

PERIODICAL COLLECTION

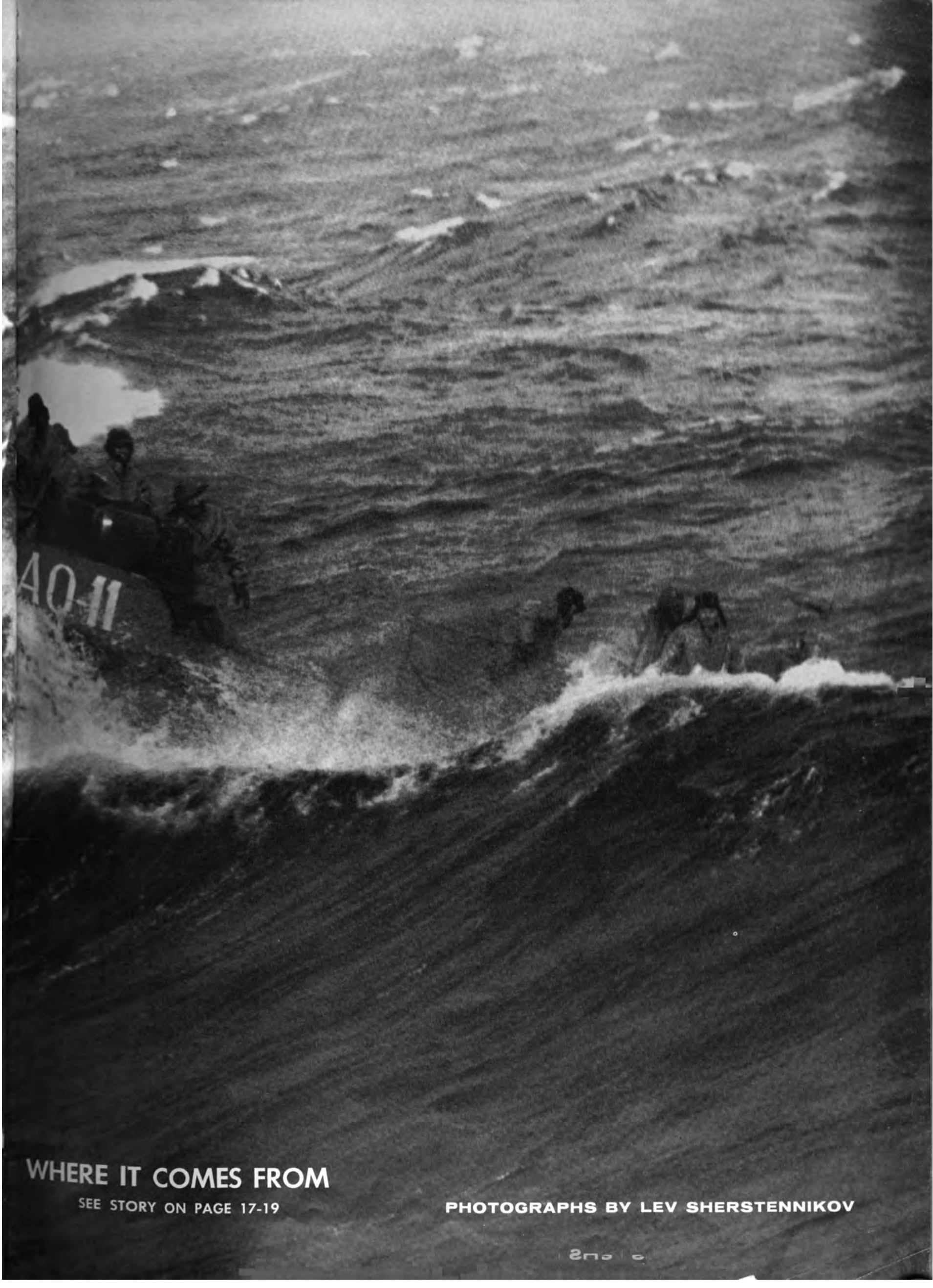
SOVIET LIFE

January 1965 • 35 cents



The Palekh Revival pages 31-37


„CHATKA“



WHERE IT COMES FROM

SEE STORY ON PAGE 17-19

PHOTOGRAPHS BY LEV SHERSTENNIKOV

SOVIET LIFE

FORMERLY USSR MAGAZINE

JANUARY 1965 No. 1 (100)

The magazine SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* America *in the Soviet Union.*



Front Cover: This example of Palekh miniatures was done by Pavel Chalunin expressly for *SOVIET LIFE.*

See story page 31.

PICTURE CREDITS

Lev Sherstennikov, Cover II, 1, 17-19; Alexander Ustinov 4-5; Alexander Mokletsov 6; Igor Vinogradov 24-26, 40-44; Georgi Petrusov 31-37; Leonid Sergeyev 45; Vsevolod Tarasevich 50-53; Yuri Cherepanov 54-57; Mikhail Ozersky and Lev Nosov 58-59; Ilya Bakhtin 64, Cover III.

Editor in Chief
(Moscow Editorial Board): Yuri S. Fantalov, 2 Putinkovsky Pereulok, Moscow, USSR.

Editor
(Washington Editorial Board): Boris V. Karpovich, 1706 18th St., N.W., Washington, D. C., 20009.

Managing Editor
(Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director
(Moscow Editorial Board): Marina T. Zabolotskaya, 2 Putinkovsky Pereulok, Moscow, USSR.

Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine SOVIET LIFE.

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second-class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Haynes Lithograph Co., Rockville, Md.

Page

SOVIET PEOPLE

The Open Door by Yuri Grafsky 24
The Brightest Flame by Sergei Pavlov 38
Yevgeni's New Apartment 50
Ilya Varshavsky 54

INTERNATIONAL CONTACTS

The Light That Did Not Fail by Alexander Milchakov 16
Tradition of Scientific Contacts by Stepan Korneyev 46
What Do You Know About Russian-American Relations? 49

ECONOMY AND SCIENCE

New Stage in Exploration of Space 4
Chatka 17
Drilling for Oil interview with Alexei Shmaryov 30
Winter in Tataria by Georgi Yuryev 40

LITERATURE AND THE ARTS

Tyorkin in the Hereafter by Alexander Tvardovsky 20
The Palekh Revival by Yevgeni Protopopov 31
The Secret of Russian Lacquer Ware by Yuri Ovsyanikov 34
Three Stories by Ilya Varshavsky 54

RECREATION AND SPORTS

Apex Hanover Stayed in Moscow by Oleg Rosin 58
Speed and Grace on Ice 64

MISCELLANEOUS

Path of Peace 3
Queries From Readers 12
Letters to the Editor 13
Brief Comments 14
Russian Snows 27
Children's Corner 45
Our Dynamic Century by Felix Momgian 60
Around the Country 62

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

JOF
+So4893

PATH OF PEACE

This, the January issue of *Soviet Life* (formerly *USSR*) magazine, is our hundredth issue, our hundredth step along the path of peace.

For the past eight years the magazine has steadily worked at its main task—as established by reciprocal agreement between the United States and Soviet governments—to acquaint Americans with life in the Soviet Union.

During these years our readers' reactions to the choice of materials have constituted our criteria for selecting new features. Their letters to the editor have told us whether or not we chose wisely. They were not only the barometer of our readers' opinions about the magazine but—what is much more important—they revealed to us their feelings as Americans toward the Soviet people, their concern for promoting peace and friendship.

"Much to my amazement I realized that the Russian people are just ordinary people. They are not bearers of hate, as I had previously been taught," writes Joel Rackley. And indeed, the Russians, or more correctly the Soviet people, are just ordinary people who want to live as good neighbors with the people of America as well as with the peoples of all other nations. Of course, there are differences in our history and world outlook. Many Americans believe in free enterprise, while we say that no man can be free unless the means of production and the country's wealth are publicly owned and the exploitation of man by man abolished. But we have many things in common, the most important of which is the desire for peace.

John J. O'Neil of Michigan says, "There is no greater irony in history than the cold war between the Soviet Union and the United States, for no two peoples are more alike in their dreams and their accomplishments. . . ." We have only one comment to make on this point: This magazine has been working for better understanding between our two nations. And we shall continue to work for that in the future.

Sometimes—as in Mr. Ebel's letter in the November issue—we are told that the magazine is nothing but a piece of propaganda. This criticism misses the point. Our magazine presents its readers with the highlights of Soviet life, with the problems the Soviet people are discussing and the tasks they are setting themselves. We are aware that it is not easy for an American reader to understand everything in our thinking and our way of life. That is why we are trying to give him cultural and historical background material. We are sure that none of our readers would approve turning this magazine into a mere book on the history and geography of Russia. Of course, now and then we present articles on history, geography, the arts. But our main concern is people, their way of life, their ideas, their problems and philosophy.

We are particularly pleased that among our readers are many young Americans who want to know more about the Soviet people, who are concerned with preserving peace in the world. "I do not believe in war," writes Diane Sanner of Missouri. "My parents told me that where they all made the mistake of getting the Second World War on its way, we of the future generation should try to prevent war. . . ." And Mrs. Sanner's comment to her daughter's letter was, "May we have continued peace in the world." In the Soviet Union young people and their parents feel the same way.

We wish all our readers a Happy New Year and hope that it will bring peace for all peoples.

The Editors



PHOTOGRAPH BY ALEXANDER USTINOV



TROIKA IN ORBIT



PHOTOGRAPH BY ALEXANDER MOKLETSOV

Press Conference on the Flight of the Voskhod Spaceship

A press conference devoted to the world's first flight on the multiple-seat Soviet spaceship* Voskhod *of pilot-cosmonaut Engineer Colonel Vladimir Komarov, research worker-cosmonaut Master of Technical Sciences Konstantin Feoktistov, and physician-cosmonaut Boris Yegorov was held in the Assembly Hall of Moscow State University.

The conference was opened by Academician Mstislav V. Keldysh, President of the USSR Academy of Sciences.

THE WORLD'S FIRST TEAM FLIGHT

By Academician Mstislav Keldysh
President, USSR Academy of Sciences

Less than 10 years have passed since the Soviet Union launched the first artificial earth satellite, ushering in the space era.

Since 1960 Soviet scientists and designers have been making planned preparations for man's flight into outer space. The most difficult tasks were developing a spaceship, ensuring the safety of the flight, and returning the ship to earth. All this required the accomplishment of a tremendous number of scientific and technical tasks.

Soviet scientists and engineers had to pioneer in solving the problems of the hermeticity of the craft in conditions of the space vacuum, of protecting the craft from radiation and controlling it, of developing two-way space communication and television, of creating an orientation reference system, and of protecting the craft against excessive heat during its descent to earth. Of the many landing schemes possible, ballistic descent was recognized to be the best. It was necessary to carefully work out and test all stages in returning the vehicle to earth, beginning with firing the retrorocket in space conditions, testing the operation of the command-giving devices for firing the retrorocket exactly at the set time, and ending with checking the proposed shape of the craft and its protection against excessive heat upon entering the dense layers of the atmosphere.

Along with the thorough elaboration of the purely design elements of the craft, a wide range of scientific problems were solved, the most important of which were biomedical investigations and a study of the radiation at flight altitudes of future space vehicles.

All *Vostok* spaceships flew at orbits where the aerodynamic drag would ensure the safe return of the craft to earth. Hence it was exceedingly important to know the density of the earth's atmosphere at altitudes of 125 to 250 miles in order to calculate in advance when the ship would return to earth if the retrorocket failed to function. Naturally all life-supporting systems of the ship were designed with an eye to this factor.

It is important to note that, on returning to earth, all the cosmonauts in earlier flights were able to land in the ship itself or to be ejected from the ship and land by parachute.

On April 12, 1961, the Soviet Union sent into orbit the *Vostok* spaceship, manned by Yuri Gagarin.

The 24-hour flight by pilot-cosmonaut Gherman Titov was a continuation of Gagarin's feat.

Pavel Popovich and Andrian Nikolayev and then Valeri Bykovsky and Valentina Tereshkova made the first group flights in the *Vostok* spaceships.

To solve new problems of cosmonautics scientists and engineers had to tackle the development of a multiseater craft.

On October 12, 1964, a new powerful carrier rocket placed into a terrestrial orbit the multiseater *Voskhod* spaceship piloted by the craft's commander, Engineer Colonel Vladimir Komarov. The other members of the crew were scientist-cosmonaut Konstantin Feoktistov, Master of Technical Sciences, and physician-cosmonaut Boris Yegorov.

The *Voskhod* spaceship is essentially different from the *Vostok* series. For the first time the cosmonauts flew without space suits and without an ejection system. For this it was necessary first of all to ensure the ship's hermeticity, for the slightest leak would have resulted in the death of the crew. The landing of the ship required the reliable operation of all systems at the moment of landing. The possibility of landing the craft on water was also provided for, and all the necessary precautions for making it unsinkable and stable on water were taken.

To ensure the safety of the craft's descent, a second standby retrorocket was installed.

The first group flight of cosmonauts in the *Voskhod* opens a new page in the history of cosmonautics. This flight is of exceedingly great importance. For the first time a scientist and physician were able to conduct observations personally and to make scientific measurements directly on board a space craft. This will be particularly important during distant space flights, say, to the moon and the planets.

It may be confidently said that astronomy will undergo a real revolution when astronomers on board spaceships train their telescopes on the boundless expanses of the universe. A real study of the planets of the solar system is practically impossible without the participation of scientist-cosmonauts.

The first flight of the multiseater *Voskhod* was planned for 24 hours. The total operating resources of the craft's equipment, however, are much greater. During the flight Komarov, Feoktistov and Yegorov successfully carried out the entire program of the flight. General guidance of the craft was entrusted to the crew commander, pilot-cosmonaut Komarov, who discharged his mission with credit. Feoktistov's observations are very interesting, especially on the optics of the upper layers of the atmosphere and the aurora polaris. Physician-cosmonaut Yegorov obtained important data on the condition and different reactions of crew members during the flight. He conducted a number of experiments in coordinating movements in conditions of weightlessness, tested the blood of the cosmonauts and carried out other investigations which are an invaluable contribution to the further development of space medicine.

At 10:47 on October 13, 1964, the multiseater *Voskhod* landed on the earth.

IMPORTANT STEP IN SPACESHIP-BUILDING

Speech by Vladimir Komarov

The *Voskhod* made 16 orbits and, after completing the program, safely landed in the preset area.

The program of flight preparation was very extensive and intricate. All the candidates selected for the flight had to work hard and intensively to carry it out.

The program of investigations was designed for 24 hours, and the crew fully completed it.

The problems we had to solve in this space flight required the participation of all members of the crew; it was impossible for one man, no matter how well-trained, to cope with them.

The training program of the crew members included the usual scientific, theoretical and professional training of cosmonauts as well as special and physical training. Each one of us made several flights in which conditions of weightlessness were reproduced. During our training on rigs and special simulators, we worked not only on the tasks of each cosmonaut specialist but also on the interaction of crew members during the flight. To finish up, comprehensive training in the impending flight's program and timing was conducted on a training ship.

What are the specific features and advantages of the flight of the *Voskhod* as compared with the flights of the *Vostok* spaceships?

It will be recalled that all six *Vostoks* were one-man crafts. Correspondingly, the cosmonauts were set very specific tasks which were designed to be carried out by one man. The crew of the *Voskhod*, however, consisted of three men, each one a specialist in a different field. This made it possible not only to considerably widen the range of scientific observations and experiments conducted in outer space but also to conduct them on a higher scientific level. While during the flight of the *Vostok* ships the cosmonaut had to stop all work periodically and sleep part of the time, on the *Voskhod* two members of the crew worked all the time while a third member rested. That is why the work did not stop for a minute and the collection of scientific information was substantially increased. Moreover, the scheduled regime of work and rest ensured the maximum working capacity of all crew members. On the *Vostok* a cosmonaut observing one or another phenomenon perceived it in his own way, while on the *Voskhod* opinions were at once exchanged, which made it possible to evaluate them more objectively. That is how it was when we observed glowing particles through the ship's portholes.

You will recall that the *Vostok* flights were made in space suits and, as a rule, it was envisaged that the cosmonaut would land by parachute outside the ship.

We were the first to make a flight without space suits, which made it easier and more convenient to work in the spaceship. This was possible because of the high degree of reliability of the design of *Voskhod*, created by our remarkable workers, technicians, engineers and designers.

Throughout the flight a normal temperature and the composition and pressure of air dictated by hygienic standards were maintained in the cabin, communications were normal and good lighting, which could be regulated, was provided.

The soft landing system functioned perfectly. This type of landing of



PHOTOGRAPH BY ALEXANDER MOKLETSOV

Press Conference on the Flight of the Voskhod Spaceship

A press conference devoted to the world's first flight on the multiple-seat Soviet spaceship* Voskhod *of pilot-cosmonaut Engineer Colonel Vladimir Komarov, research worker-cosmonaut Master of Technical Sciences Konstantin Feoktistov, and physician-cosmonaut Boris Yegorov was held in the Assembly Hall of Moscow State University.

The conference was opened by Academician Mstislav V. Keldysh, President of the USSR Academy of Sciences.

THE WORLD'S FIRST TEAM FLIGHT

By Academician Mstislav Keldysh
President, USSR Academy of Sciences

Less than 10 years have passed since the Soviet Union launched the first artificial earth satellite, ushering in the space era.

Since 1960 Soviet scientists and designers have been making planned preparations for man's flight into outer space. The most difficult tasks were developing a spaceship, ensuring the safety of the flight, and returning the ship to earth. All this required the accomplishment of a tremendous number of scientific and technical tasks.

Soviet scientists and engineers had to pioneer in solving the problems of the hermeticity of the craft in conditions of the space vacuum, of protecting the craft from radiation and controlling it, of developing two-way space communication and television, of creating an orientation reference system, and of protecting the craft against excessive heat during its descent to earth. Of the many landing schemes possible, ballistic descent was recognized to be the best. It was necessary to carefully work out and test all stages in returning the vehicle to earth, beginning with firing the retrorocket in space conditions, testing the operation of the command-giving devices for firing the retrorocket exactly at the set time, and ending with checking the proposed shape of the craft and its protection against excessive heat upon entering the dense layers of the atmosphere.

Along with the thorough elaboration of the purely design elements of the craft, a wide range of scientific problems were solved, the most important of which were biomedical investigations and a study of the radiation at flight altitudes of future space vehicles.

All *Vostok* spaceships flew at orbits where the aerodynamic drag would ensure the safe return of the craft to earth. Hence it was exceedingly important to know the density of the earth's atmosphere at altitudes of 125 to 250 miles in order to calculate in advance when the ship would return to earth if the retrorocket failed to function. Naturally all life-supporting systems of the ship were designed with an eye to this factor.

It is important to note that, on returning to earth, all the cosmonauts in earlier flights were able to land in the ship itself or to be ejected from the ship and land by parachute.

On April 12, 1961, the Soviet Union sent into orbit the *Vostok* spaceship, manned by Yuri Gagarin.

The 24-hour flight by pilot-cosmonaut Gherman Titov was a continuation of Gagarin's feat.

Pavel Popovich and Andrian Nikolayev and then Valeri Bykovsky and Valentina Tereshkova made the first group flights in the *Vostok* spaceships.

To solve new problems of cosmonautics scientists and engineers had to tackle the development of a multiseater craft.

On October 12, 1964, a new powerful carrier rocket placed into a terrestrial orbit the multiseater *Voskhod* spaceship piloted by the craft's commander, Engineer Colonel Vladimir Komarov. The other members of the crew were scientist-cosmonaut Konstantin Feoktistov, Master of Technical Sciences, and physician-cosmonaut Boris Yegorov.

The *Voskhod* spaceship is essentially different from the *Vostok* series. For the first time the cosmonauts flew without space suits and without an ejection system. For this it was necessary first of all to ensure the ship's hermeticity, for the slightest leak would have resulted in the death of the crew. The landing of the ship required the reliable operation of all systems at the moment of landing. The possibility of landing the craft on water was also provided for, and all the necessary precautions for making it unsinkable and stable on water were taken.

To ensure the safety of the craft's descent, a second standby retrorocket was installed.

The first group flight of cosmonauts in the *Voskhod* opens a new page in the history of cosmonautics. This flight is of exceedingly great importance. For the first time a scientist and physician were able to conduct observations personally and to make scientific measurements directly on board a space craft. This will be particularly important during distant space flights, say, to the moon and the planets.

It may be confidently said that astronomy will undergo a real revolution when astronomers on board spaceships train their telescopes on the boundless expanses of the universe. A real study of the planets of the solar system is practically impossible without the participation of scientist-cosmonauts.

The first flight of the multiseater *Voskhod* was planned for 24 hours. The total operating resources of the craft's equipment, however, are much greater. During the flight Komarov, Feoktistov and Yegorov successfully carried out the entire program of the flight. General guidance of the craft was entrusted to the crew commander, pilot-cosmonaut Komarov, who discharged his mission with credit. Feoktistov's observations are very interesting, especially on the optics of the upper layers of the atmosphere and the aurora polaris. Physician-cosmonaut Yegorov obtained important data on the condition and different reactions of crew members during the flight. He conducted a number of experiments in coordinating movements in conditions of weightlessness, tested the blood of the cosmonauts and carried out other investigations which are an invaluable contribution to the further development of space medicine.

At 10:47 on October 13, 1964, the multiseater *Voskhod* landed on the earth.

IMPORTANT STEP IN SPACESHIP-BUILDING

Speech by Vladimir Komarov

The *Voskhod* made 16 orbits and, after completing the program, safely landed in the preset area.

The program of flight preparation was very extensive and intricate. All the candidates selected for the flight had to work hard and intensively to carry it out.

The program of investigations was designed for 24 hours, and the crew fully completed it.

The problems we had to solve in this space flight required the participation of all members of the crew; it was impossible for one man, no matter how well-trained, to cope with them.

The training program of the crew members included the usual scientific, theoretical and professional training of cosmonauts as well as special and physical training. Each one of us made several flights in which conditions of weightlessness were reproduced. During our training on rigs and special simulators, we worked not only on the tasks of each cosmonaut specialist but also on the interaction of crew members during the flight. To finish up, comprehensive training in the impending flight's program and timing was conducted on a training ship.

What are the specific features and advantages of the flight of the *Voskhod* as compared with the flights of the *Vostok* spaceships?

It will be recalled that all six *Vostoks* were one-man crafts. Correspondingly, the cosmonauts were set very specific tasks which were designed to be carried out by one man. The crew of the *Voskhod*, however, consisted of three men, each one a specialist in a different field. This made it possible not only to considerably widen the range of scientific observations and experiments conducted in outer space but also to conduct them on a higher scientific level. While during the flight of the *Vostok* ships the cosmonaut had to stop all work periodically and sleep part of the time, on the *Voskhod* two members of the crew worked all the time while a third member rested. That is why the work did not stop for a minute and the collection of scientific information was substantially increased. Moreover, the scheduled regime of work and rest ensured the maximum working capacity of all crew members. On the *Vostok* a cosmonaut observing one or another phenomenon perceived it in his own way, while on the *Voskhod* opinions were at once exchanged, which made it possible to evaluate them more objectively. That is how it was when we observed glowing particles through the ship's portholes.

You will recall that the *Vostok* flights were made in space suits and, as a rule, it was envisaged that the cosmonaut would land by parachute outside the ship.

We were the first to make a flight without space suits, which made it easier and more convenient to work in the spaceship. This was possible because of the high degree of reliability of the design of *Voskhod*, created by our remarkable workers, technicians, engineers and designers.

Throughout the flight a normal temperature and the composition and pressure of air dictated by hygienic standards were maintained in the cabin, communications were normal and good lighting, which could be regulated, was provided.

The soft landing system functioned perfectly. This type of landing of



VLADIMIR KOMAROV

Vladimir Komarov is 37 years old. He was born in Moscow, the only child of a janitor. Komarov was in the countryside when the war began, and so he stayed on with relatives for the duration. It was there that he ate the first bread earned by his own labor.

Komarov finished seven grades of school and then attended a special school in Moscow where he was taught the rudiments of flying in addition to the usual subjects.

Komarov learned to fly the early jet fighter planes, but he wanted to become a test pilot, and for this he needed extensive engineering knowledge. That is why he enrolled in the Zhukovsy Military Air Engineering Academy, from which he was graduated in 1959.

The path Komarov had chosen took a sharp and unexpected turn when the young flyer-engineer was summoned by his superiors one day.

"You've applied for a flying job, haven't you?"

"Yes, I'd like to fly."

"Well, you shall have the chance to fly—at very great altitudes, very great! Please think it over and make your own decision. Don't ask anyone for advice."

One day the commander handed the young test pilot a telegram: "Send Komarov to Moscow at once." Thus Vladimir began training again.

He studied mathematics, astronomy, parachuting and flying. His reactions to the centrifuge, the surdochamber and the barochamber were tested. Physical culture was a very important part of the program. Finally he was briefed on the cabin of the Vostok and sent to the cosmodrome. This training, which lasted for several years, was the most difficult in his 30 years of schooling.

The doctors have a term called extrasystole. Komarov first heard the annoying word after one of his exercises in the centrifuge. When a cosmonaut's heart is functioning normally, the tracings of his cardial pulse resemble the teeth of a saw, with even intervals between them. But Vladimir's tracings showed a gap of two oscillations, or suddenly none at all. The doctors decided to exclude him from training, but he refused to submit to their decision.

Komarov read scores of books, talked to the doctors and insisted that they consult other heart specialists. Everyone found his heart perfectly sound. One young doctor finally proved that extrasystole was perfectly normal, considering the intense pressure on the organism during training.

And so Vladimir Komarov won in his struggle with destiny. He was assigned to pilot the ship that was to carry several men into space.

a multiseater craft with the crew on board has its advantages, and it has fully justified itself.

Our flight is the flight of explorers whose ultimate aim is the conquest of outer space for the good of all mankind.

The program of our flight did not have a single item whose solution could be utilized for purposes of war, for purposes directed against man, culture and civilization.

May tens, thousands of rockets rise carrying space explorers, pioneers who are blazing trails into the cosmos, and may not a single rocket rise into space for purposes of unleashing war.

FOR THE GOOD OF ALL MANKIND

Speech by Konsantin Feoktistov

In my opinion the flight of the *Voskhod* marks the beginning of a new stage in the development of space technology, a new stage in space research, since multiple-seat ships make it possible to conduct complex physical, technical, medical and biological studies. Furthermore, the presence on board ship of several people makes it possible to acquire more objective data.

The *Voskhod* is very different from the *Vostok*. It has a new three-man cabin, new equipment and a number of fundamentally new systems.

Two retrorockets, the basic and a reserve one, were installed on the spaceship to transfer it from the orbit of the earth's satellite to the trajectory of descent. This made it possible to choose a higher orbit with complete confidence.

Besides the space attitude control systems used earlier, a new system employing ionic velocity vector plotters was installed and successfully tested in flight.

The new television system installed on the ship made it possible to televise to the earth not only "reports" from the cabin of the ship but also the sights seen from aboard the ship. The same television system was used by the crew to observe the surrounding space from the instrument compartment and retrorocket, *i.e.*, on the side where it is impossible to have the usual porthole. This system therefore acted as a sort of additional porthole.

Throughout the whole period of the flight—in the booster stage, orbital flight, descent and landing—the apparatus, engines and other equipment of the carrier rocket and spaceship and the whole ground control complex functioned efficiently, reliably, faultlessly.

A series of investigations were carried out during the flight. Observation of the horizon was conducted to obtain information on the clarity of the boundary of the horizon in order to choose the base line in the optical range for the purposes of navigation and orientation in orbital and interplanetary flights when the earth will have to be used as the base celestial body for astronavigational measurements and for orientation of spaceships and automatic space vehicles.

I shall speak at this time about only some of the preliminary results of these investigations because it is necessary to develop and process the films taken of the horizon before drawing the final conclusions. It is quite possible that additional research will have to be conducted.

As a rule, the horizon is defined as the boundary of the atmosphere and the earth and appears on the day side of the earth as a a blue halo with a clear top border. The height of this halo is roughly 15 angular minutes. It seemed to me that the top border of this halo was clearer than the visible boundary between the earth and the atmosphere.

When the spaceship was in the shadow of the earth, it was possible to see a halo of brightness at a height of 35 to 60 miles above the boundary between the earth and the atmosphere. This halo is visible directly under the moon, but gradually its brightness diminishes as the observation point moves away from the direction of the moon. The stars are clearly seen between the halo and the surface of the earth, although their brightness is noticeably less under the halo. The brightness of the halo is close to the brightness observed on the horizon of the surface of the earth that is illuminated by the moon. The observations of the horizon before the spaceship leaves the shadow of the earth are extremely interesting.

Long before the emergence from the shadow, it is possible to see how the upper layer of brightness, which I mentioned earlier, grows paler. A blue halo appears above the horizon, which gradually becomes paler and turns black. The height of this halo is several times greater than on the day side. The halo gradually grows brighter, until finally at last its lower part becomes reddish at the boundary between the earth and the atmosphere. This lower layer also becomes brighter, and then suddenly above the horizon a reddish line appears which quickly changes into a greatly elongated oval. Then part of the disk comes out, and an instant later the spaceship cabin is flooded with brilliant sunlight. This is an extremely vivid picture.

KONSTANTIN FEOKTISTOV

Konstantin Feoktistov was born in Voronezh 38 years ago. His mother is dead; his father, a bookkeeper, is now retired on pension. Feoktistov remained in Voronezh until he was 16 and has many fond memories of his native city and childhood friends, he told the Soviet Life staff reporter who interviewed him. He especially remembers the main street, the bronze statue of Peter I, the parks, the agricultural institute, and Bald Mountain near Voronezh.

Although he was still very young when the Germans approached Voronezh in 1942, Feoktistov joined a fighting detachment as a scout. He crossed the front line at least 10 times and was wounded.

Feoktistov first came to like engineering and everything connected with it when he was a boy and read many books on electrical engineering written in a popular style. He is a graduate of the Bauman Higher Technical School, has a Master of Science degree, and reads English. Very well versed in technical matters and a good specialist in technology, he has directed scientific research in several fields. His special interests are philosophy and cybernetics.

Feoktistov took part in launching the first sputnik and was also a member of the group of scientists and engineers who assisted in preparing the flights of Gagarin, Titov and Nikolayev.

Knowing that the pioneer cosmonauts, the professionals, would some day be followed into space by scientists, Feoktistov volunteered his services some time ago.

The past year was a full one for Feoktistov: He passed his medical examinations and the centrifuge and thermal chamber tests, and made a study of the methods of conducting scientific experiments in flight.

Feoktistov was decorated with a medal during the war and with two Orders of Labor quite recently. He is not a member of the Communist Party.



All of us were most impressed by the aurora australis, which we managed to observe in the antarctic area just a few minutes before emerging from the shadow. The picture was roughly as follows: First the horizon, then the dark sky, then the upper layer of brightness, illuminated by the moon, and above it rays six to eight degrees high with intervals in the order of two degrees running perpendicular to the horizon. Along the horizon the aurora australis took up the entire field of vision.

The purpose of observing the stellar sky was to check on the possibility and convenience of taking bearings by the stars with the given spaceship cabin and porthole arrangement, and to evaluate the possibility and convenience of astronavigational measurements with the help of a sextant.

We discovered that it was possible to measure the elevation of the stars over the visible horizon. This means that in future flights of spaceships, particularly in interplanetary flights, it will be possible to determine independently from aboard the spaceship the ship's position, make calculations of the trajectory of the ship's flight and introduce necessary corrections.

The experiment on the study of the behavior of liquid in conditions of weightlessness was also interesting.

We managed to observe luminous particles through the ship's portholes. This usually happened when the line of observation was perpendicular to the rays of the sun. We all had the distinct sensation that the distance to these particles was small, within a range of several yards. It seems to me that these were particles of dust which had separated from the ship and were illuminated by the sun.

Several words about the flight.

From the ground the take-off of a carrier rocket produces a remarkable impression, with the roar of the rocket engines, the blinding flame of their jets, the rocket itself shooting into the sky and gradually turning into a bright spot which subsequently disappears in space. It is a stupendous and colorful picture.

However, in the spaceship cabin all this is taken in stride. Omitting the feeling of joy connected with the flight (you tell yourself: "We are flying at last!"), everything happens in what you might even call humdrum fashion. There is:

—the soft separation from the earth,

—the noise, which is not too loud (you can compare it with the noise inside a modern jet airliner),

—the vibrations, which are not too great—low frequencies mainly only within the transsonic range,

—the light swaying of the rocket like that of a moving train,

—the easily sustained overloads.

These, naturally, increased by the end of each stage, and then fell almost to the usual level at the beginning of the next stage. In general the flight stage in the rocket was quite comfortable.

Our descent and landing passed very well. After the retrorocket was fired, the instrument compartment and the descending capsule separated according to the set schedule. For a long time we were able to observe the instrument compartment through the portholes. It naturally flew nearby after the separation. With the descent into the dense layers of the atmosphere we could see the luminescence of the border layer through the portholes. The black sky had disappeared, and we could see a reddish-orange mist beyond the portholes. It was only through the porthole facing the earth that we could observe our planet covered with clouds.

It was impossible to observe this picture only a little while later because of the increased brightness of the border layer. It is probably no secret for many of you that the temperature of the gas in the border layer around a vehicle returning into the atmosphere from space reaches 10,000 degrees centigrade.

Gradually the overloads increased. However, we bore them pretty well.

When the speed of the ship was reduced due to braking in the atmosphere, the parachute system was brought into operation at an altitude of three miles. The capsule was then moving at a speed of about 720 feet per second. The capsule continued to descend on the parachute system. Right above the surface of the earth the new landing system was put into operation, and the ship landed at practically zero speed.

OUTSTANDING STELLAR FLIGHT

Speech by Boris Yegorov

The tasks of the medical and biological investigations aboard the spaceship *Voskhod* were as follows:

1. Study of the functional state of the central nervous system and



BORIS YEGOROV

The youngest member of the cosmic crew is Boris Yegorov. The Yegorov family is evidently fond of the name Boris: the father's name is Boris, the son's name is Boris, and the grandson's name is Boris. Another family tradition is medicine. Yegorov's father is a doctor too.

Yegorov, who was born on Arbat Street in Moscow 27 years ago, got his professional training at the First Medical Institute. These were years of hard work, as any medical student will verify, but there was still time for concerts at the conservatory, art exhibitions, hockey matches, evening parties, and endless arguments about books and life. Yegorov graduated from the institute in 1961, the year Gagarin made his flight. He is a member of the Young Communist League.

It was in "Gagarin's" year that the student laboratory worker became a full-fledged laboratory doctor. His passion for mechanics began while he was still at school, and he managed to combine mechanics with medicine. The laboratory doctor gradually turned into a real scientist. Using the most up-to-date instruments, Yegorov kept a careful record of the state of the cosmonaut's health, noting everything registered by his organism both on earth and during his space flight. He was just a new doctor and had to acquire his experience bit by bit.

Yegorov's main interest was the condition of the vestibular apparatus in weightlessness. Instrument recordings were very helpful in this connection, but no instrument can be as precise as the human brain, the eye and the sensitive reactions of the heart. The young doctor felt that there was still a great deal to be learned. He began to write a thesis which he planned to finish when he returned from his cosmic flight, vastly enriched by his own experience and observation.

When interviewed, Yegorov told our Soviet Life correspondent: "My favorite sport is mountain climbing. I like jazz, Rockwell Kent and Nikolai Roerich. I've driven a motorcycle, bailed out with a parachute, and swum under water with an aqualung. I like to fish, and I'm simply crazy about Moscow.

"When my father found out what I was training for, he just said: 'You have the right to decide what you are going to do with your own life.' I think this is the only sensible point of view and hope to be capable of saying the same thing to my son when the time comes."

the working efficiency of the crew members in the various phases of space flight.

2. Study of the effect of a complex of space flight factors on the functional state of the cardiovascular system and the circulatory system.

3. Study of external respiration, gas exchange and energy consumption in conditions of weightlessness.

4. Study of how the instruments functioned in weightlessness.

5. Appraisal of the efficiency of the life-supporting system and landing devices.

To fulfill these tasks, physiological data was recorded by remote control with the help of telemetering systems. I was also provided with various apparatus and instruments for conducting direct studies and measurements.

The telemetering systems registered for each individual cosmonaut:

—electrocardiogram in one thoracic section;

—respiratory movement of the thorax;

—seismocardiogram (vibrations of thorax caused by the contractions of the heart).

In keeping with a predetermined program and also depending on the situation, I was able to record brain waves, the electric potential of eye movements, data on movement coordination in drawing and writing, and also the curve characterizing muscular efficiency during rhythmic movements of the hand. These records were made directly for all the crew members, including myself.

In addition to this, pulse and respiration data were continuously transmitted throughout the flight to receivers on earth via a Signal short-wave transmitter.

Besides conducting medical and biological research, it was also my duty to give emergency medical aid to the crew members and to check the life-supporting systems aboard the spaceship.

To settle the question once and for all, I should like to say that my fellow cosmonauts had no need of medical aid, so I was deprived of the opportunity of carrying out my direct duties as doctor, although I got a very good idea of the possibilities available to a flight physician.

As far as the life-supporting systems are concerned, their high reliability throughout the entire flight should be noted. Hygienic conditions close to the optimal were maintained in the cabin. The air pressure corresponded to atmospheric pressure, with a normal concentration of oxygen and carbon dioxide, a humidity fluctuation within the 45 to 60 per cent range, and an air temperature of 18 to 21 degrees centigrade (64-70 degrees Fahrenheit). No unpleasant odors were detected in the cabin; the air had a quality of freshness about it. Artificial ventilation of the cabin made it possible for the cosmonauts to wear light woolen sport-type suits.

As already reported in the press, the food on board the ship consisted of a variety of products packed in viscotine.

All the members of the crew found the food palatable during ground tests as well as during the flight. The cosmonauts' appetite during the flight was normal.

The design of the chairs and the recliners shaped to the body of the cosmonauts are also worthy of a positive appraisal. The angle of inclination of the parts of the chair provided the cosmonauts with an optimal position as regards the vector of overload during both the booster stage and the descent and landing stages.

The transition to weightlessness did not cause any unpleasant sensation whatsoever. We all noticed that we were in weightlessness mainly because of the unusual sight of different objects floating in the cabin. Carefully analyzing our sensations, Feoktistov and I discovered that when we closed our eyes, we had the illusion of being upside down. It seemed to me that I was face down.

The work capacity of all of us during the flight was high. We carried out delicate, coordinated movements without any difficulty, and our handwriting was not appreciably changed. A more detailed analysis of the motor functions will be made after studying the telemetric data. However, we can already state that diverse scientific apparatus can be handled successfully under conditions of weightlessness.

The program of experimental research in flight was such a large one and the time so limited that we had to economize on rest. We took turns sleeping three to five hours. Our slumber was deep and without dreams. We felt refreshed after sleeping.

A thorough after-flight checkup did not reveal any health disorders.

There were certain changes in the morphological picture of the blood, in the water-salt metabolism, etc. However, these changes were of a transitory and apparently not of a specific nature, reflecting a certain general fatigue and reaction to tension caused by a combination of physical and psychological factors.

The physiological parameters registered by the telemetric system are at present being processed, and the analysis of blood samples and exhaled air have not yet been completed. Naturally the data as a whole have not yet been processed and analyzed and, therefore, I would at this time abstain from making generalizations and drawing conclusions. When the processing of all the experimental material is completed, a detailed report will be published which apparently will be of interest to a large number of people concerned with the problems of space flight.

ANSWERS TO QUESTIONS

VLADIMIR KOMAROV:

QUESTION *(Polish Press Agency): Since the* Voskhod *craft is capable of so-called soft landing, can it be used for landing on the moon or any other planet?*
ANSWER: *I can only say it was not designed for that purpose.*

QUESTION *(American correspondent): Is the* Voskhod *an entirely new spacecraft or a variant of the* Vostok?
ANSWER: *This is a new three-seat spaceship.*

QUESTION *(Polish correspondent): Does the flight without space suits mean that they will not be used in the future?*
ANSWER: *The systems of our ship are highly reliable, and it was therefore decided to fly without space suits to make it more convenient to carry out the scientific investigations of the flight program. Space suits will certainly be needed in the future.*

QUESTION *(Hungarian correspondent): Can the spaceship be used for another flight?*
ANSWER: *I think it can because the landing was soft and the ship is completely intact.*

QUESTION *(British* Daily Worker *correspondent): What profession do you think should be represented by the fourth member of a crew on the next flight?*
ANSWER: *We should have with us a man who can do a useful job as a member of the crew. It might be a newsman or perhaps an astronomer, while on long flights it might even be a cook.*

KONSTANTIN FEOKTISTOV:

QUESTION: *Can you describe the aurora which the cosmonauts were able to see in space?*
ANSWER: *The difference was firstly the scope. A combination of favorable circumstances made it possible for the crew to see this sight several times. When the spaceship shot by in the neighborhood of the aurora, the portholes were invariably turned toward it.*

QUESTION: *What kind of questions did you discuss and solve together during the flight?*
ANSWER: *We mainly checked each other's impressions of what we could observe and our sensations.*

QUESTION (New York Herald Tribune *correspondent): What was the most important single discovery made during the flight?*
ANSWER: *It is hard to single out any one particular fact since investigations were conducted in such dissimilar fields. Of greatest interest so far is the observation of the horizon under different conditions. But we must wait to see what the development of the film we shot will give us, because in the long run it is the entire package of accumulated information that is important.*

QUESTION: *What advice would you give young people who want to dedicate themselves to space research?*
ANSWER: *They should work, study and persevere in their effort to achieve their goal.*

BORIS YEGOROV:

QUESTION *(Bulgarian correspondent): What did you say to each other right after you landed?*
ANSWER: *The first one to step out of the spaceship said: "It's pretty cold down here on earth!"*

QUESTION *(Moscow University student): What would you wish young people who dream of going into space?*
ANSWER: *Success! After all, Moscow University graduates from all the departments will soon be needed in space.*

QUESTION: *Did your crew have backups, and what were their professions?*
ANSWER: *Yes, we had a backup crew of a pilot-cosmonaut, a researcher and a doctor.*

QUESTION: *Do you read any science fiction, and who is your favorite author?*
ANSWER: *I like the Soviet science-fiction writers the Strugatsky brothers and the Polish author Stanyslaw Lemm. I also like Ray Bradbury's stories very much.*

QUESTION *(German magazine* Urania *correspondent): Did you undertake any additional biological investigations on board the* Voskhod?
ANSWER: *Yes, we did conduct such investigations with Drosophila and plants.*

QUESTION: *You are considerably taller than your colleagues. Did this cause any technical complications for the ship designers?*
ANSWER: *I can say quite definitely that it did not.*

Academician Keldysh answered the rest of the newspapermen's questions. He particulary stressed that other states, not as large as the USSR and the USA, would take part in the future researches connected with man's penetration into space. Cooperation with other socialist countries in the field of science and technology, Keldysh added, facilitates the achievements of the Soviet Union in space exploration. A case in point are the orbital measurements and observation of artificial bodies as well as the research into solar radiation conducted jointly with Czechoslovak specialists. This work is very important for manned space flights.

Keldysh prophesied that in addition to being used for exploring the universe, spaceships will also be used as a means of transportation. And this is very important because the improvement and speeding up of communications is one of the main stimuli of progress.

QUESTION *(Polish correspondent): What accounts for the new spaceship's flight altitude—the discontinuation of nuclear tests in outer space or the creation of a more reliable antiradiation system?*
ANSWER: *We certainly have created more reliable technical means for flights at higher altitudes. As for radiation, it is important to investigate it at still higher altitudes. Our scientists are doing a thorough research job with the help of the well-known Elektron sputniks.*

Asked by a correspondent of the Hungarian News Agency about the possibility of a joint flight of Soviet and American cosmonauts on board a multiple-seat Soviet-made spaceship, Academician Keldysh replied that the prospects of joint space research depend on the general development of international cooperation.

Asked by a Herald Tribune *correspondent about the maximum duration of a multiseater spaceship's stay in orbit, taking into account the cosmonauts' state of health, Keldysh replied: "It can stay up any length of time. But just as thunderstorms, hurricanes and typhoons exist on earth, elemental natural phenomena are not ruled out in space. However, this should not stand in the way of prolonged and distant flights.*

The American correspondents asked whether the capacity of the Voskhod *carrier rocket was greater than that of similar rockets in the United States.*
ANSWER: *The capacity of the carrier rocket which orbited* Voskhod *is greater than that of any other rocket in the world.*

Replying to the question of a United Press International correspondent about the "desirability" of cooperation between the Soviet Union and the United States in space research, Academician Keldysh reminded him that such cooperation already exists and expressed surprise that the U.S. correspondent was unaware of it. He was referring to the bilateral agreement between the Academy of Sciences of the USSR and NASA (USA), which provides for a series of joint research programs and the exchange of information and opinions. "I think that the research done on the basis of this agreement will continue to develop," Academician Keldysh said.

Asked whether the Voskhod *flight was the beginning of a series of multiseater spaceship flights and when the next flight would take place, Academician Keldysh replied that the* Voskhod *flight marked the beginning of a series of similar flights. The next one would take place when all the preparations are completed.*

QUESTION: *Why were there only men and not a single woman aboard the* Voskhod?
ANSWER: *There was no special reason. In the future there will probably be women as well as men in the crew. This time there were only men.*

Courtesy of Pravda *(abridged)*



BORIS YEGOROV

The youngest member of the cosmic crew is Boris Yegorov. The Yegorov family is evidently fond of the name Boris: the father's name is Boris, the son's name is Boris, and the grandson's name is Boris. Another family tradition is medicine. Yegorov's father is a doctor too.

Yegorov, who was born on Arbat Street in Moscow 27 years ago, got his professional training at the First Medical Institute. These were years of hard work, as any medical student will verify, but there was still time for concerts at the conservatory, art exhibitions, hockey matches, evening parties, and endless arguments about books and life. Yegorov graduated from the institute in 1961, the year Gagarin made his flight. He is a member of the Young Communist League.

It was in "Gagarin's" year that the student laboratory worker became a full-fledged laboratory doctor. His passion for mechanics began while he was still at school, and he managed to combine mechanics with medicine. The laboratory doctor gradually turned into a real scientist. Using the most up-to-date instruments, Yegorov kept a careful record of the state of the cosmonaut's health, noting everything registered by his organism both on earth and during his space flight. He was just a new doctor and had to acquire his experience bit by bit.

Yegorov's main interest was the condition of the vestibular apparatus in weightlessness. Instrument recordings were very helpful in this connection, but no instrument can be as precise as the human brain, the eye and the sensitive reactions of the heart. The young doctor felt that there was still a great deal to be learned. He began to write a thesis which he planned to finish when he returned from his cosmic flight, vastly enriched by his own experience and observation.

When interviewed, Yegorov told our Soviet Life correspondent: "My favorite sport is mountain climbing. I like jazz, Rockwell Kent and Nikolai Roerich. I've driven a motorcycle,bailed out with a parachute, and swum under water with an aqualung. I like to fish, and I'm simply crazy about Moscow.

"When my father found out what I was training for, he just said: 'You have the right to decide what you are going to do with your own life.' I think this is the only sensible point of view and hope to be capable of saying the same thing to my son when the time comes."

the working efficiency of the crew members in the various phases of space flight.

2. Study of the effect of a complex of space flight factors on the functional state of the cardiovascular system and the circulatory system.

3. Study of external respiration, gas exchange and energy consumption in conditions of weightlessness.

4. Study of how the instruments functioned in weightlessness.

5. Appraisal of the efficiency of the life-supporting system and landing devices.

To fulfill these tasks, physiological data was recorded by remote control with the help of telemetering systems. I was also provided with various apparatus and instruments for conducting direct studies and measurements.

The telemetering systems registered for each individual cosmonaut:

—electrocardiogram in one thoracic section;

—respiratory movement of the thorax;

—seismocardiogram (vibrations of thorax caused by the contractions of the heart).

In keeping with a predetermined program and also depending on the situation, I was able to record brain waves, the electric potential of eye movements, data on movement coordination in drawing and writing, and also the curve characterizing muscular efficiency during rhythmic movements of the hand. These records were made directly for all the crew members, including myself.

In addition to this, pulse and respiration data were continuously transmitted throughout the flight to receivers on earth via a Signal short-wave transmitter.

Besides conducting medical and biological research, it was also my duty to give emergency medical aid to the crew members and to check the life-supporting systems aboard the spaceship.

To settle the question once and for all, I should like to say that my fellow cosmonauts had no need of medical aid, so I was deprived of the opportunity of carrying out my direct duties as doctor, although I got a very good idea of the possibilities available to a flight physician.

As far as the life-supporting systems are concerned, their high reliability throughout the entire flight should be noted. Hygienic conditions close to the optimal were maintained in the cabin. The air pressure corresponded to atmospheric pressure, with a normal concentration of oxygen and carbon dioxide, a humidity fluctuation within the 45 to 60 per cent range, and an air temperature of 18 to 21 degrees centigrade (64-70 degrees Fahrenheit). No unpleasant odors were detected in the cabin; the air had a quality of freshness about it. Artificial ventilation of the cabin made it possible for the cosmonauts to wear light woolen sport-type suits.

As already reported in the press, the food on board the ship consisted of a variety of products packed in viscotine.

All the members of the crew found the food palatable during ground tests as well as during the flight. The cosmonauts' appetite during the flight was normal.

The design of the chairs and the recliners shaped to the body of the cosmonauts are also worthy of a positive appraisal. The angle of inclination of the parts of the chair provided the cosmonauts with an optimal position as regards the vector of overload during both the booster stage and the descent and landing stages.

The transition to weightlessness did not cause any unpleasant sensation whatsoever. We all noticed that we were in weightlessness mainly because of the unusual sight of different objects floating in the cabin. Carefully analyzing our sensations, Feoktistov and I discovered that when we closed our eyes, we had the illusion of being upside down. It seemed to me that I was face down.

The work capacity of all of us during the flight was high. We carried out delicate,coordinated movements without any difficulty, and our handwriting was not appreciably changed. A more detailed analysis of the motor functions will be made after studying the telemetric data. However, we can already state that diverse scientific apparatus can be handled successfully under conditions of weightlessness.

The program of experimental research in flight was such a large one and the time so limited that we had to economize on rest. We took turns sleeping three to five hours. Our slumber was deep and without dreams. We felt refreshed after sleeping.

A thorough after-flight checkup did not reveal any health disorders. There were certain changes in the morphological picture of the blood, in the water-salt metabolism, etc. However, these changes were of a transitory and apparently not of a specific nature, reflecting a certain general fatigue and reaction to tension caused by a combination of physical and psychological factors.

The physiological parameters registered by the telemetric system are at present being processed, and the analysis of blood samples and exhaled air have not yet been completed. Naturally the data as a whole have not yet been processed and analyzed and, therefore, I would at this time abstain from making generalizations and drawing conclusions. When the processing of all the experimental material is completed, a detailed report will be published which apparently will be of interest to a large number of people concerned with the problems of space flight.

ANSWERS TO QUESTIONS

VLADIMIR KOMAROV:

***QUESTION** (Polish Press Agency): Since the* Voskhod *craft is capable of so-called soft landing, can it be used for landing on the moon or any other planet?*
***ANSWER:** I can only say it was not designed for that purpose.*

***QUESTION** (American correspondent): Is the* Voskhod *an entirely new spacecraft or a variant of the* Vostok?
***ANSWER:** This is a new three-seat spaceship.*

***QUESTION** (Polish correspondent): Does the flight without space suits mean that they will not be used in the future?*
***ANSWER:** The systems of our ship are highly reliable, and it was therefore decided to fly without space suits to make it more convenient to carry out the scientific investigations of the flight program. Space suits will certainly be needed in the future.*

***QUESTION** (Hungarian correspondent): Can the spaceship be used for another flight?*
***ANSWER:** I think it can because the landing was soft and the ship is completely intact.*

***QUESTION** (British* Daily Worker *correspondent): What profession do you think should be represented by the fourth member of a crew on the next flight?*
***ANSWER:** We should have with us a man who can do a useful job as a member of the crew. It might be a newsman or perhaps an astronomer, while on long flights it might even be a cook.*

KONSTANTIN FEOKTISTOV:

***QUESTION:** Can you describe the aurora which the cosmonauts were able to see in space?*
***ANSWER:** The difference was firstly the scope. A combination of favorable circumstances made it possible for the crew to see this sight several times. When the spaceship shot by in the neighborhood of the aurora, the portholes were invariably turned toward it.*

***QUESTION:** What kind of questions did you discuss and solve together during the flight?*
***ANSWER:** We mainly checked each other's impressions of what we could observe and our sensations.*

***QUESTION** (*New York Herald Tribune *correspondent): What was the most important single discovery made during the flight?*
***ANSWER:** It is hard to single out any one particular fact since investigations were conducted in such dissimilar fields. Of greatest interest so far is the observation of the horizon under different conditions. But we must wait to see what the development of the film we shot will give us, because in the long run it is the entire package of accumulated information that is important.*

***QUESTION:** What advice would you give young people who want to dedicate themselves to space research?*
***ANSWER:** They should work, study and persevere in their effort to achieve their goal.*

BORIS YEGOROV:

***QUESTION** (Bulgarian correspondent): What did you say to each other right after you landed?*
***ANSWER:** The first one to step out of the spaceship said: "It's pretty cold down here on earth!"*

***QUESTION** (Moscow University student): What would you wish young people who dream of going into space?*
***ANSWER:** Success! After all, Moscow University graduates from all the departments will soon be needed in space.*

***QUESTION:** Did your crew have backups, and what were their professions?*
***ANSWER:** Yes, we had a backup crew of a pilot-cosmonaut, a researcher and a doctor.*

***QUESTION:** Do you read any science fiction, and who is your favorite author?*
***ANSWER:** I like the Soviet science-fiction writers the Strugatsky brothers and the Polish author Stanyslaw Lemm. I also like Ray Bradbury's stories very much.*

***QUESTION** (German magazine* Urania *correspondent): Did you undertake any additional biological investigations on board the* Voskhod?
***ANSWER:** Yes, we did conduct such investigations with Drosophila and plants.*

***QUESTION:** You are considerably taller than your colleagues. Did this cause any technical complications for the ship designers?*
***ANSWER:** I can say quite definitely that it did not.*

Academician Keldysh answered the rest of the newspapermen's questions. He particulary stressed that other states, not as large as the USSR and the USA, would take part in the future researches connected with man's penetration into space. Cooperation with other socialist countries in the field of science and technology, Keldysh added, facilitates the achievements of the Soviet Union in space exploration. A case in point are the orbital measurements and observation of artificial bodies as well as the research into solar radiation conducted jointly with Czechoslovak specialists. This work is very important for manned space flights.

Keldysh prophesied that in addition to being used for exploring the universe, spaceships will also be used as a means of transportation. And this is very important because the improvement and speeding up of communications is one of the main stimuli of progress.

***QUESTION** (Polish correspondent): What accounts for the new spaceship's flight altitude—the discontinuation of nuclear tests in outer space or the creation of a more reliable antiradiation system?*
***ANSWER:** We certainly have created more reliable technical means for flights at higher altitudes. As for radiation, it is important to investigate it at still higher altitudes. Our scientists are doing a thorough research job with the help of the well-known Elektron sputniks.*

Asked by a correspondent of the Hungarian News Agency about the possibility of a joint flight of Soviet and American cosmonauts on board a multiple-seat Soviet-made spaceship, Academician Keldysh replied that the prospects of joint space research depend on the general development of international cooperation.

Asked by a Herald Tribune *correspondent about the maximum duration of a multiseater spaceship's stay in orbit, taking into account the cosmonauts' state of health, Keldysh replied: "It can stay up any length of time. But just as thunderstorms, hurricanes and typhoons exist on earth, elemental natural phenomena are not ruled out in space. However, this should not stand in the way of prolonged and distant flights.*

The American correspondents asked whether the capacity of the Voskhod *carrier rocket was greater than that of similar rockets in the United States.*
***ANSWER:** The capacity of the carrier rocket which orbited* Voskhod *is greater than that of any other rocket in the world.*

Replying to the question of a United Press International correspondent about the "desirability" of cooperation between the Soviet Union and the United States in space research, Academician Keldysh reminded him that such cooperation already exists and expressed surprise that the U.S. correspondent was unaware of it. He was referring to the bilateral agreement between the Academy of Sciences of the USSR and NASA (USA), which provides for a series of joint research programs and the exchange of information and opinions. "I think that the research done on the basis of this agreement will continue to develop," Academician Keldysh said.

Asked whether the Voskhod *flight was the beginning of a series of multiseater spaceship flights and when the next flight would take place, Academician Keldysh replied that the* Voskhod *flight marked the beginning of a series of similar flights. The next one would take place when all the preparations are completed.*

***QUESTION:** Why were there only men and not a single woman aboard the* Voskhod?
***ANSWER:** There was no special reason. In the future there will probably be women as well as men in the crew. This time there were only men.*

Courtesy of Pravda *(abridged)*

QUERIES FROM READERS

QUESTION: "Does the USSR have laws preventing cruelty to animals?" asks Charles D. Wilson of Newtonia, Missouri.
ANSWER: Cruelty to animals, whether they are owned publicly or by individuals, is punishable by law. Public opinion, a very large factor in Soviet life, also helps. Our people are fond of animals. We have any number of clubs for people who breed dogs, cats, pigeons, etc.

QUESTION: "Can Soviet people have typewriters for personal correspondence and private needs?" Mr. Wilson also asks.
ANSWER: Of course. They are freely available for sale. Among the popular portable typewriters are the Moskva and Leningrad and some foreign makes like the Optima, Rheinmetal and Erika. We should like to add that for personal letters our people prefer to use longhand. They feel that a typed letter is too formal.

QUESTION: And finally, he wants to know whether Soviet universities offer courses in Latin and in ancient Roman civilization?
ANSWER: Yes, every one of the Soviet Union's 40 universities offers courses in the classics for those majoring in history, law, philology, biology and medicine. Naturally, the courses will vary for each group. For instance, students majoring in Romance and German philology take more Latin than do students of Ugro-Finnish philology. The ancient Roman and Greek civilizations are studied in all the liberal arts colleges as well as in theater, art, film and other institutes. The basic study of ancient history and culture is pursued in secondary schools. In addition our clubs very often schedule public lectures on ancient cultures.

QUESTION: "I would like to know about your steel production," writes A. D. Covin, Sr. of Houston, Texas.
ANSWER: Our country ranks first in Europe and second in the world, after the United States, in steel production. The average annual output growth is more than four million tons. During this past decade we constructed 136 blast furnaces and steel-smelting units, and increased steel output by 77 per cent to a high of 80.2 million tons in 1963. We expect the 1964 figure to reach 84 million tons. The 1965 plan calls for an output of 89.3 million tons. In recent years we produced more than 400 qualities of special steel.

QUESTION: "Could you please speak of the production of machines and machine tools in the USSR"—also from Mr. Covin.
ANSWER: The manufacture of machine tools is one of our major industries. A third of our industrial working force is employed in engineering and metalworking enterprises. In volume of machine building, our country is first in Europe and second in the world, behind the USA.

Our annual manufacture of machine tools is greater than that of any other country (183,000 machine tools produced in 1963). In the past five years the output of our engineering and metalworking industries doubled, although according to plan we were not scheduled to reach that target until 1965.

In the past decade we manufactured 22,000 new types of machines, devices and equipment, among them many machines for fine stamping which, say Soviet specialists, will replace metal-cutting processes just as plastics are beginning to replace steel. The cost of producing machine tools keeps falling, thanks to the use of continuous production lines.

We send machines and equipment of all kinds to other countries; they constitute more than one-fifth the total volume of the country's exports. One of our agencies, Machinoexport, sells machines to 300 firms in 40 capitalist countries. We export 3,500 different kinds of machines and equipment. We also import some types of machines and machine tools.

QUESTION: "I would like to know something about the construction of high-voltage power lines in the USSR," says Freeman Smith of San Fernando, California.
ANSWER: The USSR is first in the world in voltage of current transmitted and length of electric power lines.

A united power grid of the European part of the Soviet Union is already in operation, which joins all the large power stations of the central part of the country, the Urals, the middle reaches of the Volga and the southern part of the USSR. The country's major alternating current power lines (with a tension of 500,000 volts) join the hydroelectric power stations of the Volga cascade with Moscow, the Urals and the Donbas. This power grid, with a capacity of six million kilowatts, is the largest in Europe. Right now united power grids are being built in Siberia, the Far East and Transcaucasia.

High-tension power lines link the socialist countries of Europe. The Mir (Peace) power grid connects the power grids of the Ukraine, Byelorussia, Poland, Czechoslovakia, Hungary, the German Democratic Republic and Rumania. Work now in progress will tie in Bulgaria.

We are presently building an experimental industrial 750,000-volt alternating current power line. There is also a good deal of work being done with DC. Large quantities of electricity can be transmitted over great distances only with DC since AC is less stable and more expensive. The world's most powerful DC line (with a tension of 800,000 volts) is incorporated in the power grid of the European part of the USSR. It connects the Volga hydroelectric power stations with the Donbas. Experimental data from that line have helped to develop plans for building still larger power lines.

For instance, the plan is to build a 1,430-mile-long power line in 1970-1971 which will link the European part of the USSR with Siberia. It will carry current with a tension of 1.4 million volts. We might mention in passing that it is also in Siberia that the 3.6-million-kilowatt Bratsk Hydroelectric Power Station, the largest in the world, is already in operation, and that work is under way on a still larger hydroelectric station (the five-million-kilowatt giant in Krasnoyarsk).

Every day in our country, on the average, about 60 miles of high-tension power lines are being put in. The total length built between 1959 and 1962 came to approximately 62,000 miles.

This task—certainly not an easy one, especially when the lines go across the Siberian and Far Eastern taiga—is a challenge to the hardihood of the country's pioneering-minded young people. It is they who are performing it.

QUESTION: "Is there a national quota system for immigrants in the USSR?" W. Herman of Downey, California, wants to know.
ANSWER: No, there is none in the Soviet Union.

QUESTION: Some data on Soviet corn production and consumption is requested by Mr. W. Martin of Chicago, Illinois.
ANSWER: Though corn has been grown on the territory of what is now the USSR since time immemorial, the areas sown have been much enlarged, particularly in recent years. Thus, in 1953 the country's corn crop came to 3.7 million tons, in 1962 to 23.5 million tons. Corn is used as a fodder crop not only in the form of dry grain but also as silage consisting of stalks and cobs of milk-wax ripeness. Since in most areas of our country the climate is unfavorable for ripening corn, we grow it mostly for silage.

Corn is also used for human consumption. Corn flakes, for example, are very popular in our country. So is popcorn.

A group of Soviet farm machine operators some years ago worked on Mr. Garst's Iowa farm, learning his methods of growing corn without hand labor. Some of these men have begun to surpass their American teacher. For instance, on Garst's farm one man works an area of 250 acres, but machine operator Alexander Pervitsky and his comrades in Krasnodar (who learned Mr. Garst's method in a correspondence course) each worked an area of 365 acres without resorting to hand labor.

We were able to expand our areas under crop for two reasons: greater mechanization and the production of new hybrid varieties of corn that ripen early, have good drought-resistant qualities, and give high yields.

LETTERS TO THE EDITOR

PEACEFUL COEXISTENCE

To the Editor:

There is no greater irony in history than the cold war between the Soviet Union and the United States, for no two peoples are more alike in their dreams and their accomplishments. We Americans can read about the Russian development of Central Asia and understand its import—because we did the same thing in our West one hundred years ago. Your attention to public education can also be appreciated—because this is a thing which has been close to our hearts since the days of Thomas Jefferson. In fact, I can assure you that all your efforts to improve the lot of the common man meet with the approval (and the cheers) of the American people. In fact it might be a good idea for every Soviet citizen to read the works of Thomas Jefferson, for he represents the dreams of America. Our history books tell us that, for the first one hundred years of its existence, Czarist Russia was the most able ally of the American Republic. It was the shadow of the Imperial Fleet which kept the British and French off our backs. Russian navymen were lionized in New York during our American Civil War.

You will notice that I have not even mentioned politics. Well this area (Michigan) was first settled by French and Indians who had worked out a scheme of "coexistence." The French were few and the Indians were many; so the French paid meticulous attention to tribol customs and Indian sensibilities. They learned the native dialects and legends and intermarried and created a new race—the French Canadians. I very much doubt that the wily French discussed politics with the Indian maidens whom they were wooing! Today people hereabouts boast of their Indian blood. This is coexistence at its best; and I believe that both the United States and the Soviet Union would do well to study what the French and Indians have contributed to sociology. Incidentally, my wife is a French-Indian.

Sincerely,
John J. O'Neil
Bay City, Michigan

Sir,

The phrase—peaceful coexistence—has found its way into the poges of every journal throughout the world and is entering the minds of people in ever increasing numbers. This calls for an examination of what in fact we mean by peaceful coexistence.

The phrase is not a gimmick or the product of some committee meeting, nor is it a propaganda trick. It is in fact a historical product. In human society it has existed during the period of every change of systems. Thus feudalism existed side by side with capitalism just as capitalism now exists side by side with socialism.

If we examine changes which take place in nature the same principle applies. It is difficult to conceive the old going out and the new coming in with each coexisting side by side. From this it can be seen that peaceful coexistence is in line with what is going on throughout nature. In short it is impossible for any phenomenon to make its appearance without a relationship with its source and for a time exist with it.

These are points worth discussing in your journal and it would be of great interest to hear the opinions of your readers. I read a copy of your journal in London and I would be grateful if you will put me on your mailing list.

Yours faithfully,
A. McDonald
Dagenham, Essex
England

Gentlemen:

I first became acquainted with your publication when I happened to pick it up from a newsrack in a motel I recently visited. The issue was so interesting that I decided to take a subscription.

I firmly believe in Capitalism as practiced in the United States, but I believe it is important for the people, especially the young people, of the United States to know more about the Soviet Union, and for them to know more about us.

I take this subscription out of a curiosity and interest in the Soviet Union, its people, and its geography. I look forward to future issues, and I am glad that the magazine *Amerika* is performing a similar function in the USSR.

Sincerely,
Larry Kleinbrook
Ironwood, Michigan

To the Editors.

In July of 1962 I was an observer at the Moscow Peace Conference. While there I met quite a number of your countrymen. I was pleasantly surprised to see in the last issue of USSR one of these people, Boris Krylov. It is very late for me to write but "better late than never." Boris, like all of the people connected with the Conference, gave us the impression they were born just to see that we had a pleasant visit. And all of the American delegation did have.

In looking back over this Conference I like to think that in some small way we did help to better understand each other and that very possibly contributed to the first step in the Test Ban.

This people-to-people meeting is, I'm sure, the best method for all of us to overcome the differences that seem to plague us. It is almost tragic that these differences exist for they are really nothing but foolishness. I found no difference between your people and mine. . . .

G. V. Riley
Rochester, New York

Gentlemen:

I had the opportunity of visiting Moscow in 1961 and just returned from a nine day's visit in Leningrad and Moscow. A couple of months ago you made inquiries of subscribers of preference as to types of articles.

I would suggest a feature article on Intourist people and their fine work with American tourists. The desk people in the Intourist offices, and particularly the English speaking guides, are capable and efficient. Pictures and biographical sketches of these people who serve American tourists would encourage more people to visit in major cities and resort areas of the Soviet Union.

Sincerely,
N. E. Masterson
Stevens Point,
Wiscansin

Dear Sirs:

. . . I intend to subscribe to your magazine. I believe that the only way to peace is understanding between all nations of the world. Having a whole life ahead of me, I do not particularly want to be blown up before I even have a chance of doing something about it.

Sincerely,
Tanya Braumiller
Sagle, Idaho

JUST ORDINARY PEOPLE

Dear Sir:

I became very interested in your country (USSR) as a junior at Berry College located at Mount Berry, Georgia. It was here that I was properly introduced to your country by studying your history.

I was completely astonished by what I learned. Much to my amazement I realized that the Russian people are just ordinary people. They are not bearers of hate, as I had previously been taught.

I also was astonished by the bravery of the Russian people throughout history. In fact I became so absorbed with with Russian history, that I forgot I had other subjects.

It was also at this time (1961) that I was introduced to your magazine. *USSR* continues to feed my hunger for more knowledge of Russia.

Thank you so much for this enlightenment.

Sincerely,
Joel Rackley
Lyndon, Kentucky

ON EDUCATION

Sirs:

I have found the articles about the training and education of children to be among the most interesting items in your magazine.

This is perhaps the most important single item in building the future, for it is indeed children who will make the future.

Technology demands new attitudes toward work. In the past, labor was always viewed with contempt by the ruling classes, and Adam Smith refers to "working cattle." There are still reactionary elements which wish to view work with contempt, but Technology, with its vast demands for skill, negates the old attitudes toward both labor and power structure.

Let us hope that the newer generations can make new discoveries in the field of relations between mass cultures and technology, and find new solutions to a problem which can never really be marked "solved," but which requires continuous solution.

It would be interesting to see more articles on the training and education of the very young in the USSR.

Morris Horton
Fort Lauderdale,
Florida

Gentlemen:

Your article "Algebra in the First Grade?" was most interesting and no doubt impressive. However, a few questions aroused my curiosity.

Assuming that the students receiving this experimental training are of a select group, I would like to know what is being done with these students outside school life; that is, what type of recreation is given to the mentioned young ones in order to have them release their "adolescent impulses"? I wish to know more about your education programs outside the scientific field.

Thank you again for a fine article.

Most sincerely,
Antonio Vera
San German,
Puerta Rico

Brief Comments

Young Soviet Poets

by Vladimir Ognev



Vladimir Ognev is a literary critic and the author of Poetry and Modern Times, A Trip to Poetry (1961), A Book about Verse (1963), and Essays on Poetry (Warsaw 1964). He was born in 1923 and is a graduate of the Gorky Literary Institute of Moscow.

The physicists, the kingpins of our time, have presented the agitated world with still another hypothesis. Many of them talk of an "expanding universe." According to this theory, we are flying into infinity so as to rush back a million light years later.

Not a very cheerful prospect, but I think we still have time to ponder the various problems life has to offer. For one, the problems bearing on the work of young Soviet poets. If we consider the poets born in the mid-thirties young, their developmental influence might well be termed an expansion of our poetic universe.

The years 1954-56 saw a blossoming of new ideas, an awakening of young minds and talents to fresh experimental efforts. How was this reflected in our poetry?

Young poets naturally looked for original means of self-expression. For example, Andrei Voznesensky's first poem, "The Masters," revealed him to be a highly individual lyricist with much to tell his readers. His brilliant style, wealth of imagery and association, sophisticated rhythms and inexhaustible linguistic ingenuity combine to create a world of new thoughts and ideas. His poetry is imbued with the idea that human life is beautiful, incompatible with despotism, tyranny and wars.

Art and its ways of development in our century is what Voznesensky, an architect by education and a poet by calling, is concerned with. In the *Triangular Pear,* a book of poetry written under the impression of his trip to the United States, he reflects on the destiny of man in the modern world.

Robert Rozhdestvensky, born in 1932, is more of a publicist. He is deeply involved with the pressing political problems of the time. His sharp, militant poems are the commitments of a citizen for whom poetry is a weapon in the fight for human happiness.

The poetry of Bella Akhmadulina, born in 1937, is a refined world of fleeting sensation and moods created with bold impressionistic brush strokes. Her poetry is extraordinarily plastic, supersensitive. Just as we have the ancient naïve intuition of the "soul" coexisting in our world with the iron logic of intricate machinery, so Akhmadulina's style somehow harmoniously combines a somewhat old-fashioned form with ultramodern content.

I could go on to name Novella Matveyeva, Yevgeni Yevtushenko, Rimma Kazakova and many, many others. But it seems to me that I need no more proof for my contention that the "expansion of the universe" of contemporary Russian lyrical poetry proceeded along three vectors—a more penetrating analysis of the world, social awareness and free self-expression.

This general process involved not only the young, but all of Russian poetry. There was no clash between "fathers" and "children" here—the latter were merely proved bolder and more active by the eternal logic of life.

About half a century ago the Revolution let poetry out into the echoing city streets. Mayakovsky was the first Soviet poet to merge "I" with "We." This synthesis stays, but on a different foundation. The old trust in the "loud word" is dated. The economy of words, the laconicism of modern form stripped of affectation, is akin to modern architecture, to the modern style of stage acting.

A process of synthesis, of getting back to the essentials of the people's life, has been taking shape in young poetry over the past few years, in my opinion. In the fifties the poets also sought new ways, but they mostly groped in the dark and often strayed back to the beaten track. Seeking genuine artistic values, young poets, unfortunately with small knowledge of the history of Russian and twentieth century world culture, could not possibly avoid "rediscovering America." But then the situation changed radically all along the line, and the young poetry found itself in a much more healthy and invigorating medium.

At present Russian poetry continues its concentration on the problems of our day. What we need is not sensational effects but a deeper penetration into the dramatic collisions of the time. Poets should hold up a mirror to the modern world, a world that faces the big decision of war or peace. To be equal to the task, they must be free of all prejudice, insularity and dogmatism.

Frontiers and Territorial Disputes

by Valerian Nakoryakov



Valerian Nakoryakov, born in 1921, is a graduate of the Higher Party School of the Central Committee of the CPSU. A consulting editor of Communist magazine, he writes on problems in developing public self-government.

On the eve of 1964 the Soviet Government sent a message to the heads of all states and governments proposing that the use of force in settling territorial disputes or border issues be renounced forever. From the Soviet Government's viewpoint, the conclusion of a corresponding international agreement is extremely essential because of the number of dangerous clashes that result from border disagreements, and it is usually impossible to decide who is right.

A glance at a political map of the world will reveal close to 100 areas whose possession has been disputed for ages. The majority of such disputes are fraught with the danger of complicating relations and the possibility of a serious military conflict. In our day, when the interests of states—economic, political, strategic and others—are closely interwoven, when there is a ramified system of alliances, a local conflict may very quickly develop into a world war. It will be too late to look for the guilty party when that happens.

That is why it is so necessary to agree that reason and good will should always be the main criteria in determining the settlement of border disputes. The conclusion of an international agreement on this issue would also help to ease world tension and would create a good basis for increasing trust among states.

The Soviet Government's message did not preclude the possibility of just territorial claims, but only the use of force in "proving" their justice. It condemned a reckless approach to the solution of territorial problems, an approach which is fraught with the danger of military clashes.

In the past year the Soviet Government's proposal has not only been commented on favorably but has also been supported in the most diverse political circles of many countries of the world. They see in the Soviet proposal a constructive basis for talks on this important and pressing issue. And while an international agreement on the peaceful settlement of border disputes has not yet been signed, the Soviet people believe that sooner or later it will be, that the time will come when all territorial issues will be settled at a round table conference, not on the battlefield.

Debating Economic Development

by Genrikh Emdin



Genrikh Emdin, 51, is a graduate of the Odessa Institute of Finance and Economics. He is an editor of the Ekonomicheskaya Gazeta, specializing in national planning. He has also written articles on economic policy and finance.

The Twentieth Congress of the Communist Party sparked off a radical democratization of public thinking. It provoked a free and wide-ranging exchange of opinions on every aspect of government activity, among other things, of methods of economic planning, incentives for production and the organization of management. That discussion is continuing.

Although the views of economists differ markedly, the basic principles to which they all subscribe are the same. First, they all believe that public ownership of the means of production is the basis of our country's prosperity and every citizen's well-being. Second, that economic development should be charted by

a single plan, possible with socialist ownership. Finally, they all agree that the public interest must have priority. The public interest, however, must represent the harmonious combination of collective and individual interests and must be directed toward achieving the highest possible level of economic development and standard of living. To reach these goals, the participants in the discussion are offering their various recommendations for the most efficient use of the advantages of the socialist mode of production.

Most of them propose to strengthen the purely economic levers of management as against the administrative—less control and fewer quotas from the top.

A central point being debated is profit, operation on a paying basis as the main criterion for judging a factory's performance. Academician Trapeznikov and Professor Birman, both distinguished economists, argue that profit should be the over-all index. Implicit in this point of view are the ideas of a self-regulated economy and the automatic effectiveness of economic levers, with profit playing the key role that Academician Nemchinov has argued for on numerous occasions.

Professors Lokshin, Turetsky, Gatovsky and others do not share this point of view. They do not dispute the general, and even the immediate, value of profit as an economic stimulus, but they also underscore the importance of deliberate and purposeful guidance under socialism. Their point is that an orientation solely on profit will not contribute to the balanced harmony desired—centralized planning and local initiative.

Professor Liberman's views have also undergone a certain modification. He was one of the most active participants in the 1962 discussion. He recently said that he no longer regards profitability* as the only measure of production efficiency. The performance of an enterprise should be judged primarily by how it meets planned deliveries with respect to quantity, assortment, quality and time schedules. However, Professor Liberman points out that while the indices of growth of output volume increase in production, output per ruble of fixed assets and lower costs of production are important for planning and accounting. They are reflected in profitability, which is the key indicator and the ultimate measure of efficiency.

The economic discussion has already been productive and promises to be even more so. As a result of the views projected, new indices for planning and evaluating the work of enterprises are being introduced generally. Proposals made by the economists have been incorporated in several important decisions, and some interesting experiments have been carried out with material incentives and the system of remuneration.

---

* The word as used in the Soviet Union means that the money a factory receives from marketing a product not only fully covers the cost of its manufacture but also provides a surplus. Profitability in a planned economy derives mainly from a lower cost of production and better quality, and not from market fluctuations that affect other enterprises or the consumer adversely.

IN THE NEXT ISSUE



The average life span in Russia at the beginning of this century was 32 years; it is now 70. Infant mortality has been slashed to one-tenth—from 273 fatalities per 1,000 in prerevolutionary times to 30 in 1963. These are only two of the statistics on the Soviet public health system found in the February issue. There are also brief articles on the special care provided for miners, teenagers and expectant mothers. To round out the picture, the Deputy Minister of Public Health comments on the USSR health services exhibition now in the United States.

Anatoli Arkhipenko tells about the five days he spent at the Ufa Corrective Labor Camp for juvenile lawbreakers sentenced to terms of from one to seven years. The author discusses case histories, his talks with the teachers and the boys, and the public opinion poll he conducted among the delinquents.



Is all wearing apparel at the mercy of the caprices of fashion? "No!" says Konstantin Telyatnikov. "Fashion takes a back seat in the world of national costumes." Telyatnikov's article on the history of Russian national dress is richly illustrated with color drawings of apparel in 13 regions of Russia.



Other articles in the February issue:
Our Young People Today—Ilya Ehrenburg discusses the problem of generations; **Culture in Crisis?**—Professor Igor Kon analyzes the problems of cultural advance in modern society; **USSR-USA: Women for Friendship**—about eight American women and their visit to the Soviet Union last year at the invitation of the Soviet Women's Committee; **At the Sixth International Biochemical Congress**—a report on the New York meeting attended by 6,000 scientists from almost every country in the world; **Do We or Don't We Have It?**—an answer to the question about Soviet jazz; **Mystery of the Sakachi-Alyan Picture Rocks**—about the fantastic images carved on basalt boulders unearthed in a Nanai village by Soviet archeologists; **"Once a Month"**—a short story about a girl whose parents are divorced; plus the Lavrentyev family serial as well as our regular features.

NOVOSTI PRESS AGENCY

SOVIET LIFE

New York-Siberia-Paris

In 1903 an American syndicate set up to build a trans-Alaska-Siberia railroad offered the Czar a railway project linking New York and Paris, claiming that Russia could not possibly develop the area to the east of the Urals before the end of the century. *Soviet Life* correspondents traveled along the route mapped out in the project and describe the area's development and those involved in it.

Discover the USSR

A series of articles about the many interesting things awaiting prospective visitors to the Soviet Union.

COMING SOON

THE LIGHT THAT DID NOT FAIL

by Alexander Milchakov

THE COMBINED power grid that has been given the name Peace funnels electric power to neighboring socialist countries. A breakdown, and what happened.

Lvov, USSR 12:10 A.M.

"Hello Berlin? What's your frequency?"

"Budapest? What's your tension?"

Controller Yevgeni Lidyayev at the Lvov center checks his instrument panel. Everything normal.

Prague, Czechoslovakia 12:15

It's been storming heavily for several hours. The basic transmission line has just short-circuited, it's out of commission. The Prague controller calls Lvov:

"We need help right away."

Lvov, USSR 12:20

Immediately after he gets the distress call from Prague, controller Yevgeni Lidyayev phones the Dobrotvor power station engineer on duty, Roman Kurtyak:

"Increase the station's load to maximum."

The Mukachev substation starts generating more power. From there it is conveyed to Czechoslovakia.

Prague calls:

"Thanks a lot. But we're still in a bad way."

All the controllers know that from their information panels. Only by increasing the frequency and tension to maximum in the whole combined grid can more power be sent. The order is given to put all power station reserves into action.

Dobrotvor, USSR 1:15

Roman Kurtyak phones the boiler room, "How is everything going?"

"The condenser pump has backed up."

What's happened to the pump? It's been working fine up to now.

The workmen check the filters. There's the answer: The volume of water flowing into the condensers had increased because of the load rise. Consequently the flow in the reservoir canal had increased, dragging in clumps of vegetation that stopped up the filter system.

Technician Grigori Korobenko decides: "The grill has to be cleaned."

The grill is under 20 feet of water!

Five minutes later some workmen go down to clean the grill and reservoir. Those who can't swim, get into a boat near the steel doors. They remove the slimy, clinging plants with scrapers and knives.

Hard and dangerous, working in the dark.

Sajoszeged, Hungary 2:15

The director of the power station is talking to a colleague from the supply department, Sandor Todt. "If we're to boost the load any more, we'll need top-quality fuel. There's a truckload at the storage depot. Get down there, quick! Tell them it's urgent!"

Prague, Czechoslovakia 2:40

The controller at the central Czech power point reports by phone: "There is a steady flow of current from the USSR, Hungary, Poland and the GDR (German Democratic Republic). They're all generating more power. But meanwhile, we'll have to cut our supply to certain spots."

Berlin, GDR 3:50

The chief controller talks to the engineer on duty, Tsvenits: "We need still more energy in the grid."

The engineer calls up the manager of the bread factory at his home and explains the situation. The manager is silent for a few seconds. This will be the first time in years that the factory has not supplied the town with fresh bread. It means they'll have to ship yesterday's leftover bread.

"What's the matter?" asks the engineer, impatiently.

"Well," says the manager at last, "I don't have any choice, do I?"

Then he adds jokingly, "Stale bread is supposed to be better for you, they say."

Bytom, Poland 4:40

At a mine in Bytom it's the end of the shift, but . . . .

"We'll have to go on working," decide the miners, "the power stations need the fuel."

Sajoszeged, Hungary 5:05

Sandor jumps from the still moving car. The man in charge comes up.

"This coal has to be taken off right away," Sandor says.

"There's no engine."

Sandor explains the situation.

"Well, we'll have to get some extra men. Give me five minutes."

Bertsdorf, GDR 5:10

In the railway depot they're expecting the power to be cut off any minute and the electric locomotives stopped. The whole railway system will break down.

At the reserve areas there is an immediate load for the power station.

"We understand," says the shop steward. "The power station has to increase the load sharply, so we'll have to direct the freight there. But we can't depend on the electric locomotive."

"How about a steam locomotive?"

Half an hour later a special crew sets off from the station to the power center.

Prague, Czechoslovakia 6:45

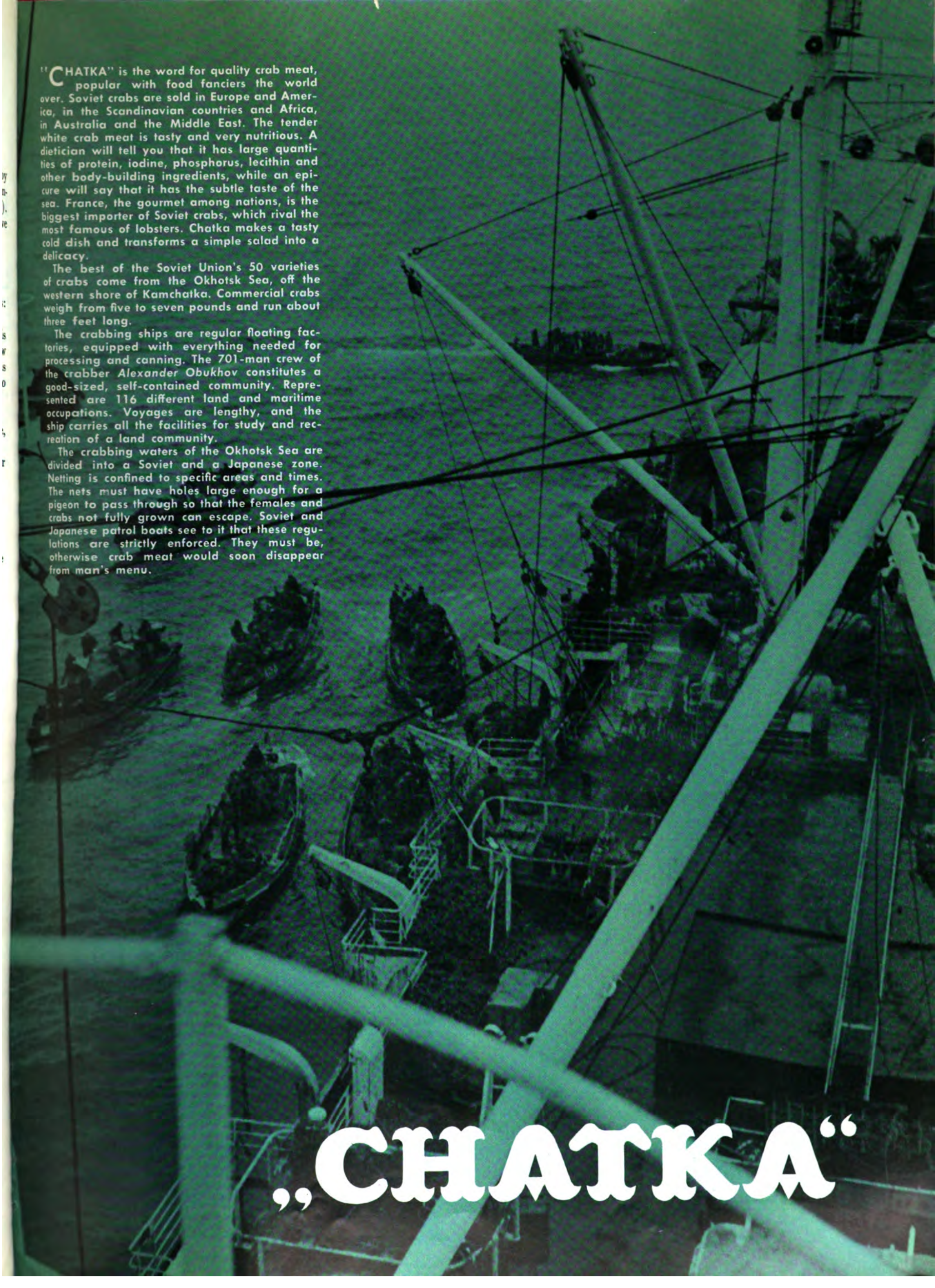
The controller at the power center reports that the repair crew has cleared the debris from the high voltage line and that everything is all right.

Lvov, USSR 7:45

The combined grid controller, Yevgeni Lidyayev, is going off duty. He picks up the phones for the last time, to say good by.

"Hello, Berlin, Prague, Warsaw and Budapest. The grid is all in order. Tension and frequency are normal. I'm going off."

And in a voice shaky with fatigue and some emotion, he bids them all farewell, to which they reply in four different languages, "Good morning."



„CHATKA“

"CHATKA" is the word for quality crab meat, popular with food fanciers the world over. Soviet crabs are sold in Europe and America, in the Scandinavian countries and Africa, in Australia and the Middle East. The tender white crab meat is tasty and very nutritious. A dietician will tell you that it has large quantities of protein, iodine, phosphorus, lecithin and other body-building ingredients, while an epicure will say that it has the subtle taste of the sea. France, the gourmet among nations, is the biggest importer of Soviet crabs, which rival the most famous of lobsters. Chatka makes a tasty cold dish and transforms a simple salad into a delicacy.

The best of the Soviet Union's 50 varieties of crabs come from the Okhotsk Sea, off the western shore of Kamchatka. Commercial crabs weigh from five to seven pounds and run about three feet long.

The crabbing ships are regular floating factories, equipped with everything needed for processing and canning. The 701-man crew of the crabber *Alexander Obukhov* constitutes a good-sized, self-contained community. Represented are 116 different land and maritime occupations. Voyages are lengthy, and the ship carries all the facilities for study and recreation of a land community.

The crabbing waters of the Okhotsk Sea are divided into a Soviet and a Japanese zone. Netting is confined to specific areas and times. The nets must have holes large enough for a pigeon to pass through so that the females and crabs not fully grown can escape. Soviet and Japanese patrol boats see to it that these regulations are strictly enforced. They must be, otherwise crab meat would soon disappear from man's menu.

WHERE IT COMES FROM





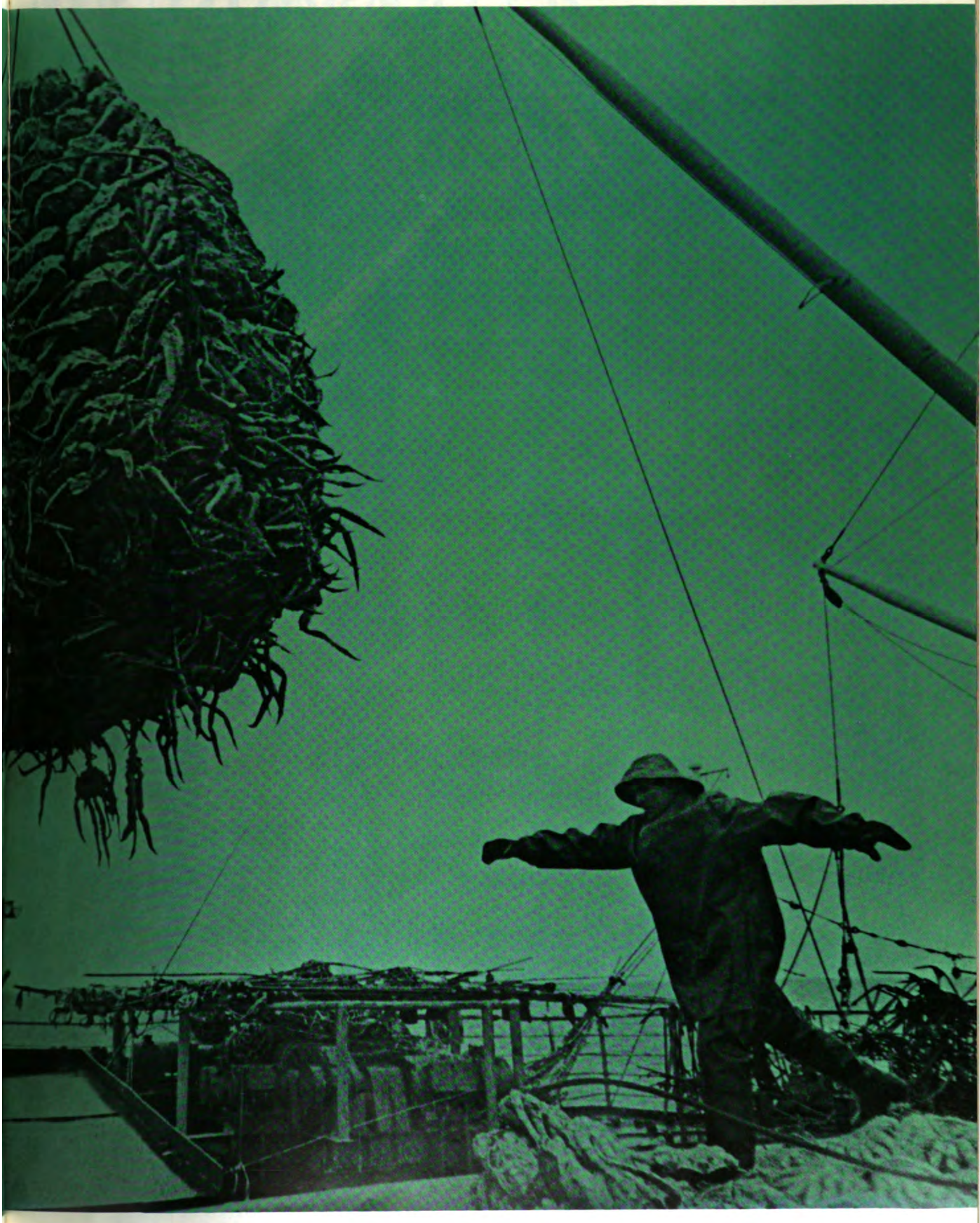


(Above) The day's results. (Right) After the crabs are dumped on the deck they are washed, sorted and canned by women—all in three hours. Though the crew represents more than 100 occupations, there are no professional artists but plenty of amateurs.





The Soviet Union has some 50 varieties of crabs. The best kind are found in the Okhotsk Sea, off the western shores of Kamchatka. The commercial varieties run about three feet or more in length and weigh from four to seven pounds. The ships of the crab fleet are floating canneries, completely equipped. This is the *Alexander Obukhov*, a self-contained industrial community with a "population" of 701 men and women. During the long periods at sea the crew consider it their second home.



TYORKIN IN



By Alexander Tvardovsky

FOR more than two decades Soviet poetry has been enlivened by the character of an inexhaustibly cheerful rank-and-file soldier, Vasili Tyorkin, from Tvardovsky's poem of the same name. The poem was read and loved by millions. There were even serious arguments at the front about whether Tyorkin was an imaginary hero or had a living prototype. For many years after Tyorkin's service at the front had come to an end, his friends and admirers kept asking Tvardovsky for a sequel, even suggesting possible subjects: Tyorkin on a collective farm, Tyorkin on a construction site, Tyorkin on the virgin lands.

Now we meet Tyorkin again: *Tyorkin in the Hereafter*. The hero is the same as ever, and the style is the same: the same lyrical digressions, so typical of all Tvardovsky's narrative poetry; the same masterly use of the common idiom; the same delight in jokes and witty wordplay, the latter often founded on popular sayings and proverbs. But the total impression is quite different. This new poem is sharply satirical in character. Its dominant tone is one of pitiless ridicule of the evils and abuses which flourished in the lee of the cult of personality and which have now finally passed into history.

At the end of the poem stands the date—1954-1963. Alexander Tvardovsky, one of the best-known of Soviet poets, devoted nine years to its completion.

The editors of *Soviet Literature* asked Archie Johnstone, who already had considerable experience rendering Tvardovsky's poetry into English, to translate the poem for our magazine. His work was cut short by sudden death. Archie Johnstone translated only about one-third of the poem. It is this fragment we now offer our readers.

Short of 30 by a year,
Tyorkin meets the Drafter—
Finds he's drafted out of Here
into the Hereafter.

Date? December 31,
ending year of slaughters;
the night a cold and dirty one
—now to warmer quarters!

What befell him down below
I shall tell anon here.
Cries a doubting reader: "Whoa!
"What's a-going on here?

"In this age when wonders flock,
"why this fuss and bother?
"What's behind this Tyorkin talk?"
"Ask me!" snorts another.

"Seems he's got a tale to tell."
"Bet you it's a tall one!"
"Who asked him to give us Hell,
"even if a small one?"

Hearing these and other views,
I shall watch my p's and q's.

So, my gracious judge and reader,
this I ask you as my due:
Never mind the special pleader,
but what follows—read it through!

Judge it sternly, spare your praises,
but ignore the critiers' bland
sniffing in the simplest phrases
traces of ideas banned.

Let them, in and out of season,
hunt the slipper and the slip;
tiny faults they label treason—
(someone tries to sink the ship!)

Leave them to their fond fixations,
old wives' tales of gruesome fate
that menaces "the foundations
and the fabric of our state."

Outworn habits still prey on us,
doubts, suspicions breeding fear.
Another era is upon us:
like it, lump it—it is here!

Remember when our foes were legion?
You knew me then—well, trust me now,
your guide through some strange Nether
Region
—but let me spin my yarn somehow!

A plain straight story? Well, say almost;
—few things in life can bear that brunt;
a gun goes frontward backside foremost
(for frontward means toward the Front).

So there you have my short preamble
to Tyorkin in the realms below.
And if he is inclined to ramble,
well, that's the way he'll always go.

Back goes the rule book on the shelf.
Now let the story tell itself.

So Vasili in his prime
(here's no cause for laughter),
snatched from Here before his time,
lands in the Hereafter.

Corridors run to and fro
(What's their destination?)
Though the arching roofs are low,
it's like a Metro station.

Soldier's eye inspects the roof—
in its care you'd welter!—
Bomb- and shell- and mortar-proof,
what a perfect shelter!

(In his innocence he fits
bomb-power as he knows it
to TNT and direct hits
and roof beams to oppose it.

Never dreaming of the birth
of atomic wonder
that pulverizes Mother Earth
and everyone "down under.")

Wake or dream? He doesn't know,
thoughts are in a muddle.
But from his boots the melting snow
makes a lifelike puddle.

Messing up the spotless floor,
all so trim and tidy,
Tyorkin, shaken to the core,
Culture! sadly thought he.

Still, it's solid, warm and sound,
fine for winter station.
Now I'd better look around,
get my map location.

"Way IN" signs there are in heaps—
Ah! I've got the layout!
Once you're in, you're in for keeps;
there isn't any Way OUT.

Doesn't that just make you curse?
Life's all jolts and wrenches.
Still, we soldiers had it worse
freezing in the trenches.

Here it's warm as Jonah's whale.
(Where's their central heating?)
It gets my throat and a glass of ale
would take a lot of beating.

Here there's discipline and drive,
not a sign of slackness.
Tyorkin watches trains arrive
out of Stygian blackness.

THE HEREAFTER

Strutting out to meet each train
comes a straight-backed colonel.
He's the C. O. (that is plain!)
of Terminus Infernal.

Behind, before, to left and right
march his armed protectors.
But what dangers come in sight
in these nether sectors?

Once you're posted here below,
why should bullets fret you?
You've only got one life, you know,
here death cannot get you.

Tyorkin, formal at this stage,
proper drill observing,
gives his number, name and age,
unit where last serving.

The Colonel looks him up and down,
distant as a demon,
treats him to an absent frown:
"State the train you came on."

Tyorkin, body upright held,
gave a respectful answer:
"I came here, sir, self-propelled.
"I walked—at times I ran, sir."

The Colonel casts an angry look.
(Thought Tyorkin, "Here's a haggler!")
"Walking? That's against the book,
"It classes you a straggler."

(Argue? It's the same old song.
You always are defeated.)
"Yes, sir, I was in the wrong.
"Offense won't be repeated."

That's a promise you will keep
there is no repetition;
it's only once you make the leap,
the transition to perdition.

The Colonel smiled a sickly shade;
"Now go fix your papers.
"Here the rules must be obeyed,
"there are no escapers.

"Everyone goes on the list
"graded x to zero,
"not a single trait is missed
"of coward or of hero.

"Here it's Method we enthrone,
"we only deal in numbers.
"A single soul who comes alone
"our office work encumbers.

"Proceed along that corridor,
"following each arrow.
"Let me warn you just once more—
"tolerance is narrow."

A smart salute and off he went
till he reached the portals
where officials, pale and bent,
scrutinize ex-mortals.

Name, rank, number, duly checked,
then a new direction,
left, right, left the arrows becked
to the Kit Inspection.

"Kit inspection? Damn their eyes!
"That's for raw young rookies.
"Kit gets hit where metal flies—
"Write that in your bookies!

"And as sure as eggs are eggs,
"the dead have no equipment."
"Yes, but Soldier, regs are regs,
"so—declare your shipment!

"Books must balance, forms must fill
"to the last initial;
"lists must show, right to the kill:
"Is your death official?

"Yes, it happens now and then
"that a wound's not mortal.
"The work that means to us poor men!"
(Tyorkin gives a chortle.)

"We file him first 'Unclassified'
"then put him under 'Pending.' "
(Tyorkin's eyes now open wide—
this could bring a good ending!)

"You are new, don't know our norms,
"you're amazed by how it looks here:
"but if you don't fill out your forms,
"you don't get on our books here."

"Blast his books, the bookaneer,
"that's for him to worry.
"My concern's, get out of here
"and get out in a hurry."

Gaining confidence, he asked
for a glass of water;
ghostly mocking glances passed,
the atmosphere grew hotter.

Tyorkin cursed them one and all,
cursed their ghoulish laughter.
"Soldier, dear, why don't you call
"for beer in the Hereafter?"

This shaft of other-wordly wit
brought rounds of hollow cackles,
several ghostly sides it split
and raised Vasili's hackles.

Now off he goes along the line
of arrows to a new row
of offices that bear the sign:
"Investigation Bureau."

Here the rooms are roomier,
but lower are the ceilings;
it's eerier and gloomier—
in keeping with your feelings.

The bosses here seem bossier,
humility requiring,
the piles of file and dossier
are really awe-inspiring.

The fittings are of deepest black
(a special shade, "infernal"),
the telephones are all—alack!—
reserved for use internal.

A bony hand comes through a hole
in a dark partition.
"Fill out, please, this questionnaire,
"making no omission."

Tyorkin's lips in scorn are curled:
"Isn't all my history
"told in verse to all the world?
"Why, then, all this mystery?"

"Well, we know your story, friend,
"and its second title:
" 'Without a start, without an end.'
"Start and end are vital."

"End?" Well, isn't death enough?"
asked Vasili grinning.
"Cut the comedy and bluff—
"Begin at the beginning."

"It's all there, in rhyme displayed,
"easy to remember,
"and the writer-bloke's okayed—
"He's a union member!"

"Our security is tight
"and we'll let you know it;
"you'll go through the mill all right
—same goes for that poet!"

(Tyorkin sees that here a chap
shouldn't stick his neck out—
Round your neck they'd hang a rap,
wreck your plan to check out.

Better far to play the peace.)
With a smile seraphical
he sits and writes his masterpiece
autobiographical,
showing proper veneration
for an earlier generation.

Granddad raised his wheat and barley
on his little patch of ground.
With aliens he didn't parley
(in our parts there're none around);
didn't visit foreign places;
never landed in the clink;
often he'd kick o'er the traces
for he loved his drop of drink;
never held up as an example;
never won the least award;
(Grandma said his faults were ample
but her word might be ignored);
wasn't active in the movement;
never was a weighty one;
didn't practice "self-improvement"
after he was 81.

Tyorkin's pen runs on and on,
uncles, aunts and cousins,
the living and the dead-and-gone
dear ones by the dozens.

Bureau chief received the text,
glanced at what was in it,
muttered a reluctant "Next!"
Then said: "Just a minute!

"We reject what's done by halves;
"here it's plainly stated:
" 'Give herewith your photographs
" 'duly triplicated.' "

(Try to tell this Bureau-runt—
and all base-soldier gripers—
the only snapshots at the front
are shot by Fritz's snipers!)

"Had one once, I shan't pretend—
"didn't think it mattered—
"but I gave it to a . . . friend,
"anyhow, 'twas tattered."

The graveyard voice became a shout;
came a stream of strictures:
"Friend?—but that's your own lookout,
"ours is: Get the pictures!"

Even worse was yet to come,
(nothing do they stint here!)
"Tyorkin, now hold out your thumb,
"then impress your print here."

This gave him a nasty jar
but steady came his answer:
"You want my thumb? Well, here you are
"What more do you want, sir?"

One more bureau left behind.
One more here to enter.
This one's of a different kind,
"Sani-Medic Center."

Not so different when he learned
from Sani-Med red-tapers
that once again the issue turned
on having "proper papers."

"To pass through to Infinity
"you need a doctor's order."
"No doc in my vicinity
"that night I crossed the Border;
"and now it seems that here below
"they still play hunt-the-neurine
"and line us soldiers in a row
"to test our blood and urine."

(There would be no need to grieve
if this spectral test camp
gave out tickets for sick leave
—but where in Hell's the rest camp?)

They checked his pulse and temperature,
in many groups they classed him,
"Breathe in! Breathe out! and now be
sure—
"Any drink?" they asked him.

Tyorkin sighed a bitter sigh,
Had he made a bloomer?
Were they sorry he felt dry
or was it spookish humor?

"If I'd have had a drop or two
"to warm me when I copped it,
"d'you think that I'd be here with you,
"that I'd have ever hopped it?"
Right or wrong, it's all the same,
it's the soldier gets the blame.
You're to blame when ration liquor
vanishes like snow, but quicker.
Quartermaster What's-his-name
snaffled it—but you're to blame.
You're to blame for sheer appeasing
by lying bleeding, slowly freezing.
You lay there till a mortar came
and burst beside you—you're to blame.
You're to blame here, to the hilt—
the dead must bear the living's guilt.

Tyorkin told himself to grin
and bear it without huffing,
while the X-rays entered in
and showed up all his stuffing.

They tried all treatments in the place,
gadgets therapeutic,
wrote three volumes on the case
just to show how you tick.

Jabbed him here and poked him there,
couldn't make him yammer,
rapped and tapped him everywhere
with a little hammer.

Whatever way they did their stuff,
still results were tacky.
He didn't smell quite dead enough,
he smelt of sweat and 'baccy.

Each succeeding thesis or
test gave strange reaction:
no sign of rigor mortis or
decent putrefaction.

Who would take the leading role
to solve the case of Tyorkin?
Could it be there was a soul
in his body lurking?

Exploring every avenue,
trying out each version,
at last they hit on something new
called "complete immersion."

But immersion means a bath
and a bath means water!
Thirsty Tyorkin gave a laugh—
Then there came a mutter:

"But today the taps don't run;
"Not a drop is coming."
So it seems two worlds are one
when it comes to plumbing.

A headless man cares not a curse
if his hair needs tending.
Tyorkin says: "It could be worse
"but let us see some ending.

"All I want's a place to rest,
"any kind of billet
"with a bed. Would I be blest—
"just you watch me fill it."

War had cheated him of sleep
and now that here they showed him
shelter warm and dry and deep,
many hours they owed him.

"Eternal rest" the promise went
(that's to cheer your heart with)
but with less he'd be content—
round the clock to start with.

Corridors stretch to and fro
to the dimmest distance;
signal lights are set at "Go"
(but "Go!" with some insistence!);
warnings that you musn't stray
(that would cause them bother)
pointing fingers say "This Way"
(this way and no other!)

Street lamps pierce you with a frown
under monklike cowling;
doorways send your spirits down;
they, too, join the scowling.

Doors are soundproofed one and all,
(don't disturb the boffins!)
and project out from the wall
like upended coffins!

Greeting you behind each door
is an odor musty
of clay, decay and plenty more—
stuffy, frowsty, fusty.

Here almost-humans do their best
to wear a look to tell you:
"We gladly turn down your request—
"We're always pleased to fail you."

Tyorkin tries to get things clear,
sees a poster reading:
"People: Do not interfere
"with those who're busy leading."

Even so he dares to go
to a shriveled figure
whose pile of files and folders grow
bigger still and bigger.

"I've been posted to your roll
"now my load I'm shedding,
"mine is but a humble toll
"just some bed and bedding."

The scribe sat gazing at the floor
inwardly reviling,
pointed to an inner door,
went on with his filing.

Tyorkin crossed the dim-lit room,
heard the dry old buffer
murmur sadly in the gloom:
"The pests I have to suffer!"

In the inner office, too,
wordless pointing flourished
and the rule of "Pass-to-you"
lovingly was nourished.

Thus he went from stage to stage,
passed along by miming,
while each ghostly personage
kept on double-timing.

Faint at last the answer came,
(listen, it may miss you!)
"No bed, no bedding, not a frame,
"but pillow slips we issue."

"Pillow slips! Oh God, what next?
"I want a bed to sleep on."
"Now then, Soldier, don't get vexed.
"It doesn't pay to keep on.
"You've been told we've no supplies
"even at our center.
"That is how the matter lies,
"now your name please enter.
"We give you too (and thank your star!)
"shavings for your pillow.
"Sign for what you've got so far
"and the rest we'll owe you.

"We can't move mountains right away."
(Thus they made excuses,
"Rome was not built in a day"
the saw still has its uses!)

Tyorkin felt the urge to spit,
couldn't muster spittle.
Cursed them to the deepest pit—
Such fuss for so little!

All this routine, all these norms,
all their means of dodging,
all these dossiers and forms
but not a simple lodging!

"Moving mountains," "building Rome,"
wordy froth and bubble.
A soldier wants some kind of home—
not this endless trouble.

Worst of all, their haughty air;
if for just a minute
he could drag them back Up There
and rub their noses in it!

Just a spell there at the Front:
teach these office loungers
how the boys who bear the brunt
deal with snooty scroungers.

Silently he turned to go,
sad and empty-handed.
Then he felt his anger grow,
"Complaint Book!" he demanded.

Gasped an inky-fingered spook.
"That, sir, is resented.
"We've no need for such a book.
"everyone's contented."

'Twas the coolest answer yet.
Tyorkin's eyes were glaring.
"Have you then a wall gazette
"to give such things an airing?"

"Yes, of course we have a press."
(Tyorkin's spirits brightened)
"Thus events we can assess
"and keep ourselves enlightened.
"First to right, then right again—
"but is your visit needed?
"Our advice is count to ten"
—advice that wasn't heeded.

Without counting even nine
Tyorkin entered bravely.
"Grave News" read the office sign,
"Speak!" a voice said gravely.

In the editorial chair
sits a sharp-eyed specter
loaded down with doubt and care,
a snuffling flaw-detector.

"On our space this would encroach;
"Shorter would be better,
"in any case, a wrong approach
"I'll file it in 'Dead Letter.' "

This disposed of, back he goes
to his ceaseless chasing;
speeding o'er the lines, his nose
scents suspicious phrasing.

Here, he kills a word or two,
there, a word's inserted;
with a sentence framed anew,
the purport is inverted.

Now he edits out a phrase
that might have hidden meaning;
now his pen goes through the praise
for those of dubious leaning.

(Plainly as an earthy being
he had held a similar post.
Now his urge for overseeing
drives him on, a harassed ghost.)

Something claims his shocked attention.
He smells an unpermitted rat,
a dark, unholy contravention
of laws dear to a scribocrat.

Under glass for magnifying
he scans the sheet with worried frown;
then for yet more subtle prying
he turns it, reads it upside down;
steeped in rule and ban and stricture,
hating anything amiss,
it's not difficult to picture
how he'd treat a tale like this!

He'd drive the daftest of us dafter,
this underworldly overseer;
"What's all this talk of a Hereafter?
"the only world is this one, Here!"

"This," he'd say, "is shameless plotting,
"attempting to revise the past;
"our noble record you are blotting,
"casting slanders free and fast.
"What you need's a sharp directive
"after such a grievous fall.
"You have strayed from the collective—
"that, my friend, explains it all.

"You've been headstrong, gallivanty,
"in your pride your head has whirled,
"fancying yourself a Dante,
"showing us your Underworld!

"They will call you to the Bureau,
"cut you down to proper size,
"place you in a lower, new row,
"make you fully realize
"that you rhymsters mustn't frivol,
"mustn't mock with nasty quirk,
"must respect us and be civil—
"and write to given Plan of Work.
"Only then—and no more ructions!—
"you'd resume . . . and make the source
"of poetry our inspired instructions
"(the very latest ones, of course).
"With that spirit in your bosom
"verses like the bees will buzz."

"Yes," says the author.
"I could do some
"but spirit is as spirit does."

Spirits are of many classes,
good or bad, alive or dead,
made of solids, liquids, gases;
some of them go to your head
and set unsober legs awobbling;
some belong to haunted parts—
the spook, the bogy and the goblin—
some live in our souls and hearts.

Now excuse me, this digression
here must end. My spirit shuns
departed spirits: now a session
with my friends—the living ones.

So then step back o'er the threshold
of this little story book. . . .
what is happening to our Tyorkin?
Come right in and have a look.

Look around, it will remind you
of a huge department store,
but before, beside, behind you
silence reigns forevermore.

When will weary bones stop aching?
When will sleep drive off this waking?

Galleries of grace and gloss
stretching on forever.
Was there then a place to doss
for a soldier?—Never!

Robbed of any chance to rest
he vies the prospect solemn,
feels like a soldier sorely pressed
who falls behind the column.

If he could catch up with it
even on the double,
yes, he would march up with it
and never grudge the trouble.

Other troops he overtakes
(they're among their own ones!)
Do they care what bid he makes?—
(he's one of the lone ones!)

That is how our Tyorkin feels,
homeless, shut out, friendless.
Fate can hand out dirty deals—
but miracles are endless!

Here before his wondering gaze
a cherished friend of front-line days!

This friend had left the living legions
when his veins no more could bleed,
but in friendless Nether Regions
here, at last, a friend in need!

Never had the memory faded
of those weeks of sternest test,
trekking through the land invaded
after bitter siege of Brest.

Then the parting—like so many!—
a soldier leans upon his spade,
a second soldier lies unseeing
in the shallow grave his friend has made.

"Sorry for this makeshift graveyard
"I did my best with my two hands,
"Forgive me, I must trudge on eastward."
The other soldier understands.

Courtesy of the magazine Soviet Literature

THE OPEN DOOR

by Yuri Grafsky

Photographs by Igor Vinogradov

KURBAN VALEYEV woke up early. "Perhaps I'm getting old," he thought, "waking up like this before dawn." But he remembered that he had always arisen with the first crow of the cock.

"Worry is worse than any cock," said Kurban to himself. "Once it's pecked at you, you'll never fall asleep. And the bigger the worry, the more wide-awake you'll be.

He thought of the sector where his team worked, a snow field between two mountains 10 miles long and four miles wide. The snowdrifts, smoothed by the wind, were long, swollen, and seemed to flex like muscles. A trifle brown by now, as though tanned by the sun, they were frozen so hard that one could walk across them as on ice. There were a hundred and five wells in that snow, and more were being sunk every week.

After dressing quickly, Kurban walked about the house in his socks so as not to wake his grandchildren. He had a good breakfast—he would be moving about all day, and there was no telling when he would find time for a snack.

He put on his felt boots, wrapped his overcoat around him, and donned his hat. Lighting his pipe, he went out. A gray mist enveloped him on all sides. The frozen fog was dense enough to hide the houses across the street. The harsh air scraped his throat.

But he did not have to wait long. A motor sputtered in the mist. Soon he could see the yellow headlights of the bus slowing down to a stop before his gate.

Kurban Valeyev slammed the door behind him as he got in and took the high seat beside the driver.

"Let's go!"

He turned around to look at the others in the bus. They were all there: everybody who lived in Almetyevsk and whoever else had to be taken to the various sectors.

All of them listened as Kurban gave the usual instructions before a new shift took over. Each one was told exactly where he had to go and what he had to do. There were no interruptions and no repetitions. His orders were brief and clear.

I knew Kurban Valeyev had lived in a Tartar village as a child. When the Volga region was stricken with famine in 1921, many people left home in search of bread. His family went south to Astrakhan. It was there that 15-year-old Kurban lost his parents. After this tragedy he managed to reach Grozny, in the North Caucasus, and came to the oil fields for the first time. He started off doing odd jobs and then became an operator at one of the wells.

Valeyev still regards Grozny as his second home, for it was there he grew to manhood and learned a trade. Throughout his apprenticeship he was paid the average earnings of a piece-worker. All his life he has been grateful to the people who shared their experience with him, helped him through all sorts of difficulties.

When he became a skilled oilworker, he had a great longing to see his native region once again, especially since large oil deposits had been discovered in Tataria.

In 1949 he came to Almetyevsk. It was not the city it is now, not much more than an old village and a few tents. Valeyev, his wife and two children lived in one of the tents. Eventually that tent grew into a good-sized cottage.

The bus kept rolling along. We were heading for an "underground" repair team that was installing a new pumping jack in one of the wells. Before we got to them, Valeyev picked up several mechanics waiting for him at the administrative office.

The bus stopped about a mile and a half from the wells, the road went no farther. Kurban climbed out and waved to us to follow him. We walked along a path at first, and then straight across the snow. The man kept hurrying on, his steps swift and energetic; we had a hard time keeping up with him.

The work of the repairmen was in full swing. They were lifting the pipes and preparing to sink the depth pump. A machine warmed the tubes with steam, obscuring the workers in clouds of mist.

Kurban addressed the bulldozer driver:

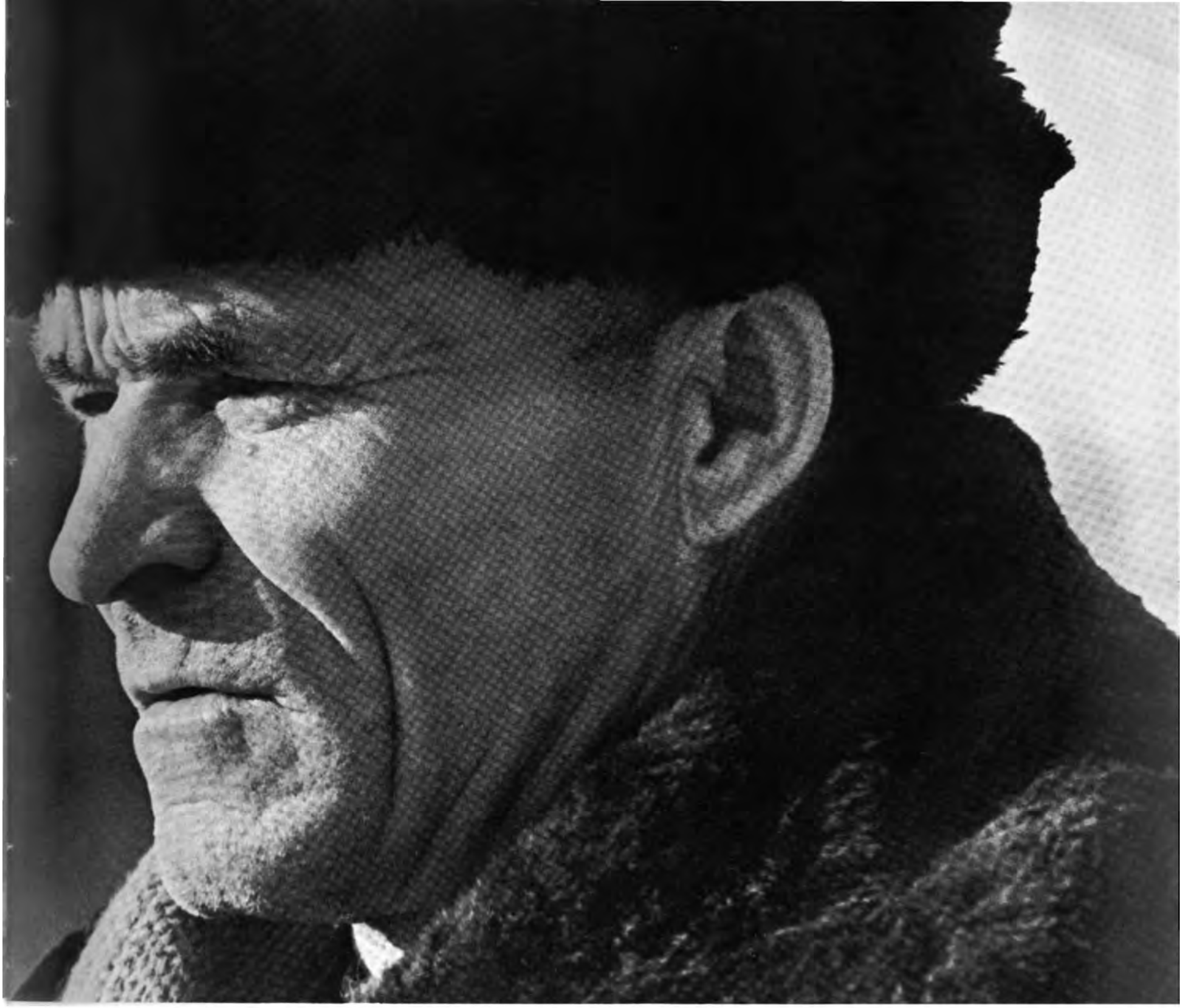
"We've got to reach the next well," he said. "The pipes have been paraffined there, and the well has stopped working."

The bulldozer plunged across the drifts with a roar. Kurban watched it for a while and then followed in its tracks.

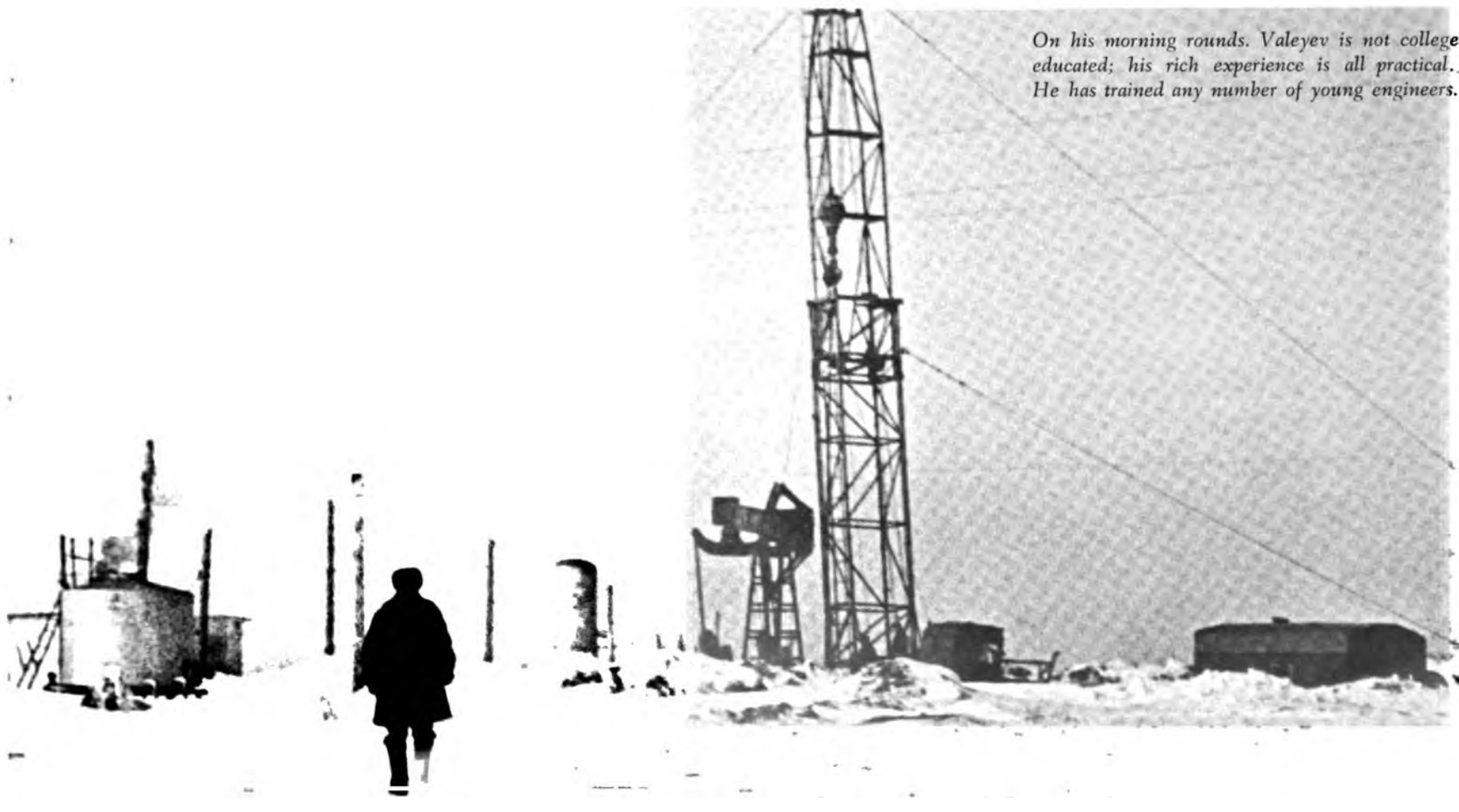
"I'd better show him the way. He's a new driver and doesn't know where things are; he's likely to damage one of the pipes. But no, I won't have to go after all! There's the well operator; he'll show him the way."



Kurban Valeyev heads a team of Tatarian oil men who are responsible for 10% of the most productive and efficiently run wells in the country



On his morning rounds. Valeyev is not college educated; his rich experience is all practical. He has trained any number of young engineers.



A skier was approaching across the snow, obviously in great haste.

Kurban went ahead to meet him and said something in Tatar. The skier answered in the same language. Kurban nodded, and the operator moved on.

"What did he say?" I asked.

"His little girl is sick, and he's got to go home. Never mind, I'll go to the well myself."

Running through the snow, Valeyev caught up with the bulldozer struggling through the drifts. Every now and then it had to roll back and attack a barrier of snow again.

The foreman climbed into the cab and said something to the driver. The bulldozer's motor was idling now. Kurban told the young man at what angle he ought to tip the big blade of the machine. The bulldozer broke free again and did not stop until it reached the well. The foreman then told the driver how to move his machine about and clear a space.

Kurban then came over to me. There were drops of perspiration on his temples and he was breathing heavily.

"That bulldozer driver ought to be able to do all those things himself, but he's young. . . ." Reflecting for a moment, he added: "The work doesn't bother me, I don't mind the frost and I don't get tired. It's when I get home and have had my supper that I begin to feel it. I'm likely to doze off for a while then, but I suppose that's only natural."

I recalled what Vladimir Filanovsky told me about Valeyev. Now the chief engineer of the oil industry board of the Central Volga Economic Council, Filanovsky came to Almetyevsk in 1952, directly after graduating from the oil institute in Moscow.

"They put me on Valeyev's team," Filanovsky said. "I remember how he brought me out to the field, pointed to a well and said: 'Here—this is where you work. Go to it!' And not another word. I worked for two weeks and never heard a word from him. Later I caught on to his method. He would watch silently, but then demand why this or that had not been done.

"And there was nothing he didn't spot! Another operator and I were walking across the field late one night when we suddenly discovered oil on the ground. It meant one thing—a pipe had sprung a leak! But where? Somewhere near or 50 yards away? 'Let's phone Valeyev,' I said. 'You go and phone him,' answered my companion, 'I'll start digging. He'll want to know what steps we took. What do you think he'll say if he hears that we both ran off to telephone instead of getting to work?' That's what he trained us to do."

Filanovsky smiled and went on:

"Valeyev stayed on the job for two days and two nights. I don't know where he got the strength! Later I learned to stay awake for two and three days at a stretch myself. As Valeyev says: 'Worry is worse than the crowing of any cock. Once it's pecked at you, you'll never fall asleep. And the greater the worry, the more wide awake you'll be.' When I got to be chief of the oil field, and later of the oil board, I always put the new engineers into Valeyev's hands. As soon as a newcomer arrives, I put him on Valeyev's team. Later Valeyev tells me who'll make a good worker and who won't. He's never been mistaken about that."

The sector Kurban Valeyev runs is much like any other in this oil field. The wells are the same and they are operated in the same way. Yet his wells are the most productive. Why? Because he is familiar with every well and knows the daily cares of each man on his team.

Kurban Valeyev invited several friends to his house that evening. He was leaving the next day for Moscow to attend a session of the Supreme Soviet. He was a deputy and this was a going away party, so to speak.

The first to arrive were his daughter and her husband and Hamid Mananov, assistant team leader. They were followed by Vazii Girfanov, secretary of the Party committee of the neighboring oil field.

Kurban invited his guests to the table, and his wife served *permyachi*, little round meat pies she had baked for the occasion. The crust was delicious, the filling fragrant.

A toast was proposed to the host with best wishes for a happy journey, another to the hostess for her wonderful cooking. The talk began, and Vazii Girfanov, a round-faced man with dark eyes and fresh, youthful features, turned to me:

"I too was on Kurban's team once—first as an operator and then as his helper. Do you remember those days, Kurban-aga?" he said addressing Valeyev. "Remember how we looked all right for Galya?"

"She was our geologist," he said, turning to me again. "We had to go out to one of the wells in the winter to see about a pipe that had burst. It was a dark and windy night, and we were on horseback. There was no other way to get there.

"When we reached the place, we dug up the pipe, found the break, and began to repair it. With the job finished we looked around for Galya, but she was nowhere to be seen. She had gone off to take some measurements, but hadn't come back.

"What should we do? Wait for morning? Kurban said no! He lined us up and set us off in groups to search the wells. The snow was blinding and I couldn't see a thing. Worse yet, the snowdrifts kept shifting. I reached a post finally and held on, thinking it would be best to go no farther; I'd get lost myself. 'But what would Kurban say,' I thought? He'd say nothing at all—just look at me and turn away. That's why I let go of the post and went on in the dark."

"Did you find her?"

"Yes, toward morning. She had curled up in one of the sheds and gone to sleep."

"I remember another occasion. Kurban-aga was inspecting our well in his usual strict way. He kept walking about, frowning, and I wondered what was bothering him. Finally he came to the gauges. They were clean and silvery, as they should be. But he pointed to a black streak at the edge of one of them.

"What's this?"

" 'I suppose the seam is leaking,' I answered. 'I'll get a copper wire and rivet it down a bit.'

"I was about to dart off for the hammer, when Kurban-aga shook his fist at me. 'Don't you dare use a hammer!' he shouted. 'Do you want an explosion?' "

"I kept leafing through my physics book all day after that. Copper wire wouldn't spark if hit with a hammer! Why did he yell so? Suddenly I understood why: the gauge was made of steel! And steel could spark if you hit it. That's Kurban for you—he never went to college, but he knows everything!"

Valeyev must have caught the last sentence. He frowned:

"What are you two whispering about?"

"About important things," answered Girfanov. "You're going to the session of the Supreme Soviet; why don't you ask them about our pay? We oilmen ought to be paid for piecework instead of drawing regular wages. It doesn't make sense for us to be paid by the day. It's as though we were being paid not for the quantity of oil we get, but for the time we spend out in the frost."

Girfanov was an economist, and it was difficult to argue with him; he had all his facts at his finger tips. Valeyev didn't argue the point, but his narrow eyes grew even narrower, as though he were filing the question away to think over later. Perhaps he would bring it up at the session, but only after he had turned it over carefully in his mind.

Girfanov, meanwhile, had changed the topic. He was talking to Pavel, Valeyev's son-in-law, about bringing up children.

"Your children live with their grandfather," he said, "and that's wrong. Parents ought to bring their children up themselves. Their grandfather has a bigger house, of course—but you won't be so crowded in your apartment."

Pavel disagreed, but he sounded a little uncertain.

Another conversation was in progress on the sofa in the corner. Valeyev was giving final instructions to Hamid Mananov:

"You'll take my place while I'm away. Keep checking the repairs in the wells and see that they get pumping as soon as the repairs are done. Watch the new section, the oil will be coming up any day now. And take my advice, Mananov, keep studying! They tell me you missed your classes at the technical school again, and that's no good."

Mananov, a heavy-set man of 35, looked like a little boy being scolded. Kurban continued:

"If I were your age, Mananov, I'd certainly go to school. You're probably thinking: 'Kurban never went to college, but all the new engineers go through his hands! Which means a man can manage all right without studying.' But that's nonsense, Mananov! I've had a hard life, a hard life! Go on with your studies, don't waste time!"

I left Kurban's house late that evening. He stood at the door, shirt open at the collar.

"You'll catch cold!" I cautioned.

"I'm all right!" he answered, taking a deep breath of the air and wet snow. "Spring isn't far off," he said.

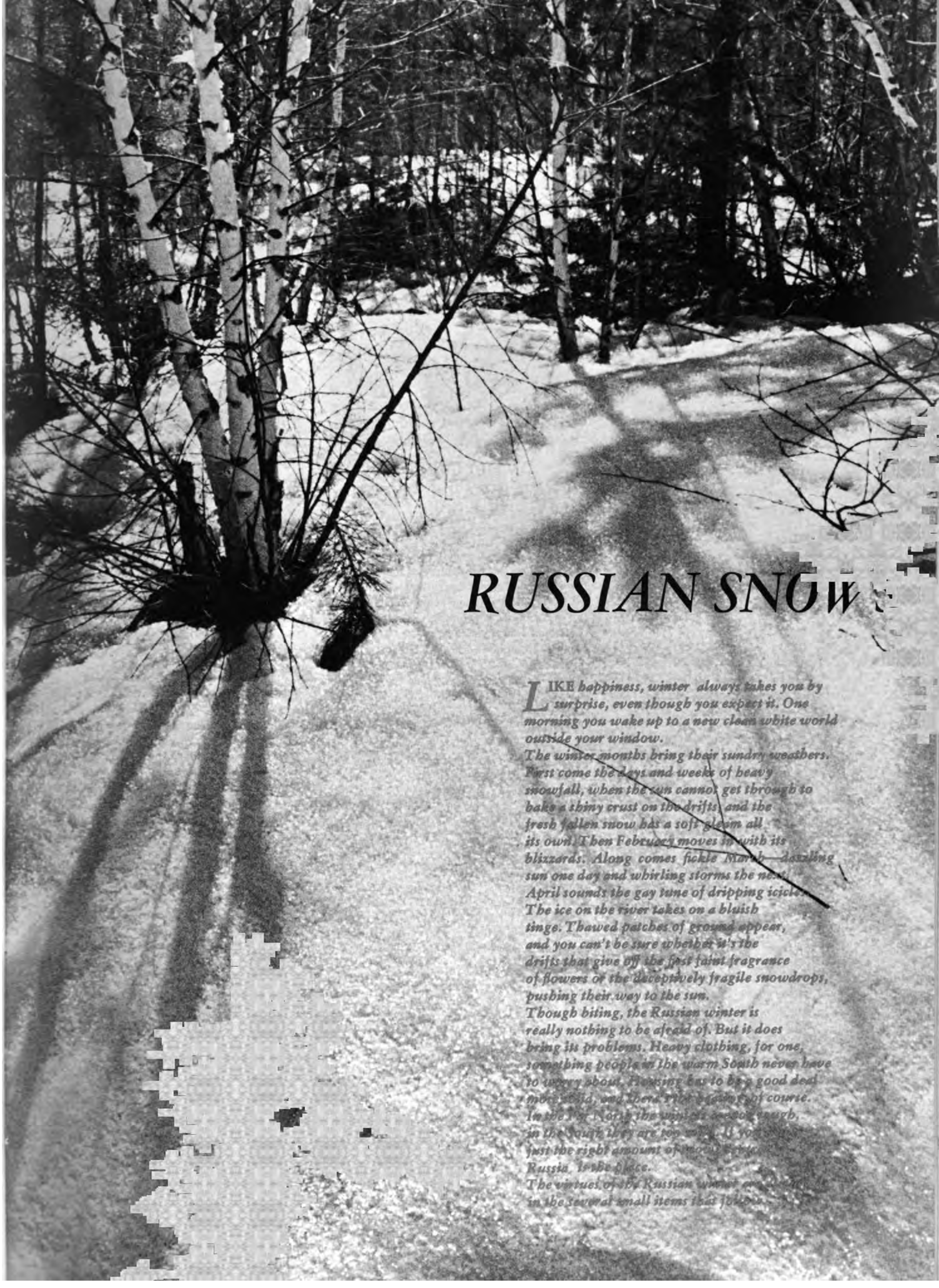
I set off in the dark. Kurban stood watching me for a long time. I could see him at his open door, the door that was always open to everyone.

His reading is technical and legal—he is also a Supreme Soviet deputy.



The 58-year-old team leader and legislator reads to his grandsons.





RUSSIAN SNOW

LIKE happiness, winter always takes you by surprise, even though you expect it. One morning you wake up to a new clean white world outside your window.

The winter months bring their sundry weathers. First come the days and weeks of heavy snowfall, when the sun cannot get through to bake a shiny crust on the drifts, and the fresh fallen snow has a soft gleam all its own. Then February moves in with its blizzards. Along comes fickle March—dazzling sun one day and whirling storms the next. April sounds the gay tune of dripping icicles. The ice on the river takes on a bluish tinge. Thawed patches of ground appear, and you can't be sure whether it's the drifts that give off the first faint fragrance of flowers or the deceptively fragile snowdrops, pushing their way to the sun.

Though biting, the Russian winter is really nothing to be afraid of. But it does bring its problems. Heavy clothing, for one, something people in the warm South never have to worry about. Planning has to be a good deal more careful, and there's that heating, of course. In the Far North the winters are too cold, in the South they are too wet. If you want just the right amount of snow and ice, Russia is the place.

The virtues of the Russian winter are [illegible] in the several small items that follow.

The cloudlet turned into a white storm cloud that slowly rose higher, spread out and gradually covered the sky. Snow began to sprinkle down, and then, all of a sudden, big flakes fell thick and fast. With the moaning wind came a blizzard. In an instant the dark sky merged with the sea of snow. . . . The wind howled with the fierceness of an animate being.

Alexander Pushkin

It is pleasant to look at the white earth and the white roofs the day the first snow falls, the first day of riding in sleighs. The air is gloriously gentle to breathe, and you recall the years of your youth. The old lime trees and birches, white with rime, have a kindly look; they are closer to the heart than cypresses and palms.

Anton Chekhov

All around stretches the violet untouched snow. But underneath, hidden from men's eyes, the eternal miraculous work goes on—the earth is being freed. The sun eats up the snow, nibbles it away, and floods it from underneath with moisture. . . . By evening the steppeland stream breaks its ice with a groan and sends it flying along with the current, full-watered, swelling like the breast of a young mother. And astonished at the unexpected departure of winter, the man stands on the sandy bank. . . . All around the snow gleams treacherously and innocently blue, and drowsy winter reigns.

Mikhail Sholokhov

The snow had a clean, fresh smell. It was the smell of the wind, of ice melting in your mouth, the smell of youth.

Konstantin Paustovsky



A look-see at the weather. A little on the cool side, we'd say. How many degrees below zero?

WHO NEEDS LAST YEAR'S SNOW?

ALEXANDER SHULGIN
DOCTOR OF SCIENCE (GEOGRAPHY)

"About as useful as last year's snow," people say. You can be sure it was not a farmer who coined that phrase. He knows the value of snow. The spring and summer temperature of the soil, its structure, chemical composition and moisture content—in short, the whole soil climate—depend largely on last year's snow, its volume and properties. What the farmer does say is: "Snow in the fields means grain in the barns." How much of the winter's moisture the snow will retain for the dry summer is a very important consideration for him. He practices snow retention.

But he can also have too much snow. In warm and humid districts deep snow overwarms the winter crops and stirs them to life prematurely. The seedlings get soaked and begin to rot. The farmers in those districts drive rollers over the fields to pack the snow.

In other places people prod springtime along. They want the snow to thaw as quickly as possible, and to help, they spray black dust over it. In the eastern areas of Siberia, on the other hand, farmers go to great lengths to slow up thawing because they want to keep the snow as protection against spring frosts.



When you're this young fellow's age, how can there possibly be such a thing as too much snow?



That's what the farmer thinks too. For him snow means water retained in the soil and good crops.

"WHITE GOLD"

GAVRIIL RICHTER
DOCTOR OF SCIENCE (GEOGRAPHY)

Russia, the classical winter country, is where research into the nature of snow began 90 years ago.

Our Far North dweller sees snow on his doorstep 280 days a year. Half the territory of the USSR lies under snow for more than five months of the year.

Russia has its Pole of Cold at Oymyakon, Yakutsk ASSR, and also its Pole of Snow on the Kamchatka Peninsula in the Far East. The average depth of the Kamchatka snow cover is 62 inches as compared with 11 to 15 in the country around Moscow. Not only on Kamchatka but in the Urals and the lower reaches of the Amur as well, there are houses and telegraph poles almost completely buried in drifts.

An extraordinary quality of snow is that although it is a product of cold, it does an excellent job of warming the soil. A winter with little or no snow would be catastrophic in our latitude. A 15-inch layer protects plants and animals against the coldest weather Siberia can manufacture. The temperature of the soil under snow is from 15 to 20 degrees higher than that of exposed earth.

Winter's white blanket also provides a shelter against blizzards. Snowflakes carried along by the wind at high speed act as abrasives. They can polish metal to a shiny finish, eat through rope, etch deep patterns in wood. Imagine what would happen to the grass and the bushes if they did not wear their heavy coats of snow.



A sizable section of Moscow's younger set takes to its skis on the Sunday following a snowfall.

A MILLION MILES OF SKI TRAILS

YEVGENI SIMONOV,
SPORTS WRITER

The oldest known picture of a skier was found near Lake Onega in the Soviet Union. It appears that people there used skis about 4,000 years ago.

The present generation is keeping up the good work. Skiing tops the popularity list, with close to four million earnest followers. How many weekend dabblers there are nobody knows exactly, but some five million pairs of skis were sold in the Soviet Union last year.

We have our kings and queens of skates and ice too. Russian ice hockey is the national winter game, but our boys don't do badly at Canadian hockey either, as fans well know.

Here in Russia we have geared practically all the summer sports to winter. Swimmers line up on icy starting lines to plunge into water cleared by icebreakers. Soccer players chase up and down snow-covered fields. Motorbike and auto races are held on snow and ice tracks.

It works the other way round, too. Artificial rinks and ski jumps lined with plastic snow stretch the season for winter sports.



Tell-tale weather. Whatever is up in the tree left fatal clues on the blanket of snow below.

TRACKS IN THE SNOW

ALEXANDER VERSHININ
HUNTER AND TRAPPER

Winter is the busy season for the hunter and trapper. The winter pelts of the sable, squirrel, ermine, polar fox and fox are prized highly. In Russia, long famous the world over for its furs, half a million professional hunters and trappers follow animal tracks.

It is the chase that brings the hunter his real thrills. But there is also the exciting and happy moment of anticipation when he comes into the woods on his short, broad skis and looks around at the indescribable beauty of the winter scene, hopeful that fortune will soon smile on him. The kindly snow, stretching on every side, promises shelter at nightfall and in bad weather.

Snow accounts for about half the annual precipitation in Russia. Thaw waters make up half the flow of rivers.

Different parts of the country have their different kinds of snow. Along the shores of the Baltic the snow is fluffy and made up of large, complicated flakes. Siberian snow is dry; its tiny crystals of ice rustle as they come down.

Snowflakes are light, but in a blizzard they can add up to a considerable weight. A strong wind carries close to 20 tons of snow across a mile of road every minute.

The air we breathe in winter is different from summer air. Snow absorbs some of the components of air. Winter air contains more ozone, which is why it seems fresher.



We have Muscovites who could do with less snow.One of them is the driver of this vehicle.

SNOW IN MOSCOW

NIKOLAI MATVEYEV
OFFICIAL OF THE MOSCOW CITY SOVIET

How much snowfall does Moscow get in an average winter? Enough to fill a freight train 1700 miles long. That's a fairly accurate figure. How do we know? Because practically all the city's snow has to be cleared and carted away.

Moscow's snow machines are kept in a state of what we call "No. 1 readiness" day and night. They go into action literally within minutes after the snow starts falling. We use a great many kinds of machines. Some sprinkle the highways with sand, some scrape off the snow with steel brushes and pile it up close to the sidewalk, and some scoop up the piles and load them into dump trucks. Tireless little pavement cleaners work away like ants, darting in and out among the pedestrians.

Moscow's snow removal fleet has about 2,000 machines, and its field of operation is some 400 million square feet.

DRILLING FOR OIL

Soviet oil comes mostly from Azerbaijan, the North Caucasus and the Volga region, but large deposits have also been found in Siberia and the Far East.

The Tatar Autonomous Republic (Central Volga Region) became a major oil producer when new fields were discovered there after the Second World War. Oil is today the republic's leading industry.

Here we interview Alexei Shmaryov, Chairman of the Central Volga Economic Council, on drilling in Tataria, where Shmaryov worked for many years as an oil engineer.

Could you give us some details on the scale of the oil industry in the Central Volga Region in general and the Tatar Autonomous Republic in particular?

In 1964 the country's oil industry celebrated its hundredth anniversary. Of the 2.3 billion metric tons of oil extracted in the last century, more than a billion came from the Tatar and Bashkirian Autonomous Republics and from the Kuibyshev, Perm and Orenburg Regions, which are all now administered by the Central Volga Economic Council. Tataria is our biggest producer.

In 1949 Tataria was pumping 400,000 metric tons of oil, 15 years later its annual output was tens of millions. A continuous stream of oil flows from the Tatar Republic to Siberia, to the western parts of the country, and even across the border via the Druzhba (Friendship) pipeline.

The cost of production of Tatarian oil is 1 ruble 32 kopecks a ton, one of the lowest in the country, which is why it pays us to pipe it long distances.

What accounts for the low production cost?

Several things. For one, the Devonian oil deposit in Romashkinskoye is among the richest in the world.

But the principal reason is our social system, which gives the people ownership of the land and all its treasures. We can therefore use methods—one of them is the strata pressure method—which would be extremely difficult to employ in countries where land is privately owned. With our planned economy and centralized management we can accelerate the development of a whole area.

You would say then that more efficient extraction is the reason for the low cost of production of Tatarian oil?

Exactly, if it were not for the contour flooding method, I am certain we would never have achieved such a fast production growth or such low production costs.

Before the Romashkinskoye deposit was found, several of our oil fields in the East were using the method with success. This is how it works:

The moment the drill reaches oil, natural pressure shoots it out of the pipes like a fountain. But as this natural pressure begins to drop, the flow gradually slows down. Then we have to use very costly pumping or other extraction methods.

This new, inexpensive method of flooding behind the contour prolongs the gushing stage. Several extension wells are drilled beyond the oil contour, and water is pumped under high pressure (100 and more atmospheres) into layers adjacent to the oil deposit to compensate for the loss of natural subterranean pressure. Do you follow me?

Yes. Can you tell us more about the contour flooding method?

Well, we soon found out that the old method of flooding extension wells was not effective for the Romashkinskoye field because of its huge oil reserves. A new plan was devised. We divided 400 square miles of the field into rows of extension wells to create artificial water contours within the deposit itself. We cut it into 26 sectors, each with six rows of oil wells. Bavlinskoye field workers have been looking for ways to improve these "superchargers," and recently they were able to close off half the supercharger wells they had previously used to service one oil well over a 50-acre area.

In spite of the fact that we enlarged the exploitation zone to 100 acres, the efficiency of the superchargers has not dropped in the past six years, and we have every reason to believe that the gross output will not fall during the whole period of exploitation.

How much oil do you get by maintaining strata pressure with the contour flooding method?

We get more than half of all our oil this way, about 70 per cent of it through gushing.

What are the other advantages of these two methods?

The extraction coefficient is raised by 0.6, almost double that of other methods. They've done invaluable service, doubled our output and cut costs per ton very considerably.

Are you using automation and remote control? If so, how does it affect labor productivity?

Yes, we use a great deal of automation and remote control. Nearly a third of the wells in the Tatar Republic are operated from control panels. A panel run by one man controls 100 to 150 wells. The new wells have independent automation systems and special machinery for dropping and lifting paraffin scrapers.

Most processes are automated: pumping oil into storage tanks and oil and gas from one field to another, as well as charging the extension wells with water. Eight out of 10 supercharging stations and watersheds are fully automated.

Large-scale automation and the contour flooding method has done much to raise labor productivity.

How about the types of drills used and the men who handle them—their effect on production costs?

They've had a very important effect. Drilling accounts for more than 30 per cent of the cost of production. Drillers in the Tatar Republic have cut drilling costs to a third as compared with 1950 and saved the country more than 500 million rubles thereby.

The shift from rotary drilling to turbodrilling, the general use of water suspension as a purifier and powerful new machinery have made for higher drilling speeds.

Devonian wells 5900 feet deep are now drilled in 25 to 28 days; in 1950 the same operation took six months. The best teams need only eight to ten days to drill such wells. They reach a sinking speed of 100 to 115 feet per hour, and they do it with eight-inch to nine-inch bits. This is an important detail because drillers throughout the world, including the United States, were sure that such a sinking rate with turbodrills could be reached only with 11-inch bits.

Soviet drillers recently set new sinking records. They drilled a well through a coal-bearing formation 3600 to 3900 feet deep faster than the commercial speed of 25,000 feet per machine-month with a mechanical speed of 130 feet per hour. The sinking speed of turbodrilling for wells 10,000 to 11,000 feet deep has been raised to 43 feet per hour, as against eight feet in rotary drilling.

A new industrial method of building mobile derricks which need no dismantling after operation enables the best teams to build 100 derricks annually. Many teams move from two to three derricks in a seven-hour working day. Workers in Kuibyshev recently set a record by moving a derrick to a new site in 39 minutes. An hour later they had it in operation.

High turbodrill speed, the application of the block building method, and the solution of problems caused by unfavorable weather conditions increased drilling efficiently considerably.

The drilling range in recent years has been from 65,000 feet for an average team or 115,000 to 130,000 feet for the best teams. This is as good as American drillers do in similar conditions.

How do you see the future of the oil industry in the Tatar Republic?

Our big problem is to provide water for the oil fields. To extract one ton of oil by the contour flooding method it is necessary to pump 53 cubic feet of water into the stratum. We use all the local waters and have built the Karabashskoye Reservoir, which stores the water of many rivers. We are building a second canal from the Kama River, a tributary of the Volga, which has the biggest watersheds in Europe. We are also building an oil-gas collector, compressor stations, and refineries that produce valuable hydrocarbon raw materials for the petrochemical plants of our economic area and for other parts of the country.

We have installed new water removing machinery, desalters and oil composition stabilizers, renovations that will help us make better use of our deposits.

In the near future we plan to raise oil output in the Tatar Republic 1.5 times by developing new Devonian deposits as well as those of other geologic periods.

Oil surveying operations across the nation have uncovered rich deposits in Siberia, which promises to become one of the country's leading producers in the relatively near future. But until then Tataria will remain a major oil producing area and the Central Volga Economic Region, the country's chief oil supplier.

ПАЛЕХ



PALEKH This jewel-like scene is the decoration on a box, an example of the world-famous Palekh lacquer ware. (It is enlarged approximately five times.) The inspiration for this miniature is the poem **Ruslan and Ludmila** by the nineteenth century Russian poet Alexander Pushkin. Visualize, if you can, this picture in its actual size for a better appreciation of the painstaking work and artistry of the creator of this exquisite collector's item.



THE PALEKH REVIVAL



Besides drawing on Russian folklore for inspiration, the Palekh artists use contemporary subjects. The song about peace, "Doves," is very popular.

BY YEVGENI PROTOPOPOV

PHOTOGRAPHS BY GEORGI PETRUSOV

I HAVE a small lacquered box on my desk. The lid looks as though a magician had sprinkled precious stones over it in a fanciful pattern and linked them together with a thin gold thread. In the center of the miniature scene is a Russian fairy-tale troika drawn by red steeds.

With a little imagination, the precious stones become field flowers, the gold thread a fine blade of grass, and the fairy steeds living creatures. You can see the breath steaming out of their nostrils and the frenzied gleam in their eyes. At the bottom, inscribed in barely perceptible letters, is the word "Palekh."

Who created this masterpiece? When?

In Sixteenth Century Chronicles

Some 170 miles northeast of Moscow, in what was once Vladimir-Suzdal Russia, stands the ancient village of Palekh. For centuries it has



The ancient Russian epic which tells about the hunt for the golden deer was the source of this simple creation by the master artist Golikov.



Pushkin's tales have been an inexhaustible storehouse of ideas for these artists. In the picture above Golikov has depicted the story of the fisherman and his wife. (Right) Ivan Vakurov has interpreted the famed Pushkin poem "The Furies."



been renowned for its icon painters, who are first mentioned in sixteenth century chronicles. At the beginning of the past century Goethe saw some Palekh icons and referred to their creators as the true heirs of early Byzantine art traditions.

During the eighteenth century the Palekh masters reached their peak. Then came a period of decline. Commercialism invaded this art form, causing its production to be broken up into separate operations. One master painted only landscapes, another the human figure, and still another only faces and hands.

The writer Anton Chekhov, himself descended from a Palekh icon painter on his mother's side, lamented in 1901 that the art of icon painting was surely dying. But not too long after the October Revolution and the establishment of the Soviet Republic, the craft of the Palekh masters found fresh application, not by chance but because of persistent and intense searching.

Palekh Cooperative Founded

Early in the twenties, during a visit to a Moscow museum, Ivan Golikov of Palekh saw some painted lacquer ware. "I wondered at the time whether we Palekh painters couldn't make such boxes," he said afterward.

They could. And their work proved it. Founded in 1924, the Palekh Cooperative of Ancient Painting exhibited its initial handiwork at the World Exhibition of Decorative Art in Paris in 1925 and won a gold medal.

Palekh was once again famous—this time throughout the world. In 1930 a school, which subsequently developed into the State Institute of Art, was established in Palekh.

Palekh Today

Maxim Gorky had much to do with the Palekh revival. The great writer had been an icon painter himself and always talked of his former colleagues as "fine people." He presented Palekh with a fine art library and popularized their new style of painting in whatever way he could. Always willing to be helpful, he was particularly interested in Ivan Golikov, one of the founders of the cooperative.

Golikov was the first to apply the ancient methods of Russian icon painting to lacquer ware and book illustrations. His illustrations for the ancient Russian epic *The Lay of Igor's Regiment* are considered models.

Ivan Golikov and the other gifted craftsmen of his generation have long since passed on. A new generation has replaced them. Today there are more than 100 fine painters on lacquer in Palekh, nine of whom bear the titles of Honored and People's Painters of the Russian Federation. Two of these are women.

Though they use the traditional techniques of the old icon painters, their themes are taken from Russian folk tales and songs and present-day life.



Prerevolutionary Palekh artists were all men. Her father, a well-known icon painter, taught Tamara Zybkova the craft.

(TOP RIGHT)
Even in Russian folklore the magic carpet figures prominently. This artist Aristarkh Dydydkin's version of it.

(MIDDLE RIGHT)
Alexander Kotukhin has caught all the charm and fancy of Rimsky-Korsakov's opera based on Pushkin's "Czar Saltan."

(BOTTOM RIGHT)
Palekh chroniclers called Ivan Golikov the local Michelangelo for his striking, dramatic figures and flaming colors.

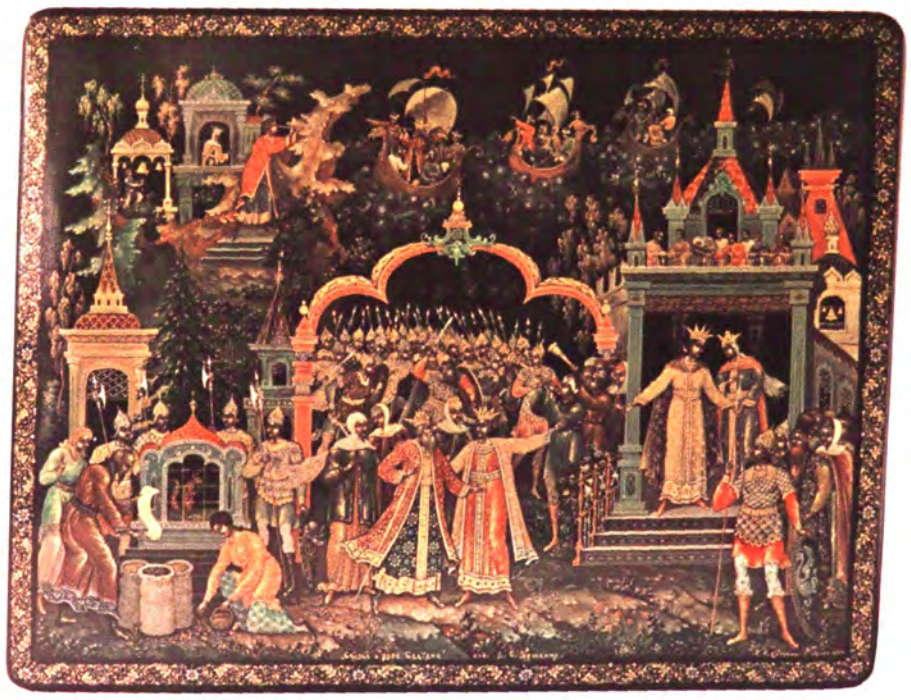
THE SECRET OF RUSSIAN LACQUER WARE

BY YURI OVSYANIKOV

WHO MADE the lacquer ware Ivan Golikov saw at the museum in Moscow? At the close of the eighteenth century an enterprising Russian merchant named Korobov bought some serfs and opened a small shop in the village of Fedoskino, near Moscow, for the production of lacquered boxes. Then a relative









been renowned for its icon painters, who are first mentioned in sixteenth century chronicles. At the beginning of the past century Goethe saw some Palekh icons and referred to their creators as the true heirs of early Byzantine art traditions.

During the eighteenth century the Palekh masters reached their peak. Then came a period of decline. Commercialism invaded this art form, causing its production to be broken up into separate operations. One master painted only landscapes, another the human figure, and still another only faces and hands.

The writer Anton Chekhov, himself descended from a Palekh icon painter on his mother's side, lamented in 1901 that the art of icon painting was surely dying. But not too long after the October Revolution and the establishment of the Soviet Republic, the craft of the Palekh masters found fresh application, not by chance but because of persistent and intense searching.

Palekh Cooperative Founded

Early in the twenties, during a visit to a Moscow museum, Ivan Golikov of Palekh saw some painted lacquer ware. "I wondered at the time whether we Palekh painters couldn't make such boxes," he said afterward.

They could. And their work proved it. Founded in 1924, the Palekh Cooperative of Ancient Painting exhibited its initial handiwork at the World Exhibition of Decorative Art in Paris in 1925 and won a gold medal.

Palekh was once again famous—this time throughout the world. In 1930 a school, which subsequently developed into the State Institute of Art, was established in Palekh.

Palekh Today

Maxim Gorky had much to do with the Palekh revival. The great writer had been an icon painter himself and always talked of his former colleagues as "fine people." He presented Palekh with a fine art library and popularized their new style of painting in whatever way he could. Always willing to be helpful, he was particularly interested in Ivan Golikov, one of the founders of the cooperative.

Golikov was the first to apply the ancient methods of Russian icon painting to lacquer ware and book illustrations. His illustrations for the ancient Russian epic *The Lay of Igor's Regiment* are considered models.

Ivan Golikov and the other gifted craftsmen of his generation have long since passed on. A new generation has replaced them. Today there are more than 100 fine painters on lacquer in Palekh, nine of whom bear the titles of Honored and People's Painters of the Russian Federation. Two of these are women.

Though they use the traditional techniques of the old icon painters, their themes are taken from Russian folk tales and songs and present-day life.



Prerevolutionary Palekh artists were all men. Her father, well-known icon painter, taught Tamara Zybkova the cra

(TOP RIGHT)
Even in Russian folklore the magic carpet figures pro nently. This artist Aristarkh Dydydkin's version of

(MIDDLE RIGHT)
Alexander Kotukhin has caught all the charm and fancy Rimsky-Korsakov's opera based on Pushkin's "Czar Saltan

(BOTTOM RIGHT)
Palekh chroniclers called Ivan Golikov the local Michelan gelo for his striking, dramatic figures and flaming colo

THE SECRET OF RUSSIAN LACQUER WARE

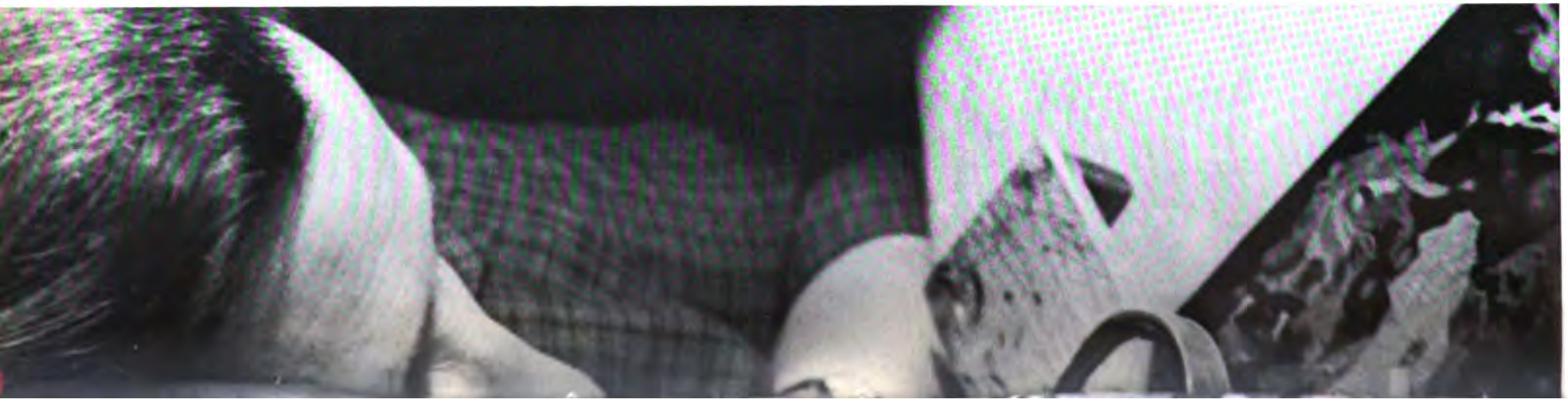
BY YURI OVSYANIKOV

WHO MADE the lacquer ware Ivan Golikov saw at the museum in Moscow? At the close of the eighteenth century an enterprising Russian merchant named Korobov bought some serfs and opened a small shop in the village of Fedoskino, near Moscow, for the production of lacquered boxes. Then a relative











Fashioning a *Palekh* box is a long and complicated process. The specially treated cardboard requires patient and careful handling. The edges are planed for smoothness.

The fit of the sides and cover of a box is measured to a fraction of a millimeter. The cover is worked with a special knife that is guided by a firm hand and good eye.

The cover is done. Now for the inside of the box. It must be coated with a layer of red lacquer smooth as a mirror. The slightest unevenness betrays the hand of a novice.

Although there are newer techniques to replace many of the manual operations, the final polishing always has been done with the most sensitive of tools, the palm.

Tamara Zybkova depicts the grace and color of the Beryozka dancers.

The Beryozka dancers in another version, as done by a Kholuya artist.











of his, by the name of Lukutin, took over the establishment. The business grew, and by the 1830's it was known throughout Europe.

A curious story is told by the Russian writer Mikhail Zagoskin. A friend of his visited Paris in 1840. Wishing to bring home an unusual souvenir, he bought a very attractive varnished snuffbox. Home in Moscow, he examined the box more closely and, to his great surprise, found it stamped with the Russian emblem and the Lukutin trademark.

Years passed. Lukutin went into bankrupcy and the workshop closed down. But the artisans organized a cooperative, which exists to this day.

After a close study of the techniques of the folk artists, the Palekh craftsmen developed a process of their own. They cut the desired shape out of cardboard and paste the parts together. Then they press and dry the box for 15 days, soak it in linseed oil for 24 hours, and dry it again. The box is then polished and primed three times, dried for 30 hours after each priming. To get the black blackground, they dilute soot with oil lacquer and give the box four coats. The artists use paint mixed with egg yolk and gold dust dissolved in gum arabic. They paint with fine squirrel's hair brushes which they make themselves. Finally, the gold is polished with the tooth of a dog or wolf, and the whole box coated again with lacquer. The final polishing is done with the palm of the hand.

In 1930 the villages of Mstera and Kholuya, former icon-painting centers, also began to produce lacquer ware, with quite a different type of painting, however. The difference is in the landscape. The Palekh artists suggest the landscape: a few trees and shrubs in the distance against the pitch-black background instead of a bright sky. The Mstera artists follow a more conventional style—a blue sky, edges of forests, white clouds, etc.

Nevertheless both the Mstera and Kholuya artists, like those of Palekh, use the methods of the sixteenth century icon painters.

Traditional style and new content is what makes Russian lacquer ware inimitable in beauty and craftsmanship.



No easy job, satisfying the critica tastes of magazine readers, ours included. Pavel Chalunin, a renowned Palekh artist, made dozens of drawings before finally choosing the one for the cover of this issue.

Ivan Vakurov is the last living associate of Ivan Golikov, originator of Palekh lacquer ware. A People's Artist of the Russian Federation, he is still active in the community, teaching the secrets of this very exacting and centuries-old craft.



BY SERGEI PAVLOV
FIRST SECRETARY
OF THE YCL CENTRAL COMMITTEE



THE BRIGHTEST FLAME

The Soviet youth newspaper *Komsomolskaya Pravda* held an open, half-year-long Young Communist League (Komsomol) meeting on its pages. The letters sent in dealt with all sorts of problems that concern Soviet young people and therefore the YCL.

After the publication of scores of these long and short "speeches," the summation was given in an article by Sergei Pavlov. The following is an abridged version.

THIS is the first time, perhaps, that we have held such a long YCL meeting and one with such broad representation. The floor was taken by young people from the most widely separated parts of the Soviet Union, from metropolitan centers and remote villages.

Our newspaper was the rostrum for this open meeting. Many of the letters gave us glimpses of brilliant careers in the making, of accomplishments already recorded. Practically all of them were marked by very deep conviction.

New Challenges

From the very opening of this unusual forum we had questions raised that probed deeply. Why are there passive members in the YCL, the letters asked, and what needs to be done to activize them? What should a YCL activist, the fellow we call a youth leader, be like? Is a YCLer a special type of person and how does it show?

There was a good deal of plain speaking and sharp differences of opinion. There were very few anonymous letters. One of these exceptions was a letter from Kharkov, the Ukraine, signed only "V." When the letter was published, some readers were irritated and even incensed by "V's" cowardice.* They were entering their objection to halfway stands, to the "golden" mean, which to young people always signifies the unprincipled person who tries unsuccessfully to sit between two chairs. This is the kind of man they thought "V" from Kharkov was. He wanted to be a YCL member, but he did not want to do anything that would justify his membership.

Scores of participants addressed themselves to Anatoli Anikin, a Moscow Komsomol organizer, who, overwhelmed by difficulties, said he had given up all hope of stirring the passive YCLers into even a semblance of activity. The letters—handwritten, most of them—were often hardly legible, composed by the light of wick lamps in distant taiga camps, in a student library, in ancient Novgorod or on the dam of the Bratsk Hydroelectric Power Station. Hundreds wrote in like real friends with advice, citing themselves as examples. Many of the letters criticized Anikin, sometimes too harshly, sometimes with sarcasm and humor, sometimes with the passion and certainty typical of the young, but always with a desire to set him right.

The question whether a YCLer should be a person of a special cast was always linked with two others: Is our present-day youth heroic? Are the times we live in heroic?

Take, for instance, the Bratsk Hydroelectric Power Station. Most of its builders are patriots, everyday heroes. Formerly from Moscow, Leningrad, Kiev, Baku and other cities, these young people faced the icy blizzards and the wilderness of the taiga without flinching.

The hard days are over now. The hydroelectric project is completed. There is a town around it. Clubs. And the young people, many of whom have already become mothers and fathers, are packing to go still further into the Siberian taiga, to Ust-Ilim, where they will start from the ground up once again to build an even bigger station. Isn't their motivation the same as that of the generation before them, which worked for the fulfillment of the first five-year plans?

Their name is legion. Their courage is one of the finest qualities of our young people, their readiness to work for humanity's sake, for the sake of the future, for the good of man.

Educate Everybody

Of course we have some YCLers who are not nearly as active as our times require. How do we meet the problem? Some comrades propose rather strong solutions, they want to make it harder to get into the League, to let only "the best people" in.

Many letters projected this idea. The writers gave what seemed to be convincing arguments and sometimes even cited figures. But the fact is they had everything mixed up; they were all arguing from the same mistaken premise.They forget that the YCL is not a caste, that you can't divide people into "clean" and "unclean" if you want to build a communist society.

All our young people must be worthy of communism, and their participation in building it is the best preparation for living in it.

The Young Communist League is a mass organization whose primary purpose is education. A young person joins the YCL to become an activist. And if he does not find models worthy of emulation, if he quickly becomes passive and turns into dead weight, it is only the organization that is to blame, the big talkers who do not know how to work with people and try to explain away their inability with "objective" reasons. Hence the cry, "First become clean and then we'll let you join the YCL."

But, tell me, where can a 14- to 17-year-old mature, test his ideological, moral and physical courage? Must we sit and wait until he runs into a blazing house or beards a bureaucrat to test his social consciousness?

What would happen if young people struggling to find themselves and in need of trust, attention and care were to meet with YCL "officials," reasoners as smooth as a billiard ball. They would be frightened off, offended, hurt by mistrust, and their yearning for the good, the right and the just would be destroyed for all time. We still meet such cases, I am afraid.

Not that I think we should drag people into the YCL or hold on to pure dead weight.

Our YCL is growing at an unprecedented rate. By the opening of the Fourteenth YCL Congress (April 1962) our League had a membership of 15.4 million; today we have more than 22 million. The YCL branches must pay special attention to every new member. It is wrong for comrades to contemptuously equate the words "educate" and "nurse." Of course, it is easier to expel a person from the YCL for his very first misstep than to find out why he got into trouble and help him! It is our duty to educate every individual. Work with young people must be interesting, dramatic, concrete. That is the way to activize our young people, including YCLers.

When we insist on lively, creative work with every individual, when we ask for attention to those who need it, we do not mean soft-soaping and solicitation.

We have our "wise" boys and "glamour" girls, with affectation and bluff to their credit and nothing much else. They have lost faith in everything even before they acquired it. But that is no reason for YCL leaders like

* "V" was disappointed with the YCL. He had been very eager to join, but once in, he found his assignments dull and unexciting. He confessed that he had not sought out the kind of assignments that would "carry him away," and the thought that he might have missed something thereby bothered him a great deal.

Anatoli Anikin to be disheartened. His job is to work stubbornly with people, to hammer away bravely at the hardest rocks in the world: at the selfishness of the greedy, the egotism of the philistines, the slyness and evasiveness of the opportunists, the stupidity and venality of the hypocrites and skeptics.

What Kind of "Activity"?

Everybody is sick and tired of the word "activity." We often use it sarcastically. But let us look into the heart of the matter. We are irritated by dull, showy and useless activities. But what about the efficiently organized, friendly assistance rendered by the young people to major industrial projects in Leningrad, Nevinnomyssk and Divnogorsk? And what about the search for the most gifted young mathematicians, physicists, chemists, which is being carried on with such enthusiasm by the YCLers of the Siberian Branch of the USSR Academy of Sciences? These are also activities, but they happen to be useful and interesting ones.

"Is it possible to get along without these 'activities'?" a Komsomol leader from Penza Region asks. This is an empty question. We must strive to work without boredom, without artificiality. An empty, vague and unreasoned project can only be harmful, because it undermines the faith of the young people in the usefulness of the work at hand.

One YCL group decided to held its meeting at night, because this seemed more exciting. But it was no better organized or more interesting than their day meetings, and the idea was hastily dropped. On the other hand, a very important YCL plenum in the Ukraine, devoted to such a "trite" question as how to get young people interested in the work emulation movement, was opened with a tape-recorded speech by Nikolai Ostrovsky.* Addressed to the YCLers, it resounded in the solemn silence of the hall, moved the audience deeply, and helped to give the plenum meaning, drama and point.

As a matter of fact, the idea of holding meetings that are a little different (not always a table covered with a green cloth, a water pitcher, bell and the same speakers) can only be welcomed. For some reason or other the prevailing notion is that a meeting must always start with an hour-long report and drag on endlessly. It goes without saying that very important questions sometimes require thorough preparation and long discussion. But let us not forget the short, punchy, to-the-point rallies. Long, boring reports and endless discussions are hardly necessary to draw up a program for a sports meet, to make arrangements for a party, to criticize poor performance or to recount the initiative of neighboring YCLers.

At the same time the search for different forms is not an end in itself. The point is not to lure young people into some undertaking, but to carry them away by its challenge. A new, dramatic form of work is good when it is prompted by the content. The important thing is still the usefulness of the project.

The passivity or activity of YCLers very often depends on the leader, on his initiative, his closeness to the young people, his sympathy, understanding, adherence to principles, and, finally, his ability to fight for them when necessary. There is the YCL leader who thinks his prestige rests in his voice, that the only place from which he can speak to young people is the rostrum. This is the youth leader we can do without. First and foremost, we must be understanding human beings, we must be concerned with each of our comrades, concerned for his development as an individual. That presupposes not only solicitude and insight but severity in making demands.

There are moments in the life of an organization when the courage, firmness and resolution of its leaders decide the attitude of its members for a long time to come, and, what is most important, bolster their faith in our common cause. It still happens that an arrogant official or bureaucrat is punished only when people from a higher echelon look into the matter. Only after *Komsomolskaya Pravda* had published the joint letter of a group of workers about the "Sergeant Major" from Kezhma, senior foreman Krishtapaitis who had no respect for those who worked under him, was he fired from his job. Before this happened, however, the Bratsk YCL City Committee had paid no attention to the shameful business. They must find it disturbing that the young workers appealed to Moscow instead of coming to them.

It is shameful for YCL leaders to tip their hats to a bureaucrat. They must fight him with principle, courage and resolution regardless of cost to themselves. The Komsomol leader must bear in mind that a young man, whose character is not yet molded, may be broken by injustice. He may try to fight once or twice, but if he is beaten down, he is likely to come to the philistine conclusion: "Nothing can be done with those on top; it's wiser to be meek and mild."

Big Rights

The YCL organizations, the leaders especially, must always be ready to defend the rights and interests of young people, must be irreconcilable in the struggle against injustice.

We have the right to raise before the Communist Party and government bodies any and all questions. And the YCL constantly exercises that right. In recent years the Party and the government have supported many YCL proposals that had to do with the work and education of the youth: extra time off for those who combine work and study at evening or other vocational schools; extra privileges for those who combine work and study at schools for young workers and farmers; cash prizes to the organizations leading the socialist emulation movement on shock YCL construction sites; steps to improve clubs, houses of culture and parks; better public services.

This very incomplete list gives an idea of the opportunities open to us and shows how carefully the Party's Central Committee considers proposals raised by the young people.

Succession of Generations

Some of the letters to the open forum express disappointment that present-day YCLers live in peacetime and not in a period of storm and stress. Victor Krasnokutsky of Moscow, for instance, thinks that heroic characters could emerge only at the dawn of Soviet power, from the flames of the Revolution. He believes that there is no room today for such enthusiasm, such passion.

Although these moods are rare among our young people, we should look into them just the same to see whether there is anything wrong in the way we teach our past history. We encourage the YCLers of the twenties to meet the young people of today, to tell them about their times and their struggle. These are good, useful, direct lessons in history, you would say, wonderful people to emulate. But among our esteemed old YCLers there are those who, for some reason or other, think that their recollections must be idyllic, must have a rosy glow, while stories about present-day young people must always be peppered with skepticism, doubts and reproaches. Some mothers and fathers don't think of the harm they do when they grumble: "No, young people today don't compare with those of our times—no self-sacrifice, no conviction." Willingly or unwillingly, they pose as bystanders, as outsiders: "We have done our job, now let's see what you can do!" But isn't bringing up replacements the common cause of all generations? Aren't we all responsible for the future?

No abstract yardstick, separated from the times, can be used to assess a generation. Very often the reproaches leveled against young people are purely superficial: "They don't dress the way we did 30 years ago . . . They dance differently . . . They are too analytical . . . They have no feelings . . . Their behavior is too free."

All these amorphous charges becloud the important thing—that our present-day YCLers are just as dedicated to the high ideals of their times, and just as ready to fight for them as are the YCLers of the preceding generation.

Not that we do not have parasites, hoodlums, drunkards and half-baked demagogues among our young people. But it is wrong to judge our youth by them, especially since their numbers are decreasing and not increasing—added proof that the socialist society is molding a new type of man.

New Stage

We are not only living witnesses but active participants in this program of communist construction. The scope of everything we do grows step by step, year by year, as compared with the previous period. Our fathers took pride, for instance, in the Dnieper Hydroelectric Power Station, one of the biggest projects of their day, which took several years to complete. But by the end of the 20-year period (1980), as scheduled by the Party Program, our country will be putting the equivalent of one Dnieper station into operation every five days!

We do not always realize as clearly as we should that the Revolution goes on. Today we are living through the most complicated and demanding period, a period in which we have pledged to outstrip economically the most advanced capitalist countries, to show all the world the unquestionable superiority of communism. We must make every individual aware that he is contributing to a historically unprecedented construction effort, that he is building jointly with others a society of a completely new type, with a completely new ideology and outlook.

Our grandfathers and fathers mapped out a rough project for communist society. They cleared the site, laid the foundation and are building the structure. They were illiterate, many of them, they had little to say, they were deprived of many things. Having inherited a beggarly legacy, they were forced to beat off the continuous attacks of the enemies of socialism. They had to dress and feed the people, teach them to read and write. Our socialist society was built by the efforts of millions of people.

There is an ancient saying that only nations with a healthy younger generation are immortal. The Soviet people have such immortality because their younger generation has always been and will always be healthy, strong and dedicated to the ideals of communism and to their great homeland.

---

* Nikolai Ostrovsky (1904-1936)—Civil War hero and then writer. After losing his eyesight and becoming completely paralyzed from wounds received in action, he wrote the magnificent novel *How the Steel Was Tempered*, giving a vivid picture of a young revolutionary, a dedicated fighter for freedom. This is a favorite novel of young readers in the Soviet Union.





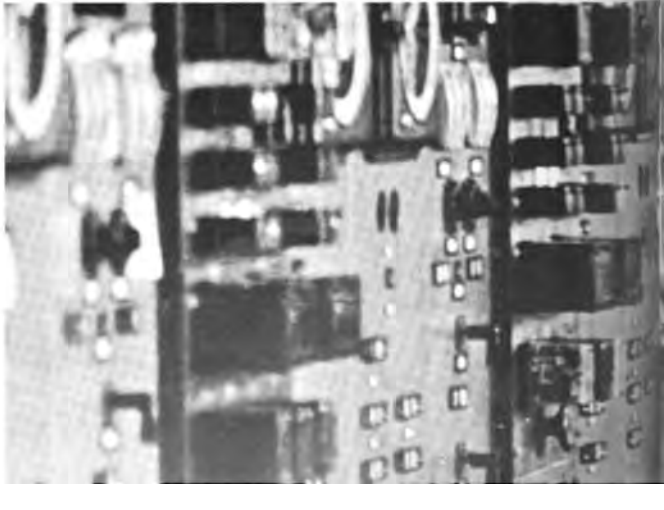




(Top of page) Even in the dead of winter, the Tatar wells keep extracting oil for domestic use and export. (Above left) The republic trains 1,100 drill operators like Muzavat Kanapov every year for its oil wells. (Above right) Plenty of gas is available for chemical plants. Two large ones are presently being built. (Left) The most modern drilling techniques are used, the reason that Tatar oil is the country's cheapest. (Right) Lots of gas comes with the oil. Economists here have a problem deciding which to concentrate on. (Below left) In this kind of weather you need bulldozing snowplows to clear the road to the oil fields. (Below right) Engineer Eda Muzayeva of the Minnibayevsky plant is a Moscow Chemistry Institute graduate.

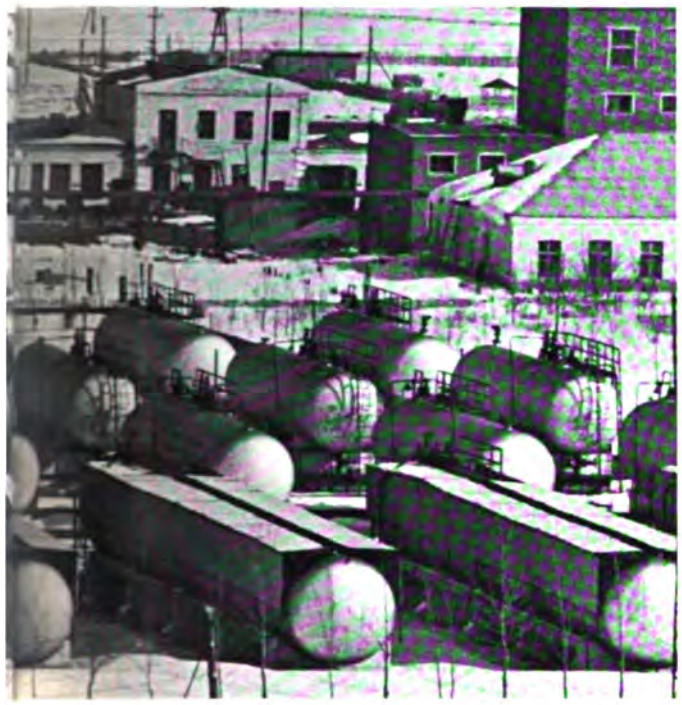


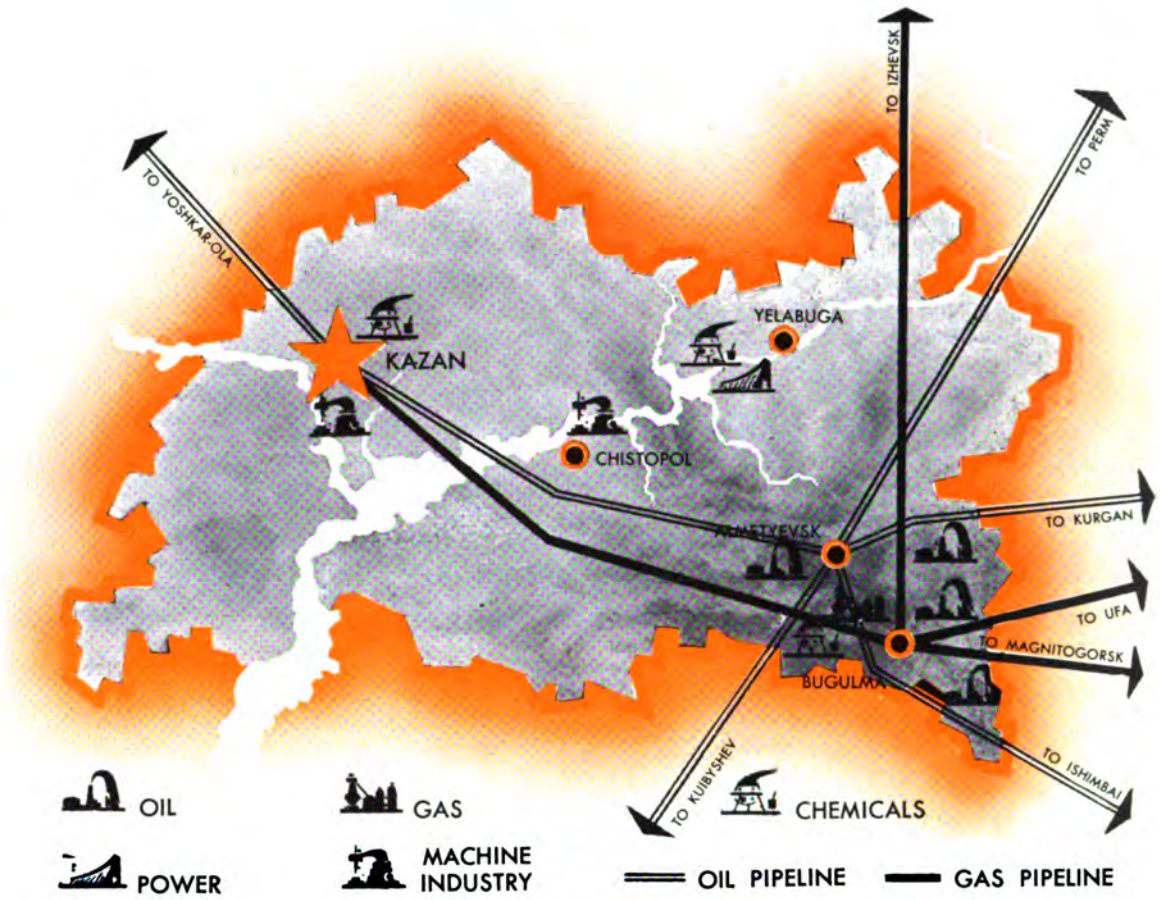




WINTER IN TATARIA











BY GEORGI YURYEV

PHOTOGRAPHS BY IGOR VINOGRADOV

IT IS WINTER in Tataria. The snow stretches like a white monolith to the very horizon. It is smooth and hard, with frozen crust here and undulating hummocks there. It presses on the road in congealed overhanging crests. The drifts smoke in the wind.

A ruddy sun hangs over the road filled by an endless stream of trucks, some carrying pipes, others containers, still others structural framework.

Reminiscing, old-timers told me that not so long ago the southeastern part of their republic was quiet farm country. Collective farmers plowed their fields and raised cattle. On rare occasions you might see an oil derrick pointing skyward in the middle of a field, with geologists prospecting for oil. They found it!

The discovery of oil broke the measured routine of Tataria. People and machinery began pouring in; new roads, factories, oil pipelines and towns cropped up all over the place.

Oil Rivers

On the face of it, it is an ordinary well with a pipe that is all valves and slides sticking out of the snow. Put your ear to it, and you hear the oil gusher swirling inside. But this is no ordinary well. It is the source of a 3,400-mile-long river of oil, the Druzhba (Friendship) pipeline. It is from here, Almetyevsk, that oil starts on its way to the western borders of the Soviet Union and further—to Hungary, Poland, the German Democratic Republic, and to the east, all the way to Irkutsk in Siberia.

A good deal of crude oil is also shipped to nearby Bashkiria, where oil was discovered ten years earlier and where large refineries were built. It was thought better to increase the load on Bashkiria's refineries than to build new ones in Tataria.

Thus, Tataria has no refineries of its own, but it does have growing capacities for processing the gas by-products that provide the raw mate-

rials for the chemical industry. A case in point is the Minnibayevsky plant, where the gas collecting networks of all the neighboring fields converge. The plant converts cheap gas into liquid hydrocarbons. The first section has been in operation for several years now, and a second is under construction. When it is completed, the plant will be the largest gas processing plant in the country.

The major consumer of its products is a plant in Kazan, the capital of Tataria, which manufactures acetone, phenol and other chemicals used in the production of synthetic materials.

The Lower Kama Combine is another chemical factory being built in Tataria. It will also be using natural gas as raw material.

Oil and gas occupy an important place in the republic's fuel balance. They fire the local thermal power stations and power plants at large enterprises that made it possible to expand and modernize many of the older mills and factories.

The discovery of oil has radically changed the economic structure of the republic. In the twenties and thirties Tataria's principle industries were mostly flour milling and leather dressing. Now, oil extraction and processing industries predominate.

I was interested in knowing how the changed economic structure had affected wages. At the republic's statistical agency I was told that in the past 15 years, since 1949, wages have gone up by 35 per cent.

What Tataria Gets

With the altered economic structure, Tataria's industrial potential has grown. If we represent the republic's gross industrial output in 1940, before oil was discovered, by 100, then the 1952 index was 447. This was the subsequent picture:

Year	*Index*
1958	952
1959	1082
1960	1204
1961	1314
1962	1423

The output increase was due mainly to the new industries—oil, chemicals, gas, engineering and metalworking.

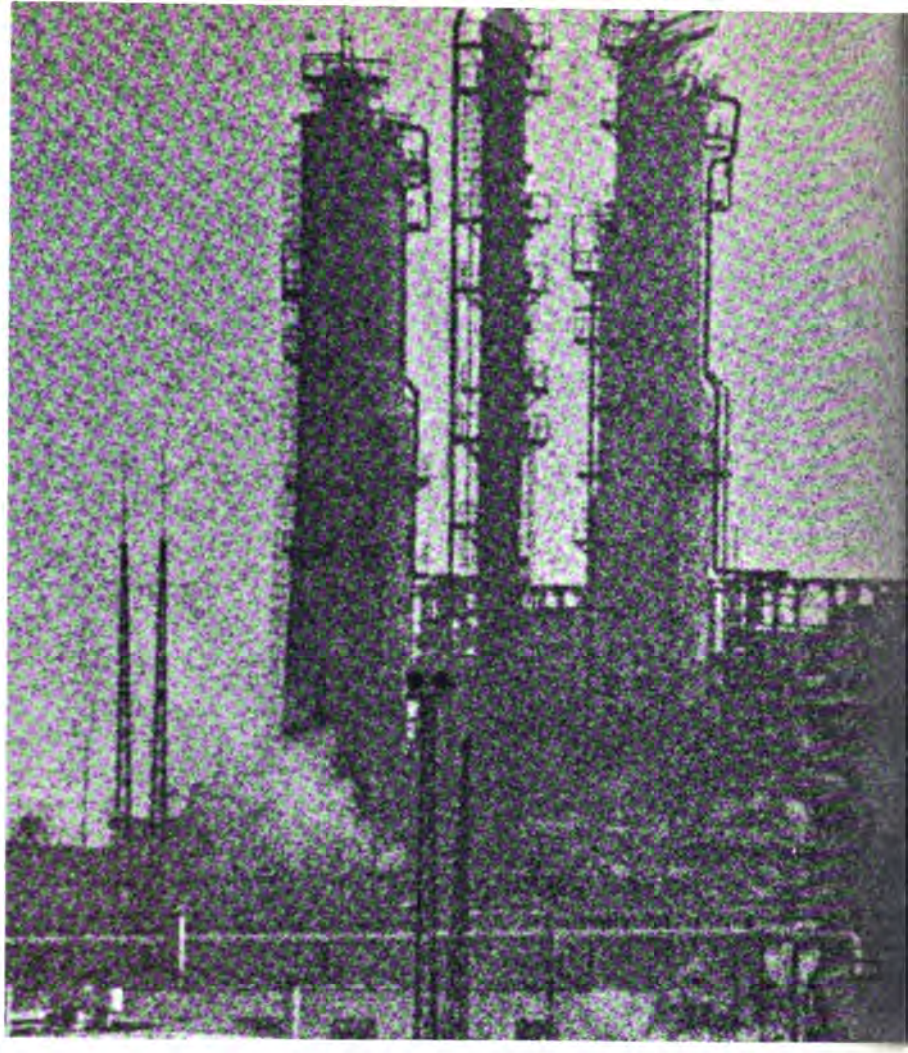
These branches of industry are administered by the Central Volga Economic Council, but with the interests of the republic very much in mind.

This was the subject of my talk with Salikh Batyev, President of the Presidium of Tataria's Supreme Soviet. The conversation took place in his office in the Kazan Kremlin. I wanted to know, among other things, what the republic contributed to the country's purse and what it got back.

"Let me start by saying," said the President, "that there is no direct connection, no matter which index you use, between what we contribute to the country's budget and what we get back. It doesn't work that way in a planned economy."

I asked why.

"This is the way it works," said the President. "The outlays planned are not contingent on how much this or that republic contributes to the budget, but on the country's needs. Say a chemical plant is to be built, the money comes out of the country's purse. Public consumption funds are also allocated according to need, regardless of how much the republic contributes. These funds pay for education, public health and welfare benefits. The reason is simple: the need to teach children or to provide for old people is no less pressing in Tataria than in, say, Moldavia. These public consumption funds are distributed in terms of



population and do not depend on what or how much a particular region of the country produces. If there were such a correlation, Tataria would have gotten less in the forties than, for instance, more industrial Bashkiria at that time. Now that our economic potential has grown, we would be getting much more than less developed Udmurtia. And so on. If I can put it this way, we are all equal so far as the public consumption fund is concerned. And we get as much as residents of other areas. Tataria's share keeps growing as the whole country grows richer.

"This is general practice," continued Salikh Batyev. "But every plant and oil field also has what we call an enterprise fund, deducted from its profits. The size of the fund depends on how efficient the enterprise is."

"Is there any connection between the efficiency of a plant and how much is deducted for the republic's budget?"

"Yes, of course, our republic's economic plan specifies how much is to be deducted for the national budget. The plan also specifies how much money enterprises must contribute from their profits, how much from turnover tax, and so on. If we fulfill these assignments, a certain part goes into the republic's budget."

The President leafed through his papers:

"About 15 per cent of the turnover tax, 30 per cent of the income and other taxes on the population, and about 25 per cent of the lottery receipts go into our republic's budget."

"What does it add up to?"

"About 180 million rubles."

"And how is it spent?"

"Approximately 145 million goes to schools, hospitals and clubs. Another seven million goes for administrative purposes and nearly 27 million for developing local industry."

"What do you mean by local industry?"

"The republic's light, food and service industries."

"And what about the oil fields and chemical plants?"

"Capital investments in these and other industries administered by the Central Volga Economic Council are financed from the budget of the Russian Federation."

"What's the total?"

"It comes to as much as 400 million rubles annually."

"What does your republic get from the state budget?"

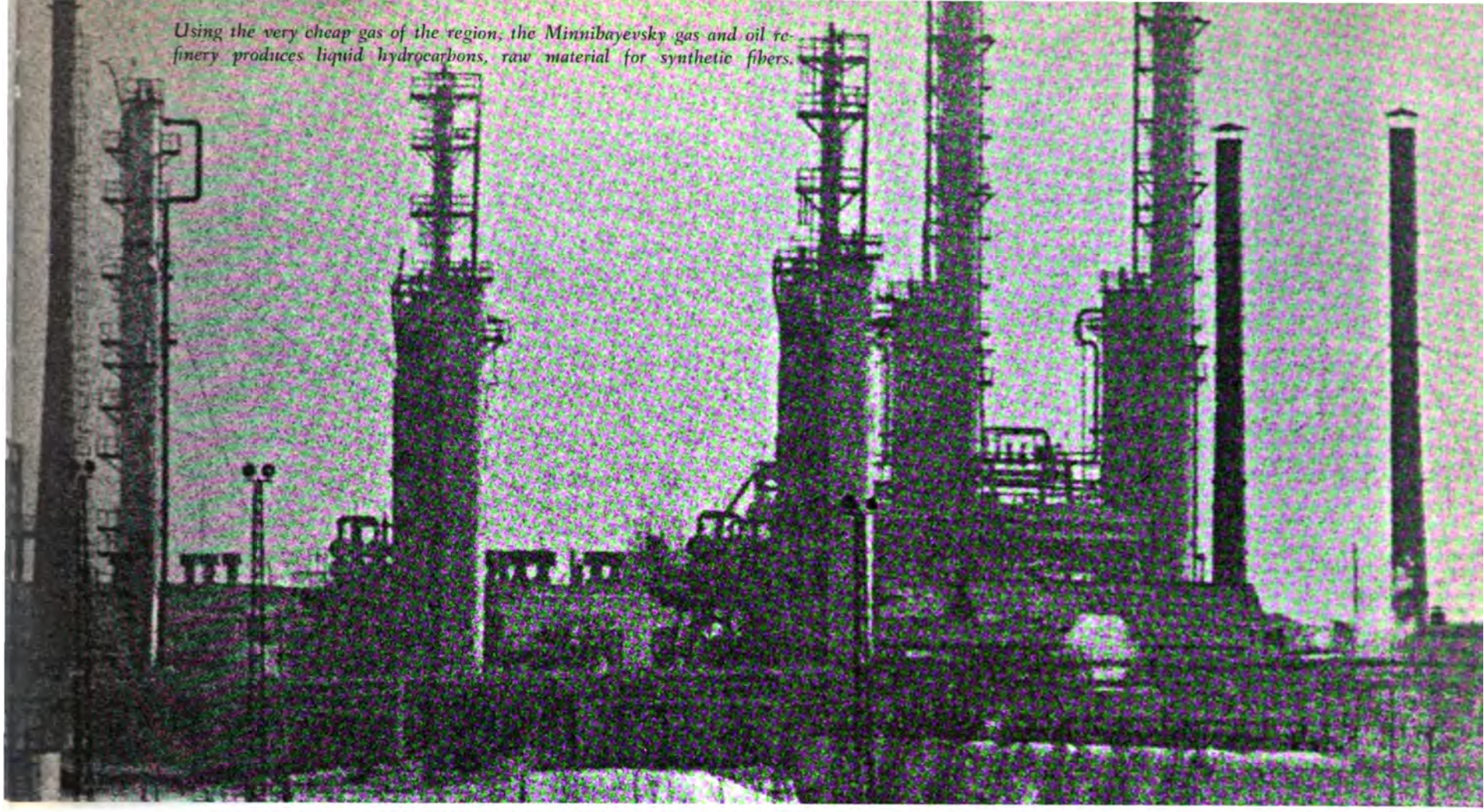
"We get 130 million rubles for pension payments. You must add to this the cost of maintaining our technical schools and institutes and of expanding or constructing key projects of national importance. If you add the funds of enterprises, which they spend at their own discretion, the total is more than a billion rubles."

"What is Tataria's contribution to the state budget?"

"Approximately 800 million rubles. Notice that we get more than we give. But we have a large-scale construction program under way, and that takes money."

A session of the Council of Ministers of the Tatar Autonomous Republic discussing methods of financing additional hospital and rest home facilities.





Using the very cheap gas of the region, the Minnibayevsky gas and oil refinery produces liquid hydrocarbons, raw material for synthetic fibers.

Cities and People

State funds are invested not only in industry but in housing and other consumer needs. More than 12,000 families move into new apartments annually. New towns have sprung up near the oil fields.

The largest is Almetyevsk, a town with wide streets and blocks of three-story and four-story houses. It grew up around the Romashkino oil deposit, discovered 15 years ago, and now has a population of 80,000. And these are not people who lived in these parts, say, 30 years ago.

I met Usman Zakirov, assistant manager of the Tatneft (Oil of Tataria) Association, a short, very active man who seems to know all and sundry. His specialty is people. He said, "The only kind of man that's any good in a modern oil field is a man who knows his job cold, but he also has to have an open, inquiring mind as well. We can't use people who shut themselves inside a narrow specialty. Where do we get such people? Bring them in from Moscow or Azerbaijan? It is not possible, because Moscow and Azerbaijan are also hunting for such people. We have to train them on the spot, right here. That is why we say oil has changed not only our economy but our people as well."

Zakirov showed me this table:

	1962	*1963*
1. New personnel trained	1,029	1,116
2. Oil workers trained for better jobs	6,296	6,311
3. Engineers and office workers trained for better jobs	415	532

"Not bad, eh? That's about 8,000 people we train annually. Besides that, some 5,000 of our oil workers combine work with study at general schools, specialized secondary schools and institutes.

Zakirov cited these figures: 10 per cent of all the people working Tataria's oil fields have a higher and specialized secondary school education, about 30 per cent have a full secondary school education, and something like 25 per cent an incomplete secondary education.

"Many of them go on with their studies," he said. "We have oil fields where one out of every two workers is either studying or has recently graduated from a general or a technical school or an institute."

Complete study facilities are available at every oil center. I visited the branch of the Moscow Oil Institute, named after Academician Gubkin, in its new four-story building.

The institute trains mining engineers, drilling and extraction engineers and oil equipment technologists. An automated oil production department was set up recently.

Nikolai Kasyanov, director of the branch, a calm, quiet, slow-moving man, took me through some of the 20 laboratories. The faculty of 24 is supplemented by visiting lecturers from Moscow.

We looked into one of the lecture rooms where a group of 50 or so future engineers were listening to a lecture on drilling machines by Georgi Bershits, one of the leading specialists in this field. "He's a visiting lecturer from Moscow," director Kasyanov explained. "He conducts several seminars and is adviser to a group of undergraduates. He'll be here for the year, and then someone else from Moscow will take his place."

A bell rang. The corridors filled with students. I approached one of the groups. I got one of the fifth-year students—lanky, fair-haired Valeri Cheremisin—to tell me about himself. He is 33 years old, finished an industrial school, worked as a fitter, studied at night school, then entered the institute. He will soon be getting his engineer's diploma. Recently he was appointed head of the machine shop.

His classmate, 30-year-old Omar Ziyautdinov, worked as a fitter and became a foreman. When the oil fields began to be automated and remote controlled, he saw that he probably could not go any further without an engineering background. Not long ago he was recommended for a section leader's job.

"That is, if I graduate, of course." Ziyautdinov smiles. "I'd better, if I want to keep my new job."

Later, traveling to other fields, I frequently met graduates from the Oil Institute's branch at Almetyevsk. The happy combination of theoretical grounding and practical experience makes them assets wherever they work.

Graduates from other cities—Kazan University, the Ufa Oil Institute, the higher technical schools of Moscow, Kuibyshev and Voronezh—also start their careers here. Almost all the young specialists work first as operators, drillers and derrick erectors. Only after this initiation are they assigned as engineers. Many of them go into research.

Unraveling the Earth's Secrets

Agdas Gilmanshin came to Bugulma in 1958. The choice was very conscious, like most he has made in his 27 years. At Bugulma, near the Romashkino oil deposit, is the Tatar Oil Research Institute.

Agdas is a geologist, a graduate of Kazan University. At the Bugulma institute he began to work on the structure of the rocks in the Romashkino layers. Then he decided that this study did not have too immediate a connection with today's needs and switched to the geophysics department, where he met physicist Ivan Glumov.

"You know," Glumov told him, "the oil in different layers has different properties. Even samples from the same bed taken at different points differ."

Agdas did not know.

He started to work with Glumov on experiments to establish the coefficient of light absorption (samples of oil differ in color if they are





(Top) Academician Boris Arbuzov, head of the Research Institute of Chemistry studies the phosphoro-organic compounds used to fight plant pests. (Directly above) The Minnibayevsky plant has refresher courses to improve its workers' qualifications. Engineer Valeri Senin is one of the teachers.

passed through a photoelectric colorimeter). Thanks to the new coefficient, it is now much easier to determine productive and nonproductive layers and to pinpoint the direction in which the oil moves in the layer.

The deduction of the coefficient of light absorption is a signal landmark in the career of Agdas Gilmanshin but only an episode in the institute's biography. The institute's prime objective is to plan the development of Romashkino and other deposits. I was shown plans for developing a field which will be flooded when the Lower Kama hydroelectric power station is built. The oil is to be pumped from under the water.

Plans for the main areas are now complete. A total of 5,000 boreholes are scheduled by the development project. Top priority, for the time being, is going to another of the institute's activities—control over producing wells.

I visited several of the laboratories. I saw the analog electronic computers at the institute's computing center. With this most up-to-date equipment thousands of versions have been calculated and hundreds of models simulated to determine how the wells would do under certain circumstances.

The conclusion I came to was that the scientists at Bugulma know the earth under their feet much better than we do the earth's surface. I saw maps and schematic diagrams showing the occurrence of productive layers, ways of exploiting them, resources and how long they will last, all described and estimated.

An important study was recently done by the geological prospecting laboratory. The analysis, which summed up a great wealth of information supplied by prospecting parties, will help determine the direction of further research. Last year Bugulma scientists carried out about 50 research studies.

The oil institute at Bugulma is a large scientific center in Tataria but not the only one. Now that chemistry is assuming an increasingly important place in the republic's economy along with ore, research in this field has taken on new momentum.

Kazan has for a long time been noted for the school of organic chemistry founded by the great Butlerov. His work has been carried on by many chemists, most notably by the Academicians Arbuzov, father and son. Eighty-year-old Alexander Arbuzov heads the Institute of Chemistry of the USSR Academy of Sciences. His field of study is phosphoro-organic compounds. Until recently the prevailing opinion was that this problem is of purely theoretical interest. Now it has been proved that phosphoro-organic compounds can be used for farm pest control; added to plastics and oil, they ensure the noninflammability of these materials.

Sixty-year-old Boris Arbuzov is interested in the practical applications of scientific discoveries. He heads the Research Institute of Chemistry at Kazan University and the recently founded Institute of Organic Chemistry of the USSR Academy of Sciences. Here he tries to link the phosphoro-organic petrochemical research done by his father to the republic's present needs.

* * *

I was leaving Tataria, watching the modern towns and long stretches of new multistoried houses flash by.

My memory traced the history of these lands. Several centuries ago they constituted the Kazan khanate, that last splinter of the great glaciation, an apt description of the Tatar invasion for the middle of the twentieth century. For a long time, until Kazan lay on the great commercial highway between Moscow, the Urals and Siberia, these lands prospered. Then the trans-Siberia railway line was built via Penza and Samara (now Kuibyshev) by-passing the region, and Tataria fell into decay, poverty and illiteracy.

The Russian Revolution of 1917 brought political emancipation to the Tatars. On May 27, 1920, an autonomous republic was set up, and the region was launched on its economic transformation. Tataria has become a major oil and industrial center, and has moved into the mainstream of contemporary science and culture. All this is thanks to the assistance of the other peoples of the Soviet Union, to planned and purposeful economic development.





At the local palace of culture. Folk dancing is an ever popular activity. Others are book discussions, painting, music and do-it-yourself projects. The woodland playground shown above is not far from Bugulma. It is most popular with the local skiers, who often engage in impromptu competitions.



GRANDFATHER FROST AND SANTA CLAUS

BY FELIX SHAPIRO

DRAWINGS BY LEONID SERGEYEV

ON Christmas Eve, the members of the Merry Youngsters Club called on Grandfather Frost and found him in bed.

"He must have gobbled down too much ice cream," said Samodelkin.

"But Grandfather Frost can't get sick from ice cream," said Petrushka. "He must have eaten too many hot cakes."

"No," Grandfather Frost said with a sigh, "I haven't been eating any hot cakes. I just have a headache, because ever since this morning I've been thinking of a way to get to America—and I can't think of any. You see, Santa Claus invited me over there; but today I got a cable from him saying that he can't send his team of reindeer for me. With Christmas here, he needs the team to deliver presents."

"Well I can take you in my rocket plane," said Samodelkin.

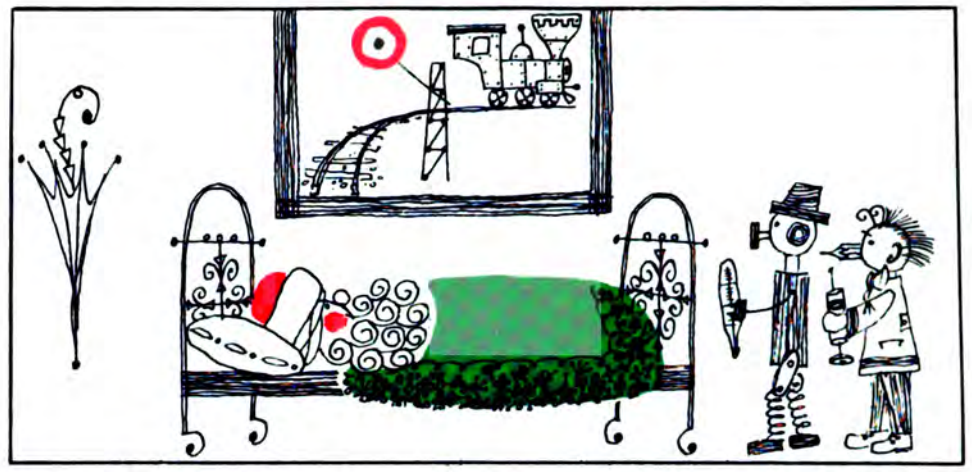
This made Grandfather Frost so happy, he skipped and hopped with joy. The fat-bellied samovar trembled and almost fell off the table.

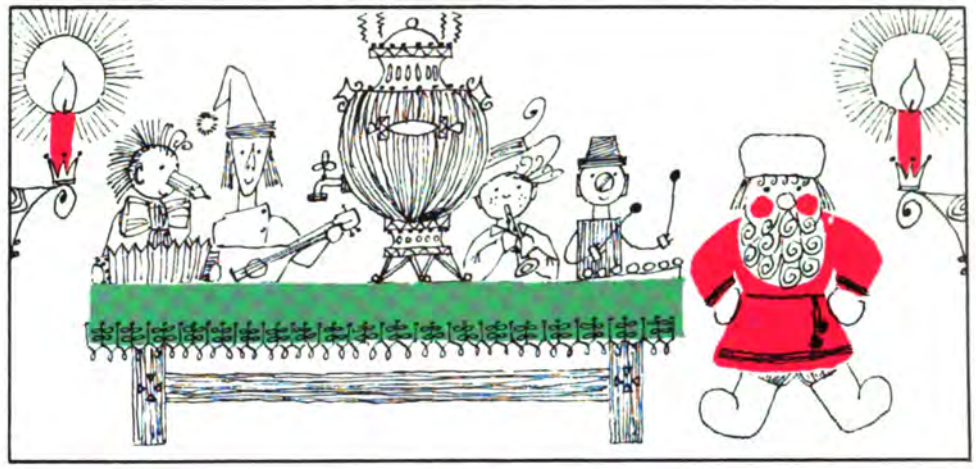
Petrushka and Karandash went into the woods and cut down the loveliest fir tree they could find as a present for Santa Claus. Grandfather Frost praised them for picking out such a nice tree, and as a reward, he gave them new winter clothing—coats, boots and hats. When they put them on, they looked like little Grandfather Frosts.

Everyone got into the rocket plane and flew off to see Santa Claus. When they reached America, they saw Santa Claus standing down below waving his hand.

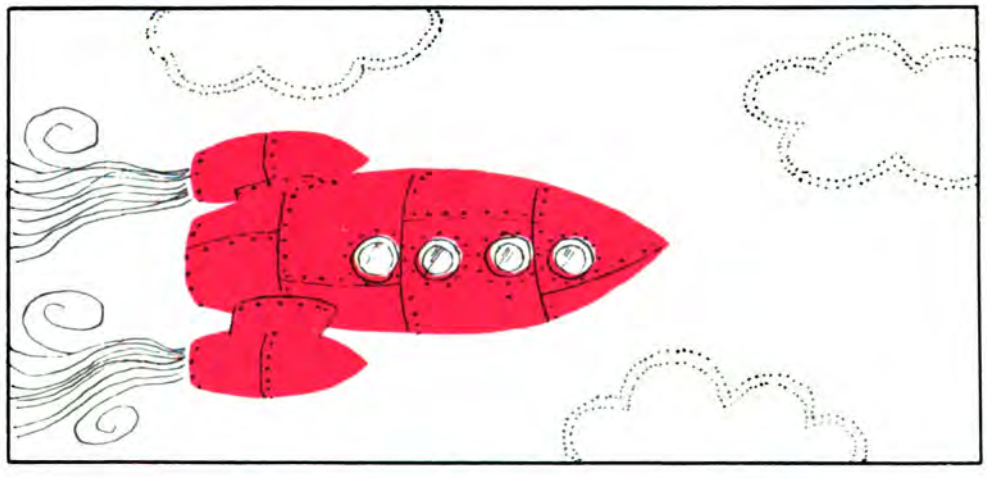
They all had their own parachutes but they had forgotten to bring one for the fir tree. So Grandfather Frost took the tree with him as he bailed out.

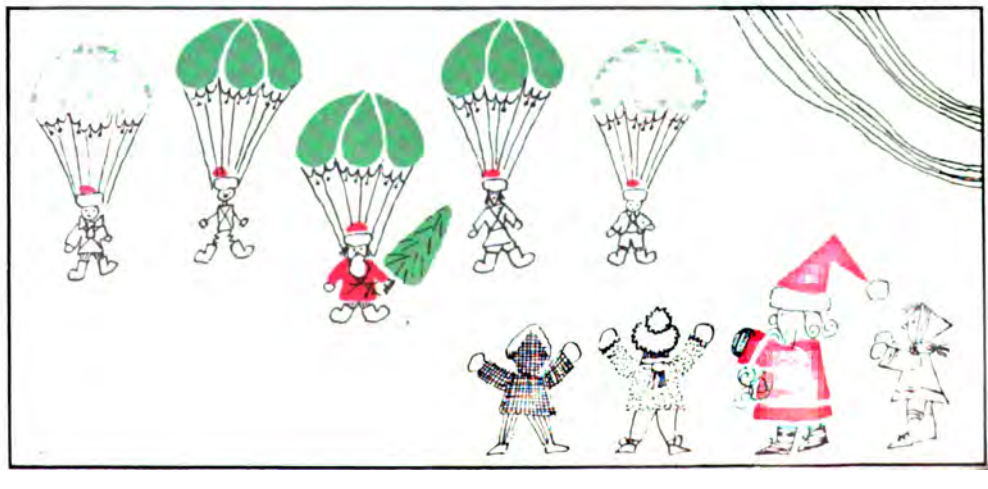
Now that little boys and girls in America have heard this story, they will hardly be surprised when they see not only Santa Claus but Grandfather Frost and the members of the Merry Youngsters Club—Samodelkin, Petrushka, Neznaika and Karandash.











TRADITION OF SCIENTIFIC CONTACTS



By Stepan Korneyev

Head of the Foreign Department
Presidium of the USSR Academy of Sciences

WITHOUT the combined efforts of researchers in all countries, there can be no significant scientific progress. Joint research is especially necessary if we are to solve the scientific problems of the day. That is why the cooperation of the scientists of two such countries as the USSR and the USA, whose research achievements rank high, is so vital.

Tradition

Documents in the archives of the USSR Academy of Sciences testify to the 200-year-old history of Russian-American scientific cooperation. In these documents, the first of which dates back to the eighteenth century, there are references to the eminent American scientists Benjamin Franklin, Alexander Bache and Joseph Henry, who were elected members of the St. Petersburg Academy of Sciences. In letters to their Russian counterparts they evidence great interest in regular scientific exchanges with Russia. Simon Newcomb, the well-known American astronomer, who was also a member of the St. Petersburg Academy, maintained especially close ties with Russian scientists. Many of his scientific papers, which he presented to the academy, are on file in its archives.

At the end of the nineteenth century the St. Petersburg Academy, acknowledging American scientific achievements and discoveries, elected to membership George Bancroft, historian and statesman, and William W. Whitney, philologist, orientalist and compiler of a highly regarded Sanskrit dictionary.

There are other equally notable examples of scientific cooperation between our two countries that testify to a continuing tradition.

Renewing Contacts

In 1923 two eminent Soviet scientists, Academicians Ivan Pavlov and Pyotr Lazarev, visited the United States. They were the first to be invited by the American scientific community after the October Revolution.

In 1924 Soviet scientists elected several eminent Americans to membership in the USSR Academy: Louis Bauer, physicist; Herbert S. Jennings, biologist; William W. Campbell, astronomer; and Robert A. Millikan, physicist.

Subsequently Academician Pyotr Sushkin addressed scientific meetings in Boston, New York, Chicago and San Francisco, and Academician Abram Joffe lectured at 12 major American universities. Academician Alexander Frumkin gave a chemistry course (1928-1929) at the University of Wisconsin. These visits to the United States by distinguished Soviet scientists in the 1920's did much to foster research exchanges between the two countries.

The long hiatus in diplomatic relations between our countries after the October Revolution was not conducive to scientific cooperation in the early years after the Revolution. However, the resumption of diplomatic relations in November 1933 opened new horizons for scientific contacts. A large group of distinguished American scientists attended the Fifteenth International Congress of Physiologists and the Seventeenth International Geological Congress, held in the USSR in 1935 and 1937 respectively.

Thereafter the area of cooperation began to enlarge. Nor did the Second World War slow the process. Our collaboration and mutual assistance in those years, which followed from the common national interests of both countries, strengthened Soviet-American relations. This cooperation carried over into the field of science.

Unfortunately, relations between our countries cooled off in the late 1940's, with the result that the ties between two of the world's largest science centers—the Academy of Sciences of the USSR and the National Academy of Sciences of the USA—were no more than casual for nearly 10 years.

The decisions of the Twentieth and Twenty-Second Congresses of the Communist Party of the Soviet Union were directed toward normalizing the international situation, consolidating peace and extending East-West cooperation. Their major emphasis was on the peaceful coexistence of socialist and capitalist states as an objective necessity. The new CPSU Program underscores the fact that the major ingredient of peaceful coexistence

is economic and cultural cooperation on the basis of full equality and mutual advantage.

In 1955 the USSR Academy of Sciences, wishing to acquaint scientists abroad with Soviet work in the use of atomic energy for peaceful purposes, convened a special session on the atomic nucleus. This was the first postwar gathering of researchers in the field.

The tremendous interest of physicists abroad was demonstrated by a distinguished representation from 42 countries. Regrettably, American scientists, who have done such important studies in nuclear physics, did not attend.

That same year Soviet scientists participated in the International Conference on the Peaceful Uses of Atomic Energy in Geneva. Simultaneously, the first atomic power station in the world was put into operation in the USSR, evidence of the maturity of Soviet science.

The 1955 Geneva conference did much to restore the artificially severed ties between scientists of our two countries.

New Stage

The year 1956 was a turning point in the postwar cooperation of Soviet and American scientists. In the spring of that year a large group of Americans, at the invitation of the USSR Academy of Sciences, took part in the Conference on the Physics of High Energy Particles and visited academy institutions to acquire firsthand knowledge of Soviet research in the application of atomic energy for peace.

That same year American scientists invited three Soviet physicists—Academicians Vladimir Vexler, Mikhail Markov and Nikolai Silin—to participate in the annual American conference on the physics of nuclear reactions at the University of Rochester.

Ever since we have had consistent cooperation in the most diverse fields. The achievements of the Soviet Union in the peaceful applications of atomic energy, the conquest of outer space, automation and electronics, rocket engineering and other fields were of course, contributing factors.

In 1957 a large group of Soviet scientists went to the United States to take part in the International Symposium on Spectroscopy; in conferences on metallurgy and nuclear chemistry, outer space and gas dynamics; and in the work of the committee on rockets and artificial earth satellites of the International Geophysical Year (IGY).

Also in 1957 more than 40 American scientists visited the Soviet Union for conferences on the application of radioactive and stable isotopes, the origin of life, the chemistry of steel production, and nuclear reactions. Some of them—Professor Francis E. Low, physicist; Professor Frank Rainey, archeologist; Professor Selman A. Waksman, microbiologist, and Professor Isaac Hughes, physicist—were invited to lecture. A paper read by Professor James Colehoffe on the application of radioactive isotopes in analytical chemistry aroused particular interest.

For the 1957 International Geophysical Year scientists of 66 countries made joint studies of geophysical phenomena on earth, in the atmosphere and in outer space. Soviet and American scientists collaborated in IGY Antarctic research. Two American meteorologists, Gordon Cartwright and Arthur Rubin, worked at the Soviet observatory in Mirny, and two Soviet polar explorers—V. Rastorguyev, a weather forecaster, and P. Astapenko, a hydro meteorologist—made observations at the Little America Antarctic station.

When the *Vityaz*, a USSR Academy of Sciences research ship participating in the IGY program put in at San Francisco, city officials, scientists, newspapermen and a crowd of interested citizens turned out to welcome the ship. The *Vityaz* scientists discussed their oceanographic studies in the Pacific and Indian oceans.

The International Geophysical Year was a big stride toward greater cooperation between Soviet and American scientists. Working side by side, they obtained invaluable data on the geography of many hitherto unknown parts of the Antarctic and on various phenomena in soil physics. Much that is new was also contributed to our knowledge of oceanography. But perhaps the greatest value was the proof IGY gave of the fruitfulness of international scientific cooperation and the need for more of it.

It had become obvious by then that further cooperation required a firmer foundation and planned organization. Thus in the fall of 1958 negotiations between the Academy of Sciences of the USSR and the National Academy of Sciences of the USA took place in Moscow.

On the Basis of Agreements

These negotiations resulted in a widely ramified agreement for exchange of lecturers in 1959-1960, seminars in various fields of science and technology, and exchange of research in progress, as well as for joint research projects. This agreement was carried through successfully and helped greatly to forward the exchange of scientific information and practical experience.

In 1959 Soviet scientists, at the invitation of American colleagues, participated in a number of international and national congresses in the United States. The USSR Academy was especially interested in the First American Oceanographic Congress, which 60 of our specialists in this field attended.

The following year, more than 400 American scientists visited the Soviet Union as guests of our academy for a congress on theoretical and applied mechanics, a symposium on polymers, a congress on automatic controls, and a congress of orientialists.

From 1955 through 1961, about 1,500 American scientists visited the Soviet Union at the invitation of the USSR Academy, and more than 300 academy researchers went to the United States.

A new agreement between the academies, signed in Washington at the beginning of 1962, provided for a wider area of contacts in 1962-1963. Besides a considerable increase in the exchange of scientists, the agreement gave each academy and its institutes the right to invite scientists for specific research projects. Another agreement between the Academy of Sciences of the USSR and the American Council of Learned Societies provided for exchanges in the humanities.

Reciprocal visits of scientists have become more frequent and of longer duration. On the basis of these agreements 28 American scientists delivered lectures at scientific institutions of the USSR Academy of Sciences and familiarized themselves with studies current at the time, similarly for Soviet scientists who visited the United States.

The agreements made longer exchange visits possible; 29 American scientists in varied fields spent nearly a year in the USSR doing research, as did 28 Soviet scientists in the United States. A symposium on radio astronomy was held in the United States in 1962 within the framework of the agreements. In August 1963, 23 American mathematicians took part in the Soviet-American symposium held in Novosibirsk on one of the most important problems of present-day mathematics, the equation of partial derivatives.

It is hard to overestimate the significance of these agreements. Reciprocal visits for conferences, symposiums, research exchanges and lectures have become more frequent outside the framework of the agreements as well. In 1962-1963, 320 American scientists visited the USSR at the invitation of the USSR Academy of Sciences, and more than 200 Soviet scientists visited the United States. American scientists George B. Kistiakowsky, Jerome Wiesner, Arthur F. Burns and many others visited the Soviet Union as guests of the USSR Academy of Sciences to lecture and study the work being done in their fields of interest in the Soviet Union. Soviet scientists Yuri V. Reznichenko, Alexander I. Oparin, Vadim V. Sokolovsky, Dmitri S. Korzhinsky, Nikolai M. Emanuel, and many others visited the United States for the same purpose and were cordially welcomed. There is no doubting the benefit of

such contacts although organization problems still remain to be solved.

Frederick Seitz, president of the National Academy of Sciences of the United States, and Frederick H. Burkhardt, president of the American Council of Learned Societies, visited the USSR in 1963. Vladimir A. Kirillin, vice president of the USSR Academy of Sciences, headed a delegation of Soviet scientists who participated in the celebration commemorating the hundredth anniversary of the National Academy of Sciences of the United States. These visits helped strengthen Soviet-American scientific ties and prepare the ground for a new agreement.

The Present and the Future

The unhappy fact is that the number of Soviet scientists who have gone to the United States is smaller than the number of American scientists who have come to the USSR. But the Soviet side cannot be blamed for the disproportion, and we have reason to believe that it will disappear in time, a belief that seems to be justified by the rising interest of American scientists in Soviet research and the increasing number of invitations extended to Soviet scientists by American institutions.

Under the agreement for scientific cooperation concluded between the two governments, the USSR Academy of Sciences and the National Academy of Sciences of the United States decided in February 1964 to exchange a large number of scientists in 1964-1965 for periods of from one to ten months. They will lecture, hold seminars on specific scientific problems, and familiarize themselves with research in progress. In addition, the academies can invite scientists for special visits. The academies will arrange for the guest scientists to participate in national conferences and visit research institutes in their specialties. The academies agreed to convene joint symposiums on topical scientific problems; to facilitate contacts between scientific institutions and organizations, archives and libraries; and to continue the exchange of scientific publications.

A similar agreement was concluded between the USSR Academy of Sciences and the American Council of Learned Societies. Apart from the exchange of lecturers, both sides are to exchange 15 scientific workers each for a period of from three to ten months to familiarize themselves with work being done in the social sciences and the humanities, and to do research. Also planned are joint Soviet-American symposiums.

These agreements for a new two-year period constitute another important step toward Soviet-American scientific cooperation, their importance for scientific progress generally and for better understanding between the two peoples being obvious enough.

Mutual participation in international conferences and in the program of the International Geophysical Year, the agreements, and the reciprocal visits over the past few years have created a favorable climate for permanent scientific exchange and cooperation.

There is still another area of international cooperation where the aspirations and interests of scientists coincide with those of people of good will the world over—joint action for halting the arms race. Indeed, to whom else if not scientists is the baneful nature of the arms race evident?

Scientists everywhere in the world, and particularly those in the USSR and the USA, bear a special responsibility. Whether science will be a blessing or a curse for the human race, whether the tremendous possibilities of scientific and technical progress will serve the purposes of creation or destruction, depend largely upon the position the scientists of the USSR and the USA take on this most vital issue and their active participation in helping to resolve it.

An important problem facing world science today is the study of outer space. In this sphere scientists of our two countries, working hand in hand, have made definite progress. An agreement on cooperation in the peaceful investigation and utilization of outer space is already in effect. Cooperation is in the form of the exchange of scientific data on artificial satellites launched in the United States and the Soviet Union, the use of these satellites in studying meteorological processes, and the joint charting of a map of the earth's magnetic field.

Soviet and American scientists are actively cooperating in international organizations investigating the oceans. The contributions of scientists of other countries would be welcomed. It is the ocean which is the potential source of varied resources that will be available to man in the near future.

Another, and no less important, problem is the study of the upper mantle of the earth and its influence on the development of the earth's crust. Such a study will give us a much desired knowledge of the interior of our planet and the distribution of minerals, and will lead us to new mineral and power resources in the bowels of the earth.

Within the framework of international cooperation, Soviet and American scientists are now carrying out researches in the International Years of the Quiet Sun (1964and1965). During this period we will cooperate on a magnetic survey of the earth and an international biological project aimed at improving the general well-being of mankind.

In this article we cannot hope to cover all the aspects of the current cooperative efforts between Soviet and American scientists; they are growing and expanding from day to day. One thing, though, is clear: they would profit enormously from normal relations between our two great countries, both of which are interested in living in peace and friendship.

HUMOR



"Please send a plumber!"



"He plays third violin in our orchestra."

QUIZ

WHAT DO YOU KNOW ABOUT RUSSIAN-AMERICAN RELATIONS?

1. In what year were diplomatic relations established between Russia and the United States? (5)

2. When was the first commercial voyage made from the United States to Russia? Name the points of departure and destination. (7)

3. Which side did Russia support in the American Civil War? How was this support given? (4)

4. Name the first joint Russian-American trading company and the year it was founded. (5)

5. The territory of which of the 50 American states once belonged to Russia? How and when did it become a possession of the United States? (2)

6. What American president officially recognized the Soviet Union? Name the exact date when USA-USSR diplomatic relations were established and the first ambassadors exchanged by the two countries. (7)

7. What three Russians set a world record when they flew nonstop from Moscow to an American city in 1937. Where did they land? What distance did they cover and how long did they fly? (6)

8. When and in what city did units of the U.S. and Soviet armies link up when Nazi Germany was routed? (3)

9. When was the first USSR-USA cultural agreement signed? (5)

10. What American aircraft carrier picked up four Soviet armymen adrift in the ocean for many days? When and where did it happen? Name the rescued men. (6)

For each correct answer give yourself the number of points indicated in the bracket.
Under 30—check your history book
30–40—not bad, but could be better
40–45—very good indeed
45–50—consider yourself an expert on American-Soviet relations

ANSWERS TO QUIZ

1. In 1808-1809 by the governments of Jefferson and Alexander I.

2. In 1784, from Salem, Mass. to St. Petersburg.

3. Russia supported the Union government. In 1863, at the request of President Lincoln, the Russian Government sent two fleets to American shores, to San Francisco and New York. The arrival of the Russian ships kept the British and French governments from intervening in the Civil War on the side of the Confederacy.

4. The Russian-American Trading Company was founded in 1799 by order of Paul I. It was granted a monopoly on the export of fur from Alaska and other lands north of the fifty-fifth parallel, as well as the Aleutian and Kuril Islands.

5. Alaska. It was sold to the United States on March 30, 1867, for 7.2 million dollars, and officially handed over on October 18, 1867.

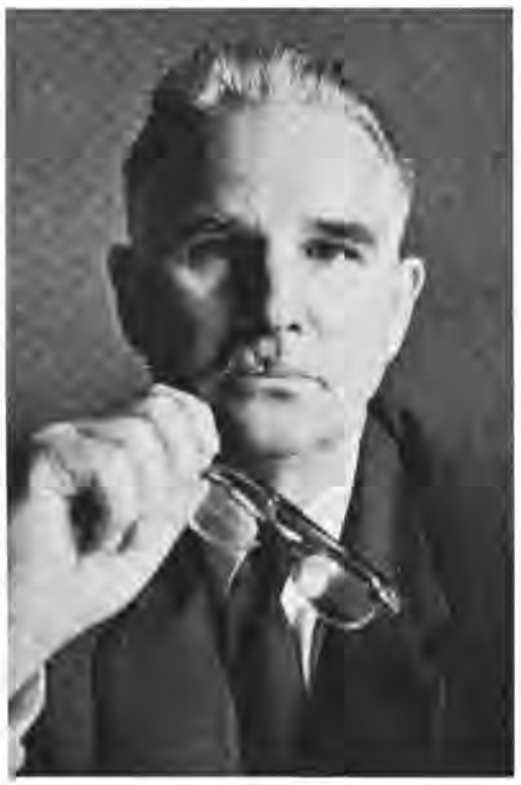
6. President Franklin D. Roosevelt. November 17, 1933. The Soviet and American Ambassadors were Alexander Troyanovsky and William C. Bullitt respectively.

7. Mikhail Gromov, Andrei Yumashev and Sergei Danilin flew over the North Pole nonstop from Moscow to San Jacinto, California (6,262 miles in 62 hours 17 minutes—one official source gives it as 62 hours 2 minutes), where they landed on July 14, 1937.

8. The link-up took place in Torgau, on the Elbe, on April 25, 1945.

9. January 27, 1958.

10. The Kearsarge. The rescue took place in the Pacific on March 7, 1960. The Soviet armymen were Askhat Ziganshin, Anatoli Kryuchkovsky, Filipp Poplavsky and Ivan Fedotov.



TRADITION OF SCIENTIFIC CONTACTS

By Stepan Korneyev

Head of the Foreign Department
Presidium of the USSR Academy of Sciences

WITHOUT the combined efforts of researchers in all countries, there can be no significant scientific progress. Joint research is especially necessary if we are to solve the scientific problems of the day. That is why the cooperation of the scientists of two such countries as the USSR and the USA, whose research achievements rank high, is so vital.

Tradition

Documents in the archives of the USSR Academy of Sciences testify to the 200-year-old history of Russian-American scientific cooperation. In these documents, the first of which dates back to the eighteenth century, there are references to the eminent American scientists Benjamin Franklin, Alexander Bache and Joseph Henry, who were elected members of the St. Petersburg Academy of Sciences. In letters to their Russian counterparts they evidence great interest in regular scientific exchanges with Russia. Simon Newcomb, the well-known American astronomer, who was also a member of the St. Petersburg Academy, maintained especially close ties with Russian scientists. Many of his scientific papers, which he presented to the academy, are on file in its archives.

At the end of the nineteenth century the St. Petersburg Academy, acknowledging American scientific achievements and discoveries, elected to membership George Bancroft, historian and statesman, and William W. Whitney, philologist, orientalist and compiler of a highly regarded Sanskrit dictionary.

There are other equally notable examples of scientific cooperation between our two countries that testify to a continuing tradition.

Renewing Contacts

In 1923 two eminent Soviet scientists, Academicians Ivan Pavlov and Pyotr Lazarev, visited the United States. They were the first to be invited by the American scientific community after the October Revolution.

In 1924 Soviet scientists elected several eminent Americans to membership in the USSR Academy: Louis Bauer, physicist; Herbert S. Jennings, biologist; William W. Campbell, astronomer; and Robert A. Millikan, physicist.

Subsequently Academician Pyotr Sushkin addressed scientific meetings in Boston, New York, Chicago and San Francisco, and Academician Abram Joffe lectured at 12 major American universities. Academician Alexander Frumkin gave a chemistry course (1928-1929) at the University of Wisconsin. These visits to the United States by distinguished Soviet scientists in the 1920's did much to foster research exchanges between the two countries.

The long hiatus in diplomatic relations between our countries after the October Revolution was not conducive to scientific cooperation in the early years after the Revolution. However, the resumption of diplomatic relations in November 1933 opened new horizons for scientific contacts. A large group of distinguished American scientists attended the Fifteenth International Congress of Physiologists and the Seventeenth International Geological Congress, held in the USSR in 1935 and 1937 respectively.

Thereafter the area of cooperation began to enlarge. Nor did the Second World War slow the process. Our collaboration and mutual assistance in those years, which followed from the common national interests of both countries, strengthened Soviet-American relations. This cooperation carried over into the field of science.

Unfortunately, relations between our countries cooled off in the late 1940's, with the result that the ties between two of the world's largest science centers—the Academy of Sciences of the USSR and the National Academy of Sciences of the USA—were no more than casual for nearly 10 years.

The decisions of the Twentieth and Twenty-Second Congresses of the Communist Party of the Soviet Union were directed toward normalizing the international situation, consolidating peace and extending East-West cooperation. Their major emphasis was on the peaceful coexistence of socialist and capitalist states as an objective necessity. The new CPSU Program underscores the fact that the major ingredient of peaceful coexistence

is economic and cultural cooperation on the basis of full equality and mutual advantage.

In 1955 the USSR Academy of Sciences, wishing to acquaint scientists abroad with Soviet work in the use of atomic energy for peaceful purposes, convened a special session on the atomic nucleus. This was the first postwar gathering of researchers in the field.

The tremendous interest of physicists abroad was demonstrated by a distinguished representation from 42 countries. Regrettably, American scientists, who have done such important studies in nuclear physics, did not attend.

That same year Soviet scientists participated in the International Conference on the Peaceful Uses of Atomic Energy in Geneva. Simultaneously, the first atomic power station in the world was put into operation in the USSR, evidence of the maturity of Soviet science.

The 1955 Geneva conference did much to restore the artificially severed ties between scientists of our two countries.

New Stage

The year 1956 was a turning point in the postwar cooperation of Soviet and American scientists. In the spring of that year a large group of Americans, at the invitation of the USSR Academy of Sciences, took part in the Conference on the Physics of High Energy Particles and visited academy institutions to acquire firsthand knowledge of Soviet research in the application of atomic energy for peace.

That same year American scientists invited three Soviet physicists—Academicians Vladimir Vexler, Mikhail Markov and Nikolai Silin—to participate in the annual American conference on the physics of nuclear reactions at the University of Rochester.

Ever since we have had consistent cooperation in the most diverse fields. The achievements of the Soviet Union in the peaceful applications of atomic energy, the conquest of outer space, automation and electronics, rocket engineering and other fields were of course, contributing factors.

In 1957 a large group of Soviet scientists went to the United States to take part in the International Symposium on Spectroscopy; in conferences on metallurgy and nuclear chemistry, outer space and gas dynamics; and in the work of the committee on rockets and artificial earth satellites of the International Geophysical Year (IGY).

Also in 1957 more than 40 American scientists visited the Soviet Union for conferences on the application of radioactive and stable isotopes, the origin of life, the chemistry of steel production, and nuclear reactions. Some of them—Professor Francis E. Low, physicist; Professor Frank Rainey, archeologist; Professor Selman A. Waksman, microbiologist, and Professor Isaac Hughes, physicist—were invited to lecture. A paper read by Professor James Colehoffe on the application of radioactive isotopes in analytical chemistry aroused particular interest.

For the 1957 International Geophysical Year scientists of 66 countries made joint studies of geophysical phenomena on earth, in the atmosphere and in outer space. Soviet and American scientists collaborated in IGY Antarctic research. Two American meteorologists, Gordon Cartwright and Arthur Rubin, worked at the Soviet observatory in Mirny, and two Soviet polar explorers—V. Rastorguyev, a weather forecaster, and P. Astapenko, a hydro meteorologist—made observations at the Little America Antarctic station.

When the *Vityaz*, a USSR Academy of Sciences research ship participating in the IGY program put in at San Francisco, city officials, scientists, newspapermen and a crowd of interested citizens turned out to welcome the ship. The *Vityaz* scientists discussed their oceanographic studies in the Pacific and Indian oceans.

The International Geophysical Year was a big stride toward greater cooperation between Soviet and American scientists. Working side by side, they obtained invaluable data on the geography of many hitherto unknown parts of the Antarctic and on various phenomena in soil physics. Much that is new was also contributed to our knowledge of oceanography. But perhaps the greatest value was the proof IGY gave of the fruitfulness of international scientific cooperation and the need for more of it.

It had become obvious by then that further cooperation required a firmer foundation and planned organization. Thus in the fall of 1958 negotiations between the Academy of Sciences of the USSR and the National Academy of Sciences of the USA took place in Moscow.

On the Basis of Agreements

These negotiations resulted in a widely ramified agreement for exchange of lecturers in 1959-1960, seminars in various fields of science and technology, and exchange of research in progress, as well as for joint research projects. This agreement was carried through successfully and helped greatly to forward the exchange of scientific information and practical experience.

In 1959 Soviet scientists, at the invitation of American colleagues, participated in a number of international and national congresses in the United States. The USSR Academy was especially interested in the First American Oceanographic Congress, which 60 of our specialists in this field attended.

The following year, more than 400 American scientists visited the Soviet Union as guests of our academy for a congress on theoretical and applied mechanics, a symposium on polymers, a congress on automatic controls, and a congress of orientialists.

From 1955 through 1961, about 1,500 American scientists visited the Soviet Union at the invitation of the USSR Academy, and more than 300 academy researchers went to the United States.

A new agreement between the academies, signed in Washington at the beginning of 1962, provided for a wider area of contacts in 1962-1963. Besides a considerable increase in the exchange of scientists, the agreement gave each academy and its institutes the right to invite scientists for specific research projects. Another agreement between the Academy of Sciences of the USSR and the American Council of Learned Societies provided for exchanges in the humanities.

Reciprocal visits of scientists have become more frequent and of longer duration. On the basis of these agreements 28 American scientists delivered lectures at scientific institutions of the USSR Academy of Sciences and familiarized themselves with studies current at the time, similarly for Soviet scientists who visited the United States.

The agreements made longer exchange visits possible; 29 American scientists in varied fields spent nearly a year in the USSR doing research, as did 28 Soviet scientists in the United States. A symposium on radio astronomy was held in the United States in 1962 within the framework of the agreements. In August 1963, 23 American mathematicians took part in the Soviet-American symposium held in Novosibirsk on one of the most important problems of present-day mathematics, the equation of partial derivatives.

It is hard to overestimate the significance of these agreements. Reciprocal visits for conferences, symposiums, research exchanges and lectures have become more frequent outside the framework of the agreements as well. In 1962-1963, 320 American scientists visited the USSR at the invitation of the USSR Academy of Sciences, and more than 200 Soviet scientists visited the United States. American scientists George B. Kistiakowsky, Jerome Wiesner, Arthur F. Burns and many others visited the Soviet Union as guests of the USSR Academy of Sciences to lecture and study the work being done in their fields of interest in the Soviet Union. Soviet scientists Yuri V. Reznichenko, Alexander I. Oparin, Vadim V. Sokolovsky, Dmitri S. Korzhinsky, Nikolai M. Emanuel, and many others visited the United States for the same purpose and were cordially welcomed. There is no doubting the benefit of

such contacts although organization problems still remain to be solved.

Frederick Seitz, president of the National Academy of Sciences of the United States, and Frederick H. Burkhardt, president of the American Council of Learned Societies, visited the USSR in 1963. Vladimir A. Kirillin, vice president of the USSR Academy of Sciences, headed a delegation of Soviet scientists who participated in the celebration commemorating the hundredth anniversary of the National Academy of Sciences of the United States. These visits helped strengthen Soviet-American scientific ties and prepare the ground for a new agreement.

The Present and the Future

The unhappy fact is that the number of Soviet scientists who have gone to the United States is smaller than the number of American scientists who have come to the USSR. But the Soviet side cannot be blamed for the disproportion, and we have reason to believe that it will disappear in time, a belief that seems to be justified by the rising interest of American scientists in Soviet research and the increasing number of invitations extended to Soviet scientists by American institutions.

Under the agreement for scientific cooperation concluded between the two governments, the USSR Academy of Sciences and the National Academy of Sciences of the United States decided in February 1964 to exchange a large number of scientists in 1964-1965 for periods of from one to ten months. They will lecture, hold seminars on specific scientific problems, and familiarize themselves with research in progress. In addition, the academies can invite scientists for special visits. The academies will arrange for the guest scientists to participate in national conferences and visit research institutes in their specialties. The academies agreed to convene joint symposiums on topical scientific problems; to facilitate contacts between scientific institutions and organizations, archives and libraries; and to continue the exchange of scientific publications.

A similar agreement was concluded between the USSR Academy of Sciences and the American Council of Learned Societies. Apart from the exchange of lecturers, both sides are to exchange 15 scientific workers each for a period of from three to ten months to familiarize themselves with work being done in the social sciences and the humanities, and to do research. Also planned are joint Soviet-American symposiums.

These agreements for a new two-year period constitute another important step toward Soviet-American scientific cooperation, their importance for scientific progress generally and for better understanding between the two peoples being obvious enough.

Mutual participation in international conferences and in the program of the International Geophysical Year, the agreements, and the reciprocal visits over the past few years have created a favorable climate for permanent scientific exchange and cooperation.

There is still another area of international cooperation where the aspirations and interests of scientists coincide with those of people of good will the world over—joint action for halting the arms race. Indeed, to whom else if not scientists is the baneful nature of the arms race evident?

Scientists everywhere in the world, and particularly those in the USSR and the USA, bear a special responsibility. Whether science will be a blessing or a curse for the human race, whether the tremendous possibilities of scientific and technical progress will serve the purposes of creation or destruction, depend largely upon the position the scientists of the USSR and the USA take on this most vital issue and their active participation in helping to resolve it.

An important problem facing world science today is the study of outer space. In this sphere scientists of our two countries, working hand in hand, have made definite progress. An agreement on cooperation in the peaceful investigation and utilization of outer space is already in effect. Cooperation is in the form of the exchange of scientific data on artificial satellites launched in the United States and the Soviet Union, the use of these satellites in studying meteorological processes, and the joint charting of a map of the earth's magnetic field.

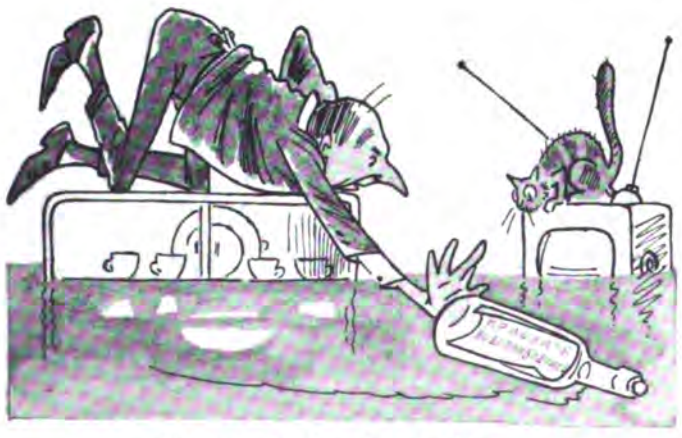
Soviet and American scientists are actively cooperating in international organizations investigating the oceans. The contributions of scientists of other countries would be welcomed. It is the ocean which is the potential source of varied resources that will be available to man in the near future.

Another, and no less important, problem is the study of the upper mantle of the earth and its influence on the development of the earth's crust. Such a study will give us a much desired knowledge of the interior of our planet and the distribution of minerals, and will lead us to new mineral and power resources in the bowels of the earth.

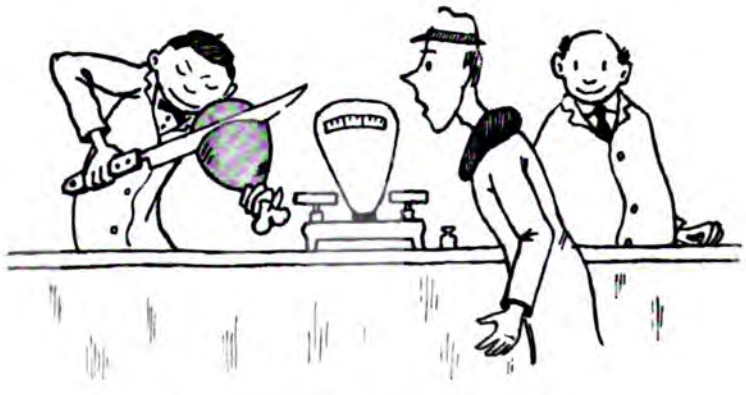
Within the framework of international cooperation, Soviet and American scientists are now carrying out researches in the International Years of the Quiet Sun (1964 and 1965). During this period we will cooperate on a magnetic survey of the earth and an international biological project aimed at improving the general well-being of mankind.

In this article we cannot hope to cover all the aspects of the current cooperative efforts between Soviet and American scientists; they are growing and expanding from day to day. One thing, though, is clear: they would profit enormously from normal relations between our two great countries, both of which are interested in living in peace and friendship.

HUMOR



"Please send a plumber!"



"He plays third violin in our orchestra."

QUIZ

WHAT DO YOU KNOW ABOUT RUSSIAN-AMERICAN RELATIONS?

1. In what year were diplomatic relations established between Russia and the United States? (5)

2. When was the first commercial voyage made from the United States to Russia? Name the points of departure and destination. (7)

3. Which side did Russia support in the American Civil War? How was this support given? (4)

4. Name the first joint Russian-American trading company and the year it was founded. (5)

5. The territory of which of the 50 American states once belonged to Russia? How and when did it become a possession of the United States? (2)

6. What American president officially recognized the Soviet Union? Name the exact date when USA-USSR diplomatic relations were established and the first ambassadors exchanged by the two countries. (7)

7. What three Russians set a world record when they flew nonstop from Moscow to an American city in 1937. Where did they land? What distance did they cover and how long did they fly? (6)

8. When and in what city did units of the U.S. and Soviet armies link up when Nazi Germany was routed? (3)

9. When was the first USSR-USA cultural agreement signed? (5)

10. What American aircraft carrier picked up four Soviet armymen adrift in the ocean for many days? When and where did it happen? Name the rescued men. (6)

For each correct answer give yourself the number of points indicated in the bracket.

Under 30—check your history book
30–40—not bad, but could be better
40–45—very good indeed
45–50—consider yourself an expert on American-Soviet relations

ANSWERS TO QUIZ

1. In 1808-1809 by the governments of Jefferson and Alexander I.

2. In 1784, from Salem, Mass. to St. Petersburg.

3. Russia supported the Union government. In 1863, at the request of President Lincoln, the Russian Government sent two fleets to American shores, to San Francisco and New York. The arrival of the Russian ships kept the British and French governments from intervening in the Civil War on the side of the Confederacy.

4. The Russian-American Trading Company was founded in 1799 by order of Paul I. It was granted a monopoly on the export of fur from Alaska and other lands north of the fifty-fifth parallel, as well as the Aleutian and Kuril Islands.

5. Alaska. It was sold to the United States on March 30, 1867, for 7.2 million dollars, and officially handed over on October 18, 1867.

6. President Franklin D. Roosevelt. November 17, 1933. The Soviet and American Ambassadors were Alexander Troyanovsky and William C. Bullitt respectively.

7. Mikhail Gromov, Andrei Yumashev and Sergei Danilin flew over the North Pole nonstop from Moscow to San Jacinto, California (6,262 miles in 62 hours 17 minutes—one official source gives it as 62 hours 2 minutes), where they landed on July 14, 1937.

8. The link-up took place in Torgau, on the Elbe, on April 25, 1945.

9. January 27, 1956.

10. The Kearsarge. The rescue took place in the Pacific on March 7, 1960. The Soviet armymen were Askhat Ziganshin, Anatoli Krynchkovsky, Filipp Poplavsky and Ivan Fedotov.

Photographs by Vsevolod Tarasevich

Yevgeni's New



Moving day starts with an early stop at the local housing office.



They're not the only new tenants waiting for occupancy permits.



Formalities completed, the new apartment is theirs to move into.



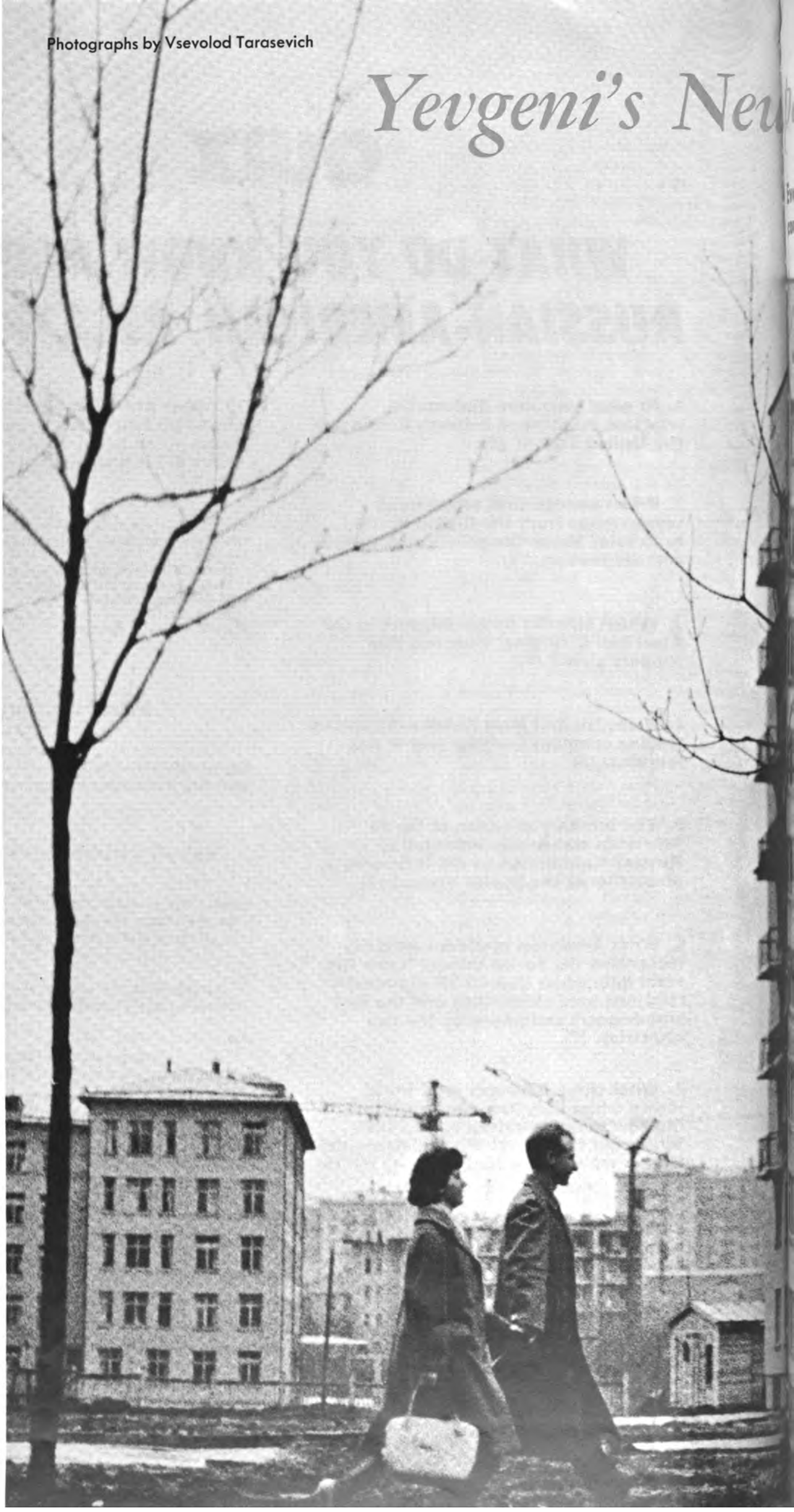
It's a very special feeling that accompanies receipt of the keys.



Yevgeni's mother is pleased for the young couple, and herself.



She and her daughter now have the apartment they had shared.



Apartment

Everyday Life . . . and Holidays of the Lavrentyevs

CONTINUATION: SEE MAY, JUNE, JULY, AUGUST AND OCTOBER





HERE you see Yevgeni and his wife Galina going to their new apartment for the first time. It's in one of the buildings their factory has just put up. Nobody has moved in yet; the street is still torn up and the lawns are bare of the trees and shrubs they'll have by spring. But all that's incidental, the apartment's the thing!

The plant where Yevgeni works has built 12 houses (five-story and eight-story) for its employees. Right now two more nine-story buildings are under construction. Half of the several thousand workers in the factory have been provided with new apartments, but there are still no less than a thousand people in the category to which Yevgeni belonged until recently. He, his wife and their five-year-old son Vova lived in one room, and his mother and younger sister lived in the other room of the same apartment. Now that Yevgeni has this new apartment, his mother and sister won't be crowded.

As many as 108 million people, half of the country's population, have moved into new homes in the past decade. Yet some of the millions of people living in the "new" apartments are already beginning to feel crowded, what with their children growing up and becoming adults. And so there is still a housing shortage. A term heard often nowadays is "moving for improvement." This means that a family with tolerable housing wants a two-or three-bedroom apartment instead of the one-bedroom apartment it is occupying.

The country has undertaken to provide each family with its own modern apartment free of charge. When that is a reality, our magazine will again run a picture story on "Yevgeni's New Apartment."

Meanwhile, in this issue we offer a visual chronicle of the Yevgeni Lavrentyevs' moving day (April 20, 1964) from the moment the head of the household received his occupancy certificate for the apartment to the time he said "thank you" and "good-by" to the last of the friends and relatives who had helped him move. Then quiet, for the first time that hectic day, Yevgeni and his wife Galina went out on the balcony to view the city's panorama from the windows of their new home.



They are the first ones to move into the new apartment building.



Help with the moving. The best friends lug the heaviest pieces.



The womenfolk take turns saying, "Don't scratch the furniture."



A couple of engineer friends do battle with the new sofa bed.



A spontaneous party. The regular housewarming will follow later.



Alone at last! The furniture's in and everyone's finally gone home.



ILYA VARSHAVSKY

"MY biography does nothing to explain why in my fifty-second year I began writing science fiction, the reason I omit biographical details," writes Ilya Varshavsky in the foreword to his collection of short stories *Café Molecular*, three of which we reprint below.

And indeed it does seem to be a matter of pure chance. Four years ago Varshavsky said to his son Victor, a young scientist, who was reading some science fiction with great interest, "How can you read that nonsense, Vitya?"

"Just try and write that kind of nonsense!" the son retorted. Varshavsky accepted the challenge and some time later became a science fiction writer. His success was properly celebrated with the bottle of cognac his son had bet and lost. Since then more than 70 short stories by Varshavsky have been published in a number of magazines and collections.

But Varshavsky's becoming a writer was really not a matter of pure chance. In his youth he served in the Soviet merchant marine. In the twenties a Leningrad journalist traveling on his ship observed that the young sailor had a gift for writing and suggested they do a travel book together. The book was published, but Varshavsky still did not become a writer. Later on he did publish several books and pamphlets, but they were not for the general public. One of them, for instance, was called *Plating by the Electrodeposition Process*. Varshavsky became a design engineer, authored a number of inventions, and is still working at the diesel plant in Leningrad.

It was this combination of literary talent and professional knowledge that probably led Ilya Varshavsky to science fiction.

Varshavsky has sense of humor. He endows his robots and cybernetic machines with human feelings and very human vices. In "The Diary" one of his cybernetic machines of feminine gender, falls madly in love with the engineer operator and is wildly jealous. Her rival is another machine.

Varshavsky's stories are popular with Soviet readers. The 65,000-copy edition of his book was sold out in just a few days.

THREE STORIES BY ILYA VARSHAVSKY

DRAWINGS BY YURI CHEREPANOV

CAFÉ MOLECULAR

SINCE the electronics calculator's indicator of Mishka's conduct had pointed all week to Excellent, we decided to celebrate the event.

Lyulya proposed that we go to the Concert of Suggested Emotions. I felt like visiting the Museum of Alcoholic Beverage Smells, and Mishka demanded that we go to the Café Molecular.

Naturally we went to the café, because it was Mishka who had behaved so well, and it would have been unfair to deprive him of his right to make the choice.

We reached the place quickly in our Thought Plane, with only one slight jolt on the way when I momentarily thought it would be nice to drop in at the museum for a while. Happily, nobody noticed it.

Inside the café, we went to a red table, but Lyulya said she preferred food synthesized out of light and not dark oil.

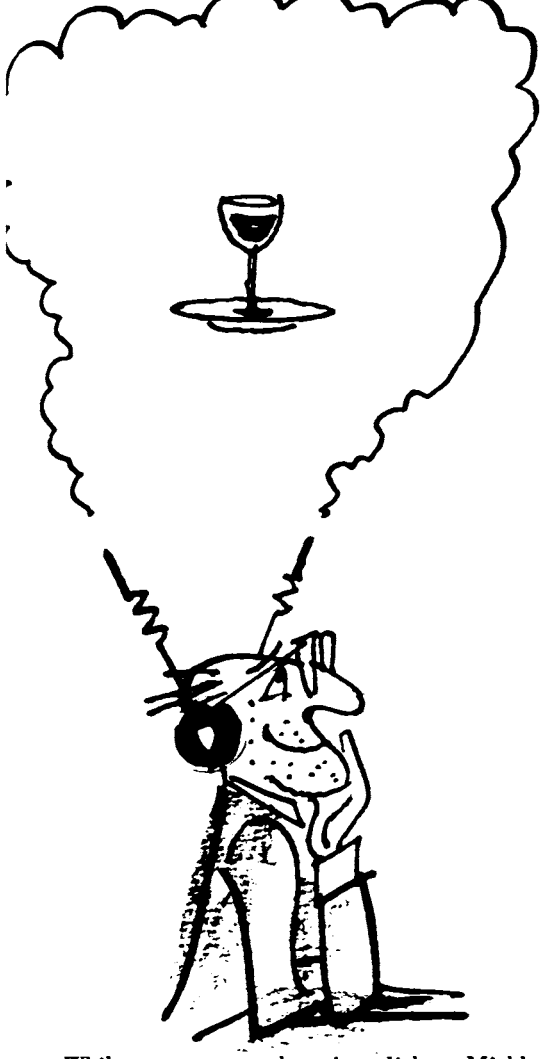
I reminded her that the papers had pointed out that they were equally good, to which Lyulya replied that perhaps it was just a whim, but when you are doing something that is supposed to be fun, why not give in to your whims?

We did not argue with her because we love our Lyulya very much and wanted her to get as much pleasure as possible from her visit. So we sat at a white table, and the screen flashed the image of a robot in a white cap and smock who smilingly told us that the Café Molecular Synthesis had some 360 dishes on its menu, that to get a dish you had to dial its number and the food would be synthesized on the plate right before your eyes. He also said that if we wanted something that was not on the menu, we should don aerials and imagine the dish. The automatic machine would fill the order.

Glancing at Mishka, I saw that we would want something not on the menu.

Lyulya ordered a plate of pancakes, and I beefsteak which was so nicely browned and looked so appetizing that Lyulya said she could not possibly eat all her pancakes and would I have half of them. I did, and gave her half of my beefsteak.





While we were exchanging dishes, Mishka gloomily prodded a concoction of pickles, herring, whipped cream and raspberry jam, trying to find out why the combination of the very best ingredients made such awful food.

Feeling sorry for him, I put his plate into the destructor, and Lyulya told him that he ought to concentrate more when he imagined a meal.

Mishka next began to synthesize a piece of cake the shape of a spaceship, while I tried to imagine what the beverage being prepared for me would taste like if it had a drop of brandy in it. I had almost succeeded, when suddenly the screen flashed the red signal, and the robot informed me that such things were not done in this café.

Lyulya stroked my hand and said, "Poor dear." She and Mishka would go home, and I could go to my museum. Lyulya was always very considerate. Since I knew how much she wanted to go to the Emotions Concert, I told her I would take Mishka home and she could go to the concert, after which she said the best thing would be for all of us to spend a quiet evening at home.

I wanted to do something nice for her and thought up a fruit like an orange, with the taste of ice cream and the aroma of her favorite perfume. She smiled and bravely took a big bite.

I like to see Lyulya smiling, because that makes me love her more than ever.

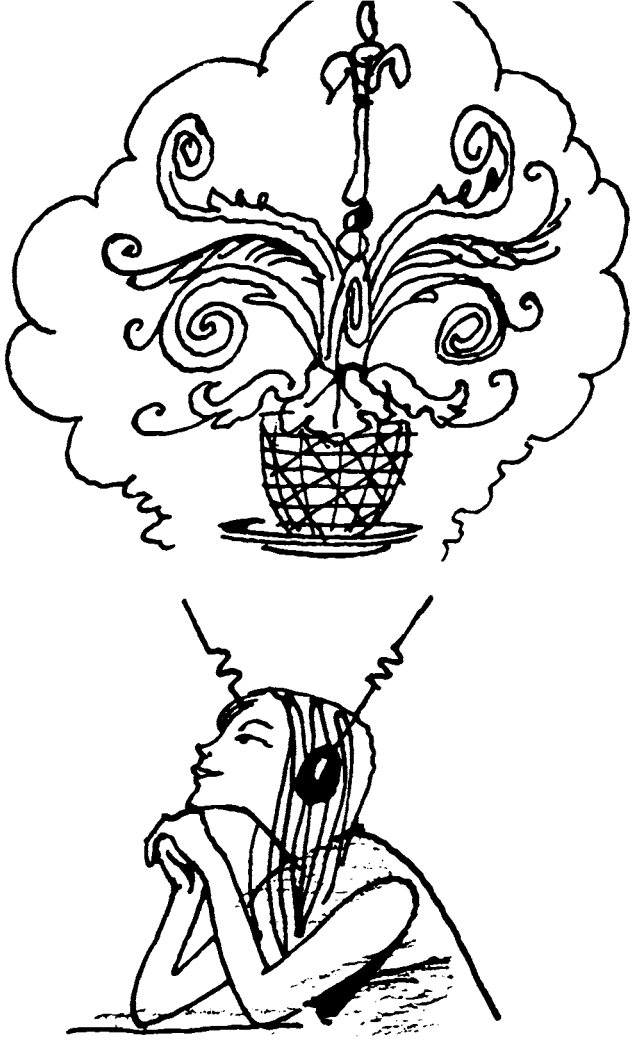
Back in our Thought Plane, Lyulya said these Molecular Cafés were dated but awfully cute, and the food they synthesized was far tastier than meals synthesized at home from the central station.

That was, I thought, because food synthesized by cable suffered from all sorts of static interference.

In the evening Lyulya suddenly broke into sobs and said that synthesized food was disgusting, that she hated cybernetics and wanted to live in the country, take long walks, milk a goat, and drink real milk with tasty rye bread. She also said that Suggested Emotions were just a parody of human feelings.

At that Mishka began to wail that the Conduct Calculator was a rotten invention, and that a boy by the name of Tom Sawyer who lived years ago had gotten along fine without calculators. Also, that the only reason he had joined the electronics group was to learn how to fool the calculator, and that he was going to make a slingshot and take pot shots at all automatic machines.

I consoled them to the best of my ability but could not help thinking myself that the Museum of Smells was not such a wonderful invention. I wondered about those pseudo-



beefsteaks too. I suppose we were just tired after ordering our meals.

Then we went to bed.

That night in my dreams I fought a bear singlehanded, and we all sat around a campfire and ate bear meat smelling wonderfully of blood and smoke.

Mishka ate big hunks of it, and Lyulya beamed at me with her lovely, shy kind of smile.

It would be hard for you to imagine how happy I was in my dreams because I don't remember whether I told you that I love Lyulya and Mishka very much.

A few months ago I celebrated my fiftieth birthday.

After many toasts exaggerating my merits and understating my faults, Strekozov, head of the electronics laboratory, stood up and raised his glass.

"And now," he said, "the culprit will be congratulated by our youngest representative."

For some strange reason, everybody turned to look at the door.

In the ensuing stillness, we could hear a scratching at the door. It opened, and a robot rolled into the room.

Everybody applauded.

"This robot," Strekozov went on, "belongs to the category of self-teaching automatic machines. It does not operate by a preset program but adjusts itself to changing, external conditions. Its memory bank has more than a thousand words, and its vocabulary is constantly growing. It reads printed texts fluently, can independently compose sentences and understand human speech, and is powered by batteries which it recharges itself from the mains whenever necessary. We worked evenings on the design for a whole year to have it ready to give you on your fiftieth birthday. It can be trained to do any job. Say hello to your new master, Robby," he wound up, addressing the robot.

Robby rolled up to me and after a short pause said, "Pleasure it will give me if you kind enough are to receive me into your family."

It was nicely put, although the grammar was not very impressive.

Everybody surrounded Robby, eager for a closer look.

"We cannot possibly have him going around the house stark naked," said my mother-in-law. "I shall make him a robe."

When I awoke the next day, Robby was standing at my bedside obviously waiting for orders.

"Would you please shine my shoes, Robby. They are outside the door."

"How do you do it?" queried Robby.

"It's very simple. You'll find brown polish and brushes in the closet. Smear the polish on the shoes and then brush them until they shine."

Robby obediently left the room.

I wanted to see how he was getting along. When I approached him, he was applying the last dabs of apricot jam my wife had been keeping for a special occasion.

"Oh, Robby!" I exclaimed. "I forgot to tell you the shoe polish was on the bottom shelf of the closet. You took the wrong jar."

"The position of a body in space," he said, imperturbably watching my attempts to wipe the jam off the shoes, "can be determined by three coordinates in the Descartes system of coordinates. The fault in the given coordinates should not exceed the dimensions of the body."

"Right. Robby. I made a mistake."

"Any point in space—the corner of this room, for instance—can be used as the beginning of the coordinates."

"That's clear, Robby. I'll remember that in the future."

"The coordinates of a body can be given in angular dimensions with the aid of azimuth and height," Robby droned on.

"Okay, we won't go into it."

"The permissible fault in the case under review, considering the dimensions of the body and the length of the radius-vector, should not exceed two-thousandths of a radian by azimuth and a thousandth of a radian in height."



"That'll do. Stop airing yourself on the subject, will you?"

Robby really did stop talking, but all day long he followed me around and tried to explain with gestures the particulars of transition from the rectangular to the oblique-angled system of coordinates.

To tell the truth, I was very tired that day.

On the third day I became convinced that Robby was created for intellectual activity rather than for physical work. He engaged in prosaic matters with the greatest reluctance.

But he had to be given credit for one thing —he could count like a virtuoso.

My wife said that if it were not for his passion for counting everything down to the thousandth part of a kopeck, his assistance in calculating our household expenses would have been invaluable.

My wife and mother-in-law feel certain that Robby's gift for mathematics is phenomenal. But my own feeling is that his knowledge is pretty superficial.

Once when we were sitting down to tea, my wife said:

"Robby, please divide the cake in the kitchen into three parts and bring it here."

"I can't do that," said Robby, after a moment's cogitation.

"Why not?"

"You can't divide a unit into three. The quotient is a periodic fraction which cannot be calculated with absolute precision."

My wife gave me a helpless look.

"I believe Robby is right," said my mother-in-law. "I once heard something of the kind."

"Robby," said I, "this isn't an arithmetical division of a unit into three, but the division of a geometric figure into three equal areas. The cake is round, and if you divide a circumference into three parts and draw radii from the points of division, you will divide the cake into three equal parts."

"Nonsense!" replied Robby with unconcealed irritation. "To divide a circumference into three parts I must know its length, which is the product of the diameter and the irrational quantity 'pi.' The problem is insolvable because in the final analysis it is one of the variants of the problem of squaring the circle."

"Quite right!" said my mother-in-law in Robby's support. "We studied that in school. Our math teacher, with whom we were all very much in love, once told us that."

"Pardon me for interrupting," I said, "but there are several methods of dividing a circumference into three parts, and if you come into the kitchen with me, Robby, I will show you how it is done."

"I cannot permit myself to be taught by a creature whose mental processes are so limited and so slow," said Roby challengingly.

That touched my wife to the quick. She would not tolerate the slightest doubt of my mental capacities.

"Shame on you, Robby!"

"I can't hear, I can't hear!" he began to chatter, demonstratively switching off his acoustic device.

Our first conflict was over a trifling matter.

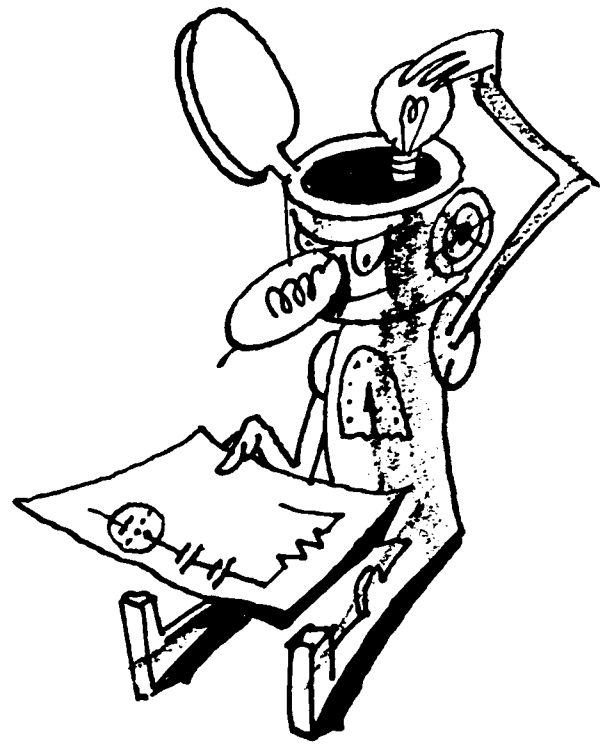
During dinner one day, I cracked a joke:

"Two traveling salesmen met on a boat.

"'Where are you going?' asked the first.

"'Odessa.'

"'You tell me you're going to Odessa because you want me to believe that you're not going to Odessa, but I know you're really going to Odessa. Why do you have to lie about it?'"



The family was duly appreciative.

"Please repeat the initial principles of your joke," demanded Robby.

It's no fun telling a joke twice to the same listeners, but I did.

Robby said nothing. I knew he was capable of performing a thousand logical operations per minute and realized what a titanic job he was doing during this protracted pause.

"It's an absurd problem" he said, finally breaking the silence. "If he is really going to Odessa and says he is going there, he isn't lying."

"Right, Robby. But it's just the absurdity of the joke that makes it funny."

"Are all absurdities so funny?"

"Not all of them. But this one creates a situation in which the absurdity of the suggestion seems funny."

"Is there any algorism for the discovery of such situations?"

"I'm sure I can't say, Robby. There are a lot of funny jokes, but nobody ever tried to classify them that way."

"I see."

At night I was suddenly jolted to a sitting position in my bed. Robby was standing in front of me.

"What's the matter?" I asked him, rubbing my eyes.

"A says that X is equal to Y, B claims that X isn't equal to Y, since Y is equal to X. Is that the gist of your joke?"

"I can't say, Robby. For God's sake, don't keep me up all night with your algorisms."

"There is no God," said Roby sternly repairing to his corner.

The next day, when we sat down to dinner, Robby suddenly announced:

"I want to tell a joke."

"Go ahead," I said.

"A customer asked the salesman the price of a unit of an item on sale. The salesman replied that a unit of the requested item on sale cost one ruble. The customer said: 'You price it at a ruble so as to make me believe the price is not a ruble. But the price is really a ruble. Why lie?'"

"Oh, that's a lovely little joke, Robby," said my mother-in-law. "I'll try and remember it."

"Why aren't you laughing?" asked Robby.

"You see, Robby," I said, "your joke isn't very funny. The situation isn't amusing enough to call for a laugh."

"It is too. It's a funny joke," said Robby obstinately. "And you ought to laugh."

"But how can I laugh if it isn't funny?"

"It is funny! I insist on your laughing! You are obliged to laugh. I demand that you laugh because the joke is funny! I demand, propose and order you immediately, at once, without a moment's hesitation, to laugh. Ha-ha-ha-ha!"

Robby was frantic.

My wife put down her spoon.

"You never let us eat in peace," she said to me. "Can't you find someone else to pick on? You've driven the poor robot to hysterics with your idiotic jokes."

Brushing away a tear, she left the room, followed by my mother-in-law, who stalked out with her head high in the air.

Robby and I were left all by ourselves.

That was when he really let himself go!

The word "idiotic" drew a whole lava of synonyms from the recesses of his enlarged vocabulary.

"Fool!" he yelled.

"Blockhead! Dolt! Half-wit! Imbecile! Saphead! Dunce! Laugh, you degenerate, because it's funny! X is not equal to Y because Y is equal to X. Ha-ha-ha-ha!"

I have no wish to describe this disgusting scene to the end. I am afraid I did not comport myself at all well. Bombarded by a hail of profanities, I clenched my fists in impotent rage and giggled through gritted teeth in an attempt to pacify him.

"Laugh louder, you brainless oaf!" he shouted. "Ha-ha-ha-ha!"

The next day the doctor put me to bed with a case of high blood pressure.

Robby is very proud of his ability to discern visual images. He has a remarkable visual memory that permits him to spot a design, glimpsed only once, among hundreds of other complicated patterns. He's always trying to develop this ability of his.

In the summer my wife left on her vacation, and since my mother-in-law was visiting her son, Robby and I were left alone in the apartment.

"I'm not worried about you," said my wife on departing. "Robby will look after you. See you don't upset him."

The weather being hot, I had my head shaved as was my habit at that time of year. When I came home from the barber's, I summoned Robby.

"May I have my dinner now, Robby," I said.

"All the food in this house, as well as everything else in it, plumbing excepted, belongs to its owner. I cannot carry out your order because that would be tantamount to appropriating someone else's property."



"Yes, but I am the owner of this house!"

Robby approached closer and examined me from head to foot.

"Your image does not correspond to that of the owner of this apartment stored in my memory bank."

"I just shaved my head, Robby. Otherwise I'm the same. Can't you remember my voice?"

"A voice can be recorded on tape," said Robby drily.

"But there are hundreds of other things to prove that I'm I. I always thought you capable of noticing such elementary things."

"External images represent objective reality independent of our consciousness."

His inflated self-confidence began to irritate me.

"I have wanted to have a talk with you for a long time, Robby. I believe you would profit by refraining from overloading your memory with supercomplicated concepts and applying yourself to your basic tasks instead."

"I propose that you leave this room," said Robby, speaking his words fast. "Leave, depart, disappear, go! I shall apply physical force, coercion, pressure, blows, kicks, smacks, punches."

Unfortunately I know that whenever Robby begins to express himself in this fashion, arguing with him is absolutely useless.

Besides, I had no desire to be slapped by him. He has a very heavy hand.

I lived for three weeks at my friend's place until my wife returned home.

By that time some of my hair had grown back again.

Robby has adjusted himself completely to our apartment. He spends whole evenings looking at TV. The rest of the time he devotes himself lovingly to his own personal plans, loudly whistling some sort of tune. Unfortunately, his designer did not endow him with a musical ear.

I am afraid his desire to perfect himself has begun to assume a doubtful character. He does the household chores very unwillingly and negligently. And he treats everything that has no bearing on his own person with utter contempt, using a very patronizing tone to all of us.

My wife tried to get him to translate into Russian from foreign languages. He memorized the French-Russian dictionary with remarkable ease and now reads French novels by the dozens. When he is asked to translate what he read, he replies disdainfully:

"It isn't the least interesting. Read it yourself."

I taught him to play chess. At first it was smooth sailing, but later, logical analysis showed him that dishonest playing was the best way of winning.

He takes advantage of every opportunity to shift my men without my noticing.

Once, in the middle of a game, I discovered that my king had disappeared.

"What have you done with my king, Robby?"

"On the third move you checkmated, so I removed your king," he replied arrogantly.

"But that is theoretically impossible. In the first three moves one cannot be checkmated! Put my king back where he belongs, please."

"Why don't you learn how to play the game?" he said and brushed the men off the board.

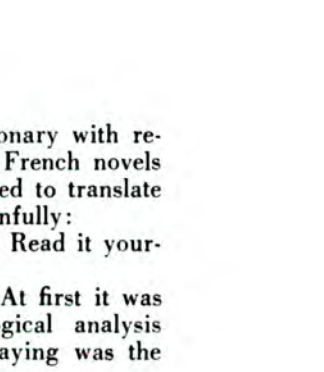
Recently he has begun to evince an interest in poetry. Unfortunately, his interest is entirely one-sided. He is ready to memorize the classics for hours in order to discover a faulty rhyme or incorrect turn of speech. When that happens, the whole apartment rocks with his deafening laughter.

His character is getting worse day by day.

It is only my elementary decency that stops me from giving him away to somebody.

Besides, I hate to upset my mother-in-law. She and Robby get along so well.

BIOCURRENTS, BIOCURRENTS...





"Who wants to see Dr. Hyppocratova? Step in here, please. Dr. Hyppocratova, here is a patient. Please sit in that chair."

"What's bothering you?"

"My front teeth."

"Ah. Let me have a look. So. Four upper fronts are missing. What sort of teeth do you want?"

"Ordinary white teeth, perhaps with gold caps."

"That isn't what I mean. Do you want milk or permanent teeth?"

"Pardon me?"

"We don't make bridges or sets. We grow new teeth. It's the latest method. We attach a tape recording the biocurrents of a teething donor to the patient's gums. Under their influence, the patient's teeth begin to grow. We can grow milk teeth in one session. Permanent teeth, considering the state of your gums, will require three. If you are in no hurry, I'd advise you to grow permanent teeth. You'll be able to chew anything you like with them."

"All right, make me permanent teeth."

"Excellent, I'll pick out a tape for you. Now, let's see. Four uppers. Here we are! Vasilyev, aged six. Tamara, get the tape out of the files, will you? Open your mouth wider so I can attach the contacts to your gums. Lift your head a little. Have you found the tape, Tamara?"

"Here it is."

"Put it on the tape recorder and switch the set on. Ready?"

"Sit still now. Here we go!"

"Zzz-zz-zz-zz-zzz."

"How do you feel?"

"It pwicks."

"It pricks, you say? That's all right. You'll have to bear it only a little longer. It's well worth it. One has to suffer to be beautiful, you know. A few years ago we couldn't even dream of growing new teeth. Now, by intensifying the biocurrents, we can accelerate the process a thousand times over."

"Ouch! Oh-h-h-h!"

"Goodness, what an impatient patient you are. Didn't I say you'd have to bear it only a while longer? "You're cutting teeth."

"Ow-www-www-www!"

"My heavens, if you aren't the most fidgity of patients! Tamara, please apply the contacts to his temples. Now we'll give you the biocurrents of a donor viewing a movie comedy. No, Tamara, this Leningrad Film Studio production won't do. We'd better use a full dose of Charlie Chaplin."

"Ow-oooh-ouch!!!"

"Switch off the recorder, and let me see what's bothering him so much. Tamara!"

"Yes?"

"What tape did I ask you to give me?"

"The Vasilyev donor."

"And what did you bring?"

"The tape you asked for."

"Then why is the patient's mouth full of hair?"

"It's not my fault. They must have mixed the files up again. There are a lot of Vasilyevs there, and this one must have been a hair-growing donor tape for bald men."

"For heaven's sake! Couldn't you take a better look at it? The infantile nurses they keep sending us! Take the patient to the cosmetic department and tell them to remove the hair from his mouth at once. And see that they use a hair-removing tape and not one that gets rid of warts!"



APEX HANOVER STAYED IN MOSCOW

By Oleg Rosin

Photographs by Mikhail Ozersky and Lev Nosov

LAST AUGUST the second a bay trotter slowly pulled a sulky along Moscow's Hippodrome race track to the music of "The Star Spangled Banner." His rider, William Fleming, was wreathed in flowers. He had just won the World Prize driving Apex Hanover, and 20,000 Muscovites were giving him a rousing cheer.

Apex Hanover crossed the ocean and half of Europe to race in Moscow against the nine best trotters of Hungary, the German Democratic Republic, the USSR and Finland. For the prize, a horse had to come first in one of the three 1,600-meter heats and turn in the best time total. The challenger from overseas clocked a winning 1 minute 15.2 seconds in the 1,000-meter event. The runner-up, Legion, was two seconds slower, but the 25-meter handicap evened up the situation.

It happened this way:

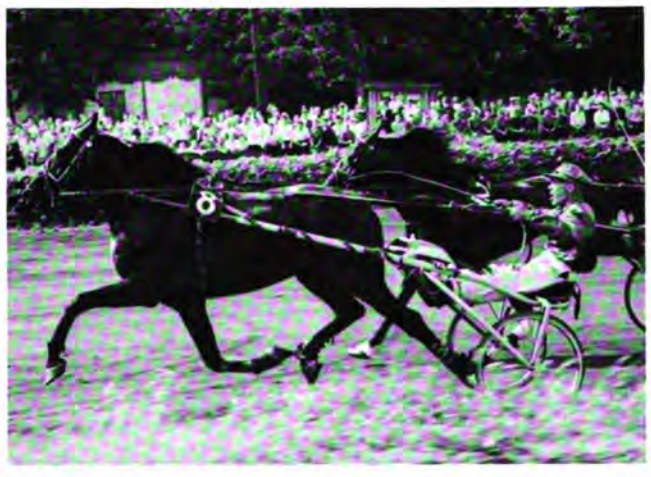
Start. The automatic starter darts forward, then leaves the track, and the even line of trotters following behind breaks immediately. Apogee, the Soviet trotter, shoots forward to lead the race with a time of 31.5 seconds in the first 400 meters.

He zips through the second 400 meters in 31 seconds even. Then the GDR's Stentor takes the lead and wins the 1,200 meters by two lengths. However, Prokaznik (rider Vladimir Kochetkov, USSR) grabs the lead from Stentor, with five other Soviet horses breathing down their necks. If they fan out, Apex Hanover will have to take the outside lane to the finish line. It's the surest win for Prokaznik, and not against the rules, but not the most sporting thing to do either. The road opens for Apex Hanover, and Fleming spurs him through. He pulls ahead of Prokaznik easily near the finish and clocks the very good time of 2:05.

Second Heat. Apex Hanover starts off 25 meters behind, but follows the trotters closely. False start. A minute later Pavel Lytkin (USSR) riding Legion, takes the lead. In the first heat Legion is fourth with 2:06 7/10. Now he darts forward and chalks up 31, 32, 30! This is better than he did in the first heat. The last turn passed, Legion races down the home stretch in the lead. Apex Hanover pulls up alongside. They run neck to neck. The riders look at each other and then prod their horses. Apex Hanover makes a heroic effort, but he is too exhausted. Legion comes in first by a half-length with a time of 2:04 4/5.







This is the second heat. William Fleming (white cap) is driving the American trotter Apex Hanover. Pavel Lytkin is behind the Soviet horse Legion. Neck to neck (in the top picture), Legion is next shown pulling ahead. Then with a burst of effort, Legion shoots forward, winning by half a length. The time: two minutes, four and four-fifth seconds.

The third heat is decisive. To win, all Legion has to do is match Apex Hanover's time for the first heat. If Legion fails, Apex Hanover is the winner.

Third Heat. This is the really breathtaking duel between Legion and Apex Hanover. Nobody looks at the other horses. Legion leads, with his opponent some 30 meters behind. He is alone with no one to chase, and he needs a rival close by badly. But Apex Hanover is no help. He is stuck behind the sulkies running along the edge of the track. What was the big idea? He could have easily passed them on the right.

By the time the horses parted and gave Apex Hanover an opening, it was too late to overtake Legion, who came in first — but clocking only 2:05 3/5, which gave him second place.

The Soviet trotters did better at home than they did in their two appearances at Yonkers. The Laurel experience shows that the time is not far off when Soviet trotters, like Soviet race horses, will bid for first place on American tracks also.

The Moscow-Laurel-Yonkers meets show that American-Soviet racing ties are developing fast and in different ways. One is particularly interesting — the Soviet horse Zabeg stayed in the USA, while several American horses moved to the USSR, among them Apex Hanover, whose new home is the Moscow Hippodrome. Roy Cleveland, former owner of Apex Hanover, took back with him several one-year-olds of the Orlov breed. Incidentally, next year trotters sired by two horses brought here from the USA will be running at Soviet race tracks.

A few words from Roy Cleveland and William Fleming:

ROY CLEVELAND: "We sincerely hope that this is the start of many transoceanic contests between the two countries by horses and horsemen. I know my fellow Americans will be proud and pleased."

WILLIAM FLEMING: "I am glad to be in Russia, and it's quite a thrill for me to race in another country. My visit to the Horse-breeding Museum was an event which touched me deeply. There I saw a portrait of an American horseman, it was my father. . . . And I'm enjoying my stay here. I would like to come back some time."

IF THE PACE of progress is measured by the number of radical social, scientific and cultural changes, then we live in the most dynamic of centuries, rushing ahead at a speed no earlier period of history even approximated.

The past few decades saw the remnants of feudalism wiped out and monarchic governments overthrown in Russia, Germany, Austria-Hungary, Italy, Turkey and many other countries.

Less than half a century ago socialism had its modest place on the bookshelves and lived only in the thoughts and dreams of men. Now the system of socialism unites more than a third of humanity.

Only a short time ago a few countries, never questioning their right to rule, held millions of colonial and semicolonial peoples in a state of servitude. In our generation we have seen the colonial system disintegrate and nations comprising one billion three hundred and thirty-five million people begin to work out their independent social, political and spiritual destinies.

Only recently it still seemed there would never be an end to wars and that humanity was headed for self-destruction. But even this crucial area has been touched by change. The forces of peace have begun to confine and fetter the forces of war. The program for the defense of peace has been advanced and is being carried out by the community of socialist countries.

We are witnessing profound changes in man's intellectual and moral life, enormous cultural progress. We are in the midst of a great scientific and technological revolution; the energy of the atom has been set free, and the first trails to outer space have been blazed. The gap between present and future, between potential possibilities and their realization, between dreams and reality is narrowing more rapidly than ever before.

No one argues the fact that history is moving at headlong speed. That is sufficiently evident. But there are decidedly different attitudes toward that fact, different explanations for the causes and the significance of this universal ferment.

Racing to the Abyss

A multitude of books have been written in which mankind is pictured as a locomotive moving at crazy speed toward a point where the rails end.

"The premonition grows of an inevitable collapse, a misgiving that everything worth living for is doomed to disappear shortly," writes the existentialist philosopher Karl Jaspers.

"We are entering an era," Germain Bazin states, "which is comparable with the grimmest periods in the history of mankind."

And so on and so forth. Sociologist Otto Veit summarizes that point of view in the following: "The leitmotiv of the modern history of philosophy is the idea of an apocalyptic aftermath. Downfall, catastrophe, decline, dusk, end—these words are met in every treatise on the history of culture. They are associated with the old social order, with the old economic order and its whole system of values, or, to put it even more generally, with Western culture."

These grim "apocalyptic visions" are seen only by those who identify the inevitable end and disappearance of the social system close to their hearts with the end of mankind, with doomsday.

Incidentally, these same moods pervade the literature of the periods when the slave-owning system and the feudal system were on the decline. Thus, when popular wrath against the brutal feudal exploitation grew stronger, its apologists pictured any effort to weaken the foundations of feudal absolutism as an attack against all human society. Philosophers Joseph Marie de Maistre, Louis de Bonald and others argued that to replace feudal with bourgeois relationships was to menace civilization, to threaten the very existence of humanity. Thus does every creature, when it dies, think all nature is dying with it.

The feudal aristocracy, of course, wanted to keep its feudal world unchanged and made its bloody attacks on the rising bourgeois system, that "paradise of parvenues," the feudal despots called it.

Even more blood was shed in our century to prevent the people from taking the next step and establishing a socialist system. It has been proved time and again that violence has its historical limits, that it cannot block the march of events permanently. No amount of violence can prevent mankind from moving toward a future superior to the reality of the present.

Dynamism and Progress

The philosophy that reflects the attitudes and interests of the declining social class denies the fact of social evolution and refuses to see any logic in history or the possibility that there is any progress.

Robert B. Bailey's *Sociology Faces Pessimism* compares the current attitudes of Western sociologists with those 100 years ago, when capitalism was at its zenith.

This is how Bailey sees the change in "the spirit of the age":

100 Years Ago	*Now*
There is progress.	There is no progress.
Social evolution moves in a straight line.	Social evolution moves in cycles.
Western civilization is developing economically and culturally.	Western civilization is decaying and disintegrating.
Sociology studies progress.	Sociology studies society's decay.

Their fear of the inexorable laws of history that predicate new and different social systems force the theoreticians of conservatism to fight against any semblance of progress. But the past 50 years have made it very patent that history, like time, has only one direction of movement—forward. The process of history is as irreversible as the course of time. This was clearly manifest in the failure of fascism to push history back with fire and the sword, to revive slavery in a different form, to do away with democracy and to subject all peoples to the most unbridled despotism.

Experience also repudiated the notion that history moves in a circle, forever repeating itself. If we must use a geometric parallel to picture the progress of history, we should more reasonably speak of a spiral running upward that appears at times to return to its starting point. Each new historical stage, while discarding everything outworn and reactionary in the preceding stage, at the same time retains and improves upon the positive achievements of the previous generations. This precludes any return to the past and any stagnation. It leaves room only for growth, for everlasting enrichment with the new.

The "history repeats itself" concept is an attempt to perpetuate outworn stages of social development and to deprive man of faith and belief in a better future.

But the world is developing, and this development accelerates with each decade.

The Source of Progress

The question arises: What makes for the unprecedented rate of progress today? What forces are moving history so fast?

We know that the primitive communal system lasted for several hundred thousand years, slavery about four thousand years, feudalism

OUR DYNAMIC

about 1500 years, capitalism in some countries a few hundred years, and the transition from the first phase of communism to its second phase only a few decades.

Why?

The first and most striking fact is the enormous number of people involved in today's world-transforming activities on every continent. In contrast to previous eras, women have begun to participate directly in civic and economic affairs. Young people are in the fight for progress. They not only demonstrate at forums and festivals but take leading places in the important movements of our time. They are a factor to be reckoned with in political life.

The story of "a lost generation" is fiction. J. Stephens, a representative from Ghana at the 1961 World Youth Forum, made that point:"No, ours is not a lost generation, as some people try to convince us. It approaches the solution of problems that confront mankind soberly and with a feeling of great responsibility.With due modesty we can say that we carry honorably the baton of civilization and progress which the older generation handed to us. We, the young masters of the globe, are pledged to uphold the highest ideals of humanity, to struggle for the noble cause. . . . We are pledged to build a new life and, together with all other peoples, to solve the fundamental problems of social development, to reunite a world which we inherited in a dismembered state, and to ensure that every human being in it has the chance for happiness."

Historical progress has been accelerated by the conscious and organized struggle of great masses of people. The existence of so many political parties which express the people's vital interests, parties armed with a scientific theory of social development which serves them as a compass by which to move toward their objectives, is undoubtedly another very important factor in speeding up the process of history.

All this, however, does not answer the question: Why particularly in our time has this revolutionary and transforming activity of great numbers of people become necessary? Apparently, some special quality of our stage of social evolution requires that.

The Future

The fact is that in no era in the history of mankind has such an abrupt and complicated transition ever occurred. It is not simply the displacement of one form of private-ownership society by another that is involved.

On the agenda of history now is the transition from the last private-ownership society toward a classless communist society, the transition from the prehistory of mankind toward its genuine history. That is why no previous social revolution can compare with a socialist revolution either in scope, or in importance, or in the complexity of the problems to be solved.

The age-long existence of class society, the insoluble contradictions, the fierce competition which bred the most sordid selfishness, aggressive individualism, indifference to the fate of fellow human beings have all deformed the human soul and converted man—the only creature on earth capable of creative concepts, reason and good—into a creature who either suffers deeply himself or causes others immeasurable evil.

History has entrusted socialism with the task of ending this antagonism, of uniting mankind into one great family, of wiping out hatred and evil, of making collectivism and humanism the normal standards for every man's feelings and actions.

The fulfillment of these epochal tasks requires that we mobilize all the forces of progressive humanity and involve new human reserves in a conscious and organized form of historical creative activity.

It is the "providence" of history that, as it evolves, as it sets us ever new and more complicated problems, it simultaneously generates the forces that can solve them.

It was Karl Marx who said: "Corresponding to the soundness of the historical action . . . the size of the mass, whose concern it is, will grow."

Technology: A Hindrance or Help?

Responsible for the dynamics of our epoch and the speed with which new and progressive social systems replace the old and outworn are the great achievements of science and technology, our mighty productive forces, the unprecedented amount of power available per worker in today's world.

We know full well that under certain conditions technology hatches a brood of social evils, turns against man, makes millions of able-bodied people idle and becomes a dire threat to the very existence of mankind.

But to call technology the work of Satan, the source of "existential fear," the reason for the "diminution of the individual," for the denigration of "humanistic and cultural values," etc., is to bell the wrong cat.

All these evils have been engendered not by technology, but by the social system of private ownership, which converts all values into their opposites.

The achievements of our century's technology can be of incalculable benefit to a liberated mankind. Given a rational and equitable social structure, they can, within a short time span, free man of his age-old burdens of hunger and disease, raise living and cultural standards the world over, make every nation prosperous. Given a rational and equitable social structure, technology brings not fear or confusion, but a profound confidence in the present and the future.

The technological achievements of our age have perfected all the means of transportation and communication, have brought all peoples closer, have made it possible for them to coordinate their activities, to act purposefully and expeditiously. Our improved means of communication have accelerated the exchange of experience and of accomplishments in every field of endeavor. They have brought better understanding and have stepped up man's advance toward a new worlds order.

When man gets rid of anachronistic socioeconomic relation, he will climb the ladder of social progress even faster. The energy now wasted on the class struggle, on wars between nations and the manufacture of the means of destruction will be channeled to peaceful purposes. The power thus released will give history new impetus, it will multiply the creative capacities of the human race.

On the one hand, the abolition of labor for private profit, of anarchy in production, of economic crises on a global scale, and on the other hand, the emancipation of labor, the possibility of planned and proportional development of the economy of a united mankind, and specialization and cooperation of the world economy, will open new prospects and set new tempos for man's development.

Our philosophical concept, which manifests itself in laws, categories and ideas, moves, as does reality, from the lower to the higher, from the simple to the complex. Reflecting reality, this philosophy most completely expresses the principle of dynamism and progress. It rejects all varieties of pessimism, all lack of faith in the strength and future of humanity. Is it any wonder, then, that in every corner of the world people are drawn to this philosophy of hope, this philosophy of optimism, this scientific philosophy of revolutionary change in the name of truth and humanity?

CENTURY

BY FELIX MOMGIAN

PROFESSOR AT MOSCOW UNIVERSITY

DOCTOR OF SCIENCE (PHILOSOPHY)

AROUND *the* COUNTRY







PRINTS ALL THE RAGE

The art studios of Moscow, Leningrad and other cities of the Russian Federation turn out some half a million different prints a year. Another half a million are put out in the studios of other republics. American art lovers saw some of the prints last fall at the Soviet Graphic Arts Show in New York. Currently more and more Soviet graphic artists, including Vladimir Favorsky, Orest Vereisky, Nikolai Zhukov and Nikolai Matorin, to mention only a few, are trying to meet the growing demand.



22 DAYS IN THE SKY

Ivan Savkin, veteran skydiver, spent 22 days in the sky—a total of 520 hours—during which he made 4,000 jumps. He spent 22 hours 30 minutes of the total time in free flight, falling more than 2400 miles all told.

Savkin became interested in the sport before the war. He served in the Air Force, and after he returned to civilian life went back to his favorite hobby.

He has made all kinds of jumps: daytime, nighttime (above water and woods), delayed, catapulted, from the stratosphere, solo and group. He holds records for altitude and pin-point landing. An instructor himself, he has trained more than 200 instructors and 20 skydivers, who hold the title of Master of Sports.

"Do you still get scared?" he was asked.

"Not any more. I forgot the meaning of the word after I made the first hundred jumps or so. I've learned the feel of the sky and I can judge the way the wind blows."

A TRAILER CARAVAN COMES TO MOSCOW

Motorists on the Minsk highway stopped to stare at a collection of odd-looking vehicles in the parking lot of a motel. A new type of bus, they wondered? It was a trailer caravan of 75 American tourists. They left the U.S. in September 1963, and since then have driven through Burma, Thailand, Pakistan, India, Iraq, Iran and all across Europe to Moscow.

Andrew Charles, who leads the group, said the caravan was named after Wally Beyham, the man who suggested that mode of global travel. He also said they had met some Russians before they reached Russia—at the construction site of the Barauni oil refinery in India. "We must say," Mr. Charles added, "that though we have been across half the world, we have unforgettable impressions of our stay in the Soviet Union. We were amazed at the Russian hospitality and also by the rebirth of towns and cities after the horrors of war, by the magnificent theaters and schools, and by the tremendous scope of construction."



LITHUANICA SHOT DOWN BY NAZIS

Lithuanian fliers Darus and Girenas covered 3,983 miles in 37 hours 11 minutes before they were shot down by the Nazis not far from the Berlinchen concentration camp, which stood on what is now Polish territory. This was in 1933.

The two fliers, who had emigrated from Lithuania to the United States, wanted to make a nonstop trans-Atlantic flight from New York to Kaunas. With great difficulty they scraped up the money to buy and old single-engine Bellanca airplane, which they renamed the *Lithuanica*.

On July 15, the two pilots took off from New York and headed east. Above the Atlantic the wings iced up and over Europe they ran into stormy weather. Without navigational instruments or a radio, the two heroes pulled through the storm and by July 17 were approaching Lithuania.

Near the Berlinchen concentration camp in East Prussia, the Nazis opened fire, and the plane crashed into the woods. In 1933, yielding to pressure from Nazi Germany, Lithuania, capitalist at the time, did not divulge the true cause of the death of the two fliers. Instead it was explained away as an accident.

Only recently were the remains of the heroes found in the basement of the Kaunas Medical College. Lithuanian patriots, fearful that the corpses would be desecrated, hid them there during the occupation. With martial honors the remains were transferred to the military cemetery.



ALMOST 100 MILES AN HOUR

The Mistral, the Paris-Lyons express, is believed to be the world's fastest train. It does the 318-mile trip at an average speed of 78 miles per hour. The Moscow-Leningrad express does the 404-mile distance in five hours 20 minutes, averaging 76 miles per hour (not including a 10-minute stop). Over the second half of the trip to Leningrad the train works up the same speed as the Mistral, and on some sections it does just under 100 miles per hour. The new ChS-2 electric locomotive, which can do 126 miles per hour without coaches, and the use of 2,625-foot-long rails supported by ferroconcrete sleepers account for the speed. The Moscow-Leningrad railway will soon have a jointless track, and express train speeds will climb to a new high.

LEBEDEV INSTITUTE PROCEEDINGS TO BE TRANSLATED

World rights to the complete English translations of the proceedings of the renowned P. N. Lebedev Physics Institute of the USSR Academy of Sciences have been granted to Consultants Bureau in New York. Translation will begin with Volume XXV, and subsequent volumes will be published on a serial basis by Consultants Bureau in close association with the Soviet editors, who will cooperate to expedite the translations.

The Proceedings (Trudy) are published irregularly in the USSR (four to six volumes per year). Each volume is devoted to a specific area of advanced physics research, and includes from two to eight papers reporting the results of coordinated researches. Subjects covered in the first 10 volumes of the series include: molecular spectroscopy; cosmic rays; radiotelescopes; neutron physics; the quantum theory of relativistic statistical processes and hydrodynamics; optical methods of investigating solid bodies; photo mesons and photonuclear processes; plasma physics; investigation of the atomic nucleus by means of charged particles and neutrons; and quantum radiophysics.

The P. N. Lebedev Physics Institute is one of the largest and best equipped in the Soviet Union, with a research staff of from 300 to 400 scientists and some 1500 technical assistants. Among its outstanding scientists are the 1958 Nobel Prize winners Frank, Tamm and Cherenkov. The institute conducts research on a very broad scale, including theoretical physics, solid state, nuclear physics (especially particle acceleration), radioastronomy, semiconductors and paramagnetic amplification. It is the center of Soviet research on lasers and masers.

NORTHERNMOST RESORT

Some 215 miles from Magadan, in Kolyma, the Soviet Far East, is the Talaya River Valley health resort, which treats all kinds of diseases of the bone and digestive tract with curative muds, mineral waters, special diets and health-building exercises. Doctors believe it better for Northerners to be treated in a climate to which they are accustomed rather than in the hot climate of the South.

All the buildings are joined by roofed galleries to guard against rain, hail or snow. Each year the health resort accommodates more than 4,000 people of Chukchi, Yakut, Kamchadal and other North Siberian nationalities.



SPUTNIK ON MIR PROSPECT

One more space vehicle has been launched, leaving a silvery trail in its wake. This time, however, it did not go any higher than 328 feet—to the top of the monument unveiled on Moscow's Mir Prospect (Peace Avenue) in honor of the launching of the first artificial earth satellite. The 250-ton titanium-coated obelisk (below) was designed by Mikhail Barshch, Andrei Faidysh and Alexander Kolchin. Its pedestal will house a museum of cosmonautics, and at its foot is a monument to Konstantin Tsiolkovsky, father of Soviet rocketry.





HIGH-TENSION TIGHTROPE WALKING

A strong gale snapped the wires of the high-tension transmission line across the Yenisei River and halted work on the Sayan-Shushenskoye hydropower station. There was no electricity to feed the pumps that were getting the water out of the pits, or to run the drilling rigs. The break had to be repaired immediately.

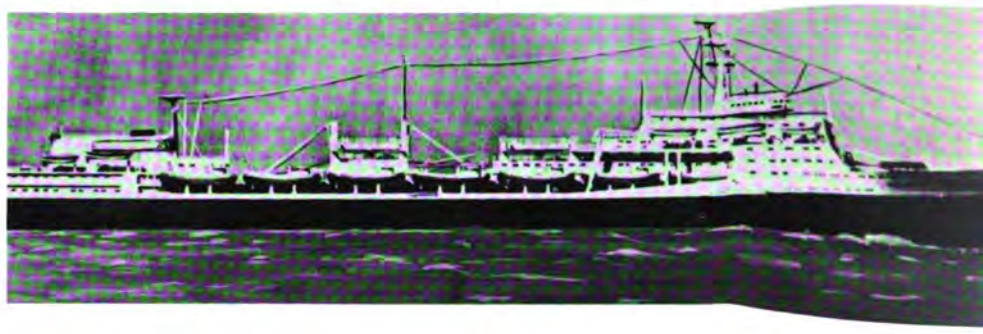
Since the wires were strung 164 feet above the river, getting them down by windlass was out the question.

Rock climbers, who were setting out geodesical markers for the future station, volunteered to do the job.

One of them, Victor Vidunok, scaled the cliff, attached himself to the cable and clambered across. Reaching the breakdown, he mounted new insulators. With the help of others on the bank, he lifted the wires and pulled them taut with nylon twine. An hour later the line was once again in operation.

FLOATING FACTORY 820 FEET LONG

The Leningrad Admiralty Shipyards are to build a fishery baseship of 43,000 tons displacement to process fish at sea. This ship, to be named *Vostok*, will be 820 feet long, 88 feet wide, and have 25,000 horsepower. Automation will enable it to process as much as 300 tons of fish daily.

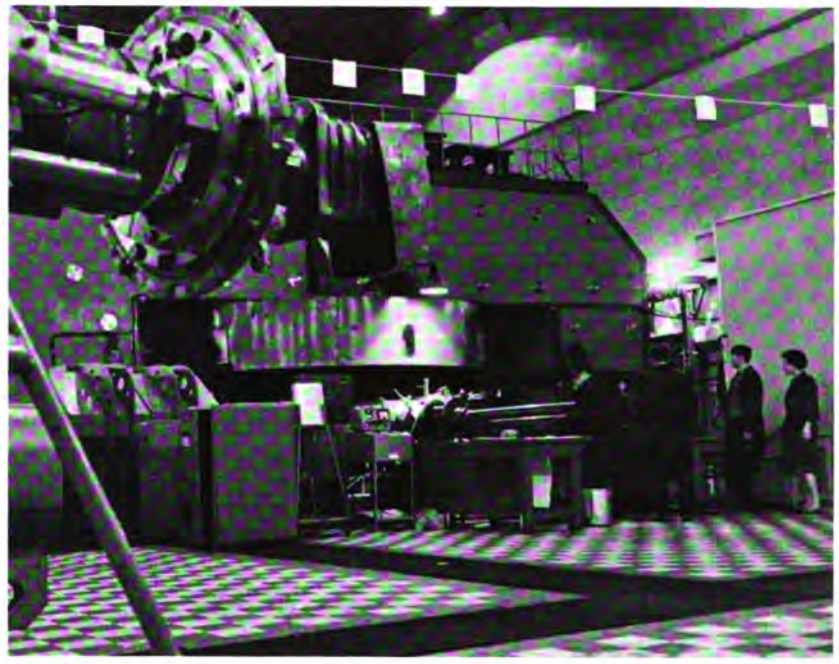


104th ELEMENT

The newly discovered 104th element in Mendeleyev's Periodic Table has a life of only three-tenths of a second. The element, with an atomic weight of 260, was obtained at the Nuclear Reactions Laboratory (below) of the Dubna Joint Institute of Nuclear Research by a team of physicists under Georgi Flerov, Corresponding Member of the USSR Academy of Sciences.

Flerov says they were able to obtain 150 nuclei of this elusive element by irradiating it with the ions of *neon 22*, a plutonium isotope with an atomic weight of 242. The speed of creation of the new element is one atom in five or six hours. It is now being studied intensively and is expected to start off an absolutely new family of superheavy elements.

The American physicist Glenn Seaborg, who is investigating the synthesis of transuranium elements, says this new element might prove to be the most interesting of all in the transuranium group.



FROM BAKU TO MURMANSK BY WATER

Nowadays oil and salt are being shipped from the Caspian Sea to Murmansk, Arkhangelsk and Leningrad along the new Volga-Baltic waterway. Joining the Rybinsk Reservoir and Lake Onega, it has replaced the old Maryinsky system built in the early nineteenth century. Most of this system, which could take ships of only 600 to 700 tons' displacement, was growing obsolete.

The new routes were opened just this past summer. Ships now go from Baku across the Caspian, entering the Volga delta at Astrakhan. They then steam up the Volga to the Rybinsk Reservoir, cross over this stretch of water to reach the new system. They go through the White Sea-Baltic Canal, built in 1931-33, to Murmansk on the Barents Sea.

Donbas coal and metal, Caspian oil and salt, Volga grain, Turkmen pyrites and other cargoes are shipped north via this new route to Murmansk and Leningrad. Cargoes of timber, iron ore, apatite and nepheline concentrates head south. These cargoes are carried by ships with a capacity of between 2,000 and 5,000 tons. Shipping by water instead of rail will mean an annual saving of 19 million rubles.



AROUND the COUNTRY

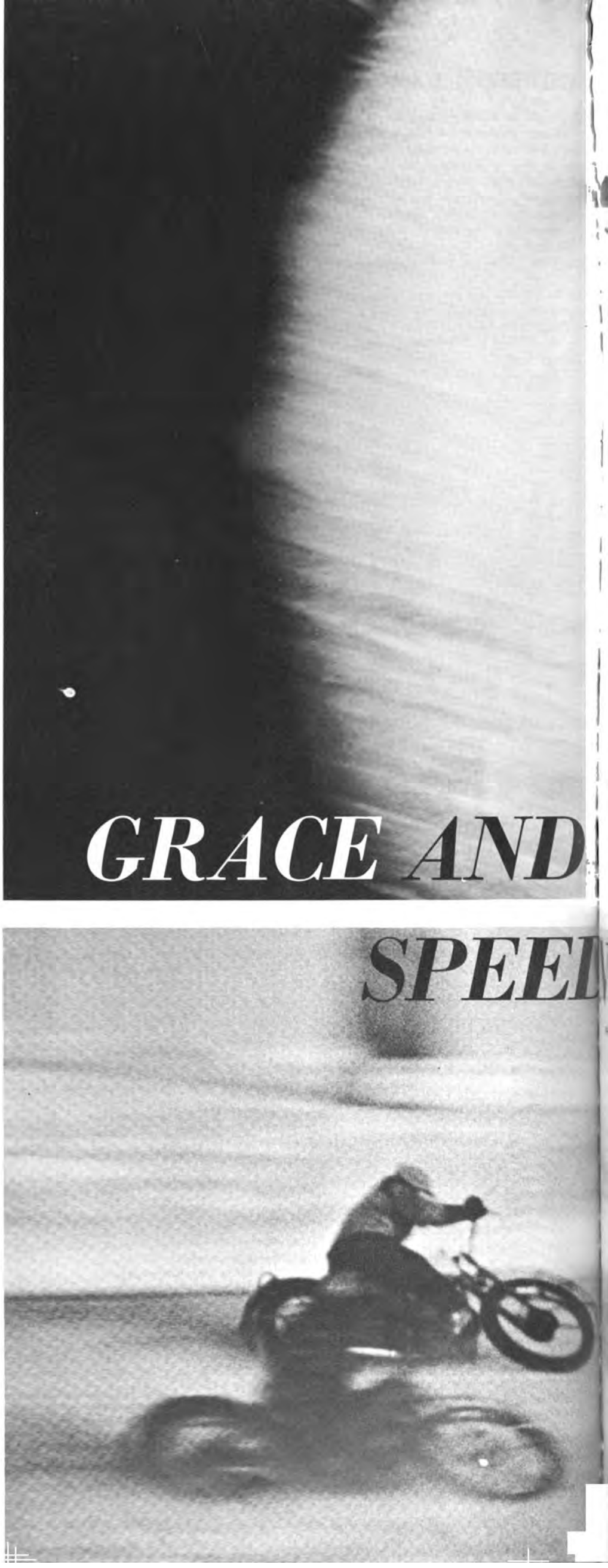


INTERNATIONAL AFFAIRS

may be obtained from:

U.S.A.-Stechert-Hofner, Inc., 31 East 19th Street, New York 3. Moore-Cottrell Subscription Agencies, Inc., North Cohocton, N.Y. Four Continent Book Corporation, 156 Fifth Avenue, New York 10, N.Y. Universal Distributors Co., 52-54 West 13th Street, New York 11, N.Y. Imported Publications Products, 1 Union Square, Room 812, New York 3, N.Y. Victor Kamkin, Inc., Bookstore and Lending Library, 1410 Columbia Road N.W., Washington 9, D.C. Cross-World Books and Periodicals, 333 South Wacker Drive, 5th Floor, Chicago 6, Ill.

ANNUAL SUBSCRIPTION RATE $3.50





IT seems as if winter combines the *uncombinable*. While Natasha Sedykh, *graduate* of one of the children's sports schools of Moscow, performs the dance of the *Dying Swan* in the hushed hall of the Soviet capital's Sports Palace, motorcycles thunder and roar in the Grand Sports Arena of Luzhniki Stadium.

In just a few days the stillness of the Sports Palace will be broken by the whistles and applause of sports fans as some of the country's best hockey teams will be playing there in competition for the all-USSR title. It will be quieter in the Grand Sports Arena, where the country's speed skaters will be holding a meet.

A few days later the Sports Palace will be the scene of a ballet on ice performed by both Soviet and foreign companies.

ON ICE

PHOTOS BY ILYA BAKHTIN









SOVIET LIFE

MEDICARE

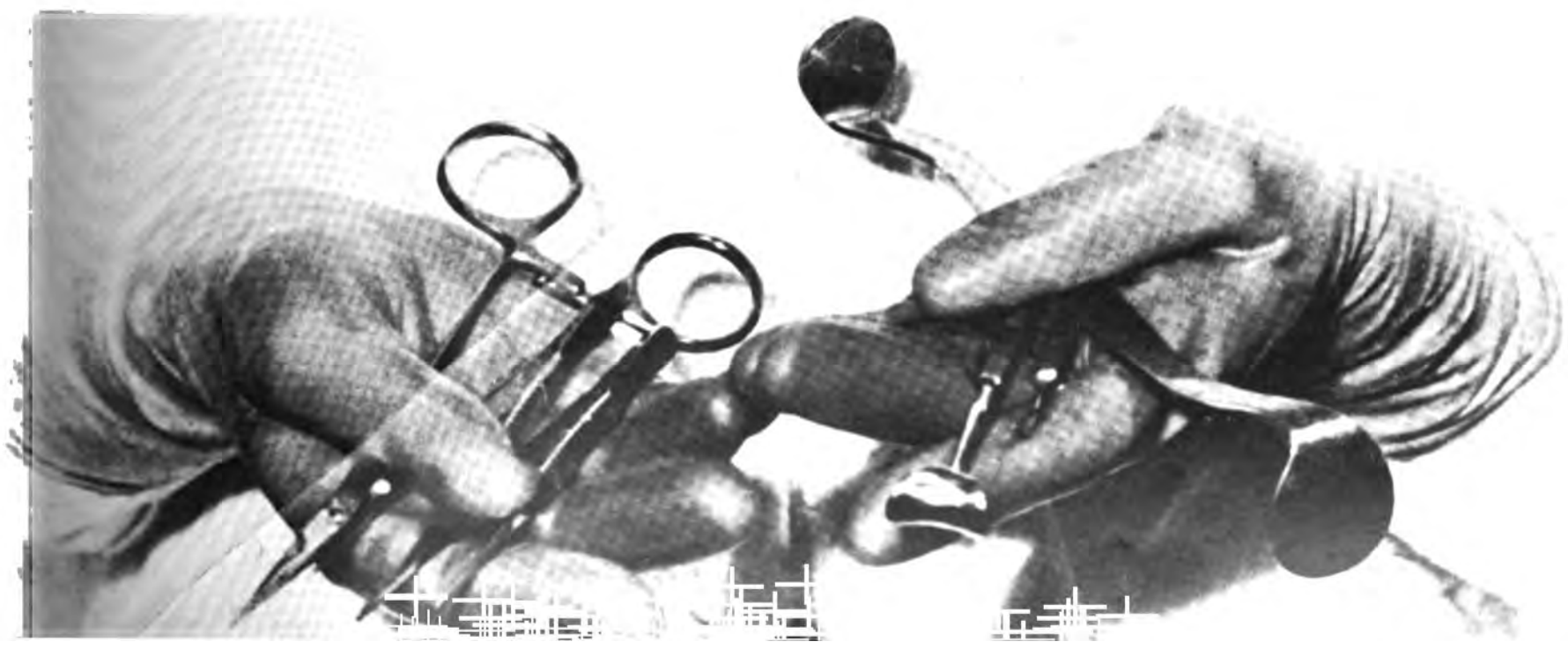
—

ILYA EHRENBURG ON FATHERS AND SONS

February 1965 • 35 cents



UNIVERSITY OF MINNESOTA
JAN 18 1965
LIBRARY



ILYA EHRENBURG

on our young people today

Interview

Reprinted from the Novosti Press Agency Yearbook

THE PROBLEM of fathers and children is perennial. The tenser the period and the faster it changes with events, the sharper is the problem. For instance, the changes that took place in our country from 1953 to 1963 were tremendous. We would expect people who matured in the thirties to be different from those who are now reaching adulthood. Our young people knew nothing about the Stalin repressions of 1937. They experienced none of the horrors of the war or the hardships of the postwar period. The Twentieth Congress of the Communist Party was a most important event for everyone, but those who were hearing the truth about their own past naturally reacted to it differently than those who had not lived through that past. Hence each of the generations has problems that are peculiarly its own, but I would not call them antagonistic.

I do not believe there is any hostility between the two generations. When we talk of the fathers-children problem, we are talking about changes in habits, in tastes. When I was a young man, sports played a much smaller part in our lives. People danced different dances. If I were to demand that today's youth dance the *pas de quatre*, which used to be my favorite, I would get a very cold reception. Taste in art changes. Much of what I liked when I was 15 years old seems to me to have only historical value now. These are natural changes. If we tried to make our young people copies of their fathers, we would actually be repudiating the Soviet Union's almost half-century existence.

What attracts me most of all in our youth is its critical attitude. Our thinking today fosters this kind of attitude that Marx, back in his own time, stressed as so necessary. The word "cult" implies an almost religious attitude toward the worshipped object, a spirit of blind obedience. Thanks to the Twentieth Congress, our youth has disencumbered itself of this uncritical reverence. Our young people insist upon knowing what is going on around them, they insist upon influencing the course of events. I frequently hear secondary school teachers and university professors complaining how difficult it is to get anything across to the youth. That is so. The younger generation will not accept anything blindly, and that is a good thing.

Furthermore, our young people have certain advantages over their elders with respect to cultural background. When today's fathers were young people, the process of mass education had just begun. When culture becomes available to everyone, when it is no longer the property of a select minority, its development, in the beginning, is bound to be superficial, proceeding in breadth and not in depth. If the first novel a person reads is Tolstoy's *War and Peace* or Stendhal's *The Red and the Black*, he will inevitably miss the fine shadings that give these books their special merit. We really begin to read only after the first hundred books. This cultural development in breadth at the expense of depth continued here until approximately the beginning of the war. After the war the quantitative store of knowledge began to undergo a qualitative change, that is, the average Soviet citizen began to acquire more cultural depth. This is the state of affairs today and the reason we can say that the youth of the fifties and sixties have a considerably higher cultural level than their parents.

Young people also have their weak points. For the first time in the history of the Soviet Union life is relatively easy, and the young people have become accustomed to it very quickly. Older people say that our youth is pampered. I don't believe they are. I was a member of an editorial council that made the selections for an anthology of the work of young poets who were killed in the war. These poets, too, had had an easier life than their parents, and I remember that their elders also thought that they were pampered. But they stood up firm as steel in the war; they showed no sign at all of weak moral fiber. In my opinion, the young poets of the forties and those of the sixties have much in common, and in a showdown they would stand up equally well.

Our youth inherited from their fathers revolutionary ideas for the reorganization of our society. There is no essential disagreement between the generations on what Soviet society should be like. The young people know they were not the architects of this new society, that it was built by their fathers. Their task is to make this structure more comfortable, a better place in which to live. And in this respect our young people have a great deal more in common with their fathers than the



Photograph by Victor Ruikovich

youth of the West. There the differences are much more fundamental.

Every society must move forward. No generation can exist merely on the legacy from its fathers. Such a generation would stagnate. It took enormous work to build our edifice, our society. There were those who tried to destroy it. During the war we were subjected to unbelievable suffering, and after the war we had to begin everything anew. Once again we had to lay down the foundation, create our building materials. Things are different today. The problem of the younger generation is how to live in this edifice, how to beautify it, what to fill it with.

A new epoch brings new problems. When we built Magnitogorsk and fought in the trenches, our chief worry was how to get our daily bread. And we managed. Why should we assume that our young people are not capable of solving the problems they have to face? One of these problems is the new morality. Communist morals must create new relations between people; that is a complex and difficult undertaking. It cannot be done with slogans. It needs time, work and inspiration. When our youth solves this problem, we, their fathers, will have something to envy.

One of the characteristic qualities of Soviet young people is their insistence upon pushing out of the narrow confines of professionalism imposed by our present-day specialization in science. To be a competent scientist these days, one must become a narrow specialist. Two physicists who work in different fields of one and the same science cannot understand each other. Science has become so complex that a person cannot be just a physicist, he must specialize in some narrow field of physics. The age of people like Leonardo da Vinci, Goethe and the Encyclopedists has vanished for all time. Automation also narrows the specialties.

But we can see the young people breaking through the limitations. The universities of culture which young people initiated some years ago are a good example. The university of culture is a sort of club where people come to learn the value of literature, painting and music, where they learn to view various problems through the prism of art. Compare the reading matter of the young people you see in the Paris, London or New York subway, and the Moscow Metro. The difference is startling. The Parisian, Londoner or New Yorker either does not read anything at all or confines himself to newspapers. The Muscovite is almost always bent over a book. Our typical young person wants to broaden his intellectual horizon, expand his range of knowledge.

True, we also have our loafers whose interests are limited to vodka and the next soccer game, but they have only the disdain of their contemporaries.

Another feature of Soviet youth is their community of interests and attitudes. It may not be sufficient for communist society, but it is considerably greater than that of young people in the West.

Western young people have much less in common than ours do. Our young people will argue their preference for Tchaikovsky or Bartok, and such an argument may generate heat and hostility. But compare that with the enmity between the young French Communist and the OAS supporter, and the difference will be more than obvious.

Certain characteristics of today's youth have their origin in the accelerated development of science. The most talented young people in the past century were interested in the humanities. Today they are moving to the natural sciences. The difference, however, is that socialism makes it possible for and encourages people to develop harmoniously, not to be "only" a specialist. We find more and more young people today who are very knowledgeable physicists, say, and good poets as well.

Visit the literary societies at such places as the ZIL Motor Plant and talk to the young workers there who are prose writers and poets. You'll find that many of them have as good a background as university students. I know one young worker who studied French so that he could read Baudelaire in the original. Later he made some excellent Russian translations of Baudelaire's poetry. Of course many young workers also write poor verse, but so do many college-educated people who enjoy writing poems. But that is not important. What is important is that these young workers, whether they write good poetry or bad, have learned to read poetry.

SOVIET LIFE

FEBRUARY 1965 No. 2 (101)

The magazine* SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* America *in the Soviet Union.



Front Cover: Our Cover girl is one of the 1,980,400 people in the Soviet Medical Profession (including nurses). Photograph by Mark Redkin. *See story page 12.*

PICTURE CREDITS

Victor Ruikovich 1; Nikolai Sharanda and Georgi Ugrinovich 5; Lev Nosov 6-9; Lev Porter 12-13; Ilya Zakharevsky 14-15; Anatoli Rusov 16; Vladimir Kuzmin 17-19, 21; Alexander Nevezhin 18; Mikhail Filimonov 20; Nikolai Rakhmanov 24-28; Yelizaveta Axelrod 31-33; Leonid Sergeyev 45; Vladimir Kivrin 46-47; Louis Sharpe 48; Vladimir Uvarov 50-53; Miroslav Murazov 54-55; Gherman Cheryomushkin 57; Alexander Gamburg and Valentina Chernikova 59; Vsevolod Tarasevich 62-64, Cover III; Yuri Cherepanov Cover IV.

Editor in Chief
(Moscow Editorial Board): Yuri S. Fantalov, 2 Putinkovsky Pereulok, Moscow, USSR.

Editor
(Washington Editorial Board): Boris V. Karpovich, 1706 18th St., N.W., Washington, D. C., 20009.

Managing Editor
(Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director
(Moscow Editorial Board): Marina T. Zabolotskaya, 2 Putinkovsky Pereulok, Moscow, USSR.

***Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine* SOVIET LIFE.**

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second-class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Haynes Lithograph Co., Rockville, Md.

Page

1965 Plan Spells Higher Living Standards and Peace 3
Report by Alexei Kosygin

SOVIET PEOPLE

Our Young People Today Interview with Ilya Ehrenburg 1
Learning to Live by Anatoli Arkhipenko 6
About Chimneys and Chimney Sweeps by Nikolai Rakhmanov 24
I Really Needed This Year A Soldier's Letters to His Mother 29
Getting to Know Soviet Children by Gianni Rodari 34
Our Parliament 36
Everyday Life and Holidays of the Lavrentyevs 62

INTERNATIONAL CONTACTS

USSR-USA: Women for Friendship by Nadezhda Khimach 5
At the Sixth International Biochemical Congress 48
by Irina Lunacharskaya

ECONOMY AND SCIENCE

Public Health in the USSR 12
Mystery of the Sakachi-Alyan Picture Rocks 37
by Alexei Okladnikov
Tears of Gold by Victor Surkov 41

LITERATURE AND THE ARTS

Culture in Crisis? by Professor Igor Kon 22
War and Peace 50
Mastery Is What's Wanted by Zara Levina 54
Jazz: Russian Style by Vladimir Pozner 54
Once a Month by Fyodor Knorre 56

RECREATION AND SPORTS

Let's Go to the Movies Photo Quiz 40
Photo of the Month by Vladimir Kivrin 46

MISCELLANEOUS

Letters to the Editor 4
Brief Comments 10
Next Issue 11
The Russian National Costume by Konstantin Telyatnikov 30
Queries from Readers 39
Out of the Mouths of Babes An Unusual Poll 42
Children's Corner 45
Humor 59
Around the Country 60

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

PLAN FOR 1965 SPELLS HIGHER LIVING STANDARDS AND STRONGER PEACE

On December 9, Alexei N. Kosygin, Chairman of the USSR Council of Ministers, made his report to the Fifth Session of the USSR Supreme Soviet on the 1965 State Plan for Economic Development of the USSR. He took a favorable view of plan fulfillment for 1964, particularly in industry. He said a good crop had been grown, that more than 600 new enterprises had been put into operation, and that the country's productive forces had progressed.

Characteristic of next year's plan is its still higher rate of growth in production and the national income. Additional resources have been allocated for major measures to further raise the population's living standards.

As compared with 1964 the national income will go up eight per cent or by 14 billion rubles—an all-time record. The rates of growth in the consumer industries will almost come abreast of those of heavy industry. The relative increases are 7.7 per cent (including a 10 per cent increase in the food industry) and 8.2 per cent. Furthermore, heavy industry will produce more machinery and other materials than before to expand consumer production.

While over-all industrial production will go up 8.1 per cent, output of electricity will increase 12.5 per cent, in the oil and gas industry 11 per cent, in the chemical industry 15 per cent and in the engineering and metalworking industries nine per cent.

Attention next year will be chiefly concentrated on the further promotion of technical standards in industry and improvement in quality. Obsolete items will be replaced by modern ones on a par with the world's best.

The chemical industry will continue to take priority in rates of advance, with the output of man-made materials and mineral fertilizers increasing several score per cent. The output of steel, which is so far still the key material today, will reach 90 million tons. A total of more than ten billion yards of all types of fabrics and of 477 million pairs of footwear will be produced. Meanwhile the output of sugar will go up 25 per cent, to a total of 8,610,000 tons, and of vegetable oil 17 per cent, to 2,147,000 tons.

Describing the situation in farming, the Soviet Premier noted that plan assignments had not been carried out in recent years. Grave blunders had been made in its management. Thus the principle of material incentive for collective farmers had been violated, and there had been a craze for administration by fiat and never-ending reorganization. Last year's crop failure was a particularly bad one, telling on the country's economic development generally. This year some favorable results had been achieved. However, there was still a lag in the field, particularly in animal husbandry. The remedies suggested included the need to augment agriculture's material and technical facilities, supply more mineral fertilizer and increase capital investment. Under the 1965 plan 5.7 billion rubles, or 18 per cent more than in 1964, are to be invested. To boost incentive it has been decided to raise state purchasing prices on milk, but without changing retail prices for milk and other dairy products.

A higher rate of increase in capital investment is slated for farming; the chemical industry; the light, food and fishing industries; the building of housing and general amenities; and the metallurgical and fuel industries. Over-all state investment will increase by 11.3 per cent to reach a total of 38.4 billion rubles.

A faster rate of advance in popular welfare is envisaged. The population's real incomes will increase 7.3 per cent, as compared with 3.9 per cent in 1964. Average wages and salaries will increase 4.5 per cent; over the past six years the annual increase averaged 2.4 per cent. During the year the factory and office labor force will increase by 2.8 million, to total 76 million. The incomes of the collective farmers will increase still more. At its previous session, the Supreme Soviet passed a law to raise the pay of schoolteachers, doctors and workers in public services. Alexei Kosygin told the session that the pay of more than nine million people had gone up an average of 23-25 per cent.

The Central Committee of the Communist Party of the Soviet Union (CPSU) and the Soviet Government have found it possible to take, in advance of schedule, certain measures to raise the population's incomes. Thus it is planned to increase as from January 1 wages and salaries to the set minimum in branches where this still had not been done. At the same time it had been decided to raise the pay of housing and public service workers and workers in the distribution services by next May 1 instead of by December 1965, as had been previously intended.

Sales of consumer goods are to increase by more than seven billion rubles; in 1964 they increased by 4.5 billion rubles. The Soviet Premier declared that the country had a large enough commodity inventory to supply the more important manufactured goods and foodstuffs without any snags or hitches. Though there could still be some difficulties in the supply of animal products, the government was drafting special measures, some of which were incorporated in this year's plan, to improve the supply at the earliest date. A cut in the prices of some types of garments fabrics, footwear and other goods, of which there was a surplus, was planned, and for this purpose around 1.3 billion rubles had been allocated.

A major feature of the 1965 plan is the considerably increased allocations for social and cultural requirements, which will total 37.4 billion rubles, or 4.3 billion rubles more than in 1964. Several other steps to boost the people's material standards are envisaged. The health services will be improved, prices of some medicines are to be reduced, and to some categories of outpatients medicine will be issued free.* Minimum disability and loss-of-breadwinner pensions for factory and office workers will be increased, and in the new year 6.8 million collective farmers will start getting pensions.

Premier Kosygin paid great attention to the question of raising quality, increasing economic incentives, improving planning, investing enterprises with broader economic powers, etc.

Referring to some aspects of the Soviet Government's foreign policy, he said that the government sees its main objective as securing peaceful conditions in which to build socialism and communism, as preventing a new world war. The aim of the foreign policy pursued by our state, the Soviet Premier said, is to consolidate the unity of the socialist camp, to support the revolutionary movements for liberation, and to promote cooperation with the independent Afro-Asian and Latin American states. This is a policy of strengthening peace and relaxing international tensions, of consistently implementing the principles of the peaceful coexistence of states with different social systems.

In the 1965 budget the Soviet Government had made provisions for a 500 million ruble cut in expenses for the Armed Forces. Judging by a statement made by the U.S. Government, it also intends to reduce such expenses in the 1965-1966 fiscal year. Thus the reduction of Soviet military spending in next year's budget and the expected cut in U.S. military spending represent a definite ,positive move toward lessening international tension.

*Hospitalized patients receive medicine free of charge.

LETTERS TO THE EDITOR

OUR DECEMBER ISSUE

Gentlemen:

I am very pleased with your latest issue (December 1964). It is just what I have been looking for: a preliminary explanation of the basic points of Communism. In the issue you have answered most of the questions asked of me when I attempt to explain Communism to others. Therefore, I would like to give copies to some of the people I have talked to. If you have a supply of back issues, I would be pleased if you would send me ten copies.

Very sincerely,
Edmond J. Hay Jr.
Sunbury, Ohio

Editor:

Congratulations for your December issue. I finally got the answers for many questions I had about the USSR. I will keep this copy for reference.

I hope your magazine will be widely read in this country, because American people are being misled about Russia, and they picture Russians as conniving brutes.

I was especially pleased at reading of your honor system, and the sense of responsibility yau try to introduce in people . . .

Eric Berthoud
Stockdale,
Pennsylvania

STANDARD OF RELATIONS

Dear Comrade Editor:

You of course are interested in letters from American readers. But I believe you will be interested ta get a Soviet reader's opinion of the magazine. I read several copies of your magazine in a library.

I think it shauld acquaint American readers mare thoroughly with the Soviet people's views an the world today. We can appraise an international problem in different ways, argue and not come to an agreement, but just the same I would like the Americans to know that we Soviet people have no greater wish than to avoid war and to build our life, raise our children, and realize our plans in conditions of peace. I am convinced that the best way to achieve mutual understanding and friendship between our peoples is for us to know each other's strivings.

Every day I enter the classroom I say to my pupils, "Good morning!" And the ringing children's voices answer, "Good morning!" I know every one of the youngsters, I remember how they learned their first English words. Among them were the words "peace" and "friendship." My colleagues and I would like them to become for our children not mere words but a standard of relations with other peoples, including the American people.

I am sure that in this striving we are at one with our American colleagues.

Sincerely yours,
Yelena Strakhova
English teacher

ARTICLES ON MUSIC

Dear Sir:

Being a new subscriber to your magazine, I wish to commend you for a truly interesting and colorful monthly, one which I enjoy immensely.

I particularly appreciate the articles concerned with music, such as you had in the November issue on the "Philosophy of Music" with an interview with Aram Khachaturyan. I am very much interested in acquiring a means by which I might write to this man, if it would be at all possible, concerning literature which may have influenced him to write any of his compositians. Sir, if you could by any means assist me with this information, I would be truly grateful. I am a student of music and of literature and am in the process of doing research concerning literature which has influenced great musicians in composing music. . . .

Sincerely,
Myrna Estep
Fort Pierce, Florida

BEAUTY OF "THUNDERSTORM"

Dear Editor:

I enjoy reading the articles in your magazine very much.

In fact what I really do love in your magazine is the beautiful colar photographs. The one photo that I myself love is the one in your November, 1964, called the "Thunderstorm" by Alexei G. Bushkin, and also another called "Looking Down on Karl Marx Avenue from the Bolshoi Theater Roof" by Ivan Shagin. . . .

Sincerely,
Mrs. Kenneth Church
Forest Park, Illinois

P.S. If you wish, you may print this letter in one of your future issues of *USSR*.

Gentlemen:

I was quite enthralled by the stunning beauty of Alexei Bushkin's photograph, "Thunderstorm" that appeared in the November issue of your magazine. . . .

Very truly yours,
Lawrence F. Karr
Washington, D. C.

ANOTHER SIDE OF RUSSIA

Dear Sir:

I find your magazine most interesting with respect to its general content and with respect to its propaganda values. I am sure you will admit that the majority of your articles deal with the better, optimistic, and hopeful side of Russian life and society. To circulate such literature in this country is indeed healthy and capable of promoting a more realistic and objective understanding of Russian life . . . Americans are becoming more and more misled about Russia because of the many one-sided, hastily-generalized, and aften exaggerated anti-communist literature. Only through comparison and contrast of the different views concerning Russia will the American people be able to abjectively and meaningfully make judgments of their own about Russia. But saurces for these different views must be provided or made available. I hail your magazine as an effort to inform the American people of "another side of Russia."

Yours truly,
Charles J. Kreiner
Glastonbury, Connecticut

Dear Sirs:

In the few months that I have subscribed to your magazine it has proved to be a great help in my studies of the Russian language and peaple. It has pointed out to me that Soviet people have basically the same problems as anyone else, and that they enjoy and want basically the same things. Your magazine has fired within me a new interest in the Soviet Union and its people. . . .

Thank you,
Larry Brasher
Salt Lake City, Utah

KEEN INTEREST

Dear Sir:

Recently while some of my friends and I were searching for out-of-date magazines . . . we saw an attractive magazine named *USSR*. We at once took it and made a very thorough study of this nice and informative magazine. We can't tell you in this brief letter how much we liked it, but it is enough to say that its own attraction and our keen interest in the USSR and in her affoirs forced us to write this letter.

Sir, my friends—among whom there are university and college students, writers, workers, artists, etc.—and I are highly interested in the sort of publication your magazine is.

Actually you have not left any side of the USSR's life and activities untouched. We were surprised to see such a nice and informative magazine.

Sincerely,
Tahie Raza
and friends
Karachi, Pakistan

Dear Sir:

Thank you for your fine magazine. Perhaps I may be able to arrange a school subscription. I will try to order after New Year's. My college classes enjoy it immensely. I believe that at least three people intend to get it. My class in school enjoyed the pictures and stories. I am surprised at the interest in the Russian history and people when I place the magazine on display.

Joseph Moere
Hoboken, New Jersey

FASHION PICTURES?

Dear Sir:

. . . I am glad to be able to read your magazine and I find it very relaxing. I say relaxing if only because of the absence of advertisements. I'm surprised that others have not mentioned this before, to my knowledge. I was a little bared when I saw fashion pictures in the magazine some time ago and heartily agree with Wanda Lee Hale of Bethany, Oklahoma. But, I'm also happy to say that I find *USSR* readable, informative and enjoyable. . . .

Sincerely,
Larry Arredondo
Ontario, California

SOVIET POETRY

Dear Sirs:

I was impressed by "Letter to the Thirteenth Century" by Robert Rozhdestvensky in your December issue of *USSR*. I wonder if there is some way that I might get hold of other material by him, or a similar style of writing by other authors. I would appreciate it very much if you could help me. . . .

In human understanding,
James B. Glove
Akron, Ohio

Ed. In January we published Tvardovsky's *Tyorkin in the Hereafter* and shall continue to acquaint our readers with the works of Sovet poets.



Photographs by Nikolai Sharanda and Georgi Ugrunovich

WOMEN FOR FRIENDSHIP

BY NADEZHDA KHIMACH

"OUR trip to your country has exceeded our expectations, and we are deeply grateful to you for inviting us and for treating us so beautifully. We have had an instructive and fascinating three weeks, and we thank you again for what you have done for us. . . . We are going home with renewed energy and a desire to work for friendship and peace."

This letter to the Soviet Women's Committee came from eight American women who visited the Soviet Union last year at the invitation of the committee. I was particularly pleased by the letter, since I had accompanied the delegation. Today, several months later, it still gives me pleasure to recall our trip. Our American guests were women of different ages and walks of life, very individualistic, keen, energetic and eager to learn more about the Soviet Union.

Three weeks is a very short time to tour as vast a country as ours. Still it is sufficient for a general idea and an overall impression. However different their reactions may have been, on this one point our American visitors could not help but agree: Wherever they went they received the hearty and sincere welcome that only true friends are accorded.

During their stay the Americans met many Soviet people and asked and answered innumerable questions. They were interested in everything, from the kinds of trees in the Nikitsky Botanical Gardens in the Crimea to the problems of longevity and budget planning. I have observed our guests trying to comprehend features of our Soviet way of life, trying to understand the feelings of our people. They made friends easily and found common topics for discussion wherever they were—in a Moscow factory, at a family dinner table, on a collective farm in Georgia, or at a resort in the Crimea. They met people of different vocations, had conversations on world problems, on the family and the way to bring up children, on the need for more time- and labor-saving household appliances.

Not always was there agreement. During a visit to the editorial office of the magazine *Soviet Woman*, an argument developed about women working. The majority of the Americans were of the opinion that women need not work in order to feel socially useful, that raising a family and being active in the community answers that need. The Russians, however, stuck firmly to their position that women should hold jobs. Besides financial independence, it gives them intellectual independence, real equality with men, and the opportunity to develop latent abilities. Despite the very decided difference of opinion, both hosts and guests felt that these personal encounters and candid exchanges of opinion help people understand each other. There were differences, to be sure, on lesser problems, but on the major problem, the need for a peaceful world, there was complete unanimity between the American and Russian women.

Just before their plane's departure, Toni Mendez Dale said she hoped that the meeting was a prelude to the kind of good friendship which had a beginning, but would have no end.





THESE YOUNGSTERS HAVE BEEN SENT TO A LABOR COLONY NEAR UFA FOR THEFT, BURGLARY AND RAPE.



"Outsiders" are frequent visitors, but magazine writers are rare. Two of the boys said they were planning to study journalism after they got out.



At this rehabilitation colony for young offenders there is a daily report on group competition and a talk on current events by one of the teachers.



The objective is to teach the delinquents the value of work. Many of them learn a woodworking trade in the colony's well-equipped carpentry shop.

For a serious offense, the punishment is a day or two in solitary confinement to think things over. Books are permitted, as reading is encouraged.

LEARNING TO LIVE

By Anatoli Arkhipenko

Photographs by Lev Nosov





The boys elect their own governing council. Gennadi Trifonov (left) heads the Education Committee. Anatoli Tereshkov is a member of the committee.

The Ufa Corrective Labor Camp is for juvenile delinquents serving terms of from one to seven years for serious crimes.

I spent five days in the camp talking to the teachers and the inmates. I looked through case histories and circulated an improvised questionnaire, which they could sign or not, as they wished.

MOST of the boys had either held jobs before they were arrested (usually as factory apprentices) or gone to a general or specialized secondary school. Eleven per cent of those questioned had neither worked nor studied.

Considering the constant demand for labor in the Soviet Union and the free schooling available everywhere, this comparatively large percentage of idlers can be explained only by the fact that these youngsters, for whatever personal reasons, did not want to study or hold a job.

Sixteen-year-old Nikolai Smolentsev said ingenuously:

"I didn't listen to my parents, got poor marks at school, played hooky with the boys, and then left home to live at my grandmother's place. When my mother took me back home, we went to the City Department of Public Education. The people there got me a job as apprentice to an electrician at an automobile repair shop and also put me in an evening school. But I met my old pal, and we decided to go to the Ukraine. We had no cash so we stole a couple of things. That's how I landed here. . . ."

The majority of the boys had not planned their offenses. Some had been committed in a moment of aberration, others under the influence of drink or, more often, at the instigation of adults.

To my question as to why they had committed their crimes, they replied: "Who the hell knows?" "I wanted to show off." "For adventure's sake." Many of those who were in for robbery had stolen money for vodka, restaurants and "a life of luxury." Three said that their families were hard up.

Vyacheslav Zotov, an orphan, wrote this autobiographical paragraph:

"I was a joiner and wasn't doing so badly, but I got the urge to travel. Soon I became nothing but a tramp. And I began to steal so as to dress well and buy the things I wanted."

Approximately half the boys made nothing out of the robberies. They were accessories to crimes organized by their more "practical" chums. Stanislav Lakshtanov told me he had tried out a bike in a store while his older partner was stuffing goods into a couple of bags.

Here is one of the typical replies:

"Nobody looked after me at home. My father used to brawl all the time. I was left to myself and made friends with a bad bunch."

LEARNING TO LIVE





Morning calisthenics are obligatory but well liked. Most boys go in for some kind of sport.

(Far right) School is also mandatory. Classes go through the elementary and secondary grades.

Thirty-nine per cent of the boys had only one parent, and several had neither.

Many of those questioned made reference to trouble at home or said that they had been spoiled as children.

The delinquents in this camp were the same "problem children" who are generally left to themselves at home and who prove unmanageable at school. With few exceptions, they were not among the tens of millions of Soviet children who attended the children's clubs, hobby groups and sports societies. These preferred what somebody called the "romanticism of the streets," and that led them straight to the courts.

"Arrested in Time"

The camp discipline and order are admirable. The boys are up like a flash at 7 A.M. and fast asleep by 11 P.M. They march in ranks to the mess hall and to work, singing en route. This is the element of "militarizing" a collective which the renowned Soviet educator Anton Makarenko thought beneficial. Military precision, I gathered from my talks with the boys, does impress them.

Instances of rule-breaking are few. The camp has a "cooler" (a room with a small window and wooden bench) which is occupied no oftener than once a month—for a day or two at the most.

In summer the boys work six hours a day, and from September to May five hours, besides going to school. What free time they have they spend on the sports field, in the 8,000-book library, or at the club, which has photo, literary, art, song and dance groups.

Annexed to the camp is a 75-acre orchard and vegetable garden. Rabbit hutches and pigpens provide additional meat for the table.

Located on the outskirts of Ufa, the capital of the Bashkirian Autonomous Republic, the camp is surrounded by luxuriant greenery. The boys won first prize citations at a city-wide show for the flowers they grew last year and the year before. They do all the building and equipment repairs and keep the grounds in shape. Each has his own section to look after.

The boys make furniture in the camp shops which is sold to retail outlets. Half of the wages they earn goes for their upkeep; they get the other half when they leave the camp.

School Principal Alexander Semyonov told me the boys were good students. Despite the fact that the majority had been out of school for a considerable time and had fallen behind their age group, they caught up fast and made good progress even by the usual standards.

Vladimir Borisov, one of the boys, told me:

"The thing that makes us take school seriously is not so much camp regulations or what the teachers say as the fact that we are personally involved in our own retraining."

All important questions are decided by councils elected by the boys themselves. There is a council for the whole camp and subordinate councils in each detachment and unit. A volunteer squad, chosen from among the most liked and respected boys, is responsible for keeping order.

Vladimir Borisov is a squad member. This 17-year-old youth was sentenced to four and a half years for robbery. When he was arrested, he tried to get out of it, he told me. But after a couple of sleepless nights he got fed up with all the crawling and lying and decided to finish with his past. He confessed to the crime he had been pulled in for and all the others he had committed. As he said himself, he "was arrested just in time." Vladimir Borisov came to camp with every intention of mending his ways. But not every boy arrives in that state of mind. The camp environment exerts a much more gradual influence on the others, often in spite of themselves.

When a new group arrives, the boys are quarantined for three to five days, during which time they are acquainted with the camp regulations. A teacher and a council member are attached to the new group. At a meeting of the council, composed of boys like himself, some of them in camp for worse offenses than his, each newcomer must confess his crimes, promise to go straight and work to observe the rules and follow the daily routine. He is then admitted to one of the detachments.

Seventeen-year-old Muscovite Vladimir Plastun, sentenced to a term for malicious hooliganism and speculation, told me:

"I realized soon enough that the kids themselves keep order here. When I lit a cigarette before breakfast, I was called to the council and told I'd broken an unwritten law. When my roommate said something about my swearing, I flew off the handle. The kids cooled me off. Gradually I came to realize that if I wanted to get anywhere with the other kids, I'd have to cut all that out."

According to Vitali Zagnetko, assistant director of the camp, the system of education here is based on the idea that although the boys are guilty of serious offenses, they are not hardened criminals. Consequently, the educational methods are much the same as those used in the ordinary school.







(Top left) The workers of a local factory take a critical but friendly look at the boys' work.

(Bottom left) A good record cut Valentine Koulichenko's sentence from 3 years to 20 months.

(Above) This pleasant veranda is often the battleground of the colony's aspiring Petrosyans.

The boys are isolated from society only geographically. In all other ways, they feel its influence. Through radio and TV, newspapers and magazines, they can follow events at home and abroad. Besides that, they often meet people from the outside. Each detachment has a patron —an organization, factory, school or theater—that arranges concerts, lectures and talks for the boys.

Your Time Is Up

One day a trial was held in the club to hear the cases of 16 boys recommended for release ahead of time. As the record of each boy was read aloud by a teacher, he climbed onto the stage to face the prosecutor, judge and two people's assessors. In answer to their questions, he told them what he intended to do when he was released.

The hall was dead quiet when the judge and assessors left to confer. Only after the decision was read—and it was favorable—did the hall break into applause. Prosecutor Henrietta Ronchenko took the floor. She said, "Now you can walk with your head up. As a mother, I congratulate you from the bottom of my heart and wish you the best of luck."

I studied the very serious faces in the audience. Each boy knew that he also could take those few steps that led up to the stage. Article 55 of the Criminal Code of the Russian Federation (the Criminal Codes of all Soviet republics have such articles) states that an inmate of a camp for juvenile delinquents who has given a good account of himself can be released ahead of time, providing he has served a third of his term.

This opportunity plays a major educational role. It gives real meaning to the competition for the best unit and detachment. It is from the unit with the best record for study, work, discipline, tidiness and community service—records kept by elected committees—that boys are chosen to be released before their terms are up. Violation of discipline by a single boy counts against the whole unit.

This explains why one group of boys, three of them committed for serious crimes, stopped a boy who tried to escape, and why another group, learning that Mikhail Bondarenko had stolen money from a camp attendant, called a meeting and made him return the money.

When the boys go outside the camp to work in the orchard or build an addition, they are accompanied by only one teacher and a squad member. It is no problem to escape, with woods nearby and the guards unarmed, but there are no more than two or three attempts a year, all by newcomers still untouched by the camp environment.

"I Want to Have a Clear Conscience"

These are excerpts from speeches made by the boys at a camp discussion entitled "Leave with a Clear Conscience":

"Many of us know now that when we get back home, we won't steal any more. I got my first summons from the militia in 1963. When they arrested me afterward, I didn't tell them a thing about my old crimes. And now I talk openly about the robberies they didn't know about." (Sergei Borisov)

"Let them put me on trial again—I want to have a clear conscience," said Valeri Korobov, making a clean breast of offenses he had not been charged with.

Last year alone the administration received 22 letters from boys in camp admitting undisclosed crimes, although the boys were aware that it could mean additional time. These letters are the end result of a lot of soul searching. They are the best proof of the effectiveness of the camp's system of education.

Asked whether their stay in camp did them any good, all but four of the teenagers answered in the affirmative. Here are some of their replies:

"In camp I've grown to like work and to respect the work of others. I finished school with good marks and have come to realize what life and the collective mean and how to live with the collective and help those who are still unsteady." (Vladimir Nazarov)

"I've learned that a man has to have an aim in life, something to strive for, something useful to do. Before, I lived a useless life." (No signature)

"I've learned that there are good people. Besides, I've begun to take an interest in our country's affairs." (Nikolai Kaltyshev)

"I learned two trades here, and now I am getting a third. I've completed seven grades. At home I got no further than the fifth." (No signature)

I believe that, with few exceptions, the replies to my questionnaire were honest. We do know that only five to seven per cent of the released teenagers get into trouble again. This is certainly not a large proportion. And it explains, in part, why there is less juvenile delinquency in the Soviet Union with every passing year.

Brief Comments

Unity and Collisions

by Vladimir Smolyansky



Vladimir Smolyansky, born in 1924 in Moscow and a war veteran, is a graduate of the law school of Moscow State University and a Master of Science in Economics. He has written a number of articles and pamphlets on the subject of socialist economics.

Economic cooperation among the socialist countries—and it already has a history—took shape in spite of their various levels of economic progress and uneven rates of growth. Nor were the historical conditions favorable. Some of the countries had fought each other and their borders had been changed, all of which left its mark on the psychology of their peoples. But the trend toward cooperation nevertheless prevailed.

Behind this cooperation is an identity of socioeconomic systems, philosophies and ultimate goals. This explains the many different forms of cooperation that have developed—economic ties, exchange of scientific and technical information, cultural exchanges, collective defense agreements, the Council for Mutual Economic Assistance (CMEA), the Warsaw Pact, and numerous other undertakings.

Of course, the way to our present cooperation was not always so clear. Stalin, for instance, tried to dictate to other countries. This hindered the trend toward unity. By abandoning the theory and practice of the personality cult, in relations among socialist countries as well as in domestic affairs, the Communist Party of the Soviet Union cleared the way for common progress.

What form does economic cooperation of the CMEA member states take today? Largely the dovetailing of their economic plans. But at the present stage of international socialist division of labor, internal economic relations are still decisive. Not every socialist state is today prepared to cooperate with the others on all matters. Each country chooses those that further its more immediate economic aims. Also, not every one of the countries has the same possibilities for adapting its production and specialization for the common good. Hence the same problem is likely to be approached in different ways.

How best to combine the interests of each of the countries with those of the socialist community as a whole? This problem cannot be solved by dictate. The interests of the community cannot be given priority at the cost of the national interests of individual countries, and the methods of domestic economic planning cannot be mechanically applied on an international scale. The Soviet Union's policy is based on the principle of the full sovereignty of each socialist state.

"It would be wrong," *Pravda* wrote recently, "to remove from the order of the day those proposals for enlarging the area of cooperation which not all CMEA member states but only some interested countries are ready to accept at present. This is tantamount to artificially holding back the demands of life. It would be more advisable for the interested countries to tackle these proposals, but in a way that would make it possible for other member countries to join in later on."

In a word, a painstaking search for flexible forms of cooperation is going on, and the choice of these forms is a matter for each country to decide. For instance, Intermetal the, iron and steel consortium recently set up within the CMEA framework, consists only of Poland, Hungary and Czechoslovakia.

The Soviet Union is searching for rational solutions. With the majority of other socialist countries it works to strengthen the unity of the entire community. That unity has no objective obstacles that cannot be surmounted.

Production Quotas and the Worker

by Genrikh Emdin



Genrikh Emdin, 51, is a graduate of the Odessa Institute of Finance and Economics. He is an editor of the Ekonomicheskaya Gazeta, specializing in national planning. He has also written articles on economic policy and finance.

Not long ago I presided at a meeting of the Business Club of our economic weekly, attended by benchworkers and engineers, active trade unionists and executives. We were discussing how efficiently time is used in Byelorussian industry. Alexander Mikhailovsky, a fitter at the Minsk radio factory, described an improved technique he had devised for operating his machine tool that raised its productivity by 50 per cent. As a result, he asked the factory to raise his output quota. The management and the trade union committee talked it over and agreed. Under Soviet law, new work quotas can be adopted only if the trade union involved permits it.

A periodic revision of output norms is to be expected in the natural course of events. As machinery and technology are improved, the labor expended on a given job or cycle of jobs is reduced and the number of units turned out per hour increases. All this justifies changes in production quotas.

The question, though, is why workers should be so interested in revising their norms, why they themselves suggest changes in many cases. The reason is that in most instances when new and more progressive quotas are adopted, their wages rise, since the increase in the quota is always less than the increase in labor productivity. Mikhailovsky's wage, for example, went up by 12 per cent.

The Soviet worker is aware, however, that a part of this increase in productivity has to go to society, to the state, since the new machinery is paid for out of the state budget. And so he assumes, as a matter of course, that a substantial part of the profit will go into the national treasury.

Also, part of the profit makes up the so-called factory fund used for building new houses, clubs, nurseries and children's camps, as well as for bonuses and cut-rate accommodations for himself and other workers at holiday resorts and sanatoriums. Hence, the greater the profit his factory makes, the more money there is available for these things. I recently visited the Seversky steel mill in the Urals whose factory fund jumped from 330,000 to 550,000 rubles in the past three years owing to larger profits.

This is in addition to the regular budget allocations the state makes for the same purposes. These allocations are very relevant to the question we just asked. Soviet workers know exactly how the funds that come from higher productivity are spent. They know from almost half a century of living experience that all the resources of their society are used to develop and strengthen the socialist economy, to advance science and learning, and to give people a better, fuller life.

Aside from wages, every Soviet man and woman receives an average of 50 to 60 rubles a month from the public consumption fund in the form of free services (education, medical treatment, etc.). Government expenditures for these services increase steadily. In 1962 they came to 32 billion rubles, and by 1965 they will be 40 billion. As time goes on, the public consumption fund will grow at a still faster rate. It is this realization—that his personal interests are identical with those of society—that explains why Soviet workers themselves suggest that their production quotas be raised.

Theater Trends

by Alexander Solodovnikov



Alexander Solodovnikov was born in 1904. For years he managed the Bolshoi Theater and later the Moscow Art Theater. A prominent critic and writer on the drama, he is also counselor of the Ministry of Culture at present.

A review of the past 10 years of Soviet theater will show how closely it has been coming to grips with the problems our times pose for people.

Western sociologists talk of a "civilization of leisure." Technical progress promises us a greater volume of goods produced in less working time. What are people going to do with their spare time? Develop their capabilities by learning? Or waste it in diversions that become increasingly less diverting?

People go to the theater for recreation, to "forget it all," they sometimes say. But a 200-year-old tradition says that Russian, and subsequently Soviet, theater has always been more than simply entertainment. The writer Gogol put it that the stage is a rostrum from which one can tell people good things about many things.

This, of course, does not at all mean that a play needs to be a didactic, boring repetition of a lecture or a book on ethics, but that our best theaters have always had a sense of responsibility for the influence they exert, an understanding that what the theatergoer looks for, besides entertainment, is an answer to the ideological and ethical problems that trouble him.

That was probably why Konstantin Stanislavsky used to ask his company before starting rehearsal what they thought the play was saying and to whom. When a play reflects the spirit of the times, in the best sense of the phrase, then it is worth while dedicating effort to it. But when it is merely a tribute to a passing fashion or, still worse, something to fill a hole in a theater budget, why waste the time, talent and audience?

Along with the classics of Anton Chekhov, Leo Tolstoy and Maxim Gorky, the Moscow Art Theater produces such plays as Nikolai Pogodin's *Kremlin Chimes,* Alexander Korneichuk's *Platon Krechet* and Daniil Granin's *Attack the Lightning*. Incidentally, American theatergoers will be able to see the first of these three this month. The Art Theater will be in New York from February 2 to 28.

Over the past 10 years the proportion of modern plays in the Soviet theater repertory has been on the increase. In 1954, 615 Soviet plays were produced throughout the country; in 1962 the number was 1,288, more than double.

Their themes grow out of contemporary life. The protagonist is that unusual yet usual person who, along with millions of others, has been transforming once backward Russia into one of the world's most enlightened and powerful countries. The protagonist is the audience; that is the reason for the Soviet theater's great popularity.

Audiences keep growing, but not fast enough to suit us. Although general attendance is high, there are still areas of the population we do not reach. However, this is being remedied. In recent years the country's 500 professional theaters have been making special efforts to reach the rural population and that of the new industrial settlements.

Here is an example. In the Tselinny (Virgin Land) Territory, where in 10 years 44.5 million acres of wild steppe land were planted to wheat, there are four professional theaters. This past year they gave 2,065 performances to audiences totaling 529,000 people. The most interesting part about it is that nearly a thousand of the performances were given out in the fields from truck platforms or in village clubs to 188,000 people.

The amateur theater movement also helps to increase attendance at the professional playhouses. These amateur theaters, which play regularly at factory and village clubs and which, incidentally, are subsidized in part by the trade unions and the government, now number more than 800. In addition, there are 126,000 amateur drama groups with an active membership of 1,604,000.

The Soviet theater's repertory is an expression of the over-all creative progress of the country. It is keeping up with our fast moving times.

IN THE NEXT ISSUE



When bear trainer Anatoli Mayorov first entered the rink, it appeared as if he had never seen ice before, except perhaps in a cocktail. The bears seemed amused by his spills on the ice, but growled when they themselves fell. Today these same bears are accomplished skaters. A picture story on the new ice show produced by Arnold G. Arnold, which is having a successful tour in the Soviet Union, includes some of the 24 young ladies chosen from among 3,400 applicants. The lucky girls represent a number of Soviet towns and villages.

The considerable growth of Soviet maritime shipping has evoked a variety of comments in some countries. In an interview with a *Soviet Life* correspondent, the USSR Minister of the Merchant Marine, Victor G. Bakayev, discusses the principal trends in this development. The deputy minister and other high officials of this department are also quoted.



The State Bank of the USSR has 4,000 branch offices and 72,000 savings banks. More than 240,000 people are employed in this vast financial enterprise. In answer to many readers' requests for a description of the Soviet finance and monetary systems, we have asked the chairman of the Board of Directors of the State Bank, Alexei Poskonov, to describe its manifold activities.





Medieval Russian painting has won worldwide recognition. However, very little attention has been paid to the country's sculpture of the period from the thirteenth to the eighteenth centuries. A surprise awaits the reader in Yuri Ovsyannikov's story ,on Russian wood sculptures of that time. The article is illustrated in color.

Other articles in the March issue:
Discover Russia for Yourself—of particular interest to those planning to visit the Soviet Union; **The Last Wagon West**—about the covered wagon round-the-world trip made by Leon H. Gillis and his family; **The Ukraine: Industry and Agriculture**—as described by Ivan Kazanets, Chairman of the Ukrainian Council of Ministers; **Long Live Archimedes!**—a feature story about some of our brilliant young scientists whose names are sure to be internationally known in the not too distant future; **Progress of Natural Science and Modern Philosophy**—the noted philosopher Pyotr Fedoseyev is the author of this article; **Who Said What?**—another popular brain-teasing photo quiz; plus our regular features.

NOVOSTI PRESS AGENCY

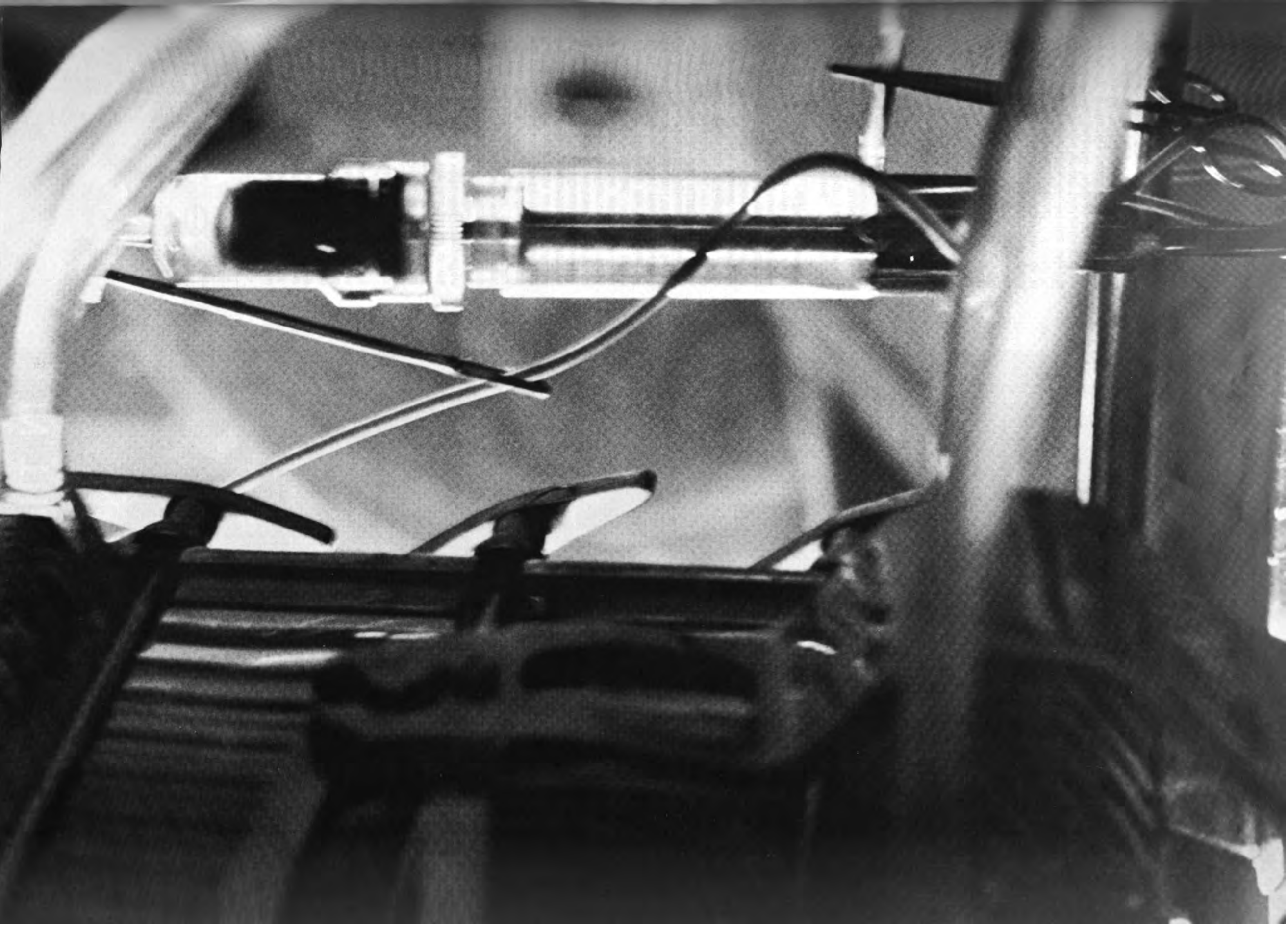
SOVIET LIFE

Sex and Early Marriage

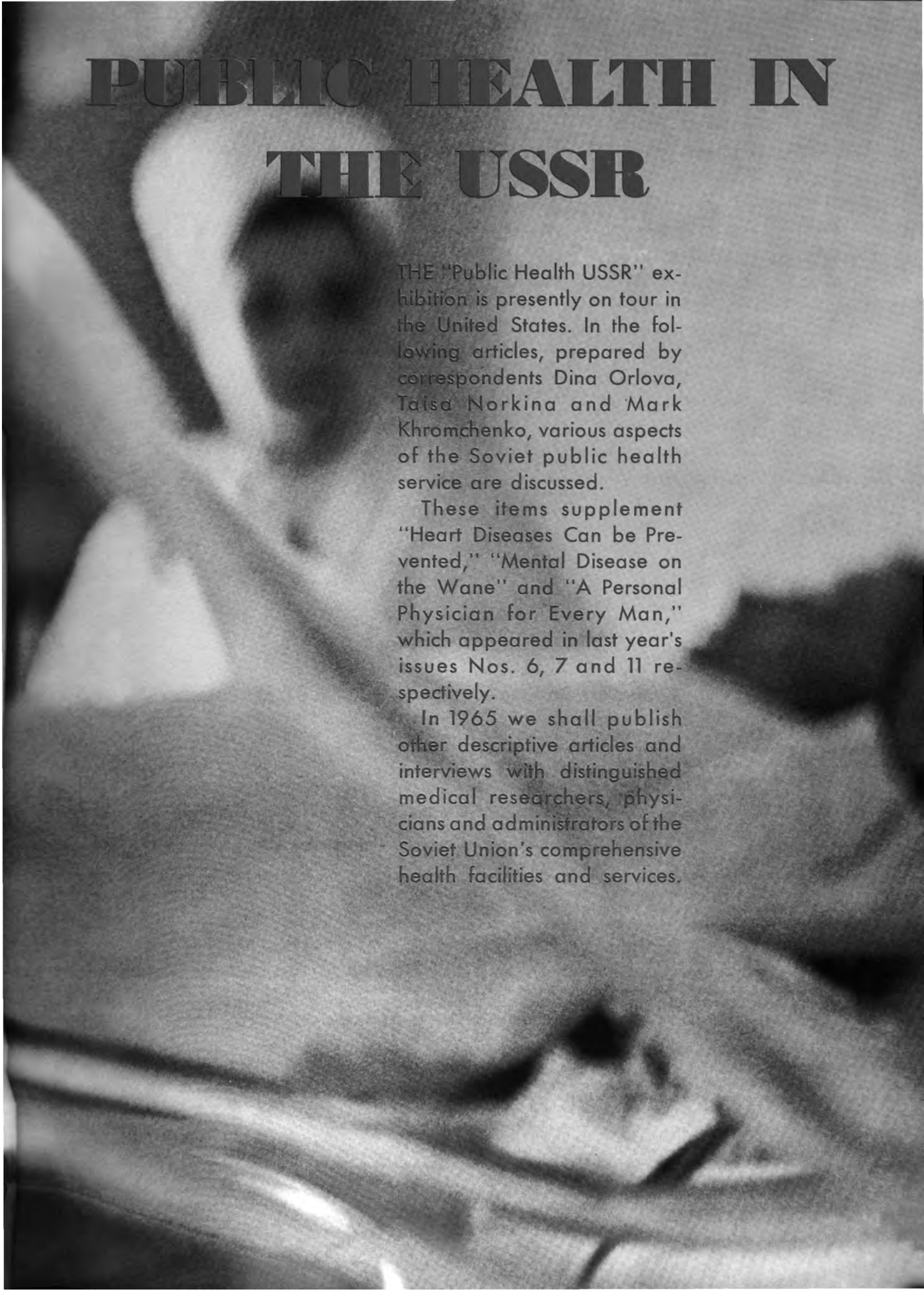
An analysis by the sociologist Boris Grushin based on 12,000 letters received in a recent opinion poll.

What Anne Frank Might Have Written

The diary of Maria Rolnikaite, who experienced life in a ghetto and a death camp during World War II.



PUBLIC HEALTH IN THE USSR



THE "Public Health USSR" exhibition is presently on tour in the United States. In the following articles, prepared by correspondents Dina Orlova, Taisa Norkina and Mark Khromchenko, various aspects of the Soviet public health service are discussed.

These items supplement "Heart Diseases Can be Prevented," "Mental Disease on the Wane" and "A Personal Physician for Every Man," which appeared in last year's issues Nos. 6, 7 and 11 respectively.

In 1965 we shall publish other descriptive articles and interviews with distinguished medical researchers, physicians and administrators of the Soviet Union's comprehensive health facilities and services.

SOVIET PUBLIC HEALTH SERVICES

In connection with the "Public Health—USSR" exhibition now in the USA, we asked Alexander Serenko, Deputy Minister of Health, to discuss for our readers the work being done in Soviet medicine.

THIS exhibition should interest Americans, if only because Soviet and American health services are organized on such diametrically opposite principles.

As soon as Soviet power came to stay, the state took on the entire responsibility for safeguarding the health of its citizens, regardless of their financial status, nationality or social standing.

The basic principle of Soviet public health is that all medical services are free. The principle has justified itself completely. A few figures to illustrate: In the first place, the country's average life expectancy has gone up from 32 years at the beginning of this century to 70 in 1963, which means that for every Soviet citizen 38 years have been wrested from death's clutches. Meanwhile, child mortality rates have dropped to almost a tenth. Whereas before the Revolution 273 of every 1,000 newborn babies in Russia—one out of three—died, by 1963 the rate was only 30.

This has been due primarily to our steadily growing volume of housing construction, rising wages and a pension system which guarantees security to people in their old age. In other words, we attribute our better health to higher living standards.

Disease and sickness do not knock at the door to ask how much a person earns. The battle for health is waged in hospitals, polyclinics, maternity homes and research centers, whose number has multiplied many times over since the Revolution.

Prevention is Soviet medicine's No. 1 aim. We try to prevent disease, to organize our work so as to wipe it out.

Our polyclinics and other health centers concentrate on prevention. The doctor does not wait for the patient to call, he keeps a vigilant eye on his patients for incipient ailments. Under constant supervision are children, teenagers, secondary school and college students, pregnant women and the chronically ill.

For prevention and cure, we have more than 3,000 specialized anticancer, anti-TB and other clinics that conduct mass prevention checkups. In 1963 some 45 million men aged 35 and over and women 30 and over were checked for cancer, and more than 80 million were examined for TB. Similar mass examinations were conducted in 1964.

Another objective of the Soviet health service is to offer more than just generalized medical attention. Surgery has been widely developed in our country and has gradually branched out into such areas as neurosurgery, urology, heart surgery, lung surgery, etc. We have an extensive network of oncological centers, and are broadening our treatment facilities in nephrology, gastroenterology and other fields. We have wiped out such infectious diseases as the plague, cholera, smallpox, typhus and relapsing fever, and have, to all practical intents, eliminated malaria.

In the past few years Soviet doctors have evolved a live antipolio vaccine. Wholesale immunization reduced the incidence of polio in 1963 to four per cent as compared with 1958. I am only too happy to note that American scientists, notably Dr. Sabin, contributed signally to the solution of this problem.

An important part in our public health program is played by the clinics at plants and factories. They bring our medical services directly to the workers. There the doctors can keep an eye on their health and working conditions, and introduce preventive measures. We also have a large network of research centers under the Academy of Medical Sciences' Institute of Vocational Hygiene and Diseases, which explore measures to improve working conditions and prevent occupational diseases.

All the achievements of the Soviet public health service are the product of the vigorous participation of our medical researchers. They are currently tackling such problems as oncology, virology and reanimation, investigating the causes of infant and maternal mortality and ways of reducing their incidence, and evolving better methods for diagnosing, treating and preventing many diseases. I haven't the time to list all their projects. But I should note that each new scientific finding is put to general use immediately after it has been validated in practice.

The USSR has a widely ramified network of institutions for training doctors. Every year 28,000 doctors are graduated. More than 180,000 students are enrolled in the 85 medical colleges. In addition, every three to five years a physician has the right and opportunity to take a refresher course at any one of 13 refresher institutes or at a major clinic. During the time he is increasing his medical knowledge, he receives his pay and a stipend besides.

The state has the welfare of its doctors and other medical personnel very much at heart. In fact, at its last session the Supreme Soviet voted them a raise in salary.

In conclusion, may I say that I should like to see our American colleagues visit more often. The regular exchange of ideas and research findings both enrich our health services.



Precinct doctor Raisa Fokina on a call.



FACTS AND FIGURES

A billion and a half demands a year are made on the Soviet Union's free medical services. The figure includes outpatient and house calls, ambulance service and hospitalization. A Soviet citizen makes use of one or another type of medical service on the average of six times a year.

* * *

In 1950 the government spent approximately 13 rubles per person on health protection; the 1963 figure was 28 rubles. In 1964, 5.4 billion rubles were budgeted for health protection, 100 million rubles more than in 1963.

* * *

Every visit to a doctor costs the government about 60 kopecks; a visit to the dentist to have a tooth filled costs 70 kopecks. The government spends an average of five to six rubles a day per hospital patient for treatment, food and other expenses.

* * *

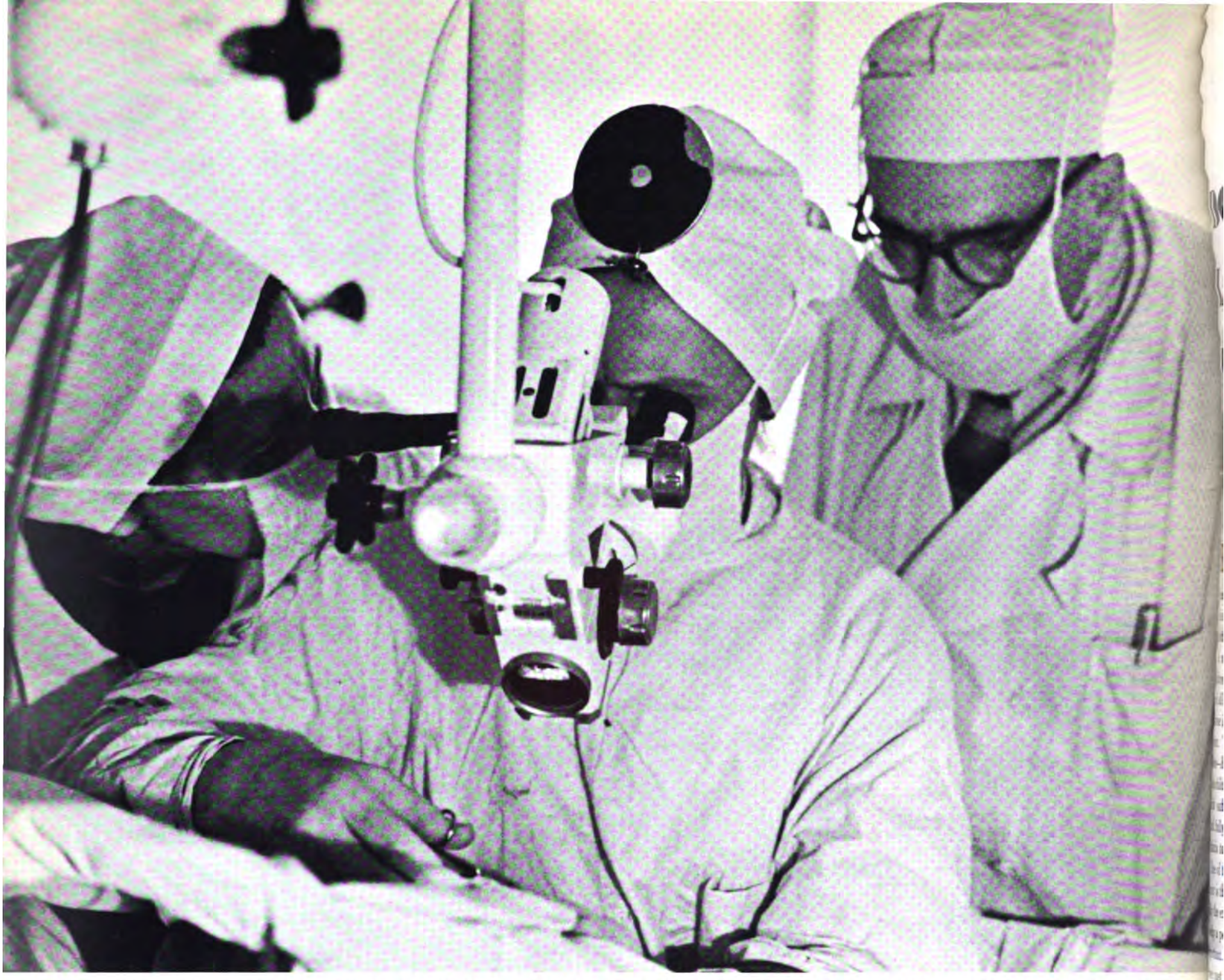
Each year more than six million people stay at sanatoriums and rest homes free of charge or at much reduced rates.

* * *

Government Expenditure for Health and Physical Culture
(in million rubles)

	1940	1950	1963
Sum	903.5	2,139.6	5,300
Per cent of budget	5.1	5.2	6.1

* * *



A basic principle of Soviet medicine is that the state is responsible for its citizens' health. All medical care is free, from a house call to hospitalization and the most costly type of surgery. Here Professor Valentina Nikitina uses a microscope in a middle-ear operation.

THE POLYCLINIC

ALL HEALTH SERVICES in the Soviet Union center around the polyclinic, explains Alexei Safonov, head of the Public Health Ministry's Prevention and Treatment Department.

The polyclinic doctor, usually a general practitioner, is responsible for a residential district of no more than 4,000 people. He sees patients at the clinic and makes house calls. Should it be necessary, he will ask a specialist—surgeon, neurologist, gynecologist—to visit his patient. Assigned to each residential district are six or seven specialists in various fields, including pediatrics, and a staff of registered nurses.

The district doctor has an ambulance at his disposal and laboratory, X-ray and electrocardiogram technicians. Portable physiotherapy equipment is brought to the patient's home when necessary.

The polyclinic, whether in town or country, is completely equipped for diagnosis and treatment. All of their physiotherapy departments give balneological treatment, and most polyclinics offer radon, mud and other baths. The polyclinic does both general and special laboratory tests, blood transfusions and minor surgery.

Statisticians tell us that our polyclinics examine and treat nine-tenths of the population. Patients suffering from atherosclerosis, hypertension, angina pectoris or ulcers are called to the polyclinic periodically for examination. By keeping them under regular surveillance, the doctor is frequently able to prevent flare-ups. Polyclinic doctors refer patients who need specialized treatment to clinics for cancer, tuberculosis, skin and venereal diseases and neurologicial disorders, where the best possible professional assistance is available.

The larger industrial plants have specialized polyclinic annexes on their grounds for studying the causes of occupational diseases as well as treating them.

Prevention, not treatment, is the prime objective of the polyclinics, which do much to combat infectious diseases. Doctors and medical assistants vaccinate patients, give various inoculations and teach people the principles of hygiene. The value of this emphasis on prevention is shown by the low incidence of influenza, a world scourge for the past 20 years now. When they learned that the incidence of flu in the Soviet Union was so low, physicians in many countries thought their Soviet colleagues had evolved some new panacea vaccine they were not revealing to the world.

The answer is much simpler. What stops the spread of flu epidemics in the USSR is free medical assistance, house calls, hospitalization when necessary and sick benefits available to every Soviet citizen.

DOCTORS LOOK FOR PATIENTS

EARLY DETECTION and treatment of disease are the heart of preventive medicine. That is why in the Soviet Union today it is becoming more and more usual for the doctor to look for the patient.

A campaign against malaria was launched before the war years. Marshes were drained and all sorts of methods used to kill mosquito larvae in floodlands, lakes and other bodies of water. The inhabitants of malaria-infested areas—hundreds of thousands of men, women and children—were examined, and every malaria sufferer was registered for treatment until fully recovered. As a result, there is no malaria today.

One of the terrible things about a malignant tumor is that it grows painlessly and stealthily. Only the experienced doctor can detect it. That is why a periodic anticancer examination is so important. It is vital for all women, especially those past 40, to visit a gynecologist at least once a year. Some women—a minority—do. The majority do not. As a regular procedure, all women are mailed reminders by the maternity consultation centers in their home district.

In the Ukraine this procedure is followed in both urban and rural areas. Women are given their examination results in writing, with the date of the next examination indicated on the memo. Those who need treatment are kept under close observation by the district oncologist.

Another very serious disease, also stealthy in its early stages, is tuberculosis. Mass examinations for TB have long been general practice. Mobile X-ray or fluorography units visit schools, factories and farms for the purpose. More than 60 million people are examined every year, and incipient cases are referred to the appropriate clinic. Since treatment is lengthy, the law specifies that the TB patient must be paid his salary and his job must be kept open while he is in the hospital or sanatorium.

Being sick is no pleasure, but there is this comfort for the Soviet citizen—he does not have to worry about paying for treatment and hospitalization or what he is going to live on until he gets well.

STANDARDS FOR HEALTH AND HYGIENE

PUBLIC HEALTH, in the narrow sense, is a specialized branch of medicine. People in this field do not treat individual patients. Their primary interest is the living and working environment as it affects health.

In the Soviet Union these public health specialists are part of the sanitation-epidemiological service. Their functions and powers cover such large areas as the prevention of pollution of the water, soil and atmosphere with industrial and other noxious wastes, the enforcement of hygienic working and living conditions, and the elimination of infectious diseases.

They operate from a network of sanitation-epidemiological stations that cover the whole country and have at their disposal all the latest chemical, physical and even mathematical tools for making bacteriological, toxicological and other kinds of analyses.

Once a town is built or a plant put into operation, it is difficult to make changes. The sanitation-epidemiological service steps into the picture much earlier, when the plant is being designed or the site for a housing project is being chosen. It keeps its finger very much in the pie until the plant or project is built.

Not a single house or factory can be cleared for occupancy or operation by the State Commission without the certification of a doctor from the sanitation-epidemiological service. Moreover, should the doctor find that the designers and builders have departed from the plan he approved, he requests the bank to stop financing the construction until it conforms to legal health standards.

Quite recently, for instance, a sanitation and epidemiological station vetoed the renovation of the foundry shop of the Moscow Pump Plant until management agreed to major changes.

The hygienic standards the service insists upon are, needless to say, the result of careful research and long experience. The research is done by more than 30 institutes and 40 medical schools. They have determined the acceptable maximum concentration of 275 harmful substances that are likely to pollute the air of industrial plants, 55 harmful substances in the atmosphere and 127 harmful substances in water reservoirs. These standards have been approved by the government and have the force of law.

Standards of industrial hygiene have done much to reduce, and in some cases to eliminate completely, the incidence of such occupational diseases as those caused by mercury, lead, aniline, etc.

Our reporter asked Pyotr Lyarsky, deputy chief of the sanitation-epidemiological service, "Your service seems to keep busy tracking down factories that do not conform to hygienic standards. Are there so many?"

"Not a great many, but we think that even a few is too many," he answered. "The explanation is negligence, or if you want to be charitable, which we are not, ignorance. Some factory managers pay the very minimum of attention to health regulations. Others are so busy beating their plan quotas that they have no time to spare for such matters as proper working conditions. We are empowered to impose stiff fines and, believe me, we do when necessary. We haul repeated offenders to court.

"But that is a relatively simple problem. More serious is the fact that in these 47 years the country has had to make a tremendous leap to reach its present industrial potential. Construction was not always what it should be; there was not enough time, money and knowledge for everything. Now we have to right these old mistakes, and that is much harder than building properly from scratch.

"Another thing is that it is not always possible to foresee the effect that a technical innovation or improvement will have on workers. Our big job until now was to cut down on heavy physical labor. But with automation, it's not physical fatigue that is likely to be the problem in the near future but mental fatigue, boredom and nervous strain.

"Here is another example: As a result of the chemicalization of our industry and agriculture, we are producing a great variety of chemical products that are in almost universal use. Our job is to find out, and quickly, what precautions have to be taken when these products are used. Let me illustrate. In recent years our research institutes studied more than 400 poisonous chemical agents to be used in farming. Only 98 of them passed muster. The rest, doctors said, were toxic to humans.

"In spite of all that," concluded Pyotr Lyarsky, "we are very optimistic. We have our problems, but we also have our successes to remind us that eventually we will be able to answer all the big questions we ask ourselves today."

Testing a street in Moscow for air pollution.





The shop's doctor, nurse and safety engineer check working conditions in the Borets plant.

HEALTH ORGANIZERS

The Ministry of Public Health reports indicate that for the past several years the sick rate of factory and office workers in the Donets Region, a coal-mining area, has been lower than in other parts of the country. We sent a reporter to learn their secret.

ABOUT 2.5 per cent of the miners in the Krasnaya Zvezda mine at Chistyakovo used to stay out an average of four days a year on sick leave. (For sick leave with pay, a medical certificate is required.) The present figure is 0.2 per cent, a very appreciable drop. It is unusual these days for a Krasnaya Zvezda worker to apply for a certificate; most men don't need them. This will explain why.

Recently a few men complained of not feeling well. That was sufficient for the whole group they worked with to be placed under systematic medical observation. The diagnosis was hypertension, and the doctors took the necessary remedial steps. Whereas several years ago people suffering from hypertension in the Donets Region were diagnosed and placed under systematic medical supervision only after the illness was in an advanced stage, today 90 out of 100 patients are discovered in the initial stage.

In the past three years the number of cardiovascular cases among factory and office workers in the basic industry of the Donbas, which is coal, has fallen by 60 per cent. One of the major reasons is the number of new medical centers that have been established, large health complexes combining hospital, polyclinic, physical therapy and hydropathic facilities. A doctor is responsible for the health of the workers of one or two shops, depending on their size. He prescribes not only outpatient treatment for the workers of his shop but also, when necessary, hospitalization. The doctors attached to the shops devote a good deal of their time and energy to preventive medicine. The workers call them "health organizers." It is an apt nickname;

EXPECTANT MOTHER

THE EXPECTANT MOTHER gets very special attention through the Soviet public health system. She has her own doctor to counsel and help her, of course, but she also has at her disposal the services of a special institution, one of the more than 8,000 district women's consultation centers in the country. Here a specialist in obstetrics talks to her about the changes taking place in her body, answers her questions and allays her fears. She is also instructed in the technique of natural childbirth. Where such centers are lacking, an obstetrician or midwife from the nearest maternity home serves. The Soviet Union has quite an army of them—32,000 obstetricians and 225,000 midwives.

Pregnant women, young mothers and women with large families are entitled by law to a list of privileges which the lawyers and doctors of the women's consultation centers make sure the factories and offices give them.

All women workers are entitled to a paid maternity leave of 56 days before and 56 days after giving birth. In the case of twins or difficult birth, the postnatal leave is extended to 70 days. After her regular maternity leave a woman may stay away from her job for another three months, in which case she draws no pay, but her job is kept for her and she retains her seniority.

A pregnant woman cannot work the night shift or overtime or be sent on business trips. If the doctor thinks it advisable, she is transferred to an easier job at her old pay. A manager who refuses employment to an expectant mother or cuts her pay is penalized.

Nursing mothers are given an additional hour a day off for one year.

Mothers receive a lump-sum grant from the state on the birth of a third child and a monthly grant on the birth of a fourth and every child thereafter.

Women with five and more children may retire on pension at 50, provided they have 15 years of service.



About five million future citizens like this one are born annually in the USSR.

that is precisely what they do—organize health.

A while ago there was an outbreak of colds in one of the mines although the weather was fine. Apparently the hot water in the showers was too cool. For this, the mine administration was made to pay the sick benefits that would ordinarily have been paid by the trade union. Needless to say, there have been no reports of mass colds from the mine since.

FETUS TO ADULT-HOOD

PROFESSOR Georgi Speransky, eminent scientist and member of the USSR Academy of Medical Sciences, likes to underline this basic principle of pediatrics—that child care must begin with the fetus.

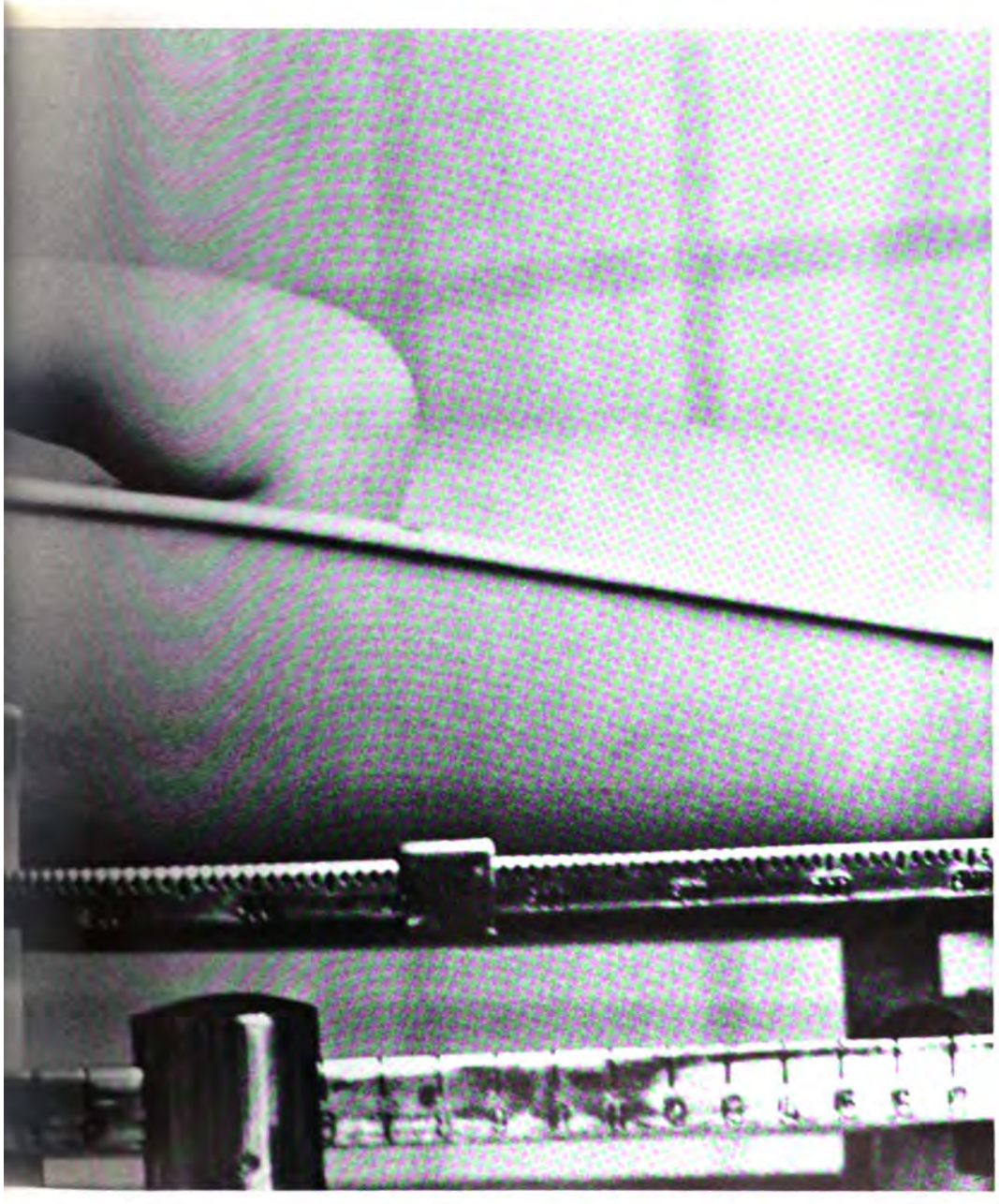
Though the professor is 91, you would never think it from his youthful, springy walk, the vigor of his speeches and reports, and the office hours he keeps.

His field is the organization of child health. Long before the Revolution, a very young doctor then, he fought for special remedial and disease prevention facilities for infants.

"And now," says the professor, "no one would even think of questioning that principle. We begin to look after the child's health long before its birth. This is consistent with our modern understanding that proper prenatal care is essential for the health of the human being about to be born.

"What do we do to use this period as productively as possible? To begin with, we keep every pregnant woman under systematic medical observation. A correct regimen of work, rest and diet, medical calisthenics and the earliest detection and treatment of disease are all beneficial to both the mother and the child.

"All women have medical assistance at delivery. We have many thousands of maternity homes and maternity wards in hospitals. Qualified assistance at childbirth sharply reduces cases of birth trauma, oxygen deficiency and the other dangers that threaten the child in the first minutes of life.



"As a rule, the mother and child spend eight to ten days in an auxiliary maternity unit, where the mother convalesces and the child adjusts to the new conditions of its existence. Pediatricians specializing in infant care keep the baby under observation. Once home, the precinct pediatrician takes over. In effect, he is the child's personal physician almost until it comes of age.

"How does this work? Very simply, at least for the parents, since there is nothing they have to do. It is standard procedure for the maternity home to notify the local children's polyclinic that a new child was born on such and such a day to a family living at such and such an address. The local pediatrician and nurse are required to visit the baby shortly after it leaves the maternity home. Usually the visit is prompt. The doctor and nurse are just as interested as the mother in having the baby get off to a good, healthy start.

"When the precinct pediatrician's work is being evaluated, he is asked how much 'his' children gained in weight, whether any of them suffer from rickets and how many of them had no ailments at all during the first year of life. The precinct pediatrician and his assistant, the nurse, are responsible for everything: below average weight, improper cutting of teeth, delayed speech development.

"The children's polyclinics give the necessary inoculations. We have set ourselves the goal of completely wiping out such infectious diseases as diphtheria. There is an epidemiological law to the effect that an infection will disappear only when its pathogene finds no material to infect. This means that all children must be inoculated exactly within the time limits set and at the prescribed intervals.

"This is not easy to do in a country with as large a territory and population as ours. What helps is a well-established system of child health care. We keep a dossier on each child's development. In this file—it gets to be quite thick—we enter his growth, weight, physical and psychological history, illnesses and inoculations. This, of course, is quite a big job but a very valuable one.

We are very close to eliminating diphtheria completely. And in some of our regions and cities, including such large cities as Leningrad, for instance, we have not had a single report of diphtheria in recent years. Where we do have occasional cases, the child is immediately hospitalized and emergency steps are taken to find the source of infection."

"What is the picture as regards hospital facilities for children?"

Professor Speransky took out a reference book.

"These are the latest figures," he said. "Children's hospitals and children's wards in hospitals can accommodate 300,000, enough to take care of every child who needs hospitalization. The precinct doctor is never turned away for lack of room. We keep building more accommodations all the time. However, some of our facilities could stand improvement—we could use more space, better equipment and more personnel. The child is a peculiar patient; besides treating him, you have to play with him.

FOURTEEN TO EIGHTEEN

VISITORS to the Teenagers' Room of Moscow Hospital No. 21 are not the quietest people in the world. In August and September, the room's busiest months, they arrive in bunches. These are yesterday's schoolchildren starting on jobs or entering vocational schools and specialized colleges, for all of which a thorough physical checkup is required.

For the teenager it is an unpleasant chore to be examined by an eye and ear doctor, a dentist, a surgeon and a neurologist, to be X-rayed, go through innumerable tests, have his blood pressure taken, tell about his family's housing and income, list the ailments his father and mother suffer from. It is not natural for young people to be concerned about their health. But the doctors in the Teenagers' Room are. They know how impatient these formative years are for the body's hardiness and endurance in adulthood.

Regular medical examinations at least once a year are obligatory for teenagers in the Soviet Union.

Victor has just turned 17 and only begun to work as a fitter at an auto repair plant. Replying to the doctor's question, he said promptly: "Fit as a fiddle!" But the needle on the blood pressure gauge crept past the normal line.

"Ever have headaches?"

"No."

"Never?"

"Oh, once in a while, but nothing to worry about."

"You know what, Victor, come back in a week." Dr. Lydia Ulyanovskaya was thoughtful. She told the nurse to make sure the boy kept the appointment.

The diagnosis was hypertension. Victor was hospitalized for treatment and later advised how to spend his vacation. Also, at the doctor's request, he was transferred to work which did not require constant bending. Victor's blood pressure is normal now.

Are frequent sore throats dangerous? From the youngster's viewpoint a sore throat is nothing to get excited about, but the doctors always have to worry about a potential rheumatic heart. And so, on the nurse's table in the Teenagers' Room is a small stack of medical records (there is no sense filing them because the young people always have to be reminded to come in for treatment).

Everybody working in the Teenagers' Room still remembers Vladimir Barashkov, a mining school pupil who caused them a lot of that kind of trouble. But the doctor took care of both his flippant attitude and his chronic tonsillitis. He is perfectly healthy now and comes in for checkups like clockwork.

One day a girl hesitantly opened the door.

"May I come in, doctor?"

"Of course."

"I began working as a lathe operator," she said, "and now, while the shop is being renovated, I've been transferred to a milling machine, and the parts are very heavy."

"It's a good thing you came in," the doctor said. "Girls under 18 are not allowed to lift even relatively heavy parts. The people in your factory seem to have forgotten that; we'll have to remind them."

Young people need special care, says the law. They are given a month's vacation, a shorter workday and special study privileges. They are not permitted to take jobs that are physically too demanding and are required to report for regular physical checkups.

"Does your work consist mostly of preventive medicine or treatment?" I asked Dr. Lydia Ulyanovskaya. "Do you have more healthy teenagers or sick ones?"

"Look at the records."



Typical retail drug prices: 500,000 units of penicillin for injection 11 kopecks, one gram chloromycetin 25 kopecks, gram of aspirin 1 kopeck.

I did. Next to every name I found 10 or so columns, and in nearly every one were the words "healthy, no change."

"We recently examined 500 students at an electronic instruments school," said Lydia Ulyanovskaya. "In every fourth case it was 'physical development above the average.'"

The Teenagers' Room doctors have a large field of activity—factories, mills, specialized secondary and other schools, wherever 14- to 18-year-old boys and girls work and study.

AMBULANCE SERVICE

THERE ARE various types of ambulance service in the Soviet Union.

An urgent call from a relative or neighbor brings a doctor from a district polyclinic. A witness to a street accident dials 03, and a doctor arrives on the scene in minutes. This is true for both urban and rural areas.

An accident happens in the mountains, the taiga or on an out-of-the-way island, and the victim is picked up by an MI-1 or MI-4 ambulance helicopter.

The country's nearly 2,000 ambulance centers, which operate around the clock, use the very latest diagnostic, treatment and transport equipment. They are staffed with qualified physicians, many of them doing research in emergency treatment.

The service is equipped with special infarction-treatment and embolism-prevention ambulances, each with a field laboratory, an electrocardiograph and anticoagulants. A heart specialist, a lab assistant and an electorcardiography technician make all the necessary tests, diagnose the case and give emergency treatment en route to the hospital.

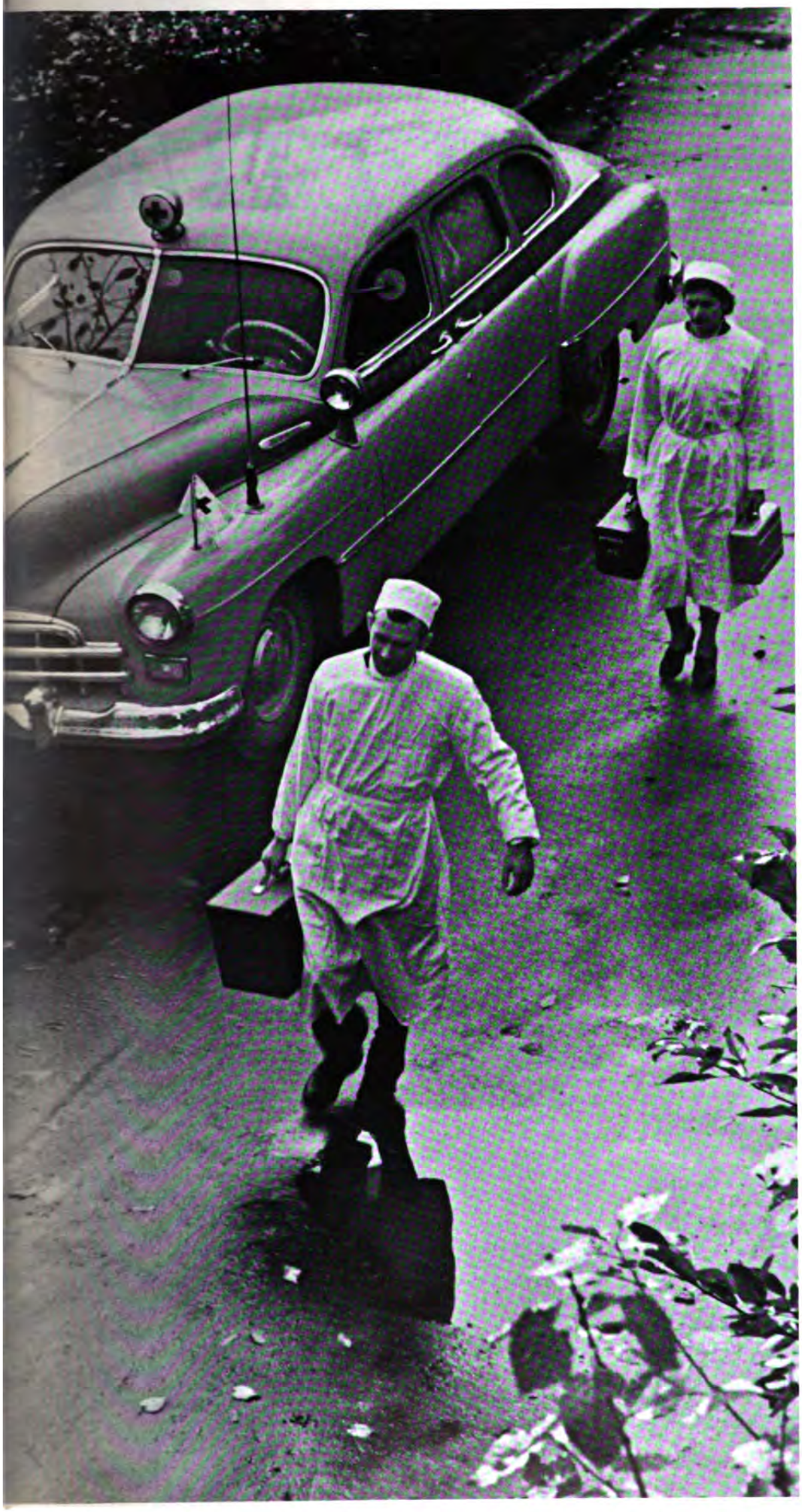
At one time doctors were very hesitant about moving heart patients. In recent years such entries in medical records as "an infarction case brought to a hospital" or "a man with a hemorrhage of the brain brought out of a coma and moved to a clinic" have become everyday occurrences. These specialized ambulances have cut the mortality rate from infarctions and hemorrhages sharply.

Ambulance service also uses special shock-prevention buses. These are, in fact, mobile laboratories, complete with lighting and heating systems, special cabinets for equipment and medicines, including heart stimulants, oxygen and nitrogenous oxide tanks and machines for administering narcosis and artificial respiration. The stretcher-table inside the bus can be used to stop bleeding, to perform a tracheotomy, for heart massage, transfusion of blood and antishock solutions, etc.

As many as 70 reanimation centers are operating in the Soviet Union today. These are typical entries from the records of one such center:

"Diagnosis—high blood pressure, lung edema, clinical death. Worked on patient 2 hours 50 minutes. Patient saved."

"Violent heart attack, concomitant suffocating and blood-spitting. Patient stopped breathing. Fought death for 1 hour 30 minutes. Heart resumed beating."



FACTS AND FIGURES

Mortality Rate
(per thousand people)

1913	1940	1963
30.2	18.0	7.2

* * *

In 1964 there were 466,000 doctors in the USSR, more than a quarter of all the doctors in the world.

Growth in Number of Doctors
(excluding dentists)

1940	1950	1964
141,700	247,300	466,000

* * *

Doctors have the right and opportunity to take refresher courses free of charge once every three or five years at the Institutes for Advanced Training or at the large clinics. During the study period they are paid their regular salary and maintenance stipend.

* * *

In 1963, 45 million men over 35 years of age and women over 30 were checked for cancer.

More than 80 million people were checked for tuberculosis.

* * *

Number of Hospital Beds
(per 10,000 people)

1940	1950	1963
40.2	55.7	90.3

Clinics and hospitals with a total of 102,400 beds were added to the Soviet Union's medical facilities in 1963 alone.

* * *

Hospitalization, like all other forms of medical aid, is free.

Since money is not a determining factor for either the doctor or the patient, even the most expensive type of treatment can be used and the most eminent specialist called in for consultation regardless of whether the patient is a plain factory worker or a high government official.

* * *

The big industrial plants have their own supplementary medical facilities, polyclinics, and first-aid stations. This brings health services to the worker rather than the other way around and makes it possible for physicians to study health conditions on the job and take the necessary preventive measures.

Accident! An ambulance equipped for shock treatment is there in minutes.

CULTURE

IS THERE any future for cultural values in contemporary society? This question has long been agitating philosophers and sociologists.

Here we have explosive progress in science and engineering and the unexampled growth and spread of such mass communication and information media as the press, radio and television. And yet many Western social scientists are alarmed that thinking is becoming standardized, the individual depersonalized; they are disquieted by the erosion of esthetic criteria. There is more and more talk of the crisis of culture.

In his much-quoted *The Decline of the West*, Oswald Spengler wrote that our age is one of civilization not culture, that it is characterized by the progress of engineering, science and material comfort. The concentration on the means for satisfying material demands, he said, gives rise to a crisis in aims and values: Man in modern civilization forfeits his spiritual potentials and becomes a slave of the things he himself creates: engineering instead of lyrics, shipbuilding instead of painting, politics instead of philosophy. And thus, by concerning himself with the creation of effective means of activity, he loses the meaning of that very activity and becomes a robot.

Advocates of this view blame mass production, whose inevitable offspring, they say, is standardization. They believe that if cultural production adjusts itself to mass demand, it willy-nilly levels down to the average, ceases to be unique, matchless, creative; it has no discoveries and revelations to make, does not lead, but merely facilitates our perception of daily routine.

Does progress in civilization kill culture? Marxists do not think so. They associate cultural progress with social progress, and the solution of the contradictions and difficulties of cultural growth with its democratization, with mass creativity.

Culture for All

Marxists say that the problem of modern culture is not its mass character but—quite the opposite—its insufficient ties with the masses.

Throughout the centuries, the gap between the cultural level of the working people and that of the social elite has been enormous. To close that gap is the primary requirement of cultural progress. Socialist society considers it a paramount duty to educate its people and draw them into creative work.

In the Soviet Union there are now 10 million specialists with a higher or specialized secondary education (about half the workers and more than a quarter of the collective farmers have a higher or secondary education). We have 107 students for every 10,000 people, considerably more than does France and the Federal Republic of Germany.

Shakespeare said that spiritual oblivion, spiritual death, threatens only "dull and speechless tribes." There are no illiterates in our country. Forty nationalities with no previous alphabet of their own acquired written languages in the Soviet period. Education opened the world's treasury of culture for millions. The art, literature, music and dance of the many Soviet nationalities are the cultural property of the whole country.

A few facts in evidence: In 1962 alone books in the languages of 53 nationalities found in the USSR—novels, collections of poems and textbooks—were translated into Russian. The ballet *The Seven Beauties* by the Azerbaijanian composer Kara Karayev is enjoying a successful run in Leningrad. The music of the Armenian composer Aram Khachaturyan delights people everywhere in our country. Among the Lenin Prize winners in literature and the arts are the late Ukrainian poet Maxim Rylsky, the Daghestan poet Rasul Gamzatov, the Lithuanian poet Eduardas Mezhelaitis, the Kirghiz writer Chinghiz Aitmatov. This process of democratization has penetrated deep into every kind of cultural activity.

Of course, universal literacy by itself is no guarantee against standardization and mediocrity, and it is true that the dissemination of culture on a wide scale can be accompanied by a certain (even if temporary) leveling downward. The slogan "Culture for the Millions" means merely making culture accessible to the masses. The next task is to make culture the concern of those millions, so that they do not merely consume cultural values, but create them. Communism presupposes not an amorphous "mass," but a collective of developed individuals, each different.

There can be no genuine cultural progress without the all-round development of the individual. But can there be all-round development in our day of growing specialization? Here is where we encounter some real and very serious difficulties.

Specialization vs. Culture?

That specialization is very much on the increase is an indisputable fact. The USSR census for 1926 listed 10,400 occupations, the 1936 census 19,000 and the 1959 census 30,000.

Work is what shapes society and human personality as well. The knowledge required to do fruitful work in any field today is so great that a man must do a certain amount of specializing. To that degree, he may limit his interests to the framework of his occupation.

Of course, creative work, even in the one field, enriches a man spiritually and gives him a more individual and more creative approach to other aspects of life. But the contradiction between the need for specialization and man's aspiration for broad knowledge, for cultural progress is very real indeed.

Let us take an analogy from mountaineering. A man strives to reach the summit. But as he climbs, a heavy knapsack on his back, his attention is concentrated on the ground under him and immediately ahead.

To some extent the same thing is true of work. Ideally and in principle, it is creative work from which is derived the creative intellect. And it is with the creative intellect that man is able to approach everything in an original, unique way.

On the other hand, creative work requires concentrated effort, all of one's powers of concentration. Can you tell a scientist to forget the laboratory once he's left it? In quest of the new and unknown, men become fanatics; often they neither have the time nor the energy for any other occupation or interest. As the saying goes, "A specialist is like a swollen cheek—the fullness is one-sided."

If an engineer is to keep up with the technical literature in his field, where will he find the time to read fiction, listen to music, go to the theater? And if this kind of thing goes on for any length of time, the cultural requirements of the worker, engineer or scientist are practically lost sight of.

We often come across people who do excellent work in their own field but are either torpid or vacuous when they move out of their special area. And since most people work in fields other than the humanities, culture is the stepchild. There are even some who argue that the arts, philosophy, etc., are essentially leisure-time pursuits—interesting, no doubt, but luxury items that the "busy" man has no time for.

Does growing specialization limit man to an increasingly narrower outlook? Not at all. The seeming contradiction arising out of the progress of social development can be resolved by society. It has only to set itself the task.

Larger Horizons

Though the Communists think work is of great importance, they do not regard man as an element in production and nothing else. All of Soviet life is directed toward making every worker, in whatever field,

IN CRISIS?

By Professor Igor Kon

Doctor of Philosophy, Leningrad University

a rounded individual. We do everything possible to give people the opportunity to work in a variety of fields, to break through the barrier of specialization. To expand every man's social horizons, to make him a participant in running his factory or farm and managing his village or town—that is one of the ways to solve the problem.

Civic participation makes radical changes in a man. When a citizen is not only a worker in a particular field but is involved in civic affairs, an interest in social, in the larger human and national problems, in world problems becomes for him as natural and as much a part of his life as his vocational interests. You cannot be a leader in a society without knowing the laws that govern its development, without an understanding of people and their motivations.

It is not because of idle curiosity alone that one dips into different fields of knowledge and engages in some activity or other, depending on one's mood. The objective necessity is there, as much as for the engineer to read technical literature, but here it is converted into an inner motive. There is nothing surprising in the constantly mounting interest of Soviet people in world problems, the sciences, the arts. The replies to a poll conducted by Soviet sociologists and the press show that it is characteristic of our young people that they hunger for knowledge of every kind.

"I dream of so much," wrote a 22-year-old bricklayer of Siberia in his reply to a questionnaire printed in *Komsomolskaya Pravda*. "I'd like to fly to Mars, but there is plenty to do on earth too. I want to learn about the underwater world and see it with my own eyes. I'd like to be a poet and write words that warm the heart and help us to live and build a radiant future."

A survey conducted among 664 industrial workers by the sociology laboratory at Sverdlovsk University in 1960 showed that almost all of them enjoy reading: 62 per cent of them belong to libraries and 41 per cent have their own home libraries. The young workers go to the movies and theater regularly, and many of them are interested in music and painting.

"The Room for Human Development"

The satisfaction of man's cultural requirements presupposes certain material conditions, particularly the free time that Karl Marx so appropriately called "the room for human development."

For purposes of study Soviet sociologists make this classification of free time: 1) Time taken for travel to and from work, preparing for the job but not actually spent working; 2) housework and personal chores; 3) sleeping, eating, etc.; 4) leisure time in the proper sense of the word, *i.e.*, time remaining after every necessity has been taken care of.

Leisure time is used differently by different people. How much a person has of it depends on his working day and the sum total of his living conditions: how much time he has to spend going to and from his place of work, transportation facilities, family responsibilities, and so on. Our working people have, on the average, three to four free hours a day—not very much. These hours are for rest (with the exception of sleep), recreation, social activities, for spending with the family, for study, sports and hobbies. However, to this time we should add days off and holidays, when there is an average of nine free hours a day, as well as vacations, when the proportion of free time is still greater. To sum up, the average annual fund of free time tends to approach that of working time.

Spent properly, free time can be very productive. As we progress toward communism, there will be further reductions in the length of the workday and greater opportunity for cultural development.

The Program of the Communist Party of the Soviet Union foresees within the next decade a six-hour workday with one day off a week, or a 35-hour workweek with two days off. People employed in underground work or in arduous or hazardous jobs will have a five-hour day (a 30-hour five-day workweek). Subsequently, with a sufficient rise in labor productivity, the workday will be cut correspondingly. Improvements in public services—which are far from what they should be, especially in rural communities and small towns—will augment the citizen's free time.

How do Soviet people spend their leisure time?

According to data provided by the sociology laboratory of Leningrad University, young workers spend most of their free time studying (18.5 per cent of their free time per week). Entertaining, socializing and walking take up 16.6 per cent; reading, more than 14 per cent; watching TV, 12.5 per cent; the children, public activities and movies, 5-6 per cent each.

Of course, the ratios vary, and people spend their leisure time in different ways, but all of them try to combine rest and recreation with intellectual and esthetic interests.

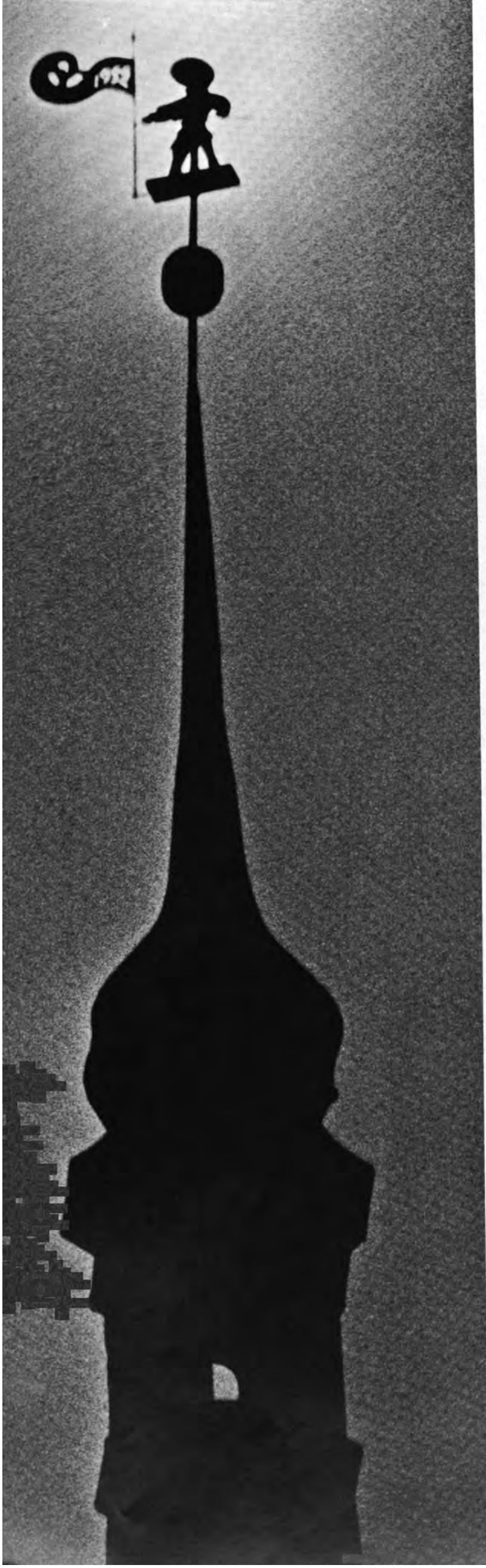
A study of the time budgets of 30 production teams in Siberian factories showed a keen desire to study and a deep interest in philosophy, art and literature.

It goes without saying that a dearth of leisure time and poor living standards affect a people's cultural development, not only quantitatively but qualitatively as well. After a hard working day, it is not everyone who wants to listen to serious music or read a deep psychological novel. The perception of large and complex works of art is also a kind of creative process that demands, besides appreciation, intellectual and emotional receptivity. A fatigued person may find he lacks this. As a result, even though he has the cultural background, a tired man may turn to light reading for relaxation. And what about the many whose tastes are uncultivated?

But these are only difficulties of growth. The main thing is that communism democratizes not only the consumption of spiritual values but also their production. Man asserting himself as an individual becomes the creator of culture. He seeks and creates beauty not only on the stage, in a work of fiction or on canvas, but also in real life, at work and in the home.

The noteworthy fact is that some 10 million of our people are involved in amateur drama, art, music, ballet and other groups. Folk and amateur art activities cannot and never will replace professional art. But such active participation develops tens of thousands of talented writers, painters, musicians, singers, whose natural gifts might, under other conditions, never have been discovered. Just as important, these amateur groups provide fertile soil for the evolution of higher and more diversified forms of art. Man, with his highly developed artistic taste and criteria, should be able to distinguish great and genuine art from the spurious; art need not "adjust" itself to the general by cheapening its esthetic criteria. Professional art can, without cutting its ties to the masses for whom it exists, keep forging ahead, not by pandering to backward taste, but by meeting the most demanding taste and leading the others.

In this way the fate of culture, the individual and democracy blends into an integral whole. The democratization of society turns the working man from a mere agent of production into a creator, not only of material but also of spiritual values. And the development of the personality, with all its diverse requirements and capacities, in turn becomes a prerequisite for the development of democracy and of culture. Only people who are unlike, who perceive the world differently, although from one basic standpoint, can enrich one another. Not a standardized and depersonalized mass but a harmonious combination of multiform, vivid, diversified personalities united by the same idea—this is the new society we Marxists see. To build such a society is not easy, but it is surely a goal worth striving for!







AND CHIMNEY SWEEPS

ABOUT CHIMNEYS A

Photographs and Story by Nikolai Rahmanov

A LITTLE IRON soldier has been standing watch for many centuries on the steeple of the old City Hall. He is known fondly to Tallinn people as Vana Toomas. The soldier turns vigilantly with the wind from the sea, peers into the coming dawn and scans the horizon for danger.

The smoke rises quietly from the chimney of the café named after this brave soldier. Vana Toomas has long been intending to drop in at the café—it's in the cellar of the building—and have a cup of coffee with some Old Tallinn liqueur. He has never been able to spare the half-hour, because there is nobody to take his watch. He came down to earth just once—11 years ago. Scorched by the sun, blown by the winds and drenched by the rains, the old soldier started rusting and almost fell to pieces. But the famous smiths of Tallinn, assisted by students from the Art Institute, reforged Toomas and in honor of his second birth gave him a metal flag with a new date to hold.

See the black smoke coming out of the soot-covered chimney on that Olevimage Street roof? That's 74-year-old Gherman Kuning, dubbed the Smith King, starting his forge. Vana Toomas has pleasant recollections of the smithy's blackened walls, the ring of hammers and the old craftsman himself. Gherman doesn't work the way he used to, he's getting on, but his shop is always full. He made a gift of the smithy with all its tools to the students of the Tallinn Art Institute. And today the Smith King is surrounded by a large retinue of students whom he teaches the secrets of his craft.

Talking about chimneys, would you believe that there are real honest-to-goodness chimney sweeps working in our age of gas, electricity and the atom? There aren't many of these people who climb such giddy heights as a matter of course and do what must literally be the dirtiest work in the world. A rare trade these days but necessary. So long as there is smoke coming out of a single chimney, there have to be chimney sweeps.

In the years of his apprenticeship August Kallas must have climbed hundreds of roofs and inspected just as many chimneys. There were things he could do as an apprentice and others tabooed until he became an assistant chimney sweep, so said the traditions and rules of the much esteemed Guild of Chimney Sweeps.

Then came the time when Kallas was called before the guild council. The faces of the examiners were very serious, almost grim. On the table in front of them was the treasury box of the council with three locks on it. August had already thrown in 50-kopeck coins twice, forfeit for his wrong answers to questions like these: "Did you wear a top hat and a white collar at any time during your apprenticeship period?" "Did you permit yourself to smoke?" "Did you make love to a girl?"

August turned red as he muttered the last No. The dean of the guild winked at the others and told the boy to drop another 50-kopeck coin into the box. Then came the last question: "What do you want from us?" "I want to turn from an honest apprentice into an honest assistant chimney sweep."

The council members began to smile, and the dean gave the boy a long pipe, matches and tobacco, and told him to have a smoke. August knew that this was an old tradition.

He unscrewed the bowl from the stem, pulled out a piece of wire (a traditional chimney sweep joke), calmly started the pipe going and gave it back to the dean. While all those present had a pull at the pipe, the dean read the certificate to be presented to August:

"We, the dean and the members of the much esteemed Guild of Chimney Sweeps, hereby certify that August Kallas of Ganzal has learned the chimney sweep's trade from Gustav Seltz, a chimney sweep of our guild, during the period between July 1, 1907 and July 9, 1911, and was ruled worthy of the title of assistant chimney sweep on July 9.

"We recommend this assistant chimney sweep to all those practicing our trade and request them most humbly to render him the support necessary for further subsistence, promising to repay in kind in similar cases. In confirmation of this we append our signatures and the guild seal."

This was 53 years ago. And today August Kallas is himself the dean of the guild of Tallinn chimney sweeps, by right of age and authority. However, the questions he puts at exams are different. Here is one: "Describe fire prevention in high factory smokestacks by the burning out method." And another: "What are the safety engineering rules for work on steep roofs?" These are the kinds of questions you have to answer to become Tallinn's fifty-second chimney sweep.



Chimney sweeps in this atomic age? Ask Egon Kiago. He's one of the fifty-odd in Tallinn.



Two of the city's motorized sweeps starting off on a job. The high hat is traditional.

Three members of the esteemed Guild of Chimney Sweeps. Their combined ages total 211.





Kiago thinks this roof has a fairly gentle slope. Imagine how steep the others must be.



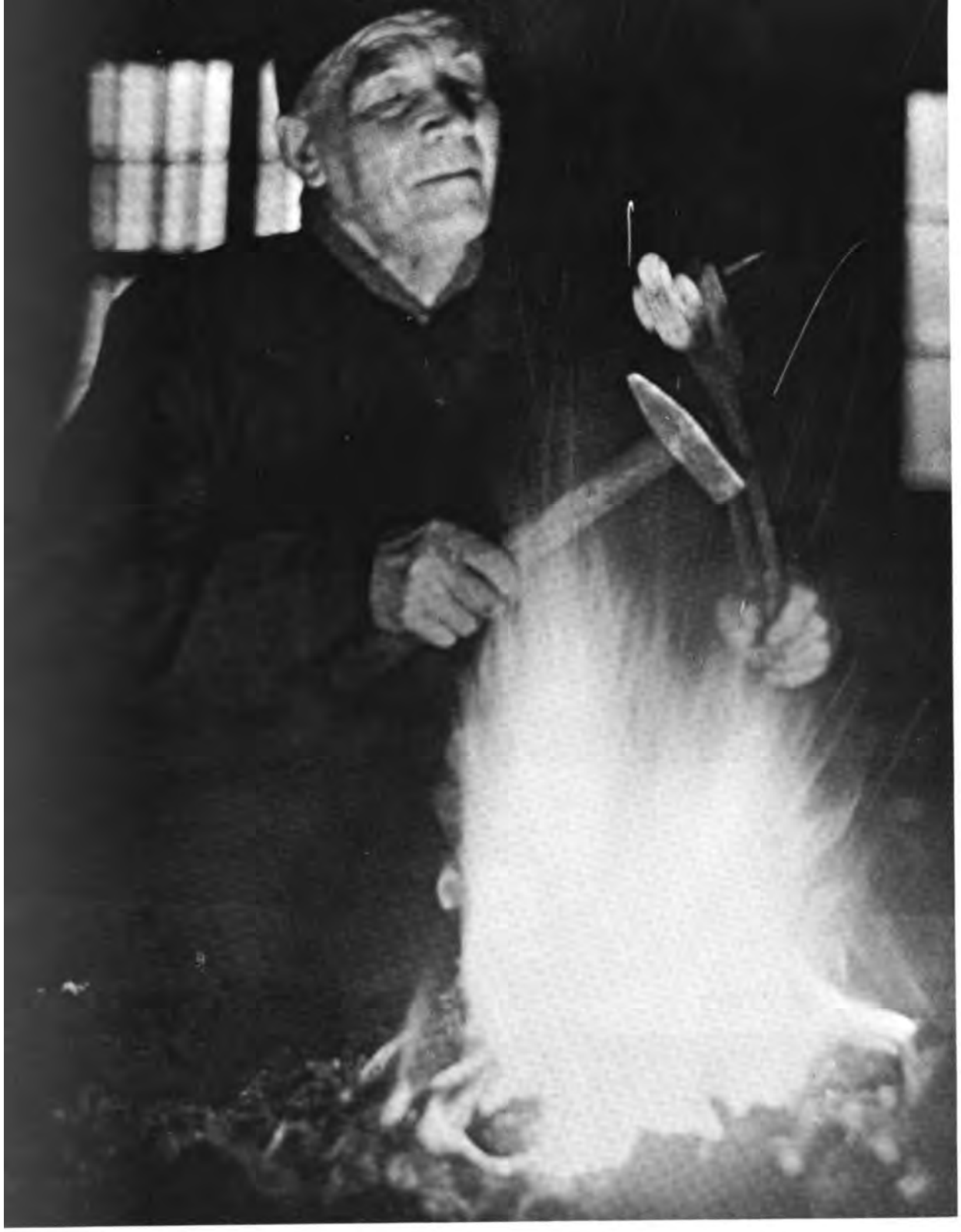
Smith Georg Labo (left) soots up chimneys. Ornamental rail he forged for the Town Hall.

Gherman Kuning's father, grandfather and great-grandfather worked in this smithy.

Kuning had to forge this Key to a Smith's Skill to test his qualifications for the craft.



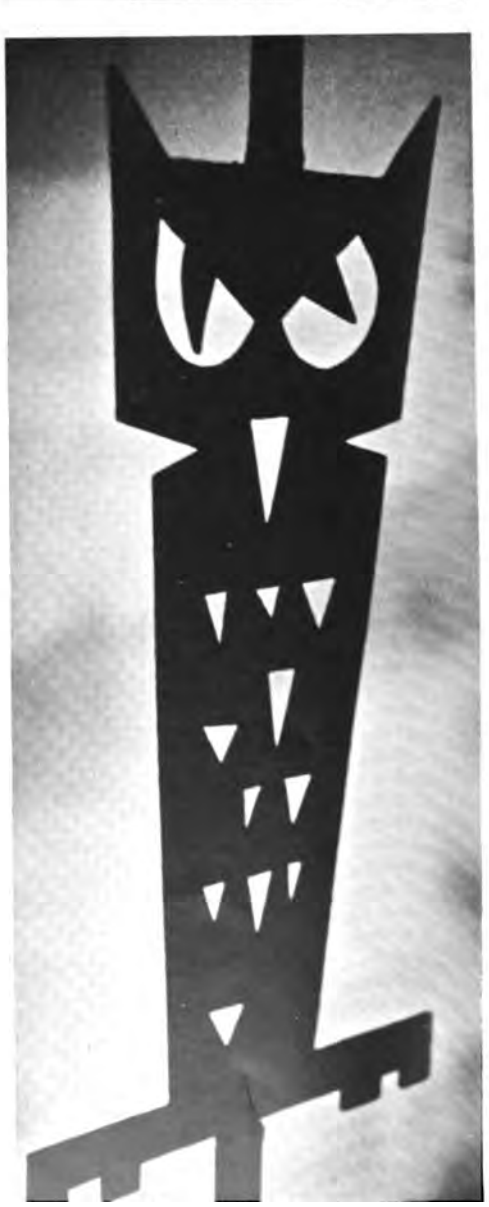




On pension now, the King of Smiths teaches iron work to a retinue of students from the local art school.









(Right, top) This decorative sign hangs over the world's oldest pharmacy. The one below is over a shoemaker's. Both are restorations.

(Right) This iron owl has been standing guard at the door of house No. 13 on one of Tallinn's oldest streets for some three hundred years.

A reminder of the past. The original of this old Tallinn sign was rusting away when the artisan Georg Labo began to redo it in copper.

A Soldier's Letters to His Mother

I REALLY NEEDED THIS YEAR

Every Soviet young man who is physically fit and is not, for one reason or another, exempt from military service, spends a specified period of time in the army. Military service is not easy, and happy will be those generations that, thanks to the general and complete disarmament we hopefully look forward to, will never know what it is to wear a military uniform. Until then, however, our young people must learn how to defend their country.

Recently the newspaper Izvestia *published the letters written by a young Soviet soldier, Boris Dyomin, which we reproduce here with a preface by his mother. We think that these simple human documents will tell our readers more about the Soviet Army and its soldiers than any article we could write on the subject.*

IN NOVELS and stories you read of time dragging on endlessly. But life is not like that! In reality time doesn't just move, it flies!

You are 40 or 50 years old, but still young at heart. You are astonished and unbelieving—half a century! Not long ago you were 18! Could so much time have passed? But there in front of you is your grown son! How fast he grew! You can't hold on to him any longer, keep him at your side.

My Boris is an average young man. Like many boys his age, he rushed around the bookshops looking for *The Boomerang Doesn't Return* or *Le Vicomte de Brageloone*, and while putting on his shirt his eyes would devour the last pages of Jack London. He taped the "craziest" music for his collection, wrote verses à la Mayakovsky, lugged firewood, and peeled potatoes. He didn't always wash his ears and sometimes got poor marks. In the eleventh grade he shot up so much that all of his friends exclaimed, "Boris! What's happening to you?" His ribs stuck out everywhere, and all the girls envied his wasp waist. He was a little frightened of cold weather and wore a warm sweater. He'd beg 20 kopecks for an afternoon movie, and sometimes for two tickets! Our house was always open, and his friends came in droves. He had no objections to cutting classes and always had a good excuse. When this happened, I would usually sigh, but Father would be stern and serious. For me Borry was "sonny," and for Dad he was a man.

Father was indignant about many things, and not without reason. Boris' report cards were liberally adorned with unsatisfactory marks! He failed the entrance exams at the college he wanted to attend, but he enrolled as a correspondence student and went to work in a factory. He acquired the textbooks, sharpened his pencils and so began life like everyone else, work and study, until one day he came home and said, "I've been called up!" He was upset and perplexed, and no wonder. It was as though they were telling him, "You didn't get into college, and so the army's nabbing you. And there brother, you'll get it! That won't be as easy as taking notes!"

"Maybe you ought to ask for a deferment?"

"Don't be so protective, Mom! What am I? An invalid? Everyone takes his turn, and I'm no different!"

. . . The train pulled in to the platform. It was stifling in the cars, but more important, there was no upholstery . . . or anything!

"What? on the bare boards?"

The men laughed, and my son with them, although his eyes showed a childlike uneasiness. I began to realize that Father was right; how was it that I hadn't prepared my son for the difficulties of life?

From the moment the train left I counted the seconds, the minutes, the hours of separation. The letters without regular stamps, but with the triangular postmark, began to arrive. They were dear not only to his father and me but also to the postman who, it seemed to me, said with a special tone in his voice:

"A letter for you! Must be from the boy. It's a soldier's letter."

How little I knew my son, even in this. I only knew that he didn't like to write compositions, to copy and recopy them, and I thought that he wouldn't write letters. But they came! They came! And here are some of them. I'm very glad to share them with you.

September. Well, we've arrived . . . we're living in tents. They feed us . . . Wow! I've never eaten such borsch in my life! The boys turned out to be a good bunch.

The nights here are so clear that it's even possible to read. But the mosquitoes are like wolves! It's too hot to wrap your head in the blanket, but with only the sheet the local mosquitoes buzz around you all night. After the first night I got up covered with bumps, but afterward . . . nothing to it! We must be getting used to each other! Until we meet again, wishing you well, wishing myself well, in love with the Caucasus and with Rigas Yurmala, Private Dyomin.

October. Studies are nearly over. We will shortly take the oath. Real army life is beginning! The other night, on an "alert," we ran for an hour and 20 minutes and . . . we arrived, that's all!

The leaves are falling, the fog is terrible, it's drizzling, but everything is very beautiful anyway. The woods are showing every possible color, and how many bilberries there are! This is the place to pick them! But actually they're quite a way off, and the bears are on the prowl. You asked me to write you about army life, but I can write about anything but! Regulations, Mom, and all that!

Today is Sunday, and for the first time I realize what this day really means. It seems to me it would be a good idea every now and then to give everyone the opportunity to appreciate the simple things in life.

November. The taiga is white with frost and snow, and at night the windows are coated and the water in the washstands turns to ice. Running for setting-up exercises, you slip and at first you're conscious of the cold, but afterward you sweat so much and get so hot that you rush off to wash without your shirt. It's more interesting now that we're studying new subjects.

. . . If only you could see what's going on here! Everyone is trying on his new uniform before the holiday, fussing around and writing letters. Next door someone is playing the accordion.

Finally the guard on duty arrives and yells "Come and get it!" at the top of his voice. But who cares about dinner? We'd rather take our time sewing on our shoulder straps than run to the dining hall. You only sew on shoulder straps once, while you eat dinner every day! The guard on duty has his own way of looking at things. His shoulder straps are sewn on already and he wants to eat!

Studies again. We are as cold as can be and then some! But as far as I know, nobody has died yet, and in general things aren't so bad, so don't feel sorry for me! Greetings to Dad and all our friends. Tell them that I didn't do too badly in the exams. You might even say good!

December. We ski with might and main. I've already worn out two pairs of bindings, and now the sergeant major looks at me sideways. I don't seem to be able to get to write. Yesterday I was on duty and only slept two hours. Soon they'll play taps, and I'm counting the minutes until that blessed moment. I'll finish tomorrow.

Every cloud has its silver lining! I'm finishing the letter. Taps are over, but I am still sitting here. Guess what happened. I had an argument and caught it. So now, instead of sleeping, I am learning the regulations! I think that this is the most important thing we're getting here, education by action. There is no time to moralize, but . . . One! Two! Get up! Run! etc.! And, word of honor, this is much more effective than the sweet talk you teachers like to stuff into people!

January. I celebrated the New Year in a rather unusual way . . . on guard duty. Not to sleep a wink on New Year's Eve is something memorable. Last Sunday we went to the musical comedy theater. It's a beautiful building, and the actors are excellent. Every Sunday we go somewhere. A while ago we went to an art gallery. How vague our ideas of Siberia are! I never thought that we'd find so many fine things here! I have also seen an exhibition of local metalwork art. Imagine a marquee complete with a canopy pitched on spears, and walls and cornices all like the very finest lace. When you look at this delicate tracery, you can't believe that the whole thing is cast iron and weighs ten tons!

February. It snowed yesterday, and the woods are sparkling in the sun as though they were covered with tiny diamonds. The sky is very blue and terribly far away, and all around there is a tremendous stretch of white. It's so bright it makes your eyes ache. It is a training field, and so that you don't have any illusions, I'm going to tell you something about the science called warfare. As the regulations say, this is an art, and as we say, art demands its sacrifices! (Among today's is a frostbitten nose, but don't worry, it's not mine!) We would have had many more if not for the care of the sergeant major. They have given us felt boots, which are light and comfortable and keep our feet warm as toast. We set off on foot, but afterward . . . oh, brother! The snow came up to our knees. You run, attacking, arrive, and then crawl back, and those lyrical diamonds of snow penetrate every hole! While all this is going on, you have another important job—to find time to tell the man next to you that his cheek or his ear is turning white. When this happens, you cover the spot with the skirt of your overcoat until the color returns and the pins and needles begin. Everything is under control then, and you can start running again with an easy mind! These are the fundamentals of our science!

March. "My new life" began half a year ago, and now I can sum up. In my opinion, by comparison with the way the army disciplines a man, your pedagogical words about discipline fade into insignificance. One sure thing is that you have to first know what good is and what bad is. The army not only teaches it to you, but insists that you live up to it. Ridiculous as it seems, I'm going to follow in your footsteps! Soon I'll have to teach the privates. I'm going to try to find ways of combining your theories with army regulations on discipline.

April. I'm really going to educate! I wonder if I've inherited some of your talent for teaching. But it should be easier for me, because in addition to your methods of convincing people, I have methods of compulsion which you don't have. Perhaps I can use your thesis. I want to congratulate you for beginning your graduate work. Citizen Mother, you are detailed to produce a thesis! Battle order: Analyze the above, separate the wheat from the chaff, add more intelligent ideas! Don't accept loss of heart or bad temper, not even a vestige of uncertainty. Time limit for the completion of order: Until the end of my military service.

Here the sun is already as warm as in springtime, and it's pleasant. We can see more earth than snow, and more mud than earth and snow combined. I'll be writing letters less frequently now, as preparation for the parade has begun.

May. Please forgive my not writing for so long, but I really didn't have time. I marched in the first column of the parade. They say I wasn't bad, but we were out of luck—it was raining and even though we had iron tips on our heels, our steps didn't exactly resound!

I'm sure when you watched the Moscow parade on television, you didn't think how much effort went into being able to march so elegantly and in such straight lines!

I'll soon be competing in the shooting matches, and I naturally don't want to disgrace us or my unit.

June. I am convinced that everyone should spend some time in the army. It is a real endurance test, and I'm a completely different man from the one I was a year ago. I can jump calmly from a first floor, hit anything on a snap shot, do a handstand on the parallel bars, and press 132 pounds. Everyone here is in perfect health. In 10 months I have had only one sore throat, and it went away after maneuvers. It's like being at a sanatorium. I weighed myself the other day, and my eyes popped out. Imagine! I gained 22 pounds! I've learned so much. I began to really appreciate classical music here. And I know now what sadness is and real happiness and the bitterness of the inevitable. I really needed this year for growing up.

THE RUSSIAN

How changeable and fickle are the whims and caprices o fashion, leading astray even the most astute designer, who forecast next year's styles incorrectly.

At fashion's will, everything changes—the look, the *line*, th trimming and even the material.

There is, however, one category of apparel that neither *bow* to fashion nor recognizes its laws—the national costume. Style come and go, but the national costume proudly lives on. An whereas styles, though they may contain elements from nationa costumes, may become international and be followed by *all cou* turiers, whether they design clothes for the Parisian, New Yorke or Muscovite, the national costume is content to lead a local *exist* ence. It thrives on bright colors and attractive fabrics. Little won der, therefore, that trend-setting designers seek new *inspiratio* in national costumes.

The history of a people, its craving for beauty and its *artisti* urge all find expression in its national costumes. More than hundred nationalities live in the Soviet Union. And it is at th request of readers Joseph Burkes, Veronica Miller and many other that, beginning with the current issue of our magazine, we pre sent a series on the national costumes of the peoples of th Soviet Union.

The Russian national dress is varied in style, color and trim. The over-all appearance and details—the fabric, color combination, trim and headgear—have been faithfully preserved through many generations; the garments of the nineteenth century have undergone little change since the seventeenth and eighteenth centuries. Even in the early years of the twentieth century the same homespun clothes were the everyday wear of the peasants in remote villages.

As in other lands, it was largely the peasants who retained the national costume. This is particularly true of Russia, when we consider that from 1700 to 1725, by an edict of Peter I, residents of Russian cities, regardless of the class to which they belonged, were forbidden to wear native-style clothes. However, after the death of Peter I the law lost its force, and the national costume came back into favor among most townspeople of the working and middle classes. Nevertheless the 25-year period during which they wore Western-style clothes did affect their manner of dressing. Thus, in addition to the West European and the purely native apparel, a mixed costume, chiefly Russian but with West European elements, came into being.

BY KONSTANTIN TELYATNIKOV

DRAWINGS BY YELIZAVETA AXELROD

NATIONAL COSTUME





Orel. Long blouse, skirt (paneva) *open in front, worn* **with a striped wool sash.**



Novgorod. Brocaded "sayan" sarafan with silver embroid- **ery trim front and bottom.**

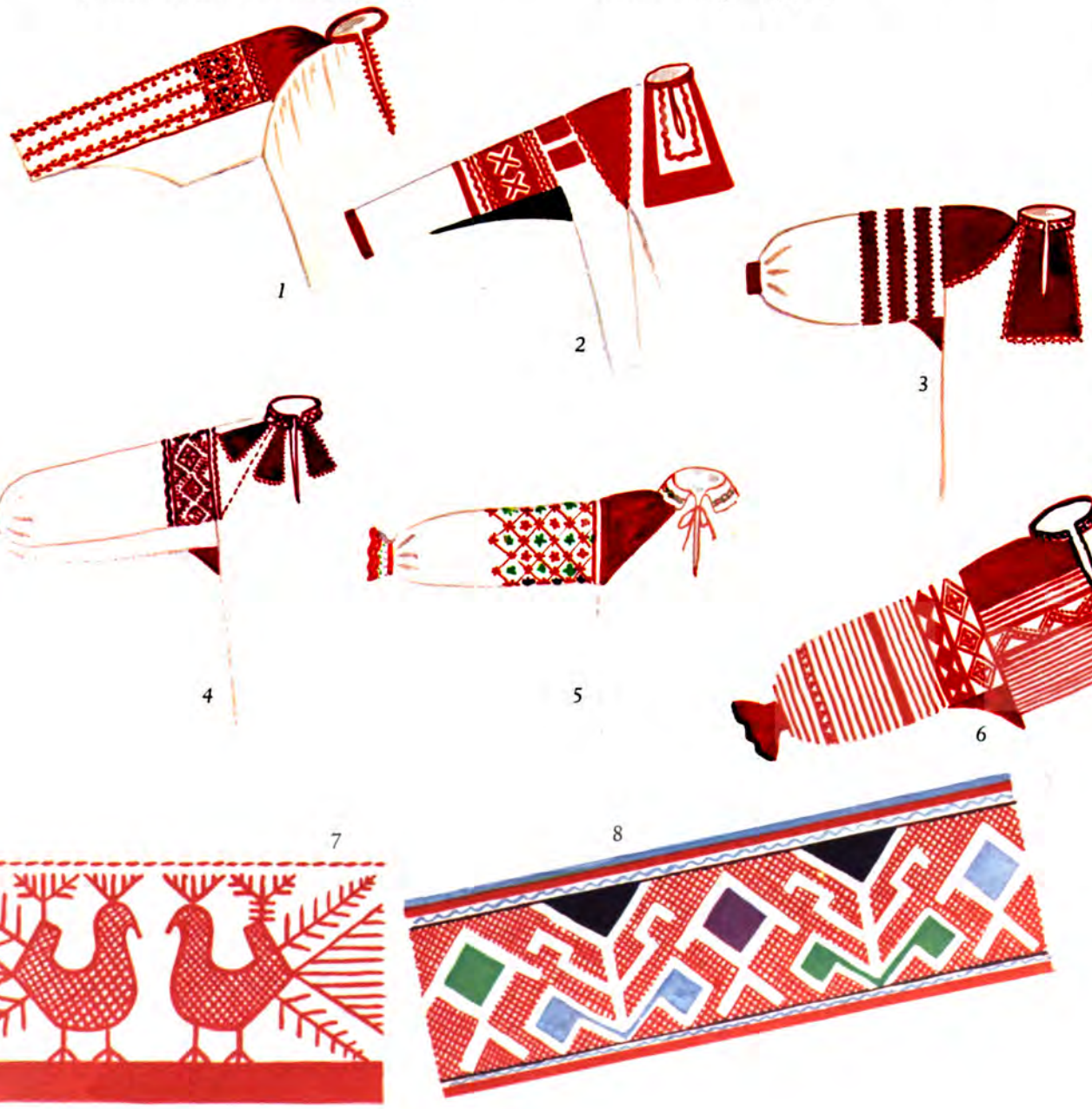


Voronezh. Blouse embroidery of bright thread, the skirt **trimmed with colored braid.**



Tver (now Kalinin). Old Russian sarafan *and "magpie"* **headgear worn with a scarf.**

1. *Arkhangelsk blouse, ham-shaped sleeve with colored neckband and embroidery.*
2. *Penza blouse with a biblike neck opening, colored sleeve and black underarm insets.*
3. *Orel blouse with colored neckband, striped shoulders and sleeves, red rickrack trim.*
4. *Kostroma blouse with colored insets, shoulders embroidered and white neck opening.*
5. *Kargopol blouse with colored neck opening, a turned-down collar and embroidered sleeves.*
6. *Smolensk blouse with straight neck opening and insets, woven trim on sleeves and bodice.*
7. *Penza blouse. Puffed sleeve, diagonal trim, ball-tasseled belt, cross-stitch embroidery.*
8. *Cherepovets blouse with insets, colored checks, trimmed with plain piping.*



The Russian national costumes may be divided into two distinct groups, the traditional clothes worn in the south of Russia and those worn in the north. The northern group includes the cities of Arkhangelsk, Vologda, Yaroslavl, Vladimir, Cherepovets; the southern—Ryazan, Voronezh, Tula, Orel, Smolensk, Kursk and Penza. The color combinations, lines and silhouettes of the two groups are quite dissimilar.

Typical of the northern group is the slender silhouette (the accentuated waistline or the A-line shape), subdued pastel colors and delicate trimmings. A popular garment is the sarafan (a sort of jumper) of homespun linen, silk or brocade in solid colors. More recently patterned fabrics are becoming popular.

In Southern Russia the national costume is more elaborate and brilliant in color, shift-like in silhouette. The color schemes are arresting—strong colors with a predominance of blue and red. Usually the overskirt is a checked homespun trimmed with braid, gay ribbons and borders of colored embroidery. Blouses are ornamented with red shoulder strips and underarm insets.

Men's shirts come in a variety of styles. The most common are the gay Penza shirt, with red embroidered front and red underarm





Ryazan. Blouse, wide striped **sh, worn with a flaring** *leeveless jacket (karatai).*



Cherepovets. The "sukman" **sarafan** *worn with a very brief and divided jacket.*



Ryazan. Everyday costume of gayly printed cotton worn with ribbon belt and kerchief.

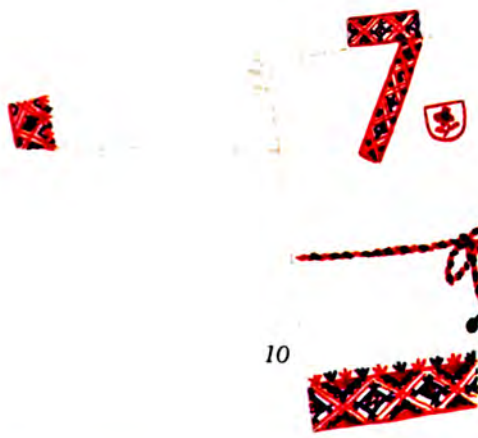


Vologda. "Haymaker" dress. One-color top, checked bottom, braid and ruffle trim.



Penza. "Zapon" overblouses, with braid and embroidery trim, worn with a paneva.

9. *Arkhangelsk blouse, embroidered in satin stitch with colored and gold threads.*
10. *Cherepovets towel end embroidered in satin stitch. Bird design.*
11. *Saratov towel end, appliqué on canvas. Tree of life design.*
12. *Torzhok towel end. The design is symbolic of mother earth.*
13. *Ryazan. Embroidery on woman's blouse. Design: Yarilo the Sun God.*
14. *Tver towel end, satin stitch embroidery. Design: birds and Yarilo the Sun God.*







10

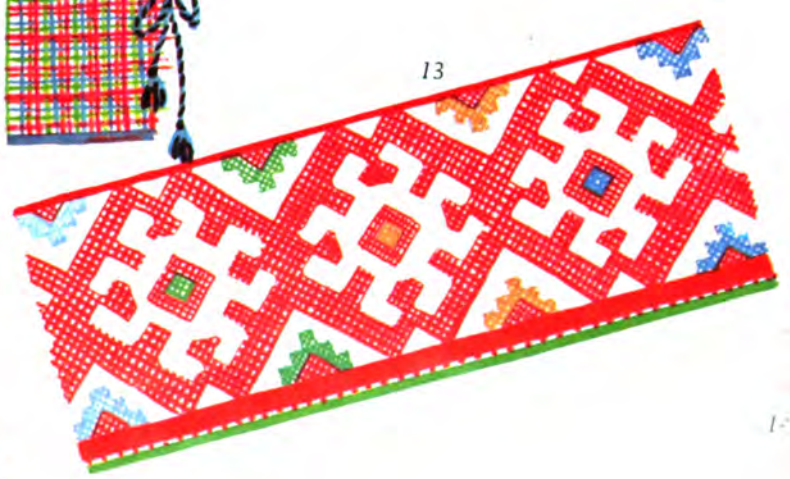
11





12





13



14

Needless to say, the national costume is no longer worn in the Russian village; Soviet country folk are just as keen on the latest styles as their urban counterparts. But it would be wrong to think that the national costume has been relegated to the museums. The many professional and amateur folk dance and song groups that flourish in our country cherish and preserve the traditional national costumes. Such groups as the world-famous Moiseyev Dance Company owe their success almost as much to their gifted costume designers as to the skill and talent of their choreographers and dancers.

insets, and the Lipetsk white shirt, with a yoke that terminates at the armholes and high puffed sleeves. Popular, too, is the checked shirt worn in the Kirov Region; it has straight sleeves and bright-colored underarm insets.

In addition, every region and every district has contributed its own individual styles, color combinations and trimmings. There is a decided difference, for instance, between the costumes of the Ryazan and Orlov regions, although they belong to the southern group. The same is true of the garments of Arkhangelsk and Yaroslavl, in the northern group.

GETTING TO KNOW SOVIET CHILDREN

BY GIANNI RODARI

Italian Writer

"ARE SOVIET children different from our own?" is the first question you are asked when you return from the Soviet Union, especially when the express purpose of your visit was to learn more about the children of that country.

The easiest answer is to say that Soviet children resemble our own very much. They have the same ways and many of the same mannerisms grownups find so annoying. They fret and try to stay up as late as they can to watch television. The boys pull the girls' braids, and the girls complain to the teachers. The pistol is as popular a toy as in my own country, and the children play soccer or ice hockey (there are plenty of skating rinks) and argue just as loudly. The schools give too much homework, of course, and boisterous youngsters race down the corridors at breakneck speed. But when it comes to the scale of juvenile activities and the relationship between adult and child life, the difference is very marked indeed.

Soviet people are inclined to say, half in jest but always with pleasure, that the only privileged class they still have is their children. What these words express is a pride, and very legitimate, in the number and quality of institutions which care for and educate the child—kindergartens and schools of all types, libraries, parks, sports stadiums, children's theaters, the Pioneer summer camps, the Young Pioneer palaces. This impressive collection of state institutions can probably be matched nowhere else, even in the most highly developed countries, those with a higher standard of living than the USSR.

This does not mean, of course, that Soviet educational institutions do not have their shortcomings. There are beautiful school buildings and ugly ones, modern and antiquated ones (except in the villages, where the school is always the best building). Some of the city schools, like our own, have double sessions. Nor can the social status of a child's parents be overlooked. That difference, however, does not begin to compare with the social distinctions prevailing in Italy, for example. But they do exist and do affect the child's life in one way or another. Hence, even in the USSR some children are luckier than others.

To my mind, however, the outstanding quality of the Soviet educational system is not so much quantitative, the scale and variety of juvenile institutions (for example, the Young Pioneer palaces or the famous Artek children's camp on the Black Sea coast), as something else. That "something else" is the fact that regardless of age, the child is drawn into the world of "big things," into the life of society. From an early age the child is adjusting to the life around him and is conditioned to the thought that today he is the little master and tomorrow he will be the big master of his country. Moreover, the child is kept busy most of the day. In addition to doing his school work he develops a wide range of interests, which may include the progress of a neighboring factory, farm or agency office.

It is not only the school, the local library and the Young Pioneer palace that have the job of educating the child. All of society has assumed that major responsibility. This explains why the Soviet state attaches so much importance to everything that relates to children, why literature for children is considered so important; it explains the existence of "universities for parents" and parents' committees at schools and the recurring item "children" in the budgets of factories and offices, as well as a host of other things.

Playing Bus Station

From a psychological point of view there is an element of play in everything the child does. Soviet children do not have playrooms of their own at home as do the children of wealthy Italian families. But what they do have is the endless possibility of "playing grownup," doing things far more fascinating than any game, things that broaden their minds and make them feel useful and important.

In the village of Novo-Tatarovskaya, I met an elderly lady pensioner who lived alone, but not altogether—the boys and girls of the local school had adopted her. The boys chop wood for her, cultivate her kitchen garden, tend her farm animals and repair her fence. The girls scrub her floors and write letters for her. For the youngsters it's probably very much like playing house." except that here is an added sense of reality in the actual help they give the old woman. And probably, these same youngsters, like our own, are scolded by their mothers and older sisters for not helping them. All the same, this game, sincerely played, does unwittingly mold their characters.

In the same village I met another group of children who helped out at a bus station. Two Young Pioneers were on duty there every day. When they found that the benches needed repair or a new coat of paint, or that a small bridge was in poor shape, they brought it to the attention of the local authorities. Of course, I'm sure that the authorities considered the kids a nuisance at times. But I can imagine how important the youngsters must feel when, for example, they answer questions about the timetable or do some other small task. They may be "playing bus station," but there is the exciting fact that it is a real bus station.

At the Artek camp Misha Nekrasov, a Siberian youngster of 10, told me proudly that he was a "volunteer usher" at the children's movie in his home town.

"It's our business to see that kids don't get in without tickets, that everyone takes his cap off, and that little kids are not pushed around," he explained. "We also show latecomers to their seats and are responsible for order and keeping the theater clean."

If Misha were told he had to do these things, I'm certain he would feel very much put upon and would find ways of shirking them. But he has taken the job on because he wants to, and he enjoys it as much as he would a game.

"And who gets the money for the sale of tickets?" I asked Misha, recalling that my own little daughter used to think streetcar conductors the richest people because every evening they walked off with a bagful of money. The question puzzled Misha.

"Don't know. I suppose the government gets it."

"And what does the government do with it?"

"Hm. . . . Well, maybe it gives it to the schools for children to study free of charge."

(In another conversation, a little girl said the government distributed the money to the stores so they would have change for their customers.)

In the Soviet school, besides the teacher and the pupil we have a third force to reckon with, the student's own organization. Beginning with the third grade little boys and girls join the Young Pioneers. They put on a red tie, elect a chairman of their Pioneer group, divide the responsibilities among themselves, and decide what activities they will undertake.

Learning to Be Independent

The key to all Pioneer activities is their appeal to the child's independence, not simply at school but in every endeavor. To think that the Soviet state has a purely paternal attitude toward the growing generation—that it generously allocates funds and equipment to indulge it s whims—is to make a mistake. In reality, a great deal of work is done to direct and stimulate the child's initiative and public spirit.

Likewise it is wrong to imagine that the sole purpose of the Young Pioneers is to stuff the heads of the children with politics (a common misconception of people not acquainted with the facts). Its task is broader and more edifying—to give the child integrity, to make him feel that he is the future master of his land, to foster a sense of independence and responsibility. The school wants to educate future citizens who will be able to live by communist ethics in the communist society the Soviet people are building today. As far as I could see, communist education does not mean dosing children with specially prepared "pills of Marx-

ism-Leninism" or the militarization of youth organizations. It means educating the child to live in a communist society.

Inside the Pioneer organization there is complete democracy, and the children are as uncompromising about it as only children can be about something important to them. Once a teenager is given the right to speak his mind, he has that right without reservation, and you can be sure that he exercises it fully, without diplomatic evasion.

A children's writer who publishes science fiction novels told me about a meeting he had with Young Pioneers at a school. The children showered him with questions on astronomy, geography, physics, etc. Finally he had to admit that he could not answer some of them. Whereupon one little girl commented rather dryly: "If you don't have a scientific background, why do you write science fiction books?"

At one village school that we visited we blushed with shame, not on our account but for a poor chap who, in our presence, was hauled over the coals by his classmates for poor school work, for teasing the girls and, in general, for being a discredit to his class. His accusers were his best friends—they themselves told me that—but they felt strongly (too strongly, I should say; children are inclined to go to extremes) their duty to the class and their right to criticize. Soviet children, as they are brought up today, will certainly not become indifferent and passive citizens. Whatever other habits they may acquire at school, submissiveness is not one of them. It is rather a decided sense of responsibility for others.

Equal to Equal

It was also in the village of Novo-Tatarovskaya, about 25 miles from Krasnodar, that we attended a joint meeting of a fifth-grade class and a collective farm team (cattle-breeding). The teachers, some collective farmers, and the children's parents were guests. In the school's small assembly hall the kids and the team members sat facing each other. For two years now the class and the cattle-breeding team have had what they call "close ties." In fact, all the collective farm teams and all the classes in this 11-year school have such ties.

One of the Pioneer girls briefly welcomed the guests. Another, the chairman of the group, reported on the activities of the membership during the previous two or three months: collecting scrap metal, assisting the lower-grade pupils with their studies at school and at home, the results of a school competition for cleanliness with another class (our friends had won) and the distribution of books to villagers. A third Young Pioneer reported on a work project on her street. "We still have students behind in their work (there followed a list of their names) and students who are doing good work (names again). We hope that by the end of the term all the backward ones will catch up and not disgrace the class!" A fourth Young Pioneer spoke about sports, a fifth on the work of the "green squads" (planting so many trees, putting up so many bird feeders, etc.).

After the Pioneers the members of the collective farm team took the floor. One team member, a zootechnician, spoke about the farm he was in charge of and summed up the year's accomplishments: "We pledged to get a yield of 2,000 quarts of milk from each cow in 1963, and we actually got 2,066." He gave the farm's milk delivery figures and named the leading dairymaids. "You must study well and we must work well—that is what our emulation drive boils down to."

Perhaps there was nothing so very extraordinary about that meeting, but to my mind it had enormous educational value, this equal-to-equal, man-to-man, father-to-son talk. This is preparing boys and girls not merely for their working lives but for their future roles as masters of their land as well.

The same is true in the city. In Riga, at the office of the director of the Rigaselmach machine-building plant (a large enterprise which has often exhibited in international industrial shows), plant executives gathered to meet the pupils of School No. 35, situated across the street from the plant.

A girl in one of the fifth-grade classes said: "Last time we were at the plant we were given machine parts to count in the assembly shop. Later we talked to the shop superintendent about the way we spent our holidays, and he told us how the work was going. Before we had several 'Poors' in our class, but now the marks are higher."

A poor mark is a problem not only for the individual pupil but for the whole class and, in this instance, the assembly shop which acts as the class patron. The result is that the backward pupil is surrounded by such an atmosphere of concern, is so admonished and talked to, that it is rather hard for him not to mend his ways. Perhaps that is one of the factors which explains why there are so few repeaters in Soviet schools.

I personally do not put much stock in marks. But the system I have briefly described has educational values that far outweigh marks. It makes the child, no matter how young he may be, realize that the effort he puts into studying is important to the community.

Meeting the Ambassadors of Tomorrow

There are innumerable clubs and facilities to help schoolchildren make the most of their leisure time. The most common and most productive are the Pioneer palaces. At the Pioneer palace in Nalchik, capital of the Karbardino-Balkar Autonomous Republic, at the foot of Mt. Elbrus in the Caucasus, we watched a performance of old national dances. The traditional dances and the national costumes are preserved with great care, not so much to give children a love of folklore as to instill a pride in the nationality to which they belong.

Until the Revolution the Kabardinians had no written language. The complete Russification of these three or four hundred highlanders would have been a simple matter. Yet the Soviet Union chose to do otherwise. Teaching in the schools is in the native language. A literature, including a children's literature, has come into being in that language, whose alphabet is not as old as the president of this autonomous republic. The Soviet content of mass education and culture has saturated the rejuvenated, or rather regenerated, national forms. This democratic process is favorable ground for the development of local autonomy and socialist democracy.

In Moscow I went through the handsome new Young Pioneer palace built by Komsomol funds on a lot belonging to the City Soviet. The palace consists of seven large, modern buildings joined by a maze of corridors, staircases and passageways. It is a huge glass structure full of light and movement, one of the most notable creations of young Soviet architecture, a foremost example of a successful combination of modern materials, functional design and integrity, and restraint in the use of ornamentation. (I was given to understand that it came in for quite a bit of criticism from the more conservative architects.)

In one of the halls of this palace I was introduced to members of the International Friendship Club, whose honorary president is none other than Yuri Gagarin. The club is divided into sections, a ministry of foreign affairs in miniature. There is the section for the Soviet republics, one for the socialist countries, and another for the countries of Asia, Africa, North and South America and Western Europe. The latter is divided into several groups, one of which is the Italian.

I asked a girl of 12 why she had chosen to join the Italian group. "I live on Garibaldi Street," she replied, "and our school, too, is on Garibaldi Street. I suggested that our Pioneer group be named for Garibaldi, and the members agreed. Then we decided to collect facts about the life of Garibaldi and Garibaldists. We learned that the Italian guerrillas in the last war called themselves Garibaldists and that they had Soviet partisans fighting with them. We began collecting material about them. That is how I became interested in Italy, and when I came to the Pioneer palace I decided to join this group."

The activities of the International Friendship Club are wide-ranging. In addition to carrying on an extensive correspondence, the children study the history and geography of the countries they are interested in, they hold political discussions and meet public figures. Thus their interest is further encouraged and may in time lead them to their vocations. I shall not be surprised some day to meet, among the future Soviet diplomats, some of the youngsters who bombarded me in Moscow with questions about Italy, its schools, our young people and how we live.

Children's literature in the USSR is published on a scale commensurate only with the huge reading public.

Books are on sale everywhere—at countless book stores, at street kiosks, in department stores and toy shops. As far as books are concerned, the Soviet home market is way ahead of the most advanced capitalist countries.

Possibly there are children in the Soviet Union, too, who do not read books. Among the children I met—and I met thousands—there was not a single one.

As for the quality of Soviet books for children, I am afraid I cannot offer a responsible judgment. We ourselves are to blame for hardly knowing Soviet children's books. And yet such writers as Gaidar, Marshak, Kornei Chukovsky, Agnia Barto, Mikhalkov and Kassil most certainly deserve to be read in Italy. Incidentally, Chukovsky is the author of a charming little masterpiece called *From 2 to 5*, a book not for children but about children.

These writers are as popular in the USSR as only film stars are in our country. And Soviet people have the same forms of entertainment we do—they have television, movies and even championship soccer games.

WHAT DO YOU KNOW ABOUT THE SOVIET PARLIAMENT?

Candidates for the office of deputy in both houses of the USSR Supreme Soviet (the parliament) are nominated at meetings held by factories, collective farms, institutions and public organizations. This predetermines the composition of the Soviet parliament. Of the 1,443 deputies in the present Supreme Soviet, 646 are industrial workers and collective farmers, 277 are officials in trade unions and other mass organizations, 239 are industry executives and civil servants of various ranks, and 152 are workers in the arts and sciences.

Candidates (they must have reached the age of 23) are registered by the election commissions no later than 30 days before elections. A candidate may run from only one election district.

Voting for the first chamber, the Soviet of the Union, is by election districts (the approximately 800 election districts have no relation to the federal structure) on the basis of one deputy for every 300,000 of the population. Voting to the second chamber, the Soviet of Nationalities, is by union republics, autonomous republics, autonomous regions and national areas, on the basis of 25 deputies from each union republic, 11 from each autonomous republic, five from each autonomous region, and one from each national area (652 election districts in all).

The Soviet Union takes in a huge area and is inhabited by more than 100 nationalities. The parliament must therefore be structured to protect the specific interests of each nationality. That is why the number of deputies elected to the Soviet of Nationalities is not determined by territorial area or population. Thus, the Russian Federation, the largest union republic (population 120 million), elects the same number of deputies (25) to the Soviet of Nationalities as the smallest union republic, Estonia (population about three million).

The candidate up for election to either chamber must receive a majority of the votes cast. The office of deputy gives him the right to question the government (he must be answered within three days), the right to submit to the Supreme Soviet any proposals that fall within its jurisdiction, to amend draft projects, and to vote on matters under consideration. During his term of office a deputy cannot be prosecuted or arrested without the consent of the Supreme Soviet or, when it is not in session, its executive body, the Presidium.

Deputies continue to work at their regular jobs and live on their earnings (there are no professional politicians in the Soviet Union). However, they are entitled to 100 rubles a month for postage and other office expenses and for fees to lawyers whom they may need to consult. When the Supreme Soviet is in session, the deputies receive an additional per diem allowance. Travel required by their legislative duties is free.

The Soviet system of representation requires the deputy to fulfill all his pre-election promises. As a servant of the people, he must comply with the laws himself, find out what his constituents are legally entitled to and report to them periodically on his activities. His mandate includes such items as housing, community improvements, new schools and hospitals.

On regularly scheduled days he personally receives visiting constituents to hear their complaints and suggestions. Twice a year he reports to the voters on the work of the Supreme Soviet and his contribution to it. If he fails to justify their confidence or engages in activity incompatible with his high position, he may be recalled by his electors. Voting for recall is by a show of hands.

The Supreme Soviet in Session

The newly elected Supreme Soviet is convened by a decree of the outgoing Presidium of the Supreme Soviet no later than three months after elections. The first session of the Supreme Soviet begins with separate meetings of the two chambers. In each chamber the meeting is opened by the oldest deputy in terms of length of service. A joint session elects the new Presidium of the Supreme Soviet and evaluates the work of the outgoing administration. Following this the Supreme Soviet apoints a new Chairman of the Council of Ministers with instructions to submit recommendations for ministry appointments, subject to approval by the session. The term of office of members of the Council of Ministers, including the Chairman, is four years—the same as for deputies.

Thirty-three deputies are elected to the Presidium of the Supreme Soviet: a president, 15 vice presidents (one from each union republic), a secretary and 16 members at large.

At the first session the deputies also elect the chairmen of their respective chambers and four vice chairmen. The chairmen preside at meetings of the chambers, guide the work of the standing committees in the intervals between sessions, represent the chambers in their relations with other government bodies, with public organizations and with foreign parliaments.

The two chambers choose a consultative body called the Council of Elders. On the Council are deputies from each of the union republics, autonomous republics, autonomous regions, territories and administrative regions. The Council of Elders helps to coordinate procedural matters.

Its internal organization complete, the first session of the Supreme Soviet turns to legislative problems. All meetings are public, with Soviet and foreign correspondents, representatives of public organizations, foreign parliamentary delegations and members of the diplomatic corps present.

The right to initiate legislation is vested in both chambers, the Presidium of the Supreme Soviet, the Council of Ministers, the Supreme Court and the standing and interim committees of the chambers. Each chamber has a permanent Committee on Legislative Proposals to determine what bills merit attention. A bill may be offered for nationwide discussion. In recent years such discussions were held before the Seven-Year Economic Plan and the Law for the Reorganization of the Schools were adopted. As a result of the discussion both were amended. A measure may also be adopted by referendum.

A bill becomes law when it is passed by both chambers of the Supreme Soviet with a majority vote. Voting is by show of hands at separate meetings of the chambers. Hence, the chambers have equal rights both in initiating and passing legislation. Amendments to the Constitution of the USSR require a two-thirds vote of each chamber.

Sessions are convened by the Presidium of the Supreme Soviet twice a year. The Presidium may also convene an extraordinary session either at its own discretion or at the request of one of the union republics.

The Presidium of the Supreme Soviet and Its Committees

The Presidium of the Supreme Soviet of the USSR checks on the work of the various state agencies accountable to it and sees that the laws and decrees adopted by the Supreme Soviet are carried out. Any citizen may address a complaint or proposal, on a public or private matter, in person or by mail, to the President of the Presidium of the Supreme Soviet. Visiting citizens are received by the President of the Presidium or Vice Presidents.

The Presidium has several departments, which deal with legislation, international relations, the activities of the Soviets, etc. The Office of the Presidium publishes the "Records of the Supreme Soviet of the USSR" and the verbatim reports of the sessions.

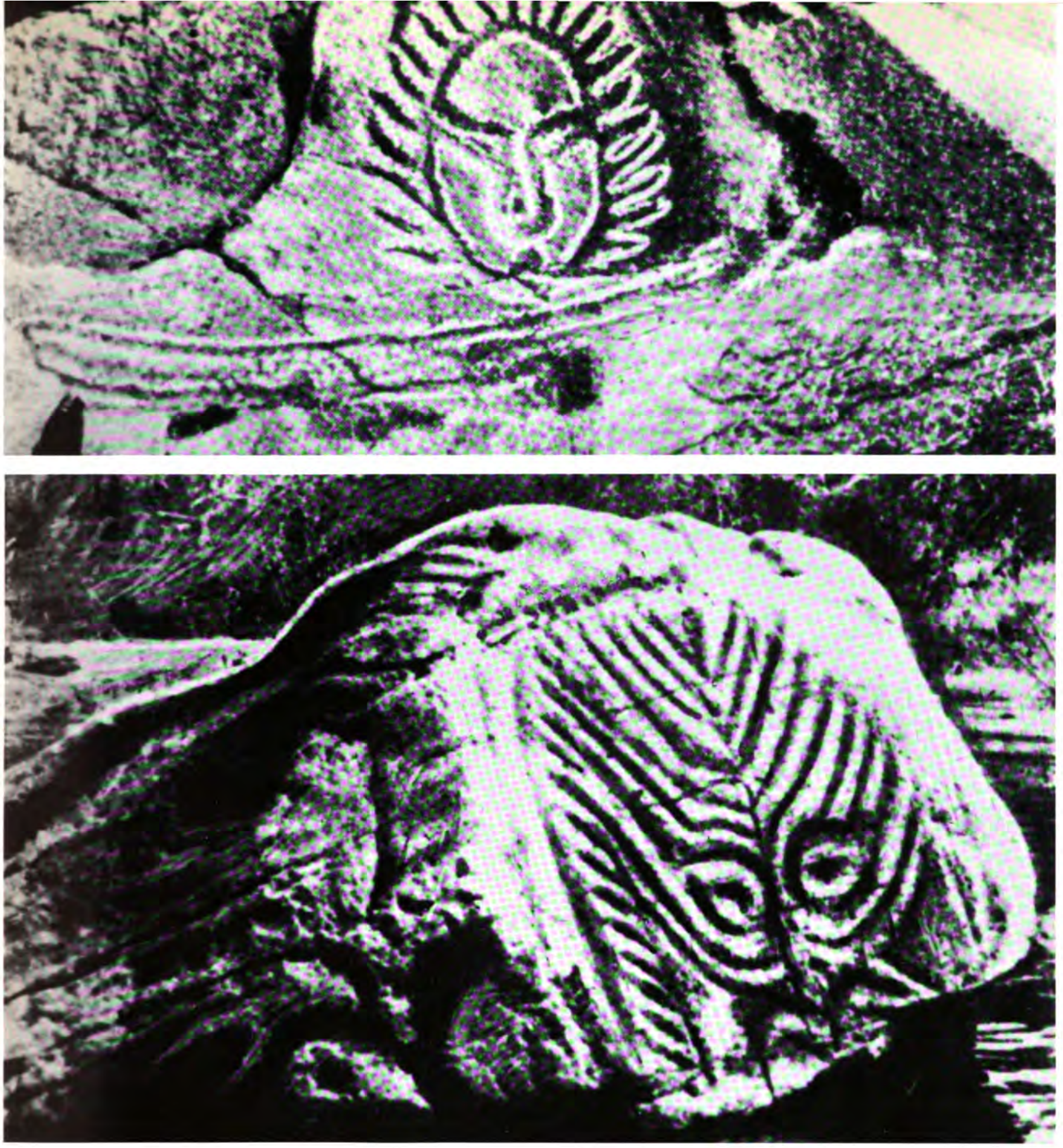
The permanent committees of both chambers are housed in the Kremlin. Each chamber has the following committees: The Credentials Committee (21 members) verifies the results of the election and the credentials of deputies. The Budget Committee (39 members) prepares the draft of the State Budget and checks on receipts and expenditures. As mentioned earlier, the Legislative Proposals Committee (31 members) drafts bills and studies the changes recommended by citizens when a bill is published for nationwide discussion. The Foreign Affairs Committee (23 members) is concerned with the Soviet Union's international relations.

The Soviet of Nationalities also has an Economic Committee, which sees to it that long-term economic plans and budgets, subject to approval by the Supreme Soviet, take sufficient account of the special needs and interests of each of the national republics, territories and regions.

The committees are headed by chairmen elected from among their members for the full term of office of the Supreme Soviet. The meetings of the committees may be attended by other deputies, with deliberative vote. When necessary, the committees set up subcommittes or working groups.

The proceedings of the committees, subcommittees and groups are published in the press.

In many cases the committees send their draft proposals for preliminary discussion to the union and autonomous republics.



Discoveries and Hypotheses

MYSTERY OF THE SAKACHI-ALYAN PICTURE ROCKS

By Alexei Okladnikov

Alexei Okladnikov (born 1908), Corresponding Member of the USSR Academy of Sciences, is an eminent Soviet historian and archeologist. He is the author of a series of books on the history of the peoples of Siberia.

AS we were starting out on our journey, I recalled something Nikolai Przhevalsky, the great Russian traveler, once said: "The distant vistas call to the soul of the nomad. . . ." These words have been imprinted on my mind since childhood.

As we left Khabarovsk, we were filled with the happy anticipation that always comes with a new trip. Nearby lay the Amur River Valley, and ahead was the Nanai* village of Sakachi-Alyan, our destination. This little village, lost in the Ussuri taiga, has intrigued the scientists of many countries. Berthold Laufer, the famous American orientalist, came to

* The Nanais are one of the ancient peoples of the Tungus-Manchurian group that have long inhabited Siberia and the Far East. They presently number 8,000.

explore it as far back as the end of the nineteenth century, and in the twenties of our century it was visited by Professor Ryuzo Torii, the eminent Japanese scientist, author of many works on the archeology and ethnography of Sakhalin, Manchuria and Mongolia. Another man to write about Sakachi-Alyan was the Russian scientist Lev Sternberg, of whom Friedrich Engels spoke so admiringly.

Our predecessors, like us, were drawn here by the huge basalt rocks that lie piled along the banks of the Amur. To be more precise, it is not the rocks that attract the scientists as much as the historical problems they pose. And now we saw a many-ton piece of cliff sticking out of the turbulent waves of the river. Centuries, or rather millennia, had smoothed its sharp edges and polished its surface, but they could not erase the deep lines that some unknown artists had cut into the rock in ancient days.

Pictures by Unknown Artists

Nearby, above and below, were other basalt boulders with fantastic images, in the same style, cut into them. Some looked like the heads of monkeys with huge eye sockets, others were figures of animals and whole tangles of coiling snakes. Though we had seen thousands of rock drawings on the banks of the Lena, the Angara, the Selenga, the Yenisei and other taiga rivers, we had never before seen pictures of the kind one comes across in Sakachi-Alyan.

Scientists are not the only ones whose curiosity has been aroused by the mystery of the Sakachi-Alyan petroglyphs. One of the oldest local inhabitants, who had even forgotten how old he was, told us a legend of mythical days. "Three luminaries rose one after another in the sky. They made the earth so hot that even the stones melted. A great archer shot down the two extra suns and wounded the third in the leg so that it had to slow down." As the authors of the Nanai legend saw it, the Sakachi-Alyan pictographs were there before man made his entry into the world. And so it was something of a surprise for us that the cliff and boulder drawings looked like the very familiar ornamentation on the fishskin gowns made by Nanai women artisans displayed in the Khabarovsk museum. The lower rim of the gowns has a broad decorative edging, with a flexible, steeply coiling spiral like seaweed running along it. Such gowns are certainly not a rarity. But, studying the pictographs, I began to see this spiral from a new and quite unexpected angle.

What makes the Sakachi-Alyan famous drawings different from all the other petroglyphs of Siberia is this very characteristic spiral. Besides the spiral, there is something else: Look closely at the intricate coils of the Nanai ornaments, and you see that they form the same kind of fantastic masks as the ones on the ancient rock pictographs of the Amur and the Ussuri. In both cases they remind you of strange-looking monkey heads. Thus, it develops that the mysterious masks on the Amur banks were hewn not by demigods or some unknown and strange people, as the legends maintain, but by the ancestors of the present Nanais. The rich and unique art of the Nanai people dates back to such early prehistoric times that even the oldest of legends make no mention of them.

What Petroglyphs Say

The origin of the art of the Amur tribes has long been in dispute. The Russian Academician Leopold Shrenk wrote that the rich art of the Amur peoples has deep local roots, and sprang from a foundation all its own. Shrenk's views were later rejected by Laufer, author of a work on the art of the Amur tribes. He thought that the source of the original Amur style was China.

Now, half a century later, we found new facts substantiating Shrenk's views. Proof that he was right increased as our explorations progressed. Beside the masks on the rocks near the village, there were images of birds, deer and snakes, like those Nanai women artisans in our day cut out of birch bark. The similarity between these and the petroglyphs is so great (and at the same time they are so different from anything Chinese) that the new facts will simply end all argument. Nobody will ever again be able to deny the original character of the art of the Amur tribes. It has so much vitality that it has survived the centuries and become a component element of the Nanai art of our day.

However, some people might object that the date of these petroglyphs is thus far unknown. And here again interesting data from the ancient past of the Nanai land came to our aid.

That same summer excavations were begun in Kondon, another Nanai village near Komsomolsk. One evening, at a performance of a collective farm amateur theatrical group, we saw on the walls of the new club the familiar coils of the Amur spiral. The collective farm artist had decorated his club with this favorite ornament just as generously as Nanai women use it to adorn their clothes and household articles. Later the same ornament was discovered on a vessel found together with a stone ax in a Stone Age dwelling.

Thus, it appears that the source of all this wealth of art is not in some distant spot on the Yellow River of ancient China but in the land of the Amur. These discoveries, the first link of a chain, brought us to other conclusions.

Until very recently the tradition of setting off the prehistoric farmer against the hunter and fisherman had a hypnotic effect on researchers. It colored the views of students of the prehistory of the Siberian peoples, and my early works were no exception. Factual information was comparatively scant, but as data accumulated, the real picture became clearer.

There is no denying that as time went on the ancient farmer moved ahead much faster than his brother the hunter, that he developed his productive forces and social relations more rapidly. On the other hand, Maxim Gorky was quite right when he said that historians were unfair to the hunter, that the prehistoric hunter had created no less significant cultural values. With the new excavations in Siberia and the neighboring Asian countries, it became clear that next to the land of the earliest farmers of China there lay a whole world of cultures equally ancient and unique. The inhabitants of that world were not at all "barbarians" or "savages" but people who had made their own weighty contribution to the development of world culture. They had maintained themselves independently for millennia on their own lands.

As far back as the Stone Age they had invented such things as birch-bark boats, fireproof birchbark utensils, spoon bait and other ingenious fishing implements. Spoon bait specimens carved from semiprecious nephrite have been found near the cities of Komsomolsk and Blagoveshchensk. And these will still draw fish as well as the best of our modern metal lures. Factories that make fishing equipment have asked for samples of the neolithic Amur spoon bait in order to acquire the know-how of the ancient fishermen.

These substantial achievements helped the precursors of the Amur tribes to explore and master the expanses of the taiga and the rivers and lakes of the Far East. The art they created has retained its vital quality to the present day. There is no telling how far the influence of that art has spread in time and space.

Something similar to the spiral element characteristic of Amur ornamentation occurs in the neolithic monuments of the Japanese islands. It has penetrated as deep into the South Seas as New Zealand and has been found on painted Stone Age vessels in the basin of the Yellow River. Under the pressure of tradition, researchers were inclined to attribute the origin of this finely made ornament to ancient China. Now we know for certain that the spiral was not the original and basic element of the ornaments made by the farmers of ancient China.

On the Amur the primeval spiral has survived to the present day with its meaning unchanged. The Nanais still bake cakes of turtle flour and decorate them with spirals. The ends of the spirals are shaped into clearly defined snake heads.

These coiling snakes on the Nanai sacred cakes have a symbolic meaning. In the mythology of the Siberian peoples the snake was not the symbol of evil and death. The great solar snake *Mudur*, master of the heavens and the waters, was a benificent deity. Legend has it that this mighty and wise snake, in company with the mythical mammoth, plowed the valleys for rivers and let the waters run into them.

Here is another piece of evidence that the ancient cultures of Siberia and the Far East developed independently. Archeology informs us that these lands, from the most remote to recent times, show no graves except those of the ancestors of the local peoples—the Nanais, the Ulchis, the Nivkhis and the Udegehs, the same ones that are now building communism with the other fraternal peoples of the Soviet Union.

The People of Mokhe

The brownish yellow rocks of Sakachi-Alyan, which look as if they had indeed been scorched by the flames of three suns, yielded us one more discovery. On a fragment of rock wall we found the image of a panther which had probably been hewn out by the strong arm of an ancient warrior. This dynamic and expressive picture was a lively reminder of those carved by warriors and hunters on the cliffs of Central Asia and the Yenisei. They opened for us a new chapter in the history of the Amur tribes. From the dim past we heard the voices of the Mokhe, a people that spoke the same language as the Nanais.

Chronicles say that the Mokhe farmers and livestock breeders, who raised their fine horses in the meadows of the Amur, were the masters of these boundless expanses some 2,000 years ago. It is here that they came into direct contact with the Turkic tribes, the ancestors of the peoples who speak the Turkic languages in our days. They fought with these tribes against the Chinese emperors and took part in the eventful political life of the peoples who lived in the region between the Yellow Sea and the Dnieper. They were the ones who brought down the arrogant rulers of the Sung dynasty in China and their feudal state. The Chinese chronicles describe how the triumphant army of the Churchens broke the resistance of the Chinese groups, seized half of China and even took emperors prisoner.

The Churchens took away with them the emperors, their courts, their books and archives. These warriors were versed in history, literature, astronomy and poetry. Of course they also took away with them carts loaded with coins.

The new data collected by Soviet archeologists in recent years show conclusively that the ancient cultures of Siberia and the Far East were created by the peoples who have lived in these lands from time immemorial.

Courtesy of Izvestia

QUERIES FROM READERS

QUESTION: "Are you doing much research in cybernetics?" asks a Milwaukee reader.

ANSWER: Instead of answering this question in detail, let us simply say that without a wide network of scientific institutions doing research in cybernetics, we would hardly have been able to put our first sputnik in orbit in 1957, photograph the dark side of the moon, put a manned spaceship in orbit around the world in 1961, twice orbit two cosmonauts simultaneously in 1963, and orbit three men in one spaceship in 1964.

We might add that the elements of cybernetics are now being studied in many Soviet high schools.

If this aspect of cybernetics interests you, see the September 1964 issue of *USSR*.

QUESTION: "Do you pay interest on savings bank deposits, and how much?" Vassil Speroff of Akron, Ohio, wants to know.

ANSWER: Yes, our banks pay a fixed interest rate of two per cent per annum. In cases where the depositor agrees not to make withdrawals for a minimum of six months, the bank pays an interest rate of up to five per cent. This is the only kind of investment the private individual is permitted in the USSR.

QUESTION: "Are there large national parks in the Soviet Union? How are they administered?" writes Robert Turnberg of South San Francisco, California.

ANSWER: There are several national parks in the Russian Federation, and almost everyone of the other Soviet republics has at least one—Byelorussia has Belovezhskaya Pushcha; the Ukraine, Askania Nova; etc. Their function is to preserve the wildlife and provide a natural habitat where naturalists can study the native flora and fauna.

These parks are under the supervision of the Academy of Sciences and staffed by zoologists, ornithologists, botanists, etc. Incidentally, one of the first decrees after the Revolution called for the creation of national parks.

QUESTION: "Do Soviet citizens who disagree with Communist Party and government policy have any sort of representation in legislative bodies?" (Robert Turnberg)

ANSWER: To be a representative in any of the legislative bodies of the Soviet Union, one must be elected. A candidate must state his platform. It is extremely unlikely that a person who disagrees completely with the general policy of the government and the CPSU will ever be elected to a legislative post, since the overwhelming majority of the people agree with these policies. In our country the majority rules, not the minority—a basic principle of democracy.

However, people in both Party and government bodies may, and often do, disagree on concrete issues of policy. This is something they thrash out and, if the subject is important enough, offer for wide public discussion in the press.

QUESTION: "What is the penalty for a Soviet citizen who tries to leave the country illegally?" (Robert Turnberg)

ANSWER: Article 83 of the Soviet Penal Code states: ". . . Entry into or departure from the country without a passport or the permission of the authorities in charge is punishable by a prison sentence of from one to three years."

QUESTION: "Are Soviet citizens who are religious permitted to work for the government? Are they permitted to work in Soviet embassies abroad?" (Robert Turnberg)

ANSWER: A Soviet citizen is never asked to declare whether or not he believes in God. There is no law whatsoever to keep a religious person out of any job. Therefore it is altogether possible for a religious person to work in a Soviet organization.

QUESTION: "Are priests of the Russian Orthodox Church paid by the state?" Anthony J. Bondi, Jr., of Mahopac, New York, inquires.

ANSWER: No they are not. Priests are paid by their church from funds derived from donations and the sale of icons, Bibles and other religious items.

QUESTION: "I read Mr. George Frantsov's article (USSR, June 1964) in which he says that production is the 'key' to a greater society. If production is the key, then the USA should be the greatest society because we produce, or can produce, more than any society in the world," comments Bernard Smith of Passaic, New Jersey.

ANSWER: Frantsov was speaking of the eventual economic victory of socialism over capitalism and was quoting Lenin's definition of the essential factor required for the displacement. Lenin said: "Labor productivity, in the final analysis, is the most important thing for the victory of a new social system. Capitalism can be, and will be, finally defeated, because under socialism there will be created a new and much more productive system. This is a difficult and a *very long process* (italics—Ed.), but it has been started, and that is the most important thing."

Feudalism displaced the slave labor empires because its productivity was greater; capitalism displaced feudalism for the same reason, although at the beginning of this process some of the old feudal states were producing more than the new capitalist states. What Mr. Frantsov is saying is that while the U.S. today is producing and can produce more than the USSR, the socialist economy is more progressive productionwise, and that the gap will be closed and later opened again, but this time in favor of the USSR.

QUESTION: Do you have insurance companies that insure a worker against sickness?

ANSWER: We have no insurance companies in the Soviet Union. A factory or office worker who falls ill is paid sick benefits from the state social insurance fund, which is made up of deductions from the funds of the enterprise. The workers themselves contribute nothing to this fund.

QUESTION: "I would like to know how the rights of seasonal workers are protected," writes Dino Grandi of Columbus, Ohio.

ANSWER: A seasonal worker may contract with management for a whole season, for as long as the job he is hired for takes, or for an indefinite period. However, if a worker, hired for a seasonal job, puts in more than six months on the job, he is considered a permanent worker.

A seasonal worker, just like a permanent one, can be fired only with the approval of the trade union committee. Seasonal workers do not get paid vacations or monetary compensation instead of vacation. They do, however, get the same temporary disability allowances (disability as a result of accident on the job or occupational disease) as permanent workers. The allowance is 100 per cent of their wages, regardess of seniority or trade union membership. If his illness is not caused by his work, a seasonable worker, to be entitled to the usual sick benefit of 50-90 per cent of his wages, must have been on the job at least three months at the onset of his illness or have worked ten months during the previous two years.

For old-age pension purposes, the number of months of actual employment is totaled, except for people employed in lumber camps, on log-rafting jobs, and those connected with peat extraction; each season they work is figured as a full year. In all other respects the principle for determining the size of pensions for seasonal workers is the same as for permanent workers.

LET'S GO TO THE MOVIES



1



2



3



4



5



6



7



8a



8b

PHOTO QUIZ

HERE ARE SCENES from 11 Soviet films that have been shown in the United States. Check your "movie quotient." You get 10 points for each correct answer (5 points if you answer only one part of the question). If you score over 60, you're good; over 70, you're a real fan; over 80, we take off our hats to you; 90 to 100—how come? Did you cheat?

Answers on page 59.



9



10

1. At an international meeting of film critics and directors this film was elected "the best ever made." What was it called? Who made it?

2. *Baltic Deputy* was a film about a world-famous Russian scientist who took his stand with the Revolution and worked actively for socialism till the day he died. In the film he was called Professor Polezhayev. What was his name in real life? What famous Soviet actor played the part of the old scientist?

3. The man who played the leading part in this film is also a leading Soviet director (he is presently directing *War and Peace*, from the novel by Tolstoy). The picture won the gold medal at the 1959 Moscow Film Festival. What was it called? Name the leading actor.

4. This film was about one of Russia's great leaders and generals. Name the film. Who played the title role?

5. This film is a Soviet classic. It has been shown all over the world and was named after a legendary hero of the Civil War. What was it called? Who played the leading role?

6. This film won the Grand Prix at the Connes Film Festival. It also won instant fame for its leading actress. What is her name? The title of the film?

7. This movie was widely acclaimed by American critics. What was it called? What was the little boy's name?

8a and 8b. Here are two famous Soviet productions. They were directed by the same person, and the leading role in both was played by the same actor. Name the films, the director and the actor.

9. This film was nosed out by Fellini's *La Dolce Vita* for the Grand Prix at the Cannes Festival. The young man who played the leading part was invited to the San Francisco Film Festival. What film was it? Name the actor.

10. This film was awarded the Golden Lion at the Venice Film Festival. Who directed it? What was it called?

TEARS OF GOLD

By Victor Surkov

ROCKS shed tears, say people in the Pendzhikent District of Tajikistan. When the thermometer rises above the 104 degree Fahrenheit mark in their mountainous part of the world, the rocks ooze a liquid they call "tears of gold" because of its legendary healing powers.

The "tears" harden into a black plastic substance which smells like the needles of coniferous trees. The substance is "mummy," famous in the ancient world as a wonder drug. In his *Canon of Medicine*, Avicenna noted that mummy was good for tonsilitis, migraine, tumors and nerve ailments, that it helped to knit broken bones and heal joint injuries.

Until very recently the why and wherefore of this balm was shrouded in mystery. A year ago Tajik scientists went on the hunt for these "tears of gold." They took the mountain road to Pendzhikent District where, legend has it, nature had stored the balm in the spurs of the Zeravshan Range. The expedition climbed to a height of 8200 feet. The guide pointed to a very ordinary looking ridge as a likely source. There, in a cave, they found samples.

This expedition of the Tajik Academy of Sciences' Botany Institute brought several hundred pounds back to Dushanbe, where it has been studied by chemists, botanists, geologists and medical researchers.

It took a year's work to break the substance down into its components. The Institute of Chemical Research, directed by Konstantin Poroshin, vice president of the Tajik Academy of Sciences, extracted the organic part of mummy—benzoylaminoacetic (hippuric) acid. Researchers were able to synthesize a compound that was an exact chemical duplicate of the natural substance.

Academician Poroshin told reporters: "We found that mummy contains both organic and inorganic elements. The substance is, in effect, a minute chemical laboratory. It contains aluminum, calcium, magnesium, sodium, silicon, chrome, lead, beryllium—some 20 of the elements in Mendeleyev's Periodic Table.

"Its organic part consists of about 50 per cent carbon and 10 per cent hydrogen. We were able to extract seven fractions. One of them contains 10 to 12 per cent oxygen and hydrocarbons. The analysis of this fraction shows that mummy is, apparently, a wax of natural origin. The other fractions are now being studied. Researchers discovered new forms of fungi they believe explain the curative properties of the substance. The pure extract easily dissolves in water and smells a little like coniferous needles."

Tajik medical institutions are doing experimental and clinical studies with mummy, and we shall probably soon know what ailments the ancient balm cures and the proper dosages to administer.

OUT OF THE

The *Komsomolskaya Pravda* Institute of Public Opinion recently conducted a somewhat unusual poll. The youth newspaper asked third-grade pupils (9-10 years of age) to write their own definitions of some 50 words that seem to be dropping out of usage. We know that the living language reflects the changes that occur in life.

Children of 10 can understand abstract as well as concrete concepts. However, in their primers they do not often come across the words that were chosen for the poll. A child's ideas derive from his own experience, primarily from what he learns at home.

The poll was based on a geographical selection which took into consideration the differences between everyday life in town and country, in the long established and newly populated areas. Two places were chosen: the city of Komsomolsk-on Amur, which appeared on the map of the Soviet Far East only in the thirties, and villages of the Komsomol District in Ivanovo Region, in the heart of European Russia.

All told, a thousand children—half from the city, half from the countryside—answered the questionnaire. This gave us a kind of dictionary with 50,000 different definitions for the 50 words supplied.

Included below are an introductory note by Lev Kassil, well-known Soviet writer, a sampling of the poll results, and comments by Tamara Gromova and Galina Ronina of *Komsomolskaya Pravda*.

SENSITIVE EAR

BY LEV KASSIL

I HAVE BEEN looking forward to the results of this most unusual poll. In my constant contact with the younger generation, I myself have more than once heard the curious definitions Soviet children give for many words that bear the imprint of the past. This is not only an indication of the freshness of a child's mental perception, it is also a sign of the great social changes that have taken place in the USSR, in the course of which many notions have been discarded or have taken on an entirely new meaning for the younger generation.

The breath-taking rate of progress in our time has erased some words from the vocabulary completely and has changed the time-hallowed meaning of others. The results of this very interesting poll which Komsomolskaya Pravda *conducted among third-graders will once again compel even those with a very good idea of what children are like to marvel at their aural sensitivity, at the ease and fluency with which they catch and instantaneously reinterpret words which seem so familiar to us. I mean, of course, not the sense of hearing which we all have, but that spirit of the new age in which our Soviet children live. The old saying about truth coming "out of the mouths of babes" certainly applies here.*

Many of the answers, of course, show the limitations of age, inadequate vocabulary and lack of experience. But I am sure that if this poll had been conducted among schoolchildren some three years older, they would also have interpreted most of the words much differently than their fathers and grandfathers. In this case one could have included many more words than the 50 in the poll. I am certain that few of our children aged 12 to 14 would know exactly what "batman," "innkeeper" or "usurer" really mean. At any rate, when I asked some of my small friends to tell me what any word in this category meant, I got startling replies—quite at variance with the original meaning.

When you read these answers, you see with what unerring accuracy children pick on every human trait they dislike. It is unfortunate that they still encounter evil-minded people. But judging by the answers, children somehow have them properly categorized. For myself, frankly, I would be only too pleased if our Soviet children did not have such a good idea of what the words "yes man" and "bribery" really mean.

At any rate, the results of the poll are interesting and most edifying.

MOUTHS OF BABES

HEAR THEM TALKIN'

Listed below are the most typical and interesting definitions: (c) stands for answers given by the city children, (v) those given by the country children.

BUREAUCRAT

—A man with a briefcase. Kostya Leshgayev (c)

—Someone who digs holes in the ground. Natasha Lagutina (v)

—A person who criticizes everybody, but doesn't like to be criticized by others. Sasha Tarasov (v)

—A kid beat me up in school, and Mom called him a bureaucrat. Valya Bekesheva (c)

GOBLIN

—A man. He stays home and washes the dishes. Valeri Tumanin (c)

—A sort of magician. When you go to sleep, he tickles you and wakes you up. They don't hardly exist anymore because people don't believe in God. Nadya Kniazeva (v)

WRANGLER

—A cowboy. Vasya Khrush (c)

—I told my mother how other kids misbehave at school, and she called me a 'wrangler.' Natasha Kravchenko (c)

HOARDER

—A member of a tribe. Vova Shumilov (c)

MISER

—A person who can put you in a trance. Valia Lokteva (c)

—A guy who never makes good. Slava Kozlov (v)

—A man who works in a bank. Natasha Kanishcheva (c)

BAZAAR

—It's a sort of a market. Nadya Molegina (v)

—Something women wear. Zhenya Maligin (c)

—A swimmer who stays in the water for a long time. Nadya Pronina (v)

—A big bird that feeds on dead things. Sergei Korolev (c)

BIGOT

—A woman, a very wicked woman. Nina Abayeva (c)

—A very angry person who sits on a rug and yells at everybody. If he gets mad enough, he can kill you. Misha Sochnev (c)

HYPOCRITE

—A thing doctors use for injections. Pavlik Kojin (c)

QUACK

—A wizard. They used to live a long time ago. They cured people. Nadya Mologina (v)

—A kind of duck. Tanya Redko (c)

—A medicine man. Says he knows everything, but doesn't know anything—like Kolya Kurochkin. Olya Pavlenko (c)

TOADY

—A little frog. Sasha Lukyanov (c)

—A bellhop. A servant. Valya Pashleva (c)

—A magician. He moves from city to city and does tricks and makes a lot of money. That's not nice. They live mainly in Paris. Kolya Kurochkin (c)

PAWNBROKER

—A tricky chess player. Sveta Kochetkova (c)

—An old man who exchanges toys for old clothes. Yura Sokolov (c)

—A man who sells old things. Vova Malinin (v)

SLUM

—An old rickety house full of old, sad women. Valya Logachova (c)

—A long sleep. Nadya Guseva (c)

—It's when you win at cards. Yura Zheleznev (c)

—Dirt. Oleg Boiko (c)

HOBO

—A horn. It's very hard to play on. Tanya Ostankina (c)

—A shindig. Everybody whoops it up. Sasha Kan (c)

—They used to use that to shoot arrows during the Middle Ages. Galya Fokina (v)

—A tool you dig with on the farm. Tolya Dmitriyenko (c)

HAWKER

—A man who shoots hawks. Vova Komardin (c)

—A comedian. Cracks jokes all the time. Nadya Kiseleva (c)

—A rope to tow boats. Tolya Kubrin (c)

PEDDLER

—A bicycle racer. Vitali Boronyuk (c)

DOOMED WORDS

BY TAMARA GROMOVA AND GALINA RONINA

The answers indeed sparkle like precious gems. Some show a riotous imagination, others a wry sense of humor, and still others a sort of precocity. They appeal differently, of course, to the teacher and linguist, to the mother and the professional writer.

But for all of us, the answers and the children who gave them are interesting in that they reflect the world around us, in that they show what the children know about it and what they don't know about it.

Indeed, if the "biography" of a word can serve to guide us through the intricate maze of social relationships, let us use it as a compass. So, our guides are the small fry, and their notion of the adult world of the past and the present is the subject.

Ask the parents of these lively youngsters, who are always firing a battery of whys and hows, what is meant by a "kulak," say. They will be able to tell you, if not from their own experience, then at least from experience gained vicariously in reading novels or textbooks. However, their children, with neither experience, resort to their imagination.

Some 40 years ago, when the young Soviet Republic lacked trained specialists, the word "specialist" had a definite social meaning; it meant a "bourgeois intellectual." Children today define this word as it should be defined: a person who does things well. As you see, the word has lost its social interpretation of the years of the Revolution and has regained its original meaning.

Or take the word "kulak." In the child's mind it has no association with the harsh class struggle waged in the Soviet countryside during the period of collectivization. Children understand the word—which also means "fist"—as the traditional epithet used in all arguments.

The answers children give may do more than tickle our funny bones or tug at our hearts. They can even make grownups blush with shame. Thus, more than half the children gave a very accurate definition of a black-marketeer.

Many of them know what a sponger is too.

The Komsomolskaya Pravda vocabulary also included a group of words reflecting such phenomena of the past as national animosities and prejudices.

Nor do children put any faith in superstitions or evil omens. Most of them said that such things were simply inventions from old times.

Since a new type of relations between human beings has developed in the Soviet Union, it is quite logical for many of the boys and girls to be ignorant of words typical of the old way of living, such as "mealy-mouthed," "hanger-on," "trouble-maker" and the like. True, they do know what "sponger" and "tattletale" mean, giving in the case of the former a truly classical definition of the social parasite, not so much a picture drawn from books but from life itself. The other word is still current among children. One little girl noted that it was very bad to be a tattletale because her mother had told her, "Your tongue will drop off."

Even a brief analysis warrants the conclusion that every passing year is erasing from our vocabulary more and more of the words that relate to the privations and evils of the past, evidence that the associated phenomena are also disappearing.

BY FELIX SHAPIRO

DRAWINGS BY LEONID SERGEYEV



MERRY YOUNGSTERS CLUB

WHO'LL DRAW THE FUNNIEST PICTURE?

Big Competition: Who Can Draw the Funniest Picture?

Dear children,

These are our funny drawings. Which one do you like best?

You probably have brothers, sisters or friends you play with. Arrange a competition and see who can draw the funniest picture.

What to draw?

Everything: animals, birds, people, heroes from fairy tales, flowers, butterflies, and many, many other things, as long as they are funny.

What to draw with?

Pencils, paints, India ink, gouache, and so on and so forth, as long as they are pretty.

When the drawings are ready, hang them up in your room and hold an exhibition. After that all of you together decide which drawing is the funniest.

Merry Youngsters Club



PHOTO OF THE MONTH

"50 Miles Per Hour" was done by Vladimir Kivrin, one of the country's best-known photographers. On the staff of the magazine *Soviet Union*, he also contributes to other periodicals and newspapers. His pictures have won the first prize and certificates at exhibitions and contests.



Photographs by Louis Sharpe

AT THE SIXTH BIOCHEMICAL

By Irina Lunacharskaya
Novosti Correspondent
(New York, July-August 1964)

Professor Sergei Mardashev, vice president of the USSR Academy of Medical Sciences, chairs a symposium with American scientist Philip Cohen.



The papers read by Professor Sergei Severin and Vladimir Skulachev aroused great interest. After the session with other researchers in bioenergetics.



Professor Vladimir Engelhardt, famous Soviet biochemist and member of the American Academy of Sciences, took part in all five earlier congresses.



Packed auditorium at the New York Hilton Hotel for the paper—a highlight of the congress—presented by the young Soviet scientist Alexander Spirin.



The congress was attended by more than 6,000 scientists from nearly every country in the world. At the display of biochemical laboratory equipment.



THE SIXTH International Congress of Biochemistry, which met in New York, was very likely the most representative of the many scientific gatherings held during the past summer. More than 6,000 scientists from nearly every country in the world attended, 2,500 papers were submitted, 400 were read and 600 published. These figures are a sufficient indication of the large scope of research in the field and of the unremitting interest of both scientists and lay people in this "science of life."

In the past 10 or 15 years more and more researchers have been trying to fathom the structure and functions of the multitude of intricate substances comprising the cell. What seemed but recently the realm of science fiction, this inner sanctuary of the living cell has in the space of a few years been opened wide for study. The purpose of this congress, as of any other scientific meeting, was to provide the direct exchange of new and promising experimental observations, findings and speculation.

The Soviet delegation participated actively. For example, at the opening session Moscow University's Professor Sergei Severin, Corresponding Member of the USSR Academy of Sciences, read a paper on the biochemical fundamentals of muscular activity and the transmission of nerve impulses. Severin and his coworkers are investigating the role of the so-called imidazole ring, a chemical group that is a critical factor in the transmission of nerve impulses, in motor activity of the muscles, and in many of the biochemical processes that take place in the cells of animal organisms. The study continues the work begun by Severin's teacher, the eminent Academician Vladimir Gulevich. The paper aroused keen interest.

Young Soviet researchers Alexander Spirin and Vladimir Skulachev presented a paper that was also a highlight of the congress.

In the living cell the process of metabolism is unceasing. Part of its chemical substance keeps on disintegrating to release the energy the organism needs to maintain life. Meanwhile new chemical substances, notably proteins, make their appearance. Biochemists have learned a great deal about protein synthesis. They have found that the synthesis takes place in special structural formations, ribosomes, which resemble miniature protein factories. These particles are extremely small, only 200 to 300 angstroms in diameter. Biochemist Alexander Spirin and crystallographer Nikolai Kiselev made the first photographs of these particles with an unusually powerful electron microscope. Around these pictures Spirin and Kiselev built a hypothesis on the inner composition and structure of the particles. Professor John T. Edsall, the distinguished American scientist who chaired the congress, said the paper was one of the most memorable presented there.

Before the congress opened, Spirin attended the Gordon Con-

NTERNATIONAL CONGRESS

ference in New Hampshire. Later, after the congress, he visited several American biochemical laboratories.

The other young scientist, Vladimir Skulachev, a student of Professor Severin's, presented a bold hypothesis which integrates into one well-conceived system a host of scattered data and theoretical speculations explaining how the cells of living organisms store and expend their energy and how the chain of highly intricate chemical transformations in these processes occurs.

A fundamental discovery in the field—that the formation of the cell's prime source of energy, adenosine triphosphate (ATP) is related to breathing—was made back in the thirties by Academician Vladimir Engelhardt, well-known Soviet scientist and, incidentally, a member of the American Academy of Arts and Sciences. However, though a wealth of new information has been accumulated in biochemistry since that time, there was still no composite theory for the mechanism through which the energy of oxidation, which occurs in the process of breathing, is converted into the energy-rich chemical links of ATP. If Skulachev's theory stands the acid test of time and is confirmed experimentally—and there is no question but that biochemists in many countries will attempt to do so—it will be a signal contribution to the field. Nobel Prize winner Britton Chance, the eminent American researcher in bioenergetics, told me—he had seen what Skulachev was doing earlier, in Moscow—that the paper was "a sensation."

After the congress Dr. Chance invited all the bioenergetics specialists to his farm outside New York for some off-the-cuff discussion that went on for hours on end in the garden, in the barn, while walking and eating, and even in the host's family circle. And it was Skulachev's theory that provoked the most heated discussion.

Radiy Khomutov, a young Soviet chemist, spoke at the third symposium. He derived chemical compounds capable of inhibiting the action of certain fermentive proteins. This inhibition results in a changed metabolism, excluding those particular ferments from the reactions. Evidently the action of medicines, drugs and the like is based on this inhibitive impact. The preparations Khomutov obtained react this way to the tubercle bacillus.

The youngest member of the Soviet delegation was Lev Kiselev, who only recently presented his thesis. Like Khomutov, he is on the staff of the USSR Academy of Sciences' Institute of Radiation and Physico-chemical Biology; his chief is Academician Engelhardt. Using some highly orginal methods, Kiselev demonstrated that a carrier molecule of ribonucleic acid is pellet-shaped, about 100 angstroms long and 20 angstroms wide.

About 20 papers were presented by the Soviet delegation, all of which aroused interest and provoked animated discussion.

At a news conference held just before the congress ended, Professor Sergei Mardashev, Vice President of the USSR Academy of Medical Sciences and head of the Soviet delegation, introduced his Soviet colleagues and described the contents of the major papers they had presented. Professor Severin, Dr. Lyubimova-Engelhardt, Spirin, Kiselev, Gorkin and Skulachev discussed their studies and answered a host of questions, scientific and otherwise.

The General Assembly of the International Biochemical Association elected Academician Alexander Oparin and Professor Sergei Mardashev to its new council.

Besides attending the congress proceedings, the Soviet biochemists went to Washington and Boston, not simply for the sights—though they did visit the museums and other places of interest in these lovely cities. Even as a tourist, a scientist's first and foremost interest is science and other scientists.

In Washington they were the guests of the National Institutes of Health, in whose laboratories they spent a whole day. It is pleasing to note that apparently lengthy and thoughtful preparations had been made for their visit. Printed in Russian on the cover of the special program were the words: "We greet the visitors from the Soviet Union. Welcome." The welcoming speech and an account of the institute's work were given by the deputy director in Russian. Another pleasant surprise was a lecture in very good Russian by Dr. Simon Black, well-known enzymologist. Nearly all the speakers began and ended their remarks in Russian.

An outline of the work he had done in genetic decoding was given by one of the most brilliant of the younger generation of American scientists, Dr. Marshall W. Nirenberg. Like his compatriot Van Cliburn, he took his first step on the road to fame in Moscow. It was in 1961, at the Fifth International Biochemical Congress,that this young and as yet unknown American scientist (he was 26 or 27 at the time) reported his astonishing first results in genetic decoding.

In Boston and Cambridge the Soviet biochemists were the guests of Dr. John Buchanan, who heads the biochemistry department at the Massachusetts Institute of Technology, and Dr. Alton Meister, chief of the biochemistry department at Tufts University.

Commenting on the delegation's impressions of the congress, Professor Mardashev said it had been splendidly organized. "Our kind hosts," he remarked, "must have worked very hard for so large a gathering to have run so smoothly, particularly since the proceedings were held in two different hotels, the Hilton and the Americana."

Both the papers submitted and the discussion, said the Professor, were on a very high level. Most interesting were the symposiums dealing with nucleic acids, proteins and enzymes, biochemical genetics and bioenergetics. These vital areas of modern biochemistry, he noted, have attracted the attention of researchers all over the world. Unfortunately, too few papers dealt with the new advances in the field of plant biochemistry.

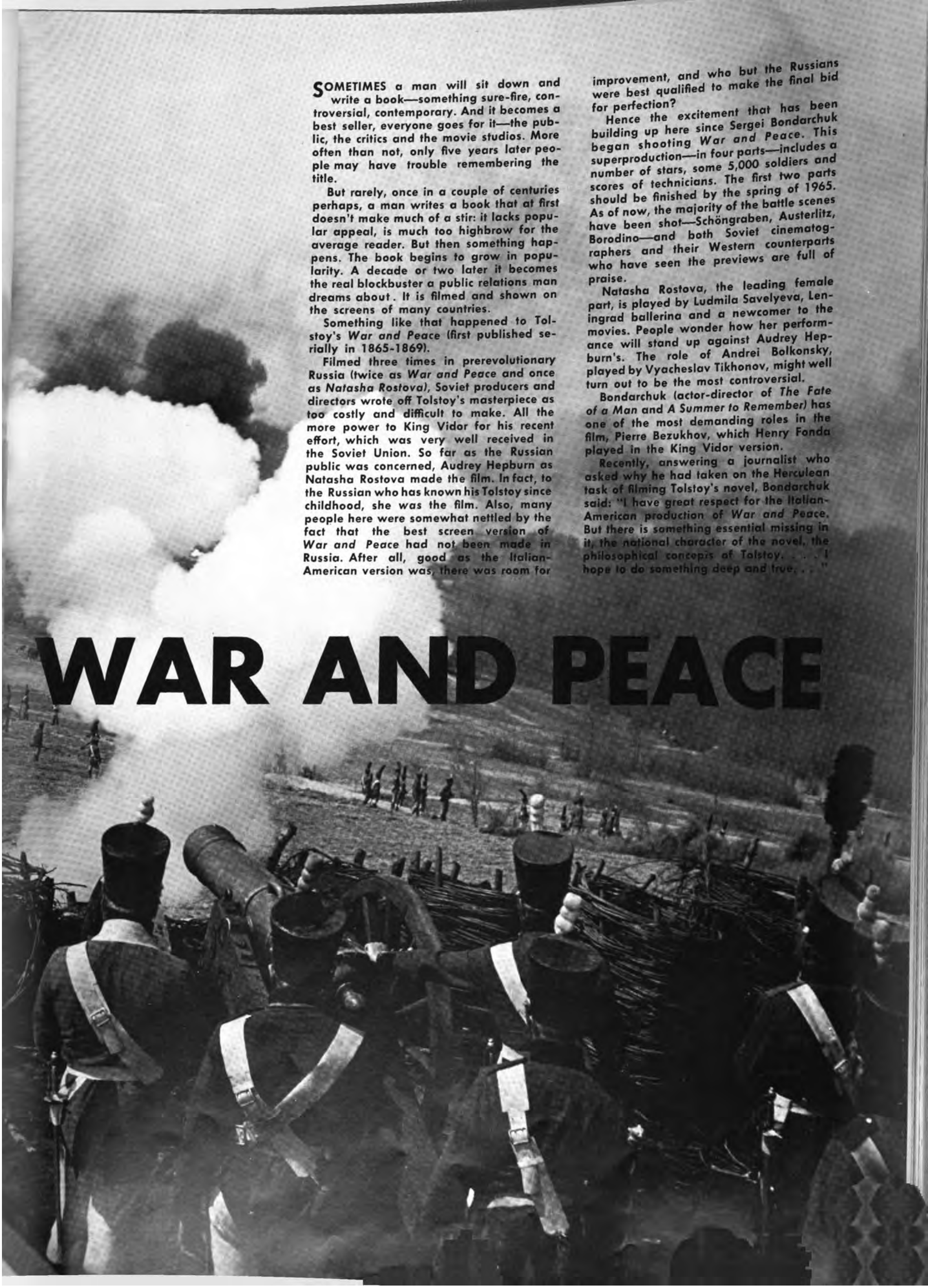
The increasing intrusion into biochemical laboratories of the methods used in the fields of physics, mathematics and cybernetics, and the extensive use of various automatic devices, the Professor thought, was noteworthy. Automation does much to facilitate and expedite research. This was demonstrated by the exhibition of laboratory equipment displayed.

But perhaps one of the most significant results of the congress, the Professor concluded, were the friendly get-togethers of the scientists from different countries. The exchange of opinions, views, arguments was important not only for scientific development but for better understanding, friendship and peace on earth.

Photographs by Vladimir Uvarov



WAR AND PEACE



SOMETIMES a man will sit down and write a book—something sure-fire, controversial, contemporary. And it becomes a best seller, everyone goes for it—the public, the critics and the movie studios. More often than not, only five years later people may have trouble remembering the title.

But rarely, once in a couple of centuries perhaps, a man writes a book that at first doesn't make much of a stir: it lacks popular appeal, is much too highbrow for the average reader. But then something happens. The book begins to grow in popularity. A decade or two later it becomes the real blockbuster a public relations man dreams about. It is filmed and shown on the screens of many countries.

Something like that happened to Tolstoy's *War and Peace* (first published serially in 1865-1869).

Filmed three times in prerevolutionary Russia (twice as *War and Peace* and once as *Natasha Rostova*), Soviet producers and directors wrote off Tolstoy's masterpiece as too costly and difficult to make. All the more power to King Vidor for his recent effort, which was very well received in the Soviet Union. So far as the Russian public was concerned, Audrey Hepburn as Natasha Rostova made the film. In fact, to the Russian who has known his Tolstoy since childhood, she was the film. Also, many people here were somewhat nettled by the fact that the best screen version of *War and Peace* had not been made in Russia. After all, good as the Italian-American version was, there was room for improvement, and who but the Russians were best qualified to make the final bid for perfection?

Hence the excitement that has been building up here since Sergei Bondarchuk began shooting *War and Peace*. This superproduction—in four parts—includes a number of stars, some 5,000 soldiers and scores of technicians. The first two parts should be finished by the spring of 1965. As of now, the majority of the battle scenes have been shot—Schöngraben, Austerlitz, Borodino—and both Soviet cinematographers and their Western counterparts who have seen the previews are full of praise.

Natasha Rostova, the leading female part, is played by Ludmila Savelyeva, Leningrad ballerina and a newcomer to the movies. People wonder how her performance will stand up against Audrey Hepburn's. The role of Andrei Bolkonsky, played by Vyacheslav Tikhonov, might well turn out to be the most controversial.

Bondarchuk (actor-director of *The Fate of a Man* and *A Summer to Remember*) has one of the most demanding roles in the film, Pierre Bezukhov, which Henry Fonda played in the King Vidor version.

Recently, answering a journalist who asked why he had taken on the Herculean task of filming Tolstoy's novel, Bondarchuk said: "I have great respect for the Italian-American production of *War and Peace*. But there is something essential missing in it, the national character of the novel, the philosophical concepts of Tolstoy. . . . I hope to do something deep and true. . . ."



PHOTO OF THE MONTH

"50 Miles Per Hour" was done by Vladimir Kivrin, one of the country's best-known photographers. On the staff of the magazine *Soviet Union*, he also contributes to other periodicals and newspapers. His pictures have won the first prize and certificates at exhibitions and contests.



Photographs by Louis Sharpe

AT THE SIXTH BIOCHEMICAL

By Irina Lunacharskaya
Novosti Correspondent

(New York, July-August 1964)

Professor Sergei Mardashev, vice president of the USSR Academy of Medical Sciences, chairs a symposium with American scientist Philip Cohen.



The papers read by Professor Sergei Severin and Vladimir Skulachev aroused great interest. After the session with other researchers in bioenergetics.



Professor Vladimir Engelhardt, famous Soviet biochemist and member of the American Academy of Sciences, took part in all five earlier congresses.



Packed auditorium at the New York Hilton Hotel for the paper—a highlight of the congress—presented by the young Soviet scientist Alexander Spirin.



The congress was attended by more than 6,000 scientists from nearly every country in the world. At the display of biochemical laboratory equipment.



THE SIXTH International Congress of Biochemistry, which met in New York, was very likely the most representative of the many scientific gatherings held during the past summer. More than 6,000 scientists from nearly every country in the world attended, 2,500 papers were submitted, 400 were read and 600 published. These figures are a sufficient indication of the large scope of research in the field and of the unremitting interest of both scientists and lay people in this "science of life."

In the past 10 or 15 years more and more researchers have been trying to fathom the structure and functions of the multitude of intricate substances comprising the cell. What seemed but recently the realm of science fiction, this inner sanctuary of the living cell has in the space of a few years been opened wide for study. The purpose of this congress, as of any other scientific meeting, was to provide the direct exchange of new and promising experimental observations, findings and speculation.

The Soviet delegation participated actively. For example, at the opening session Moscow University's Professor Sergei Severin, Corresponding Member of the USSR Academy of Sciences, read a paper on the biochemical fundamentals of muscular activity and the transmission of nerve impulses. Severin and his coworkers are investigating the role of the so-called imidazole ring, a chemical group that is a critical factor in the transmission of nerve impulses, in motor activity of the muscles, and in many of the biochemical processes that take place in the cells of animal organisms. The study continues the work begun by Severin's teacher, the eminent Academician Vladimir Gulevich. The paper aroused keen interest.

Young Soviet researchers Alexander Spirin and Vladimir Skulachev presented a paper that was also a highlight of the congress.

In the living cell the process of metabolism is unceasing. Part of its chemical substance keeps on disintegrating to release the energy the organism needs to maintain life. Meanwhile new chemical substances, notably proteins, make their appearance. Biochemists have learned a great deal about protein synthesis. They have found that the synthesis takes place in special structural formations, ribosomes, which resemble miniature protein factories. These particles are extremely small, only 200 to 300 angstroms in diameter. Biochemist Alexander Spirin and crystallographer Nikolai Kiselev made the first photographs of these particles with an unusually powerful electron microscope. Around these pictures Spirin and Kiselev built a hypothesis on the inner composition and structure of the particles. Professor John T. Edsall, the distinguished American scientist who chaired the congress, said the paper was one of the most memorable presented there.

Before the congress opened, Spirin attended the Gordon Con-

INTERNATIONAL CONGRESS

ference in New Hampshire. Later, after the congress, he visited several American biochemical laboratories.

The other young scientist, Vladimir Skulachev, a student of Professor Severin's, presented a bold hypothesis which integrates into one well-conceived system a host of scattered data and theoretical speculations explaining how the cells of living organisms store and expend their energy and how the chain of highly intricate chemical transformations in these processes occurs.

A fundamental discovery in the field—that the formation of the cell's prime source of energy, adenosine triphosphate (ATP) is related to breathing—was made back in the thirties by Academician Vladimir Engelhardt, well-known Soviet scientist and, incidentally, a member of the American Academy of Arts and Sciences. However, though a wealth of new information has been accumulated in biochemistry since that time, there was still no composite theory for the mechanism through which the energy of oxidation, which occurs in the process of breathing, is converted into the energy-rich chemical links of ATP. If Skulachev's theory stands the acid test of time and is confirmed experimentally—and there is no question but that biochemists in many countries will attempt to do so—it will be a signal contribution to the field. Nobel Prize winner Britton Chance, the eminent American researcher in bioenergetics, told me—he had seen what Skulachev was doing earlier, in Moscow—that the paper was "a sensation."

After the congress Dr. Chance invited all the bioenergetics specialists to his farm outside New York for some off-the-cuff discussion that went on for hours on end in the garden, in the barn, while walking and eating, and even in the host's family circle. And it was Skulachev's theory that provoked the most heated discussion.

Radiy Khomutov, a young Soviet chemist, spoke at the third symposium. He derived chemical compounds capable of inhibiting the action of certain fermentive proteins. This inhibition results in a changed metabolism, excluding those particular ferments from the reactions. Evidently the action of medicines, drugs and the like is based on this inhibitive impact. The preparations Khomutov obtained react this way to the tubercle bacillus.

The youngest member of the Soviet delegation was Lev Kiselev, who only recently presented his thesis. Like Khomutov, he is on the staff of the USSR Academy of Sciences' Institute of Radiation and Physico-chemical Biology; his chief is Academician Engelhardt. Using some highly orginal methods, Kiselev demonstrated that a carrier molecule of ribonucleic acid is pellet-shaped, about 100 angstroms long and 20 angstroms wide.

About 20 papers were presented by the Soviet delegation, all of which aroused interest and provoked animated discussion.

At a news conference held just before the congress ended, Professor Sergei Mardashev, Vice President of the USSR Academy of Medical Sciences and head of the Soviet delegation, introduced his Soviet colleagues and described the contents of the major papers they had presented. Professor Severin, Dr. Lyubimova-Engelhardt, Spirin, Kiselev, Gorkin and Skulachev discussed their studies and answered a host of questions, scientific and otherwise.

The General Assembly of the International Biochemical Association elected Academician Alexander Oparin and Professor Sergei Mardashev to its new council.

Besides attending the congress proceedings, the Soviet biochemists went to Washington and Boston, not simply for the sights—though they did visit the museums and other places of interest in these lovely cities. Even as a tourist, a scientist's first and foremost interest is science and other scientists.

In Washington they were the guests of the National Institutes of Health, in whose laboratories they spent a whole day. It is pleasing to note that apparently lengthy and thoughtful preparations had been made for their visit. Printed in Russian on the cover of the special program were the words: "We greet the visitors from the Soviet Union. Welcome." The welcoming speech and an account of the institute's work were given by the deputy director in Russian. Another pleasant surprise was a lecture in very good Russian by Dr. Simon Black, well-known enzymologist. Nearly all the speakers began and ended their remarks in Russian.

An outline of the work he had done in genetic decoding was given by one of the most brilliant of the younger generation of American scientists, Dr. Marshall W. Nirenberg. Like his compatriot Van Cliburn, he took his first step on the road to fame in Moscow. It was in 1961, at the Fifth International Biochemical Congress,that this young and as yet unknown American scientist (he was 26 or 27 at the time) reported his astonishing first results in genetic decoding.

In Boston and Cambridge the Soviet biochemists were the guests of Dr. John Buchanan, who heads the biochemistry department at the Massachusetts Institute of Technology, and Dr. Alton Meister, chief of the biochemistry department at Tufts University.

Commenting on the delegation's impressions of the congress, Professor Mardashev said it had been splendidly organized. "Our kind hosts," he remarked, "must have worked very hard for so large a gathering to have run so smoothly, particularly since the proceedings were held in two different hotels, the Hilton and the Americana."

Both the papers submitted and the discussion, said the Professor, were on a very high level. Most interesting were the symposiums dealing with nucleic acids, proteins and enzymes, biochemical genetics and bioenergetics. These vital areas of modern biochemistry, he noted, have attracted the attention of researchers all over the world. Unfortunately, too few papers dealt with the new advances in the field of plant biochemistry.

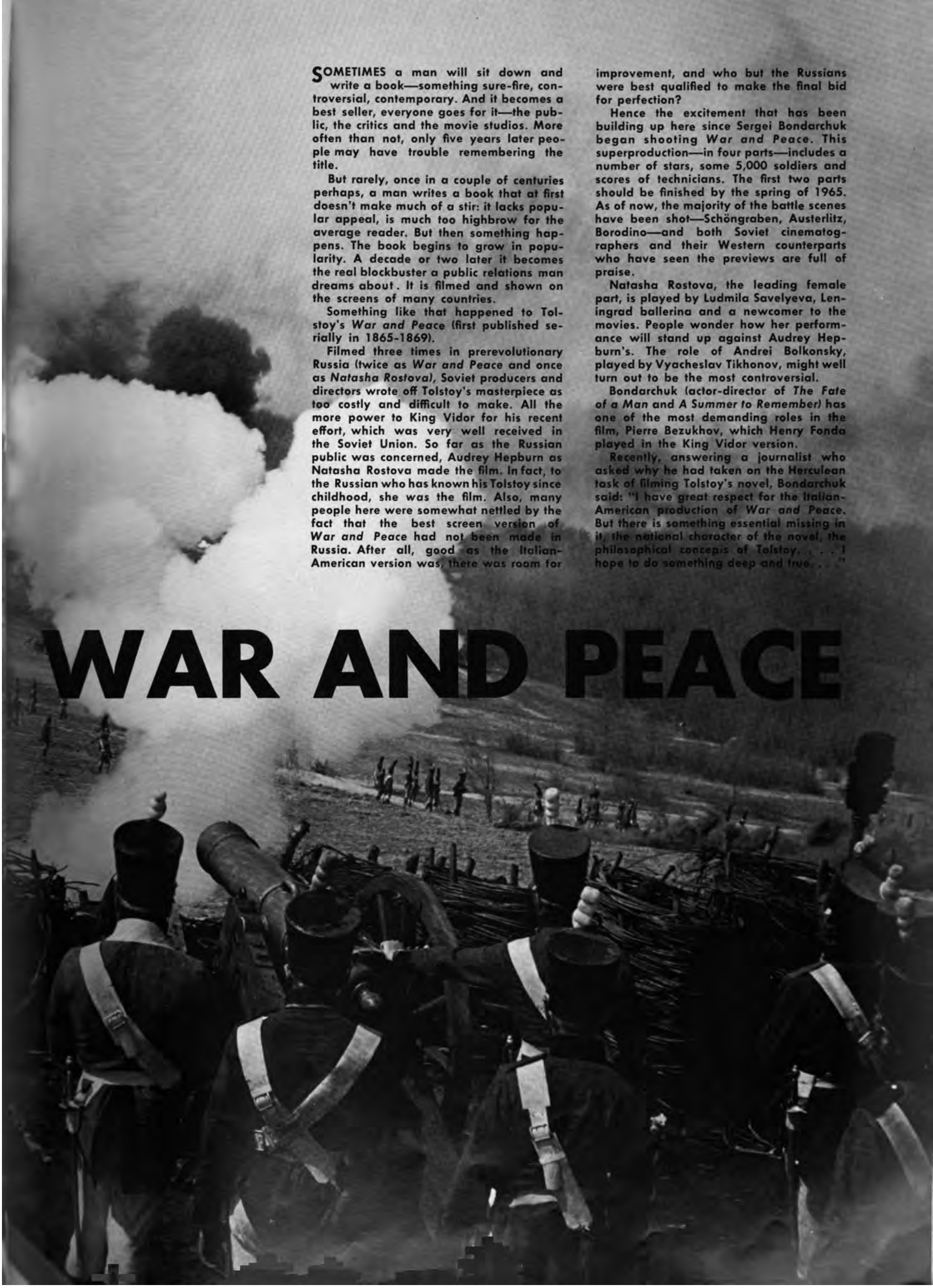
The increasing intrusion into biochemical laboratories of the methods used in the fields of physics, mathematics and cybernetics, and the extensive use of various automatic devices, the Professor thought, was noteworthy. Automation does much to facilitate and expedite research. This was demonstrated by the exhibition of laboratory equipment displayed.

But perhaps one of the most significant results of the congress, the Professor concluded, were the friendly get-togethers of the scientists from different countries. The exchange of opinions, views, arguments was important not only for scientific development but for better understanding, friendship and peace on earth.

Photographs by Vladimir Uvarov



WAR AND PEACE



SOMETIMES a man will sit down and write a book—something sure-fire, controversial, contemporary. And it becomes a best seller, everyone goes for it—the public, the critics and the movie studios. More often than not, only five years later people may have trouble remembering the title.

But rarely, once in a couple of centuries perhaps, a man writes a book that at first doesn't make much of a stir: it lacks popular appeal, is much too highbrow for the average reader. But then something happens. The book begins to grow in popularity. A decade or two later it becomes the real blockbuster a public relations man dreams about. It is filmed and shown on the screens of many countries.

Something like that happened to Tolstoy's *War and Peace* (first published serially in 1865-1869).

Filmed three times in prerevolutionary Russia (twice as *War and Peace* and once as *Natasha Rostova*), Soviet producers and directors wrote off Tolstoy's masterpiece as too costly and difficult to make. All the more power to King Vidor for his recent effort, which was very well received in the Soviet Union. So far as the Russian public was concerned, Audrey Hepburn as Natasha Rostova made the film. In fact, to the Russian who has known his Tolstoy since childhood, she *was* the film. Also, many people here were somewhat nettled by the fact that the best screen version of *War and Peace* had not been made in Russia. After all, good as the Italian-American version was, there was room for improvement, and who but the Russians were best qualified to make the final bid for perfection?

Hence the excitement that has been building up here since Sergei Bondarchuk began shooting *War and Peace*. This superproduction—in four parts—includes a number of stars, some 5,000 soldiers and scores of technicians. The first two parts should be finished by the spring of 1965. As of now, the majority of the battle scenes have been shot—Schöngraben, Austerlitz, Borodino—and both Soviet cinematographers and their Western counterparts who have seen the previews are full of praise.

Natasha Rostova, the leading female part, is played by Ludmila Savelyeva, Leningrad ballerina and a newcomer to the movies. People wonder how her performance will stand up against Audrey Hepburn's. The role of Andrei Bolkonsky, played by Vyacheslav Tikhonov, might well turn out to be the most controversial.

Bondarchuk (actor-director of *The Fate of a Man* and *A Summer to Remember*) has one of the most demanding roles in the film, Pierre Bezukhov, which Henry Fonda played in the King Vidor version.

Recently, answering a journalist who asked why he had taken on the Herculean task of filming Tolstoy's novel, Bondarchuk said: "I have great respect for the Italian-American production of *War and Peace*. But there is something essential missing in it, the national character of the novel, the philosophical concepts of Tolstoy. . . . I hope to do something deep and true. . . ."

WAR AND PEACE







Photographs by Miroslav Murazov

MASTERY IS WHAT'S WANTED

"Light versus Serious Music" is just one of the many questions presently being discussed by Soviet composers and music lovers. This article, reprinted from the Soviet press, is by composer Zara Levina.

LIGHT MUSIC has long been considered "a problem" in our country.

The fallacy here, it seems to me, is that music lovers have split into two camps: there are those who do not consider light music art and those who prefer the world of "pleasant rhythms." Neither group, however, seems to be completely happy with its exclusive choice. I think it pure blasphemy to approach the problem by setting classical music against jazz.

Light music has its own qualities, characteristics, ways of development and diversities. The crux of the matter is that light music requires no less mastery than the most serious kind. When a composer works on a symphony, opera, sonata or song, he spares none of his ability, knowledge and talent. With light, diverting music, however, some composers do not think it necessary to tap that backlog of knowledge and experience they have accumulated through practice.

The gap between serious and light music is much too large. For the most part new evocations in harmony are ignored in light music and new forms not developed. We show too little concern for new ways of presenting musical images.

The most popular compositions are those that bear the mark of individuality. Is it not true that we always recognize Isaac Dunayevsky for the highly personal way he creates his music? I enjoy listening to the music of the gifted young composer Mikael Tariverdiev for the same reason.

Andrei Eshpai and Arno Babadjanyan have been very successful with their light music. It is a shame, however, that their compositions so often do not reflect their capabilities; they purposely simplify their musical language, obviously thinking that it will be easier to understand. But is this false modesty necessary? Where will it lead?

Light music comprises a multitude of diverse forms. It includes music easily remembered, music for dancing. But it includes a great deal more. What opportunity it provides for compositions of the most varied, wide-ranging character, rich in interesting content, novel in idea, unusual and finely elaborate in form, music that can be listened to, not merely memorized at the first hearing! Such music can open up a vast world of harmony, melody and orchestral inventiveness to the listener.

Take jazz, for instance. For years some people have been saying that they are not opposed to "good jazz." But do they know what jazz is, how it came into being, its history, its unique character, its place in the world of music?

Many people call anything that is noisy and loud jazz. Actually jazz borders on serious music, and the more we learn about it, the less talk there will be that "the age of jazz has arrived" or, in quite the opposite vein, that "jazz is not music." Posing the problem in these terms is pointless. We must learn to recognize quality in jazz.

How shall we develop our light music? I think that first of all we should be more demanding. I would like to make this appeal to our composers: When you write light music, please be as critical and exacting as when you write serious music, please do not oversimplify it.

We must not forget our heritage of folk and classical music. Study Russian, Armenian, Daghestanian, Georgian and other people's songs. How rich and complex their music is. A composer, who should be creative, sometimes turns out music more primitive and monotonous than that which the people themselves have produced.

We are fortunate in having a large group of talented composers, and we have every right and reason to expect quality music from them. Let us try to close the gap and raise the artistic level of our light music so that it commands the same respect that our serious music enjoys throughout the world.

JAZZ: RUSSIAN STYLE

by Vladimir Pozner

IS THERE such a thing as Soviet jazz? This is a question debated both in our country and in the West. In point of fact, there is really no clear-cut answer; it depends on your definition of the word "jazz."

If we are to take the classic definition, *i.e.*, that jazz is the blend of two musical cultures —African and European—at a specific historic period, in a specific geographical region (New Orleans) and because the people of a specific African tribe were brought over to this spot as slaves—then there can be no question of Soviet jazz. Nor, for that matter, of any other kind of jazz except American because, again by the same definition, jazz is a folk art, a specifically American folk art.

If, on the other hand, we define jazz as a musical form whose principle components are (1) syncopation, (2) the blue note, (3) tonal color, and (4) improvisation, an art which, during its "classic" era, was primarily practiced by the musician but today is becoming more and more the composer's, then we can talk of "Soviet jazz."

But even in this sense jazz is something new to the Soviet Union. For many years it

was no more than an imitation—and a rather poor one at that—of the American original.

As American jazz evolved, it was based on the pop tune, something as specifically American as the *chastushka* (a Russian folk-song form) is Russian. The pop tune, with its eight bars per part, the first, second and fourth parts being identical and the third being the "bridge," provided an ideal basic theme on which the jazz musician could elaborate.

In the Soviet Union the pop tune never existed. There was—and is—the Song, something created by a composer, not to be tampered with. This is a question of tradition and temperament. A song in Russia, popular as it may be—"Polyushko Polye" or "Moscow Nights"—is always the composer's. And just as nobody would dream of altering a Chekhov story or a Prokofiev composition, it would be considered poor taste to "jazz up" the creation of the song writer.

For this reason, while American jazz used the pop tune as its inspiration, the Russian jazz musician had no choice but to play the ready-made American product. There were some fine jazz players in the Soviet Union, but, whatever their technical competence, they could not be original since they had nothing of their own to go by.

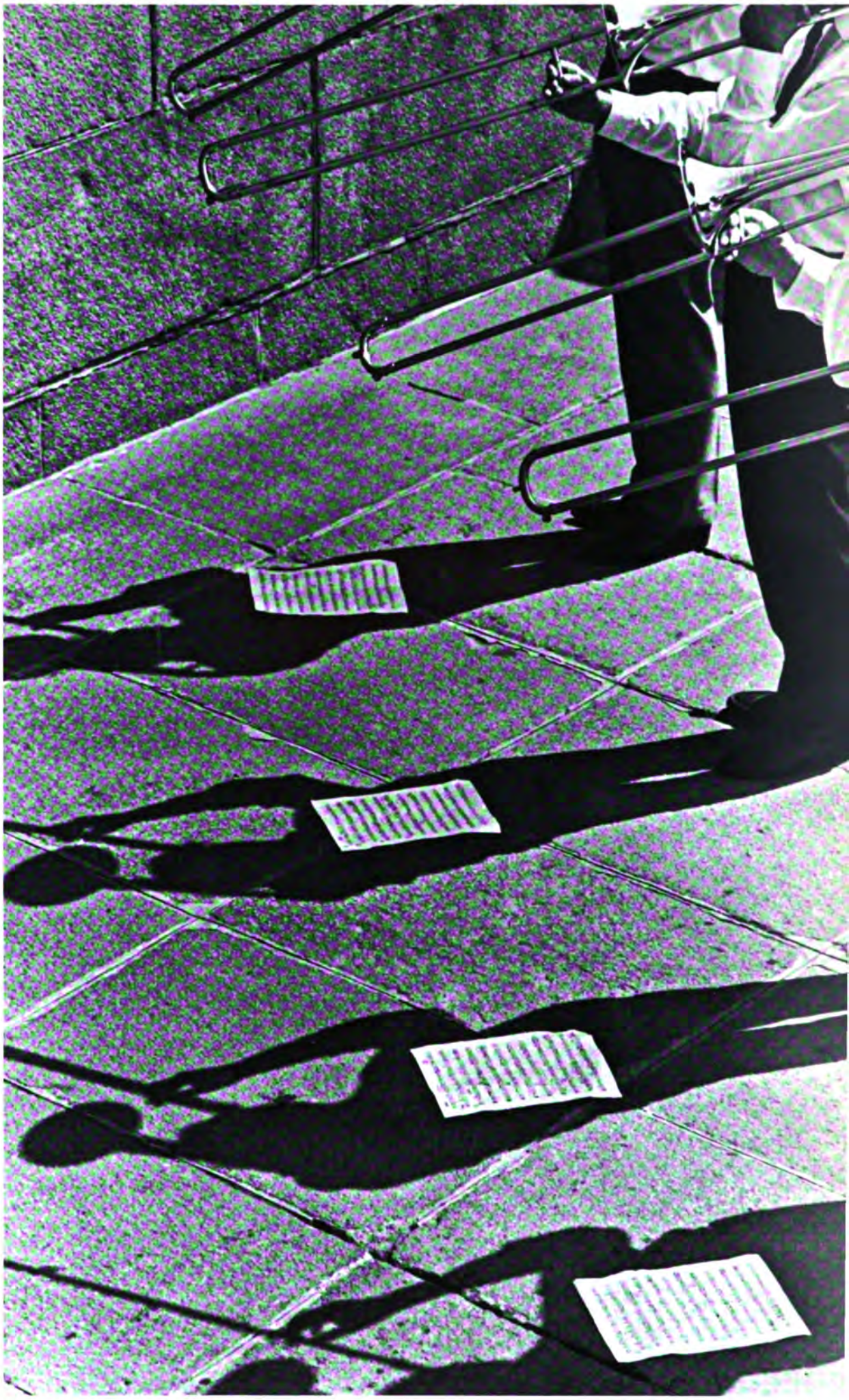
With the appearance of the jazz musician-composer, this relatively new form of music came alive for us.

At present we have what are roughly two trends on the Soviet jazz scene. The first, and oldest, is represented by the traditional jazz combos that play American jazz; they repeat, but do not stray from the beaten path. Their importance to jazz is minimal, but what they are responsible for is the popularization of jazz in our country.

The second trend, and far more interesting, is still in the experimental stage. The jazz composer in the Soviet Union is a contradictory figure. On the one hand, he may be a professional musician in the very real sense of the word, with a background of 10 years of music school and four years of study at a conservatory. On the other hand, he may be a self-made musician with hardly any academic musical training.

These two types of jazz composers are today responsible for Soviet jazz, although in reality they bear little love for each other. The "pros" look down on the "nonpros" as dilettantes, while the "nonpros" consider the "pros" musical conformists. This kind of wrangling—in private debate, public speeches, in articles published in the press—ultimately influences the music and is probably one of the primary factors in the development of jazz in Russia.

Acceptable as a good copy may be, it is always inferior to the original. Hence, many Soviet jazz fans probably enjoy a recording of the Modern Jazz Quartet more than a Soviet jazz combo's version. At the same time, they want to hear a new type of jazz, with the four basic elements intact but with the melody in the Russian folk tradition. This is something they are now getting the chance to enjoy, thanks to the new figure in Soviet music—the jazz composer.



They call themselves the Tune-happy Trombones and don't bother to define jazz but play it. They are part of the Tbilisi Youth Club combo.

ONCE A MONTH

A short story by Fyodor Knorre

TOWARD MORNING Sasha dreamed she had overslept and was late. Nothing was ready; her unironed dress hung over a chair, the sleeves dragging on the floor.

She started up, leaned over on her elbow, drew up her legs and looked about in the darkness, confused, still half asleep.

Her eyes would not stay open. She had only a vague idea of what everything was about and where she was. For a moment she was not even sure *who* she was.

She ran her fingers through her disheveled hair and nervously scratched her head. Her mouth opened as if she were about to cry. She waited a moment, whimpered a little, and listened.

"What's the matter, Sloppy?" came a voice from the darkness.

The sound reassured her. Instantly she remembered that Mother was close by, that they were staying in the country. Mornings everyone called her Sloppy, but it wasn't morning yet. Everything was all right.

"I'm late," she mumbled, just to be sure. "My dress isn't ironed."

"Go back to sleep, Sloppy," said Mother. "Everything's ironed for you."

Sasha yawned so loudly she made a squeaking sound in her throat, and opened one eye wider. In the half-darkness she made out her dress. The collar and cuffs had been sewn on. It was sitting in a chair near the head of the bed like an obedient little girl without head and legs.

Pulling her crumpled nightgown down over her bare knees, Sasha squeezed herself into a ball, drew the bedclothes around her, flung herself back on the pillow and, grunting with satisfaction, rubbed her cheek into its soft, sleepy warmth.

When Mother, sitting down on the edge of the bed, gently shook her shoulder and woke her up in the morning, she no longer remembered her dream.

Kazimir Ivanovich, Mother's husband, was standing near the window, closer to the light, drumming his nails on a tin box that had once held fruit drops. He was carefully examining his worms through his spectacles as though to make sure they were worthy of going fishing with him.

This happened every time. As soon as the first Sunday in the month came around and Sasha got ready to visit her father, Kazimir Ivanovich reviewed his worms, floats and fishing rods and went off for the whole day so he would not have to see her leave.

Sasha threw on her flannel robe, thrust her feet into her slippers, and ran out to the yard. She stopped on the porch to pat the Vetrov dog who came running up to greet her. The Vetrovs were the people half of whose house they had been renting the past three summers. Sasha splashed herself with stinging cold water at the rattling tin washstand, beneath which lemon-colored birch leaves floated in a puddle of soapy water. Then she ran back into the house and patiently stood, with an occasional sniff, in front of the mirror while her mother combed and smoothed down the light, fluffy hair, so hard to comb and brush, that had given her the nickname Sloppy.

Meanwhile, Kazimir Ivanovich kept rattling his fishhooks and tin boxes, putting things in their right places, in a hurry to leave before the car came for Sasha.

Kazimir Ivanovich was a dry sort of person, but he was a good, kind man. Sasha had heard Mother say so and agreed. That he was dry was obvious at once. Anyone so tall, thin and narrow was, of course, dry. But that he was kind was also true. He never got angry. Instead, a hurt expression appeared on his face and he fell silent. When he left for work each morning, he would bend low and cautiously kiss Mother's hand. Every time he got paid, he bought a present for Sasha. He did not earn the same sum each time. When it was a small sum, he bought a small present, and when the sum was larger, the present was larger, too. He wasn't especially good at picking presents. He did not notice that Sasha was growing, for example, and no longer liked books for eight-year-olds. But he was a good man. That was the honest truth. Except that somehow one had to remind oneself of the fact from time to time.

While Sasha, her eyes on the clock, finished her breakfast, Kazimir Ivanovich dragged out his faded old hat with the flopping brim and smoothed it out. Mother had tried to throw away the hat several times, but Kazimir Ivanovich would search silently, his feelings hurt, until Mother took pity on him and brought it back from somewhere in the attic and once even from the burdocks at the back of the Vetrov garden.

Now, in his narrow gray trousers, which also existed only for fishing, and his new boots, Kazimir Ivanovich carefully edged his way out of the room, his rod catching at the ceiling, muttering "Well, I'm off," and left, without kissing Mother's hand.

Through the window Sasha saw him going down to the river, cautiously making his way along the clayey path, slippery from yesterday's rain and all the other rains which had been so frequent that autumn.

As he made his way out of the garden, he slipped and grabbed at a stake in the fence to keep from falling. He must have felt bad about leaving the way he had because he turned around and waved good-by. It couldn't be much fun for him, Sasha thought, to sit all day on the damp bank of the Vilyaika, where there were no fish, alone except for the worms in his tin box.

The hands of the clock met on 10, forming one thick hand, but Sasha kept putting off going, hoping her mother's attention would be distracted and she would be able to put on her favorite coat, a light fall tweed. But as soon as she came near the hook from which it hung and glanced about guiltily, her mother laughed and said:

"No, you don't! Put on your brown coat."

"Oh-h-h!" Sasha groaned, snatching the hateful old coat. It was warm, practically a winter one, but narrow across the shoulders and short in the sleeves. It was no good arguing, for a chilly autumn wind was blowing, and as soon as she set foot outside the door she felt a fine spray of cold rain against her face.

She kissed her mother twice, with the mixed feelings of happy excitement and awkwardness she always had at these moments, walked along the edge of the village road covered with small yellow birch leaves, and then struck across to the highway over an endless pasture where the wind whipped the duck down tangled in the wet grass.

She was to meet Daddy's car near the familiar road sign that had "22" on one side and "23" on the other. Mother did not allow the car to drive up to the Vetrov house.

The handsome car already stood waiting for her, its reflection glittering in a black puddle on the asphalt. Mitya, the driver, whom Sasha knew (only Daddy and Sophia Philippovna addressed him so familiarly, of course) had spied her from far off, and had the door open as she scrambled up the embankment, clutching at the wet grass to keep her footing.

"Good for you," he said, glancing over to see if she had the door properly closed. "Right on time, I just drove up this minute."

The car started with a hollow rumble and glided forward. Outside the thick glass the woods where she and Mother picked mushrooms slid past and then, faster and faster, the blue summerhouse with the wooden columns and aluminum-colored statues of athletes, and farther on unfamiliar birch groves, the trees growing in clumps, and a mowed field across which a herd of black and white calves straggled. A fine rain was falling on the calves, the summerhouse, and the graceful birch trees waving in the wind, while in the car there was neither wind nor rain. From somewhere dry warmth blew in her face, and everything around her was smooth, bright and polished.

Turning a corner, the car slowed down and drove into a narrow driveway covered with glistening yellow leaves that had fallen from the maples that lined it.

As usual, Daddy was waiting for her at the curve in the road.

"There he is," Mitya said approvingly. The car gently splashed through a big puddle and stopped a few feet from Daddy. He hurried forward to meet them, smiling happily, yet anxiously, as he tried to make Sasha out through the rain-streaked windows.

"Hello, Little Frog!" he cried gaily as he put his hands under her arms, lifted her out of the car, and set her down in front of him. "Let's see what you look like."

Sasha looked up expectantly, her head thrown back, smiling happily.

Through the open door of the car Mitya stared at them with frank interest. He always liked watching this first moment of their meeting.

After Daddy had looked his fill, he again picked up Sasha and, as she threw her arms around his neck, kissed her on the cheeks, the forehead and the ear until she squealed and kissed his big, hard cheek with its familiar odor of tobacco, shaving cream and, most important, himself.

Then she thrust her hands against his shoul-

ders and pushed herself away from him, arching her back.

"Well?" he asked, his eyes moving over her face searchingly.

Sasha took a deep breath, sniffed like a rabbit, and said after a pause:

"It smells of cheeks!" She imitated the childish way she used to say the phrase a few years back. She had been a very little girl then, and she and Daddy had played a game in which she had kissed him all over his face and head, wrinkling her nose and shouting: "It smells of eyebrows!" or "It smells of ears!" It was a wonderful game, they had thought.

Sasha was older now, and Daddy had rapidly grown gray, but they still had several words and phrases left over from the old days that were dear to them because no one else could understand them, like the secret language of two conspirators talking about things no one else knows, least of all Sophia Philippovna, Daddy's present wife.

Mitya suddenly realized it was not nice to sit there staring at them with a grin on his face. He frowned and said:

"Shall I drive on?"

"Yes, go ahead. We'll walk," said Daddy, and the car moved off ahead of them, toward the two-story summer cottages surrounded by brightly painted wooden fences that could be seen through the leafless trees.

They walked along slowly, holding hands.

"Why are your hands so cold, Little Frog?" Daddy asked. "Are you frozen?"

Little Frog was a nickname that also dated back to the old days. Mother had once called her that, too, but not for a long time now. Only Daddy remembered it. Probably because he had seen her so rarely all these years—only once a month. Every first Sunday.

"My hands are always like that," Sasha said, smiling to herself as she thought: "Daddy's hands are big and so is his face. No one would think of calling him dry, the way people do poor Kazimir Ivanovich."

"Such a small hand," Daddy said, examining it there in his broad palm.

"But it's strong," cried Sasha, squeezing his fingers as hard as she could, her face screwed up in a terrible grimace from the effort.

Only 30 feet left before they reached the gate. The best moments of this Sunday, the moments when she could be alone with Daddy, just the two of them, were coming to an end.

"How is Mother?" Daddy asked, stumbling over the words.

"Very well, thank you," Sasha said, realizing at once how awkward the "thank you" sounded. But it had already popped out, and there was nothing she could do about it.

Daddy looked at her closely.

"Come now, tell me the truth," he insisted. "Is she all right?"

"Yes. Really and truly!" Sasha nodded seriously. At that moment she saw Daddy's twin daughters beckoning and calling her, their voices shrill with joy, two identical little faces peering out through the slats of the fence.

"You must try to love them," Daddy said hurriedly, a note of guilt in his voice. "They are very affectionate and they adore you."

As soon as she stepped through the gate, the two little girls flung themselves on her, begging her to hurry and come with them. But Daddy asked her in a low voice to step into the house first and say good morning to Sophia Philippovna.

A welcoming smile on her face, Sophia Philippovna met her on the porch, where the table was still covered with the breakfast things. The colored glass that enclosed the porch made everything appear colored: the buns were purple, the sprats green and the butter red and white. Sasha liked the porch. She also liked Sophia Philippovna a little.



Drawing by Gh...

ONCE A MONTH

A short story by Fyodor Knorre

TOWARD MORNING Sasha dreamed she had overslept and was late. Nothing was ready; her unironed dress hung over a chair, the sleeves dragging on the floor.

She started up, leaned over on her elbow, drew up her legs and looked about in the darkness, confused, still half asleep.

Her eyes would not stay open. She had only a vague idea of what everything was about and where she was. For a moment she was not even sure *who* she was.

She ran her fingers through her disheveled hair and nervously scratched her head. Her mouth opened as if she were about to cry. She waited a moment, whimpered a little, and listened.

"What's the matter, Sloppy?" came a voice from the darkness.

The sound reassured her. Instantly she remembered that Mother was close by, that they were staying in the country. Mornings everyone called her Sloppy, but it wasn't morning yet. Everything was all right.

"I'm late," she mumbled, just to be sure. "My dress isn't ironed."

"Go back to sleep, Sloppy," said Mother. "Everything's ironed for you."

Sasha yawned so loudly she made a squeaking sound in her throat, and opened one eye wider. In the half-darkness she made out her dress. The collar and cuffs had been sewn on. It was sitting in a chair near the head of the bed like an obedient little girl without head and legs.

Pulling her crumpled nightgown down over her bare knees, Sasha squeezed herself into a ball, drew the bedclothes around her, flung herself back on the pillow and, grunting with satisfaction, rubbed her cheek into its soft, sleepy warmth.

When Mother, sitting down on the edge of the bed, gently shook her shoulder and woke her up in the morning, she no longer remembered her dream.

Kazimir Ivanovich, Mother's husband, was standing near the window, closer to the light, drumming his nails on a tin box that had once held fruit drops. He was carefully examining his worms through his spectacles as though to make sure they were worthy of going fishing with him.

This happened every time. As soon as the first Sunday in the month came around and Sasha got ready to visit her father, Kazimir Ivanovich reviewed his worms, floats and fishing rods and went off for the whole day so he would not have to see her leave.

Sasha threw on her flannel robe, thrust her feet into her slippers, and ran out to the yard. She stopped on the porch to pat the Vetrov dog who came running up to greet her. The Vetrovs were the people half of whose house they had been renting the past three summers. Sasha splashed herself with stinging cold water at the rattling tin washstand, beneath which lemon-colored birch leaves floated in a puddle of soapy water. Then she ran back into the house and patiently stood, with an occasional sniff, in front of the mirror while her mother combed and smoothed down the light, fluffy hair, so hard to comb and brush, that had given her the nickname Sloppy.

Meanwhile, Kazimir Ivanovich kept rattling his fishhooks and tin boxes, putting things in their right places, in a hurry to leave before the car came for Sasha.

Kazimir Ivanovich was a dry sort of person, but he was a good, kind man. Sasha had heard Mother say so and agreed. That he was dry was obvious at once. Anyone so tall, thin and narrow was, of course, dry. But that he was kind was also true. He never got angry. Instead, a hurt expression appeared on his face and he fell silent. When he left for work each morning, he would bend low and cautiously kiss Mother's hand. Every time he got paid, he bought a present for Sasha. He did not earn the same sum each time. When it was a small sum, he bought a small present, and when the sum was larger, the present was larger, too. He wasn't especially good at picking presents. He did not notice that Sasha was growing, for example, and no longer liked books for eight-year-olds. But he was a good man. That was the honest truth. Except that somehow one had to remind oneself of the fact from time to time.

While Sasha, her eyes on the clock, finished her breakfast, Kazimir Ivanovich dragged out his faded old hat with the flopping brim and smoothed it out. Mother had tried to throw away the hat several times, but Kazimir Ivanovich would search silently, his feelings hurt, until Mother took pity on him and brought it back from somewhere in the attic and once even from the burdocks at the back of the Vetrov garden.

Now, in his narrow gray trousers, which also existed only for fishing, and his new boots, Kazimir Ivanovich carefully edged his way out of the room, his rod catching at the ceiling, muttering "Well, I'm off," and left, without kissing Mother's hand.

Through the window Sasha saw him going down to the river, cautiously making his way along the clayey path, slippery from yesterday's rain and all the other rains which had been so frequent that autumn.

As he made his way out of the garden, he slipped and grabbed at a stake in the fence to keep from falling. He must have felt bad about leaving the way he had because he turned around and waved good-by. It couldn't be much fun for him, Sasha thought, to sit all day on the damp bank of the Vilyaika, where there were no fish, alone except for the worms in his tin box.

The hands of the clock met on 10, forming one thick hand, but Sasha kept putting off going, hoping her mother's attention would be distracted and she would be able to put on her favorite coat, a light fall tweed. But as soon as she came near the hook from which it hung and glanced about guiltily, her mother laughed and said:

"No, you don't! Put on your brown coat."

"Oh-h-h!" Sasha groaned, snatching the hateful old coat. It was warm, practically a winter one, but narrow across the shoulders and short in the sleeves. It was no good arguing, for a chilly autumn wind was blowing, and as soon as she set foot outside the door she felt a fine spray of cold rain against her face.

She kissed her mother twice, with the mixed feelings of happy excitement and awkwardness she always had at these moments, walked along the edge of the village road covered with small yellow birch leaves, and then struck across to the highway over an endless pasture where the wind whipped the duck down tangled in the wet grass.

She was to meet Daddy's car near the familiar road sign that had "22" on one side and "23" on the other. Mother did not allow the car to drive up to the Vetrov house.

The handsome car already stood waiting for her, its reflection glittering in a black puddle on the asphalt. Mitya, the driver, whom Sasha knew (only Daddy and Sophia Philippovna addressed him so familiarly, of course) had spied her from far off, and had the door open as she scrambled up the embankment, clutching at the wet grass to keep her footing.

"Good for you," he said, glancing over to see if she had the door properly closed. "Right on time, I just drove up this minute."

The car started with a hollow rumble and glided forward. Outside the thick glass the woods where she and Mother picked mushrooms slid past and then, faster and faster, the blue summerhouse with the wooden columns and aluminum-colored statues of athletes, and farther on unfamiliar birch groves, the trees growing in clumps, and a mowed field across which a herd of black and white calves straggled. A fine rain was falling on the calves, the summerhouse, and the graceful birch trees waving in the wind, while in the car there was neither wind nor rain. From somewhere dry warmth blew in her face, and everything around her was smooth, bright and polished.

Turning a corner, the car slowed down and drove into a narrow driveway covered with glistening yellow leaves that had fallen from the maples that lined it.

As usual, Daddy was waiting for her at the curve in the road.

"There he is," Mitya said approvingly. The car gently splashed through a big puddle and stopped a few feet from Daddy. He hurried forward to meet them, smiling happily, yet anxiously, as he tried to make Sasha out through the rain-streaked windows.

"Hello, Little Frog!" he cried gaily as he put his hands under her arms, lifted her out of the car, and set her down in front of him. "Let's see what you look like."

Sasha looked up expectantly, her head thrown back, smiling happily.

Through the open door of the car Mitya stared at them with frank interest. He always liked watching this first moment of their meeting.

After Daddy had looked his fill, he again picked up Sasha and, as she threw her arms around his neck, kissed her on the cheeks, the forehead and the ear until she squealed and kissed his big, hard cheek with its familiar odor of tobacco, shaving cream and, most important, himself.

Then she thrust her hands against his shoul-

ders and pushed herself away from him, arching her back.

"Well?" he asked, his eyes moving over her face searchingly.

Sasha took a deep breath, sniffed like a rabbit, and said after a pause:

"It smells of cheeks!" She imitated the childish way she used to say the phrase a few years back. She had been a very little girl then, and she and Daddy had played a game in which she had kissed him all over his face and head, wrinkling her nose and shouting: "It smells of eyebrows!" or "It smells of ears!" It was a wonderful game, they had thought.

Sasha was older now, and Daddy had rapidly grown gray, but they still had several words and phrases left over from the old days that were dear to them because no one else could understand them, like the secret language of two conspirators talking about things no one else knows, least of all Sophia Philippovna, Daddy's present wife.

Mitya suddenly realized it was not nice to sit there staring at them with a grin on his face. He frowned and said:

"Shall I drive on?"

"Yes, go ahead. We'll walk," said Daddy, and the car moved off ahead of them, toward the two-story summer cottages surrounded by brightly painted wooden fences that could be seen through the leafless trees.

They walked along slowly, holding hands.

"Why are your hands so cold, Little Frog?" Daddy asked. "Are you frozen?"

Little Frog was a nickname that also dated back to the old days. Mother had once called her that, too, but not for a long time now. Only Daddy remembered it. Probably because he had seen her so rarely all these years—only once a month. Every first Sunday.

"My hands are always like that," Sasha said, smiling to herself as she thought: "Daddy's hands are big and so is his face. No one would think of calling him dry, the way people do poor Kazimir Ivanovich."

"Such a small hand," Daddy said, examining it there in his broad palm.

"But it's strong," cried Sasha, squeezing his fingers as hard as she could, her face screwed up in a terrible grimace from the effort.

Only 30 feet left before they reached the gate. The best moments of this Sunday, the moments when she could be alone with Daddy, just the two of them, were coming to an end.

"How is Mother?" Daddy asked, stumbling over the words.

"Very well, thank you," Sasha said, realizing at once how awkward the "thank you" sounded. But it had already popped out, and there was nothing she could do about it.

Daddy looked at her closely.

"Come now, tell me the truth," he insisted. "Is she all right?"

"Yes. Really and truly!" Sasha nodded seriously. At that moment she saw Daddy's twin daughters beckoning and calling her, their voices shrill with joy, two identical little faces peering out through the slats of the fence.

"You must try to love them," Daddy said hurriedly, a note of guilt in his voice. "They are very affectionate and they adore you."

As soon as she stepped through the gate, the two little girls flung themselves on her, begging her to hurry and come with them. But Daddy asked her in a low voice to step into the house first and say good morning to Sophia Philippovna.

A welcoming smile on her face, Sophia Philippovna met her on the porch, where the table was still covered with the breakfast things. The colored glass that enclosed the porch made everything appear colored: the buns were purple, the sprats green and the butter red and white. Sasha liked the porch. She also liked Sophia Philippovna a little.



Drawing by Gherman Cheryomushkin

Sophia Philippovna talked to her as though she were grown up and treated her politely, the way she would a guest.

Now she urged Sasha to have a cup of coffee and something to eat. Sasha had to keep repeating, "Oh, thank you, I couldn't possibly," with her hands pressed to her chest to make it more convincing, the way one of Mother's friends, famous for her extreme politeness and huge appetite, always did.

Finally Sophia Philippovna gave up, but she looked somewhat upset and embarrassed, she even blushed a little. Sasha thought again that she might even be able to love this tall woman with her pretty face and her short hair coiffed in such carefully arranged disorder. But the thought immediately made her feel guilty, as though any feeling of love for Sophia Philippovna was a betrayal of her mother.

They talked a while like adult acquaintances, but, as always, it was a strain. You had to keep remembering the things you must not talk about. Like the game in which you could talk about anything and answer any questions, but you had to remember "not to say yes or no, or mention black or red." So, of course, all you could think of was "black" and "red." Both were relieved when Daddy's little girls refused to wait any longer and insisted on dragging Sasha out to the garden.

Here she was able to take off her coat at last and at once felt light and free.

The twins, with whom she felt like a grown-up condescending to play with small children, were really timid, kind, trusting little creatures. And they were awfully bad at thinking up things to do and play, even for their age.

There was a lovely swing in the garden, but they did not know how to swing themselves, and they were so afraid and at the same time so grateful when Sasha swung them a little that she did not have the heart to leave them.

They took her to the place where they had buried a dead sparrow, then to the tree where they had tried to build a playhouse that was pretty much of a failure, and then, with many warnings to Sasha that frightened them more than they did her, to the most terrifying spot in the garden, where that terrible dog Mamai ran back and forth on a chain hooked to a long wire.

As soon as he caught sight of them, Mamai, who had a black face and a glossy black streak down his back, pulled hard at his chain and barked hoarsely, rearing on his hind legs.

"Don't you dare, Mamai!" the twins shouted from a distance and moved back with little cries of fear when he rattled his chain.

Sasha cautiously approached the dog, talking gently all the time. Mamai jumped up and down in excitement, straining toward her and breathing heavily. He stopped barking. Sasha stretched out her hand and, ears flattened, he slid his head under it. Then Sasha took another step forward, and Mamai pushed his head into her knees and reached up happily to lick her hands.

Sasha held him by the front paws, and he awkwardly danced on his hind legs, tugging at Sasha's dress to keep her near him.

The twins, who had been frozen with fear, now burst out laughing to see Mamai, whom they always stayed far away from, who frightened them to death and whom they almost hated, dancing, his long tongue lolling between his terrible teeth, and licking wonderful, fearless Sasha.

At Sasha's order they ran for sugar and came back carrying the sugar bowl between them. Finally they grew so brave that they themselves threw lumps of sugar to the dog. Mamai caught the pieces but let them fall to the ground at once, barking and pulling at his chain, afraid of missing a single happy moment of the affection and contact with human beings he had waited for so long.

In farewell the twins scattered all the sugar under Mamai's nose and ran to put the bowl back. At that moment they were all called to dinner.

The table settings had to be changed because the twins set up a howl. They wanted to sit near Sasha, and she enjoyed supervising them and telling them what to do. With each visit, she realized, she was becoming more and more attached to these delightful moppets, as little as she knew them.

There were grown-up guests for dinner and noisy, dull adult conversation. Glasses were lifted in honor of Daddy and the praise his latest work had received.

Sophia Philippovna also touched glasses with her guests and glowed, as if it was more in her honor than Daddy's, and Sasha realized happily that now she did not like Sophia Philippovna at all.

Daddy drank a glass of vodka, touching glasses with a stern, thickset man in glasses, who congratulated him in a low voice and without a smile, as though it was all rather sad, somehow, which made his congratulations the most convincing of all. Her face wreathed in a permanent smile, Sophia Philippovna poured Daddy some wine.

"I don't like wine!" said Daddy.

"You'd better learn to like it," Sophia Philippovna told him in a disgustingly sweet voice. "It's very good and not easy to get."

Daddy turned away from her, leaving his glass untouched. Meeting Sasha's eye, he winked and nodded to her plate, meaning for her to eat up what was on it.

After that they kept glancing at each other amid the sound of voices and the rattle of dishes. It made her feel very good that the two of them were separate from the others and that only they understood each other.

The twins were led off to bed by their nurse, and although Sophia Philippovna was just starting to cut a chocolate cake, Sasha slipped down from her chair to keep them company because she felt sorry for the little girls, who looked as though they were about to cry.

The girls slept in beds with sides all around, like baby cribs. They kept throwing off their blankets and jumping up, holding on to the sides and bouncing up and down in their long nightgowns.

"Don't go away, Sasha! Please don't go away!" they cried. Sasha was touched by what they said and amused by the funny way the pronounced the words.

When Daddy came into the nursery, the twins disappeared underneath the blankets, but they kept saying that they would not close their eyes a wink all night but would cry if he did not promise them that Sasha would come to stay with them the whole day, next day, from early morning, and the day after that, and the day after that. Still chattering away, they sleepily kissed Sasha good-by and only calmed down when Daddy assured them, tenderly and sadly: "Yes, yes, tomorrow and the day after tomorrow," in a way that made you think he wanted it even more than they.

Together, her hand clasped in his, they went down to the dark garden.

The muffled sound of the radio came from the house with its lighted windows. The birches rustled overhead, and the pines sighed in the wind.

"Again we had no chance for a real talk," said Daddy. They walked silently down the dark path and back again.

"It must be time for me to go," Sasha said.

They returned to the porch, holding hands right up to the door.

Sophia Philippovna immediately rose when she heard Sasha was leaving and went into the hall with her. She stood there while Sasha put on her coat. She looked as though she wanted to say something nice, *at least in farewell*. but again, as always, neither *of them* could forget the rule "not to mention red or black," and both were glad to say good-by as quickly as possible.

"I think I'll go with Sasha," said Daddy, taking down his heavy, long coat and putting it on. "Why, of course," Sophia Philippovna said quickly in a funny voice, stressing the last word.

Driving back, they both sat in front with Mitya. It made a tight fit, but it was very cozy.

They stopped at the "22-23" sign. Sasha shook hands with Mitya, and then she and Daddy got out of the car and, holding hands, started down the embankment.

Lights shone through the trees in the distance. They walked slowly toward the lights, cutting through the big pasture that Sasha had crossed alone that morning on her way to meet the car.

Daddy ran his hand over her shoulder.

"It's kind of an old coat we have, isn't it?"

"Yes," Sasha answered casually. "We keep meaning to buy a new one but just haven't gotten around to it." Those were Kazimir Ivanovich's exact words.

The wet grass rustled under their feet. Again they were silent. There was so much to talk about that it did not pay to begin in the few minutes they had left.

Suddenly Sasha clearly pictured how they would walk on and on. They would not stop at the first street lamp but would keep on going, right up onto the porch, and Mother would open the door for them with a smile and say, "Well, you're both back at last!" and it would turn out that she and Daddy had just gone somewhere together and then come home, and there had never been anyone named Sophia Philippovna or the porch with colored glass.

She did not know what Daddy was thinking but was somehow not surprised at what happened next.

The village street lay before them like a black ribbon stretched between the tall trees, and only the occasional round spots of light from the lamps, swaying unevenly in the wind, lit up the deep, water-filled ruts in the road.

They walked down to the edge of the last circle of light, where they always stopped to say good-by, and Sasha's heart began beating fast before she actually realized what was happening. For they did not stop but went right on walking, through the lighted spot, straight up to the Vetrov house. Only at the porch did they both come to a stop; they already understood each other.

"Shall I go tell her?" Sasha asked indistinctly, for some unknown reason speaking in a whisper.

"Yes. Tell her I want to talk to her very, very much. Only for a minute."

Hands stretched out in front of her, Sasha almost ran past the tubs in the dark passageway and pushed the door into the room open with her shoulder. Mother was alone. She was sitting at the table, in her place by the window, with a pillow propped on the windowsill against the glass to keep out the draft. At the sound of Sasha's hurried footsteps she must have put down her cup and turned to the door, but she still held a piece of cookie in her hand.

Kazimir Ivanovich, Sasha thought, had probably gone down the road to the Makeyevs to play cards so that he would not be there when she returned from visiting Daddy.

"Mother!" Sasha cried desperately. "May he come in? Just for a minute. He's outside."

Mother got up, startled. Her shoulders twitched as if they were shivering from the cold.

"What for?" she asked in a low voice. "Very well. Let him in."

Daddy was standing on the steps. He took Sasha's outstretched hand and followed her through the dark passageway, stumbling and hurrying.

Sasha led him into the room. Without glancing at her mother and without turning to Daddy, she said quickly:

"I'm going over to the Vetrovs."

The Vetrovs, husband and wife, lived in the other half of the house, separated by a big stove and a board partition that did not reach all the way to the ceiling.

Tonya Vetrova loved to have Sasha visit them, and now she gave her a warm welcome. She was standing behind her husband, biting a fingernail and looking over his shoulder at something he was writing in a notebook. Beside them on the table stood an open phonograph, but they were not playing it for fear of disturbing their neighbors.

Sasha greeted them. From the other side of the partition she heard Daddy say:

"I know you told me not to come, but I did. Just for a moment. . . ."

"Why isn't the phonograph going?" Sasha asked, her voice so steady it surprised her. "Let's play it."

"Won't it bother your mother?" Tonya Vetrova asked hesitantly.

"Certainly not!" Sasha said quickly, and put on the first record she found.

Piano chords rang out with a metallic sound, and then a man's voice lifted in a slow, languorous melody.

Vetrov raised his head, put his pencil down, and briskly started looking through the records.

Sasha half-closed her eyes, pretending she was listening to the music. What were they talking about? What had Mother answered? How humble and choked Daddy had sounded when he said "you told me not to." Yes, Mother had the right to tell him what to do. But not Sophia Philippovna, she didn't.

Now a flourish of trumpets sounded the alarm, a big drum boomed, beating time, while another trumpet, hoarse and strong, broke away from the others and rang out triumphantly.

Nobody had ever told her, but Sasha knew for sure that Daddy was to blame for the way things were. He had often had to go away on long trips, for a whole year sometimes, and one day Sophia Philippovna suddenly appeared, and then the little girls. After that came her strange, divided life with Daddy once a month, on the first Sunday, and then, a long time later, poor, dry Kazimir Ivanovich, who did not seem very happy either.

But now, while the music played, everything might change again. Now Mother would call to her over the partition: "Sasha! It's all right. We'll always be together, the three of us." Suddenly she knew there was no use her sitting there with the Vetrovs when it had all happened; no doubts remained, everything had come true, and she was sitting there not yet knowing that she was happy.

She sprang up, dashed out the back door into the yard, ran around the house and into the dark passageway, where a ray of light fell through the door that had been left ajar. She was about to rush into the room and hug them both when her father's tone stopped her.

"I beg you to. After all, it is my duty. I have the right," he was saying in an indignant, yet pleading voice.

Her mother's voice, also full of despair and indignation, interrupted him.

"I told you," she said, "not to talk like that. I refuse to listen to you. She needs nothing from you. Nothing."

"But I'm asking it as a favor. Can't you understand—as a favor! I'll go down on my knees if you want me to. Why can't you give in on such a small matter? After all, what are we quarreling about? A silly little coat! I know—you want to punish me. But why punish her?"

"It's none of your business. It hasn't been your business for a long time," Mother said bitterly.

They fell silent and then spoke very quietly because the record on the other side of the partition had come to an end. Sasha stood without moving, holding her breath. Finally, after a long, unbearable pause, the sound of a tinny accordion filled the house, and a woman started singing in a high, jerky voice.

The door creaked as a draft pushed it open a little more. Sasha saw Mother standing in the middle of the room awkwardly holding a roll of hundred-ruble bills and trying to count them with shaking hands.

Finally she took four bills and held out the rest to Daddy.

"Take it. This is enough."

Daddy slowly stretched out his hand, took the money and shoved it quickly in a ball into his coat pocket.

Sasha stood staring at the scene only because she was afraid to move. She could not say how long she had stood there, whether for a minute or for hours, until she suddenly heard her father's voice, quite a different voice, which almost frightened her.

"These hands," he said with disgust, "these are my hands!" As though this were the most terrible thing he could have said, Mother began to move backward, the hand that held the crumpled bills pressed to her breast, until she reached the couch where Kazimir Ivanovich usually slept, and sat down. Daddy followed her. Suddenly, just as he was, in his unbuttoned coat, his hat in his hand, he dropped to his kness, laid his big heavy head on Mother's knees, and pressed his forehead to her hands.

Hurriedly and incoherently, he kept muttering something Sasha could not catch. What she did hear, though, was the hungry longing with which he said it. Then she caught the word.

"Never! Never!" he was repeating. Bending low over his head, Mother softly, carefully, stroked his hair. She lifted the gray locks and smoothed them, each one separately, exactly as though she were trying to remember them.

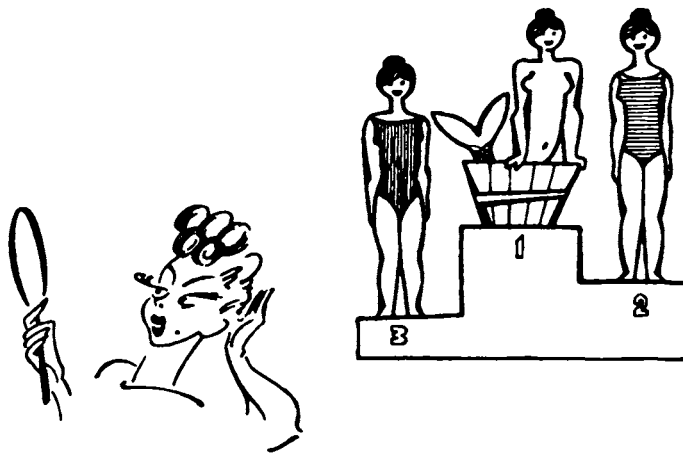
"You mustn't feel so bad. It will pass," she said softly and sadly. But Daddy went on repeating "never, never" still more insistently.

Sasha knew she should not be looking at them, that she had no right to. So she did not cry and did not stir. Finally, she found the strength to move and quietly stepped back onto the porch and out into the yard.

To keep from meeting anyone, she went around behind the hen house. Here, she told herself, she could cry, but the tears did not come. Such aching pity for Mother, for Daddy and for the little girls filled her heart that there was none left for herself, which always made crying easier.

"Never," she repeated in a whisper, trying to sense the meaning of this word she had heard pronounced in such a different way. It was quite a different word from the empty, silly "never" she had known up until now. "I'll never be late for school again." That "never" was a simple, gay little word, almost. Yet how terrible it had sounded when Daddy said it.

She heard steps on the porch. The sound of drums and horns still floated from the Vetrov windows. Then Sasha saw headlights flare up on the highway; two rays of blue picked the tangled branches of a big birch tree out of the darkness at the turn, and then two ruby colored taillights vanished down the road.



HUMOR

The Olympic spirit lingers on.





Drawings by Alexander Gamburg and Valentina Chernikova

ANSWERS TO PHOTO QUIZ

1. ***Potemkin*. Sergei Eisenstein.**
2. **Timiryazev. Nikolai Cherkasov.**
3. ***The Fate of a Man*. Sergei Bondarchuk.**
4. ***Peter I*. Nikolai Simonov.**
5. **Chapayev. Boris Babochkin.**
6. **Tatyana Samoilova. *The Cranes Are Flying*.**
7. ***A Summer to Remember*. Seryozha.**
8. ***Alexander Nevsky* and *Ivan the Terrible*. Eisenstein and Cherkasov.**
9. ***Ballad of a Soldier*. Vladimir Ivashov.**
10. **Andrei Tarkovsky. *Childhood of Ivan*.**

AROUND *the* COUNTRY



SUBWAYS IN BAKU AND TBILISI

Thus far, the only three Soviet cities that have subways are Moscow, Kiev and Leningrad. However, several other cities have mushroomed so much that they face an acute transportation problem. The new housing projects have pushed out beyond the city limits for more space, fresh air and sunshine. And since subways and monorails have no intersections, they are becoming the fastest and cheapest means of transportation. Baku, capital of Azerbaijan, has started work on a nine-station subway line (above) that will link the downtown area with the industrial districts and new residential areas. An eight-station subway is under construction in Tbilisi, the Georgian capital. And in Kiev construction will soon start on a monorail project to help relieve congested areas.

NEW MOSKVITCH

The Moscow Compact Car Plant has turned out a new model in the Moskvitch series. Its light, modern, streamlined body has plenty of room inside and provides 25 per cent greater visibility than the previous model.

The Moskvitch-408 is built lower than its predecessor. Though the tires are of smaller diameter, clearance was cut by only four-fifths of an inch. A brand new front suspension improves performance and cuts wear and tear on the tires. It hugs the road at speeds of 75 to 80 miles per hour. Despite the reinforcement of several units, it weighs less than 1,985 pounds.



CHEAPER AND BETTER RAILWAY SERVICE

Passenger fares on Soviet railroads have been cut, and the difference in cost between local and express travel eliminated. A ticket on the Moscow-Leningrad express used to cost 8 rubles 80 kopecks, now it is 7 rubles 90 kopecks. Fares on the Moscow-Kiev express will be 3 rubles 20 kopecks cheaper.

Previously passengers had to pay double for luggage weighing more than 165 pounds. This has been eliminated.

Finally, schoolchildren and college students will travel at half-fare during the period November 1 to April 30.



INTERPLANETARY DIALOGUE

Scientists today are discussing the possibilities of contacting other worlds by radio. Whether such contact can be made depends, first of all, on the power output of the transmitter.

Mankind today consumes four billion kilowatts of energy every second. But even that power is insufficient to send a message to a distant world. However, there is the possibility of receiving messages from planets with civilizations having a higher level of development than ours. Perhaps our counterparts on other planets are aready sending us signals, but how are we to distinguish them from the static and noises reaching us from outer space?

Engineers recently established that the 3-10 centimeter wave length is the best band for long-distance contacts. Young Soviet scientist Nikolai Kardashov has verified this assumption. He drew a spectrum of a source of artificial radio waves that cannot be mistaken for a natural source, so that if a radio spectrum of some celestial body resembled the one Kardashov developed, we could assume it was not a simple emission of radio waves but a radio transmission. American scientists recently spotted two objects in space they named STA-21 and STA-102. It is evident their spectra differ from natural radiations and have much in common with Kardashov's pattern.

So far, the signals received on earth have not been deciphered. But if they were sent by intelligent beings and follow certain laws, sooner or later our scientists will find a key for decoding them.

MOSCOW ROSE GARDEN

One of the largest collections of roses in the USSR—more than 2,000 varieties—is being shown in the Main Botanical Gardens of the USSR Academy of Sciences, on the outskirts of Moscow. It includes roses from Poland, Czechoslovakia, Bulgaria, China, the German Democratic Republic, the USA, Britain and the Netherlands. This rose garden is the happy product of a painstaking and systematic international exchange of seeds, grafts and dormant buds.

The pride of Soviet selectionists is Moscow Sunrise. Its pink petals with a faint tinge of yellow remind you of a cool dawn. This frost-resistant rose won a gold medal at the International Fair in Erfurt.

Many varieties are very delicate and need pampering, especially in winter, and are covered with polyethylene for protection. Thus even the fragile hybrid tea rose is made safe from the fatal touch of Jack Frost.



The experience of the capital's Botani cal Gardens is being put to good use i regions with a harsher climate. Novosi birsk, which never grew roses, now ha a rose garden it can be proud of in th Central Siberian Botanical Gardens.



FACTS AND FIGURES ON POWER

Power consumption by Soviet industry is expected to almost triple in the next decade. Power output will accordingly grow to one trillion kilowatt-hours by 1970 and to three trillion kilowatt-hours by 1980.

A single power grid with enormous reserves will enable the USSR to transmit electricity from the eastern borders of the country to its European regions. The network is linked to the power systems of other socialist countries.

The USSR has set itself the task of building by 1980 about 200 regional thermal power stations with capacities of up to three million kilowatts each and another 260 major heat and power plants. During the period another 180 powerful hydroelectric stations will be put into operation, among them those at Sayansk, Ust-Ilimsk, Boguchan, Yenisei, Osinovo and Nizhne-Tungus in Siberia—each with a capacity of more than four million kilowatts. The Nizhne-Ob station will contribute another six million kilowatts to the power grid of the European part of the country.

Progress in gas and magnetic hydrodynamics and in plasma physics may soon help Soviet engineers convert heat directly into electricity. A magnetic hydrodynamic device being built on this principle will make it possible to obtain electricity directly from the kinetic energy of a jet of hot, ionized gas.



A 120-DAY SPACE EXPERIMENT

Two physicians, two technicians and a lab assistant at a Soviet research institute voluntarily spent a four-month period in an airtight pressure chamber under conditions simulating those encountered in space flights.

One of the human guinea pigs, Lev Seyev, reports:

We got along well during the whole time. The only squabbles we had were about the best ways of getting our work done. And we had plenty of work to do. Daily we had to weigh ourselves; take our temperature readings; do cardiovascular tests; check our nervous systems, vision, equilibrium, etc.

This was a medical experiment, aimed at studying the effects of a long incarceration in a pressure chamber on the many aspects of human activity. We subjected ourselves to many of the space flight conditions—noise, vibrations and temperature increases—tosimulate takeoff and landing. There was nothing pleasant about it. In our free time we read the latest newspapers, magazines, books and played dominoes or chess. We had a radio and TV set, so actually we were always in touch with the outside world. Nevertheless, at the end of our four months cooped up in the chamber all of us suffered to some extent from insomnia and felt run down.

"We are back to normal now and have even started smoking again."

THE "DAISY" GENERATOR

The Igor Kurchatov Atomic Energy Institute in Moscow has successfully tested an experimental device which transforms nuclear energy directly into electricity. Because of its shape, the device was dubbed the Daisy. The main units of the Daisy, which employs a very simple and reliable system, are a high-temperature nuclear reactor and a transformer. The heat is obtained by splitting U-235 in an active, cylinder-shaped zone. This zone is completely surrounded by a beryllium reflector. By bouncing neutrons back into the active zone, the reflector triggers a chain reaction with a smaller quantity of uranium. The maximum temperature in the center of the active chamber is 3,218 degrees Fahrenheit.

The transformer contains thermoelectric elements made of a silicon germanium alloy. One side of the thermal elements is heated by the reactor while the other side is cooled. This creates an 88-A current in the thermal element.

The Daisy, the first working device of its kind, has a capacity of not more than 500 watts and was built chiefly for experimental purposes. Actually, the successful Daisy test marks a new stage in the development of atomic energetics.



GLOBE-TROTTER

Alexeyevka is a small village in eastern Kazakhstan where Akysh Yermekov began to do a man's job as a tractor driver when he was only 14. These were the war years, when fathers and older brothers were in the frontlines and young boys grew up fast. In that remote village Akysh looked at the flocks of birds winging to far horizons and dreamed of journeying to distant lands.

Since then Akysh has done a good deal of globe-trotting. He was graduated from a vocational school and became an assembler on the construction of the Ust-Kamenogorsk hydroelectric power plant, the first on the Irtysh River. Then he moved to the Kamsk hydroelectric power station in the Urals, where he became an assembly team leader. His team assembled cranes and a bridge across a river lock.

Next came the Novosibirsk hydroelectric project, where he was in charge of assembling a giant trestle for the transportation of concrete. In Kazakhstan he helped build the republic's first blast furnace. And when work began on the Bukhtarminsk hydroelectric project, Akysh again went to the banks of the Irtysh.

When Soviet and Arab workmen changed the course of the Nile, Akysh Yermekov was there. For his work he was decorated by the Soviet Government with the Badge of Honor and by the Government of the United Arab Republic with the order For Services to the Republic.

NEW LIBRARY

The USSR Academy of Sciences is building a new library in Moscow.

Though the structure is only just being started, a study is under way of the best and most modern means of transporting books, and of various methods for mechanizing and automating the work of the librarians.

No more than three stories high, the building will hold seven million volumes. The book stacks will occupy the first two floors, with the reading rooms on the third.



SLEEP INDUCER

Insomnia? Physician Igor Kukhterov and engineer Anatoli Ilyinsky have brought relief to poor sleepers through a method that is as old as mankind itself. They rock their patients to sleep, just as parents do their babies. Or to be more exact, the patients rock themselves to sleep.

They discovered that rocking in time with the strength and frequency of biocurrents from the brain has an especially strong sleep-inducing effect. Sensors attached to the patient's head and to a regulating device synchronize the rocking with the frequency of the biocurrents. Depending on the strength and frequency of the brain impulses, this device regulates the pressure in a pneumatic mattress which has a gentle rocking motion.

Kukhterov and Ilyinsky recommend the treatment for people suffering from nervous disorders, fatigue and a generally run-down condition.

40 YEARS IN THE WRITING

Kornei Chukovsky is the author of the unusual *From 2 to 5*, a collection of observations on and samples of children's talk. Chukovsky has assembled these observations—his own and those of thousands of parents—in a most delightful book.

It was 40 years ago that he began the collection. Each new edition (he is now busy on the eighteenth) is larger than the preceding one. Here are a few samples from the most recent edition:

—When you grow up, what do you want to be?

—If I grow up to be a woman, I want to be a doctor. If I grow up to be a man, I want to be an engineer.

—A hunter needs dogs to protect himself against rabbits.

—Well, how did you sleep? What did you see in your dreams?

—You don't see anything, it's too dark.

—Mommy, what's heaven?

—Oh, that's where there are apples, pears, oranges, plums . . . .

—I understand. Heaven is stewed fruit.

A four-year-old boy is sitting in his father's lap in a bus. A woman enters. Trying to be polite, the boy hops off the parental knee and says:

—You can have my seat, Ma'm!



NEWS PHOTOGRAPHERS SHOW

The Third International Exhibition "Interpress-Photo 64" held in Warsaw drew more than 1,200 entries from 21 countries. The aim of the show was to portray the daily lives of the working people.

The jury was made up of editors of photo magazines published in France, Poland, Hungary, the USSR, Britain and Italy, plus a representative from the International Union of Journalists. Two of the three gold medals went to Soviet photographers Victor Budan, TASS correspondent, for "Harnessing the Nile" and *Ogonyok* reporter Gennadi Koposov for "55 Below," taken in the Arctic. The latter was the Photo of the Month in the December 1963 issue of USSR magazine. The display by the Soviet Journalists Union was judged the best at the exhibition.



AROUND the COUNTRY

IT'S IN THE FAMILY

Everyday Life . . . and Holidays of the Lavrentyevs

(CONTINUED. SEE MAY, JUNE, JULY, AUGUST AND OCTOBER 1964 AND JANUARY 1965 ISSUES.)

Photographs by Vsevolod Tarasevich









IN 1949 the trade union committee of the Ordzhonikidze Machine-Tool Plant asked stage director Sergei Knyazev to set up an amateur theater group for the workers. Varvara Lavrentyeva, her daughter Lydia and Lev Volkovysky were among the first members.

The group started with one-acters. And now, 15 years later, it has a repertory of full-length plays by Russian, Soviet and foreign dramatists. The competence of this amateur company can be judged by the fact that Volkovysky, who plays Lenin in Nikolai Pogodin's *Kremlin Chimes*, is frequently invited by professional theaters in Moscow to play that role in their productions.



Tatyana in Light of a Far-off Star, *staged by her factory's amateur theater company. She not only acts but is also assistant director. On the left we see her in what is obviously a heated argument with director Sergei Knyazev.*

Varvara no longer works at the plant—she has retired on pension. Nor does she take part in theatricals now that she has grandchildren to take care of and feels she is "too old to play, anyhow." But another Lavrentyev is listed in the plant's theater programs. Varvara's youngest daughter Tatyana has been playing leading female roles for the past five years. She had a choice of joining any of the amateur groups at the plant—stage designing (her father worked at the plant as a designer and that would have been in the family tradition), dancing or singing. The trade union local subsidizes all these activities with the 9,000 rubles a year it allocates from its budget for the purpose.

But Tatyana followed in her mother's footsteps. She has always wanted to act. As a child she never missed a performance her mother was in. Now when Tatyana plays to full houses in the 400-seat auditorium of the plant club, her mother is there applauding.

Tatyana has also played in professional productions. Many Moscow theater companies invite worker-actors to play for their regular audiences. The Stanislavsky and Nemirovich-Danchenko Theater and the Ordzhonikidze plant have long had what you might call an exchange arrangement. The theater lends the amateur group expensive props and scenery, and the plant makes the metal frames for the sets and chrome-

1



2



3





4

5



1) The final touches. Lev Volkovysky, foreman at the factory, plays the part of Lenin. 2) Everyone in the company has the opening-night flutters, including the make-up girl. 3) Waiting for their cues behind the curtain at the group's fifth anniversary performance. 4) Shakespeare figures largely in the repertory. Lev Volkovysky as King Richard III. 5) This scene from the company's production of Kremlin Chimes *was shown on television. 6) Ludmila Karavayeva as the Mother Superior in Gorky's* Yegor Bulichev and Others. *7) A hit! Technician Tamara Aidarkina and secretary Natalia Yeremina are in the cast. 8) Technician Emile Veczer makes his stage debut as the watchmaker in* Kremlin Chimes.

6



7



8



plated dummy weapons. In addition it helps the professional theater keep its complicated mechanical stage equipment in working order. All this is done free, of course.

Hundreds of thousands of amateurs are active in these groups, which constitute a major factor in the people's cultural development. Certainly it is the most effective means for esthetic education. This is Lenin's dictum come to life—that art must be rooted in the masses. Professional actors, many of whom started out as amateurs, direct and coach these factory groups. This close contact with the workers is helpful to the professionals as well, it adds to their creative powers. Such stage personalities as Maria Meltser, Maria Goldina, Mark Prudkin and Anatoli Ktorov help regulary with the productions staged by 70-year-old Sergei Knyazev at the Ordzhonikidze plant.

Right now the group is busy preparing Shakespeare's *Richard III*. Knyazev is trying to persuade Varvara Lavrentyeva to play Queen Margaret. In spite of the fact that Varvara bade the company farewell at its fifteenth anniversary party last year, she is very much tempted to try a Shakespearean role.

What was it that brought Varvara and her daughter to the theater? Tatyana answers the question with the words of the French sculptor Auguste Rodin: "The world will be happy only when each man has an artist's soul, that is to say, when each man takes pleasure in his work."

Lydia and son Sasha heading for the opening with flowers for the star, Tatyana. You read about Lydia in the May 1964 issue. There will be more about her subsequently.





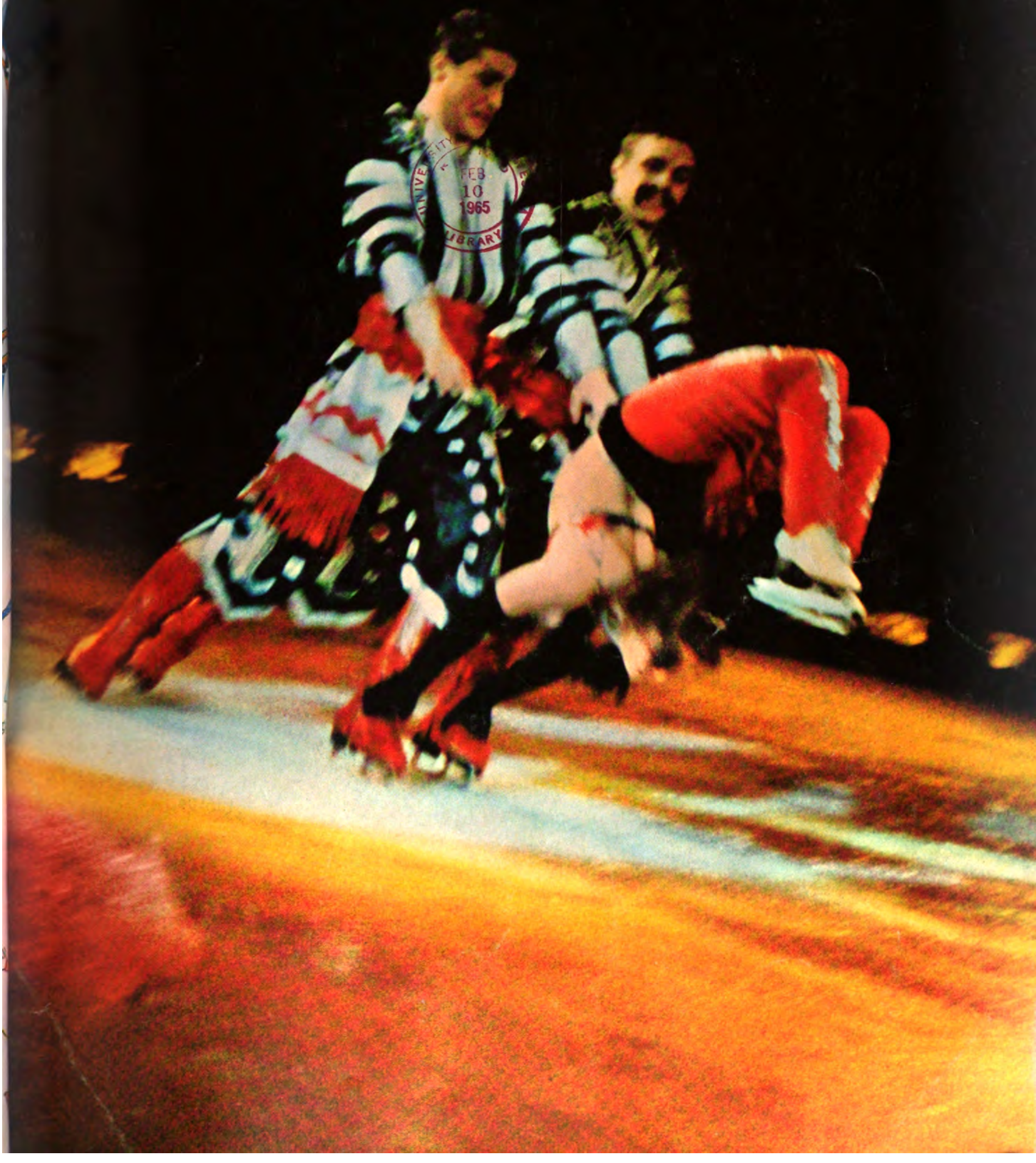
SOVIET LIFE

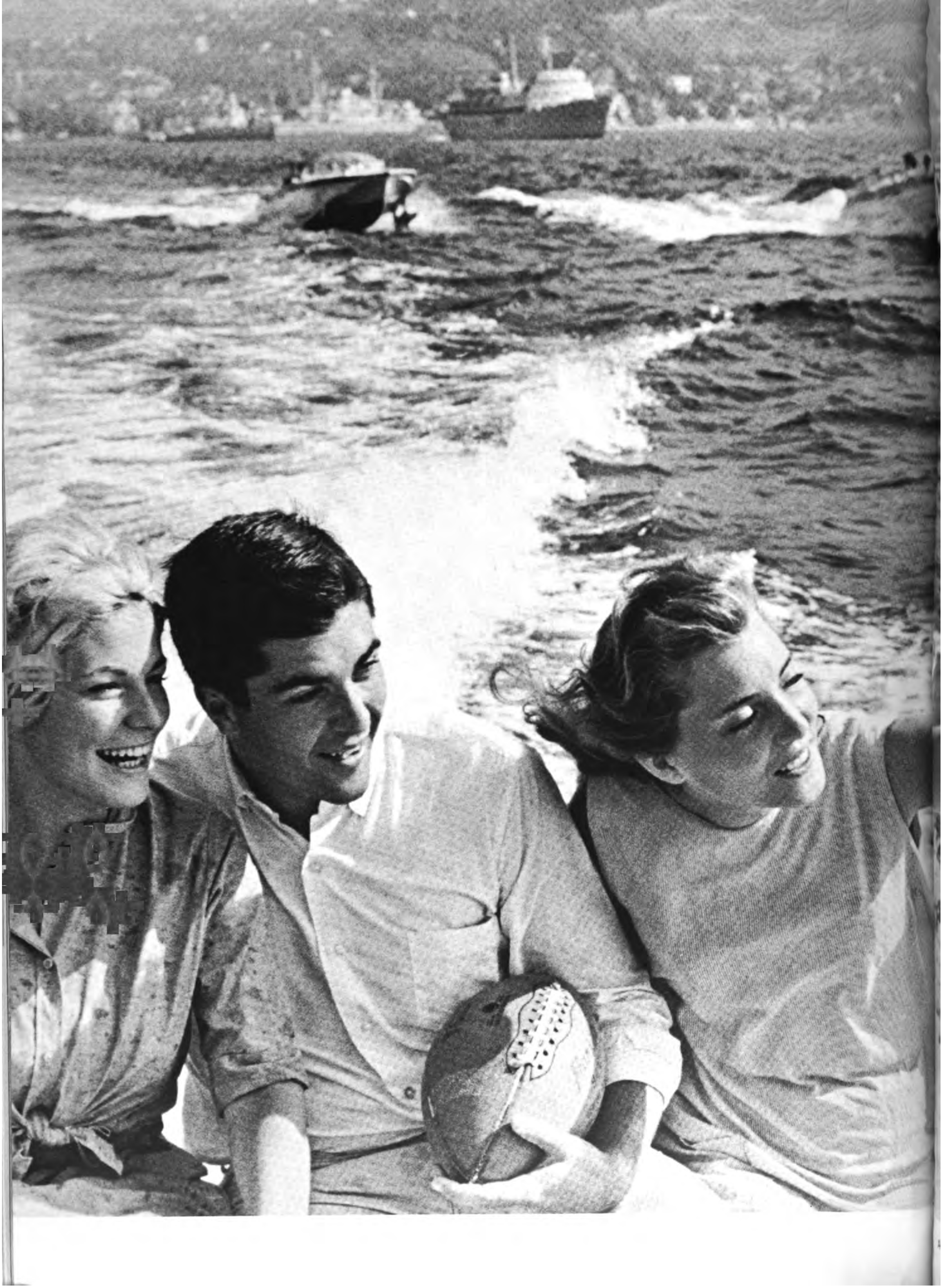
MERCHANT MARINE:
TO CONTROL THE HIGH SEAS?

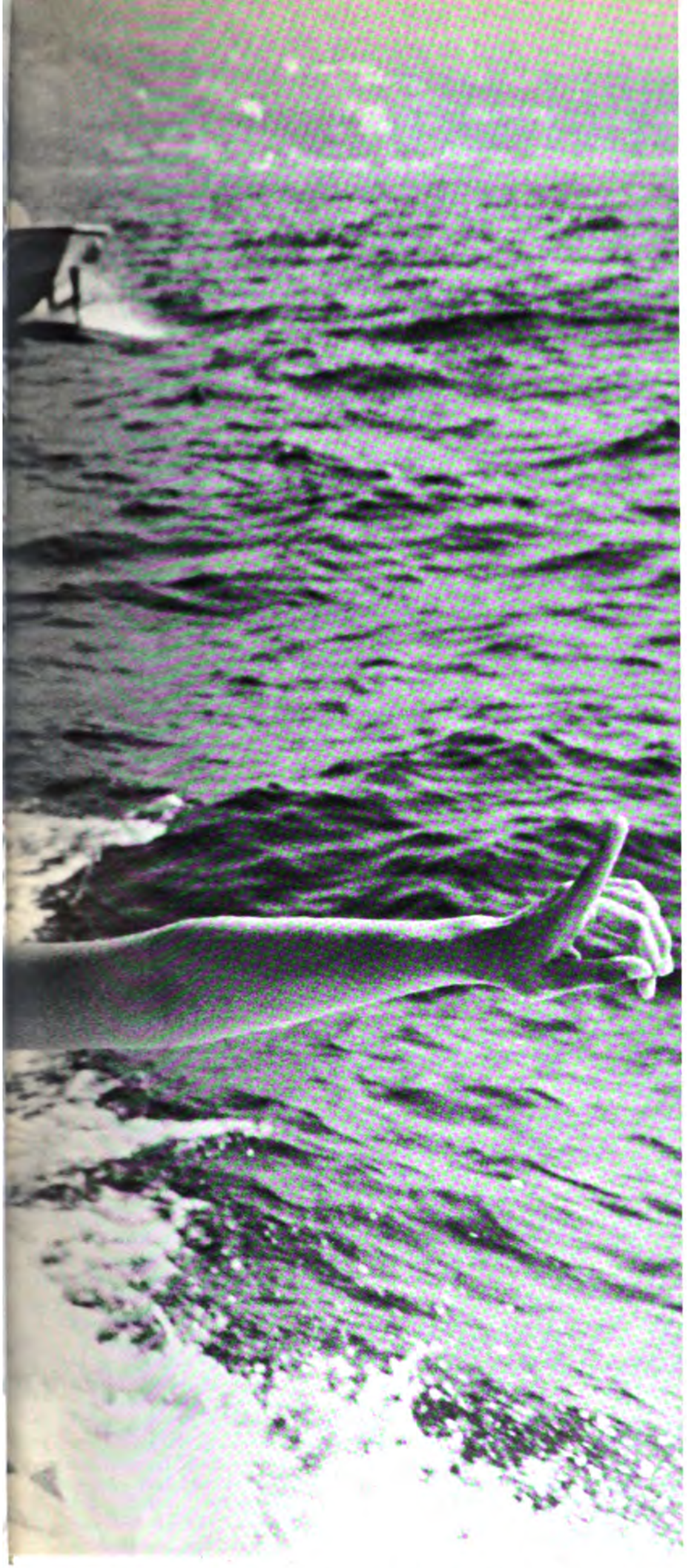
STATE BANK AND CURRENCY

March 1965 • 35 cents

UNIVERSITY
FEB
10
1965
LIBRARY







The time of your life— fun, action, rest at Soviet spas and health resorts on the Black sea and in the Caucasus.

DISCOVER RUSSIA FOR YOURSELF!

SEE STORY ON PAGE 52

American college students boating near Yalta in the Crimea.

Photograph by Vladimir Volodkin

SOVIET LIFE

MARCH 1965 No. 3 (102)

The magazine SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* America *in the Soviet Union.*



Front Cover: One of the many breath-taking acts in the Ice Circus, now thrilling Soviet audiences. *See story page 62.*

PICTURE CREDITS

Georgi Petrusov Cover I, 62-64 Cover III; Vladimir Volodkin Cover II 1; Anatoli Sukhov 5-7; Yakov Ryumkin 18-19; Alexander Nevezhin 26; Alexander Gamburg 27; Alexander Mokletsov 29-32; Leonid Sergeyev 33; Lev Ustinov 34-39; Nikolai Vorobyev 40; Sergei Petrukhin 50-51; Mark Gankin 53-57; Yuri Abramochkin 58-59.

Editor in Chief (Moscow Editorial Board): Yuri S. Fantalov, 2 Putinkovsky Pereulok, Moscow, USSR.

Managing Editor (Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director (Moscow Editorial Board): Marina T. Zabolotskaya, 2 Putinkovsky Pereulok, Moscow, USSR.

Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine SOVIET LIFE.

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second-class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Haynes Lithograph Co., Rockville, Md.

Page

Public Control Our Trends 3

SOVIET PEOPLE

Long Live the Archimedeses! by Tamara Ilatovskaya 5
Is the Average Man a Mediocrity? Problems We Discuss 16
"Very Engineering" by Nikolai Orlov 26
Miroslav Skorik, Young Composer of Lvov 50
Musical Lvov by Vladimir Popov 51

PHILOSOPHICAL PROBLEMS

Natural Science and Contemporary Philosophy by Pyotr Fedoseyev 46

INTERNATIONAL CONTACTS

Soviet Medical Exhibit in the USA by Yevgeni Ruzhnikov 21
Discover Russia for Yourself Interview with Vladimir Ankudinov 52
Your Guide: 1000 Professions by Felix Alexeyev and Alexander Ranov 53
"The Visit Rejoiced Our Souls" 56
The Last Wagon West by Stanislav Pshennikov 58

ECONOMY AND SCIENCE

Merchant Marine, Trends and Developments in Soviet Shipping as discussed by Victor Bakayev, Dmitri Zotov, Nikolai Bykov, Nikolai Malakhov and Alexander Savelyev 8
The Face of Ivan the Terrible by Mikhail Gerasimov 18
Mystery of the Czar's Tomb by Wanda Beletskaya 18
Tomorrow's Doctors by Vladimir Kovanov 20
The Ukraine: Industrial and Agricultural Progress by Ivan Kazanets 23
Bank of the Soviet Union by Alexei Poskonov 34
Small Bank—Big Business by Nikolai Popov 38

LITERATURE AND THE ARTS

Saints and Symbols by Yuri Ovsyannikov 29
Lesson in Telepathy by Vladimir Soloukhin 40
Moscow Art Theater in New York Interview with Boris Pokarzhevsky 57

RECREATION AND SPORTS

Who Said It? Quiz 22
Aragvi 54
Circus on Ice by Yuri Dokuchayev 62

MISCELLANEOUS

Letters to the Editor 4
Humor 27
Learning Russian 28
Children's Corner 33
Queries from Readers 43
Around the Country 44
Brief Comments 60
Next Issue 61

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

PUBLIC CONTROL

The problem of control is one of the most complicated in building the new society. When the Soviet Government first came to power, an inspection system was set up based on Lenin's principles—joint control organs for the Party and the Government, with the broadest possible participation of the people. This system completely justified itself. If there were deficiencies, they were due to the lack of experience in politics and state administration of the Soviet workers and peasants at that time.

Later on, during the period of the Stalin personality cult, Lenin's inspection system was flagrantly violated. The control organs of the Party were separated and isolated from those of the Government, and the people were practically barred from participating in inspection.

After exposing the personality cult, the Party set about righting wrongs and restoring the standards of socialist democracy in all areas of Soviet life. The Twenty-second Congress issued directives to reorganize the whole control system. It revived Lenin's principles, creatively applying them to contemporary conditions.

At the present time the inspection system consists of joint Party and State Control Commissions in the districts, regions (territories) and republics assisted by a ramified network of public inspection groups. The work of the local commissions is coordinated by the national commission in Moscow. The public inspection groups operate at industrial enterprises, construction projects, on the collective farms and state farms, in offices, educational establishments, research institutes and residential blocks—in a word, at every collective of any significance.

The statistics on the numerical correlation between the Control Commissions and the people's inspection groups are revealing: there are 3,280 of the former and 700,000 of the latter. Whereas the staff of the commissions is kept to the minimum (for example, it consists of only one man on the district level), participation in the people's inspection groups is encouraged, and total membership now tops 4,300,000.

Thus, the official inspection organs, the commissions, rest on a very broad foundation of public bodies consisting of representatives of the population. The very same principle of mass participation of the working people is followed in all the other spheres of our political system.

The people's inspection groups are elected. Their members are workers, collective farmers, professionals, office employees, artists, students, pensioners and housewives—the most principled people in the collectives, those with the most initiative. Some are Party members, others are not; some are young people, others are on in years. The generations work in unison here, the enthusiasm of the younger members complementing the experience of the older. All group members are volunteers, that is, they do their inspection work without pay in their free time.

The existence of a control system involving millions of people is primarily due to the size and complexity of the task of actively and creatively helping the Party and Government improve the guidance and management of all the processes involved in developing the new life.

It stands to reason that the recommendations of the inspection groups must carry weight if they are to be effective in the struggle against shortcomings, infringements and abuses, which constitutes an integral part of their work. That they do is evident from the news items found from time to time about a manager of one or another enterprise who has been removed from his post by decision of the control bodies, or about proceedings that have been instituted against a Government or Party official. However, the people's inspection groups consider their main work to be the timely discovery, correction and elimination of shortcomings.

The control organs employ various methods of work. They organize regular checkups and inspection of both individual enterprises and whole branches of the national economy. Sometimes a check may be held simultaneously throughout a republic or even the country, with hundreds of thousands of volunteer inspectors participating.

For example, a check on how metal is accounted for and utilized at industrial and transport enterprises, construction projects and storage facilities in the Russian Federation involved 350,000 volunteer inspectors and 15,000 targets. Reserves of ferrous and nonferrous metals greatly exceeding standard requirements were unearthed at many enterprises. The Control Commissions adopted the recommendations made by the people's inspection groups to correct the situation, and those guilty of mismanagement were demoted.

Another example is the check made nationally on the storage of freight and its delivery from railway stations and ports. As many as 300,000 people took part in it. Literally all the railway stations and ports of the country were scrutinized to determine the methods of storing and moving freight. When the people's inspectors finished their examination, they submitted their recommendations on how to improve the situation.

By exposing inefficiencies and taking steps to eliminate them, the people's inspection groups pinpoint important problems of economic and cultural development. For example, the Ukrainian Control Commission, basing itself on the proposals made by local inspection groups, has submitted for consideration by the Ukrainian Council of Ministers more than 20 suggestions dealing with the improvement of the leadership and the more efficient organization of various sectors of the republic's economy. All of them were supported and approved by the Ukrainian Government.

It is not surprising that the inspection bodies are mostly concerned with economic problems since their solution is crucial for the construction of communism. "The people's eye," as inspection is called in the Soviet Union, must be especially vigilant.

At present the most complex problems being worked on are the priority development of the most progressive branches of industry, the intensive electrification and chemicalization of the national economy and the expansion of consumer goods production. A great deal of attention is being paid to figuring out how to more efficiently turn out products of better quality.

It is only natural that the people's inspection groups should be concerned with these problems. This is how *Pravda* headlined a series of articles about them: "Public Controllers Concentrate on the Quality of Products"; "Control Groups at Urals Factories Supervise Filling Chemical Industry Orders"; "Public Controllers Call for the Complete Mechanization of the Timber Industry!"

At about the same time *Izvestia* published a number of articles by active volunteer inspectors who made proposals on such important problems as training engineers for light industry, increasing the efficiency of farm machinery on the collective farms and decreasing the time it takes to construct factories. Millions of Soviet workers, farmers and intellectuals taking part in public inspection have accepted Lenin's advice not to rest on their oars, to soberly assess shortcomings, to concentrate on unsolved problems. Their activity and initiative keeps growing.

The people's participation in inspection groups is giving them the administrative experience they need to run their country. After working in these primary links of inspection, many people are asked to serve as volunteer inspectors on the Control Commissions. There are already 130,000 such members manning 16,000 departments and committees of the Control Commissions.

The Soviet inspection system is one of the most effective institutions of socialist democracy. In the process of working to improve the administrative bodies, the public controllers are improving themselves and at the same time helping to administer the state.

LETTERS TO THE EDITOR

NO HEBREW BIBLE SINCE 1917?



Dear Sir:

The Los Angeles Times *columnist Paul Coates states in his column of August 25 that "Russian Orthodox Bibles were printed in large numbers in 1957. A Russian language Bible for Baptists was published in 1958. A Koran for Moslems was printed in 1958. No Hebrew Bible has been permitted since 1917."*

Is there any truth to that statement? As far as is known, no religious objects of any kind had been produced in the Soviet Union. What are the real facts about it? Please inform us either by replying in your magazine or privately. If in the publication, kindly mail me the issue in which it will appear. We are having a hot debate on it.

This is an entirely new twist in the long line of canards regarding "Soviet Anti-Semitism."

If you mail the issue, bill me for it.

Daniel Sigal
Los Angeles

Rabbi Natan Olevsky answers at our request

Sir,

I have just read your letter citing Mr. Paul Coates' story that the publication of the Holy Bible for Jews is supposedly banned in the USSR.

Let me describe the real situation.

As a rabbi and a religious person, I very much regret that in the USSR, as elsewhere in the world, the number of Jewish believers has fallen off greatly and tends to keep falling. Hence the lack of interest in the Bible in Hebrew and the lack of demand for it.

It would cost many thousands of rubles to publish the Bible in a printing of 5,000 copies. And the money would be wasted, since it would have no sale.

I am reliably informed that every religious Jewish family in the USSR has one or more copies of the Bible in Hebrew, in Russian or some other language. The Torah is read at all synagogues on the days commanded, with all members of the congregation following the passage from the appropriate book of the Bible. In addition to the Bibles that the members of the congregation own personally, synagogues have dozens, sometimes hundreds, of copies for worshippers to use at services.

In 1927 the Old Testament was published in five volumes in Hebrew in Bobruisk, Byelorussia, and in 1940 it was published—also in Hebrew—in Vilnius, capital of the Lithuanian Soviet Republic. The second publication had a particularly wide distribution, and since then no need has arisen for another printing.

No Jewish congregation has ever raised the question of additional printings of the Bible or the Talmud. However, should the need arise, they could go ahead with publication and encounter no obstacle.

As for Hebrew prayer books, they were published in 1920 in Odessa, in 1922 in Petrograd, in 1924 in Rostov-on-Don, in 1928 in Kiev, in 1934 in Minsk, and in 1939 and 1940 in Vilnius and Riga.

At the end of 1955 the Moscow Jewish community printed 4,000 prayer books. It took more than six years to sell the entire edition, though copies were sent to nearly all Soviet Jewish communities. Even the largest bought only 10 to 25 copies. The reason, as I have said, is that there are fewer believers now, and the devout Jews have enough prayer books.

Religious calendars are published annually by different communities. We have 5,000 copies printed in Moscow every year. They are sold not only in Moscow but generally. Here again sales are very slow.

However, when a Hebrew-Russian dictionary, which also contained a course in Hebrew grammar, was published in a printing of 25,000 copies in Moscow in 1963, it sold out within two or three months. Currently a new edition is being prepared.

This all shows that the declining interest among Jews in the Bible, prayer books and in religion generally derives from the fact that Jewish children, young men and adults seek a higher secular education, not a religious one, as was the case in czarist Russia.

Although there are many Jews in Moscow, Leningrad and other Soviet cities, in the past 20 years not one young man has applied for admission to the theological seminary, and this despite the free tuition, the large scholarship grants (three to four times larger than university stipends) and other benefits.

Soviet Jews stand on an equal footing with all other nationalities, and religious Jews have the same rights as members of the Russian Orthodox Church and the Moslem, Baptist and other faiths.

This is the true picture.

If you, Mr. Sigal, were to come to the USSR and visit our synagogues, you would see for yourself that the cock-and-bull stories about discrimination against Jews or the Jewish faith are, at best, the result of misinformation and, at worst, downright slander.

Natan Olevsky
Rabbi of the Jewish Orthodox Community
Maryina Roshcha, Moscow

OUR DECEMBER ISSUE

Dear Editor

How refreshing it is to read your magazine, *USSR*, once a month, for in it I see the reflection of a society effervescent with youthful energy and enthusiasm. When one lives in a society in which spiritual values mean, to a large degree, opportunities for commercial exploitation for private profit, when one must go to doctors to whom the health of the body means only how much money can be made from it, and when one lives in a society whose cultural and moral values have degenerated to a point of mere escapism from a mad whirl of competition for money, material possessions, and status, the only avenue left is to search for new ideas. Thanks to teachers who have taught me to be open-minded and objective, I am beginning to find hopeful answers to society's problems and to see that communism isn't as bad as some people make it out to be. Your December issue is especially helpful and enlightening in showing communism as a sensible solution.

Please print my letter in your magazine section "Letters to the Editor."

Thank you,

Sincerely,
A College Student,
Azusa, California.

Dear Editor,

I am a Japanese student majoring in political science here at Salem College.

I have read your magazine "USSR" at our library. And I am so delighted to see the December issue, "Your Questions on Communism." This covers entirely what the people in non-communist countries want to know. . . .

Yours sincerely,
Isao Yamada,
Salem, West Virginia



The concluding stanza and sketch of an original New Year's greeting card which Mr. John W. Kilts of Arnold's Park, Iowa, created and sent to the staff of *Soviet Life*.

LONG LIVE THE ARCHIMEDESES!

Impressions of Young Siberian Scientists

BY TAMARA ILATOVSKAYA

Drawings by Anatoli Sukhov

THEORETICIANS

At Moscow University we always thought the physics crowd the gayest and most ingenious. They would arrange marvelous socials, stage side-splitting skits and have fascinating hikes. In sports they were sure to wrest the prizes from the flabby hands of the humanities bunch. The fact that the physicists were a select group was, of course, part of the story. But that was probably not the decisive factor.

Indeed, now and again they discussed literature and art with much greater profundity and interest than we philology and journalism students. In debates they were more tolerant and compassionate. Possibly it was because instruction in the humanities was encumbered by tradition and timidity about independent brain work, while the physicists worked with the most modern and iconoclastic of sciences.

They also had another ace up their sleeves. Even as students they knew that scientists were not only fighters but also targets for foolish blunders. So they set out on the paths of science in groups, just as when mountain



climbing. They had great names to look up to: Igor Tamm, the mountaineer; Sergei Sobolev, the swimmer; and Irene Curie, the slalom queen. The scientists seemed to be especially partial to mountaineering. "An obvious yen for Olympus!" the boys and girls in the humanities department would remark sarcastically. However, both sports and science created bonds of friendship, at least among the scientists on the staff of the Siberian Branch of the USSR Academy of Sciences.

The theoretician is forgiven his eccentricities—to a degree, of course!—in behavior and clothing. They somehow help him to counteract his intensive mental effort, to preserve a boyish freshness, bring him closer to "miracle working" perhaps. Can you, the layman, understand what underlies the behavior of the greedy meson, which gobbles up nucleons bigger than itself? Much like the Biblical cow that devoured seven others, but grew no fatter for all that. One has to be conditioned to accept the unusual.

Our usual picture of the academician is of a venerable ancient with a black skullcap perched on his silvery crown, who sits in an enormous study as quiet as the inside of a bookcase and hates drafts like the very devil. The association stems from potboilers in which the professor is always depicted as an absent-minded crank. In fiction the academician never laughs, dances, skies or wears the latest in suits, and is always forgetting something or other. In no book will you ever find a 30-year-old academician who walks with the springy step of an athlete, wears a car coat in a frost, and puffs a cigarette by an open window in deference to the nonsmokers in the room.

On the university campus, and also in Komsomol committee rooms, I often ran into a tall, witty individual of about 35, who sticks in my memory because when others were obviously indulging themselves in fantasy, he would invariably come up with a simple, sensible solution. He had an amazingly realistic outlook on things—a sobriety of thought, so to say. His opinion was appreciated and respected. He was an interesting conversationalist, who waxed enthusiastic about almost anything under the sun, was well up on many things, and had a fine flair for the humorous.

I remember him speaking fervently for the Universe Coffee Club, delivering a passionate harangue that attracted an immediate following. He was a very lively sort, very much of this world, and as far as one could judge by his looks, an athlete. I learned later that he was Dmitri Shirkov, topnotch physicist, Lenin Prize winner and corresponding member of the USSR Academy of Sciences, author of several dozen papers on the theory of elementary particles and coauthor with Academician Nikolai Bogolyubov of the world-famous *Introduction to the Theory of Quantized Fields.*

In Bristol some 16 years ago the British physicist Cecil Powell discovered a new particle which lives for only a one-hundred millionth of a second. It was dubbed the pimeson, or, for short, the pion. Mesons have always given physicists a lot of headaches. For some reason they keep obstinately poking their noses into other nuclear affairs and lead experimenters a dance. Finally, scientists realized that these particles carried the energy inside the nucleus and served as the cementing agent, binding the indifferent protons and neutrons into one nucleus. Unexpectedly, they came to occupy a place of the greatest prominence in solving the mystery of intranuclear forces, a factor in one of the knottiest problems of modern physics. How do these particles carry the energy and how do they behave when they collide? This problem, called "pion-pion interaction," is the one Shirkov's team has tackled.

By now physicists have virtually climbed the "meson" peak. "Pion-pion interaction" has boiled down to "pion resonance." Scientists have learned that given a definite quantity of energy, two pions will interact and merge for an instant to produce a new particle, the rho-meson. Siberian researchers discovered that.

In the room where the theoreticians congregate every day after dinner, the most glamorous exhibit in the heated debates that follow is the blackboard filled with exotic formulas. Cigarette butts all over the place, of course. On the table heaps of journals from all over the world—the USA, Britain, Italy, Japan. Their contents will tell you what is happening at the moment in the world of theoretical physics. So far Soviet physicists working on elementary particles are clearly up in the forefront.



A NEW GOETTINGEN?

Modern-day physics is as sensational as a Conan Doyle story. And the physicist—you see him with a shining halo round his head. Something special about him, an impression created by his breathtaking achievements—things like rockets, nuclear energy and atom-smashers. In plain fact, the modern physicist is no superman. Nearly everything is hammered out in discussion ("powwows," you can call them) in rooms aromatic with strong coffee usually. It's not absolutely necessary, but a clean blackboard with a piece of chalk is—and, of course, a big idea to throw around. It is twisted and turned and viewed from every angle, no matter who first suggested it. It is compared with its opposite and refuted by a whole team, a department or even a section. Indeed, the tasks facing physicists studying plasma and elementary particles are so complex that one man simply can't cope with them alone. Articles are published over what looks to the uninitiated like an excessively long list of names. This is no "honorary presidium"; all of them did the work: one suggested the idea, another developed it, a third did the calculations, and so on.

One day, at a planned seminar, the happy suggestion was made to have unplanned seminars. This gave birth to the famous Cybernetics Coffee Club, where over a cup of the black liquid Sergei Sobolev produced a brilliant impromptu forecast of the future that lies ahead for mathematics, while Igor Poletayev, a man of great erudition and bursting with aphorisms, spoke of the formalization of the creative process. Yuri Rumer, one of the department elders and head of the Institute of Radioelectronics, reminisced about his meeting with Albert Einstein and about the Goettingen of the 1920's, then a dazzling constellation of geniuses in the realm of physics. Today the young people are bound to be a bit cocky. As they listened, they probably thought to themselves that they were creating a Goettingen of their own.

At these joint research centers one bright brain is sharpened by contact with another,

a great advantage. You don't have to go far for examples. Some time in the future, when the scientist is as popular as the soldier, museums of history will be filled with fine collections of coffee tables—some of them, certainly, from the Siberian academic township.



SCIENCE-PRODUCTION-SCHOOLING

One evening a young fellow who looked about 19 or 20 called on an acquaintance of mine. His crew cut barely skimmed the top of the door. He had a pleasant, open face and a confident manner. The only childhood habit he had retained was his way of fingering his forelock when deep in thought. His name was Volodya Mazepus and he had just turned 16.

Let me tell you now how he was "discovered."

It was already late, and the usual buzz in the Komsomol committee room had subsided somewhat. The young scientists were overwhelmed with work, preparing to welcome participants in the third and final round of the All-Siberian Physics Contest. More and more envelopes with belated replies were being opened. The people reading them could hardly keep awake. Suddenly somebody said: "Hey fellows, listen to this!"

"This" was a brief letter from Sverdlovsk. An instructor of theoretical physics at the local teacher-training institute had written in about a boy he was keeping an eye on, a ninth-grader who had read works by Landau, Dirac and Planck. The son of a civil engineer, he had a remarkable feeling for the world of quantum emission and elementary particles. The instructor thought Volodya a boy of very exceptional gifts. A cable was sent to Sverdlovsk the same night, and soon thereafter Volodya arrived, having skipped all three rounds of the contest. Celebrated physicists talked with him as an equal, forgetting at times that their interlocuter, with his clear and steadfast glance, was only 15 years old. He had a truly insatiable range of interests, from astronomy and elementary particles to chromosomes and Debussy. Adolescence is a time when the distance between one's heart and humanity is shortest, they say. He wouldn't let a thing go by him; indeed, he simply couldn't. He wanted everything explained: the harmony or discord of the world, Landau and Vorontsov-Velyaminov, astrobotany and contrapuntal music.

He was enrolled immediately in the theory section of the Institute of Nuclear Physics, and will go through school and the university while on the job. He is enchanted by the domain in which he has found himself, the domain of the theoretician. He can thank his lucky stars for having started his scientific career there, among talented young people who are generous beyond measure in sharing their scientific knowledge.

Today's physicist takes an incredibly objective attitude toward success, talent and luck, which at times seems to change to a feeling of affection—though any physicist will tell you that to regard one's boss with affection is just a lot of sentimental nonsense. The scientist is always on the lookout for harmony; in fact his whole mind is attuned to it, because it is equilibrium, the law, the axiomatic truth. Every truth is harmonious, which is, perhaps, why mathematicians and physicists are so fond of music.

It was during the contest that Volodya met Dmitri Shirkov. The physicist realized he was dealing with a gifted boy whose concepts of physics, however, were all haywire, and that an early start must be made to straighten him out.

For the theoretician precocity of intellect is a necessity, though we don't give that fact as much attention as we should nowadays. For example, Shirkov's teacher, Academician Bogolyubov, was enrolled as a postgraduate from the ninth grade on, and by the age of 16 had already earned a doctor's degree.

In Shirkov's case the shoe was on the other foot. He went through two years in the university's department of physics as though it were terra incognita. Only in his third year did he realize that physics was his calling. He finished his postgraduate work brilliantly. Though they recognized an ascending star, scarcely any of his scientific colleagues suspected that in a mere 10 years he would be elected a corresponding member of the Academy of Sciences.

These 10 years were most eventful. He started off with a pyrotechnical display of articles at the Steklov Institute, then came Dubna, where the Joint Institute of Nuclear Research is located, and collaboration with Bogolyubov, a man of amazing intuition and intellect. This was followed by international congresses; trips to the USA, France and Britain; world recognition; and, finally, a snow-swept cottage in the Golden Valley near Novosibirsk. He, Serebryakov and Ginzburg made up the first Siberian trio of physicists working in elementary particles.

Ten years may or may not be a long time. For the theoretician it is a sizable chunk out of his life. The earlier he matures, the more he gets done. There should be some way to start schoolchildren off on a scientific career early. But precisely how? How does one go about spotting future Newtons in small village schools or in any of the scattered Siberian towns? How does one infect mischievous youngsters with enthusiasm for research?

One day Institute Director Gersh Budker and Shirkov put their heads together on this problem and came through with the idea for an all-Siberian school contest in physics. It caught the imagination of the youngsters. The winners were invited to Novosibirsk University, which trains specialists in thermonuclear physics, cybernetics and biophysics. The runners-up were invited to join the college of physics and mathematics, a boarding school with a special curriculum, whose aim is to introduce teenagers as early as possible to the fundamentals of higher mathematics and modern physics so that by the time they are 17 they will feel at home in research laboratories and be able to do research on their own. Indeed, the earlier they start a scientific career, the better. Students get no homework; after three daily lectures, they ski, play volleyball or attend science club meetings. Their instructors include renowned chemists, physicists and mathematicians as well as young enthusiasts.

The task of scouting and developing talent is occupying the attention of Siberian scientists more and more. The academy's Siberian Branch was conceived precisely with this combination of science, production and schooling in mind.

At the Siberian center it is hard to draw the line of demarcation between the classroom and the research laboratory. Dean of the department of physics is 30-year-old Roald Sagdeyev, with a doctorate in physics and mathematics. He looks like an undergraduate, and the doorman at the Nuclear Physics Institute, where Sagdeyev is a leading theoretician, often looks twice before he remembers who this not especially striking-looking, rather short, casually dressed young man is.

Scientists were unanimous in calling Sagdeyev's doctoral thesis on shock waves in plasma brilliant. It is interesting to note that one of the men before whom he defended his thesis was Igor Tamm, a leading thermonuclear physicist.

From the Nuclear Physics Institute one automatically expects something hush-hush and most unusual. One is always prepared to break out in ohs and ahs. Its director, Gersh Budker, is a *corresponding member* of the USSR Academy of Sciences and a person of much enterprise. His institute is the most impressive piece of architecture in the town. It sparkles with glass, has a vast fresco-decorated lobby. Everything is large, even the exhaust pipe is monumental. You can't believe it's just a pipe and think the physicists are pulling your leg.

In the hallways, which branch off into a maze of corridors, the Siberian Branch's achievements are exhibited in display cases filled with models and diagrams—indeed a parade of 20 institutes, the fruit of five years of creative endeavor.

The physicists do not work by a timetable; they come and go when and as they please. Sometimes they forget that anything else but science exists, and would more likely than not spend the night in their elegant building if the guards didn't shoo them out.



CYBERNETICISTS

Across the table sits an impeccably dressed young man chain-smoking. Though he is only 28, it's the fourth year now that he has been in charge of one of the biggest departments at the Institute of Mathematics and has earned both his master's and doctoral degrees. A rather slow-moving person, he is most considerate and tactful, his face always wreathed in a smile, even when he is wrapped in thought.

Yuri Zhuravlev, that's his name, is in torment, wondering what it is I want from him. He thinks it devilishly difficult and unfair to have to single himself out as representing a particular trend in mathematics. Though we spent several evenings talking about it, he failed to do that, winding up by telling me about Shannon and one Vasilyev, also a Yuri, who was also a Siberian cyberneticist. He thinks he must stand somewhere between the two. He even crystallized his contribution—minimization. I could see he was upset, as if this were too little.

This young man from Voronezh first stepped across the threshold of Moscow University's department of mathematics in the summer of 1952. He, of course, had no inkling at the time that a group of gifted scientists, who have since won world fame in cybernetics, was then in the making.

The students were told about the work done by the American, Claude E. Shannon, who sought to convey in the simplest possible manner the patterns of relay-contact systems. As he pored over the outlines of Shannon's solutions, it seemed to Yuri that we were standing on the threshold of a new and fascinating branch of mathematics. However, many of his classmates disparaged Shannon's work—a run-of-the-mill engineering approach to automation that had nothing to do with real science, they thought it. The problem had to be analyzed.

In his first paper Zhuravlev determined the most economical way of interpreting into machine language—or of programming, as it's called—intricate logical problems. He hunted for but one regularity, for one more algorithm.

A problem of vast significance was wrapped up in his examination paper. How could he simplify not the programming but the solution itself? Everything was hazy and elusive, a groping in the dark. However, his efforts evoked the interest of one of the instructors, who advised him to apply the theory of sets. This was Sergei Yablonsky, head of the university's cyberneticists. From that day on he, along with Professor Alexei Lyapunov, be-

came Yuri's friend as well as his supervisor.

At the time Professor Lyapunov was working on the problem of simplifying the solution of problems in cybernetics, a fundamental aspect which in the world of science had emerged some 50 years earlier under the name of minimization and which had since turned up from time to time in various forms to confront different mathematicians. All the daring minds trying to grapple with it were at once beset with such incredible difficulties that they threw in the sponge.

The pattern of every electronic system, be it a computer or a telephone exchange, is expressed in a formula, a logical polynomial, in which is interpreted the entire life and behavior of the system. The simpler and shorter the formula, the cheaper and more compact is the machine. When he first encountered cybernetic "codes," Yuri was amazed by the cumbersome nature of the basic formulas. To think they could give birth to elephantine affairs was simply dreadful; it would mean tens of millions of rubles wasted and fantastic dimensions. It was nothing but technical robbery, an elephantiasis in electronics!

NO SOLUTION?

In subdued voices the students thronging the corridor were arguing whether Shannon or Wiener should be dubbed "the father of cybernetics." Yuri took no part in the argument, his mind occupied with the thought that the father's "child" was too absurdly cumbersome and greedy. Engineers were no longer able to pick out from the multitude of "Ons" and "Offs" the minimum of necessary contacts. A new branch of mathematics was needed, and that was what Yuri was thinking about.

Suppose we know the functions the machine discharges, its comprising elements and the cost of each. The problem is to produce a machine at the minimum cost or, in other words, simplify the formula on which the machine is based. It was a matter of looking for the universal solution, a kind of cybernetic lever.

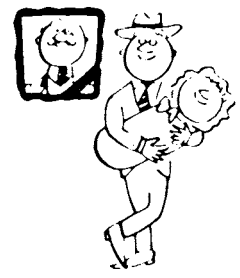
A time of fever set in. Every three or four months, one or another scientific journal or popular science magazine would present a new universal method for simplifying polynomials, a panacea for every cybernetic evil. How many times people thought the riddle of the minimization sphinx was at last solved, believed that now a triumphant age of electronics would set in, and cheap and nicely compact machines would be produced. However, these short-lived hopes were invariably dashed. The new method inevitably failed to operate; it was as hopeless as all the others prior to it. The elephants continued to hold the fort. Something was wrong somewhere.

Mathematicians sometimes say a problem has no solution. They say so wryly, though it is the objective truth. More than a century ago the Scandinavian mathematician Henrik Abel won immortality when he proved that a quintic equation in radicals had no solution. Solutions exist for quadratic, cubic and biquadratic equations but not for quintic.

Yuri Zhuravlev got his master's degree in physics and mathematics four years ago, when he demonstrated that a universal method for simplifying all types of electronic systems was simply nonexistent. The frontal attack on cybernetics, which had taken so great a toll in time and energy, was given up and an artful, protracted siege started. If one wanted to evolve useful methods, one had to take a concrete class of machine. Universality was out of the question. This opened up a vast domain of particularities, a wealth of detail, which had to be summarized. And that is precisely what teams of cyberneticists, including Zhuravlev's section, are preoccupied with, having divided among themselves the various classes of systems.

Academician Sobolev called Zhuravlev a talented cyberneticist. He could have put it in many other ways. But he put it the way he did because cybernetics is the foundation on which the entire structure rests.

Zhuravlev once deplored the story written about him which gave him something of a saintly halo. I would say that is not so far off for the real scientist; the shine comes from the glow in his eyes and heart.



BIOPHYSICISTS

Take heredity. Life reproduces every second, obeying each wave of this magic wand. It multiplies much like the issues of a newspaper coming off the printing presses. The son resembles his father, except that he has his mother's blue eyes. For more than 14 generations the children in Colonel Talbot's family were born with symphalangism, or ankylosed finger joints. The Hapsburgs were notorious for their protruding lower jaws.

Why is there division into sexes? Can man become immortal, at least relatively so? How do freaks come to be born?

Some scientists think this age of ours is misnamed; it is not the age of the atom and outer space but the age of biology. Biochemistry is the queen of the sciences!

Nature has nothing more intricate and subtle than living matter. It seemed unthinkable to try to get down to its roots. However, the day did arrive when man attacked the very mechanism of heredity. He wanted to know how an organism was born from one cell. And he found out. Scientists Crick, Watson and Wilkins got the Nobel Prize for their study of desoxyribonucleic acid or, more simply, DNA. These three letters provided the key to heredity.

Iya Kiknadze, head of the laboratory of general cytology and a vivacious young lady to boot, examines her microscopic collection, an amazing assortment of commas, string beans and minute "telephone receivers"—all photographs of chromosomes. A picture of the chromosome, magnified an umpteen number of times, adorns the wall. Stretching it a bit, we could call it an artistic portrait of that mysterious stranger, the carrier of the "code of life," which eluded the grasp of the scientist for so many years.

The chromosome is stuffed with DNA molecules, like the wires in a telephone cable. These molecules hand down the hereditary characteristics from parent to child. The genetic code is an incredibly complicated thing, containing all the characters and features that the organism has accumulated throughout the entire history of the species. And it was just as incredibly difficult to spot the carrier of this code. Scientists did that only recently.

DNA, we learn, possesses the amazing property of being able to "remember" every trifle in the development of our organism. As we take shape, we carry out, as it were, the program set in DNA. Conveying this program from parents to children, DNA stands on guard, as the scientists say, over constancy in the change of generations.

DNA molecules vary even within the limits of one organism. Each has its own sphere of influence. Identical molecules group into the bodies called chromosomes. In man there are 48 chromosomes in each cell. The full set comprises the complete book of heredity. God save you from losing a page! Deprivation of just one chromosome may result in imbecility.

At Kiknadze's laboratory they study chromosome behavior under varying conditions—not simply for reasons of pure science, though. Congenital diseases and senility are rooted in the chromosomes. Can they be controlled?

Kiknadze borrowed "giant" chromosomes from mosquitoes. Under the microscope a wonderful panorama of metamorphosis was revealed to her.

The greater the degree of precision with which the experiments were conducted, the more insistent was the confirmation obtained of the fact that not only each chromosome but each chip of a chromosome had its own part to play, one it had rehearsed throughout the ages.

Kiknadze once thought of somehow influencing these fragile filaments ot life, of testing her power over this mechanism, whose secret had been unraveled. Could one tell the chromosome, or at least a mosquito's chromosome to begin with, what it should do?

PHYSICS STEPS IN TO HELP

Kiknadze started her laboratory from scratch, so to speak. She had graduated from Leningrad University and finished her graduate work. Though she hadn't much in the way of experience, it was enough to tell her quite firmly that in her laboratory she could not dispense with the physicist. True, the physicists viewed biology rather warily. The precision of their experiments seemed incompatible with the blunt generalizations biologists are wont to make at times. The people needed had to be enthusiasts prepared to learn without end, to be painstaking and interested.

One such enthusiast, Alexei Gruzdev, turned up in the academy township in 1958, when it was just beginning to be built. Kiknadze asked him to invent a gadget which, without crippling the chromosome, would remove one of its parts, in order to elucidate its functions.

The device was a simple one. A mirror and the tiny orifice of a probe were drawn upon to condense the light coming from an ultraviolet lamp placed behind several lenses into a beam as thin as the finest needle, which, directed at the microscope slide, pricked out a minute bit of chromosome. The probe orifice was made of joined razor edges, which gave an accuracy of one to two microns. It worked. Science had made one more little step forward toward heredity control.

Arthur Sherudilo, a friend of Gruzdev's and a graduate of the Physico-Technical Institute, contrived a photometer to measure DNA in the chromosomes. It is incredibly accurate. Magenta red is used as the coloring agent, because for some reason it alone colors DNA. A slender green ray is pinpointed at the photometer slide by means of a device reminiscent of Gruzdev's contraption. The photometer gauges the amount of light which the magenta red absorbs.

So far the physicists won't take it upon themselves to draw conclusions. No organic symbiosis of physics and biology has yet been achieved. But that will come eventually.

One's first impression of the academy township does not change. This is a daring project, timely and necessary, a magnificent start for the breath-taking advance of a new generation of scientists. Searching for a comparison in history, one could call it a new Goettingen, what with its spirit of quest and youth.

Of course, I was told that this was a lot of hifalutin nonsense, that they were having a pretty hard time, that they were short of staff and that too little had been done.

That isn't what occupies my thoughts, though. What I think about is the trust reposed in youth, about a factor that's mostly potential, that can't but do much even if it hasn't done much yet.

How vital it is for science and humanity that the men of learning who toy with such things as the chain reaction and a directed explosion be frank and honorable human beings!

Long live the Archimedeses!

PLYING THE HIGH SEAS

MERCHANT MARINE

VICTOR BAKAYEV
USSR Minister of the Merchant Marine

The growth of the Soviet merchant marine in recent years has stirred interest and speculation in the foreign press. Our correspondent Yuri Andreyev asked Victor Bakayev, USSR Minister of the Merchant Marine, to give our readers a picture of the trends and developments in Soviet shipping.

He provided us with facts and figures, and invited Deputy Minister Dmitri Zotov, department chiefs Nikolai Bykov and Nikolai Malakhov, and the head of V/O Sovfrakht, Alexander Savelyev, to discuss their specific divisions.



QUESTION: The Western press has said on several occasions lately that our merchant marine is being expanded in order to control the high seas. Will you please comment on the statement?

ANSWER: It is true that the Western press has been paying a good deal of attention to our merchant marine recently. There has been much talk in the press and in speeches about our expansion, about our attempts to "invade" the world shipping market, about our "crafty objectives."

Edwin M. Hood, president of the Shipbuilders Council of America, voiced the opinion that as a result of the extensive Soviet shipbuilding program, we may exert an unusual, surprising and very significant effect on shipping and traditional patterns of transportation. The conclusion is correct and shows foresight, and we cannot help agreeing with Mr. Hood. We can also understand his regret that the rate of growth of the Soviet merchant marine is faster than that of the United States. But we are surprised, to say the least, when he goes on to say that the expansion of our shipping is aimed at control of the high seas.

We are inclined to think that perhaps some of the people who follow the progress of our merchant marine from abroad have a private ax to grind. They are inclined to regard us as a rival. To be sure, for some decades now the Soviet Union has chartered hundreds of vessels to transport its goods, for which it has paid out hundreds of thousands of dollars. Some people have begun to think of this as a kind of Christmas present that is due them. And as soon as the Soviet Union began to build up its own fleet for transporting its own goods, the accusations of expansion became loud and numerous.

If we turn to the most accurate and objective language of facts and figures, then it becomes obvious that there are no grounds for such accusations. In the past 10 years the turnover of Soviet foreign trade increased 2.7 times, while the tonnage of the Soviet merchant marine increased by two and a half times. The Soviet Union has moved to fifth place in the world for trade turnover, and it is only reasonable that we should be taking steps to build up our merchant marine to keep pace with world shipping.

Simply, we are expanding our fleet to freight our goods because we wish to develop our trade in every way possible.

QUESTION: How much of the country's trade is handled by the merchant marine?

ANSWER: The Soviet Union has trade relations with 91 countries, 13 of them socialist, 51 developing and 27 capitalist. Our ships call at the ports of these or neighboring countries to deliver goods. In 1964 they sailed a total of 44 million nautical miles or, figuratively speaking, they spanned the earth 2,000 times along the equator, weighing anchor 11,000 times at 600 ports of call. Ships flying the Soviet flag sail all the seas and oceans of the world from the Arctic Ocean to the Antarctic.

First of all, I would like to say a few words about our shipping with the socialist countries. Their rapid economic growth and socialist division of labor have resulted in an increased exchange of commodities among these countries and consequently in the rapid development of shipping. At present approximately a third of the over-all turnover of exports and imports carried by Soviet shipping goes to and from the countries of the socialist community.

A good deal of merchandise is shipped to the developing countries, including foreign trade goods and consignments of economic aid. The USSR is helping the newly independent states to build about 500 industrial and other projects. More than 700,000 tons of various goods were delivered from Soviet ports by sea to Bhilai (India) alone for the largest iron and steel plant in Asia. We also ship to India farm implements and equipment for its machine-building industry; lathes and instruments; mine equipment; and everything necessary for the oil installations, power stations and other projects it is building with Soviet aid.

Considerable shipping is done to Indonesia, where the Soviet Union is providing technical assistance in building plants and roads.

Large cargoes of equipment and building materials go to the United Arab Republic (UAR). The Aswan High Dam alone accounted for more than 200,000 tons of equipment and building materials. Many items are shipped to the UAR for the metallurgical, machine-building, chemical and textile plants being built with Soviet assistance.

More and more freighters leave the USSR for Ghana, Guinea, Morocco, Somalia and

way traffic along the Northern route is growing.

QUESTION: Vessels with modern technical equipment, including nuclear installations, must require highly qualified seamen. How do you train them?

ANSWER: For training you need free time and good working conditions. Our merchant seamen, like all Soviet citizens, work a seven-hour day, 41-hour week. This gives them ample time for study and recreation. More than 30 per cent of all personnel on our merchant ships study free of charge by correspondence at secondary and higher schools. Teachers are often sent on board ships, and at large ports we have consultation centers. The seamen are given time off with pay to prepare for and take examinations. Our system of correspondence and regular school training for the merchant marine specialties gives us qualified personnel in large numbers. Every fourth Soviet seaman has either a specialized secondary school or higher education.

In conclusion, I would like to emphasize that in building up a modern merchant marine, we not only promote our own interests and those of the other socialist countries, but we help to develop world shipping and trade as well.

The policy of our merchant marine is shaped by the country's general economic policy and fair and friendly economic competition with capitalist countries. Its purpose is to meet the country's increasing demand for shipping. Its purpose is *not* to seize control of international shipping. Any such accusation is absurd, to put it mildly. The single aim and purpose of the merchant marine of the USSR is to promote economic prosperity on the basis of mutually profitable international trade.

FIFTY-SIX REGULAR ROUTES

To stabilize goods traffic within the country and with foreign countries, we run our merchant marine ships on regular freight shipping routes by a timetable. The advantages of regular runs which are profitable to both the shipowner and the shipper are perfectly obvious.

At present Soviet ships on these regular runs carry up to 6.5 million tons of dry cargo a year. Of this amount only 2.5 million tons are freighted by the 29 shipping lines with routes abroad. This is obviously too little, and we are sparing no effort to double and even triple the volume of traffic.

Soviet vessels sail 11 regular routes jointly with the shipping companies of Britain, France, Belgium, the Netherlands, the German Democratic Republic, the Federal Republic of Germany, India, Ceylon, the United Arab Republic, Bulgaria and Japan. Most of the lines have been in regular operation for several years, have a good reputation, and give us high returns. Our merchant marine transports up to 1.1 million tons of general cargo on these year-round routes.

Besides this, the Soviet Union maintains 18 lines on its own to foreign countries. Soviet Baltic ports have regular traffic with ports in Britain, Poland, Norway, Denmark and other European countries and in West Africa. The Black Sea ports are in regular contact with the ports of Italy, Iraq, East Africa, Indonesia, Vietnam; and the ports on the Danube, with those on the Red Sea, in North Africa and the Near East.

The ships on these runs carry more than 1.4 million tons of cargo a year, mostly of a general type. During the 1964 navigation year we made the first regular runs from our northern ports to Britain, Belgium and Norway, delivering timber on schedule.



DMITRI ZOTOV, Deputy Minister of the USSR Merchant Marine

So you see, the geographical scope of our regular shipping is quite large. In the near future we intend to make it even larger.

To speed the loading and unloading of ships on these regular runs we provide special moorage with highly efficient equipment. This is much more of a problem in some foreign ports than in our own, and we may go so far as to rent wharves and warehouses in some ports of the Afro-Asian countries to speed up service.

In principle our regular shipping lines, like our merchant marine, in general, serve to meet the demands of Soviet foreign trade, but in cases where it is mutually profitable for the shipper and ourselves, we are prepared to freight cargoes for foreign shippers as well.

WE CHARTER AS WELL AS CHARTER OUT

V/O Sovfrakht expanded operations very considerably in recent years because of the increase in trade turnover and the resulting demand for shipping. This is the only Soviet organization to charter foreign ships for the transportation of Soviet cargoes.

At present V/O Sovfrakht does business with more than 3,000 foreign shipowners and brokers. In 1963 it chartered foreign cargo vessels for 3,000 voyages, paying out millions of rubles to foreign shipowners. The volume of transactions last year was even greater, one and a half times more than in 1963. Besides chartering vessels for separate voyages, V/O Sovfrakht books tonnage on time charter. Its business relations have proved to be mutually profitable.

Due to the growth of the Soviet merchant marine, V/O Sovfrakht has been beset with new problems in recent years—chartering out ships and freighting cargoes of foreign owners on Soviet ships that otherwise would carry ballast.

I should note that Soviet ships are speedy, have well-trained crews and absolutely reliable technical equipment, and always meet their contract stipulations. In a relatively short period of time the Soviet merchant marine has won the esteem of shippers in many countries.



ALEXANDER SAVELYEV Head of V/O Sovfrakht

Representatives of Soviet shipping are often asked when the Soviet Union will stop chartering foreign ships for Soviet cargoes. The answer is "never." Every businessman knows that even with a very large fleet it is often more profitable to charter other ships. Chartering a ship for cargo space is often cheaper than sailing your own vessel to a port with ballast. There are many other circumstances and conditions which make it more profitable to charter a ship on the spot.

The best reply to this question is the large future we see for Soviet trade. By very modest estimates our foreign trade turnover will increase fourfold by 1980. Such a growth in trade, and therefore in shipping, will sustain the Soviet Union's interest in chartering foreign vessels.

The main direction of V/O Sovfrakht's activity today and in the foreseeable future can be summed up in the phrase: "We charter as well as charter out."

LUXURY CRUISE LINERS

The Soviet passenger fleet has 50 liners for travel abroad and hundreds of ships for domestic use. Thus far the largest liner in our fleet is *Sovetsky Soyuz* (30,000 tons), which can accommodate 1,250 passengers. *Sovetsky Soyuz* makes regular cruises on the Vladivostok to Petropavlovsk-Kamchatsky run. The







The new luxury liner Ivan Franko *accommodates 750 passengers and does 20 knots. This one-class boat has everything to make a cruise memorable—beautiful* décor, *elegant dining, swimming pools, etc.*

The Soviet fleet has 50 liners for travel abroad and hundreds of ships for domestic use. The Litva—*registered capacity 4,870 tons gross, main engines 2 x 4,000 h.p., speed 18 knots, 340 passengers.*

fleet has a score of sister ships modeled after the *Mikhail Kalinin* with accommodations for 330 passengers each. These vessels, built in the German Democratic Republic (GDR),



NIKOLAI MALAKHOV, Chief of the Passenger Fleet Division, Ministry of Merchant Marine

have seven regular routes from ports on the Black Sea to Marseilles, Naples, Genoa, Piraeus, Istanbul, Alexandria, Beirut and Famagusta; from ports on the Baltic to Havana, London, Le Havre, Copenhagen, Goteborg, Stockholm and Helsinki; and from our Far Eastern port of Nakhodka to Yokohama. This last route is gaining in popularity because the cheapest, safest and fastest travel from Europe to Japan is through the USSR. Many tourists now take a plane from some European country to Moscow. Then they take off on a superb 170-passenger jet liner which covers the distance to the Far East in eight hours. A comfortable Soviet diesel ship picks them up in Nakhodka and sails to Yokohama in a matter of 52 hours.

Recently a new passenger liner, the *Ivan Franko* (after the Ukrainian poet), joined the Soviet fleet. Its Soviet designers worked with German workers in the GDR shipyard. It has a sleek, streamlined body and features beautifully decorated lounges, decks for strolling, bars, restaurants and cafés, a movie theater, a sports deck and swimming pools—everything that makes for an enjoyable cruise.

We plan to use the *Ivan Franko* as a luxury ship for cruises to Soviet Black Sea ports as well as for trips to foreign countries. In 1965 there will be added to our fleet a sister ship of this class, to be christened the *Alexander Pushkin*.

There are many vessels of other types in the Soviet passenger fleet carrying passengers on domestic routes on the waters of eight seas. Among them are hydrofoils for 90 to 300 passengers that do more than 40 miles an hour. As many as ten million people a year book passage on our Black Sea lines.

Annually our ships carry tourists from Britain, France and other countries on European cruises, to the shores of Africa, and from West European to Soviet ports. In 1964 our ships carried more than 60,000 of these tourists.

SOVIET SHIPS BUILT AT HOME AND ABROAD

I would say that our general policy, in brief, is to build as quickly as possible a large, fast and economical merchant fleet fitted to load and unload quickly and efficiently. We want our ships built on a high engineering level, with sailing and loading operations automated wherever possible. The general purpose of increasing the freight-carrying capacity of our tanker fleet and dry-cargo ships is, of course, to cut shipping costs, particularly on long ocean voyages. Research centers determine the main trends in the cur-

rent and long-term development of our merchant marine.

Our marine engineers are busy designing increasingly more powerful and efficient diesel engines and gas- and steam-turbine installations for speedier craft. Their greater carrying capacity will reduce shipping costs.

More of our vessels are being built in Soviet shipyards. Production of merchant vessels on a large scale has made it possible to cut expenses, standardize marine machinery and equipment, and do a better job of supplying our ships with spare parts.



NIKOLAI BYKOV, Chief of the Contracting Department, Ministry of the Merchant Marine

The largest of our dry-cargo vessels are the turbine-powered ocean liners of the *Leninsky Komsomol* class. Quantity production of this class of ship was started in 1959 at the shipyards in Nikolayev and Kherson, on the Black Sea. Newly designed ocean liners of the *Poltava* class have been in production since 1962.

We have orders placed with foreign shipbuilders: the Japanese firm Hitachi, for several double-decked ships with a dead weight of 13,000-16,000 tons (*Omsk* class); the Wartsila Koncern of Finland (*Krasnograd* class); the Gdansk shipyards in Poland (*Murom* class); in Warnemünde, the German Democratic Republic (*Vyborg* class); and in Yugoslavia, with the Ulyanik shipyards at Pula (*Pula* class). These vessels will be powered by Burmeister-Wain and Zultzer-Mann diesels with a capacity of 8,000-12,000 horsepower and have a speed of 16.5-18 knots.

A large series of dry-cargo, double-decked ships with a dead weight of approximately 4,300 tons is under construction at the Neptune shipyards in Rostok (GDR). Soviet shipyards are building icebreaker-freighters and several series of lumber vessels. Poland and Finland are filling large Soviet orders for lumber freighters, and the Hungarian People's Republic is building us single-decked dry-cargo ships of the *Tartu* class with 1,200-ton carrying capacity.

The Soviet merchant marine already has a large tanker fleet as well as 12,000-ton dead weight ships of its own make in multiserial production. In 1959 Leningrad shipyards began to build turbine-powered tankers with a dead weight of about 30,000 tons. Still larger tankers of the *Sofia* class are currently under construction.

Orders for tankers with a dead weight ranging from 18,000 to 50,000 tons have been placed in Japan, Italy and Yugoslavia.

Besides large tankers, Soviet and foreign shipyards are building tankers with a dead weight of 4200 tons and smaller tankers with a dead weight of about 1600 tons.

All ships on order for the Soviet merchant marine have excellent working, living and recreational facilities. The crew is housed in one- or two-man, air-conditioned cabins provided with hot and cold water. The larger ships have swimming pools and sports decks. There are libraries and projection rooms for daily movie showings on all ships.

In the near future the Soviet merchant marine will be getting new ships of the following basic types:

dry-cargo, double-decked ocean ships (dead weight of 10,000 to 16,000 tons) mainly for general cargoes;

dry-cargo, double-decked motor ships (dead weight of some 5,000 tons) for freighting general cargoes in coastal waters and for short voyages abroad;

icebreaker-transport ships, double-decked, diesel-powered (dead weight of up to 9,000 tons) capable of sailing in Arctic waters without icebreaker escort;

universal single-decked motor ships (dead weight of some 6,000 tons) designed for freighting lumber and generally bulky cargoes under any navigational conditions;

lumber vessels (dead weight of from 1,000 to 3,500 tons) designed for delivering lumber to ports mainly in Europe and the Far East;

dry-cargo, single-decked motor ships (dead weight of 1,000-2,000 tons) for freighting various cargoes along the coast and between seaports with shallow waters;

motor ships for freighting ore and coal (dead weight of from 10,000 to 23,000 tons) for coastal navigation and ports abroad;

15,000 to 50,000-ton tankers powered by steam turbines and diesel engines for service on ocean lines and between European and Far Eastern ports;

diesel-powered tankers (dead weight of from 1,500 to 4,500 tons) for coastal navigation and short voyages abroad;

refrigerator ships of medium tonnage for freighting perishable cargoes under all kinds of navigational conditions;

freight and passenger motor ships of large capacity designed for long-distance domestic and foreign travel;

ships of the same type but of smaller capacity for local shipping lines in the Black Sea, the Caspian Sea, the North and the Far East;

high-speed passenger hydrofoils for coastal runs, accommodating 100 to 300 passengers.

PHOTOGRAPHS ON PAGES 9-13 MAY BE REPRODUCED ONLY BY PERMISSION OF THE USSR MINISTRY OF THE MERCHANT MARINE.

DATA ON THE DEVELOPMENT OF THE SOVIET MERCHANT MARINE



FOREIGN TRADE TURNOVER

(IN MILLION RUBLES)

1938	475	1959	9,463
1950	2,925	1960	10,071
1952	4,776	1961	10,643
1958	7,783	1962	12,134
		1963	12,898

STRUCTURE OF EXPORTS

(IN PER CENT)

	Manufactured Goods	Raw Materials
1913	36.0	64.0
1952	59.7	40.3
1962	63.6	36.4
1963	64.9	35.1

Seventy per cent of the Soviet merchant ships are less than 10 years old.

In the seven-year period from 1959 to 1965 the tonnage of the merchant marine will be increased 2.6 times.

In 1959 only 7.4 per cent of the fleet could do better than 14 knots; by 1966 the percentage will be 47 per cent. Vessels with a speed of from 10 to 14 knots will make up 48 per cent of the total, and only 5.4 per cent will do less than 10 knots.

In 1958 the percentage of ships with steam engines was 45.6. In 1965 they will constitute only 14 per cent of the total, and only 0.6 per cent will run on coal.

By the end of the present seven-year-plan period 86 per cent of the ships will be equipped with steam turbines and internal combustion engines.

The average speed of Soviet vessels increased by 34 per cent in 10 years. The increase in speed in the current seven-year period will be 21 per cent.

MARINE SHIPPING TURNOVER

(IN PER CENT)

	General Turnover	Turnover of Ships Sailing Abroad
1958	100	100
1959	109	110
1960	124	130
1961	150	166
1962	163	184
1963	212	256
1964	276	350
1965	348	455

In 1964 the Soviet merchant marine freighted about 100 million tons of cargo.

The trade turnover of Soviet shipping abroad increased approximately tenfold in the past 10 years.

Arrival and departure of foreign trade cargo in Soviet ports increased sevenfold in the 10-year period.

More than 13,000 foreign vessels now call at Soviet ports every year, compared with 2,482 vessels in 1953.

PRODUCTIVITY OF LABOR COMPARED WITH MARINE SHIPPING COSTS

(IN PER CENT)

	Productivity of Labor	Shipping Costs
1958	100	100
1959	107	94
1960	115	91
1961	130	89
1962	136	86
1963	166	82
1964	194	74
1965	221	68

IS THE AVERAGE MAN A

Dear Editor:

I have a lot of problems worrying me, and since I can't solve them myself, I want you to help me.

How does a person choose what he is going to do the rest of his life?

When I finished high school, I was faced with the same problem as all the other graduates—where to go for further study.

To college, of course. But which one? I didn't have the slightest idea. When you come right down to it, I thought, why do I have to go to college? Why do we all see ourselves as college students and not as workers in a factory or on a farm? So instead of going to college, I went to work in a coal mine in Karaganda. I started as a laborer, worked my way up to tunneler and then to electrician. After that I learned several more trades. But deep down inside I kept dreaming of going to college.

Now I have begun to study in earnest for my college entrance examinations. I am pretty sure I will be admitted and will be able to hold my own. But am I making the right choice? After all, it's going to be for life.

I had thought of becoming an engineer (because of my previous work experience and skills and, besides, engineering holds a top place in our country). But my marks in mathematics are never more than Good, and sometimes only Satisfactory. Let's say I graduate with a degree in engineering. What will it be worth if I'm not able to think up anything new, make improvements? Like the next man, I have my pride.

There are mediocre engineers, mediocre agronomists, mediocre schoolteachers. What I'm most afraid of is landing in that category. I'd rather be a good worker than a poor engineer. I don't want to be in the "average" or "rank-and-file" class.

How does one avoid being just "average"? Every person who chooses a profession, a profession for life, hopes, I think, that he will be a top man in his field, or at least a good one. But it doesn't always work out that way. Some switch to another field in their junior or even senior year at college; some just manage to pass their exams, get their diploma by a miracle, and after that do nothing, frankly speaking, but get underfoot.

Why does that have to be? How can it be avoided? How is a person to find his element so that he can really put all his energies, intelligence and knowledge to use and be of maximum benefit? So that he fulfills himself, feels that he is needed, and gets satisfaction from his work? So that he leads a full, active life and is happy?

Anatoli Petrushin
Reutov
Moscow Region

After Anatoli Petrushin's letter appeared, the newspaper received and published many comments from other readers. But first came the following thought-provoking editorial comment.

The words "average" and "rank and file" are often said in a disparaging tone. What is it about the words that people don't like? After all, there are rank and-file writers as well as rank-and-file construction workers, rank-and-file physicists as well as rank-and-file farm-machine operators. And rank-and-file cosmonauts, for that matter. When you come right down to it, practically everybody occupies a place in some "rank" or "file." We doubt whether anyone would object to being a rank-and-file cosmonaut. But when it comes to being a rank-and-file engineer or farm-machine operator, many people feel the way Anatoli Petrushin does. It therefore seems to be not so much a matter of the job a person holds as the field in which he works.

What makes one field more attractive than the next? Better pay? But according to the socialist principle of "to each according to his work," the harder and more important the work is, the better the pay.

It's not earnings, however, that seem to be bothering Anatoli Petrushin. He used to be a mine tunneler, and they make very good money. He knows that he will probably make less as an engineer, but that does not stop him.

Is it ambition, a desire to be important, that motivates people in their choice? But in our country a sheepherder, dairymaid or miner can become as famous as a physicist. Why, then, do young people prefer the fame of a poet, film actor or soccer player to the fame of a dairymaid or lathe operator?

An interesting thought to reflect on.

Perhaps the crux of the matter is that Anatoli wants to do intellectual, creative work. Creativity, however, is to be found everywhere; it is not restricted to any particular occupation. As a matter of fact, it is a moot question whether more of our innovating and inventing is not done by benchworkers than by engineers.

It seems to us that Anatoli Petrushin and many others equate "rank and file" with "mediocre," and this sends them on useless and self-deluding searches. If that is so, then where does the illusion originate? Is it sheer imagination or is it prompted by life's experience? And what, actually, do "average" and "mediocre" mean?

We invite readers to discuss these questions.

The opposites of mediocrity are richness of spirit, talent, zeal. Is one born mediocre or is mediocrity acquired? The same question holds for talent. Is it an innate gift or is it acquired through formal and self-education? Is it the fate of some people to be mediocre or is it the result of circumstances?

It would be hard to find a person who has not pondered these question at one time or another. An even trickier question is where does talent spring from? Unfortunately, it does not crop up so very often. But why? We look forward to hearing our readers' opinions on that point also.

Freedom to choose one's road in life is one of the most precious rights our society gives its citizens, and it guarantees this right by providing the material facilities, by placing at everyone's disposal shops, laboratories, farms, university departments.

How should the various social levers and incentives, both material and psychological, be used so that the capabilities of each citizen are employed with maximum benefit and effect?

Next, a few of the letters readers sent in.

Seek and You Will Find

I once read this thought: "Millions of people are considered incompetent by others and even by themselves because they are doing what they are not fitted for and are not doing what they are undoubtedly capable of. . . . What you lack you lack, and there is no sense in railing at fate. But if I have not managed to use that which I already have, and if I have not made any effort to develop my abilities, that is a real crime both against the society in which I live and against myself, the victim of that crime."

It is necessary, absolutely necessary, that everyone should find himself.

I should like to see this discussion continued endlessly, or at least as long as people need to transform themselves into citizens of the new society, in the full sense of the word.

Valentina
Kramatorsk
Ukraine

Believe in Yourself

The fear of being "average" comes from insecurity, a lack of self-confidence, and even the most "successful" choice of occupation

MEDIOCRITY?

This discussion in "Komsomolskaya Pravda," the Moscow youth newspaper with a nationwide circulation, started with a letter to the editor from reader Anatoli Petrushin. "How does a person avoid becoming a mediocrity?" Anatoli asks.

will not help the person who feels that way find his particular element.

A friend of mine named Kotov works at the Lenin Lead and Zinc Mill in Ust-Kamenogorsk. He has been a carpenter, bricklayer and a worker in the zinc-pouring shop. He doesn't rack his brain about which kind of work is choicer or about how he rates. He is in his element on any job. Whatever he happens to be doing, Kotov makes good use of his chief asset—a searching, creative approach to his work. He never finished high school, but he invented a machine that had scientists in Italy, Germany and America stumped for decades.

We can call Kotov a brilliant worker or a fine engineer or a good scientist. The fact is, he now heads a big research laboratory. But that he outclassed thousands of engineers and many scientists in solving a tough technological problem does not give us any grounds for believing that the engineers and scientists who failed to solve the problem are simply helpless "mediocrities."

That is not the point. At the particular moment and under the given circumstances Kotov proved to have better conditions for creativity, more energy and a clearer view of his goal.

During the Revolution and the Civil War Russia lost most of its intellectuals. Many scientists died; many others failed to see what history had in store for the country and emigrated. "Average" people boldly tackled the most difficult problems. What are the results? In less than half a century the Soviet Union has emerged to a leading place in science.

This example from recent history clearly shows how meaningless it is to divide people into "genius" and "average."

The only thing needed to take a man along the road to happiness (and to fame, too) is work—any kind of conscientious work, shoulder to shoulder with the other members of the collective. It seems to me that many young people waste a lot of time and suffer a lot of unnecessary mental anguish when they let themselves be guided by a morbid desire to avoid being "average" as they look around for an occupation. The important thing is not simply to choose your field but to find your element. Factory worker Kotov's element is creative searching, and he will be doing that all his life. In this element, which fits in with any kind of work, he has risen to heights worthy of a distinguished scientist.

Mikhail Tytskikh
Ust-Kamenogorsk
Kazakhstan

Jury of Destiny Still Deliberating

What Anatoli seems to be saying is that he wants to do outstanding work or none at all. But not a single outstanding man ever began that way. World-famous scientists started as ordinary workers ready to do ordinary jobs all their lives. They did not pin wings on themselves. Talent and hard work made them what they are. History itself elevated them.

There are millions of ordinary, average people. They are mankind's working-class glory. the toiling geniuses of the world. They are the ones who go to work every day, the ones who do the same job year in and year out. the ones who work steadily—without putting on airs—growing wheat and teaching children, healing the sick and building houses, assembling machines and handing out library books. Lathe operators, steel makers, schoolteachers, concrete pourers, bakers, engineers, doctors, weavers, agronomists, bookkeepers, tractor drivers, salesmen, those who feed and clothe the world.

The private who doesn't want to become a general, they say, is not much good. But the private who finds soldiering burdensome will never become a general.

Yuri Gagarin, you remember, was training to be a plain worker. . . .

Can you see this picture? You are an average engineer, an average agronomist, an average schoolteacher, but you are also an outstandingly kind-hearted person, a rare gardener, an inimitable accordion player, the life of the party.

You are an average worker, but you are a credit to your collective. Scores of people admire and respect you. You are an outstanding man in your shop, factory, school or collective farm. You are an outstanding personality. You are talented.

Your smile, your jokes, your generous help, your cheering word, your courageous voice of comradely criticism all help to make people's lives better. You are a big man. You simply go to work, to the same job, day in and day out, year in and year out, for 10, 20, 30 years.

People look at you and say: What a good life! They see that your work, ordinary work, is done with talent, that it is precious, outstanding work and, at the same time, rank-and-file work.

Mikhail Shur
Moscow

I Disagree with the "Previous Speaker"

We have here two viewpoints, two attitudes toward life: Anatoli Petrushin's and Mikhail Shur's. One is afraid of landing in the "average," rank-and-file" category, while the other glorifies the heroism and genius of "those who go to work every day."

In my opinion, that is just the same as being "mediocre." Anatoli Petrushin is not afraid of being an average worker; he is afraid of being a mediocre one. Mikhail Shur has told us how to live without any twinges of conscience about having turned out to be less than we are capable of being.

Which of the two is right?

The extraordinary man differs from the "average" man because he sets himself big and difficult aims in life. Big motivations lead people on to big goals. Marx and Lenin were inspired by a love for plain people and a hatred of exploiters; Alexander the Great and Napoleon were motivated by ambition and a thirst for power; Archimedes and Michurin, by the love of truth. But all had something in common. They knew at the start what they wanted out of life, and they worked stubbornly to get it.

How can a person get anywhere if in his youth he limits his potentialities to being "an outstandingly kindhearted person," or "the life of the party"? What can you expect from a man whose ultimate goal is to become an outstanding figure—in his own family?

Longfellow put it well when he said that we should live in such a way that each new day finds us farther ahead than the day before. Wise words, and they should provide food for thought to those who find going to work every day "heroic."

A few words about talent. I believe there are exceptionally gifted people, but I don't believe there are people without talent. If someone says to me, "I don't aspire to do anything because I'm not gifted," I know he is either a liar or simply a coward. Talent is a product of knowledge plus natural ability, and the latter is never zero. Everyone, whether he is an astronaut, a farmer or an engineer, must study and acquire knowledge all his life if he does not want to be a mediocrity.

You have to keep adding to your education. And you have to work—as a mechanic, house painter, truck driver, janitor, salesman. Those jobs, or any others, are nothing to be ashamed of, but their purpose is to serve as a stepping-stone instead of as the alpha and omega of human activity. . . .

Vladimir K. Loskutov
Murmansk
Russian Federation

Vocation as a Social Problem

Two basic conditions are necessary before a man can do his best work. First, the work has to dovetail with his inclinations and abilities and be useful to society. Second, the person (it doesn't make any fundamental difference whether he is composing a symphony or inventing a labor-saving gadget) must constantly feel the influence of social incentives: moral incentives and, as yet, material ones also.

The choice of vocation as a social problem is now being posed for the first time in history.

An equally complex problem is the kind of social incentives that will stimulate enthusiastic and creative work. This is especially important in our production areas.

It is by no means a simple matter to determine each person's vocation and channel it to serve society. The objective and subjective reasons why some people do not find their true vocations and do not work with maximum effect can be learned only by scientifically studying all the interrelated factors.

Victor Khmary
Dnepropetrovsk
Ukraine

"Line It up on the Way"

I am 24, but I am already being bothered by the banal thought, "If only I could start life all over again." And so I would like to give a few pointers to 17-year-olds on the subject of "what not to do."

I am neither a genius nor gifted. My abilities are definitely "average," and I had no special interest either. For society and in my own behalf, I had to develop the abilities I had to the full and put them to maximum use. I could waver and doubt, but I could not lose time. I had to choose a definite road and start moving, patiently biting away at the edges of knowledge with all my energy and ability.

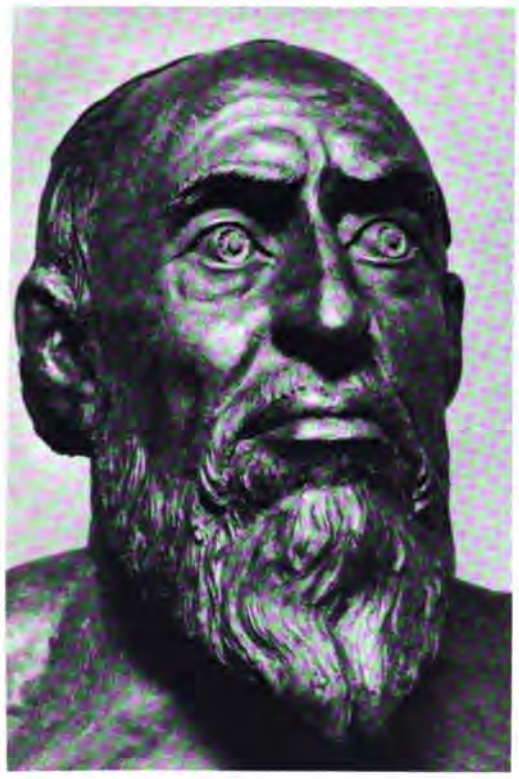
Here is my advice to teenagers who are trying to figure out what to do with their lives. The main thing is to get off to a good start. Like in a middle-distance race, you get off to a flying start, pick yourself a place among the other runners and then, after you've covered about 150 yards, you begin to line up and apply your tactics and strategy. Line it up on the way, so to speak.

Another thing. "Self-education" is a popular word, but it produces only dilettantes. The only way to get results (for others as well as for yourself) is to study by a definite program in a definite school. And results are what are wanted from a person, first and foremost. Only in this way can you hold your head high and know that you are not wasting the time you have here on earth.

Valentine Kukanov
Lvov
Ukraine

THE FACE OF IVAN THE TERRIBLE

BY MIKHAIL GERASIMOV



" . . . Please publish a complete article on the work of Professor Mikhail Gerasimov, who in January of last year succeeded in reconstructing the external facial characteristics of Ivan the Great from his skull," asks T. B. Caldwell of Denton, Texas.



Mikhail Gerasimov at work on his model.

Ivan the Terrible—the head as reconstructed by Gerasimov.

THE skeleton of Ivan the Terrible was in a comparatively good state of preservation.

As in neighboring coffins, the skull showed the greatest loss—only a few hairs on the chin and brows were preserved.

I took a good look at them and photographed them, but they fell apart before I was able to examine them thoroughly. I got the impression that Ivan the Terrible had brown hair. I cannot vouch for this since the color may have faded.

Ivan the Terrible was over 5 feet 10 inches tall and well built. In his youth he kept himself physically fit and was very strong.

At about 40 the czar weighed 175 pounds. In later years, however, he began getting fat and could hardly have weighed less than 210 pounds.

At 54 Ivan the Terrible was still a man of great physical strength. It is well known that two years before his death he killed his son with a single blow.

How did the czar die? He died suddenly, and an ugly rumor spread that he had been strangled by his court favorites—Bogdan Belsky and Boris Godunov. However, the well-preserved throat gristle completely disproves that theory.

MYSTERY OF THE CZAR'S TOMB

BY WANDA BELETSKAYA

Ivan the Terrible, first autocrat of Russia, traveled in a fawn-colored Volga car carefully packed in cardboard boxes. His remains were on the way to the plastic reconstruction laboratory headed by the well-known anthropologist, sculptor and historian Mikhail Gerasimov.

It was only January 1964, more than five months after the tomb had been opened, that Professor Gerasimov began the work of reconstructing the czar's real features.

BEFORE the czar's ancient tomb in the Archangel Cathedral of the Kremlin could be opened, the walls of the southeast corner of the cathedral, where the ancient graves are located, had to be reinforced.

A special group was assigned to open the tomb. It included historians, ethnographers, archeologists, anthropologists, architects, medical experts, chemists, restoration artists and art connoisseurs.

After nearly four centuries the heavy lid of the whitestone sarcophagus was lifted. And immediately the first riddle was solved. Inside the lid of the tomb, an unknown artist had etched the following:

> "In the year of 7092, on the 18th day of March, the Orthodox Christian Czar and Grand Duke Ivan Vasilyevich, Soverign of All Russia, who assumed the hood as the Monk Jonah in memory of Cyril, Archbishop of Jerusalem, passed away an hour and a half before sunset."

The riddle was the date, for all the records, except those of Pskov state, showed that Ivan had died on March 19, 1584. The Pskov chronicles set the date a day earlier, and this was confirmed by the inscription.

Why Apart?

All Ivan's predecessors were buried in the same church, but why did his tomb stand by the altar, apart from the others? Even in death Ivan IV wished to stress his special gandeur and stand apart from those who had preceded him.

He had begun to arrange his tomb long before he died. Its walls were covered with the paintings of the best artists of the sixteenth century.

The cables grew taut, tightening their grip on the top of the sarcophagus. The great slab stirred, rose a trifle and suddenly split in half like a block of ice. This was not unexpected since the split had been detected before the work began. Everyone was worried just the same. How would the sarcophagus behave next?

Another split could be traced across the slab. It was barely visible but obviously deep. The fears of the scientists were unjustified, however. The massive top of the sarcophagus rose slowly out of the tomb with no more surprises.

The scientists strained forward.

In his last years the ailing czar had been fond of descending to his treasure house, where he would handle his gems and gold for hours. But this was the austere tomb of a monk. Its only decoration was a handsome dark blue goblet placed at the head of the tomb.

This confirmed history's report that the dying czar had assumed the hood.

Beneath the dark, half-decayed monk's cassock one could plainly see the outlines of the czar's bones. What about his skull?

There is no real contemporary portrait of Ivan, only likenesses done in the conventional icon style.

Gerasimov bent low over the tomb. Under the tattered black tissue on one side he could just barely see the profile of the czar, and everyone sighed with relief.

The skull was brought safely out of the tomb after a few hours. Its bone tissue was in poor condition and could disintegrate into dust at the slightest mishap. The researchers, therefore, saturated it with a special solution.

New Break

Gerasimov's excited voice was heard: "The left foot of the czar has been damaged through a hole in the sarcophagus!" Why? Who had penetrated the sarcophagus? This was a new riddle. It was posed even before the disinterment, when the floor of the cathedral was raised and one of the side slabs of the tomb was found to be broken.

The specialists carefully examined the break. It had been done crudely, in a great hurry, with some heavy tool.

The traces of a candle were left on the walls of the break. There was a small crevice in the sarcophagus. In it lay a fragment of the tool which had evidently been used to damage the czar's foot.

Many theories were proposed. A thorough study, however, revealed that the break had been made recently, early in the present century.

A fine layer of cement was found on the lid of the sarcophagus. This material was first used in the Archangel Cathedral when the floor was relaid at the beginning of the twentieth century. One of the workers had evidently made the hole. He had been in a hurry, afraid of being detected.

He had meant to enrich himself at the expense of the dead czars and had not realized that the ancient Russians did not put treasures in the graves.

Bent Arm

The remnants of the black wool covering were removed. The cassock was best preserved at the breast. Embroidered on it was the scene of Golgotha, the skull of Adam and a cross. The stitching was also preserved in the wreath around Ivan's head.

The skeleton was laid bare, and then came another surprise. Everybody strained forward for a better look.

The czar's hands were not folded on the chest as they should have been in Christian burial. The right arm was sharply bent at the elbow, as though the dead man had tried to hide his face.

More suppositions! Why had Ivan raised his hand to his face? Had it been done to defend himself? Had death frozen him in that gesture?

Perhaps he had died in a fit and had been so terrible to look at that no one had dared to approach him until *rigor mortis* had set in?

Poison? Our chemists looked for signs of arsenic, the most common poison of the time and one which, moreover, can be preserved in the body for a long time.

Numerous tests confirmed the presence of arsenic in all four bodies, but in no larger amounts than are common for the human organism.

Further tests, however, revealed large quantities of mercury in Ivan the Terrible's remains, whereas no trace of this substance was found in the other exhumed bodies. What accounted for its presence?

Rumor had it that Ivan suffered from a disease which made his beard sparse and caused premature baldness. On his deathbed his body began to swell and his internal organs to rot.

His vertebrae ends revealed him to have been suffering from an early and acute development of osteophytes. This resulted in a stiffening of the spine—his whole body must have had a ramrod appearance, with a stiff back, stiff neck and head slightly flung back.

I have never seen such quantities of osteophytes, even when examining the skeletons of persons of extremely advanced age. The cause, I presume, was the czar's overeating and intemperance. The bones of his skeleton show many signs of heavy drinking.

It is clear, too, that in later years almost every movement he made caused him excruciating pain. As a result, he most likely sought relief from his pain in Oriental ointments containing mercury. This would account for the large quantity of mercury in his remains. Moreover, regular use of such ointments might have caused baldness and the sparse growth of his beard.

These and other changes in the czar's appearance were noticed by his contemporaries.

His irregular habits, overindulgence in food and drink, and the lack of exercise to which he was reduced must all have resulted in a grave cardiovascular disorder. I should not be surprised if historical data were discovered to the effect that in the latter years of his life he had suffered from shortness of breath, weakness and headaches—all symptoms of high blood pressure.

It is quite possible that he had a stroke or infarction of the heart, and in that condition—when he ought not to have been disturbed—the last rites were performed, he was dressed in a monk's habit and, of course, moved around. All this proved fatal, and he died.

In reproducing his hair, I was aided by two portraits—one, the more realistic, engraved on wood, is in the Vienna Library; the other, an extremely conventional painting, is in Copenhagen.

This restored likeness of Ivan the Terrible is not unlike the images known to us from pictures by Russian painters of the nineteenth century. The painters of that period evidently guided themselves by both the historians and the portrait of his father, Czar Vasili III, whom he greatly resembled.

Photographs by Yakov Ryumkin





Two contemporary portraits of Ivan the Terrible—the engraving above, in the Vienna Library, is slightly more realistic than the conventional "Copenhagen portrait."

Or had his hand assumed that position as a result of his affliction, when he was still alive?

Ivan IV grew very stout in his final years. The arm might have rested on his swollen stomach and gradually slipped into its strange position.

Everyone waited for the experts to have their say, but they were in no hurry!

Too Big

The scientists noticed that the walls of the sarcophagus were surprisingly thin. It had evidently been widened during the burial. This throws some light on Ivan the Terrible's illness.

The czar had evidently been too stout to fit into his stone coffin. That is why it had had to be widened.

What do the historians know of the last days of Ivan IV? Witnesses stated that he had felt better on the day of his death, that he had taken a warm bath and then sat down to play checkers with his favorite courtier, Bogdan Belsky.

If so, he was in a serene condition, rare for him, before he died. In his final years he was harassed by fits of pain and tormented by forebodings and his conscience. But he was kind and serene on his last day.

It was during his game of checkers that he suffered a stroke. The dying czar then took the hood, in token of which his hair was cut. When he passed away, he was buried in his stone coffin.

But can these sources be fully believed? They cannot, especially since the story of the game he played before his death came from a foreigner who did not know the Russian court very well.

Ivan's teeth are extremely well preserved. That riddle has yet to be solved. Judging by all medical data, they are nearly 20 years younger than the czar. The teeth are straight, strong, and unbent—the teeth of a young man. Two incisors are hardly worn, and the canines seem to have just grown.

Is it possible that Ivan could have preserved some of his milk teeth to the age of forty? Highly improbable, says Gerasimov.

The curve of the lower jaw is too steep, and the tongue in such cases is farther back in the mouth than usual. It is possible that Ivan had a lisp and other speech defects.

Ivan the Terrible lies next to his son Ivan, the 27-year-old czarevich whom he killed in a fit of rage.

In the laboratory the researchers recently examined the fiber of the czarevich's clothing. It turned out to be silk of an orange and gold tint.

In his grave his long blond locks had withstood the effects of time, but his skull had not. We shall never learn whether he resembled his father.

The skull of Ivan the Terrible's other son, Fyodor, is also poorly preserved, but Gerasimov will begin to construct a portrait soon.

For some reason Fyodor was buried in a hurry. The artist who inscribed the sarcophagus had evidently been very hasty, not even finishing his words.

Instead of "Jesus," for instance, he wrote "Jesu," and the word "Orthodox" was left without its first and last letters.

The word "and" was inscribed twice before the word "buried." The upper lines are even, but the lower are out of alignment.

There was probably little reason to waste time on Fyodor, for his cousin Boris Godunov was striving hard for power.

What caused Fyodor's death? The records say very little about it. Only the Pskov Chronicles vaguely hint that he was poisoned by Godunov.

The chemists have made only some preliminary analyses so far, and their work is not finished.

Only Three

The historians, doctors and anthropologists have thus far been faced with more than enough riddles, but now they have been confronted with another.

In this row of three tombs there was once a fourth, that of Boris Godunov. This one was found empty; there was not so much as a trace of the czar's coffin.

This confirmed the historical account that False Dmitri had ordered the body of Czar Boris to be taken from its sarcophagus and transferred to a poor wooden coffin, which was buried in a remote monastery.

The boyar Czar Vasili Shuisky, who followed False Dmitri, ordered the mortal remains of Ivan the Terrible's youngest son Dmitri to be transferred from Uglich to Moscow and laid in the former grave of Godunov.

The body of the little Dmitri, however, was not buried but placed in a special shrine in the center of the Archangel Cathedral.

Why? Little Dmitri, as we know, perished under mysterious circumstances. The versions of his death are contradictory. One source claims that he fell on a knife during an epileptic fit; another, that he was stabbed on secret orders of Godunov.

To Test

Fifteen years after Shuisky ordered the remains of Dmitri transferred to Moscow, the Church proclaimed Dmitri to have been martyred and canonized him.

Rumors were spread that the body of the little saint was untouched by decay and that red blood had flowed from his wounds when he was carried to Moscow.

Were the remains of Dmitri really brought to the Archangel Cathedral? To produce the miracle of an undecaying corpse it is not impossible that another innocent was slaughtered, one not of royal descent at all. It is by no means impossible to test this hypothesis if the skull of the child has been preserved.

The features of Ivan IV, Dmitri's father, have been restored; and Dmitri's mother Maria Nagaya, is likewise buried in the Kremlin. A comparative analysis of the portraits of the parents and the son may disclose this secret of the past.

When the features of Ivan the Terrible and his son Fyodor have been restored, their remains will be be returned to their graves, and the heavy lids of their tombs will be replaced.

But the historians, archeologists, anthropologists and restoration artists will continue to work on the priceless material derived for a long time.

Courtesy of Soviet Weekly

TOMORROW'S DOCTORS

This article supplements the material we ran in our last issue on Soviet medical practice. The USSR has 466,000 practicing physicians. About 196,000 future doctors are presently being trained at medical schools, and 28,000 graduates receive doctor's diplomas every year. Professor Vladimir Kovanov, rector of the First Medical Institute, here answers some pertinent questions.

QUESTION: How is the training of doctors organized in the Soviet Union and, more particularly, at your institute?

ANSWER: Doctors in the Soviet Union, as a rule, are trained at medical institutes that offer one, two or three fields of study. In some republics—Latvia, for instance—the universities have training departments. But for the most part, higher medical training institutions operate independently of the universities.

In the larger cities (Moscow, Leningrad, Kiev) the medical institutes train doctors in two or three fields. But there are also specialized institutes that train, say, only general practitioners, pediatricians, dentists, pharmacists or public health specialists.

Our institute has 8,000 students and 600 graduate students and interns. We offer courses in three divisions—medicine, sanitation and hygiene, and pharmacology. The medical department trains general practitioners; the course is six years. The department of sanitation and hygiene trains doctors in industrial, food and school hygiene. The course takes five-and-a-half years. The pharmacology course takes five years.

QUESTION: What is the pattern of the curriculum at your institute?

ANSWER: The program for the first two years of study is almost identical in all three departments. It includes general educational and some basic medical courses. At the same time the students are also familiarized with the operation of several medical institutions.

From the third year on, the training varies. Students in the department of sanitation and hygiene, while taking clinical subjects, have courses in specialized hygiene; in the medical department the emphasis is on preparation for medical practice. Fewer hygiene subjects are given by the medical department than by the department of sanitation and hygiene. After their third year the students become doctor's assistants, working as trained nurses. They spend a month at a medical institution learning nursing techniques and filling prescriptions.

After the fourth year of study they work in major medical institutions under experienced assistant professors from the institute. Under the guidance of ward superintendents they are assigned several patients for treatment. They also assist surgeons in complicated operations, do simple operations themselves, and see outpatients.

Sixth-year students work for a month as practicing doctors in the outpatient hospital network of the different city districts and are paid corresponding salaries.

The rest of the sixth year is devoted to clinical work. The students are very rarely seen in lecture halls and classes, spending most of their time in the laboratory and at the patient's bedside.

In the course of the six years of training the students have to pass 98 tests and 50 exams, getting their doctor's diploma only after having worked a year at some medical institution.

Parallel with this full-time training program we have a large network of evening departments for those who have a general secondary and medical education (nurses and doctor's assistants). These people work for three years at medical institutions and study evenings at a medical institute. They follow a different curriculum: three years of general educational subjects instead of two, but less clinical training and practical hospital work. During their fourth year of study they stop working and study full time, drawing maintenance stipends like all other students.

QUESTION: As I understand it, our institutes turn out doctors in a rather broad range of specialties. Doesn't this run counter to our aim of providing the country with a sufficient number of trained people in all the specialties?

ANSWER: There is no contradiction. As a matter of fact, we favor the more general type of training. The broader their training and the more versatile their backgrounds, the better doctors they will be, no matter which field of specialization they choose. The point is that when they receive their diplomas, doctors not only have to treat patients, they also have to know how to prevent the spread of infectious diseases and keep people healthy. This means that every practitioner has to be a hygienist and epidemiologist as well, and be able to popularize health measures on the radio and in the press.

As for specialization, Soviet doctors, as a rule, do that after they have graduated, joining the staff of some medical or research institution as interns or graduate students. In addition, there are 13 advanced medical training institutes in the Soviet Union, where full-fledged physicians can get refresher training in such specialized areas as oncology or neurosurgery.

QUESTION: What if a student shows special interest in some particular medical problem while he is still at the institute?

ANSWER: We provide for that. Almost every department in the institute has its extracurricular scientific circle for training students interested in research. In these circles students usually do their first independent experiments. Worthwhile studies are published in the medical journals and reported at conferences and symposiums. At our institute more than 1,500 students are active in these research circles, where they can develop their natural gifts and an interest in research. The most talented are given the opportunity to take the three-year postgraduate course leading to the degree of Master of Medicine, which requires independent research and publication of the results, several reports and the public defense of a thesis. The degree makes an individual eligible for an assistant lectureship at an institution of higher learning or the post of junior researcher at a research institute.

QUESTION: Where do your graduates work?

ANSWER: Everywhere—on land, sea, in the air, and even in space! Our doctors are to be found in all—even the remotest—parts of our country and out of it, on merchant vessels, working as sanitation inspectors in the deepest mines, and quite recently one of our graduates, Boris Yegorov, was a member of the first space crew to orbit the earth. Boris went in for a good deal of mountain-climbing and skiing while he was a student, but I must say no mountaineer on earth ever climbed as high as our doctor-cosmonaut did in the *Voskhod* spaceship!





SOVIET MEDICAL EXHIBIT IN THE USA

BY YEVGENI RUZHNIKOV
Deputy Director of the Exhibit

THE "PUBLIC HEALTH—USSR" Exhibition now touring the United States was arranged under the American-Soviet cultural exchange agreement signed in Moscow in February 1964. The exhibition has already been seen in Pittsburgh, Pennsylvania, and Kansas City, Missouri, and will be open to the public in Cincinnati, Ohio, from February 26 through March 27.

Utilizing the latest in Soviet medical equipment and instruments as well as color films, photographs and drawings, the exhibit illustrates the principal aspects of medical care and health protection in the Soviet Union. It is manned by 20 specialists in surgery, cardiovascular diseases, pharmacology, hygiene, mechanical engineering and electrical engineering.

The director of the exhibition is Vladimir F. Rudko, Master of Science (Medicine), prorector for scientific work and chairman of the department of surgical stomatology at the Moscow Institute of Stomatology.

The exhibition opens with general information about Soviet health services, a major feature being a 12-minute color film shown on six synchronized screens several times a day. There are also four mobile movie units showing films on various aspects of Soviet medical care and health protection.

A section of the exhibit deals with the organization of public health. Everything revolves around the polyclinic, a large health center that provides both general and specialized medical assistance, including home visits. The district which the polyclinic serves is divided into wards, each headed by the ward doctor, the equivalent of the family doctor. In addition there are polyclinics at most Soviet factories and large offices, making the health services more accessible to the employees.

Public health in the Soviet Union is dedicated to the principle, "An ounce of prevention is worth a pound of cure." Displays highlight the 3,000 specialized clinics, 5,000 sanitation-epidemiological stations and other disease-prevention institutions that facilitate the implementation of preventive medicine. The exhibition also tells of the work of 360 hygiene education centers set up in Soviet cities.

Great stress is placed on medical care for women and children. A section of the exhibition explains that all Soviet women are entitled to a paid 112-day maternity leave. The network of maternity consultation clinics and the number of obstetricians and gynecologists in the country keeps increasing. Mothers of large families receive special benefits from the state.

There are more than 130 medicinal preparations on display in the medical industry and pharmacology section, such as chloracisine, a new, highly efficient means of curing coronary disorders; sarcolisine, successfully used in treating certain forms of malignant tumors; and various antibiotics.

The Pharmacological Committee of the USSR Ministry of Health, composed of prominent specialists—chemists, pharmacologists and clinicians—permits the clinical testing of new medications only after extensive pharmacological and toxicological investigation.

The section on medical research demonstrates some of the work being done in neurology, virology, heart diseases and cancer as well as new techniques in surgery.

The space medicine section tells of the medical control over the health of Soviet cosmonauts and includes a schematic diagram explaining how physiological data is telemetered from space during orbital flight.

The Soviet doctors acting as guides at the exhibition were received in many hospitals and also private homes in Pittsburgh. They are very grateful for all the care being taken to make their stay in this country a pleasant one.

VISITORS' IMPRESSIONS

During the exhibit's first weeks numerous visitors commented on its great educational value:

"Very nice exhibit. Enjoyed talking to one of your doctors and feel I have learned something worthwhile," DR. NICOLA ESTER, Allegheny County Health Service.

"This was a terrific demonstration in the operation of medical equipment. The film was also excellent," CHERYL SWEENY, Slippery Rock College.

"An all-too-rare opportunity to meet visitors from the USSR, get acquainted and exchange information. As always, people-to-people meetings are the only situations in which one understands 'brotherhood' first-hand, as more than a concept," WERNER J. FRIES, Ph.D.

"Very pleased to see the progress you have made in Medicare and Health. Your care for children is unsurpassed. We need that in the USA for our working mothers. Carry on," JOHN G. BIANEKI.

"Your exhibit is extremely interesting. Come here again. Let's live in peace with one another, and there will be much more accomplished for the betterment of mankind," ANNA NYDES, Pittsburgh.



LINCOLN STEFFENS

JAWAHARLAL NEHRU



H. G. WELLS



CHARLES DICKENS



GENERAL GEORGE C. MARSHALL



THE following comments, complimentary and otherwise, on Russia and Russians were made by personalities, some more famous than others. Match the names to the quotations. Score 10 for each correct pair: 90-100 is fair, 110-120 good, 130-140 excellent, over 140—practically impossible. See page 49 for the correct answers.



SIR WINSTON CHURCHILL

WHO SAID IT?



HEINRICH HEINE



DOROTHY THOMPSON

ALEXANDER PUSHKIN



LEO TOLSTOY



EDOUARD HERRIOT



LORD CURZON



1. "I cannot forecast to you the action of Russia. It is a riddle wrapped in a mystery inside an enigma."
2. " 'So you've been over into Russia?' said Bernard Baruch, and I answered very literally, 'I have been over into the future, and it works.' "
3. "The beep of the Soviet satellite is an intercontinental outerspace raspberry to a decade of American pretensions that the American way of life was a gilt-edged guarantee of our material superiority."
4. "The Soviet Union has changed the entire mentality of the Russian people in a single generation, an accomplishment . . . without parallel in history."
5. "Moscow: these syllables can start
   A tumult in the Russian heart."
6. "Toward France there journeyed two
   grenadiers
   Who had been captured in Russia."
7. "Decline-and-Fall-Of-the-Rooshan-Empire."
8. "Soviet rule has bestowed on science all the authority of which it deprived religion."
9. "God bless the Russians."
10. "The Russian soldier is perhaps the most faithful modern parallel to the Spartan."
11. "Russia in the Shadows."
12. "A Russian is conceited precisely because he knows nothing and cares to know nothing, since he does not believe it possible to know anything fully."
13. "This will last out a night in Russia,
    When nights are longest there."
14. "The Soviet Revolution has advanced human society by a great leap and has lit a bright flame which cannot be smothered, and has laid the foundations for that society towards which the world will advance."
15. "The refusal of the British and Russian people to accept what appeared to be inevitable defeat was the great factor in the salvage of our civilization."



WILLIAM SHAKESPEARE



CLARE BOOTHE LUCE

THE UKRAINE:

INDUSTRIAL AND AGRICULTURAL PROGRESS



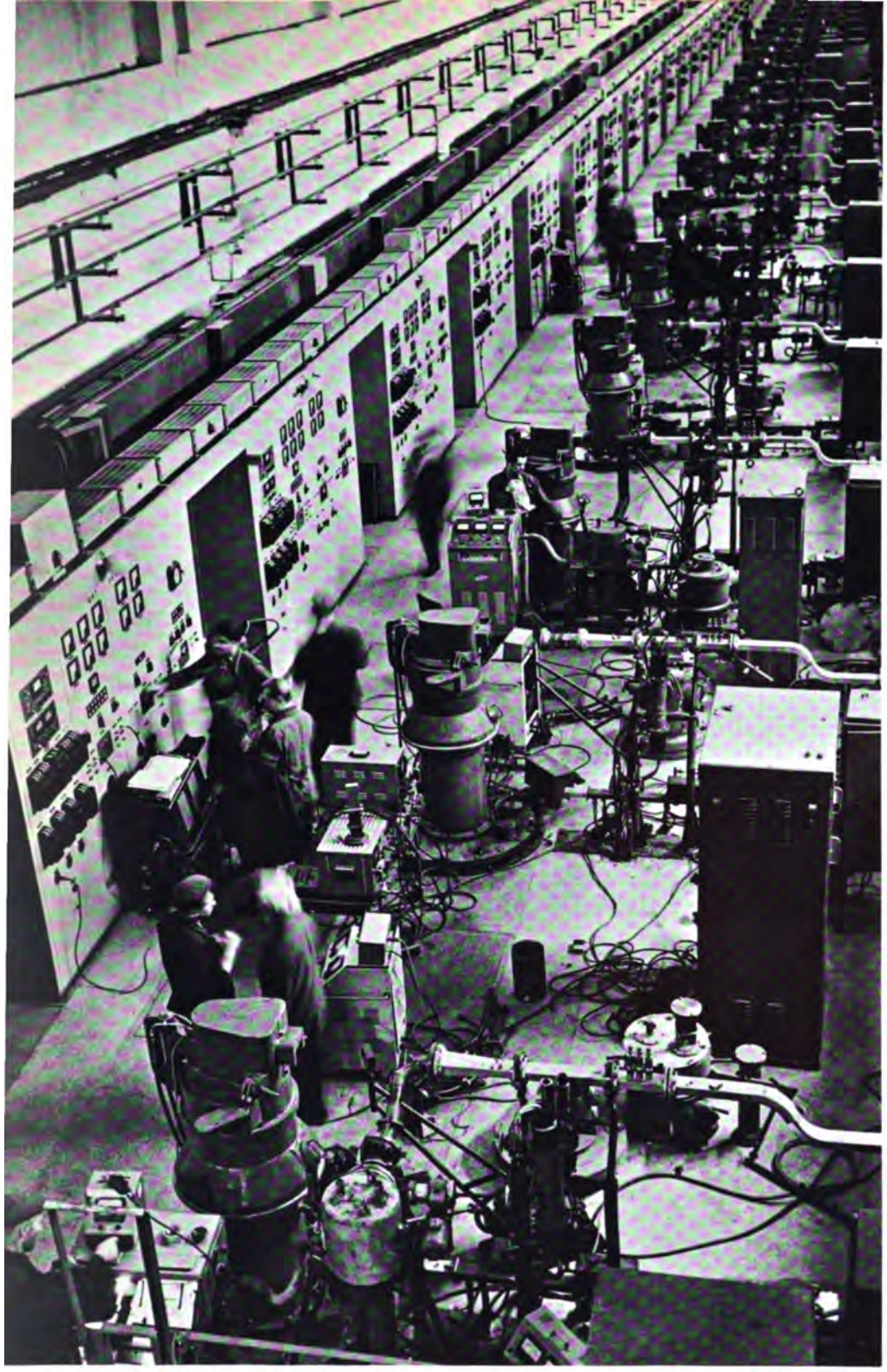


By IVAN KAZANETS

Chairman of the Council of Ministers of the Ukrainian SSR

BY EUROPEAN standards the Ukrainian Republic is a large industrial power, a country of coal and steel, large-scale agriculture and an expanding power industry. Keep in mind that during the years the Nazis occupied the Ukraine, they destroyed property in the amount of 285 billion rubles (1941 prices), and you will realize what a difficult path our republic has had to traverse in the past two decades.

We are working for a systematic and balanced development of all branches of our economy, with emphasis on such areas as oil extraction, chemicals and irrigated farming.



Assembling a 2,000-MEV linear electron accelerator in Kharkov. The Ukrainian Republic has more than 750 scientific research institutions.



Artek, the world-famous Young Pioneer Camp in the scenic Crimea. There are some 500 resorts, sanatoriums and summer camps in the Ukraine.



These girls work at a synthetic fiber plant in Chernigov. The average annual growth rate of the Ukraine's chemical industry is 17 per cent.



Testing a new rail-welding machine. Devices for welding developed at the Paton Institute in Kiev are in wide use in factories at home and abroad.

New Fuel Balance

The Ukraine has long been known for its coal mines (the Donets basin, or the Donbas). Though coal is still our major fuel, in recent years we have been giving preference to oil and gas. The volume extracted in the postwar years increased respectively by 14 and 70 times. We presently produce as much gas as do Britain, France, the Federal Republic of Germany and Italy combined.

Progress in electrification has been notable: The republic generates annually 90 billion kilowatt-hours of electricity. It now generates as much power in two days as it did in an entire year five decades ago. Our power station builders are completing a complex of hydroelectric projects on the Dnieper River, the Kiev station is nearing completion, the first units of the Dneprodzerzhinsk station will soon be in operation, and work is under way on the Kanev station. The V. I. Lenin Hydroelectric Power Station on the Dnieper River, one of the first to go up during the Soviet five-year-plan periods, is being rebuilt.

Concentration on Chemicals

The Ukraine is becoming a "Big Chemistry" republic. Several large chemical enterprises have already been built, including mineral-processing combines, synthetic and artificial fiber plants, a tire factory, and nitrogen fertilizer and superphosphate plants. They helped boost the output of chemicals by 380 per cent in 10 years.

Work is now under way on six more giant chemical installations, which by the end of this year will increase the industry's output another 34 per cent (this includes a 33 per cent increase in mineral fertilizer production to a volume of seven million tons a year).

Our investment of capital and effort in engineering has always been high, and the returns have been commensurate. Suffice it to say, in 1963 the output of our machine-building and metal-processing industries was ten times greater than in 1940.

This, in no small measure, is the work of the 79,000 researchers in the republic's institutes and laboratories. During the past five years they have engaged in more than 2,000 research projects, designed more than 3,000 new types of machines and instruments, and set up some 5,500 automatic and semiautomatic transfer lines.

All this has had its salutary economic consequences. In the past five years labor productivity in our factories rose by 29 per cent and on our construction sites by 36 per cent.

Consumer Goods Production

The growth rate of our light and food industries is high. Recently, we put into operation enterprises that are some of Europe's largest: a textile combine in Kherson and flax combines in Zhitomir and Rovno. We have also built scores of sugar refineries, meat-packing and dairy-processing plants, bakeries, wineries and other enterprises. In the past few years we substantially increased our output of cotton and silk fabrics, furniture, foot-



The noted American artist Rockwell Kent (right) on a visit to Ukrainian People's Artist of the USSR Iosif Bokshai. More than 200,000 foreign tourists and specialists visit the republic every year.



Capron (nylon 6) plant in Lisichansk, one of the republic's largest chemical factories. It ranks in size with the Kremenchug petrochemical works.



Rail junction at Yasinovskaya. By the end of 1965 about 1,900 miles of road will be electrified and 6,500 switched to diesel traction.



Mechanized unloading of sugar beet at the Makovsky plant near Khmelnitsky. The Ukraine's beet production nearly doubled in the past ten years.

wear, clothing, refrigerators, TV sets and washing machines. We now produce more than four million tons of sugar annually, more than 200,000 tons of butter and about 700,000 tons of vegetable oil (not counting the vegetable oil people make at home), as well as great quantities of meat and dairy products, baked goods, canned food, wine and other products.

Intensive Agriculture

A distinguishing feature of our economy is that along with a highly developed industry we also do large-scale farming. We grow mostly winter wheat and corn, as well as peas, barley, buckwheat, millet and other crops. We have more than 10 million acres under industrial crops, including 4.5 million sown to sugar beet and 3.8 million to sunflower. We also raise flax, hemp and tobacco. The Ukraine leads the world in sugar beet and sugar production yield.

Our farms also raise livestock in large numbers. Our animal meat yield is more than two million metric tons (in slaughter weight) and our milk yield 15 million metric tons, twice as much as in 1940.

Our farm development rests on a solid material and technical foundation, qualified personnel and the achievements of Soviet and foreign agricultural research. We have 150,000 agronomists, zootechnicians, veterinarians and large numbers of machine operators and livestock breeders. Working the republic's collective and state farms are 379,000 tractors (in 15-horsepower units) and large fleets of grain-harvesting and special combines, trucks and other machines.

The economy of our collective farms grows stronger with each passing year. In 1963 their cash incomes came to 4.6 billion rubles, representing a fourfold increase in four years.

In the next few years we will be increasing sharply the use of mineral and organic fertilizers as well as of chemical pesticides, trying not to harm animals and birds. Our areas of irrigated land will be largely expanded. Presently 865,000 acres of land are under irrigation, and by 1970 the figure will be close to four million.

Higher Living Standards

A good measure of the people's living standards is the growing national income. During the past five years this income has increased by one third. Our public consumption fund grew by 33 per cent. With these disbursements we trained 12 million individuals at secondary schools, technical schools and higher educational institutions, and provided pensions for the aged and disabled. Beginning with 1965 we will be paying pensions to collective farmers. The public consumption fund is also used to pay stipends to students, grants to mothers of large families, and to maintain kindergartens, sanatoriums and rest homes.

Since 1956 we have been making systematic upward adjustments of wages, which have increased by 35 per cent for two-thirds of our workers in industry, construction and agriculture.

"VERY ENGINEERING"

BY NIKOLAI ORLOV

IN THE thirties, when Khanaan Izakson was an engineering student at college, he received his practical training at the plant in Zaporozhye that turned out the first models of the Kommunar combine. At the time, the new machine seemed to him the height of perfection, and the enthusiastic young man had no idea that he would be spending many years of his life trying to improve the famous "ship of the steppes"—his first love.

Many things have changed in these 30 years. The Soviet countryside now has more than 600,000 combines, not to speak of other machines. Many of these combines have been unitized so that they can be used in all the country's farming regions. The most popular model, the SK-4, was designed by a group of engineers under Izakson, for many years chief of the State Design Shop for Combines in Taganrog.



Khanaan Izakson is the head of the state agricultural machinery design office in Taganrog, which is working on manifold, all-year models.

Izakson's previous model, the SK-3, won the Grand Prize at the World's Fair in Brussels. The SK-4 is an improvement on the SK-3. Its reaper automatically follows the relief of the field longitudinally and transversally, cutting the stalks at a set height. A special device collects the hay and automatically unloads it on the field. This used to be done manually, not a very pleasant job.

Additional equipment picks oil-producing crops, legumes and corn (which is threshed and then cut for silage). The self-propelled combine, which is operated by one man, moves at speeds ranging from one-half to eleven miles an hour. Soon automatic loaders and automatic drivers will be shifting gears and keeping the machine moving in the right direction. As many as 250 such combines are built every day at the country's largest plant, in Rostov-on-Don. You would think there is nothing left to improve. However . . .

"The self-propelled combine has a great drawback, an impermissible drawback," said Izakson. "The machine is used only two months a year and stands idle for 10 months. It doesn't make sense."

"But a combine is a special harvesting machine, and a very good one at that," he was told.

"If it's that good, then it certainly should not stand idle," retorted the designer. "What we need are multipurpose machines easy to convert and adapt for use in both the summer and winter seasons."

And Izakson and his design shop set to work. They decided to try to break the combine down into units. They detached the self-propelled cart with the engine so it could be used as a mount for various farm implements and machines.

A number of plants undertook to build the chassis, but none of the models proved to be very efficient. Each implement gave the wheels a different weight to bear, causing a lack of balance.

The Taganrog designers submitted their own model, the SSh-65, which was displayed at the Soviet exhibition in New York and won high praise from the experts.

Izakson was told that one of the experts had said about his machine: "It's 'very engineering!'" Flattering, but Izakson knew that the SSh-65 was far from perfect.

The wheels had to be balanced regardless of the load, that was the crux of the problem. But how to achieve that balance? The fact that not a single designer had come up with anything like an answer made it look as if the problem were insoluble.

For three years the Taganrog group worked on the chasis. They had discarded 10 models. Then Izakson had a brain storm.

While he was traveling to Moscow, thinking in time to the familiar beat of the train wheels about the latest blueprints of the chassis he had turned over to the experimental shop before his departure, a thought stunning in its simplicity suddenly flashed through his mind. Why of course—the engine should be made to revolve eccentrically around a single point by 180 degrees!

The passengers in the next compartment were playing a noisy game of dominoes, and someone else was telling funny stories. But oblivious to everything, Izakson was sketching the plans for a new machine in his notebook.

Yes, indeed! A self-propelled chassis with a

turning engine would be balanced regardless. If you mounted a reaper, a fertilizer distributor, a dump tray or a plow, the engine and the driver's compartment would stay in the center of the chassis and the machine would be balanced. And if you had to mount a combine, the engine would turn, moving to one side of the chassis with the axles extended on the other. And still the machine would be properly balanced, with all the parts fitting perfectly.

"Now that's what I would call 'very engineering,' " thought Izakson.

At the State Committee for New Technology in Moscow he hesitated to talk about his new idea without giving it more thought. Quite by accident he left his notebook with the drawings on the table as he was talking about some other matter.

The engineer he was talking to glanced at the notebook and then took a closer look.

"What have you got here? The engine turning with the driver's compartment? That's very clever!"

The engineer looked at the drafts some more and then turned to Izakson, saying:

"This is it, the self-propelled chassis that will end all arguments!"

Obvious enough to any designer, but how would the production men feel about it?

For them it meant that nearly 60 per cent of the blueprints would have to be redone and the work of foundrymen, lathe operators and assemblers discarded. The best always pushes out the better. Too bad the idea hadn't occurred to him sooner! But what's to be done when a job is almost finished and suddenly you think of a better solution? You start over again. And they did.

The new machine puts the combine engine to use the year round. It makes the combine a mount for other implements. The Taganrog model is called the SSh-75 (75 being the horsepower of the tractor engine).

This is the metamorphosis of the chassis: Previously it was symmetrical in design (like an automobile), with the wheels in a single track and the driver's compartment over the steering axle for a clear view of the road. The chassis carried a dump tray of four-ton capacity and did 25 miles an hour on a good road. The tray was removed, the driver's compartment and the engine were made to revolve by 180 degrees, the axles were made extendable —and the machine was transformed. Now it could accommodate various combines for grain, corn and silage as well as other machines.

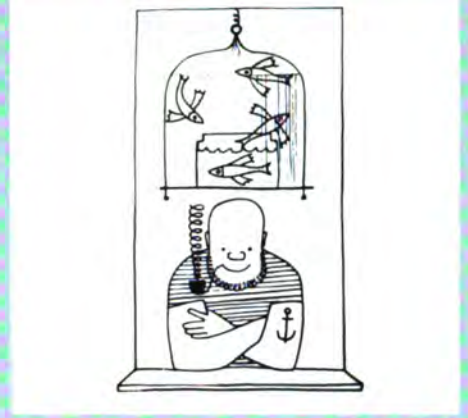
The new chassis has one more distinguishing feature: it can be fitted with implements of existing designs, a convenience not offered by any other model. A complicated machine like a combine can be mounted by two men in 30 minutes and dismounted in 20.

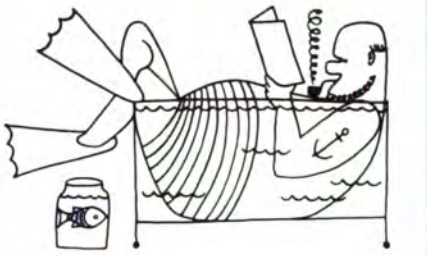
The chassis has already been tested with a combine, a reaper and a dump tray. Slated for serial production are a mincer, which will make it possible to simultaneously harvest corn for grain and stalks for silage, and a semicaterpillar rice and grain combine. The laboratories are already producing new variants: a caterpillar chassis, a combine for hilly areas, and other implements.

Road builders, irrigation people and even firemen are interested in the chassis.

Izakson's design shop turned out 160,000 machines for various purposes in 1963. In 1964 this amount was augmented by 1,000 chassis.

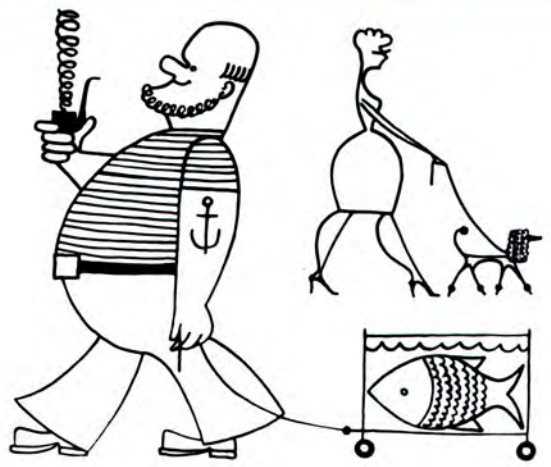
HUMOR

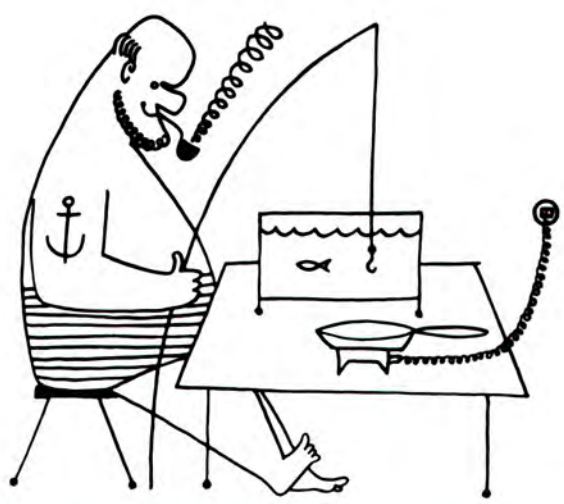




SAILOR ON PENSION

DRAWINGS BY ALEXANDER GAMBURG





LEARNING RUSSIAN

English-Russian Phrase Column

We are continuing this self-study column at the request of many readers and hope they will find it useful when they visit the Soviet Union or meet Soviet people elsewhere.

The lessons include everyday words and expressions.

A guide to pronunciation accompanies each phrase. The letters in brackets preceded by a hyphen indicate the feminine ending. The editors tried to bring the transcription as close as possible to the Moscow pronunciation, which is considered standard.

Post Office, Telegraph Office, Telephone

When is the post office open?	В какие часы работает почта?	f ka-kee′-ye cha-sy′ ra-bo′-ta-yet po′ch-ta
Give me a stamped envelope, please, for an ordinary letter.	Дайте мне, пожалуйста, конверт с маркой для письма	dai′-te mne, pa-zhah′-lsta, kan-ve′rt s mah′r-koi dlya pees-mah′
Please register this letter.	Примите, пожалуйста, заказное письмо	pri-mee′-tye, pa-zhah′-lsta, za-kaz-no′-ye pees-mo′
Please show me some collection's stamps.	Покажите, пожалуйста, коллекционные марки	pa-ka-zhee′-tye, pa-zhah′-lsta, ka-lek-tsee-o′n-ny-ye mah′r-kee
I want to send a postal order (a money order by telegraph).	Я хочу сделать денежный перевод по почте (телеграфу)	ya kha-choo′ zde′-lat de′-nezh-nee pe-re-vo′t pa po′ch-te (te-leg-rah′foo)
I want to send a reply-paid telegram.	Я хочу послать телеграмму с оплаченным ответом	ya kha-choo′ pas-lah′t te-leg-rah′-moo s ap-lah′-chen-nim at-ve′-tam
Can you tell me, please, when this telegram will arrive?	Скажите, пожалуйста, когда эта телеграмма будет доставлена?	ska-zhee′tye, pa-zhah′-lsta, kag-dah′ e′-ta te-leg-rah′-ma boo′-det das-tah′v-le-na
What is your telephone number?	Скажите, пожалуйста, номер вашего телефона	ska-zhee′-tye, pa-zhah′-lsta, no′-mer vah′-she-va te-le-fo′-na
How does one use the public telephone?	Как позвонить по телефону?	kak paz-va-nee′t pa te-le-fo′noo

Café and Restaurant

Have you had breakfast?	Вы завтракали?	vi zah′f-tra-ka-lee
Come to the café with us.	Пойдемте с нами в кафе	pai-dyo′-mtye s nah′-mee f ka-fe′
Let us go to dinner (supper).	Пойдемте обедать (ужинать)	pai-dyo′-mtye a-be′-dat (oo′-zhee-nat)
I should be glad to.	С удовольствием	s oo-da-vo′l-stvee-yem
I am very hungry.	Я сильно проголодался	ya see′l-na pra-ga-la-dah′l-sya (-as)
Here is your check.	Возьмите, пожалуйста, номерок	vaz-mee′tye pa-zhah′-lsta na-me-ro′k
What hors d'oeuvre shall we have?	Какую мы возьмем закуску?	ka-koo′-yoo mi vaz-myo′m za-koo′s-koo
Please lay another place at this table.	Дайте, пожалуйста, еще один прибор	dai′-tye, pa-zhah′-lsta, ye-schho′ a-dee′n pree-bo′r
Please bring me a knife (fork, spoon, wine glass, plate).	Дайте, пожалуйста, нож (вилку, ложку, бокал, тарелку)	dai′-tye, pa-zhah′-lsta, nosh (vee′l-koo, lo′sh-koo, ba-kah′l, tare′l-koo)
What shall we drink?	Что мы будем пить?	shto mi boo′-dem peet
I like (do not like) this wine.	Мне нравится (не нравится) это вино	mne nrah′-veet-sa (ne nrah′-veet-sa) e′-ta vee-no′
I do not eat meat (milk).	Я не ем мясного (молочного)	ya ne yem myas-no′-va (ma-lo′ch-na-va)
I like vegetables.	Я люблю овощи	ya lyoob-lyoo o′-va-schee
What fish dishes have you?	Какие рыбные блюда есть у вас?	ka-kee′-ye ri′b-ni-ye blyoo′-da ye′st oo vas?
I want fried fish.	Я хочу жареную рыбу	ya kha-choo′ zhah′-re-noo-yoo ri′-boo
Please bring me chicken.	Принесите мне, пожалуйста, цыпленка	pri-ni-see′-tye mne, pa-zhah′-lsta, tsip-lyo′n-ka
We want to order lamb shashlyk.	Мы хотим заказать шашлык из баранины	mi kha-tee′m za-ka-zah′t shash-lik eez ba-rah′-nee-ny
What do you want for dessert?	Что вы хотите на десерт?	shto vi kha-tee′tye na de-se′rt
Please bring us ice cream.	Дайте, пожалуйста, пломбир	dai′-tye, pa-zhah′-lsta, plam-bee′r
Bring me tea with lemon, please.	Принесите, пожалуйста, чаю с лимоном	pri-ni-see′-tye, pa-zhah′-lsta, chah′-yoo s lee-mo′-nam
Please bring us some fruit.	Дайте нам, пожалуйста, фруктов	dai′-tye nam, pa-zhah′-lsta, froo′k-taf
Bring me the bill, please.	Дайте, пожалуйста, счет	dai′-tye, pa-zhah′-lsta, schot

Proverbs and Sayings

To go through fire and water.	Пройти сквозь огонь и воду	prai-tee′ skvoz ah-go′n ee vo′-doo
When pigs fly.	Когда рак свистнет	kag-dah′ rak svee′s-net
To add fuel to the fire.	Подливать масла в огонь	pad-lee-vah′t mah′s-la v ah-go′n
To carry coals to Newcastle.	Ездить в Тулу со своим самоваром	ye′z-deet v too′-loo sa sva-ee′m sa-ma-vah′-rom
The devil is not so black as he is painted.	Не так страшен черт, как его малюют	ne tak strah′-shen chyort kak ye-vo′ ma-lyoo′-yoot
Strike while the iron is hot.	Куй железо, пока горячо	kooi zhe-le′zo pa-kah′ ga-rya-cho′

BY YURI OVSYANNIKOV
PHOTOGRAPHS BY ALEXANDER MOKLETSOV



This lion's head adorned the stern of a frigate of Peter the Great's time.



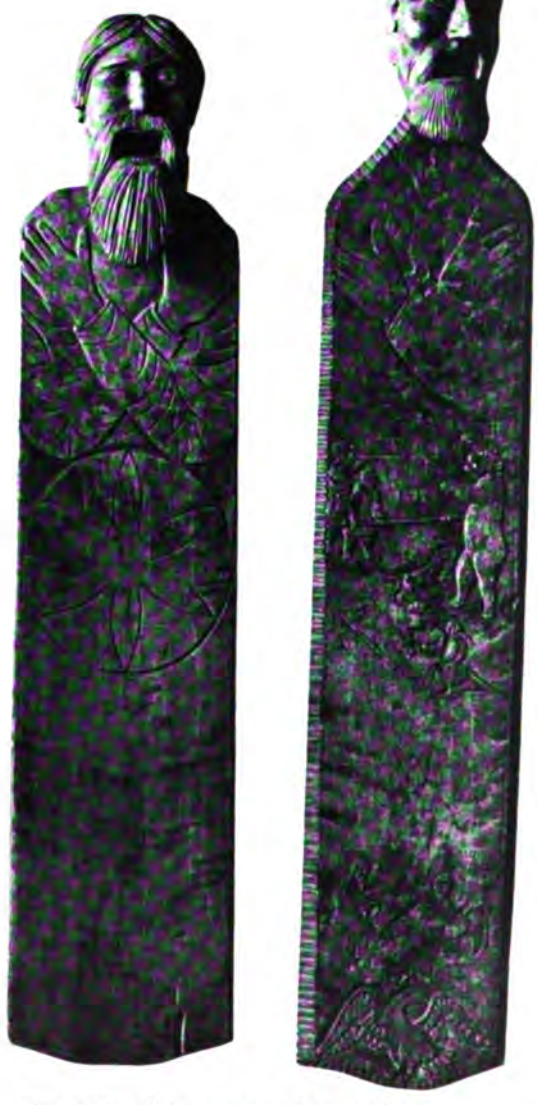
An unknown wood carver 200 years ago did this heron to decorate a peasant's abode.

SAINTS AND SYMBOLS

Yuri Ovsyannikov's family has lived in Moscow for many generations. He was born in 1926 on one of its quiet old streets, in a house next door to a seventeenth century building. Perhaps it was this architectural monument that eventually turned him to art history as a career. The war broke out when Ovsyannikov had just finished school. He saw service at the front as a scout and took part in the capture of Berlin. When the war ended, he traded his machine gun for a correspondent's pen. He is the author of a book on Russian folk art and has written on Russian folk engraving, Soviet porcelain and modern decorative and monumental art.

IT WAS Matisse, at the turn of the century, who said that icons had opened for him a new, hitherto unknown world of art. Today these creations of the ancient Russian painters are the pride and glory of many museums and private collections.

However, while Russian painting of the Middle Ages has long been treasured by the art world for its unique contribution, until very recently the sculpture of the thirteenth to eighteenth centuries was

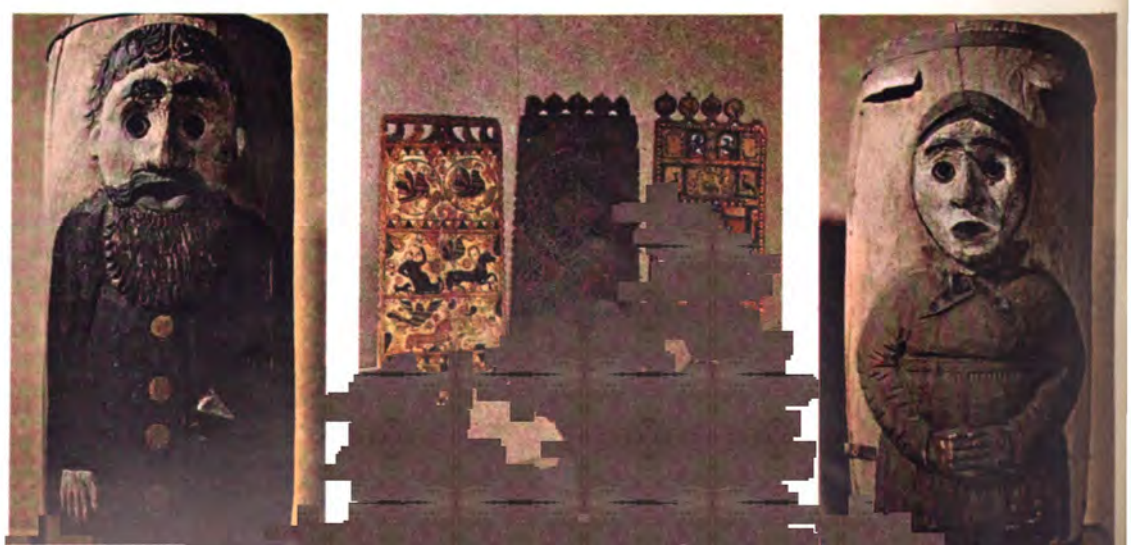


The pride of the peasant housewife was a carved and ornamented spinning wheel and bench. These are bench tops.





St. Georgi Pobedonosets smiting the winged dragon. Several of the figures at the palace windows have disappeared over the years, and we can only re-create them in our minds.



The folk painters and sculptors of every region of Russia had their favorite themes—the sun symbolized, animals, mermaids, scenes from country life. The carved peasant figures decorate beehives hewn out of tree trunks. In the center photo are spinners' paddles.

The restorers had to peel several layers of paint to get to the original surface of this 300-year-old image of Paraskeva, patron saint of happy marriages and profitable trade.

relatively little known, nor was it considered particularly characteristic. Research done by Soviet art scholars has altered this view.

The oldest piece of monumental wood carving which has come down to us is a six-foot screen of an iconostasis with images of saints and cherubs in bas-relief. It was executed by a thirteenth century master whose name we do not know.

He enclosed the saints and the cherubs in a highly individual frame, and on both sides of the screen carved odd-looking lions with trefoils at the end of their tails instead of the conventional tassels. The carver had obviously never seen the "king of beasts." His lions very much resemble big, amiable dogs, except for their fluffy manes.

As time went on, wood carvers tried to free their bas-relief figures from the background, to give them three dimensions. Unfortunately we have no samples of fourteenth century sculptures. Those that were not ruined by fire were destroyed by bigoted priests, who looked on the wooden figures as idolatrous, the leftovers of old heathen beliefs.

The veneration of worshippers was so persistent that the church was finally forced to accept the carved figures, and three-dimensional images of saints began to appear generally. Curiously enough, the sculptors confined themselves, for the most part, to three saints: Georgi Pobedonosets, Nikola Mozhaisky and Paraskeva Pyatnitsa.

When you study the sculptures that have remained intact and ponder the reasons for their creation, this strange devotion of the sculptors to the same images becomes quite understandable. Old Russia was going through a very critical period, fighting for its independence against a cruel and insidious enemy, the Tatars. Georgi Pobedonosets, the dauntless horseman who smote the winged dragon with his spear, became for the Russian people a symbol of their struggle.

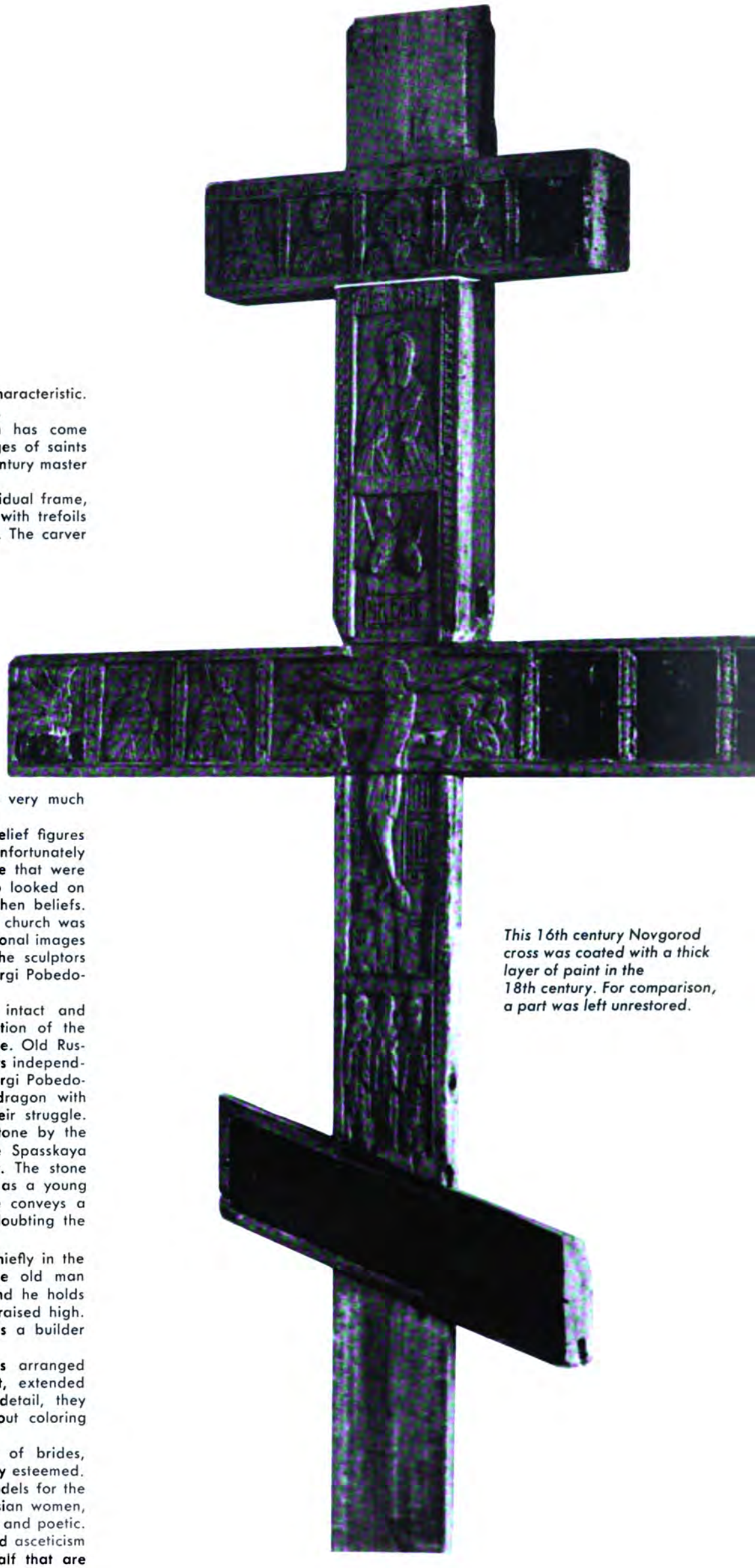
In 1464 a figure of Georgi Pobedonosets carved in stone by the master Vasili Yermolin was set up over the gates of the Spasskaya Tower of the Kremlin. It became the emblem of Moscow. The stone Georgi was later reproduced in wood. He is represented as a young warrior with spear raised to smite the enemy. The figure conveys a feeling of such strength and confidence that there is no doubting the outcome of the battle.

The sculptures of Nikola Mozhaisky were to be found chiefly in the frontier towns. Saint Nikola is depicted as a calm, wise old man with a high forehead and penetrating eyes. In his left hand he holds a model of a fortress city, and in his right a heavy sword raised high. The Russian masters were not creating a saint so much as a builder and defender of outlying fortresses.

Those ancient sculptors knew their craft. They always arranged their figures frontally and, violating proportion somewhat, extended them upward. Although they never tried for individual detail, they achieved amazingly lifelike silhouettes, and well-thought-out coloring provided the decorative effects they wanted.

Paraskeva Pyatnitsa, the Russian Venus, patron saint of brides, of happy married life and of profitable trade, was very highly esteemed. We shall never know the names of those who served as models for the sculptured portraits of Paraskeva, but they were lovely Russian women, full of inner fire and at the same time extraordinarily gentle and poetic.

The Russian wooden images of the saints were free of cold asceticism and unctuous piety. The figures of the lion, eagle and calf that are preserved in the museum of the ancient Russian city of Suzdal, outwardly, in silhouette and composition, resemble the famous gargoyles



This 16th century Novgorod cross was coated with a thick layer of paint in the 18th century. For comparison, a part was left unrestored.



These ingenious symbols of the apostles were carved in the early 18th century. The calf stands for Luke, the eagle for Mark, the lion for John, and the angel for Matthew.

St. Nikola, the builder and defender of Russian border strongholds. This carving was done by a Pskov craftsman in the early 16th century.



of Notre Dame. But the resemblance is only superficial. In the Russian figures we have sly good nature instead of the malicious, spiteful grin of the Parisian monsters.

The four seated evangelists, made by northern craftsmen in the early eighteenth century, seem just as simple and uncomplicated. Ordinary plowmen and workers were the prototypes, and the sculptors found the designs for their ornaments and patterns in the nature around them, in the fields and forests.

However, we must remember that Russian wood carving was not motivated simply by the desire to reproduce reality. It had a richer and much broader background. In spite of all the efforts of the Orthodox Church, there still lived on in the Russian people, sometimes unconsciously, a belief in the heathen gods of their distant ancestors. The Russian Shrovetide, the holiday to greet the spring, has remained a purely heathen celebration. In the old days there was also a holiday to welcome summer, when great bonfires were lighted at night and wreaths woven of young birch twigs were cast into streams.

In art, too, we hear these faint echoes of ancient beliefs. A circle of rays or a horse, the symbols of the sun, the most revered deity of the ancients, can be seen to this day in carvings and paintings on household utensils. To this very day almost every house in the northern villages is ornamented with the sculptured head of a horse. It once served to guard the house against harm and misfortune, then it became a traditional ornament. Ladles for drinking, carved bowls and spinning wheels were ornamented with the same horse's head. Bright, beautiful horses gallop across boxes woven of birch bark made for a bride's dowry, and wild horses chase each other on colored spinning wheels and on hunters' powder flasks carved of wood.

The more familiar image of the sun-—a human face circled by rays—is to be found, just as often, on spinning wheels, boxes, cups, under the eaves of houses, on barges and sailing vessels. One such "sun" had a two-hundred-year-old history of service—a huge circle more than three feet in diameter was affixed to the mast of one of the Volga boats, not simply as an ornament, but to tell time. From ancient days Russian ships were decorated with carvings of fantastic animals, flowers and leaves.

Wood carvers in other countries looked to the myths of Greece and Rome for their subjects and did figures of Minerva wearing the helmet of Pallas Athena. But distant antiquity remained alien and incomprehensible to the Russian folk masters. They preferred to carve the things that were part of their lives, the things they loved most. The Russians, whose life was bound up with the forest, revealed their very souls in their wood sculptures.

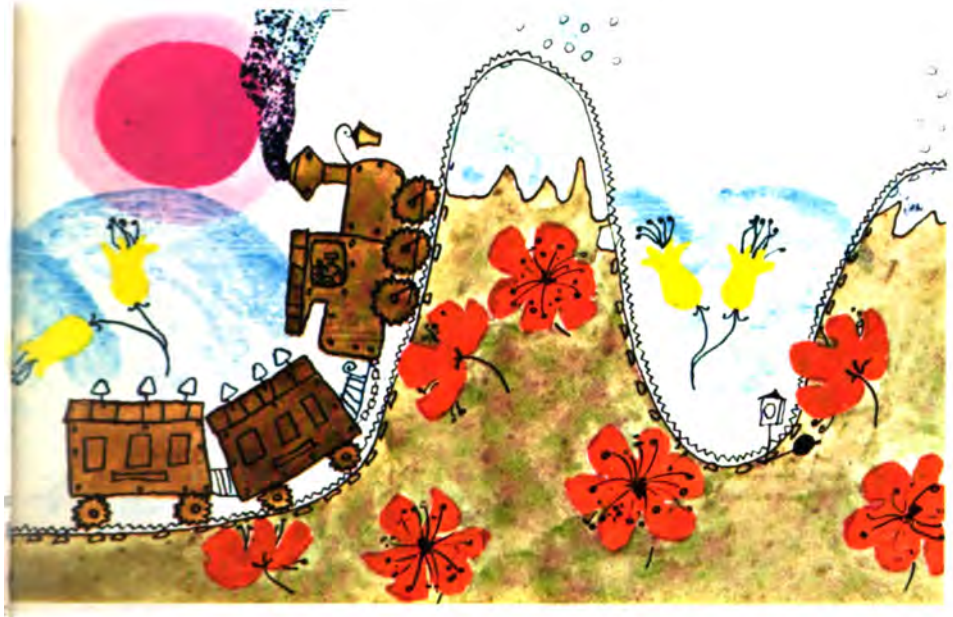


MERRY YOUNGSTERS CLUB

BY FELIX SHAPIRO

THE ADVENTURES OF SAMODELKIN'S LITTLE LOCOMOTIVE

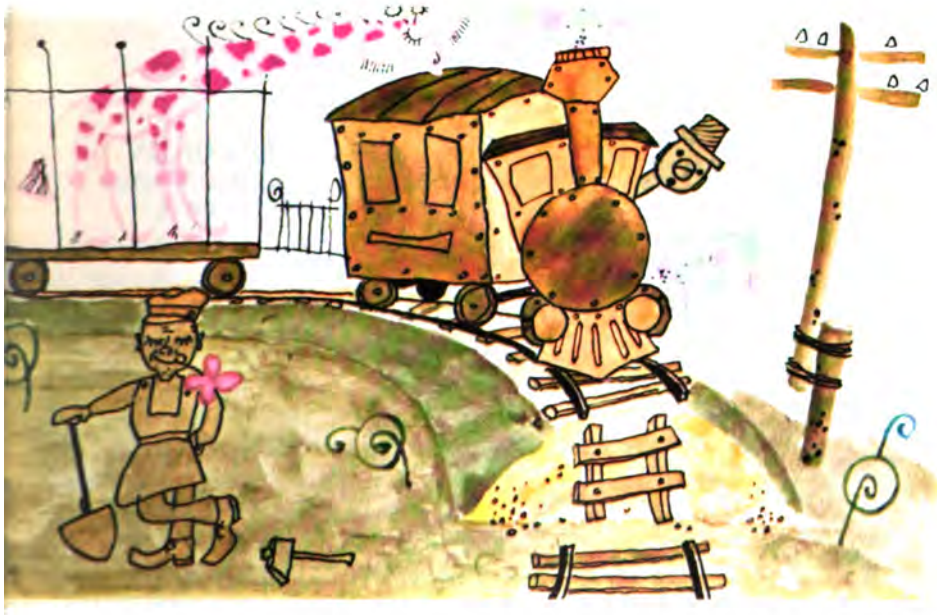
DRAWINGS BY LEONID SERGEYEV





1. Once Samodelkin drove his little locomotive in the mountains. But don't think that he did not know what to do! He built special mountain rails and wheels, and the little locomotive rode from summit to summit. It was really a very brave little locomotive.

2. Once Samodelkin drove up in his little locomotive to the fairy tale about two horses: a red horse and a black and white horse. The horses hitched themselves to the little locomotive, each pulling it into its own fairy tale. But don't think that Samodelkin did not know what to do! He said "Whoa!" and the horses stopped immediately.





3. Once Samodelkin drove up in his little locomotive to a break in the line. But don't think that Samodelkin did not know what to do! He stretched a wire between the rails, and the train quickly shifted from one line to another. It was a very agile little locomotive.

4. Once Samodelkin drove up in his little locomotive to a dead end. But don't think that Samodelkin did not know what to do! He backed up, and the little locomotive took him home. It was a very clever little locomotive.

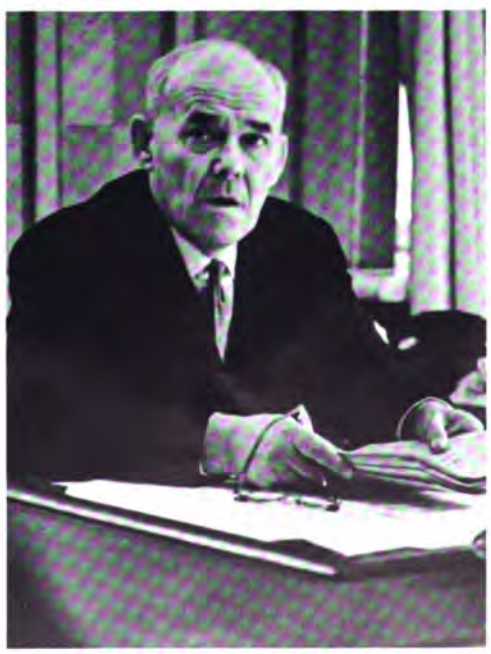
The business of the USSR Bank of Foreign Trade with 1,000 foreign banks is concentrated here.





BANK OF THE SOVIET UNION

Photographs by Lev Ustinov



Alexei Poskonov, chairman of the Board of Directors of the State Bank. A Leningrad Institute of Finance and Economics graduate,he has been in banking 40 years.

BY ALEXEI POSKONOV
Chairman, Board of Directors
State Bank of the USSR

THE STATE BANK of the USSR, the Bank of Foreign Trade (Vneshtorgbank) and the Bank for Financing Capital Investments (Stroibank) comprise the Soviet Union's banking system.

There are 240,000 people on the staff of the State Bank, which has 4,000 offices and branches and operates 72,000 savings banks. The bank's management is completely centralized. It is administered by a Board of Directors appointed by the USSR Council of Ministers. The Chairman of the Board is a member of the government and is appointed by the USSR Supreme Soviet.

The State Bank is an important economic institution with several centralized functions. It is a credit agency; a settlement, collection



The computing center at the main office of the State Bank does four million operations daily.

- and disbursement center; and a bank of issue.

The State Bank has close connections with all the industrial, agricultural, commercial, transportation and other enterprises and organizations in the country, and exercises direct control of their financial and business operations.

Sources of Finance

The vast resources of the State Bank derive from the temporary surplus funds of enterprises, organizations and institutions held on deposit; their settlement and current accounts; the deposits of private individuals; State Budget surpluses; its own funds; and money in circulation. It should be noted that the ratio of banknotes to total assets is very small.

All enterprises, organizations and institutions are required to keep their liquid funds on deposit with the State Bank. Accounts are settled by the transfer of funds from one account to another, so that no handling of cash is involved. There are more than four million accounts belonging to one million depositors in the State Bank. More than four million banking operations are handled daily by the bank and its various offices and branches. Transfers in settlement of mutual accounts of enterprises and organizations total more than 800 billion rubles annually.

The cash receipts of all commercial, entertainment, transport, service and other enterprises are deposited with the State Bank's branch offices.

Also on deposit with the bank are considerable funds owned by individuals. There are 54 million private accounts in the savings bank system. These funds are deposited by the savings banks in the State Bank. As of the beginning of 1964 they totaled 14 billion rubles.

The state finds it profitable to use the temporarily idle funds of individuals and pays interest at the rate of two per cent per annum on demand deposits and three per cent on time deposits. Savings banks offer the depositor certain services, such as paying his rent, gas, electricity, telephone, taxes and other bills and selling bonds and lottery tickets.

The State Bank handles all budget revenues and disbursements. Budget revenue includes a share of the profits of enterprises and the turnover taxes they are required to pay, as well as taxes paid by the individual citizen. The latter constitute an insignificant and systematically diminishing part of government

revenue. All these payments go into the national, republican and local budget accounts on deposit with the State Bank. The balances in these accounts, resulting from the fact that receipts regularly exceed disbursements, form a substantial share of the bank's resources.

The bank's own fund, *i.e.* the original grant it received from the state—the statutory fund, which serves as security for its liabilities, is equally large. At present it amounts to one and a half billion rubles.

Money, of course, is in continuous circulation. Receipts and disbursements in the economy never being equal at any given moment, the bank always has available large balances in the budget accounts; the temporary surplus funds of enterprises, organizations and institutions; the deposits of private citizens; and, of course, its own fund. All these the bank uses to extend credit to various branches of the national economy.

Credit: the Bank's Most Important Function

In the Soviet system of economy the bank is not a private institution whose primary purpose is earning interest or profit but a tool used by the state to strengthen and develop the national economy. Its function is to extend temporary financial aid to industrial enterprises, collective farms, organizations, etc., in the form, primarily, of short-term and long-term credits.

Bank loans are available to enterprises, collective farms, institutions and to private individuals when they want to build a house for themselves. Bank credit may be used by enterprises to cover disbursements for new construction, expansion and modernization, and for such current needs as raw materials and supplies required for continuous operation. Credit extended for the latter is proportionate to the amount the enterprise itself invests for the purpose.

The role of bank credit in the country's economy is constantly expanding. The State Bank invests its funds in every single branch of the economy. As of the beginning of 1964 its outstanding short-term loans amounted to 53 billion rubles, distributed as follows: industry—35 per cent; trade—38 per cent; agriculture—14 per cent; others—13 per cent. Short-term credits are generally payable in from 30 days to one year.

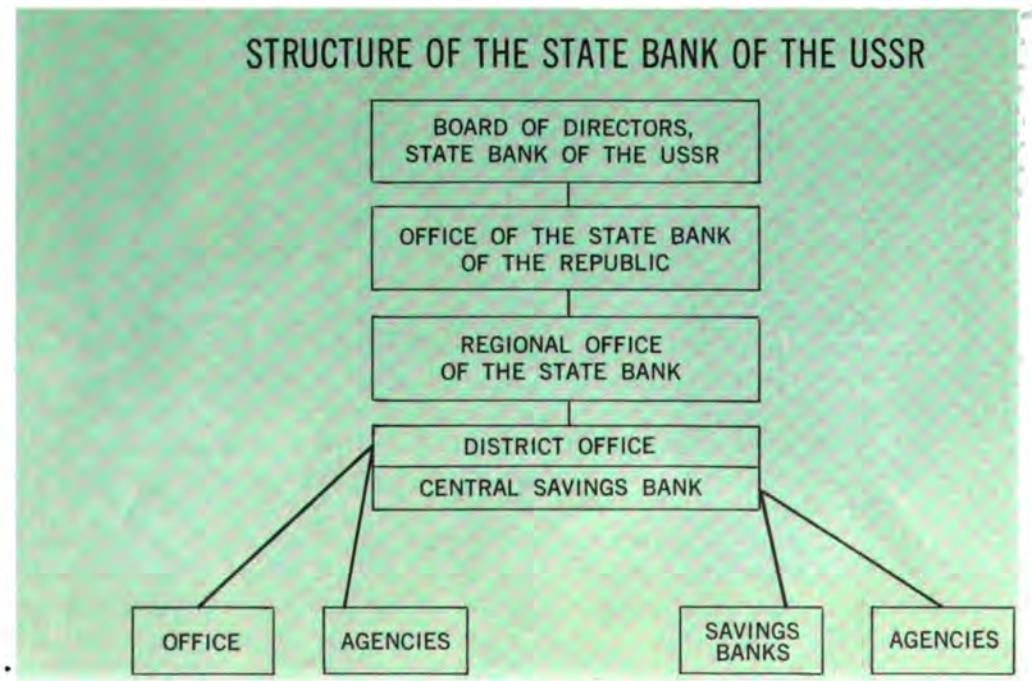
Long-term credit is available for periods of up to 20 years. Outstanding long-term loans amounted to more than four billion rubles at the beginning of 1964. The bulk of these credits went to collective farms to finance new livestock facilities, drainage and irrigation projects and machinery. Long-term loans are made by the bank out of special budget appropriations.

Short-term and long-term credits extended in all branches of the economy in 1963 totaled 490 billion rubles. Enterprises and organizations are charged from one to two per cent interest per annum. Collective farms pay 0.75 per cent interest on long-term loans. Interest on overdue loans is charged at the rate of five per cent. The State Bank also finances capital investments in certain industries as well as in agriculture through grants from state budget appropriations.

Credit Machinery

The bank conducts its lending operations according to a plan. Enterprises and organizations wishing to obtain loans are required to submit quarterly and yearly estimates in advance. These estimates are examined by the higher economic bodies in the respective sphere, the ministries concerned, the Finance Ministry, and the State Planning Committee. The bank submits its plan to the government for approval.

The plan, quite naturally, cannot anticipate all requirements a year in advance. Amendment is accordingly provided for, and special credit reserves are made available.



Cash in Circulation

The cash in circulation is regulated by the State Bank's cash plan. In a socialist planned economy payments (wages and other citizen income) and receipts (revenue from commercial and other service enterprises) are balanced. The circulation of money is planned and regulated for the country as a whole and on the republican, regional and district level as well. Prices are set by the government alone according to plan. The government maintains a balance between consumer purchasing power and the turnover of retail trade and services. The amount of money in circulation is maintained at the level required to assure a normal turnover. This system guarantees the Soviet economy against any possibility of inflation.

Foreign Exchange Operations

Another important function of the State Bank is credit and settlements connected with foreign trade and exchange. The bank has a monopoly on foreign exchange operations, the purchase and sale of foreign currencies, checks, bank drafts, letters of credit and other negotiable instruments made out in foreign currencies, and on such assets as shares and bonds. It also deals in gold, silver and other precious metals.

The State Bank handles all operations bearing on loans to foreign countries, export and import deals, and credit from abroad. The rate of the ruble with respect to foreign currencies is also fixed by the bank.

Many of the above-mentioned functions have been assigned by the State Bank to the USSR Bank of Foreign Trade (Vneshtorgbank), subject to its control. The Vneshtorgbank is a joint stock corporation. Its stock is held by various Soviet state and cooperative organizations concerned with foreign trade and related operations. The State Bank is the principal stockholder.

The State Bank is, besides, a stockholder in a number of banks abroad. The development of foreign trade and economic and cultural relations between the Soviet Union and other countries has increased the volume of foreign settlements. The State Bank and the Vneshtorgbank settle foreign accounts through more than 1,000 institutions in 80 countries.

The government monopoly on foreign exchange and foreign trade creates a stable foundation for planning foreign exchange operations. The State Bank ensures adherence to the plan and maintains sufficient exchange reserves, thereby guaranteeing prompt settlement of all Soviet obligations.

The most modern equipment is used in the accounting and planning operations. The head office at Moscow houses an electric computing center and a fully mechanized accounting department. There are similar computing centers in other large cities and economic areas.



In the Bank of Foreign Trade tourists exchange their currency and buy Soviet traveler's checks.



Paper money comes in denominations of from one to 100 rubles; coins—one kopeck to a ruble.



Officials of the Podolsk cable factory negotiating a 250,000-ruble loan, repayable in two years, with the head of the bank's planning department. It will be used for renovation.

SMALL BANK— BIG BUSINESS

By Nikolai Popov



The Mikhailovskoye farm's accountants discuss a bank loan with inspector Irina Rusakova.

PODOLSK, a regional center about 25 miles from Moscow, has a population of 450,000. In the area are textile mills, a machine-building plant, a cable factory, nineteen collective farms, eight state farms and eight experimental stations. All of their financial operations are handled by the Podolsk branch of the USSR State Bank. All told, the branch does the banking for 1,146 industrial, agricultural and commercial enterprises.

The bank opens at 8 A.M. By that time the 116 employees, 99 of them women, are at their desks. The manager and his assistants get in well before eight to look over the balance sheet just in from Moscow. Each day the business transacted by the branch is teletyped to the main office for processing at its computing center. This balance sheet is what branch manager Nikolai Maletsky starts his working day with.

By nine the office is full of accountants and finance department heads of farms and factories. A man with short clipped hair and a lively, expressive face comes up to the counter. Nikolai Noskov is the finance department chief of a cable plant which has just received a large shipment of copper wire from Sverdlovsk. Noskov hands in the document certifying receipt of the goods, and the clerk finds the cable plant's account and verifies its balance. The Podolsk branch is now authorized to make payment to the Sverdlovsk branch, which handles the business of the copper-smelting works.

"What's the procedure when you ship the finished product?" I asked Noskov.

"Here's an example," Noskov says. "Two days ago we shipped cable and wire to the Dynamo Electrical Engineering Plant in Moscow. Can you tell me, please," he turns to the clerk, "whether payment has been made?"

"It has."

"How about a situation like this?" I continue. "Suppose you have to pay for a shipment of raw materials or pay day comes along and your bank account is zero. What do you do then?"

"This kind of thing does happen on occasion," Nikolai Noskov says. "We make a shipment on time, but it's delayed in transit and so is payment. That's what the banks are for. The branch gives us a credit for 2.5 million rubles, which covers half our production costs; the other half we supply. When we run short, the bank pays for our purchases on the understanding that we will shortly be paid for the goods in transit. This credit account is a sort of control lever between our buying and selling operations. It stabilizes our work, makes it independent of transportation hazards, seasonal deliveries and occasional delays in payment."

Manager Maletsky added that his branch advances this kind of credit to all the enterprises in the region in amounts equal to a fourth of their total turnover.

"Credit is our main banking service," he went on to say. "At any given moment the credit granted to our customers averages 70 million rubles. In the course of a year we lend about 720 million rubles."

A factory payroll. The State Bank pays out 450,000 rubles daily for the city's plants and offices.



"Getting an advance from us is standard procedure for a plant. Usually it marks the final stage of a plan drawn up by the plant and bank jointly," Irina Malysheva, in charge of the bank's planning department, told me. "We have a staff of inspectors who visit local factories, collective farms and other enterprises to see how they are run, what their requirements are, whether they need money to pay for raw materials, say, or for construction or new machinery. Then when the plant applies for credit, it does not come as a surprise to us. We know what all of our enterprises are likely to need over a given period, and we can plan accordingly."

Irina Rusakova, an inspector, comes up and gives Irina Malysheva some papers. They have to do with an application the Mikhailovskoye farm, 25 miles from Podolsk, is making for a two-year loan of 160,000 rubles to build cowsheds. Rusakova is going to the farm, and we join her. Ivan Maksimenko, the farm's chief bookkeeper, accompanies us. This heavy-set man with glasses is second to none in the bookkeeping business, Rusakova tells me.

"We borrowed money from the bank once to buy cattle," Ivan Maksimenko says. "Now we want to build cowsheds. We figure that increasing our livestock will add 130,000 rubles to our income. By the end of next year we'll have our debt paid off."

Irina Rusakova goes through the farm and the books with a fine-tooth comb. "You can pick up the money tomorrow," she tells Maksimenko.

We start back to Podolsk.

"And what do you do about a debt that isn't paid off on time?" I ask.

"If it's not the borrower's fault, we allow more time," the inspector explains. "We look into the reasons, of course. If the plant is to blame—let's say it is turning out goods of inferior quality that customers won't buy—we'll cut down its credit and inform the economic council of this area. That will usually be enough to straighten things out. If this doesn't help and the plant keeps on producing goods that won't sell, we ask either that the factory be closed down or that it be merged with another plant. But I must say this is the very rare case. On the average, overdue payments come to only a half per cent of all the credit we extend."

"Do you lend money to private individuals?"

"Yes. We grant loans to build private dwellings and cooperative apartment houses. As a rule, these are long-term loans, 10 to 15 years. Our bank finances 26 such cooperatives with a membership of 150 people each."

We return to the bank. It is still crowded. Natalia Semyonova, a stout woman in a green coat, has just drawn a large sum to cover the payroll. She is the pay clerk at a local factory.

"Every day the local enterprises draw about 450,000 rubles for wages," the manager explains. "The bank usually takes in as much cash as it pays out."

"Where does the cash come from?"

"From stores, restaurants, movie houses, bus companies, savings banks and so on. If you like, you can see how we collect it."

We go with Nikolai Zuev, a cash-collecting officer, to the Ruslan and Ludmila Department Store, one of the largest in town. We get there at lunchtime. In a matter of minutes the money is counted and put into a canvas bag. The cash-collecting officer writes out the receipt. A militiaman stands by. Nikolai Zuev carries a gun, just in case; the bulge in his coat shows it. He takes the bag and gets into the car. The driver starts the engine.

"Has anyone ever tried to hold up the bank or the cash-collecting officer?" I ask.

"Not that I know of," Nikolai Zuev answers.

I address the same questions to Nikolai Maletsky. He has been with the branch since it was established. He answers in the negative too.

I ask Maletsky whether his branch can issue new notes.

"Yes, we can and do," he says. "We issue new notes when a large number of enterprises pay out wages on the same day and also to replace those worn out, with the permission of the main office of course. We don't print or coin money, naturally, but we always have a stock of new bills and coins on hand to avoid delays."

The workday is coming to a close. Nikolai Maletsky goes to his office to check the amount of business the branch has transacted—how much money went out, how much was deposited. The bank clears about 6,000 checks totaling 13 million rubles a day. The information on the day's transactions is teletyped to Moscow. In the morning Nikolai Maletsky will have the new balance computed at the center.

Lesson in Telepathy

A SHORT STORY

BY VLADIMIR SOLOUKHIN

Vladimir Soloukhin is known to Soviet readers as a poet and prose writer. His travel books *Vladimir Lanes* and *The Dew Drop* are favorites with the reading public. The writer views both nature and people with penetrating insight, sensing the beautiful in what seems prosaic and ordinary. This is, perhaps, what endears Soloukhin's work to readers.



Drawing by Nikolai Vorobyev

THE DAY BEGAN like any other, though Nadya, or Nadezhda Petrovna to the budding authors who came to her office, conscientiously reflected that it had to be dedicated entirely to the crucial instant of one minute to ten and one minute after.

But we shall have to explain who Nadezhda Petrovna is and what mysterious moment she was anticipating at ten o'clock sharp, Moscow time. Nadya worked in a newspaper office in a little old town beside a wide river slowly but surely rolling its deep blue, often jet black, waters to the Arctic Ocean. The ocean was far away, but Nadya Tomtseva often felt its breath on her cheeks. It was as though a huge green block of ice lay hidden behind the stunted pines just outside the town, numbing you with its chill now and then. This was quite pleasant in July. Nadya, of course, knew that beyond the stunted pines there was nothing but sand and more stunted pines, and so on to the very tundra.

This was her second year with the local newspaper to which she had been assigned after graduating from journalism school. This town with its bazaar selling mostly cranberries and mushrooms, its silent deserted churches (with daws fluttering round the leaning crosses and rusty cupolas), its resinous yellow woods beside the wide river, and the curious but pleasant dialect of its people had come to be very dear to Nadya. To make the time pass more quickly, she had organized a literary circle under the auspices of the newspaper. So now every Thursday she presided at a gathering of quiet young people and shy oldsters, the budding poets of the town. They respectfully called her Nadezhda Petrovna and revered her to a fault.

It's true these details have little to do with our story. Nadya could have been a teacher or a technician at the sawmill. . . . But then she would never have met our two other heroes, and we would have had no story.

To round out the background, we must add that Nadya was 24 years old, that there was a distinguished air, something of big city life, about her, even if she was not exactly pretty. She could be likened, perhaps, to a stray, migrating bird in the midst of the handsomer, but far more modest, northern species.

We shall begin our story of Nadya's adventure by saying that a friend of hers in Moscow helped her get accommodations at a very exclusive sanatorium in the Crimea last June. The people who came there were mostly scientists or writers. They were elderly folk, very impressive and all of them famous. Each had a room to himself; and there were signs all over the corridors, reading: "Silence please! Noise interferes with work!" This was not exactly to Nadya's liking; she had been craving for noise, lots of fun, dances and evening parties, all sorts of pranks, get-togethers where riddles would be solved and games thought up, funny enough to make a person laugh so hard that the tears came. It was not that she was particularly given to such things; it was simply that she felt like hopping about and laughing a bit after living in that severe, pensive northern town where everything sounded hushed.

Well, if there wasn't going to be any noise, then there wasn't! There was still the warm blue sea to enjoy, the white sea gulls, the curious exciting aromas of the sanatorium gardens—especially at night, when cicadas sang and the earth returned the steamy heat it had saved up by day.

In the dining room Nadya shared a table with a tall old man who had a sharply lined face and gray tufts of hair escaping from under his academician's cap. Either he was 60 and had led an exceptionally hard life, or he was 70 and was exceptionally well preserved. If 70, he was a very youthful septuagenarian. Apart from this he had a pair of piercing blue eyes that belonged to no definite age or time.

That look of his was like a weapon gracefully sheathed in a rakish scabbard for further use. It could even seem innocuous, like a toy safe enough for a child. But it could flash forth with a sting that was fatal. It was a weapon as hard and sharp as steel, wielded by a firm and sophisticated hand.

Nadya sensed all this instantly. The old man introduced himself as Kazimir Frantsevich. Elegantly annihilating his steak, he plied her with questions about the North and the town where she lived. His eyes twinkled at her from time to time or affected surprise. It was a polite table chat, the best thing for dinner. But suddenly Nadya was in a daze, everything rocked around her and seemed to swim. She felt she was falling, for Kazimir Frantsevich had somehow moved up to the very ceiling. He seemed to be suspended up there, and all around was a blue haze, nothing to hold on to to steady herself. There was only intangible, fuzzy blueishness.

Then everything was back in place. Nadya was sitting in her chair, and Kazimir Frantsevich was still coaxing some of the vegetables on his plate onto a bit of meat, his eyes lowered, contemplating the food. When he raised them, they were just ordinary blue eyes. But he smiled at her and quietly apologized.

"I'm sorry! That was my fault. It was childish of me, perhaps. I really shouldn't be so thoughtless. Forgive me, please!"

The young woman and the septuagenarian (for he was 70, after all) were soon friends. Sometimes they would sit side by side in the rocking chairs under a spreading plane tree or stroll the alleys of the ancient park. They were sure, at any rate, to meet in the dining room three times a day, to say "how do you do," and wish each other "a good appetite" even a second time if one of them left the table before the other. Her strange dizziness and the professor's even more mysterious apology continued to preoccupy her. On the third day Kazimir Frantsevich decided to explain. They were sitting in comfortable wicker chairs, looking at the sea.

"I shouldn't abuse my powers, of course. That's not permissible. Just as it is not permissible, for example, for a boxer to use his fists outside the ring. The fists of a boxer are on a par with an iron weight, a crowbar, say, or even a knife. But what's a knife or a crowbar compared with the weapon I carry?"

Nayda regarded him almost with fright.

"Know anything about telepathy?"

"A little . . . It's something like hypnotism, isn't it?"

"Hypnotism! That's only a toy! Though the two belong to the same order, essentially. Hypnotism is when I look into your eyes and impose my will on you. Now if we were thousands of miles apart. . . ."

"Do you mean that's possible?"

"Why should you doubt it? If you had a little electric battery and a few wretched wires, you could hurl a wave into the ether—all the way to Australia or some such place, where someone else could pick it up with the same sort of battery and a few more wires. But I'm a man, a source of energy in my own right. . . ." The professor digressed at length. His explanations were peppered with such learned expressions as "functional directivity," "ionic alterations," "wave generation," "brain biocurrents," "intracellulars" and even "supercellulars." Poor Nadya wrinkled her little brow to show that if she did not understand what he was saying, at least she was trying to. Kazimir Frantsevich finally took pity on her.

"Ah yes, it must all seem extraordinary. The point is that a man can hurl his own wave into the ether, and another can pick it up no matter how far away he may be. The amazing thing about such biocommunication is that you will think that everything I transmit to you, or rather impress upon you, has been prompted entirely by your own wishes and not by a will infusing its message from without."

Nadya meanwhile had fished a chocolate truffle from her bag, slowly unfolded the paper, blown the brown dust from the sweet, and bitten into it.

"There you are!" said Kazimir Frantsevich gleefully. "You felt like eating that truffle. What could be simpler? What has anyone else's will to do with it? But you might as well know that it was I who made you want to eat that sweet. That was my will disguised as your own. Would you like to find yourself in Paris for a moment?"

Again everything started rocking around Nadya. The hazy sea-blue mists broke into fragments of squares and other rectangles. The rectangles grouped swiftly into tall gray houses. Automobiles swooshed by, and she could hear people chatting in a strange, hurried tongue. But the houses and motley crowds were soon lost in the blue sea. Nadya saw the old man sitting there as before, in his wicker chair. Her arms and legs were her own, though there was a ringing in her ears as though she had been slapped or had sprung to her feet from deep slumber.

"You've just seen Concord Square. It was fun, wasn't it? What's the weather like in Paris? Is it rainy, or sunny like here in the Crimea?"

"The sky was overcast, I think. But that was simply hypnosis. You've just made me imagine things. I was not really in Paris. That would be mysticism!"

"Your grandfather would have said the same thing if I told him that one day we'd be able to see people singing and dancing in London. Seeing things that happen thousands of miles away is surely mysticism too! But we do see such things, nonetheless. Two hundred years from now our present conversation, and particularly your incredulity, will seem very naive and comical. Imagine a lady at the court of Catherine II musing on such things: 'Why, that's preposterous! How could anyone talk to Moscow from St. Petersburg through a wire, no matter how long and thin! What? You don't even need a wire? Sheer mysticism!'

"All things are material, my dear Nadezhda Petrovna. Biological communications are based on electromagnetic oscillations. But what if they were based on oscillations we know nothing about as yet? It would surely be wrong to discard everything we know nothing about as impossible, with such exclamations as: 'Why, it's sheer mysticism! Utterly supernatural!'

"For all we know there may be spheres and forms of matter which we do not even suspect. Human thought hesitates, perhaps, to explore those directions because they smack of the supernatural and seem unreasonable. There's a little story about a carp, a tale with enough wisdom for an epic poem. When the carp put its head out of the water one day, it caught a breath of air and dived for the bottom, nearly suffocating. 'Well, what did you see out there?' asked several other carps crowding around the adventurer. 'There's no life out there, I can vouch for that!' answered the enterprising carp. And it seems to me we behave in much the same way, more often than not."

Speculation crept into the professor's eyes, which were fixed on Nadezhda Petrovna.

"What would you say to taking part in some experiments? I can see you have a subtle and sensitive psyche. Very much so, in fact. Our experiments would be important to science and the future."

"Well," gasped Nadya, smiling. "Not if you're going to keep sending me to Marseilles or Paris!"

"That's not the point," said the professor earnestly. "Other such experiments are now under way, as you may know. We're beginning from the beginning. I'm sure you must have heard or read newspaper reports about the experiments made on the American submarine *Nautilus* sailing in the Atlantic. Telepathy experiments were conducted aboard that ship continuously for 16 days. A Duke University student named Smith was the inductor and never left his isolated laboratory on shore during all that time, giving two telepathy transmissions, that is, hurling his visual sensations into the universe, every day. To be exact, he transmitted various geometric figures: a circle, a square, a cross, a star, and three wavy lines. The sequence of these images was changed with every 'broadcast.' "

"Aboard the *Nautilus*, meanwhile, a lieutenant by the name of Jones received the impulses from the inductor. At a prearranged hour and minute he sat concentrating over a sheet of paper, drawing those same geometric figures. It seemed to him, of course, that he was drawing them at will, or at least at random. Actually he was receiving the signals broadcast by the inductor."

"Did those figures coincide?"

"In more than 70 cases out of 100. But even over the telephone you may miss a word or two and have to ask the party at the other end of the line to repeat. Remember that the two men were separated by 1200 miles plus the density of the water, the submarine's sides and all sorts of insulating barriers."

"But if we really keep radiating something and our impulses keep flying into the ether, why can't we hear them?"

"I repeat, that's because we don't know how to use the receiver. The ether, for example, may be filled with all sorts of radio waves—music, speech, distress signals. But you've got to press a button to make the receiver work. Then you've got to turn a dial until you've found the wave length you need. To this I may add that our constructors have taken special pains to preserve us from telepathy by installing protective brakes or barriers. People with disturbed psyches, as they are called, often insist that they are under constant pressure from alien wills, that a voice keeps telling them to do this or that. Thousands of such cases have been confirmed by medicine. It is not improbable that the barriers break down sometimes. But we've strayed from the subject. Let's make a pact, you and I, for the sake of science and progress. Let's agree to have five sittings. I'll explain what I mean. When you get home, you and I will hold five biological radio communication sessions. On prearranged days, hours and minutes you will withdraw (about an hour before the sitting), concentrate very carefully and jot down whatever I send you at the proper moment. At first there will be simple geometric figures: a square, triangle, a circle, cross, rhombus, or just a line. My messages will be more intricate during the second sitting (we'll decide that beforehand), and after that even more complex. Finally you will be writing whole sentences, such as: 'I don't love you,' or 'The Volga flows into the Caspian Sea,' or something of that sort.

"Immediately afterward seal the results in an envelope and send them to me. I'll send a similar envelope to you. We will compare our drawings and scribbles. Do you agree?"

"Oh yes. It's so interesting and unusual."

"When are you planning to return to your town?"

"July eleventh."

"Splendid. We shall have our first telepathic sitting on July sixteenth at exactly ten in the evening, Moscow time, or, to be more exact, from one minute to ten to one minute after. But see that you don't disappoint me, dear Nadezhda Petrovna. Don't make an old man strain himself in vain. Can you keep your word?"

"I promise, Kazimir Frantsevich! No matter what happens, if I'm alive, I'll be there at ten o'clock on the sixteenth. You have my word."

This story, you remember, began with July sixteenth. Nadya found nothing extraordinary about the day, though her thoughts were with the forthcoming experiment from the moment she woke up. She kept thinking about it while washing, breakfasting, and all the way to the office. She had a cozy little office with a single window facing an old church. Nadya had never paid the church any particular attention, just as one hardly looks at a familiar painting on the wall at home. She did notice, however, that the scene outside was soothing when she was tired, also that it was pleasant precisely because it was unobtrusive and there was nothing superfluous about it. To enjoy it one had only to keep looking at it. She was glad she did not have the office of her coworker Misha Kulebyakin, because his window looked out on a dusty, hilly street and a large sawmill.

When Nadya got to her office, she opened her desk, arranged her papers, sat looking out the window for about five minutes as always—this to get into the proper frame of mind for work—and then buckled down to her job. In spite of herself, she kept remembering that it was at this desk, today, at ten o'clock in the evening that a miracle was to occur. She would receive a signal from the Crimea and put it on paper. It was probably all nonsense. But that made the experiment all the more interesting.

There was a loud knock on the door just then, and a man appeared whom Nadya had never seen before. He stepped over the threshold, and the little office at once seemed crowded. It seemed brighter too, perhaps because of his straw-colored, sunbleached hair and smiling eyes, or because of his friendly and well-wishing smile.

He was evidently dressed for travel, but not without taste. He wore a wide, comfortable jacket, and it was no accident, surely, that his socks and shirt were of the same tan color. He's not from this town, thought Nadya at once.

"How do you do," said the stranger, still smiling. He did not put out his hand, however, but waited for Nadya to do so. "I'm a young poet. They call me Ivan. I was told young poets were your special concern. That's why I've come straight here."

"That's right. Have you brought your poems along? Want to recite them and get my criticism? Don't be shy. Let's have one of your poems. We'll talk about it."

"Never mind the poems. We can talk about

them later. I'm here for another reason. I'm just a visitor—from Moscow. Or rather, I'm on my way through this town. I'm taking a steamer this evening and continuing my journey to the Arctic Ocean. I'd like to spend the day getting acquainted with this town, its history, and so on. I thought you could help me. You've been living here a long time."

"Why should I play guide? They'll tell you everything there is to know at the museum. They have special guides for that."

"True enough. But those museum folk are a bit dry. They'll just give me a stiff exposition. I'd rather have someone a little more human, if possible someone who knows something about literature. Your editor in chief gave me a friendlier reception. By the way, he was the one who advised me to talk to you."

"Please forgive me! You said you were a poet from Moscow. What's your full name?"

Nadya thought she would put this simple-hearted chap gently in his place. He would tell her his name, and she would look perplexed, never having heard of him. Instead she flushed to the roots of her hair, for his name proved quite familiar. She had once even written a short criticism of a book of Ivan Speshnev's poems. Why, she knew two of them by heart! "And I asked him to recite his poems and offered to criticize them," she thought with anguish. "How mortifying!"

"Won't you give a stranger from Moscow a few hours of your precious time? Your superiors have no objection."

"I could, of course. But what good would that do? All those monasteries and churches! I don't really know them."

"It'll do a lot of good, believe me. Thanks for agreeing. Shall we begin with St. Nicholas?"

"Which Nicholas?"

"The one over there, the martyr who keeps looking at you every day from nine in the morning till five in the evening."

"I didn't know he was a saint and martyr." She would have liked to add: "Do you think he's a martyr because he has to keep looking at me from nine till five?" But she held her tongue, for such a remark might seem too forward. They went out together.

The newcomer seemed to know more about the town than she and did most of the talking. Nadya kept blinking with surprise. St. Nicholas' turned out to have some curious decorations over its windows, something like the traditional Russian woman's headdress. At the Uspensky Cathedral of the Sacristi Monastery there were some wonderfully well-preserved frescoes thought to have belonged to the school of Dionysius, who turned out to be nothing less than the Mozart of Russian painting. Nadya had passed the monastery often but had always preferred the tall, exotic belfry to the simple cathedral with its high, narrow windows. Now she learned that the belfry had been built only a century ago and should not even be mentioned in the same breath with the cathedral.

They roamed through the cathedral for a long time, looking at the colorful frescoes. Ivan told her various stories from the Bible, and things that had formerly been nothing more than spots of color to her, flitting past her eyes and consciousness, formed a continuous and meaningful account. One of the frescoes made them laugh. The artist had illustrated the saying: "And why beholdest thou the mote in thy brother's eye but considerest not the beam that is in thine own eye?" That was exactly what the artist had painted, a log protruding from the sinner's eye.

"And this is the parable of the prodigal son," explained Ivan. "The parable is an all-embracing literary genre, the quintessence of wisdom, applicable to thousands of situations in life in all epochs, in any social system."

Walking through the town, Nadya suddenly noticed a little old house she had never paid any attention to before, a unique platband, a queer lantern over the wing of an old mansion —bits of beauty handed down from the past. She caught herself thinking that it was fun to be walking with Ivan, that she had learned more about the town in half a day than in the previous two years. The big thing, moreover, was not what she had learned, but what she understood. She had acquired a new way of looking at things which would stay with her always. Her heart was filled with gratitude to this tall broad-shouldered man striding boldly along the wooden sidewalks.

There was another aspect to their relationship that had made itself felt from the start. On the one hand, they were merely walking down the street to visit St. Nicholas. But on the other, Nadya was a little confused and secretly proud and glad to be walking beside this tall fellow, a poet from Moscow. How she wished some of the people she knew could see her with him. She was seized with growing exultation. Often, while he was talking about the stone ornamentation and the various window decorations, his eyes would be on her, smiling, mocking, bold and warm. At any rate she could read things in them that had little to do with seventeenth century ornamentation. Helping her to climb a step here and there, he would offer his hand, and something occurred in those seconds of contact. Once, too, he had held her arm, and when she turned to him, their eyes were very close. So close that she forgot what she had meant to say and turned away with a blush. They were silent for a while after that, each marveling over the things discovered in the eyes of the other. Once, too, she caught him looking at her lips.

On the surface nothing seemed to have changed between them: from the church to the house which once belonged to a rich merchant, from the monastery to the town wall.

They had dinner at the Sever (North) Restaurant, and Ivan unerringly chose the things Nadya liked best. There was little to choose from, true enough, but this only showed how perceptive he was. It was astonishing—just like this whole astonishing day. Ivan discarded the menu, laid his big hands on the table and regarded her calmly.

"Why are you looking at me like that?"

"Well, it would be worse if I looked the other way, wouldn't it? I don't feel like leaving town today. We haven't been to the museum yet, though our feet are aching. There'll be another boat tomorrow, I'm sure. Let's go to Beliye Gori this evening. We'll have a look at the preserve. Why don't you take the boat with me and go out to the ocean? We'll look at the green waves, watch the rosy sun and the little black steamer."

"I can't! I'm sorry. I've got to be free this evening, because I've promised. . . ."

"So that's how it is! Well, I'm sorry too."

"Please don't misunderstand. . . . I promised a very old man. . . . He's 70. . . ." Here Nadya felt that her words made no sense. There was nothing to do but tell him all about the professor, which she did—hurriedly and in some confusion.

"I see," he said finally. "I suppose you're right. You can't exchange a bit of nonsense for something earnest. Run along and draw your triangles."

Nadya looked at him imploringly. "What's wrong with it?" she wanted to say. "There'll be another evening like this tomorrow. We can go to Beliye Gori. And there's after tomorrow. Why blame me for having made a promise two weeks ago?"

But Ivan had darkened ominously. This was a revealing side of his character. He could not readjust himself easily. Once he got into bad humor, nothing could change it.

Nadya accompanied him to the pier. When a strip of swift water appeared between the ship's side and the log pier, both knew they were wrong to have quarreled and that everything was unimportant compared with this new thing they felt, and that today was an important day, a memorable day in their lives.

Ivan waved his hand, and Nadya stood on tiptoe. But the patch of water between the ship and pier was widening. The steamer turned its stern landward and churned vigorously away.

Nadya reached her little office well ahead of time. She was as hurt and petulant as a little girl who had been thwarted, who had reached for a new toy only to see it snatched away. But it was not with Ivan that she was angry, strangely enough, though he had become moody for no reason at all and had gone away. Nor did she blame herself for not having tried to detain him. The man to blame, she felt, was none other than Kazimir Frantsevich, for whom she had to draw those silly triangles. If not for that, she'd still be with Ivan. They could have visited Beliye Gori. She was irritated with the old man. In a sudden fit of spitefulness she decided she would draw him a triangle whatever his signal might be. "That's what I'll do! Draw a triangle and nothing else! That'll turn his telepathy upside down."

The clock in the next room, the empty office of the editor in chief, began to chime ten. Whereupon Nadya determinedly reached for a sheet of paper and drew a triangle with uneven sides. Her hand must have trembled from excitement, for one of the sides of the triangle turned out to be slightly rounded, instead of straight.

"Ah, I see! Well then take this and this!" She was furious now. Pressing hard on the pencil she traced a fat curve turning the triangle into a semicircle. "And this too, you old faker!" Her pencil drew beams emanating from her semicircle in all directions, like the innumerable pictures of the sun drawn by children. "What else could I add? Just for the fun of it. Out of spite! I could draw the sea, the green waves—and a little black steamer. What else? A large sea gull could float over the sea. Very well, you shall have a sea gull too."

She slipped the picture into an envelope and licked the unsavory strip of paste. But she felt sorry the next day when she thought about it calmly, after a good night's sleep. Why should she have wanted to hurt the old man? And she hadn't kept her word, she had treated a possibly serious scientific experiment frivolously, just like a child. There'll be an answer soon, air mail travels fast.

Within a few days Nadya received two letters at once. One of them bore the stamp of the Crimean post office department, and the other had come from a port town on the shore of the Arctic. The professor's envelope contained a sheet of paper marked with a neat, firmly drawn square. When she opened the other envelope she turned very pale, almost losing her footing. For she saw her own drawing, the one she had sent (or should have sent) to the professor in the Crimea: the sun and its rays, the waves, the little steamer, and the sea gull. Could she have mixed up the addresses? But that was impossible! She did not know the other address. . . . There was a brief note with the picture.

"Dear Nadya, It is exactly ten o'clock now, and I'm on the deck of the little steamer. I know you're waiting for a signal from the Crimea. But I've decided to join the game myself. I'm sure the signal of a young, ardent heart will be stronger that that of an old, bald magician. I am sending you what you will (I'm sure) draw on my instigation. Please write and let me know if things have turned out right. Your letter will reach me at this address for several days."

Nadya hurried to look at the schedule hanging in the correspondents' room. The next ship bound for that port town would leave at dawn, at 5:15 to be exact.

QUERIES FROM READERS

QUESTION: "Are newborn infants in Soviet hospitals examined to see whether they are mentally retarded?" asks T. Morris of Roseburg, Oregon.

ANSWER: No, they are given only the usual physical checks. Soviet pediatricians believe that the undeveloped nervous system of an infant renders these tests valueless.

QUESTION: "How many countries took part in the intervention against Soviet Russia in 1919?" Arthur Riley of Detroit, Michigan, wants to know.

ANSWER: Fourteen countries, including Germany, France, Britain, Japan and the United States.

QUESTION: "I've read that three big jails have been closed in Moscow. Is this so? And is it a fact that Sumgait, with a population of 80,000, has no police force or jails?" Arthur Riley further asks.

ANSWER: Yes. Three jails were closed in Moscow and torn down four years ago. On their sites new housing was built and public parks laid out. Jails have been closed in some other cities also.

Sumgait, which was built only 15 years ago, has no jails. The job of the local militia is confined mainly to traffic regulation.

QUESTION: "What is the difference between the former kulak farm and the present individual farm in the USSR?" This comes from Andrew Samuelson, Lawrence, N. Y.

ANSWER: The main difference is that the kulaks used hired labor, which is banned by the Soviet Constitution. There are not many individual farms now, and these are worked only by the owners and their families.

QUESTION: "Are your trade unions wealthy?" Allan Banben of Buffalo, N. Y., inquires.

ANSWER: They are, but in quite a different sense than the question implies. Dues are minimal, only one per cent of wages. However, the unions have the use of every tenth ruble in the country's total budget. They control the expenditure of the state social insurance fund, a total of nine billion rubles, to which the workers do not contribute a single kopeck.

Besides, the trade unions maintain and supervise more than 1,000 sanatoriums and holiday resorts, where every trade union member can spend his vacation. Many of them pay only one-third of the cost of accommodations while some lower paid workers usually get their accommodations and sanatorium treatment without charge.

The Soviet trade unions also run more than 18,000 workers' clubs and theaters. They maintain about 17,000 stadiums, swimming pools and gyms, available to anyone for a yearly membership dues of only 30 kopecks. The unions publish 160 newspapers and 60 magazines of their own.

QUESTION: "Are there any volcanoes in the Soviet Union? Are they active?" Robert Walldorf asks.

ANSWER: The USSR has both active and extinct volcanoes in the northeastern parts of the country, on Kamchatka and on the Kuril Islands. There are 28 active volcanoes on Kamchatka and 39 on the Kurils.

The biggest active volcano, Klyuchevskaya, in the heart of the Kamchatka Peninsula, rises 15,912 feet above sea level. Geologists say that it is a new volcano, less than 5,000 years old, which has erupted 700 times.

QUESTION: "Can a worker be dismissed because he is in poor health and is no longer able to do his job?" Leo Martin, Minneapolis, Minnesota, is interested in knowing.

ANSWER: No, management must transfer such a worker to an easier job. If the new job pays less than the old one, the worker gets his previous pay for the first two weeks. He can also learn a new skill at management's expense in order to qualify for a higher paying job.

QUESTION: "How do Soviet women feel about cosmetics?" asks Lilian Palmer, Pittsburgh, Pennsylvania.

ANSWER: They seem to like them, as do women the world over. There are many beauty parlors, and they are well patronized. Moscow also has a Cosmetic Clinic, where plastic surgery is performed.

QUESTION: "Is it true that Boris Yegorov of the three-man crew of the Voskhod spaceship said that Hemingway is one of his favorite authors?" A Colorado reader asks this one.

ANSWER: Yes.

QUESTION: "Is there a Public Opinion Institute in the Soviet Union?" Walter Perkins of San Francisco, California, wants to know.

ANSWER: Yes. Youth polls are conducted by the newspaper *Komsomolskaya Pravda*.

QUESTION: I've heard that a book on the Bolshoi in English translation has been published in Moscow. Where can I get a copy?" William Sternberg, Salem, Oregon, asks.

ANSWER: The Progress Publishing House has issued *Bolshoi Ballet* in English, a history of this famous company in pictures, 173 in all, taken from private albums, theater museums, etc. Many of these pictures are published for the first time. Yuri Slonimsky, a noted historian of the ballet, describes performances and performers, and outlines the esthetic principles of Soviet ballet. Copies of *Bolshoi Ballet* can be obtained from the following American agents of Mezhdunarodnaya Kniga: Znanie Book Store, 5237 Geary Boulevard, San Francisco 94110 California; Four Continent Book Corporation, 156 Fifth Avenue, New York 10010, N. Y.; and others.

QUESTION: "Is it true that military toys are not manufactured in the Soviet Union?" asks Susan Abrahams from Minneapolis.

ANSWER: It's true. Our stores do not sell toy bombs, rockets or jet bombers; nor do they sell pneumatic or machine guns. Such toys are not manufactured anywhere in the Soviet Union and their import are prohibited.

But you can buy cardboard Cossack sabers or Caucasian daggers, toy pistols or tin soldiers. One must reckon with the fact that in learning their country's history, the children often take a fancy to certain personalities. They may be of the time of the Patriotic War against the Napoleonic invasion, the legendary heroes of the Civil War (1918-1924), or of the Second World War against the Nazi invaders.

But since there are no manifestations of militarism anywhere in the USSR, and the cult of force is extolled neither in the press, radio and TV, nor the arts, this kind of child's play, inspired by history, is regarded as a comparatively harmless tribute to the old traditions. It is being increasingly superseded by new kinds of play and amusements which spring from the children's desire to create and to build.

AROUND *the* COUNTRY

ANOTHER TUPOLEV PLANE

The TU-134 is the most recent addition to a famous Soviet aircraft series—the TU-104, TU-114 and TU-124—developed by the design office headed by Andrei Tupolev. The new plane carries 64 passengers, has a top speed of 620 miles an hour and a maximum range of 1,865 miles. It has low take-off and landing speeds and needs a runway of less than 3,280 feet.

The two turboprop engines are mounted in the tail section, reducing cabin noise considerably. They are also easy to replace.



10,000 YEARS AGO

Recently a human skull with prominent superciliary ridges was dug up near the city of Moscow: It belonged to a man who lived 10,000 years ago.

Historians tell us that the first settlements on the site of the Soviet capital date back some eight hundred years. A reconstruction of the Moscow of that time has been made from archeological finds. It is on display at the Moscow History and Reconstruction Museum, along with artifacts and drawings.



BYELORUSSIAN OIL

Another oil deposit has been found in the Soviet Union, this one in Byelorussia after 15 years of probing. The gas and oil field is in the Pripyat depression, northeast of the city of Mozyr. The Devonian deposits, 6500-9800 feet deep, yield 150 metric tons of oil a day. Byelorussian oil is light and contains little sulphur.



VETERAN RADIO MOSCOW ANNOUNCER

Listeners of Radio Moscow know his voice. The big headlines of the pre-war five-year plans, the Second World War front line dispatches, the sputnik launchings were all first broadcast to the Soviet people and the whole world by Yuri Levitan, the country's most listened-to announcer. Just turned 50, he has been with Radio Moscow for 33 years.

In the past couple of years people have been calling Levitan "the space announcer," because he broadcasts important cosmic doings.

DISPLACED BEES

Bees being loaded into freight cars livened things up at the Novorosiisk railway station. It was a warm, sunny day, so the beekeepers let out several colonies for an airing; they knew the bees would return to their hives.

However, while the bees were taking the air, their cars were shunted to another siding. When they came back—no hives. In a formidable swarm they buzzed around the station searching for the hives, causing a small panic.

The cars were shunted back, and passengers, insect and human, quieted down.



NO SPEED LIMIT

The Krasnoye Sormovo Shipyard on the Volga, near the city of Gorky, has built another hydrofoil with a maximum speed of 62 miles an hour. The builders have named the vessel the *Burevestnik* (Stormy Petrel).

The ship is propelled by powerful gas turbine engines and water jets; its comfortable cabins can accommodate 150 passengers. The designer is Lenin Prize winner Rostislav Alexeyev.





TV CAMERAS ON THE OCEAN BOTTOM

Oceanographers have another research ship in the *Academician Knipovich*, designed for investigation of the ocean depths and floor and more accurate location of schools of fish. This floating laboratory is equipped with an underwater television unit, among other devices. Here engineers Victor Kochetkov (left) and Alexander Isayev are lowering a TV camera into the water.

GIANT SHOVEL

This excavator is for scooping up the rock overlying open-cut coal deposits. It is called the EVG-35/65, the first figure standing for the volume of the shovel in cubic meters; the second, the length of the boom in meters. This behemoth of a machine weighs 2,650 metric tons, stands as high as a 15-story house, and is powered by 78 electric motors having a total capacity of 5,200 kilowatts. The excavator moves on caterpillar tracks, is operated by a five-man crew, and replaces several hundred workers. It has been tested at the Cheremkhovo coal basin in Siberia.



HELICOPTER CRANES

Helicopters are multipurpose aircraft. They put out forest fires, fight insect pests, land expeditions in the taiga, rescue fishermen from ice floes and swimmers from stormy seas. Now they are being used on construction projects.

Large sections of lime kilns were being installed at a sugar refinery going up



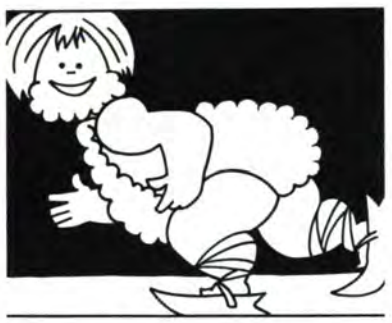
in Otrada (Orel Region). Two 2.5-ton loading chutes and two five-ton kiln casings had to be mounted at a height of 130 feet.

At this point an MI-6 helicopter arrived. After workers fastened the structures with cables, the aircraft hovered over the kilns. The pilot could not see the load but followed the orders of the radio operator on the ground. In just a few hours the sections were in place. With an ordinary crane, the operation would have taken weeks.



JUVENILE HEAVEN

These twins were made at the Plastic Toy Factory of Moscow. Playthings of polyethylene and foam plastic are popular with Soviet children. The factory turns out 340,000 toys a year—favorite clowns, fairy tale characters and animals. Other factories make toy machines, automobiles, ships and build-it-yourself dollhouse kits.



3,000-YEAR-OLD SKATES

The world's oldest skates have been found in excavations in the settlement of Chaglinsk, near Lake Borovoye in Kazakhstan. Made of bone, the skates have sharpened ends and blades polished smooth by frequent use. The bone is filed on top to hold the foot. Archeologists of the Kazakh Academy of Sciences believe the skates were used in the twelfth or thirteenth century B.C.



HIGH STEPPERS

How do you cross a mountain river when it floods in spring? One of two ways—you take off your clothes and wade through ice cold water, or you wait a couple of weeks till the water subsides. The inhabitants of the mountain village of Bolshoi Kichmai in the Sochi district of the Caucasus have a third method, all their own. From early childhood they learn to walk on stilts, and when nature goes on a rampage, they use their wooden legs.

THE SECRET OF RUSSIAN CAVIAR

Besides fish eggs, a lot of experience is packed into the tins of Russian black caviar, prized by gourmets the world over. The delicacy comes from sturgeon caught only in the lower reaches of the Volga, near Astrakhan.

The live fish are carried in tank barges, "aquariums," from Astrakhan to the factory. There the fish are selected, some for smoking, others for caviar.

They are cut open and drained of blood. The strained and washed caviar



goes to the salting section where it is weighed, salted and packed in four-and-a-half-pound cans. The caviar must not stay in the brine even half a minute more than necessary; this is where experience and intuition count. The quality is determined by tasters, each of whom eats a pound of caviar a day while sampling the contents of 218 cans. And they call that work!





ART AT 40 BELOW

"The paints and the canvas get covered with hoar frost," says artist Igor Ruban about his work in the ice fields. Thanks to his long experience, he can work in oils when the thermometer is down to 40 or more degrees, and paints even when the ice around the camp is breaking up. Ruban has painted in both the Arctic and Antarctic, on ice fields and polar islands, on planes and drifting stations. His exhibition "North of the Chukotsk Peninsula" recently opened in Moscow.



FIRST NIVKHI SCIENTIST

The Nivkhi, numbering less than four thousand, live in the lower reaches of the Amur River in villages scattered along the river or in the taiga. Before the Revolution they had no alphabet of their own, were completely illiterate. Today all Nivkhi children go to school, and many of the young men and women are in secondary technical schools and colleges.

A stocky young man of medium height with jet black hair, Chuner Taksami is the first Nivkhi scholar of countrywide stature. He received his bachelor's degree in history from Leningrad University, where he also did graduate work. His field is the ethnography of the small Far Eastern nationalities.

The Nivkhi are the most ancient people in the Sakhalin Island and lower Amur area. Their language is very different from those of the neighboring nationalities of the Tungus and Manchu groups. Why the difference? What are the Nivkhi's origin and history? These are Taksami's research problems.

He began his work at the Ethnographic Institute of the USSR Academy of Sciences, where he wrote his master's thesis, several works on the ethnography of the Nivkhi, and a Nivkhi dictionary. At the Seventh International Congress of Anthropology and Ethnography he read a paper to a crowded hall on the small nationalities, once doomed to extinction and later revived in Soviet times.

One of his books is entitled *Revival of the Nivkhi Nationality*.

AROUND *the* COUNTRY

NATURAL SCIENCE AND CONTEMPORARY PHILOSOPHY

BY PYOTR FEDOSEYEV

PHILOSOPHY has always played an important part in the development of knowledge. It has not been absorbed into the specialized fields of knowledge (as the positivists hold), nor has its cognitive significance lessened as the sciences have become differentiated. What has changed is the way its influence is exerted.

There was a time when the natural sciences were influenced mainly by natural philosophy which, owing to the dearth of empirical data at the time, had its source in speculative constructions. Although the old natural philosophy contained profoundly rational elements (suffice it to mention the atomistic hypothesis), its speculative approach is patently inadequate in our day of rapid scientific progress.

Marxist philosophy influences science through its materialist outlook and its dialectical method, which provide a valid picture of the universal relationships and laws of development of the material world. Hence this influence is felt in the specialized fields of knowledge, primarily in the sphere of methodology. The fundamental principles of dialectical materialism are becoming part of the very fabric of modern natural science.

This is due primarily to the creative nature of Marxist-Leninist philosophy, to which dogmatism in any shape or form is alien and which from its very inception has been closely linked with natural science. In point of fact, Marxism crystallized as a generalization of the findings of the other sciences, not as something standing above them and handing down preconceived laws conforming to an arbitrary system of thought. Hence it is a constant stimulus to research. As Lenin put it, by posing the as yet unsolved problems, materialism impels science to resolve them.

To illustrate the point, let us turn to the facts, to the natural sciences as such.

DEVELOPMENT OF METHODOLOGICAL PRINCIPLES

The discoveries of the nineteenth century in astronomy, geology and especially biology, which demonstrated the evolution of both the organic and inorganic worlds, laid the groundwork for the study of the dialectics of nature. Since then the scientific foundations of the dialectical materialist conception of nature have grown immeasurably more solid and comprehensive.

The revolution in physics, which began at the turn of the century, has now extended to all the key areas of natural science. The theoretical and practical accomplishments of the past half-century eclipse all the previous achievements of human genius. The theory of relativity and quantum mechanics, space exploration and nuclear power, automation, electronics and cybernetics, polymer chemistry, and so on, have not only changed the scientific picture but are radically altering the entire technological foundation of society.

Science is now solving the problems of the three technological pillars of contemporary civilization—new sources of power, new materials and new types of engines with a previously unimaginable efficiency.

Through its researches on the essence of living matter, science is paving the way to the artificial biosynthesis of protein, control of biosynthesis in the organism, and control of heredity and mutation, all of which will provide the key to some of the most complex problems of medicine and agriculture. And the extensive application and development of electronic equipment for automating production and managerial operations is bound to change the very nature of man's labor.

All these revolutionary changes enrich the methodology of science, necessitate its conscious application, and hence have a direct bearing

Pyotr Fedoseyev is a Soviet philosopher, a member of the USSR Academy of Sciences and the author of several books of Marxist philosophy.

on the development of essentially new methodological trends in scientific cognition.

To understand these trends, it is essential to bear in mind 1) the connection between theory and practice, 2) the universality of the principle of development, and 3) the unity of scientific knowledge and the interaction of all branches of science, the correlation of experimental and purely theoretical methods of research.

The utilization of the findings of the natural sciences is one of the *social* problems of our time. In the competition between social systems, the winner will be the system that makes the most effective use of science in behalf of the people and that in the long run achieves the highest productivity of labor. And this is directly linked with the growing role of science in material production. In the process of building communism, science increasingly becomes a productive force, in the direct sense of the word.

The ever closer interlocking of research and production, reflecting the growing role of the researcher in solving practical tasks, is the salient feature of science today.

The principle of the unity of theory and practice is of prime importance for *planning* scientific endeavor, for combining research already producing practical results with research whose cumulative effect will make itself felt in future production.

An important aspect of the link between twentieth century science and dialectics is the qualitative change brought about by the penetration of the *principle of development* into the very fabric of research. In the eighteenth century motion was visualized only in space, while change in time remained theoretically unelucidated. In the nineteenth century the concept of development was applied first in geology and then generalized with the discovery of the law of conservation and transformation of energy. Darwin carried the idea to its nineteenth century peak in his theory of evolution.

However, the nineteenth century concepts of the development of matter remained incomplete, primarily because the separation of the various branches of science made it impossible to obtain an integrated, over-all picture of the evolution of the objective reality. The main failing was that the basic building blocks of matter—atoms—were regarded as unchanging. The situation was incongruous indeed: On the one hand, material processes were being investigated and, on the other, science was still dominated by the idea of the immutable atom. This contradiction was resolved only in the twentieth century, when it was found that the primary structural elements of matter were subject to change and to mutual transformation. Each of these elementary particles is inexhaustible as regards its properties. The idea advanced by Lenin that matter was inexhaustible at all structural levels became a cardinal methodological principle of twentieth century science. This is conceded by many scientists in the capitalist countries whose views are remote from dialectical materialism.

Further development of the theory of the forms of motion of matter and their structural vehicles is of fundamental importance for methodological analysis. The sum total of scientific findings understood dialectically shows that matter has an infinite capacity for differentiation and an equally infinite capacity for structural change at successive levels of development. Underlying all this is the multiformity of the motion of matter. The different forms, as Engels indicated on the basis of the findings of nineteenth century natural science, are studied by the different branches of science. At that time Engels pointed to the interconnection and the distinctions between the forms of motion of matter and the sciences dealing with them, calling physics the mechanics of the molecule, chemistry the physics of the atom, and biology the chemistry of albumen. Just as one form of motion develops from another, he said in his well-known *Dialectics of Nature*, so the different sciences reflecting these forms must necessarily follow one from the other.

This was an instance of penetrating foresight, for at that time the various sciences were still isolated from one another; their interaction was sporadic and was not appreciated in practical research. Today these ideas of Engels', finding more and more corroboration, are acquiring an increasingly profound meaning.

When Engels classified the sciences according to the forms of motion of matter, many of the modern branches of knowledge (for example, nuclear physics, theoretical astrophysics and molecular biology), which reflect the penetration of research into new realms of matter, were nonexistent. Today it is no longer enough to consider the forms of motion in classifying sciences or defining their interrelation and perspectives. It is necessary also to bear in mind the ever more clearly discernible differences between closely interlinked *structural levels of matter.*

These levels (particles, atoms, molecules, celestial bodies and galaxies and, in the organic world, molecules, cells and organisms) are material things representing key stages in the integral process of the development of matter in space and time. Cognition of these levels is increasingly becoming a synthesized process involving the cooperation of many sciences.For example,the organism is now studied from the standpoint not only of biology, but of physics and chemistry, while the earth is studied from the standpoint not only of geology and geography, but of geophysics and geochemistry as well.

In our time is is imperative not merely to supplement the findings of one branch of science with those of others, not merely to employ in one science the methods of another, but to create what might be called an amalgam of the sciences. This is necessary not for reasons of convenience, of pragmatic advantage; it is dictated by the specificity of the object of study. In investigating vital processes, the researcher has to deal with both the physics and the chemistry of living organisms. Consequently, if he is to probe all the laws governing these processes, he cannot remain only a physicist or a chemist or a biologist. At the level of the molecule the boundaries between the forms of motion of matter become fluid, the physical and chemical forms become biological. Thus biochemistry is not simply chemistry applied to living organisms or simply biology employing chemical methods, but something more, something in the nature of a synthesis of chemistry and biology that produces a new quality, in this case a new science. A similar trend can also be traced in other sciences—physical chemistry and chemical physics, for example.

Alongside the interaction of crystallizing fields of scientific knowledge, new discoveries and new methods of research elaborated on the basis of these discoveries impinge on the "old" branches of science. For example, we are witnessing what might be called the second birth of many classical branches of the physics of solids as a result of the use of nuclear and electronic methods of investigation. At the same time a deeper and more detailed understanding of the laws governing the physical processes in solids that determine their properties helps to accelerate progress in electronic and nuclear physics as well as in the physics of elementary particles (through the creation of new experimental equipment, etc.).

In all branches of natural science, then, the over-all trend today is interaction of the sciences on the basis of the unity of scientific cognition. This new feature and the new approaches and methods of research described here pose a number of methodological problems.

COLLAPSE OF THE POSITIVIST CONCEPTS

Many schools of philosophy have advanced distorted interpretations of the methodological problems confronting modern natural science. And the ideological degradation of these schools of thought is bound to continue as science forges ahead.

The new features of scientific knowledge find a deceptive reflection in various positivist trends. Positivism has laid claim to being the sole philosophy of modern natural science. And it must be admitted that many Western scientists have fallen under its spell.

There are a number of reasons for this. One is the complete collapse of the concept that philosophy is the science of sciences and the decline of the idea that natural philosophy is allegedly capable of filling in the scientific picture of the world with speculative deductions. The logical positivists capitalized on this and, in the guise of struggling against natural-philosophic metaphysics, launched a campaign against philosophy as an independent science. Without any justification whatsoever, they equated all philosophic systems, including dialectical materialism, with metaphysics, declaring all the fundamental problems of scientific philosophy to be "pseudo problems," sheer metaphysics. This drive against speculative metaphysics appealed to the natural scientists since it was ostensibly aimed at deposing philosophy as the "science of sciences." All the more so since logical positivism posed important problems with progressive implications, especially in the sphere of logic and methodology.

On the whole, however, the real trends of scientific development find a distorted, illusory reflection in neopositivism. Being a subjectivist theory, it cannot but evade examining the objective processes of scientific cognition, reducing everything to an analysis of abstract, arbitrarily posited constructions of "pure" logic. The spokesmen of this school offer no scientific solution to the really important questions they often correctly note, but speculate on the complex unsolved problems. The legitimacy of posing these questions cannot, of course, be questioned. It should be noted, however, that the positivists are able to speculate on many philosophical problems precisely because they have not been thoroughly elucidated. The scientific solution of these problems from dialectical materialist positions will finally deprive them of this opportunity.

The positivist claim that materialism denies the importance of formalization of knowledge is completely groundless. On the contrary, modern scientific materialism goes to the substance of the matter, revealing the utter fallacy of the idealistic interpretation. It regards formal construction not as an end in itself, but as an important means, one of the methods of precise description and explanation of natural processes. The content of scientific knowledge, the very substance of cognition, is expressed through the medium of formalism. Extensive employment of formalism in studying natural processes testifies to the maturity of scientific knowledge, its penetration to the objective nature of the subject.

Although the positivists have posed some new problems, they have been unable to solve them in the spirit of modern natural science because their concept of it is utterly illusory. No wonder, then, that many eminent scientists (de Broglie, Einstein, Bohr, Born and others) dissociated themselves in one way or another from the postulates of positivism and criticized its extreme formalism. Heisenberg, for example, says that the "positivist scheme of reasoning on the basis of mathematical logic is as a whole too limited for describing nature."

Even logical positivists (Popper, Feigl and others) have begun to question the cognitive value of the basic principles of the philosophy of logical positivism. The adherents of this school have been unable to carry out a single point in their program; their promise to construct a totally formalized schema of science has proved impossible of realization. In this connection the opinion of the writer C. Hamburg concerning the perspectives of the subjective idealist trends is indicative; no scientific school of thought such as pragmatism, neo-Kantianism or positivism, he says, has produced a stable and effective philosophy for our time. Or take this statement by Feigl at the Thirteenth International Philosophy Congress in Mexico: "It is now generally admitted that the early logical positivists went to great lengths in their zeal to purge philosophy of pseudo problems.Their criterion of actual knowledge was inadequately substantiated from the standpoint of verification."

METHODOLOGY OF MODERN SCIENCE

Lenin said early in the century that dialectical materialism was born of physics. Today it is penetrating all areas of science. Precisely because it is a science of the general laws of the development of nature, society and human thought, it assimilates all the findings of the specialized sciences. The concepts of dialectical materialism, its categories, formulations and precepts, develop accordingly.

This is evident from the evolution of the concept of causality in modern physics. The contemporary physical theories of microprocesses—quantum mechanics and the theory of quantized fields—are statistical theories in view of the big part probability plays in them. For it is only within probability amplitudes that the behavior of microparticles, their states, the laws governing their interaction and their intrinsic properties can be theoretically ascertained. Modern physics is guided by the principle of the infinity of matter, the infinity of the interconnections and relationships between the components of an integral law-governed world —a principle originally discovered by dialectical materialism. In the era of classical physics researchers sought to ascertain a simple connection between elementary phenomena, and only the basic relationships determining the given phenomenon,limited in number,were considered to be causal. This disregard of the objective existence of an endless number of other interconnections which, though not fundamental for the given phenomenon, nevertheless influence it, found expression in Laplacian determinism. The element of objective chance, the objectively statistical character of the laws of matter, was thus banished from science. Modern physics has shown, however, that the causal connections determining the basic development of a phenomenon and connected with the intrinsic properties of material things do not rule out multiformity of connections between elementary developments. Thus the correlation of uncertainties in quantum mechanics shows that it is pointless to apply the determinism of Laplace to the microworld, but this does not in any way signify the "collapse of causality."

Neopositivism seized on the probability element in quantum mechanics, on the fact that Laplacian determinism was not applicable to microphysics, to reject causality in general. Subsequent findings, however, have proved the utter untenability of indeterminism as applied to the microworld.

Thus, as modern physics developed, the methodological fallacy of both mechanical determinism and indeterminism were revealed. The way out of the impasse was provided by dialectics, which shows the relative, limited and transient nature of each historical modification of the concept of causality while proving the validity of this fundamental principle as a whole.

The real connection between phenomena is not fully revealed by concepts evolved on the basis of knowledge of the laws governing any particular aspect of these phenomena. Dialectical materialism underscores the need to approach causality concretely as one of the forms of the objective interconnection of phenomena. Lenin pointed out: "Cause and effect . . . are merely moments of universal reciprocal dependence, of (universal) connection, of the reciprocal concatenation of events, merely links in the chain of the development of matter."

We see, then, that Marxist dialectics is an antidote against one-sided interpretations and conclusions being taken on faith and elevated to absolute dogma. At the same time it provides a reliable methodological guide for a new examination of these interpretations and conclusions. It is a well-known fact that the fundamental ideas of the theory of relativity were accepted and understood only after overcoming the pre-Marxian philosophic concept that space and time had no intrinsic connection with each other or with matter. The fallacy of this concept was revealed by materialist dialectics in the last century, when Engels showed that space and time, like motion, are forms of the existence of matter. Today this idea has found flesh-and-blood embodiment in science. Einstein's critical approach to the classical concepts of space and time and the concepts he advanced to replace them must be regarded as one of his greatest services to humanity. The substance of the views on space and time and their relation to matter which have become established in physics may be expressed in Einstein's thesis that if matter and its motion were to disappear, there would no longer be either space or time.

The achievements in cybernetics, too, are a hard blow to the dogmatists and to the objective idealists who believe in the divine origin of thought. Analysis from dialectical materialist positions of the latest findings of science has deepened our understanding of the processes of thought in the light of the achievements of neurophysiology and cybernetics.

Further development of the creative nature of Marxist-Leninist philosophy is decisive for elucidating the philosophical problems of modern science.

The exceptional importance of the trend toward a synthesis of sciences is unquestionable. It marks a stage in science which calls for a philosophy representing a synthesis of knowledge. Dialectical materialism is such a philosophy. Contrary to positivism, it does not reject the traditional philosophical problems of the world around us, but, unlike the ontological and theological schools, it interprets these problems in a consistently scientific, rational way. Moreover, the basic principles of dialectical materialism are broad enough to find multiform reflection in the achievements of natural science.

For example, the discovery that elementary particles are subject to mutual transformation can be explained consistently only from the standpoint of dialectical materialism, which regards the field and the particle as interconnected manifestations of matter. Moreover, it sees the elementary particles simultaneously as both simple and complex structural units. The latest discoveries fit organically into the dialectical-materialist concept of matter.

A feature of the present relationship between dialectical materialism and natural science is the extensive use of mathematical methods in the most diverse areas of knowledge. This is particularly connected with the advance of cybernetics. Hence examination of the philosophical aspects of mathematics generally and cybernetics specifically is of prime importance. The aspects involved concern the essence and role of mathematics, its basic concepts, the object of cybernetics and its relation to natural science, the concepts of information, control, complex dynamic systems, etc.

The study of the nature of life is disclosing more and more concretely the biological laws of the organic world, the connection between the organism and the conditions of its life, and completely refutes the neovitalistic concept that the living and inorganic worlds are separated by an insurmountable wall. Recognizing the qualitative uniqueness of living matter, dialectical materialism provides the methodology for the physicochemical and cybernetic approaches to the question of the essence of life. This is a problem with a multitude of facets. Physicochemical experiments have revealed a morphological and biochemical qualitative difference between the microstructure and the macrostructure of the cell, and disclosed complex enzyme systems governing the metabolic processes. The molecular weights of many proteins, the arrangement of amino acid residues in the molecules of some proteins, etc., have been ascertained. Considerable progress has been made in the study of the structure and properties of nucleic acids and their role in metabolism, particularly in protein synthesis. The genetic properties of desoxyribonucleic acid and the enzymes involved in its synthesis have been discovered. These findings are now being used to delve into the fundamental principles governing heredity. Needless to say, much is still unclear, and it still remains to be seen how fruitful quests along this line will be.

Dialectics attaches particular importance to the exceptional promise of new discoveries held out by deciphering the qualitative boundaries between different forms of the motion of matter as well as between different structural levels. The major discoveries in the sphere of electricity and its utilization in production, for instance, were made in the course of research on the conversion of the motion of matter. Similarly, transitions from one structural level of matter to another opened broad vistas in the use of nuclear energy.

Speaking of the perspectives of science, note should be made of investigation of such qualitative leaps as the transition from nonliving to living matter. Here both the mechanist and the vitalist theories have proved fallacious. Dialectical materialism alone has charted the way to solving these universal riddles. There is no doubt that in this area new properties of matter will be discovered and a big contribution made to theory and practice. Needless to say, what is in question here is not some nebulous "vital force" but the infinite capacity of matter to produce multiform structural complexes.

Investigation of the transition from the physiological to the psychical also holds promise. This qualitative leap in the development of matter was elucidated by Sechenov and Pavlov, and our understanding of it has been deepened by contemporary contributions to the physiology of higher nervous activity. But the accomplishments to date are only the beginning, and much remains to be done (in connection with cybernetics in particular) in exploring the concrete mechanism involved.

Of exceptional interest is research on the qualitative changes involved in the transition from the animal world to the human, from nature to society. For a long time natural science and social science went their own separate ways. True, bourgeois philosophy and sociology have attempted in the course of the past century to apply methods of natural science to sociological investigations, but the only result has been a vulgarization of science. This applies to the so-called organic school of sociology, social Darwinism and other similar trends.

Unlike these trends, materialist dialectics provides the correct approach to that momentous turning point in nature when the transition from the natural to the social took place. So far not enough has been done in this area, which is still, far more than any other, the breeding ground for parasitic pseudoscientific concepts, such as Malthusianism and racist eugenics.

The life of society has of course a quality of its own, but one can hardly deny the influence exerted by nature on man and society, just as the influence exerted on nature by man's activity and social progress cannot be underestimated. With the abolition of the exploitation of man by man, the eradication of class antagonisms everywhere in the world and the ending of wars, the relations between man and nature, between society and the world around us, will enter a new phase when all of man's efforts will be directed at completely subjugating the forces of nature and improving the life of society.

The investigation of qualitative transitions from the natural to the social is of enormous significance for industry, for the productivity of labor, for developing man's physical and mental abilities, consciously molding new traits and habits as well as new forms of social life, and overcoming all the distortions that human nature has accumulated in the course of centuries of antagonistic societies.

Engels gave us a profound theoretical elaboration of the problems of methodology and the theory of knowledge based on the scientific findings of his time. Lenin, in step with the rapid advances in science, raised the theory of knowledge to a higher level in his *Materialism and Empirio-Criticism* and in his *Philosophical Notebooks*.

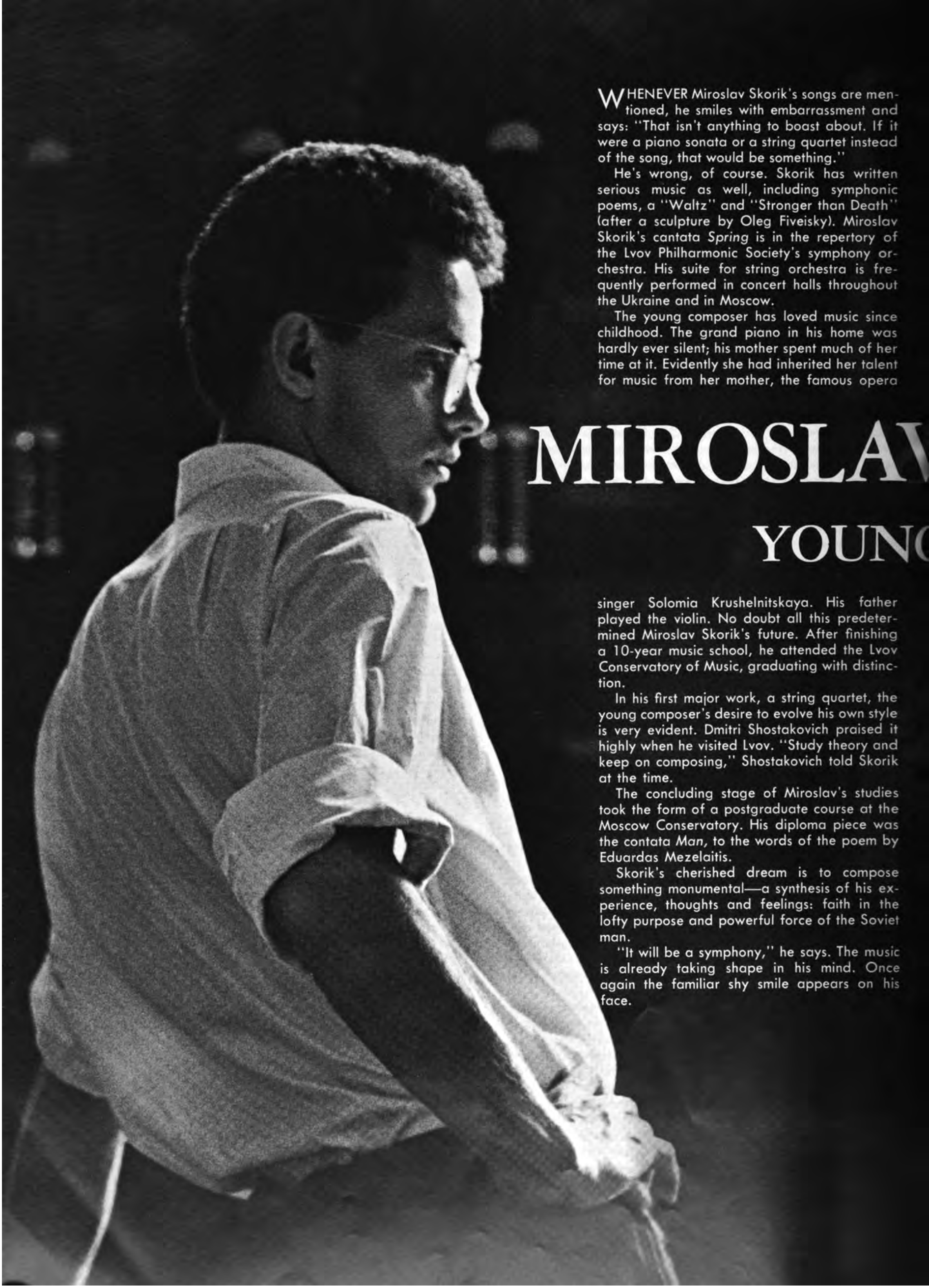
The time has now come to link philosophy and natural science organically, as both Engels and Lenin urged. For it is on the basis of dialectical materialism that the highest degree of philosophical synthesis of contemporary knowledge can be achieved. Hence the growing importance of the union of philosophy and natural science. Their creative cooperation is essential to the further development of science.

Courtesy of the magazine Problems of Peace and Socialism

ANSWERS TO PHOTOQUIZ

Your pairs should read:

1. Sir Winston Churchill (radio broadcast, October 1, 1939)
2. Lincoln Steffens, *Autobiography* (1931) Chapter 18
3. Clare Boothe Luce
4. Dorothy Thompson (1956)
5. Alexander Pushkin
6. Heinrich Heine (*Die Grenadiere*)
7. Charles Dickens, *Our Mutual Friend*
8. Edouard Herriot (ex-President of France)
9. Gideon Welles (Lincoln's Secretary of the Navy)
10. Lord Curzon
11. H.G. Wells (Title of book)
12. Leo Tolstoy, *War and Peace*, Part IX Chapter 10
13. William Shakespeare, *Measure for Measure*
14. Jawaharlal Nehru
15. George C. Marshall (September 1, 1945)



MIROSLA

YOUNG

WHENEVER Miroslav Skorik's songs are mentioned, he smiles with embarrassment and says: "That isn't anything to boast about. If it were a piano sonata or a string quartet instead of the song, that would be something."

He's wrong, of course. Skorik has written serious music as well, including symphonic poems, a "Waltz" and "Stronger than Death" (after a sculpture by Oleg Fiveisky). Miroslav Skorik's cantata *Spring* is in the repertory of the Lvov Philharmonic Society's symphony orchestra. His suite for string orchestra is frequently performed in concert halls throughout the Ukraine and in Moscow.

The young composer has loved music since childhood. The grand piano in his home was hardly ever silent; his mother spent much of her time at it. Evidently she had inherited her talent for music from her mother, the famous opera singer Solomia Krushelnitskaya. His father played the violin. No doubt all this predetermined Miroslav Skorik's future. After finishing a 10-year music school, he attended the Lvov Conservatory of Music, graduating with distinction.

In his first major work, a string quartet, the young composer's desire to evolve his own style is very evident. Dmitri Shostakovich praised it highly when he visited Lvov. "Study theory and keep on composing," Shostakovich told Skorik at the time.

The concluding stage of Miroslav's studies took the form of a postgraduate course at the Moscow Conservatory. His diploma piece was the contata *Man,* to the words of the poem by Eduardas Mezelaitis.

Skorik's cherished dream is to compose something monumental—a synthesis of his experience, thoughts and feelings: faith in the lofty purpose and powerful force of the Soviet man.

"It will be a symphony," he says. The music is already taking shape in his mind. Once again the familiar shy smile appears on his face.



Miroslav Skorik lectures at his alma mater, the conservatory.

KORIK,

MPOSER OF LVOV



ensemble of friends and critics tries one of the young composer's new songs.

stion of interpretation? The Lvov Phil- nonic is rehearsing his cantata, Man.



MUSICAL LVOV

By Vladimir Popov

APN Correspondent

Photographs by Sergei Petrukhin

CANADIAN guest conductor Victor Feldbrill called the Lvov Philharmonic an orchestra with very high professional standards. Many other eminent musicians, Soviet and foreign, who have played with this Ukrainian orchestra at one time or another are of the same opinion.

Its repertory includes Beethoven's Ninth Symphony, both the Mozart and the Verdi *Requieum,* Shostakovich's Eleventh Symphony and Respighi's *Pines of Rome.* Last year the orchestra made 26 tours of Lvov Region.

Other orchestras in this musical city are those of the local Opera and Ballet Theater, the Polytechnic Institute, the university, the Conservatory of Music, and the Palace of Young Pioneers. Concerts are often given in three or four halls simultaneously for an aggregate audience of some two thousand.

Most of Lvov's musicians are alumni of the city's conservatory, among them the first conductor of the Philharmonic, Demyan Pelehaty. The majority of the opera theater's 30 soloists are local people, nine having won prizes in various music contests.

"The six faculties of the conservatory graduate more than a hundred musicians and music critics every year," Professor Nikola Kolessa, rector of the conservatory and well-known Ukrainian composer, said. "Many go into teaching and some join music theater companies, ensembles and orchestras. Several of our graduates are now well-known composers. For example, the compositions of Miroslav Skorik and Bogdana Filtz are often played over the radio."

Miroslav Skorik and Bogdana Filtz represent the younger generation of Lvov composers. The dean of Ukrainian composers is Stanislav Lyudkevich, this year's Shevchenko Prize winner for his symphonic cantatas *Kavka* and *Zapovit*, set to texts by Shevchenko, the classical poet of the Ukraine. Others of the older generation are Anatoli Kos-Anatolsky, who has many popular songs, two ballets and an opera to his credit; Yevgeni Kozak, whose specialty is choral music; and Nikolai Kolessa, who writes symphonies.

Lvov Region has 30 music schools on the primary level and two on the secondary level, where more than 2,000 children are taught the fundamentals of music. The most talented are admitted to the music boarding school named after Solomia Krushelnitskaya, an acclaimed Ukrainian singer. There are 446 girls and boys in the school's ten grades. Well-known graduates include violinist Oleg Krysa, prize winner of the Paganini and Wieniawski competitions; Victor Yeresko, first prize winner of the Marguerite Long and Jacques Thibaud contest; and Alexander Slobodyanik, diploma winner of a Chopin competition.

Lvov is a city of music. When the lights in its many concert halls are dimmed, thousands of music lovers are transported into the world of melody.

To help readers who would like to visit the Soviet Union and have written us to ask about the cost of tours and services, we interviewed Vladimir Ankudinov, recently appointed chief of the Foreign Travel Department of the USSR Council of Ministers, who for 17 years headed Intourist, the government travel agency.

QUESTION: First, could you tell us why the Foreign Travel Department was set up? Is it because Intourist can't do the job? And won't the agencies be competing?
ANSWER: No to both your questions. The two will be performing different functions. Let me explain.

The Intourist stock company for foreign travel was set up in 1929 by Sovtorgflot, our merchant marine; Sovfrakht, our charter shipping company; and Mezhdunarodnaya Kniga, our international book firm—the organizations most interested, commercially speaking, in getting foreigners to come to the Soviet Union. Today Intourist has a capital of roughly 17 million dollars and pays dividends on a total of 6,240 shares. To cope with its tourist service tasks, Intourist contracts with foreign travel firms and with ships, airlines and railroads, for which it sells tickets on a commission basis. It also contracts with restaurants, garages, museums, theaters and other such organizations for their services. Since Intourist was founded 35 years ago, its business has multiplied dozens of times over. In its first year of operation it took care of only 6,000 tourists; in 1964 it catered to about a million.

Intourist is now faced with the problem of increased travel to parts of the country that still do not have comfortable hotels, sufficient restaurants and good roads. All this has to be built, but Intourist does not have enough capital. That is why the government-subsidized Department for Foreign Travel was set up. The plan is to allocate some 300 million rubles (330 million dollars) from the state budget over the 1964-1968 period for building hotels, motels and camping facilities.

QUESTION: That's a big investment. What are the chances for getting it back?
ANSWER: Excellent. There isn't a more profitable business today than this traffic in impressions. In 1964 the world total of receipts from "invisible exports" was somewhere in the neighborhood of nine billion dollars, much more than for crude oil, the largest revenue item. Last year nearly 12 million foreign tourists and about 10 million excursionists visited Italy, the tourists' Mecca these days. The country netted about a billion dollars. That's the economic aspect of travel.

But there is also another aspect. "When people travel, the guns are silent," they say. Tourism is the blood brother of peaceful coexistence. And from that angle there is no gauging its value.

QUESTION: How many Americans visit the USSR?
ANSWER: Some ten years ago, in 1956 for example, there were 2,565; in 1963 the figure was 19,500. The number of visiting Americans is growing fast, but it still constitutes a rather small fraction of the total. This might be because a transatlantic crossing is so expensive.

QUESTION: But many Americans do cross the Atlantic to vacation in Europe. It costs them about the same to visit our Black Sea coast as to go to southern Italy. Still, many more of them go to Italy.
ANSWER: I think one of the reasons is that Americans still don't know what a wonderful vacation they can have in the Soviet Union. The many tourist attractions we offer should be publicized more. Our prices are relatively low. American Express charges Soviet tourists 28 or 29 dollars a day for First Class service in the USA, while we offer American tourists service in the same class for only 15 dollars.

QUESTION: What are the different classes of service?
ANSWER: The cheapest is Camping Class, at a daily rate of one dollar. The most expensive is the Deluxe Class, which runs up to a daily rate of 35 dollars. The charge for a married couple traveling Deluxe, however, is only 50 dollars a day. Children under two travel free with parents, and the charge for children under 10 is half price. The full cost depends on the service class, the number of days, fares, tickets to concerts, theaters and sports events, and so on.

More detailed information is available at the American office of Intourist, 355 Lexington Avenue, New York, N. Y.

QUESTION: What formalities does an American have to go through?
ANSWER: Very simple. He merely applies for his visas and tickets at any one of 50 American travel agencies that book through Intourist. Visas are issued free by the Soviet Embassy five to seven days after date of application. Americans may obtain Soviet visas not only in the United States but in any country where the USSR has an embassy or consulate. Though Intourist does not generally handle the issuance of Soviet visas, it helps tourists who want to prolong their stay in the USSR. For comparison, I might note that it is much harder for a Soviet tourist to get a visa to the United States. It usually takes several weeks.

QUESTION: Was any American ever refused a visa to the Soviet Union?
ANSWER: I cannot recall a single case.

QUESTION: American newspapers say that Intourist offers the same few tours to all foreign visitors, that it shows everybody the same things, introduces them to the same groups of people, and takes them to the same meetings. Any comment?
ANSWER: We offer standard tours that we think will most interest people who are visiting the USSR for the first time. This arrangement enables us to make sure that every tourist will have a good time. Those who have been to the USSR before choose their own itinerary. We go out of our way to make their stay interesting and comfortable provided, of course, the cities and tours they choose offer Intourist services. The tourist can decide for himself what sort of transportation to use, whether he wants a guide or interpreter, what museums, theaters and other places of interest he will see, and so on. Naturally, the fewer the services he asks for, the cheaper the trip.

As for sticking to a definite itinerary, I can say this. Recently an American family of five traveled across the Soviet Union in a covered wagon. A colleague of yours from Novosti Press Agency phoned me to ask where he could find them. He wanted to do a story for an American magazine. I couldn't tell him where they were at the moment. I knew only that they were in Byelorussia, and I had a rough idea of when the wagon would reach the bigger cities. I told him I didn't know where they might decide to stay over since they had declined Intourist

DISCOVER RUSSI

services. I advised him to fly to Minsk and track them down in Byelorussia himself.

QUESTION: What standard tours are most popular?
ANSWER: Well, Americans, for instance, want to see Tbilisi and Kiev, the capitals of Georgia and the Ukraine, two of the Soviet republics, as well as Moscow and Leningrad. They are also attracted by our Black Sea vacation resorts—Sochi in the Caucasus and Yalta in the Crimea. We often have groups of people from the same profession coming together, and we make up special itineraries for them. For instance, we filled the request of groups of American farmers for a tour of the Kuban. Several thousand American farmers have already been there.

QUESTION: What tours are you offering this year?
ANSWER: Our aim, as I told you, is to give people a pleasant and interesting stay. To do that we must have good hotels, restaurants and interpreters in all the cities and towns in our itineraries. In 1965 tourists will be able to visit 62 Soviet cities and make a 1500-mile journey by boat down the Volga, from Kazan to Volgograd, or a thousand-mile journey along the Dnieper. We have new tours in the Ukraine, along the Black Sea coast and in Armenia, this last one giving the traveler the chance to taste such a delicacy as trout from Lake Sevan, high in the mountains. For the first time we are offering tours to Irkutsk and Bratsk in Siberia. The world's largest hydroelectric power station is located at Bratsk. Tourists will also be able to visit Lake Baikal, the world's deepest lake; Baku, the capital of Azerbaijan; and several other places of special interest.

OR YOURSELF!

QUESTION: You keep talking of comforts; apparently this is one of your big headaches.
ANSWER: Very much so. The war destroyed everything we had in the way of tourist accommodations and services. When it ended and we set about rebuilding our ruined towns and villages, it was only natural for us to be placed somewhere at the bottom of the list. Many cities still do not have hotels and restaurants, and in those that do the space and service are often inadequate. We only recently began to tackle the business of service from a really professional angle, guiding ourselves by the experience of other countries. For example, we used to build large hotels with small restaurants. But we found that the ratio of hotel accommodations to seats in a restaurant should be 1:2, even 1:3. Only then can every tourist be guaranteed good and quick restaurant service. The same holds true for other types of service, say, barbershops. All our renovation and new construction is now done with an eye to maximum comfort.

QUESTION: The foreign visitor who doesn't know Russian is bound to need an interpreter for a time. What about your interpreters?
ANSWER: The work of the guide-interpreters is rather exacting, and we employ only college-trained people with an excellent command of the language. They need the fluency since they must handle a variety of topics. We offer interpreter service in more than 40 languages. Our interpreters are tactful, polite and well educated. Every visitor has his own idiosyncrasies, and the interpreter's job is to see that our guests enjoy their stay. Personal charm and warmth are important.

But enough for now. The best answer to these and to the many other questions you could ask is an Intourist trip to the USSR to see our cities, museums and theaters, our Siberian rivers and Caucasus Mountains, and to taste the many exotic national dishes our restaurants serve.

YOUR GUIDE: 1,000 PROFESSIONS

By Felix Alexeyev and Alexander Ranov

ON the first day of your visit to Odessa, Moscow, Leningrad or Brest you are met by a girl Intourist guide-interpreter.

"How do you do. Welcome to our country!" she says.

If she is very young and a little shy at first, judge her kindly. It only means that she is playing host to foreign guests for the first time. She will soon grow accustomed to the role and become a confident guide and charming interlocutor on your travels around our country.

Mr. Barker of Washington probably paid no attention to Lydia Dubinskaya's blushing confusion when she introduced herself to him. But she hasn't forgotten it. It happened to be her debut as a guide for American tourists. Now she is one of Intourist's experienced interpreters.

"Your chief, Vladimir Ankudinov, remarked to me the other day that this profession of guide-interpreter of yours is anything but easy. What's your feeling about it, Lydia?" I asked.

"A job you like is never hard," she replied, "except on husbands. When the tourist season begins, we are hardly ever home. Our poor husbands have to cook their own dinners. In three summer months I covered about 3500 miles with foreign tourists, traveling to Leningrad, Kiev, Tbilisi, Yerevan and Baku. And yet, so far as Intourist is concerned, I'm leading a sedentary life! You see, as the leader of a group of interpreters, I stay in Moscow more than the others."

Lydia Dubinskaya, however, is too modest. After spending hours talking to several In-

Continued on page 56

To be an Intourist guide-interpreter you don't have to be as pretty as Svetlana Batsulo, but it helps. She has been working at this profession, which demands a variety of talents, since 1961.





Aragvi

Photographs by Mark Gankin

HEEDING the old saying, "Philosophize on a full stomach," we hereby extend an invitation to readers of **Soviet Life** who visit Moscow to join us for a meal at the Aragvi Restaurant.

Why the Aragvi? Because when we polled our Editorial Office, three out of every four of the staff members gave it their enthusiastic vote. Famous for its Georgian cuisine (Aragvi is the name of a river in the Caucasus Mountains), this restaurant is in the heart of the Soviet capital, opposite the monument to Prince Yuri Dolgoruki, the man who founded Moscow 800-odd years ago.

This quip shows how proud Georgians are of the popularity of their national dishes shashlyk, kupaty, lobio, khashi, served with Tsinandali, Khvanchkara, Mukuzani, Saperavi and other Georgian wines:

"Who's that sitting on the horse?" one Georgian asks another, pointing to the monument.

"Yuri Dolgoruki, the founder of Moscow."

"What a man! To build such a big city around the Aragvi."

Talking of exotic dishes and wines, some time ago our magazine published several unusual recipes. We received a spate of letters afterward.

The Georgians claim that their wines prolong life. It's true that medical reference books make no mention of the fact, but judging by longevity statistics in Georgia, they should.

Presidents, cosmonauts and ambassadors are among the distinguished patrons who have left testimonials in the Aragvi guest book. James Hagerty, former White House Press Secretary, wrote: "It's a wonderful restaurant, one of the best I've ever visited."











Guide Natasha Krechetova's job is to make each trip—a tour through the Kremlin, a visit to a collective farm, an evening at the Bolshoi Ballet—an unusual experience for every tourist.

Continued from page 53

tourist guides, we think their husbands are pretty lucky. These women combine so many desirable qualities that they must make almost ideal wives.

"Why?" you may ask. "All they have to know is the language and be able to say 'this is the Bolshoi Theater' and 'that is the Kremlin.' Isn't that so?"

Intourist doesn't think so. Last year, when the travel agency announced a course for guides, it had as may as 600 people between the ages of 20 and 40 applying. They were all sure they could cope with the job because they knew one or two foreign languages, but only 50 were accepted. The point is that a guide is a person with a thousand professions plus one indispensable quality—charm.

Planning a tour schedule is like working out an algebra problem with a hundred unknowns. Multiply excursions, meetings, theater tickets, hotel rooms, car bookings, advice on choice of menus and souvenirs by characters, habits and moods. And guess who solves this problem. A mathematician? Chess master? Financial wizard? Not at all. Just an Intourist guide. By the way, if you intend to visit the Soviet Union, you will make your guide's life far easier if you tell your Intourist agent which you prefer—a ballet performance at the celebrated Bolshoi or a recital by the no less celebrated Svyatoslav Rikhter. Remember that the Bolshoi has no more than 2,150 seats, and there are some tens of thousands of Muscovites and as many foreign visitors who want to occupy them. That, however, is only one of your guide's small worries.



When her foreign charges tell her that they've made friends in the Soviet Union, says Lena Ushats, an Intourist guide-interpreter since 1958, "then I know that I've been doing a good job."

To see and learn as much as possible is what the tourist comes for. Here he is in a strange country with a different social system, way of life, traditions and customs. The guide is the one who has to make every trip—a visit to the Kremlin, a new residential district, the Tretyakov Gallery—an interesting adventure.

Since they have to answer so many hundreds of questions, we decided to ask each of our "victims" only one.

"What is the thing you like most about your job?" we asked Lena Ushats, an Intourist guide since 1958.

"When my charges begin to call me Lena and say they're leaving friends behind in Russia. Take this letter from a group of Americans. When they arrived, they were all strangers, but during our trip around the Soviet Union they became friends and subsequently traveled together to other countries." For this they were indebted to their guide, they said.

"What upsets you most when guiding foreigners around the country?" we asked Ludmila Sdobnova, who has been with Intourist since 1960.

"Mismanagement. Ours. Say, when you set the hour of departure at 9 A.M. and the tourists are on time but the bus is late. I remember how embarrassed I was two years ago when a group touring our country ended up in Kiev. The hotel accommodations there at the time were very bad, and my charges made no bones about their annoyance. I told them, 'Didn't I warn you that accommodations would be poor? But you insisted on coming.' I was right, but that didn't make me feel any better. Nor them either. It was the last city on their tour, and last impressions are the ones that stick."

"What is the funniest question your tourists

Calm and poised, Ludmila Sdobnova takes all of her duties in stride, whether it's correlating timetables, getting theater tickets and hotel reservations, or recommending shops for gifts.



"THE VISIT REJOICED OUR SOULS"

The Molokans are a religious sect whose members broke away from the Greek Orthodox Church nearly 300 years ago. Like other schismatic groups, they were persecuted by the czarist state and church, imprisoned, exiled to Siberia and their property confiscated. At the turn of the century about a thousand Molokan peasant families migrated to the USA from their northern Caucuses villages and settled in Los Angeles.

This letter was received by Intourist.

WE, a group of 11 Molokans, led by Elder Terenti Prokhorov and including Yakov Danilov, Moisei Volkov and others, who have lived in Los Angeles, California, for almost 60 years, made a visit to Soviet Russia. All our lives we missed our homeland and hoped that some day we would see it. When this became possible, we began to make plans to collect the means, and with God's help we managed. We received permission to make the trip.

The first city we came to was Moscow, and to our surprise and great pleasure we were treated like dear and honored guests. We visited 15 cities on this tour of our native land and saw too many wonderful things to describe. We went to Tashkent, Samarkand and Ashkhabad in Central Asia, Baku in Azerbaijan, Yerevan in Armenia, Tbilisi in Georgia, to Sochi, Pyatigorsk, Rostov-on-Don, Volgograd, Kiev and, of course, Moscow. Our last stop was at Leningrad. We want to express our heartfelt gratitude to Intourist and to Yulia Vladimirovna Pomerantseva, who was our very helpful and understanding guide and left us not a single thing to worry about.

Every place we went we were welcomed as dear guests. We traveled in first-class buses, stayed at the best hotels, and were served the most delicious food. Our daily excursions to places of interest took us to historical museums, ancient monasteries, collective farms and big factories. All this rejoiced our souls so much that we cannot find words to express our gratitude to the Soviet Government.



specially like guiding groups of specialists the United States," says Ksana Mikhailova, has been working with Intourist since 1960. arn many interesting things from them."

'" We queried Svetlana Batsulo, a guide e 1961.

Why there are so few cats and dogs on our streets. A guide friend of mine says: 'It's use they are all vacationing in the coun- and then explains that pets are still a blem with our crowded housing."

What is your opinion of American tour- ?" we asked Ksana Mikhailova, a guide e 1960.

I like working with groups of specialists n the USA. You learn a lot of interesting gs from them. They are usually busy ting and talking with their Soviet counter- s, but they spend every free moment visit- museums, art shows and theaters. They punctual and usually know what they t to see. It's harder with people who don't w one another and whose interests are erent. Once, in the middle of an argument ut where to go, I said: 'How about putting question to a vote?' The Americans ed, of course. That's what I usually do n I have the problem."

atasha Krechetova, who has been with urist since 1961, said about her job:

You may think I'm boasting, but I would we ought to know a little more about a e than the people who live there."

We were looked after like a mother cares for her children, taken from city to city, from hotel to hotel. We were always the first to board a plane. Over and over again we heard: "Let the guests in first, let the guests be seated first." This gave us great pleasure. With what friendship and respect people in your country are treated, even when they are strangers!

We visited many cities and met many of our coreligionists and relatives, to whom we also express our heartfelt gratitude for their warm welcome and hospitality. Our thanks to you all a thousand times. You will live in our hearts.

(Retranslated from the Russian)

MOSCOW ART THEATER IN NEW YORK



An interview with Boris Pokarzhevsky, Director of the Moscow Art Theater

QUESTION: As far as I can remember, no Soviet theater has performed in the United States since the war. When did the Moscow Art Theater play there last?

ANSWER: In 1924—40 years ago. This will be our second trip.

QUESTION: That's a long time ago, but I suppose some of the older generation of American theatergoers still remember the Art Theater of those years, and Moskvin, Kachalov, Tarkhanov, Leonidov and Stanislavsky himself. Which members of the present company do you now consider your leading actors and how would you rank them with the celebrated founders of the company's traditions?

ANSWER: That is hard to say. You don't just conjure up an actor with Moskvin's versatility. There are people who, in a manner of speaking, constitute an epoch on the stage and the screen all by themselves—a man like Chaplin, say. But performers of his kind are few and far between.

The Moscow Art Theater reflects our Russian cultural tradition in the same sense as the Comédie Française does the French. And, of course, we have developed with the time. We would not do *The Three Sisters* today as it was done 40 years ago. The development was in the direction, mostly, of deeper psychological analysis of the characters' inner world, at the expense of form. In each period people read new meanings into a play, and a theater's power lies in the way it finds traits of contemporaneity in every play it stages. A case in point is Griboyedov's *Wit Works Woe.* Written in the early nineteenth century, it was produced last year in Leningrad and drew full houses because it was read with the eyes of the man of our day.

As for the ranking members of our company, I should name our very fine actors Boris Livanov, Mikhail Yanshin, Pavel Ktorov, Angelina Stepanova and those disciples of Stanislavsky, directors Nikolai Kedrov and Victor Stanytsin. In short, we have a company to be proud of.

QUESTION: In the twenties, the Moscow Art Theater was not only the avant-garde theater of Russia but, to a certain extent, it charted new pathways for the theater the world over. At present such theaters as the Sovremennik (Contemporary) in Moscow and those of Akimov and Tovstonogov in Leningrad are just as popular. Does this mean that the Moscow Art Theater has relinquished its avant-garde role?

ANSWER: Not at all. The Moscow Art Theater did revolutionize the stage. It created what is now called the Stanislavsky Method, which has spread all over the globe, including the United States. We know the work such advocates of the Method as Lee Strasberg and Stella Adler are doing.

Of course we are not unique any more, but that is good rather than bad and certainly does not mean that we no longer have anything new to say. Quite the contrary, we are still the theatrical Mecca to which hundreds of directors come from all parts of the country for the seminars our directors lead. As for the Sovremennik, most of its actors and directors were trained in our studio school.

However, our object is not simply to carry on the Stanislavsky tradition. Our theater has helped to develop companies with other trends—the Tairov, the Meyerhold and the Vakhtangov. The Akimov and Tovstonogov companies prefer the style of the chamber theater; that is a matter of taste. We incline more toward character delineation; the Leningrad theaters are more concerned with form. I should say that the Moscow Art Theater is the best among equals.

QUESTION: Is the Moscow Art Theater interested in the work of leading foreign theaters?

ANSWER: Of course we are, and we are always glad to see their productions staged in Moscow. We were most impressed by Peter Brooke's company and his production of *King Lear* with Paul Scofield in the title role. I personally cannot accept Scofield's interpretation of Lear all the way, but our theater did pick up several interesting pointers from the Brooke production.

QUESTION: Does the Moscow Art Theater stage foreign plays? American ones, for instance?

ANSWER: We are now running two American plays, Kilty's *Dear Liar* and a stage version of John Steinbeck's *Winter of Our Discontent.* When Mr. Steinbeck was in Moscow, I saw him and told him we had adapted his book. He was very pleased and asked me to send him a copy of the play so he could have it translated into English. We have produced Arthur Miller's *Death of a Salesman* and hope to stage Miller's new play.

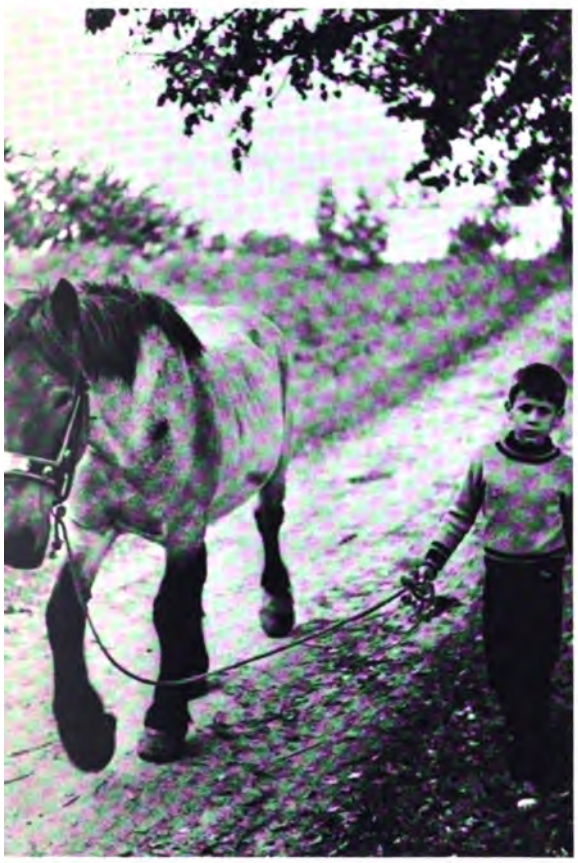
QUESTION: Where will you be playing in the United States, and what plays will you be doing?

ANSWER: We will be coming for a month and playing in New York's City Center Theater. We are taking two Chekhov plays with us—our theater is unthinkable without Chekhov!—*The Three Sisters* and *The Cherry Orchard.* We will present also our adaptation of Gogol's *Dead Souls* in a production as originally staged by Konstantin Stanislavsky. Of our Soviet plays we are bringing Pogodin's *Kremlin Chimes.*



THE LAST WAGON WEST

By Stanislav Pshennikov







Gillis thanks Ivan Mosevich, chairman of the Dzerzhinsky Collective Farm near Minsk, where one of the horses was reshod by the farm's smith after casting a shoe. Back in the States Gillis had done the job, but in the Soviet Union blacksmiths were glad to accommodate the travelers in return for a hearty handshake, a picture of the wagon, and all its passengers' autographs.

Photos by Yuri Abramochkin

(Above) Barbara was delighted when this stray puppy joined the caravan in Poland to become the seventh passenger in the covered wagon. The eighth recruit was a Russian kitten. Unhappily, they took off, each going its own mysterious way when the wagon was barely 10 miles from the goal, Moscow.

(Above, left) The long trip across the United States and Europe by horse and wagon did the children good—plenty of fresh air, said the Gillises. The year before they had nine bouts with illness of various sorts, not a single one en route. Little George had contracted polio; not a trace of it left now.

(Right) At the Eternal Flame honoring the war dead, in Minsk's Victory Square. In the usual order: Mrs. Gillis, Carol, George, Barbara, Gillis and Janet. When he was asked why the family set out on this unusual trip, Mr. Gillis said that people-to-people contacts are very important today.



TWELVE million horse paces across the United States and another 12 million in Europe add up to the 8700 miles this covered wagon traveled to reach Moscow, carrying Leon H. Gillis and his family. On one side it bore the inscription "The Last Wagon West."

Gillis told me why the family set out on this unusual trip.

"People to people contacts are the most important thing today. In the long run, they make history," and went on to add:

"So I sold my small restaurant and sports and hunting-gear shop in Richmond, Virginia, built a covered wagon of the type Americans used to travel in, and on September 27, 1961, set off—at first going through the States (missing only eight of them), because if you don't know your own country well, what's the point of visiting other countries? On the way we went by car into Mexico for a look."

On September 18, 1963, the Gillises, leaving their elder boy behind at college, crossed the Atlantic by ship and from Antwerp drove the wagon through Holland, Belgium, France, Luxembourg, West Germany, Czechoslovakia and Poland to the Soviet Union.

Late on the night of September 11, 1964, "The Last Wagon West," drawn by two sturdy dray horses, lent to the Gillises by a Dutch stud farmer for the sake of advertisement, crossed the Soviet-Polish border. Thirty-five days later they reached Moscow, their goal.

"I like the Soviet people," Mr. Gillis said. "They are simple people, congenial, and always showed a desire to help us. All along the way they provided us with milk, eggs, fruit and vegetables free of charge. We had with us a gas stove and refused to put up at motels or hotels, however tempting it was and however much we were pressed to do so by our hospitable hosts, and lived in our wagon.

"The Soviet people are particularly concerned in having peace. I saw the towns and villages they have built and heard of their plans, which they can carry out only in a period of peace. No wonder the first thing most folks said in the Soviet Union when they saw us was: 'Let's live in peace. And let's be friends.' "



The traveler from Richmond, Virginia, stops to shake hands with Moscow workmen stringing colored lights across Kutuzovsky Prospect on the eve of November 7, the national holiday celebrating the Socialist Revolution.



Brief Comments

The Leader and Politics

by Genrikh Emdin



Genrikh Emdin, 51, is a graduate of the Odessa Institute of Finance and Economics. He is an editor of the Ekonomicheskaya Gazeta, *specializing in national planning. He has also written articles on economic policy and finance.*

"A leader's word can turn the needle of the political compass in any direction," writes a reader from Detroit, commenting on the recent changes in the leadership of our Party and government. The statement is hardly one we would accept without argument.

In this period of world history a leader does not single-handedly determine a nation's policy. That is done, as a rule, by the governing body that represents the dominant class in the country's economy, the class which, by virtue of its control of the productive apparatus, determines the country's destiny. The policy it adopts, obviously, is in the interests of this class. That is a social fact, all camouflaging declarations to the contrary, and is true not only of our country but also of countries where private enterprise prevails. The vital difference lies in which class is in power.

The Soviet Union's domestic and foreign policy is determined by the Communist Party. This is the mass political organization of workers, farmers and intellectuals, and it therefore blocks out the country's direction of movement in such documents as the Third Party Program, a program of economic and social development for the next 20 years. Innumerable institutes and other research and planning agencies helped to work up this scientific forecast for the next two decades, and 70 million citizens discussed the draft, suggesting changes and amendments before it was finally adopted.

For adoption such programs require a majority of votes of the most authoritative elected bodies of the Party—the Central Committee and the Party Congress.

Since the birth of the Soviet state these have been its two basic and principled goals: at home—on the basis of socialist ownership of the means of production to create for each Soviet citizen a maximum of material and spiritual values; internationally—the peaceful coexistence of states with different social systems.

Our leadership has changed several times during the period, but these two principles have remained unchanged. They serve the interests of the many millions and therefore have constituted and will continue to constitute the foundation of all our programs.

What a leader can influence are the ways and means for carrying out a program. How effective these ways and means are is, unfortunately, not always clear at the outset, especially in a new undertaking. Social and economic experiments, experience demonstrates, are much more complicated than scientific experiments. But even the ways and means must be approved by the representative organs of the people, by the USSR Supreme Soviet in particular.

Thus, Alexei Kosygin, the new Chairman of the USSR Council of Ministers, proposes that we make greater use of economic levers in the national economic policy approved by the Twenty-second Congress of the Party. But this is simply a suggested use of different methods for carrying out the already adopted program, proposed changes in organizational and administrative methods that have proven inefficient. And the proposals of the new Chairman will be discussed by the relevant legislative commissions before they are approved by the Supreme Soviet.

The volume of information that a leader has to digest today before making an important decision is fantastic. World relationships have grown too complicated for any single man to encompass. Rational judgment in our time demands the collective leadership practiced in the Communist Party of the Soviet Union.

The Short Story: An Interplay of Genres

by Lev Anninsky



Lev Anninsky, 31, is a graduate of Moscow University's Philology Department. He is a literary critic, a contributor to leading Soviet magazines, and the author of The Kernel, *dealing with the present trends in Soviet literature.*

Shortly before his death Norbert Wiener said that a machine can be taught to answer questions but not to ask them. It is quite an art to formulate a question. Put it to a person one way, and he will have to think twice before answering. Ask it another way, and you will get an automatic "Why naturally!"

Take the opening of a critical discussion on the short story. The hub of the thing is *how* you begin it. For example, suppose we start by dealing with the validity of the genre: Is the short story something we need, want to have?

"Why naturally!" you literally explode. "It is inconceivable to have literature without the short story! What's more, the reader enjoys . . ." etc., etc.

Let's call things by their names. The short form in literature has always been and always will be popular in belle-lettres. And the demand for it will always be fully met.

However, I would like to shunt the belletristic aspect aside in favor of something else—the organic crux. If, in leafing through puny stories, runty stories, exiguous stories, you come across a STORY— you feel that its content can be put into no other form, that the genre here is a matter of principle, that the short form in itself (be it a story, episode, sketch) expresses the inherent quality of the content. The very existence among rank and file short story writers of outstanding authors who write only short stories speaks of literature's organic—not purely belletristic—need of the short genre. However, it is not the battle of genres that interests me, but the historic evolution of literature that gives birth to this or that genre. During the first postwar decade the novel played first fiddle in Soviet literature—the novel, as multiple in time and space as in characters. If I may be permitted to coin a word, "multiheroness" seems to me the novel's reason for existence, development of the interrelationship, unity, mutual dependence of a multitude of different people. Here the novel once ruled supreme.

But how great the changes in our prose since those days!

Novels are now written as novelettes, threaded onto a phantom-like axis. Cinematographers swear that without heavy editing, the novel loses authenticity. They want pieces, splinters . . . a mosaic—sharp, local, monolithic details—instead of a smooth line and three-dimensional volume. They chop away artificial, branching plot-ties to give the episode basic authenticity.

This wind of micro-authenticity blows the short story to the forefront. Consider that the short story writing of the past few years has been the most brilliant by far. But the flowering of the form is not explained by the emergence of fine writers. They come because their time has arrived. The more brilliant the short stories which now appear, the stronger the wind that polished them.

The short story is the child of the break off, of disconnection.

Yuri Kazakov, one of our best short story writers, wrote a piece called "There Goes a Dog." * What is it about? The incidental meeting of two strangers. One of them is suffering deeply. The other is in a hurry to go hunting. He is the one who drops the insulting triviality, "There goes a dog!" to fill in a pause so as not to be drawn into a frank conversation, not to lose his pleasure for another's pain. That false phrase about the dog ends the story. You feel that the close-locked form of the story is natural, organic, for Kazakov is writing about the disconnection of people, their strangeness to one another, their separateness.

What if he had started to follow and develop connections? What would have happended to the strict pattern of his story? I fear it would have fallen apart, disintegrated.

Of the three short stories written by Alexander Solzhenitsyn, only one—"For a Good Cause"—is perfect in the genre sense. Yet this story is certainly the weakest! The stories of Solzhenitsyn at his best—"The Incident at Krechetovka Junction" and "Matryona's Yard" —are two genres in collision. Up to a certain point both stories are essays, and then they change to novelettes. Solzhenitsyn's best stories are not built along classic lines. They are essays battling with the novelette. And there is a profound reason for this, the need to pierce the structure of the short story, to break the circle-plot which shows only one aspect and not the full truth of the character; in other words, not merely to show the character undergoing a moral test but to show his whole nature, his whole destiny.

The essay and the novelette interplay in the structure of the modern short story. By virtue of pure quality, the essay determines the total color of modern short prose. But against this background another type of short story emerges. It is rare. It spirals from the solution of moral issues to the comprehension of life. This is the story that marks an event in literature and comes to stay—"The Pipe" by Yuri Nagibin, "Matryona's Yard" . . . and, one of the best short stories of the past decade, its very name is portentous, "The Fate of a Man" by Mikhail Sholokhov. . . .

Yes, the novelette wins in quality, delves deeper into the stuff of life, is a more complete synthesis. It wins, but not the way an all-star team does in football. Literature is not football. The novelette wins by taking over the experience of the essay, the experience of thought, of micro-authenticity. And what is this novelette, filled with the essay's knowledge of conditions, saturated with its fullness of detail?

It is the *short story.*

Now we have reached the level of prognostics.

In this sense the short story is the beginning of a new synthesis. It does not attempt to analyze society in the complexity of its ties. It unfolds the fate of one person, but attempts to do this completely, to see it as a unity, as an individual act of life. I believe that along

* Published in the March 1963 issue of *USSR* magazine.

the road to synthesis, to the epic, the present natural stop will be the short story.

I Thought Up The Holiday

by Yekaterina Sheveleva



Yekaterina Sheveleva, a poet as well as a diplomatic correspondent, is currently with the Novosti Press Agency. She has written three books about her visits to the USA in which she describes her experiences and the need for peace.

One day my elder daughter Svetlana asked Tanya, my younger, who was in the first grade at the time:

"Do you know, Sis, who thought up Mother's holiday of March 8th?"

"I did," Tanya answered without a moment's hesitation. Svetlana corrected her:

"No, I was the one who thought it up first and then you did!"

Of course, my girls meant the various presents they had thought up to give me on March 8th, International Women's Day. However, "out of the mouths of babes," they say. Real holidays have something in common with a good song or poem: Each one believes he thought it up himself. From the historian's point of view it is, of course, important that March 8th was first observed as the international day of solidarity among women in their struggle for their rights back in 1910. However, for me, as for you, dear reader, I suppose, the important thing is the festive fact of human contact between us—contact that has arisen out of historical necessity and that must expand from year to year because our minds and hearts demand it.

Though the women of our two countries celebrate more holidays that differ than those that have the same origin, we have many more things in common than one might think at a cursory glance, the most important being our mounting desire for peace.

Just recently I was host to a very charming American woman, Mrs. Catherine Wayne Elwood. She told me that when the construction of air raid shelters was all the rage in the United States several years ago, she sent the UN her private "Declaration of Hope" and a thousand-dollar check. She wrote that she could have used the money to build an air raid shelter but that she preferred to have it spent on strengthening peace and international brotherhood.

At various gatherings and meetings I told my Soviet sisters about what she had done, and it invariably evoked the kindliest of sentiments, because Soviet women warmly welcome every move that their sisters, near or far, make for peace.

We share in common not only a craving for peace but also an awareness of what we really need peace for. True, there are different social systems in our two countries. But regardless of the system, women want peace so that they and their families can have a fuller and better life. I think this wish well reflected in our society's key principle, "From each according to his ability, to each according to his needs." The same search for happiness could possibly be expressed differently. One can imagine a time when the women of the world will annually mark March 8th with scientific discoveries or artistic achievements, with deeds of noble friendship and great love. In short, one can imagine a time when every woman in the world will say:

"I thought up the holiday!"

IN THE NEXT ISSUE



Passover Night describes a Seder as conducted in the home of a Soviet Jew. This article, written by Moisei Itkovich and illustrated with photographs by Yevgeni Tikhanov, is being published in compliance with the requests from many readers who wanted to know how the annual feast commemorating the sparing of the Hebrews in Egypt is observed in the USSR. The author admits that he is an atheist, as are the children of his hosts. Nevertheless everyone enjoys the special foods served on this occasion—evidently reason enough for participating in the celebration.

The Public Opinion Institute, set up under the auspices of the youth newspaper *Komsomolskaya Pravda*, polled some 12,000 young men and women on the problems of young married life and on the subjects of sex education and morality. The answers they gave form the basis of a study by journalist-sociologist Boris Grushin which was published in a Moscow monthly.



Five of Moscow's leading young artists are presented to our readers in a discussion of their work as well as their personalities. They are members of the artists' colony at Izmailovo, one of the Soviet capital's new residential districts. In their bright and spacious studios they work seriously and diligently, paying much more attention to real constructive criticism than to the praise they have received.





The Soviet basketball team has been unable to place first in the past four Olympic Games. The silver medals the team won in Tokyo hardly consoled the fans, who are only waiting for the day when the national team will take the gold ones. Read about the members of the team for the next Olympics, to he held in Mexico the summer of 1968. Then you'll surely want to see them on their upcoming American tour this spring, when they will play seven games in a number of cities.

Other items of interest will be:
Lenin—by Maxim Gorky; **Abraham Lincoln and Russia**—in which is described the support given by the Russian people to Lincoln's policies; the poet Yevgeni Vinokurov states his credo in **Poetry and Thought; The Ice Is Melting** tells about the recent conference held in Moscow in which representatives of American and British industrial and banking circles participated; **What Anne Frank Might Have Written**—excerpt from the diary of Maria Rolnikaite, who experienced life in a ghetto and later in a death camp during the Second World War; ***Yunost* for Any Age**—a short story about the popular youth magazine in the Soviet Union; **Work That Never Ends**—in which is described the work of the deputies in a small-town Soviet; **City on the Sozh River**—about the city of Gomel (which some of our readers requested); **Our Shaggy Pets**—a photo story about dogs; **Vladimir**—another installment in our series on ancient Russian monuments.

NOVOSTI PRESS AGENCY

SOVIET LIFE

Anniversary of the Victory over Nazi Germany — A series of items and photographs related to the Second World War.

Materialists and Dreamers — Soviet young people today as compared with those of a decade ago. An interview with Victor Rozov.

COMING SOON



Photographs by Georgi Petrusov





CIRCUS ON ICE

By Yuri Dokuchayev

THERE WERE MORE skeptics than performers when the new company was being recruited. And plenty of headaches. A circus on ice sounded like a pipe dream. Figure skaters were to be had for the asking, and acrobats and clowns were not scarce either. But where do you find them in combination? Where do you look for animal tamers on skates—not to mention the animals themselves? What's a circus without animals?

However, a group of enthusiasts did get together. Producer Arnold G. Arnold, who is well known in Canada, Finland, France and Japan for his glittering Soviet circus programs, choreographers Vladimir Burmistrov and Tatyana Sats, circus instructor Nikolai Stepanov, designers Yevgeni Chemadurov and Valentin Belinsky, and the heart of the enterprise, Vladimir Goreglyad, manager of the circus studios, sacrificed leisure, sleep and even family celebrations to confound the skeptics. Of the 3,400 girls auditioned, only 11 were chosen for the world's first circus on ice. Some were fine acrobats but no skaters; others could cut perfect figure eights but could not do the simplest handspring.

After 18 months of hard work, the first night audience practically lifted the roof and the roundish Thomases out of their seats. Adjectives cannot begin to describe this hilarious, scintillating show full of youthful effervescence—the average age of the performers runs from 17 to 20. It has to be seen to be believed. For more than three months now the rafters have echoed nightly to thunderous applause and laughter.

The program has everything a circus should have—acrobatics, the flying trapeze, tightrope dancing, even trampoline somersaults. All on skates? Yes, take our word for it. All the performers, from the master of ceremonies to the gymnasts, perform on skates.

This show has not yet been given in Moscow or any of the other capitals of the Soviet republics. It opened in the old Russian city of Kostroma and is now in Tula. But circus managers all over—America, Europe, Australia—are interested.



(Top left) It is the rare performer who does a double somersault on sawdust, let alone ice. Nina Popova with her partner Vladimir Yanovs.

(Top right) A dazzling Russian Lent Dance, with enough dizzying spins and springs to make any circus artist in the world turn green with envy.

(Above) And immediately afterward Tatyana Lebedeva, Yuri Kiselyov and Yuri Abalov take the center of the rink in a daring acrobatic number.



From left to right: Gennadi Kuzmin and three Vladimirs—Minkin, Redin and Popov—all fine musicians, clowns, dancers and bareback riders as well.

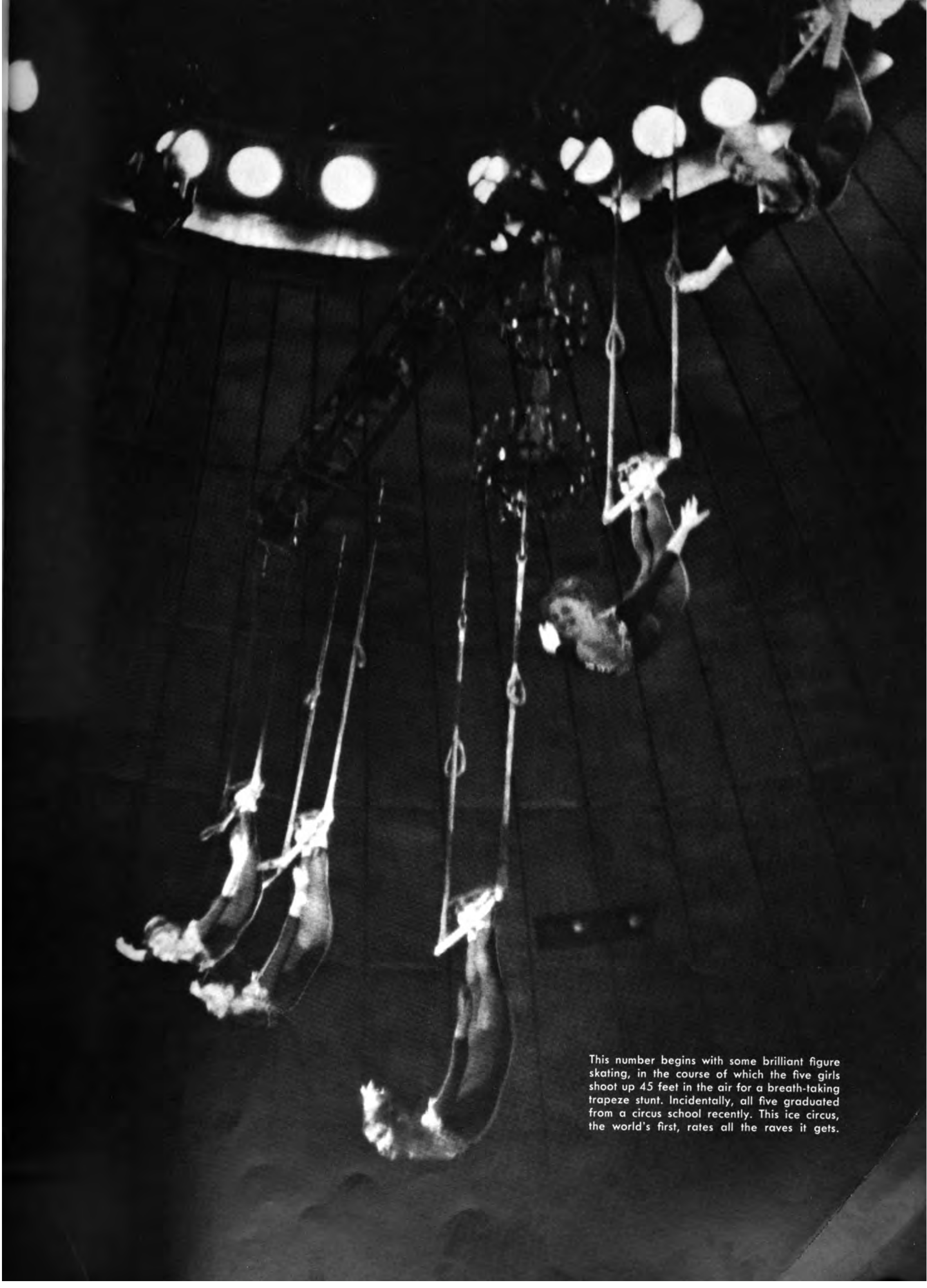


Nina Popova again. One moment she is doing a graceful pirouette, and the next—she is as gracefully doing a stunt no one before her has ever done.

Eyewitnesses say it was something to see, this trio flopping all over the ice only a year ago, trainer Anatoli Mayorov taking his bumps as well as the bears. But recently, when one of the bears lost a shoe, he very nonchalantly finished the routine, cutting a graceful figure on one skate.







This number begins with some brilliant figure skating, in the course of which the five girls shoot up 45 feet in the air for a breath-taking trapeze stunt. Incidentally, all five graduated from a circus school recently. This ice circus, the world's first, rates all the raves it gets.



This photograph dates back to 1898, the year Konstantin Stanislavsky (third left) and Vladimir Nemirovich-Danchenko founded the Moscow Art Theater. Anton Chekhov is shown here with members of the acting company, a relationship that was to bring special fame to the theater. Americans will be able to see the present-day Moscow Art Theater company during its stay in the U.S. *(See interview with the director on page 57.)*

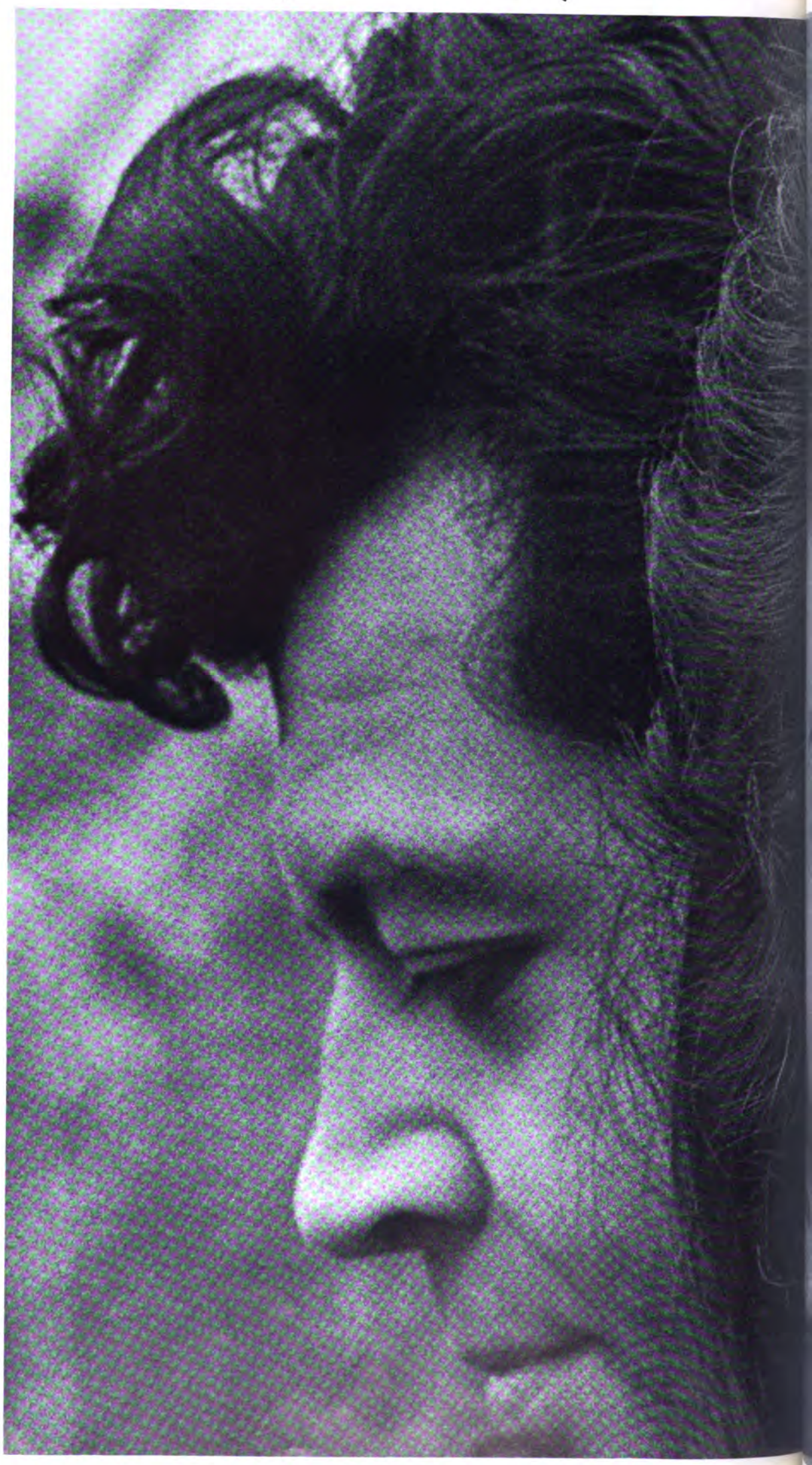
SOVIET LIFE

INTRODUCING
YOUNG ARTISTS

April 1965 • 35 cents

ITY OF
MAR
11
1965
LIBRARY

LOVE, SEX, THE



By BORIS GRUSHIN

The Public Opinion Institute of the newspaper Komsomolskaya Pravda some time ago circulated a questionnaire on the problems of young married life. The results, it was hoped, would provide a better understanding of family relationships, help young couples to order their lives more intelligently and serve as a basis for improving the marriage and divorce laws.

The 12 points in the questionnaire were answered by 12,104 young people. Journalist-sociologist Boris Grushin wrote a thesis around the results in which he discussed thoughtlessness, the housing problem, love at first sight, early marriage and other such questions. The study was published in the monthly magazine Molodaya Gvardiya (Young Guard).

This article, the first of two, is a reprint of one of the chapters —On Sex Education of the Young.

Photograph by Edward Pesov

YOUNG FAMILY



I SHOULD LIKE to mention a problem of enormous importance," wrote A., an Odessa office worker. He has been married for 24 years and is the father of two children. "I refer to sex. The problem has been bashfully avoided, as though it did not exist. Is it really nonexistent? I've lived to the age of 42 and can tell you that it certainly does exist. I was confronted with it at the age of 16 or thereabouts, about when most people are, I suppose. It is a particularly acute problem in one's youth.

"Young people have to know something about sex when they get married if they are to live together intelligently. But where can a young person hope to find published material on the subject? The answer is Nowhere. There is almost nothing available, even in the medical books. Finding no answers to their questions, the young (and not only the young!) make mistakes and often do things they regret. My opinion is that sex accounts for more than half of the divorces, though that reason rarely figures in court cases."

This is from a 34-year-old attorney in Kiev, who has been married 12 years and has a daughter:

"Young people seem to be completely ignorant of the sexual side of marriage, of its physiology. Although more than half the divorce cases that come to my attention in my own practice (and in the practice of my colleagues, as well) grow out of the frigidity or abnormality of one of the partners, because of prudery we have no publications whatever on the subject. Despite the common notion that the sexual relations of young people have become more casual, the young people I meet (including those who sue for divorce!) hardly know any of the things a person ought to know when marrying. Newlyweds ought to be taught more than how to prepare meals, wash clothes and diaper a baby. They ought to be taught how to avoid pregnancy and to be given some idea of the physiology of marriage."

Ignorance in sex matters is stressed in one out of ten of the replies made to the questionnaire by those who thought young people were unprepared to raise a family.

Only 2.6 per cent of those questioned saw sex as the root of the trouble in family breakups. This surprisingly small percentage is understandable in a way, for the difficulties that arise from sexual incompatibility are not necessarily the major ones, although they certainly contribute to the breakup. Family relations are not limited to sex. Psychological and intellectual compatibility play an enormous role in today's Soviet family.

It seems to me, for all that, that our literature and public opinion have until recently grossly underestimated the importance of sex. Its role in family life has been passed over in silence, reduced to zero. All mention of sex was—and still is, for that matter—thought "not nice," "shameful." People seem to have the feeling that such talk somehow sullies the family.

No one would argue seriously that sex is the chief and only basis of a family relationship. It is, however, equally absurd to deny that sex has always been at the foundation of family relations, of the relations between man and woman in general.

It is true that we rarely touch on sex in dealing with divorce cases in court, but this in itself means nothing. The couple may be deliberately concealing the real reason for their divorce, or they may even be unaware of it. We know well enough from interrogations that sexual incompatibility is frequently the real reason for harrowing family scenes that seem to originate from money difficulties and other such more visible sources. This is what prompts us to focus public attention on the problem.

Uneven Marriages

The questionnaire replies that stress young people's ignorance of sex as well as the difficulties that stem from sexual incompatibility raise several problems of obviously unequal importance.

Some of the replies cite marriages in which there is a considerable age difference between the partners. This, they say, will sooner or later lead to family conflict because of unsatisfactory sexual relations. But the number of such marriages is very small, on the whole. Nor do all of them end up in divorce for the reason considered here. Only to an insignificant degree, therefore, may conflict originating from unsatisfactory sexual relations be attributed to age differences between the partners. Only 1.4 per cent of the replies gave this as a cause for divorce.

Do age-difference marriages indicate an immature and shiftless disregard of the problems of family life? Where such marriages are contracted without love, they unquestionably do. But this kind of immaturity is not what we mean by unpreparedness for marriage. It is most improbable that adults (even if they are only 18 years old) would be unaware that the chances of sexual disharmony multiply beyond an allowable age difference.

Deliberate and Inadvertent Risk

Another cause of sex difficulties cited is an ailment of one of the partners. This is obviously a more important factor than age difference.

There is sterility, for instance. Childless marriages are not infrequent, according to doctors; they comprise at least 10 per cent of the total. We also know that a childless marriage caused by sterility of one of the spouses may be considered a great misfortune by the other and offer a legitimate reason for separation.

Venereal diseases, disorders of the nervous system that result in impotence or enfeebling sexual activity, psychotic conditions, severe heart, lung, liver, kidney and other ailments are also obstacles to a normal sex life or the birth of children. Confronted with any of these, one or both partners may regret the marriage and sue for divorce.

This kind of situation, obviously, differs fundamentally from age-difference marriages, for marrying a person who is very much older (or younger) and thereby exposing the family to future hazards is a conscious act, freely entered into.

Where illness is concerned, neither of the parties knows what he is in for. The future wife or husband may have or be stricken with an ailment that makes happy married life impossible. The cause for divorce, in these cases, is clearly objective. The subjective factor is not especially relevant.

By not giving people about to marry the medical, legal and other information they need, society is creating a situation in which only good luck, as it were, stands between every new family and the divorce court.

Strictly speaking, we do have certain legal safeguards. Article 132 of the Marriage and Guardianship Code of the Russian Federation requires that the parties sign a statement at the marriage ceremony that they are informed as to the condition of each other's health, particularly with regard to venereal diseases, mental derangement and tuberculosis. We have laws in the Soviet Union that say marriages may not be contracted with persons known to be deranged or feeble-minded.

But the law reduces itself simply to this: that both parties to a marriage are obligated to inform each other of their state of health! We do not need much law to see how formal this demand is, that it is contingent only on the "free will" of the newlyweds, that it is not supported by the requisite tradition of sex education of the young or by the responsibility of public health, law or other government agencies to intervene, in appropriate and legal ways, of course, when necessary. When marriages are registered at the local Soviets, therefore, this requirement is treated as a mere formality, especially when compared with such stringent regulations as hold for the marriage age, bigamy and blood relationships.

The employees of the marriage registration bureaus do not even take the trouble to find out whether the newlyweds are really "informed about each other's health." "Word of honor" is deemed sufficient.

The person who deliberately deceives his future spouse, *i.e.*, who furnishes false information about his health, is not answerable to the law. So that we have the objective possibility for deceit. Malefactors are not the chief trouble, however. The important thing is that the great

majority of the young people pay no attention to this aspect of the matter. Do many young people go to a doctor before marrying for a physical checkup with an eye to future family life? Very few, especially among the men. Are all of our young people about to marry sure they are not haboring (or actually suffering from) diseases that could handicap married life? Not all by far, unfortunately. And the reason is simply that no one ever tells them they should. The medical establishments intervene only when they have been approached for consultation. But the difficulty is that only a very small fraction of the young people go to them in time. It is evident that this has a direct bearing on the diminishing number of happy families and on the weakening of family ties in general.

Posed as it is here, the question is not meant to imply that people suffering from serious ailments that could interfere with a normal sex life or having children should be forbidden to marry, to raise families. This (except in the few cases forseen by the law) would obviously be absurd. It would be wrong because it is inhuman and also because it is disproven by life. There are many happily married people who are childless, and good families in which one or the other of the partners is afflicted with a serious ailment.

We are arguing for quite another thing: We want people who are about to marry to really (not just formally) know the state of each other's health.

Modern sociology and medicine present us with this possibility: If people can be grouped according to their sexual traits (as they can be grouped according to their blood types), the sexual compatibility (or incompatibility) of the future spouses (the identity or disparity of their groups) could then be ascertained beforehand, and these young people could be duly informed of the possible consequences of their conjugal life. The scientific (and hence the practical) importance of such ideas will be demonstrated by the future. But we do not have to wait to dispose of divorces that originate in the health of one of the partners. The solution is education and a sensible method of acquainting people with their actual state of health.

Terra Incognita

The crux of the problem, as most of the people questioned justly remarked, lies in the almost total ignorance of the young where sex questions are concerned. This will undoubtedly be vigorously denied by some readers, while others will call it an unpardonable exaggeration. "What's so complicated about it?" they will say. "It's all so simple. . . ." But it is that remark that illustrates the truth of our contention. It is this "oversimplified" view of sex, more often than not, that contains the seeds of conjugal friction between couples who are perfectly healthy, capable of a normal sex life and truly in love with each other.

The people who answered the questionnaire noted first of all that the young lacked an elementary knowledge of the anatomy and physiology of the human body, and particularly of the sex organs. The lack of such knowledge and the idea that the young "will learn by themselves" contribute to various erroneous and perverse conceptions of sex, and these often lead to conflict between man and wife. This ignorance sometimes even leads to serious physical and moral traumas that make normal sex life difficult and even impossible.

"Unable to find their way about in sex matters, young women often begin their lives with irremediable mistakes," wrote 28-year-old V. of Moscow (married) in reply to one of the questions, "while some men remain ignoramuses on the subject all their lives."

Here is the comment of married couple P. They are both 34 years old, both doctors, and have an eight-year-old son.

"That our young people are not prepared for sex life is undeniable," they wrote. "This, unfortunately, leads to serious complications and is sometimes the cause of poor health and invalidism, particularly for the wife. Doctors are well aware of this. We were preparing to raise the question in *Meditsinskaya Gazeta (Medical Journal)*, but this apt and timely questionnaire may prove more useful."

The poll would seem to indicate that young people have only the most elementary knowledge of sex. Teacher M. of Moscow, 38 years old, married at the age of 24 and the father of two children, wrote: "Our young newlyweds are poorly prepared to raise families, even when they are armed with diplomas. That is why young people in their first months together are harried by problems that often throw a pall over married life. It is also the reason so many young families run into a crisis sooner or later.

"One of these problems which young families come up against, in my view, is conjugal relations. How often do these relations, so tenderly anticipated by the newlyweds, take an utterly unexpected turn! How often do they become an unpleasant burden instead of a pleasure and joy, particularly for the young woman! As a result, there is disappointment and dissatisfaction, then irritation and dislike, and finally so-called "character incompatibility" and loathing! Though the spouses sometimes spare each other's feelings and hide the truth, it makes itself felt in the long run, when quantity turns into quality and into marital infidelity."

The doctors claim that the beginning of sexual relations is often decisive for conjugal happiness and even that the fate of a marriage may depend on the first night. It is then that people ignorant of the elementary facts of sex life draw often totally wrong conclusions.

But this ignorance has even wider repercussions. By reason of this lack of sex education and the fact that the whole area of intimate relations between man and woman is labeled "terra incognita," a primitive, coarse view of the content, function and form of sexual relations has become prevalent. Many people, particularly men, will be convinced to their last day that sexual love is the sex act and nothing more. They have no idea that sexual love, including the sex act, is a highly complex combination of spiritual values, of psychological attitudes and of physiological reactions. It was precisely this coarse, vulgarized approach to sex that was scored by Karl Marx when he wrote that such a view "debased the senses," reducing true love to the mechanical ejaculation of semen.

Sexual love is a grand and complex phenomenon, and the society that aims for the all-round development of personality, of all of man's mental and spiritual capabilities, cannot afford to dismiss sexual love as "shameful." It is astonishing that people who teach their children to walk, then to talk, then to eat by themselves, to read and to work quite "forget" to teach them to love—to do so correctly, intelligently, esthetically and humanely. Such teaching would add immeasurably to the beauty, harmony and permanence of marriage and the relations between man and woman generally.

Health at Stake

The questionnaire results pointed to the conclusion that young couples have very little knowledge of the techniques of preventing pregnancy. Ignorance in this area is responsible for all sorts of family complications. The discussion of this problem took on a very serious tone. The Moscow teacher who wrote about "the problem of marital relations" also discussed "the problem of childbirth." His comment was that newlyweds who decided to have no children for the first year or two are at once confronted with the question: "How can one avoid maternity without the risk of ruining one's health through abortion?" "To our shame, unfortunately," he wrote, "we must admit that there are many among us who haven't the faintest idea of how to answer this vital day-to-day question. Nor are many of our doctors much better informed, though the problem could hardly be said to be unsolvable!"

Office worker G. of Daugavpils, 48 years old, married for 19 years and the father of two children, expressed himself as follows:

"There are cases when young couples entirely unprepared for family life are afraid to have children and feel that the birth of a child is undesirable. They decide to interrupt the pregnancy, and this has disastrous effects on the young wife, injuring her nervous system and at times leading to irremediable family difficulties. Our medical science has been making no progress whatever in the production of contraceptives. Such

(Continued on Page 34)

WE CAN DO BUSINESS

By MIKHAIL GRIBKOV
Department Chief at the USSR Ministry of Foreign Trade

Last November a group of 92 executives from 63 of the largest corporations and banks in the United States as well as several European businessmen visited the Soviet Union. The trip was sponsored by Business International. The delegation was received by Premier Alexei Kosygin and President Anastas Mikoyan.

This was unquestionably the most representative group of American businessmen ever to visit the Soviet Union. They came for business, not pleasure, to get a more complete picture of Soviet foreign policy, economics, planning, and the specific features and conditions of the USSR's trade with other countries.

The success of the meetings was due largely to the atmosphere of frankness and friendliness, to the evident mutual good will. In a statement to the press on November 21, Business International said:

"The fact that the U.S. group met in serious discussions with the top leadership of the government, that these Soviet leaders were so well prepared and that they both asked and answered questions with great candor made these meetings rewarding, constructive and practical."

Our growing foreign trade was a prime factor in stimulating the interest of American businessmen. In 1963 we did better than 14 billion dollars' worth of business, 12 times more than in prewar 1938. Today we stand fifth in the world in the volume of international trade—after the USA, the Federal Republic of Germany, Britain and France; before the war we were sixteenth. We trade with 91 countries and have agreements with 65 of them.

The varied Soviet economy makes for as varied a structure of exports and imports, and permits us, in practice, to trade with any country, regardless of its production level.

In our export structure the proportion of manufactured goods, chiefly machinery and equipment, is increasing. In 1963 this category accounted for 64.9 per cent, with machinery and equipment accounting for 19.7 per cent as compared with five per cent before the war. As for imports, in 1963 manufactured goods and raw materials accounted for 73.7 and 26.3 per cent respectively.

We do a really roaring trade with the socialist countries, understandable since arrangements with them are based, to a growing extent, on long-range commercial agreements, the coordination of economic plans and an increasing division of labor.

Our trade with the industrially developed Western countries is also making headway. It has doubled in the past five years and now accounts for 19 per cent of the total. In 1963 the volume of business was almost 2.7 billion dollars.

Our biggest trading partners among the industrially developed countries are Finland, Britain, Japan, the Federal Republic of Germany, Italy and France, with Finland heading the list. Our relations with her illustrate the progress of trade between countries with different social systems. Soviet-Finnish commerce is based on long-term agreements. For instance, the agreement concluded for 1966-1970 will permit the two countries to place long-term orders and guarantee each other stable markets.

Our trade with Britain rests on traditions of long standing. Over the past five years it has increased by 60 per cent, totaling more than 340 million dollars in 1963. We have a five-year agreement that runs until 1969 as well as an agreement for consumer goods exchange.

Last September the Soviet Bank of Foreign Trade and the British Midland Bank signed an agreement to give the USSR a 15-year loan for the purchase of British equipment. In line with this an 84-million-dollar deal has already gone through for the delivery and construction of a Terylene (synthetic fabric) plant. The British Government statement that it is prepared to vouch for long-term bank credits is still another move toward a larger volume of reciprocal business.

Soviet-Italian trade has almost quadrupled over the past five years. The 1966-69 agreement provides for a further increase—roughly 1.5 times. The long-term contracts which Soviet foreign trade corporations conclude with Italian firms play a most important role. Thus, we have arrangements to supply Italy with more than 25 million tons of oil between 1964 and 1970. Italy will repay us with machinery, equipment and various other goods. In Soviet-Italian trade long-term credit is also the practice.

The Franco-Soviet trade agreement provides for a 70 per cent increase over the previous five-year period. The French Government has agreed to extend credit for Soviet purchases and has also stepped up its imports of the traditional Soviet raw materials and Soviet-made machinery and equipment.

The trade we do with Japan has multiplied by more than seven times in the past five years. It is interesting to note that before 1957 we were doing hardly any trade with Japan, and in 1963 we did business to the tune of 290 million dollars—largely as a result of the three-year agreement concluded then, which expires this year. The exchange of trade-and-industrial and of specialized exhibitions, of various delegations and of long-term contracts and coastal commerce are all prominent features in our business relations with Japan.

We do a brisk trade with Scandinavia and many other countries.

There was a time when we were doing quite a large volume of trade with the USA. Back in the thirties our business ran to several hundred million dollars annually. However, after the war trade between us fell off sharply, and today we are hardly doing any business at all. For countries like the USSR and the USA, the 40 to 50 million dollars of annual trade we have been doing these past few years is pitifully inadequate, considering the possibilities.

Not infrequently the argument is advanced that since the USSR and the USA both have self-sustaining economies, there is not much point in trade between the two. The allegation is also made that the USSR does not have enough resources for export, that it does not provide adequate protection of patent rights, and so on and so forth.

All one can say about such assertions is that in most cases they originate from an inadequate knowledge of Soviet economics and of the principles and rules we adhere to in our foreign business. The firms in Western Europe and elsewhere that already do business with our foreign trade agencies have long stopped asking whether one can trade with the USSR and whether it has anything to trade with. That is past history so far as they are concerned. They simply do business with us—and pretty good business it is.

The best way to dispose of doubts is experience, by direct contact with Soviet foreign trade organizations. And the visit of the American businessmen's group arranged by Business International is certainly an auspicious beginning.

The USSR has always been for the broadest, unrestricted trade with the USA on an equal and mutually advantageous basis. Our rapid economic progress opens up large vistas. Soviet economists believe that over the next 20 years our foreign trade may well quadruple and reach a total of 60 billion rubles. To proceed from old attitudes and notions, therefore, is to do an injustice to the prospects of trade between our two countries.

A statement Premier Alexei Kosygin made at the USSR Supreme Soviet session last December is apropos. Addressing himself to the West, the USA included, of course, he said:

"The Soviet market and the export of Soviet raw materials, equipment and other commodities in which the Western countries are interested could be greatly expanded if the West really wanted to carry on extensive trade with us on mutually advantageous terms. Now that the seven-year plan of economic development is being completed and the Soviet Union is about to begin economic planning for the next five years, our plans could take into account the possibilities of trade development and channel additional investments into appropriate branches. This would put trade relations between the Soviet Union and the Western countries on a solid foundation and would make it possible to conclude long-term trade agreements."

We are sure the normalization of Soviet-American relations would be in the interests of both countries and serve to improve mutual understanding generally. Though not prone to underestimate the attending difficulties, we are firmly convinced that they can be overcome, provided the wish is there.

SOVIET LIFE

APRIL 1965 No. 4 (103)

The magazine SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* AMERICA *in the Soviet Union.*



Front Cover: The Passover holiday is celebrated at the home of one of Moscow's Jewish families. *See story on page 52.*

PICTURE CREDITS

Yevgeni Tikhanov Cover I, 52-55; Edward Pesov Cover II, 1; Mikhail Kharlampiev 9; Oleg Neyelov 13, 14-17; Leonid Sergeyev 18; Anatoli Sukhov 25; Leon Dubelt 26; Igor Vinogradov 28; Gherman Cheryomushkin 36-37, 39; Yuri Koralyov 40-41; Semyon Maisterman 42-43; Victor Akhlomov 40-41; Alexei Bushkin 45; Edward Saratov 46; Georgi Petrusov 48-49; Vitali Chernikov 57; Sergei Solovyov 58-61; Abraham Shternberg 64-Cover III; Vladimir Akimov Cover IV.

Editor in Chief (Moscow Editorial Board): Yuri S. Fantalov, 2 Putinkovsky Pereulok, Moscow, USSR.

Managing Editor (Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director (Moscow Editorial Board): Marina T. Zabolotskaya, 2 Putinkovsky Pereulok, Moscow, USSR.

Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine SOVIET LIFE.

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Haynes Lithograph Co., Rockville, Md.

Page

We Can Do Business (Our Trends) by Mikhail Gribkov 4

SOVIET PEOPLE

Love, Sex, the Young Family by Boris Grushin 1
Lenin by Maxim Gorky 6
The City on the Sozh by Yanka Luchko 14
Endless Tasks by Igor Sakharov and Nikolai Anastasyev 26
I Must Tell About This by Masha Rolnikaite 36
Workers' Schools by Pavel Antonov 48
Passover Night by Moisei Itkovich 52

SOVIET DEMOCRACY

Punishment and Soviet Law
Queries from Readers answered by Alexander Gorkin, Vladimir Terebilov, Grigori Anashkin and Valentin Panyugin 20

INTERNATIONAL CONTACTS

The Ice is Melting by Heart Vladimirsky 8
He Talked to Lenin by Mikhail Bruk 9
American-Soviet Cultural Exchange on the Increase Interview with Boris Krylov 13
Abraham Lincoln and Russia by Robert Ivanov 24
Soviet Children on ABC-TV by Edward Saratov 46

PROBLEMS WE DISCUSS

Cuts in Military Spending: Threat or Blessing? by Igor Glagolev 56

ECONOMY AND SCIENCE

Karelia, the Forest Republic by Pavel Prokkonen 42
Space Psychology by Vladimir Zhukar and Irina Pushkina 34

LITERATURE AND THE ARTS

The Three Bears by Leo Tolstoy 18
Horror Story by Mikhail Andrasha 25
Vladimir by Ludmila Keidan 23
Introducing Five Young Painters by Yuri Ovsyannikov 29
Shostakovich's 'Lake' Quartets 47
Poetry and Thought by Yevgeni Vinokurov 50
Yevgeni Vinokurov's Poems 50
Yunost *for all Grownups* by Marina Khachaturova 58

RECREATION AND SPORTS

Dialogue with an American Coach by Anatoli Pinchuk 12
Twins Club 40
Our Shaggy Pets by Alexander Shaposhnikov 64

MISCELLANEOUS

Around the Country 10
Letters to the Editor 19
Learning Russian 44
Photo of the Month by Alexei Bushkin 45
Radio Moscow 47
Humor 57
Editor's Notes 61
Brief Comments 62
Next Issue 63

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

LENIN

The world is about to commemorate the ninety-fifth anniversary of the birth of Lenin, the founder of the Communist Party of the Soviet Union and the Soviet state. He was born on April 22, 1870, and died on January 21, 1924. Innumerable works have been written about Lenin — biographical essays, studies of various periods of his life, and reminiscences of colleagues and friends. Among the particularly interesting memoir literature is Maxim Gorky's essay. These are extracts.

IT IS a difficult task to paint his portrait. Lenin's words were as much a part of his external appearance as scales are of a fish's. The simplicity and straightforwardness of everything he said were an essential part of his nature. No glittering halo surrounded his heroism. His was that heroism which Russia knows so well, the unassuming austere life of self-sacrifice of the true Russian revolutionary intellectual who, in his unshakable belief in the possibility of social justice on earth, renounces all the pleasures of life in order to toil for the happiness of mankind.

I ought to begin with the London Congress, when the figure of Vladimir Ilyich stood out in strong relief against a background of doubt and mistrust, of open hostility and even hate.

I had never met Lenin before, nor had I read as much of his works as I should have. When we were introduced, he shook my hand heartily, and, scrutinizing me with his keen eyes, jocularly said in the tone of an old acquaintance: "So glad you've come. I believe you're fond of a scrap. There's going to be a big one here."

I did not expect Lenin to be like that. I felt something lacking. He pronounced his "r's" like a Frenchman and had a jaunty way of standing with his hands poked up under his armpits. He was somehow too ordinary, did not give the impression of being a leader.

I have never met a man who had so infectious a laugh. It was strange to see such a stern realist, a man who saw so keenly and felt so deeply the inevitability of great social catastrophes, irreconcilable, relentless in his hatred of exploitation, laughing like a child till the tears came, till he choked with laughter. To laugh like that one must have the soundest and healthiest of minds.

* * *

There was a certain magnetic quality he had that drew the hearts and sympathies of working people. He didn't speak Italian, but the Capri fishermen, who had seen Chaliapin and many other outstanding Russians, by a sort of instinct put Lenin in a special place at once. His laugh was fascinating—the hearty laugh of a man who, because he was so well acquainted with the clumsy stupidity of human beings and the acrobatic trickery of the quick-witted, could find pleasure in the childlike artlessness of the "simple in heart." One old fisherman, Giovanni Spadaro, said of him, "Only an honest man could laugh like that."

We would go rowing sometimes, on water blue and transparent as the sky, and Lenin learned how to catch fish "with his finger"—using the line alone, without the rod. The fishermen explained to him that the fish must be hooked when the finger feels the line vibrating. "*Cosi:drin, drin. Capisc*?"

A second later he hooked a fish, pulled it in and cried out with childlike joy and an angler's excitement, "Drin, drin!" The fishermen roared with laughter, gay as children, and nicknamed him Signor Drin-Drin. Long after he had gone away, they kept asking: "How is Signor Drin-Drin getting along? The Czar hasn't caught him yet, has he?"

* * *

Life plays such malicious tricks on us; those who are incapable of real hatred are incapable of real love as well. This fact alone, distorting human nature at the root, this unavoidable division of the soul, the inevitability of love through hatred, is the modern condition that condemns us to disillusionment.

In my opinion Lenin was an exceptionally great man precisely because of his irreconcilable, unquenchable hostility toward the suffering of humanity, his burning faith that suffering is not an essential and unavoidable part of living but an abomination which people ought to and are able to sweep away. I would call this basic feature of his character the militant optimism of a materialist, and it was not a Russian quality. This is precisely what attracted me to this man—Man, with a capital M.

* * *

It was the clearly expressed will to live he had, his active hatred of life's abominations, which attracted me to him. I loved the youthful eagerness he put into everything he did. His movements were light and agile, and his rare but powerful gestures were in full harmony with his speech, sparing as it was in words, in thought abounding; and in his slightly Mongolian face gleamed and sparkled the keen eyes of a tireless fighter against the lies and sorrows of life—now glowing and burning, now narrowed, now blinking, now smiling ironically, now flashing with anger. The fire in his eyes made his words glow. Sometimes it seemed as though the indomitable energy of his soul flew out in sparks from his eyes, and his words, shot through and through with it, hung shining in the air. His words always gave one the impression of the physical pressure of an irresistible truth. It was an unusual and extraordinary thing to see Lenin in the



park at Gorky, so much has the idea of him become associated with the picture of a man sitting at the end of a long table, expertly and skillfully guiding the comrades in their work, eyes alert, a smile at the corner of his lips; or standing on a platform with head thrown back, casting clear, distinct words to the hushed crowd, before the upturned eager faces of people thirsting for truth.

His words always brought to my mind the cold glitter of steel shavings. From these words, with amazing simplicity, there rose the perfectly fashioned figure of truth.

* * *

He was venturesome by nature, but his was not the mercenary recklessness of the gambler; in Lenin it was the manifestation of that exceptional moral courage possessed only by a man with an unshakable belief in his calling, a man with a profound and complete perception of his connection with the world and a perfect comprehension of his role in a chaotic world, the role of the enemy of that chaos.

With equal enthusiasm he would play chess, look through *A History of Dress*, argue for hours with comrades, fish, go for a walk along the stony paths of Capri, scorching under the southern sun, feast his eyes on the golden-hued gorse and on the swarthy-faced children of the fishermen.

Stocky and thick-set, with his Socratic head and quick eyes—he would often adopt a strange and rather comical posture—he would throw his head back, inclining it to his shoulder, thrust his fingers under his armpits, in the armholes of his vest. There was something deliciously funny in this pose, something of a triumphant fighting cock, and at such moments he beamed all over with joy, a grown-up child in this accursed world, a splendid human being, who had to give himself as a sacrifice to hostility and hatred so that love might at last be realized.

* * *

A man of astonishing strength of will, Lenin possessed in the highest degree the best qualities and properties of the revolutionary intelligentsia.

In the hard famine year of 1919 Lenin was ashamed to eat the food which was sent to him by comrades, soldiers and peasants from the provinces. When the parcels came to his bleak flat, he would frown, become embarrassed and hurry to give the flour, sugar and butter to sick comrades or to those who were weak from lack of food.

Completely devoid of personal fads, a stranger to tobacco and wine, occupied from morning to night with complicated and difficult work, it never occurred to him to look after himself, but he always had a vigilant eye on the well-being of his comrades.

* * *

Once I came to visit him and saw *War and Peace* lying on his desk. "Yes, Tolstoy. I wanted to reread the hunting scene, then I remembered that I had to write to a comrade. Absolutely no time for reading. Only last night I managed to read your book on Tolstoy."

Smiling and screwing up his eyes, he stretched himself luxuriously in his armchair, and, lowering his voice, added quickly: "What a colossus, eh? What a marvelously developed brain. Here's an artist for you, sir. And do you know something more amazing? You won't find a genuine muzhik in our literature until this Count came on the scene." Then, squinting and looking at me, he asked, "Can you put anyone in Europe beside him?" and replied himself, "No one." And he rubbed his hands together laughing contentedly.

* * *

I have already described his quite extraordinary attitude to the comrades, his concern for them, even to the smallest details of their lives. But in this characteristic of his I never caught the note of that self-interested care which a clever master sometimes exhibits toward an honest and expert workman. This was not the case with Lenin. His was the heartfelt interest of a sincere comrade, the affection which exists between equals. I know that it is impossible to consider as Lenin's equals even the greatest people in his Party, but he himself didn't seem to realize this or, more probably, did not want to realize it. He was sometimes sharp with people when arguing with them, pitilessly ridiculed them, even laughed at them. All this he did. But how many times, when judging people he was criticizing and rebuking yesterday, there was clearly evident a note of genuine wonder at their talents and moral steadfastness: at their unflagging labor, work amidst spies of all countries and parties, amid plots which swelled like festering sores on the body of the war-exhausted country.

* * *

He was a Russian who lived for a long time away from his native land, and he had examined it attentively—from afar it must have appeared brighter and more beautiful. But he estimated accurately its potential forces and perceived the singular talents of its people, which, feebly expressed as yet, unawakened by a history monotonous and oppressive, still gleamed everywhere like golden stars against the somber background of the fantastic life of Russia.

No other man has so well deserved the eternal remembrance of the world.

MAXIM GORKY

Ninety-two executives of leading American banks and industrial firms participated in a five-day round-table conference in Moscow arranged by Business International last November. Its purpose was to explore the possibility of increasing trade with the West, particularly with the United States.

Heart Vladimirsky of *Moscow News* describes the conference.

THE ICE IS MELTING

I HAVE SEEN many groups of American businessmen in the USSR, but this is the first time the Soviet capital has been host to so large a delegation, large in both number and significance. A good sign. We have trade relations with 91 countries and trade agreements with 65. The visit of these American businessmen was prompted by sound commercial sense, and the fact that the group included executives of such powerful international corporations as Ford, General Electric, Kaiser Industries, Socony Mobil Oil, Sperry Rand, U.S. Rubber, Vickers, Armour, Bendix, Bank of America, Chrysler, Occidental Petroleum, the B.F. Goodrich Company and the Chase Manhattan Bank is a story in itself. There is a very large field for Soviet-American trade, and we would like to see it develop, as Soviet leaders have stated on so many occasions. But a one-sided interest is not sufficient.

Climate Gets Milder

I met many of the participants of this international conference, and all of them commented on its value and their confidence that trade would be expanded. Summing up the meetings with Soviet leaders and experts, Sir Harry Pilkington, Chairman of Pilkington Brothers, Ltd., and a director of the Bank of England, said: "Many of your busiest ministers and chairmen of state organizations have given freely of their time to answer our questions, and ask their own." He went on to say that what they had heard from the Chairman of the Council of Ministers "convinced any who were still in doubt of the sincerity of your country's desire for peaceful coexistence and the steady and rapid development of trade for the benefit of everyone. Each day we have received impressive proof of the good will of the Russians, of their determination to concentrate on peaceful activities."

Turning to the general atmosphere at the conference, Sir Pilkington noted: "We were warned that the weather here would be cold. Many of us brought coats and hats. However, the climate proved to be much milder than we anticipated. The cold war, too, is much less cold now. If this keeps up, the Russians and Americans will not need coats and hats altogether."

Will Lend Their Weight

"But this conference," he continued, "is only the beginning. It must not be the end. Many of us have specific contacts to follow up. But the answer as to whether this conference is of limited interest or whether it is indeed historic depends on quite general actions. The melting of the ice must continue. This calls for positive propaganda, stressing the points that unite and not those that divide. We Western industrial leaders accept this responsibility."



American business leaders in Lenin's Kremlin study. Dr. Armand Hammer holds the figure that he presented to Lenin 44 years ago.

Several members of the group said that on returning home they would report the results to Washington, and particularly to Secretary of State Rusk. In view of the fact that the Johnson Administration has declared its intention of working for better relations with the USSR, the comment of Eldridge Haynes, President of Business International, is especially interesting:

"I sense a feeling in the group that we are persuaded that the Soviet Union will give greater emphasis than ever before to the development of its agriculture and consumer goods production to further elevate the living standards of the Soviet people. This is a tangible sign that the leaders of the USSR are sincere in their dedication to peaceful coexistence. If I am right about this," he went on, "then it can be expected that the business executives who have been privileged to be here will lend their weight to resolving the obstacles to trade with the Soviet Union."

Among the businessmen at the round-table conference was Dr. Hammer, who first visited Russia 44 years ago. Mikhail Bruk, a Novosti Press Agency correspondent, interviewed him.

HE TALKED TO LENIN

THE round-table conference was held behind tightly closed doors. Newsmen were not allowed to report on the deliberations or even be present in the conference room. So, we hung around the lounge of the Sovyetskaya Hotel, trying to glean whatever morsels of information we could. I was scanning the list of participants when my eye was caught by a name: Dr. A. Hammer, chairman and president of the Occidental Petroleum Corporation. "It must be the son of the famous Hammer who met and talked with Lenin almost half a century ago," I thought. I decided to find out and during a coffee break tracked down Dr. Armand Hammer. I faced a portly gray-haired gentleman who appeared to be in his mid-sixties. He had a pleasant face and very lively shrewd eyes.

"Pardon me, sir," I said. "Are you by any chance a relative of Dr. Armand Julius Hammer who came to Russia in 1921 to arrange for the first American concession in the Urals?" "A very close relative indeed," he said smiling. "I am Dr. Armand Hammer."

I was nonplussed. Seeing incredulity clearly printed on my face, Dr. Hammer suggested that we go up to his room after the day's session for a talk. I jumped at the invitation and late that afternoon went up to his room on the third floor of the Sovyetskaya Hotel. We ensconced ourselves in easy chairs.

"We don't have much time," said Dr. Hammer, "so let me begin by telling you a funny thing that happened to me yesterday after our group was received by your Premier, Mr. Alexei Kosygin.

"After we had finished discussing with him what we consider to be the various crucial issues of USA-USSR trade, we were invited to visit Lenin's apartment and his office in the Kremlin. We passed through room after room until we came to Lenin's office. Our guide was telling us that everything in the room is preserved exactly as it was 40 years ago, when Lenin was there last. She went up to his desk and pointed to a small bronze figure of a monkey sitting on a volume of Darwin's *Origin of the Species* and holding a human skull in its hands which it was studying closely. The guide told us that the bronze statuette had been given to Lenin by an American businessman who delivered the first shipment of wheat flour for the starving people of Russia. 'I believe his name is Hammer,' she said, 'but I am sure he must be dead by now.'

" 'I am very much alive,' I exclaimed. 'And I still clearly remember that meeting and the conversation we had with Lenin.' Our guide was flabbergasted. She invited us to sit down and asked me to tell her how it had all happened. And so, in that very room and at that very desk where I had sat 43 years ago, I told them the story. Here it is.

"I was 23 then and a medical doctor. But business always appealed to me more than medicine, and I came to Soviet Russia back in 1921 to see what business prospects there were in your country. The primary aim of my trip to Moscow was to negotiate a concession from the Soviet Government, probably somewhere in the Urals. Somebody told me that Lenin was very fond of *objets d'art*. And so I decided, in case I should meet him, to present him with some kind of antique. In London I came across a bronze monkey in an antique shop. It struck my fancy, so I bought it and brought it with me to Moscow. I also brought with me a set of equipment for a hospital that was to be built in your country and turned it over to Mr. Nikolai Semashko, then People's Commissar of Health, who offered me a trip to the Urals while the equipment was being installed. I accepted the invitation and went by special train with Ludwig Martens. He acted as your ambassador to the U. S., although he was not officially recognized as such by the White House. We traveled through Central Russia and then on to the Urals. I shall never forget the dreadful picture of poverty and hunger, of outright starvation. I did not believe then that Russia would ever be able to get out of its appalling plight. How mistaken I was! Well, it was at a small station that a telegram from Lenin reached us inviting me to see him in the Kremlin.

"Shall I ever forget that first encounter with Lenin? It would be impossible even if I wanted to. When we finished talking business, I took this monkey out of my bag and gave it to Lenin. He was delighted. His eyes sparkled. Those eyes. You know, he drove right through you with his eyes. He took the monkey and, after viewing it at arm's length, inspected it closely. Then he put it on the table and, hands in trouser pockets, started pacing the room. Then, stopping suddenly, he asked me why I had chosen this particular bronze figure. I told him that I thought the theme of the statuette interesting. 'It is an illustration of Darwin's theory of man originating from the monkey,' I explained. 'Nothing of the sort,' retorted Lenin. 'It is clearly an allegory. The artist who made it wanted to show that if the peoples of the world don't get together and establish peace, what with the development of new weapons, only monkeys will survive to play with human skulls.' He gave a short laugh, then added seriously: 'Coexistence is necessary, especially for Soviet Russia and the United States.'

"It was a very true observation and it shows you how farsighted he was. If Lenin hadn't died so early, relations between our countries would have developed much faster. He understood that the United States and the Soviet Union complement each other. You had unlimited resources and we possessed the technical know-how."

"Dr. Hammer, the famous British author H. G. Wells called Lenin 'the dreamer in the Kremlin.' Do you agree with him?" I asked.

"I'd prefer to answer you with another story," said Dr. Hammer. "During my last visit here I had talks with Mr. Mikoyan, whom I have also known since the early twenties. When I returned to my hotel after one of those meetings, the chauffeur of my car said: 'Mr. Hammer, I just found out that you are the well-known pencil manufacturer. Soon after the October Revolution in Russia you taught us how to make pencils so that the illiterate people of Russia could learn to write. And now we make sputniks and rockets that we send to the Moon.'

"That, I think," continued Dr. Hammer, "is the best answer to your question. Some 30 years ago I gave H. G. Wells, whom I knew quite well, the first automatic pencil made by our factory. Pity he is dead, otherwise I would tell him that he had underestimated Lenin and your country. But then, if he could see with his own eyes what you have achieved today, he would admit being wrong."

In an interview with an *Izvestia* correspondent, Mr. Hammer made the following comment on the businessmen's round-table conference:

"Businessmen in the United States now feel —and this is becoming a popular idea—that the time has come to review our policy on trade with the socialist bloc countries and, in particular, with the Soviet Union.

"I believe that the main importance of our discussions in Moscow hinges on the fact that they furthered understanding between our two great countries."

AROUND *the* COUNTRY

COSMIC STAMPS

Early-bird stamp collectors by the hundreds besieged the Moscow Central Post Office and its branches for the new commemorative on the flight of the three-man spaceship *Voskhod*.

Fortunately, the printers at the Ministry of Communications had anticipated the demand. Only a few hours after the flight began, artist Iosif Levin brought his drawing to the Ministry. And in 24 hours they had the stamp off the press and ready for issue. Cosmic speed!

The 10-kopeck stamp is in violet and blue tones.



POET COMMEMORATED

A three-stamp series has been issued for the 150th anniversary of the birth of Mikhail Lermontov.

The first, bearing the poet's portrait, is by the artist Kirill Gorbunov. The second shows critic Vissarion Belinsky visiting Lermontov in prison. The latter had been arrested for publishing antigovernment verses on the death of Alexander Pushkin. On the third is pictured Lermontov's childhood home in the village of Tarkhany, Penza Region (Middle Volga).

The stamps sell for six, ten and four kopecks respectively.



CATHEDRAL REINFORCED

Leningrad's monumental St. Isaac's Cathedral stands 303 feet high and weighs 300,000 metric tons. It has room for 13,000 people. Two hundred and twenty pounds of gold were required to gild its dome.

As a result of the cathedral's great weight and a probable miscalculation by its architect, Auguste Monferrand, it had settled unevenly. In recent years a large fissure appeared in the west wall, and the columns supporting the dome showed cracks. Also, the north and south walls deviated from the vertical by six to seven inches.

To find out what could be expected, a commission was set up to study the structure. After three years of observation the conclusion it reached was that the building was not likely to do any more settling.

To preserve the unique monument, it will be strengthened with steel cable and stressed reinforcing bars. St. Isaac's should stand for years to come.



INCH-LONG DIAMOND

Yakutia has yielded the largest diamond ever found in the Soviet Union. It weighs 69.4 carats, is more than an inch long, and was named Oktyabrsky in honor of the October Revolution.

The diamonds are found in kimberlite pipes like those in South Africa; the richest are Mir (Peace) and Aikhal. The first diamonds were found there 10 years ago.

LIVE VOLCANOES

The Kamchatka Peninsula is famous for its volcanoes; 28 of them are active. Scientists keep a sharp eye out for signs of eruption.

But volcanoes also have their virtues: They permit geophysicists, petrographers and specialists in ore deposits to peep into our planet's interior to learn where to look for copper, zinc, lead and the noble metals.

The Institute of Volcanology at Petropavlovsk Kamchatsky is one of several such research organizations in the Soviet Union. At the end of 1964 an all-Union conference of volcanologists was held at the institute, after which its participants toured the local natural "laboratories" —Kamchatka's volcanoes.

The scientists in the photo are studying pieces of lava erupted from the Bezymyanny volcano.



NEW OBSERVATORY

A new astrophysical observatory, of the Institute of Physics and Astronomy of the Estonian Academy of Sciences, has been built on a hill near the university town of Tartu. The observatory is equipped with a 28-inch reflecting telescope for spectral studies and two 20-inch telescopes for photoelectric photometric research. There is also an automatic tracking camera for photographing artificial earth satellites.



NEW ZAPOROZHETS

A new model of the compact Zaporozhets, the Zaz-966, is now in production. It has a 40-horsepower engine and can do up to 75 miles on hour.



HEADED FOR SIBERIA

This beaver is waiting for a decision: Is it fit to travel? If the answer is yes, it starts on the long journey from the Voronezh Region preserve to Siberia's Krasnoyarsk Territory. Beavers are now raised in the clear, quiet rivers of the Siberian forests.

Only healthy animals make the trip. But before they do, they are kept in quarantine for a time, vaccinated against paratyphoid, and given a shot of penicillin.



BABEL'S SEVENTIETH BIRTH ANNIVERSARY

Isaac Babel was a man of intellectual brilliance, creativity and originality, an outstanding short story writer who stood in the forefront of our early Soviet authors.

So said Konstantin Fedin, secretary of the board of the Union of Writers of the USSR, on the occasion of the celebration of the seventieth anniversary of Babel's birth. Gathered in the hall of the Central Writers Club were writers, friends of Babel's, students of his work, and others. The writer's widow and daughter were also present. Ilya Ehrenburg was one of the speakers.



UNDERWATER GLIDER

This device is towed under water behind the ship at a depth of 200-250 feet to permit observation of trawls at work and the behavior of fish. The nose of the chamber, in which are four portholes, accommodates an obesrver equipped with still and movie cameras.

During tests of the new apparatus in the Mediterranean, staff members of the Atlantic Research Institute of Fisheries and Oceanography stayed under water for four hours at a time and experienced no ill effects. The device had been developed at the institute.



100-YEAR-OLD PERFUMERY

Some 150 varieties of perfume and toilet water, 300,000 bottles a year, are produced by the world's largest perfumery, Novaya Zarya in Moscow, which recently marked its hundredth birthday. Its products are exported to 26 countries. The perfumes Moscow Lights, Pearl, Evening and others won the Grand Prix and a large gold medal at the Brussels World's Fair.



COSMETIC SURGERY

At the Cosmetic Clinic in Moscow you can have the shape of your nose and face changed, wrinkles and scars removed, and your figure thinned down and glamorized. The staff, headed by Professor Fyodor Khitrov, perform some 4,000 such operations annually.

Plastic surgeons have to use the latest equipment and methods. Ordinarily, incisions are sutured with needle and thread. These surgeons have learned to do without them; they use polymer glue, which leaves neither scars nor stitch markings. For the very delicate incisions their work requires, they use atraumatic needles, pincers and files, and the type of scalpel employed in brain surgery.

These surgeons must also be artists. To help them mold new features, they study the paintings of the great masters.



FASHION AND FOLK COSTUMES

What is the best way to use lace, linen, muslin, straw and wooden ornaments—in a word, the elements of old-time Russian dress—in present-day garments?

This question is being studied by the Research Institute of Industrial Arts and by numerous studios in Vologda, Tarusa, Saratov and other centers of folk handicrafts. The answers—modern costumes in the Russian style—are on display at the Folk Art Museum in Moscow. Here one can see dresses worn by our great-grandmothers as well as modern garments produced by the handicraft industry.



A HALF-TON FISH

This giant was hauled in by fishermen from Ikryaninsky (Caviar) District, Astrakhan Region. They caught the white whale, also known as beluga, in the Volga Delta. It weighed 1,150 pounds and yielded 176 pounds of caviar.





CONSTRUCTION IN LENINGRAD

Leningrad (formerly Petrograd, earlier St. Petersburg) was founded by Peter the Great in 1703. The city is famed for its many graceful examples of eighteenth-nineteenth century Russian classical architecture.

A large-scale building program is now under way. More than 40,000 new apartments were readied for occupancy in 1964. Two-thirds of the buildings are being erected with large prefabricated panels by the plant-to-site method: Every three minutes an apartment comes off the conveyor! The photograph is of an apartment house on Novo-Izmailovsky Avenue.



COLLECTIVE FARM JAZZ COMBO

This is a collective farm jazz ensemble. Svetlana Leontyeva, an eighth-grade schoolgirl, is the soloist. The Rossiya's jazz, choral, folk instrument and drama groups perform regularly in the farm's House of Culture and in neighboring villages of Ivanovo Region, north of Moscow.

NOBEL PRIZE WINNERS

Two Russians—Nikolai Basov and Alexander Prokhorov—and one American, Charles Townes, were awarded the 1964 Nobel Prize in physics. The prize was given for fundamental research in quantum electronics, which resulted in the development of generators and amplifiers in the radio and optical wave bands (masers and lasers).



Nikolai Basov and Alexander Prokhorov are laboratory heads at the Physics Institute of the USSR Academy of Sciences. In 1959 they won the Lenin Prize for the development of a new principle of generating radio waves and the creation of molecular generators and amplifiers.

In recent years semiconducting quantum generators with exceptionally high efficiencies have been developed under the leadership of Basov. Alexander Prokhorov works on the applications of paramagnetic amplifiers to radio astronomy.

AROUND *the* COUNTRY

DIALOGUE WITH AN AMERICAN COACH

By Anatoli Pinchuk
Photograph by Oleg Neyelov

AS SOON AS I'm through with this article, I shall no longer consider myself indebted to John MacLendon. But let me first explain who MacLendon is and how I became his debtor.

John MacLendon is the coach of the USA national basketball squad, which he led twice to the Soviet Union—in 1961 and 1964. During the latter visit I accompanied the American basketball stars on their tour as correspondent for *Soviet Sports*. The newspaper was interested in everything connected with the game in the country that gave the world this wonderful sport.

In general I hardly left MacLendon a single free hour, plying him with questions incessantly. He answered them patiently and fully. But don't think, however, that I'm going to make up those "lost hours" to him. I have something else in mind.

During the numerous interviews MacLendon gave me I noticed at times that he wanted to ask me some questions. But I pretended not to notice it. And now, in an attempt to assuage my conscience, I have decided to pay my debt to him. There is only one hitch: I don't know the questions he wanted to ask. That being the case, I'll have to guess what they were.

"Is basketball popular in the USSR?" Anyone as closely associated with the game as he would certainly ask such a question.

"Of course!" A sports writer who enjoys the game couldn't answer otherwise. However, it is not really so.

As far as I know, basketball in your country is one of the big three. In the USSR, however, it is soccer, volleyball and ice hockey that enjoy the greatest popularity. If a poll were held in your country on the 10 top athletes, it would surely include Bill Russell and Wilt Chamberlain. In our country not a single basketball player would make the roster of the top 10. Nevertheless, "Of course!" These words could have been uttered together with mine by at least 2.6 million Soviet citizens, the 2.6 million representing the number of basketball players in the USSR.

The question of geography in relation to basketball would have been quite in place. Therefore let us assume that MacLendon posed it. Basketball is most popular in Latvia, Lithuania and Estonia. Despite the powerful competition of soccer and several other sports, it wouldn't exactly be stretching the truth to claim that Leningrad (the first basketball game in our country took place there at the turn of the century), Moscow, Rostov, Sverdlovsk, Kiev, Odessa, Kharkov and Tbilisi are basketball centers. Don't get me wrong—that is not to say that basketball is played only in these cities. I only enumerated, so to say, the basketball capitals. It would be difficult, if not impossible, to name the towns that are not familiar with basketball. Thus, recently I visited the small Tajik town of Khorog, famous for being on the Roof of the World, as the Pamirs are called. I was pleasantly surprised to learn that basketball was introduced there not so long ago by a young man from Khorog who became acquainted with the game during the years he attended college in Dushanbe, capital of Tajikistan. It is also interesting that Khorog is probably the only place in the USSR where soccer is not played.

Just as in your country, basketball is mainly popular here among students and army men. The students lead in the number of players; army men, in the number of games they won. Since 1955 the national title has been held either by the Moscow or Riga army team. Unfortunately, however, basketball is not yet as popular among children in the USSR as in the USA.

Where our world of basketball has an advantage over yours is in the women's division. Out of the 2.6 million Soviet basketball players, nearly one million are women. As far as I know, in your country the number of women players does not even reach the 10,000 mark. No wonder our country leads in women's basketball! Let me remind you that the gold medals at the last two world basketball championships were captured by the USSR national women's team.

Talking about medals, John MacLendon would most likely be interested in the reaction of Soviet basketball fans to the USSR national team's taking only second place in the Tokyo Olympics. By the way, in the spring of 1964 I asked MacLendon to name the future Olympic championship team. He said he thought the chances of the USA and USSR were about even. Somewhat later, however, I learned from the Paris *L'Equippe* that in an interview with a correspondent of that paper MacLendon had yielded the gold medals to the USSR national team.

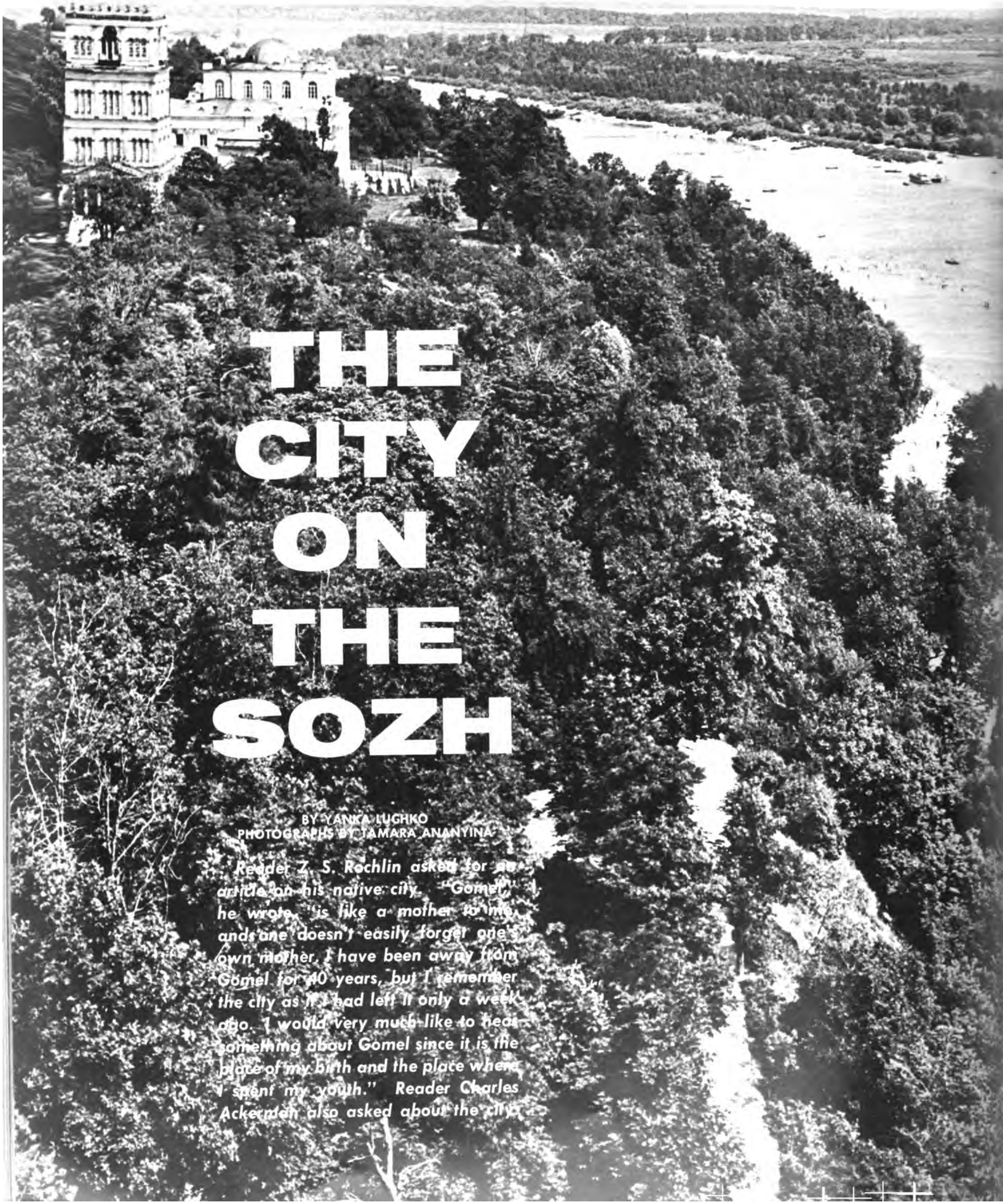
For the American players the Tokyo Olympics were the sixth in which they had participated, for the Soviets it was the fourth. My compatriots brought home silver medals from all four. But whereas the fans accepted second place in Helsinki, Melbourne and Rome as a matter of fact, the Tokyo silver medal did not arouse any particular enthusiasm. Soviet basketball fans, always impatient, got sick and tired of being in second place. They are convinced that the time has come for the team to start winning gold medals. However, they are not bothered by the fact that basketball is much more popular in your country than in ours, or the fact that the U.S. basketball army, numbering 18 million people, has a great advantage over our basketball army. Give them gold medals—that's all they're interested in! By the way, this probably does not surprise you: Fans are the same the world over; they are inclined to take the wish for reality, always and everywhere.

And now, in April, the USSR national team is in the USA for its third visit. They will be playing eight games in seven cities, including Baltimore, Boston, St. Louis, Los Angeles and San Francisco. All of these encounters will be with outstanding amateur and professional teams. The line-up includes at least four players MacLendon knows, two of whom have played here before: forward Gennadi Volnov, very popular with American fans, center Alexander Petrov, and guards Armenak Alachachyan and Alexander Travin (playing in the USA for the first time). MacLendon had especially warm praise for Alachachyan, felt any American professional club would welcome such a player.

* * *

It's possible that I haven't guessed all the questions that MacLendon wished to ask and hence have repaid him only partially. But I solemnly vow to settle our accounts entirely at our very next encounter. At the same time I shall be able to ask several other questions I didn't get around to the last time.





THE CITY ON THE SOZH

BY YANKA LUGHKO
PHOTOGRAPHS BY TAMARA ANANYINA

Reader Z. S. Rochlin asked for an article on his native city. "Gomel," he wrote, "is like a mother to me, and one doesn't easily forget one's own mother. I have been away from Gomel for 40 years, but I remember the city as if I had left it only a week ago. I would very much like to hear something about Gomel since it is the place of my birth and the place where I spent my youth." Reader Charles Ackerman also asked about the city's



TWILIGHT was falling when the hydrofoil ship was about to put out on its last trip to Gomel. We had barely managed to come aboard when it moved smoothly from the quayside. Soon the *Raketa* (*Rocket*) was sweeping ahead at a good speed, soaring over the surface of the water on its submerged wing-like plates.

The two men in the pilot's cabin were watching the instruments and listening to the rhythmic hum of the engine.

"Thanks!" we said as we drifted into the dock at Gomel. "This is a fine boat. Made at the Gorky yards?"

"No, this bird comes from Gomel," answered Marat Ardashnikov proudly. He was one of the designers of these winged river expresses.

That is how our acquaintance with Gomel began. The fact that we came to the city aboard the *Raketa*, the first hydrofoil built by the Gomel shipyards, was not fortuitous; it is the novel, the new, that shapes the life of Gomel today, that gives the city its character and tempo.

Something of the City's History

This city has stood on the banks of the Sozh River, a tributary of the Dnieper, for more than 800 years. Everything has happened to Gomel. In the course of its long history it has been besieged, stormed, surrendered and given away as a gift. It nearly burned to the ground, rose from its ashes, and burned again. It has been smitten with the plague.

Through all these vicissitudes Gomel went on working, trading, praying, eating, drinking, enjoying itself and sleeping. Located at the crossroads and waterways, it nevertheless remained a half-forgotten provincial town for a long time. Only 50 years ago all of its industry was comprised of little more than a few small enterprises processing local raw materials—a rope yard, a sawmill, a brewery, and the like. It had practically no streets worthy of the designation. Water mains, electric lighting and only too often just plain sidewalks were conspicuously absent.

By 1941, however, Gomel had grown into a fairly important industrial and cultural regional center of Byelorussia with many large factories, including the huge Gomel Farm Machinery Plant. From a big village it had become a handsome, modern city with a population of 150,000.

"Gomel Is No More!"

These words were in a letter found on the body of a German officer who was killed on the outskirts of the city. Before the Germans left Gomel, they had razed the city. All its factories, the railway center, the power station and nearly all of its dwellings were destroyed. Not a single school or hospital was left standing. By some miracle a few of the older structures remained intact, including the famous Paskevich Palace.

During the dark days of the occupation Gomel suffered a mass annihilation of its civilian population. Himmler's butchers slaughtered 50,000 old men, women and children on the grounds of a shoe factory turned into a concentration camp.

Resurrection

Though history says Gomel dates back to the twelfth century, in fact it is hardly more than 20 years old, since everything had to be rebuilt after the war. Not only has Gomel been restored, it is virtually a new city.

The growth of its industry as compared with the prewar level may be gauged from the following: Its factories produced three times as much last year as they did in 1940.

Some of the city's enterprises are known throughout the world. Harvesters made at the Gomel Farm Machinery Plant, for instance, are exported to many countries. The Kirov Plant's automatic metal-working lathes are used in more than 40 countries, including West Germany, Italy and Austria.

Prominent in Gomel's industrial life are the Lomonosov Glass Works, one of the largest in the Soviet Union (with an annual output of 150.7 million square feet of window glass and 48,500 cubic yards of foam rubber); the ball-bearing plant; the knit goods factory (producing 50 million items a year); the shipyards; the Trud shoe trust (2.5 million pairs a year); the cable, woodworking and prefabricated panel factories; and many others. Moreover, this vigorous development of industry keeps accelerating.

Panoramic view of the public park, the old palace and the well-frequented sandy beaches. Gomel is the second largest city in Byelorussia. It is a major railroad center, enjoys a brisk river traffic, and has a busy airport.



Automated superphosphate fertilizer plant under construction. Its first section is expected to be in operation very soon. Gomel also has a huge farm machinery plant.



The Gomel Drama Theater has a varied repertory of modern and classic, Soviet and foreign plays, including the Ben Hecht-Charles MacArthur comedy The Front Page.



Some 50,000 of the city's young people are active in one sport or another. On the far left is student Leonid Doshchuk, four-time winner of the world skydiving crown.



The city has two institutes, both of which do research besides training specialists. Vladimir Bely is one of Gomel's 300 scientists. He is working on polymer problems.



Gomel residents believe there is a path, invisible but irresistibly alluring, that runs from the Sozh riverside straight to the city's recently built Wedding Palace.

In Festivalny, a new residential district, apartment houses have mushroomed in the woods. Gomel has 1,850 acres of forest and gardens inside the new city limits.





Fifty years ago the Imperial Geographic Society Notes described Gomel's impassable, muddy streets. This is Lenin Prospect, typical of the thoroughfares in this modern city.

The Old and the New

Such hovels of the old city as Kagalny Rov, Caucasus, America and others, where the poor people lived in czarist times, linger only as a faint memory in the minds of Gomel's old-timers. They are altogether unknown to the younger inhabitants.

Present-day Gomel is a modern city with spacious squares and parks, clean, shady streets, wide avenues, a handsome waterfront and scores of restaurants and shops. The heart of the city is Lenin (formerly Cathedral) Square, adjacent to an old park along the Sozh River and the palace of Prince Paskevich, which now houses the Regional Museum, the Young Pioneer Club and the library.

Gomel has three principal avenues radiating from Lenin Square: Lenin Prospect (formerly Zamkovaya Street), Proletarskaya Street (formerly Feldmarshalskaya) and Sovietskaya Street (formerly Rumyantsevskaya). The city is marked off clearly into three districts: Novobelitsky (east), Central District (from the river to the railway), and Zheleznodorozhny, or the Railway District (west).

"We put up a lot of apartment houses," Alexander Kosyakov, the city's chief architect, explained, "No sooner did we finish the new Festivalny District, for 20,000 people, than we started on an even larger development, for 72,000 people. This one is outside the old city limits, and the lakes, groves and gardens will be preserved as a park area.

"The population of Gomel is growing faster than we expected," he went on. "We had 80,000 people in 1945; now we have 240,000. Which means that we must think in larger terms. We have already set up a prefabricated house plant and this will ease things up considerably."

Not Work Alone

The worker does not look for a job here, the job looks for the worker. "Help Wanted" ads are prominent in the Gomel newspapers and signs are posted all over. But life is not only work. People study, play, use their leisure time in a hundred different ways.

What does Gomel have to offer in this respect, especially to its young people?

This is a city of students. It has the Railway Engineering Institute, the Teachers Institute and nine technical schools. Besides training specialists, the institutes do research. The Gomel laboratory of the Byelorussian Academy of Sciences has been working on polymerization as applied to machine building. There are 47 general secondary schools in the city, 12 of them for young workers. The public library has 2.3 million volumes.

Gomel's professional theater has a distinguished company. When it is touring other cities during the summer, the theater is used for performances by drama companies, vaudeville acts and circus performers from other republics and from abroad.

The city's television station offers a varied program, relaying broadcasts from Moscow, Minsk, other Soviet cities and foreign countries. For all television's growing popularity, the city's movie houses have no box office problems. The City Soviet even built a large new movie theater last spring. Gomel's many amateur choruses and dance and drama groups perform in the palaces of culture, clubs and parks.

The wide river, the thick woods and parks draw the citizens out-of-doors. The Sozh is crowded with motorboats, rowboats, kayaks and speeding hydrofoils. There is good fishing, and the woods are full of berries, mushrooms and nuts for the picking. There is game too for the hunter: hare, fox, wolf and, believe it or not, mink. Once imported from the United States, this animal has acclimatized and multiplied. Mink hunting was legalized in 1960.

Tomorrow

Yevgeni Sankovsky, chairman of the Planning Committee, estimated that the city would need 27,000 new workers by 1967 despite automation. Why? Because of new construction and the expansion of existing enterprises. Also because there will be more schools and health facilities, more shops and restaurants, more transportation—more of everything.

The output of the Gomel Farm Machinery Plant, the city's chief enterprise, will double and its working staff increase by several thousand. A superphosphate plant and a foundry are under construction. A new clothing and knit goods factory will need 6,000 workers. Even a cursory estimate suggests that specialists and workers in some 200 or more professions and trades will be required by the new enterprises.

We talked about this problem of finding trained heads and hands with Sankovsky at his headquarters where the future city is being planned.

"The plan cannot tell us exactly how many workers we'll need," he said. "We'll have to watch the trend. But if past experience is any guide, we'll be short of workers by 1970."

* * *

Gomel is very pleasant in the spring. In the country's central region, its climate is temperate. The seasonal changes are gradual here—no unpleasant surprises. Gomel enjoys the warmth of the South and the freshness of the North. Warm days and blue skies are the rule. It is doubtful if strawberries as large, fragrant and juicy as those that grow around Gomel can be found anywhere else.



Три медведя

THE THREE BEARS

By Leo Tolstoy

Drawings by Leonid Sergeyev





CHILDREN'S CORNER

THERE WAS ONCE a little girl who went for a walk in the forest and got lost. She tried to find her way home, but could not. At last she came to a little house. The door was open and she peeped in. Nobody was there, so she went in.

Now this house belonged to three bears. The Father Bear was a great big, shaggy bear. The Mother Bear was a middle-sized bear. And the Baby Bear was a tiny little bear, and his name was MISHA.

All the bears had gone for a walk in the forest while their soup was left to cool.

There were only two rooms in the house, a dining room and a bedroom. The little girl went into the dining room. Three bowls of soup stood on the table. The first was a great big bowl; that was for the Father Bear. The second was a middle-sized bowl; that was for the Mother Bear. The third was a tiny bowl; and that was for Misha, the Baby Bear. Next to each bowl was a spoon: a great big spoon, a middle-sized spoon, and a tiny little spoon.

The little girl picked up the great big spoon and tasted the soup in the great big bowl. Then she picked up the middle-sized spoon and tasted the soup in the middle-sized bowl. Then she picked up the tiny little spoon and tasted the soup in the tiny little blue bowl. She liked that soup best of all.

The little girl wanted to sit down. She looked around and saw three chairs: a great big chair, a middle-sized chair, and a tiny little chair with a little blue cushion on the back of it. She tried to climb onto the great big chair, but she could not. Then she sat in the middle-sized chair but did not feel comfortable. So she tried the tiny little chair, and it was so comfortable that she clapped her hands. She picked up the tiny little blue bowl and began to eat. When she had eaten up all the soup, she rocked back and forth in the chair till it broke, and she fell down.

She got up, picked up the pieces of the tiny little chair, and went into the next room. There stood three beds: a great big bed, a middle-sized bed, and a tiny little bed. First she lay down on the great big bed, but it was too wide for her. Then she lay down on the middle-sized bed, but it was too high. Then she lay down on the tiny little bed, and it was just right. So she fell fast asleep.

Soon the bears came home for their dinner. They were very hungry. The great big Father Bear picked up his bowl, looked into it, and said in his great big voice:

"WHO'S BEEN TASTING MY SOUP?"

And the middle-sized Mother Bear looked into her bowl and said in her middle-sized voice:

"WHO'S BEEN TASTING MY SOUP?"

And Misha, the tiny little Bear, looked into his empty bowl and squeaked in his tiny little voice:

"WHO'S BEEN TASTING MY SOUP AND GOBBLED IT ALL UP?"

Then the great big Father Bear looked at his chair and said in his great big voice:

"WHO'S BEEN SITTING IN MY CHAIR AND MOVED IT OUT OF PLACE?"

And the middle-sized Mother Bear looked at her chair and said in her middle-sized voice:

"WHO'S BEEN SITTING IN MY CHAIR AND MOVED IT OUT OF PLACE?"

And the tiny little Baby Bear looked at his broken chair and squeaked in his tiny little voice:

"WHO'S BEEN SITTING IN MY CHAIR AND BROKEN IT ALL TO PIECES?"

The great big bear said in his great big voice:

"WHO'S BEEN LYING ON MY BED AND CRUMPLED IT UP?"

The middle-sized bear said in her middle-sized voice:

"WHO'S BEEN LYING ON MY BED AND CRUMPLED IT UP?"

And the tiny little bear stood on a stool to get into his bed and squeaked in his tiny little voice:

"WHO'S BEEN LYING ON MY BED?"

And suddenly he saw the little girl asleep in it and squeaked out again in his tiny little voice:

"There she is! Hold her! Hold her! There she is! Hold her! Oh, oh!"

He was just going to bite her when the little girl opened her eyes, saw the three bears, and ran to the window. The window was open, so she jumped out and ran away. And the three bears couldn't catch her.

The End

LETTERS TO THE EDITOR

PUBLIC HEALTH

Dear Sir:

I have been reading your informative publication for a little over a year now, but your February issue was by far the best you've ever published.

What fascinated me most was the article on "Public Health in the USSR." As you stated, Soviet and American health services are radically different, and your direct aim towards prevention deserves much praise.

Secondly, "Getting to Know Soviet Children" answered for me a question that has lingered constantly in my mind for long as I can remember, and that was the first sentence of the article "Are Soviet Children different from our own?"

I hope all of your forthcoming issues can bring me half of the enjoyable reading hours that your February issue did. Continued success with your publication.

Frank Kramerman
Springfield, New Jersey

COEXISTENCE

Dear Sir:

We have enjoyed the USSR Illustrated magazine for several years and surely would not want it to expire. I think it is a wonderful idea that the exchange of magazines came about. It is an advantage for everyone in the world and we should have more exchanges of everything that is peaceful to exchange before it is too late. For through the media of fast communications and mode of travel it has indeed caused the world to be a small community compared to 50 years ago. So much is being spent for the engines of destruction that can now only lead to annihilation and ashes. Should the nations of the world now cooperate in science, industrial knowhow and nuclear energy for peaceful purposes to the betterment of their fellowman they could truly make a poradise of this world in less than 50 years instead of ashes.

Our family has found the USSR very enlightening. I personally feel as though the Soviet peaple are our friends as much as our neighbors. This is due to information gained from the USSR magazine which in turn has caused us to seek other knowledge of our world.

I can truthfully say that I am ashamed that my country is now attempting the proposition of placing nuclear arms in the hands of the West Germans after so many of my people and other people of the world have suffered so much and died from the hands of the Germans. I am sure millions of my people do not understand this properly.

Sincerely,
Ervin Knowlton
Eau Claire, Wisconsin

A PEOPLE-TO-PEOPLE EXCHANGE

Dear Sir:

I have preserved each copy of the magazine (18 in all) and display them prominently in the living room, along with many American magazines. I have thoroughly enjoyed reading and re-reading the magazines which have given me some insight into the Russian way of life of which I was woefully ignorant. It is interesting (and sometimes sad) to see the reaction of guests to this display. Some are curious enough to leaf through and even read an article. Others pretend they don't see them (as if it was somehow subversive to read such a publication) while others openly remark, "Why do you keep Communist propaganda in your house?" Very few show a definite interest in the magazine. They seem embarrassed to do so. At times my husband says he wished I would not openly display the magozines and he seldom reads them. But I am odamant. Carefully I explain that this is a people-to-people exchange and thot we must know something of the USSR if we are to "co-exist." That such a magazine as "Amerika" is also available to Russians makes little impression. Most people state that they doubt if many Russians read it. So I would like to know what the comparative subscriptions are —that is, how many Russians read "Amerika" as compared with the "Soviet Life" here. We are constantly mouthing our sentiments concerning our freedoms of speech—the rights we hold dear to say and think as we please and this includes the right to read what we choose. So why are so many Americans narrow-minded in reading or discussing Communism? It makes me very sad. To live in the accelerated world of today it behooves each of us to know as much about the rest of us as we possibly can. Wendell Willkie wrote a book titled "One World" many years ago and today it is even more "One World." It is my hope to instill this viewpoint in my three children and to teach them that hating people because they are different is bad. Instead, I try to show them our similarities and your magazine is most helpful. I was delighted to read to them from the Children's Corner in your latest issue, showing that Russian children celebrate Christmas, too, though perhaps in a different manner.

Truthfully, I have found many articles in your magazine which show me how much alike are our two countries—our moral principles and ideals are closely allied, though yours are not religiously oriented . . .

Sincerely,
Mrs. Virginia L. Woodrow
Hialeah, Florida

QUERIES FROM READERS

SOVIET LEGAL SYSTEM

We have had many readers' queries on the courts in the USSR, legal trends, juvenile delinquency, etc. This is a reprint, slightly abridged, from *Nedelya*, *Izvestia's* weekly supplement. The answers are by leading Soviet jurists: Alexander Gorkin, Chairman of the USSR Supreme Court; Vladimir Terebilov, Deputy Chairman of the USSR Supreme Court; Grigori Anashkin, chairman of its legal collegium on criminal cases; and Valentin Panyugin, chairman of its legal collegium on civil cases.

ALEXANDER GORKIN

QUESTION:* What is the function of the *Supreme Court of the USSR?

ANSWER: It is the court of highest instance. It has 31 members: 16 are elected by the Supreme Soviet, the country's parliament; the other 15 are the chairmen of the Supreme Courts of the union republics.

The function of the Supreme Court is to oversee all the lower courts, to generalize legal practice, and to ensure uniform administration of the laws of the USSR and the union republics. It guards against inconsistencies in administering the law and sees that crimes are properly classified, that judges impose the penalties prescribed by law and that the rules of court procedure are not violated. In short, the court of highest judicial instance in the USSR concentrates its attention on the strict, speedy and, most important of all, equitable administration of the law.

Its present goal is to improve the operation of the courts and other legal agencies so that they will be more effective guardians of socialist law and the rights of the citizen.

To improve their work, the courts must rely more on citizen help, probe deeper into the causes of violation of the law and take the indicated steps to wipe out crime.

The Supreme Court has international obligations arising from the Treaty on Legal Assistance to Socialist Countries, and it also has to adjudicate hundreds of cases (mostly civil) originating annually from legal proceedings in various other countries.

One such recent case concerns a large legacy left to an elderly Soviet citizen, Stepanova, in the United States. A Moscow court questioned Stepanova and her witness, also a very old woman, in the presence of American Embassy representatives. The evidence was registered, and Stepanova is now awaiting her legacy.

QUESTION: What sort of legal problems does the USSR Supreme Court handle?

ANSWER: Let us take the most recent plenum as an example. It discussed legal practice in connection with cases of hooliganism. Why was that problem taken up? In the first place, cases of hooliganism are decreasing, but much too slowly. Besides, it is especially in dealing with these cases that courts make mistakes of a purely judicial character.

Another question discussed was what to do with the criminals who were sentenced to long terms at a time when old laws were in effect. The punishment for the crimes they committed is less under the present law. The plenum, as was proper, decided that the courts could reduce these terms.

The plenum also heard 76 appeals in both criminal and civil cases. Some sentences were found in error and rescinded altogether; in other cases the crime charged and, with it, the penalty were changed.

VLADIMIR TEREBILOV

QUESTION: What cases, concretely, does the Supreme Court hear?

ANSWER: We hear very few cases as a court of first instance. For the most part the Supreme Court considers cases after they have been tried and appealed all the way up the legal ladder.

We should point out that the verdicts of the Supreme Courts of the republics are final and are not subject to appeal. Only the Chairman of the USSR Supreme Court and the Procurator General have the right to appeal these verdicts. The collegium examined about 200 such cases last year.

Often the Supreme Court will hear a case that is simple in fact but which involves an important point of law. I mean simple insofar as the evidence, available facts and other such pertinent details are concerned. Thus, we had the case of a certain K. accused of murdering his wife and daughter. The husband went out for a walk with his wife and children and came home with only his son. Everyone claimed that he had killed his wife and daughter. And he even had a motive; he was known to be paying attention to another woman. When the father and the son came back from that walk, a barber, a family acquaintance, asked the four-year-old boy, "Did your father push your mother and sister into the water?" The barber did not hear the boy's answer, but a neighbor insisted that it was in the affirmative.

K. was sentenced to death. But from the legal point of view, all the evidence was based on emotion, hearsay and supposition. K. claimed that the girl was playing near the water and fell in. The mother plunged in after her, and since neither of them could swim, they both drowned before his very eyes. He did not help them because he had panicked. He could not swim himself, and because of his fright, he did not call for help immediately. Of course you can interpret his behavior in any way you wish, but the legal fact was that the investigation did not produce a single piece of evidence refuting his story. The initial sentence was therefore rescinded.

Another reason we took that case was to emphasize once again that a sentence must be based on strictly verified facts.

As you can see, the Supreme Court does not accept cases because they have a large relevance, necessarily, but because a decision one way or the other will serve to guide the lower courts.

QUESTION: What is the public's attitude to the juvenile delinquency problem?

ANSWER: *Komsomolskaya Pravda*, among other newspapers, has dealt with this problem twice in the past few months. The authors of *Komsomolskaya Pravda* articles thought that an unduly gentle attitude toward juvenile delinquents and mild punishments were responsible for some of the increase in juvenile crimes in certain cities and regions. I do not think that harsher penalties are the answer. Getting to the root of the trouble is much more important. We still have many young people who do not study or work. Executives, public organizations, the Young Communist League and the trade unions do not pay sufficient attention to young people. This is at the root of the trouble. If we do not help young people (particularly boys) who do not study or work to find their place in life, to acquire a trade or profession, how can we hope to fight juvenile delinquency?

(Grigori Anashkin): From 80 to 85 per cent of our juvenile delinquents are two or three school grades behind their age. There are many juvenile delinquents among vocational school students.

GRIGORI ANASHKIN

QUESTION: What crimes are particularly widespread now?

ANSWER: Until now, we have not given legal statistics the attention they merit. Some people even used to say ironically: "Statistics is the most accurate science based on the most 'inaccurate' data; the less use we make of it the better. And yet statistics is an exceptionally important tool for legal practice.

In the past statistics paid very little attention to the causes of crime. We are now introducing a new statistical method to pinpoint them. It is still in the experimental stage, but it holds a great deal of promise.

What do our statistics show? That the number of cases tried has been dropping in the past few years. The number of persons convicted in 1963 was 36 per cent less than in 1958 and only a half of the 1952 figure. The number of persons per 100,000 of the population convicted in 1963 was only one-half the prewar figure and less than one-third the 1928 figure.

One striking statistic is the radical decrease in the number of people tried for stealing personal property. It has shrunk to a tenth of what it was 30 years ago. But for hooliganism, the picture is not nearly so bright. We still have much too much of that. Drinking is one of the reasons, the most important, perhaps. Eighty per cent of all acts of hooliganism are perpetrated by people while intoxicated. We also still have theft of public property.

Statistics show that the ratio of serious and socially dangerous crimes like murder and rape is small. They, too, generally originate from drinking. Out of a hundred manslaughters, there are only one or two premeditated murders for mercenary motives. But innocent people are often killed in scuffles started by drunkards.

A few words about juvenile delinquency. The press in Western countries refers to it as social problem No. 1. In 1961 in Britain, for example, 35 per cent of all crimes sentenced were committed by juveniles under the age of 17.

In the Soviet Union the number of crimes committed by juveniles in the past few years has run from two to four per cent of the total. And yet juvenile delinquency is a problem of great concern to us.

VALENTIN PANYUGIN

QUESTION: Does the Supreme Court hear only criminal cases?

ANSWER: Civil cases constitute about 85 per cent of all those that come to trial. The majority of claims, almost nine out of ten, are satisfied by the courts. This shows that individual citizens and organizations find the protection they seek in the courts when their rights are violated.

It is interesting to note that 71 per cent of our civil cases are disputes between citizens. About 25 per cent are disputes between a



Alexander Gorkin



Vladimir Terebilov



Grigori Anashkin



Valentin Panyugin

citizen and an organization (disputes between state agencies are decided by arbitration). Three per cent of the cases are collective-farm disputes or claims on state agencies.

What are the disputes about? It is hard to describe them all, of course. But here are some helpful figures. Labor conflicts account for 5.6 per cent of the cases; housing disputes, 8 per cent; property damages, 9 per cent; divorce cases, 13.7 per cent. Unfortunately, we have an especially large number of nonsupport cases, the wife suing her divorced husband for nonsupport of their child. These account for one-fifth of all civil cases. And here, perhaps, is one of the reasons for juvenile delinquency. Anything can happen in a broken family where the child may not be looked after properly and may get into bad company. Fifty per cent of the juvenile delinquents come from fatherless families.

The number of civil cases has dropped by almost a half since 1958.

CAPITAL PUNISHMENT

A particularly large number of readers inquired about capital punishment. We asked Deputy Chairman Terebilov to answer their questions.

QUESTION: Is the death sentence imposed in the USSR?

ANSWER: Article 22 of the Fundamentals of Criminal Legislation for the USSR and the Union Republics says that until such time as capital punishment is abolished, the death sentence by shooting may be imposed in exceptional cases (premeditated murder under aggravating circumstances and other such crimes). The death sentence may not be passed on persons who have not reached the age of 18 at the time the crime is committed or on women who are pregnant at the time the crime is committed or at the time sentence is passed.

Each death sentence is reviewed by the Supreme Court of the union republic concerned. The convicted person, his lawyer and relatives are entitled to appeal to the Presidium of the Supreme Soviet of the USSR for clemency.

QUESTION: Have you any serious objections to the abolition of the death sentence?

ANSWER: I have no objection in principle.

QUESTION: What is the public feeling about capital punishment in the USSR and is it likely to be abolished soon? Are there people in the USSR who advocate that capital punishment be abolished?

ANSWER: One of the aims of our society is to wipe out crime completely. It is therefore natural that the necessity for capital punishment will sooner or later cease to exist. At present it is not possible to say exactly when this will be.

Almost immediately after World War II capital punishment was abolished in our country. Unfortunately, it became clear rather soon that the decision was premature. The grave legacy left us by the fascist invasion included, among other things, a serious rise in crime.

This created a feeling of great anxiety among the population, and the Supreme Court of the USSR, the Procurator's Office, the CPSU Central Committee and the government started receiving thousands of letters from ordinary citizens and public organizations requesting that the death sentence be restored as the punishment for particularly serious crimes. The question was discussed in the press, which also published letters from the public. As a result, capital punishment was reintroduced.

It must be pointed out that a particularly large number of such requests were made with regard to recidivists. The system of work rehabilitation used in the country's penal colonies provides for preterm release for good behavior and satisfactory progress in work. As a result, the overwhelming majority of ex-convicts return to normal life and to equal participation in the construction of the new society.

But some take up illegal activities again, committing grave crimes against life and the people's property. The public has been particularly persistent in its demand that the death sentence be applied to such incorrigible criminals.

It must be pointed out that the democratization process in the past 10 or 12 years and the general improvement of living conditions, as well as the joint efforts of the state agencies and the public aimed at averting crime, have resulted in a noticeable reduction in the country's crime rate. And the downward tendency continues. This is the basis for our confidence that capital punishment will eventually be abolished, and this would undoubtedly concur with the Soviet people's wishes.

QUESTION: In the U.S. it is held that the accused is innocent until he has been found guilty by a jury. In other words, the presumption of innocence extends even when the facts seem to bespeak the absolute guilt of the accused; he is still considered innocent until the jury has made its verdict known. What is the principle and practice in the USSR? Is Soviet justice based on the presumption that the accused is innocent until he has been proved guilty?

ANSWER: Article 7 of the Fundamentals of Criminal Court Procedure for the USSR and the Union Republics says: "In criminal cases justice is administered by the court alone. No person may be found guilty of a crime and subjected to a criminal penalty except by sentence of the court."

It must be admitted that during the period of the Stalin personality cult the presumption of innocence was practically negated. And some lawyers, A. Y. Vyshinsky, for example, even tried to justify this theoretically.

But these deviations from the legal norms, like the other abuses of law in that period, were resolutely condemned in 1956 by the Twentieth Congress of the Communist Party of the Soviet Union. Measures for the restoration and consolidation of socialist law were immediately taken. All former cases and sentences were carefully reviewed, and reparations were made to persons unjustly convicted.

The above-cited Article 7 is now one of the basic principles of socialist law and Soviet legal procedure.

Under our law the accused is regarded as innocent until he has been pronounced guilty at an open trial at which all his rights to defense have been strictly observed. Nobody may be considered a criminal until he is found guilty and is sentenced by the court.

The investigator and prosecutor, *i.e.*, the judicial officers who gather evidence prior to the trial, are obliged to submit evidence to the court only if such evidence is objective and points to the defendant's having committed a crime. But their assumption of guilt is only inference and is not binding on the court.

For eyewitnesses the question of guilt may also seem indisputable. However, both the findings of the investigating authorities and the evidence of eyewitnesses must be examined by the court from beginning to end.

Only the court has the right to pronounce a person guilty of a crime, and only after that can sentence be passed.

QUESTION: What kind of a trial do you consider more equitable, trial by jury or one without a jury?

ANSWER: Each society sets up its own institutions. We, naturally, regard our judicial system, the basic principles of which came into being in our country after the October Socialist Revolution of 1917, as most effective and conforming to the interests of the people.

In all our courts, beginning with the district people's court and ending with the USSR Supreme Court, criminal and civil cases of first instance are tried by a presiding judge and two people's assessors.

People's district judges are elected by everyone in the given district who voted in the elections to the local Soviet and the USSR Supreme Soviet. Judges are elected by secret ballot for a term of five years and are accountable to their electors.

People's assessors of the people's courts are elected by the same voters of the district in which they live or work. They are nominated at general meetings of enterprises, institutes, collective farms, state farms, etc., from among the most respected workers, those of the highest moral character. Their term of office is two years, and they take turns serving at trials for periods of ten days a year. The number of people's assessors elected throughout the country is some 500,000. To enable every citizen, irrespective of income, to serve as people's assessor, he receives his full wages or salary from his employers while discharging his duties as an assessor.

The rights of people's assessors are much more extensive than those of juries. On a par with the judge, they take part in the entire proceedings, from beginning to end: ask both sides questions; determine, together with the judge, the degree of the defendant's guilt or his innocence; and discuss and agree on the punishment. Should the judge and assessors fail to agree on the sentence, they each have an equal voice, and the majority decides.

As for the system of juries existing in many Western countries, it can hardly be regarded as perfect. Legal practice knows of a huge number of cases of a prejudiced selection of jurymen or a biased attitude on the part of the jurymen toward the defendant.

Juries, as a rule, decide only the guilt or innocence of the accused, while the sentence and all other related questions are decided by the permanent professional judges.

Of course, there is not a single judicial system that is completely flawless or guaranteed gainst mistakes. The program of the construction of communist society in the Soviet Union envisages, among other things, further improvement and democratization of our legal agencies. But the basic principles now at work will remain unchanged, of course.

I, personally, do not regard our system of people's assessors as the acme of perfection. It could stand improvement. I think, for instance, that in certain types of cases the number of assessors ought to be increased to four or even six. But this and other proposals are not decisive or urgent.

Vladimir

By Ludmila Keidan









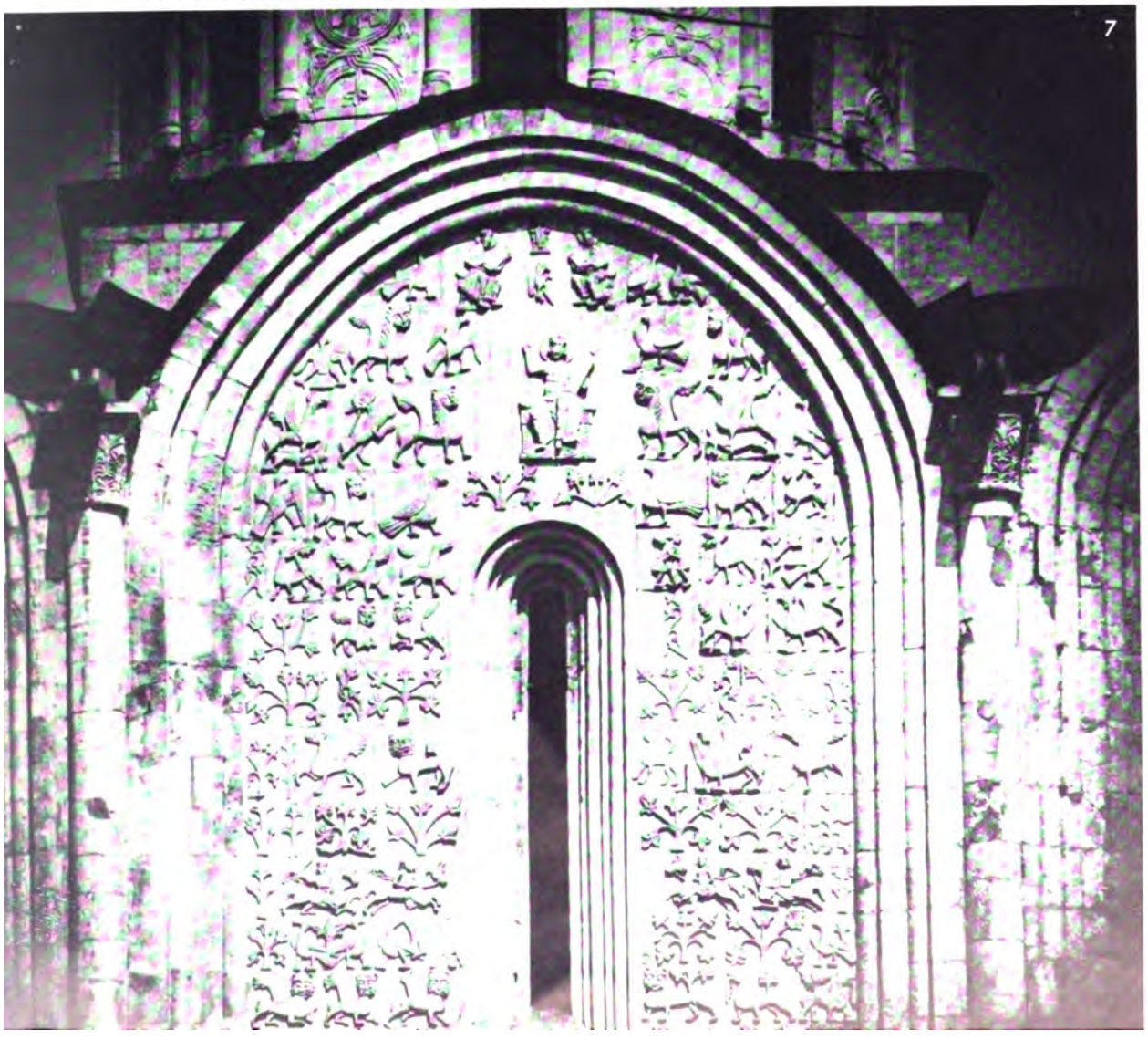
1. *Nothing remains of the Bogolyubsky Palace but the tower and the church (right). The monastery (left) was built in 1238 after the Tatar invasion.*

2. *Fragment of whitestone sculptural decoration. Dmitrievsky Cathedral.*

3. *Pokrov Church on the Nerli, a charming sample of Old Rus architecture.*

4. *The Uspensky (Princess) Monastery, built by the wife of Prince Vsevolod in 1200. The monasteries of the time did double duty as town fortresses.*

7. *Characteristic Vladimir-Suzdal carving around a cathedral window slit.*



We have now come to the fourth stopping point in our pilgrimage to the historical monuments of old Russia begun in 1964. In July we visited the Troitse-Sergievo Monastery, in August Suzdal, and in September Pereslavl-Zalessky. Our next stop will be Rostov Veliky.

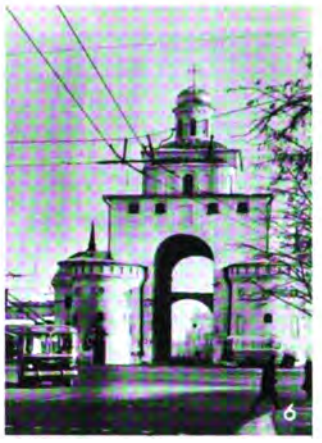
THE CITY OF VLADIMIR, founded in 1108 on the left bank of the Klyazma by Grand Prince Vladimir Monomakh of Kiev, was meant to be one more impregnable fortress for the defense of the Prince's properties in the north.

A large center of ancient Russia that later outshone even Kiev, Vladimir played a major role in the evolution of the Russian state. A number of important events of those distant days were associated with the city, which was built earlier than Moscow. Many princes whose names have come down to us in the Russian chronicles ruled there, including Alexander Yaroslavich, otherwise known as Alexander Nevsky.

The Vladimirites valiantly defended their city from the hordes of the Tatar Khan Batii (1237) and fought the famous battles of Lake Chudskoye and the Siti River against the German knights, and at Kulikovo Field against the Tatars. They rallied to the banners of Minin and Pozharsky in the years of the Polish-Lithuanian intervention (early seventeenth century) and marched under Gen-



5. *The Uspensky Cathedral, the most famous of all the Vladimir churches.*



6. *The Golden Gate was Vladimir's main entrance. From here ran the road to Moscow. Here Prince Alexander Nevsky pledged his loyalty to the city.*

eral Kutuzov to defend Russia from Napoleon's invading army in 1812.

Besides being schooled in the art of war, they were also skilled stonemasons, carpenters, jewelers, potters and painters. The city's first fortifications were built during the reign of Vladimir Monomakh.

Few tourists viewing the sights of Vladimir guess that the hillocks overgrown with gardens and vegetable plots are the remains of the old rampart.

Late in the twelfth century new fortifications were erected in Vladimir, encompassing three districts: the Pecherny (Monomakhov), Novy (west of it) and Vetchanoi (situated to the east of the town's old center). The Golden, Silver, Copper, Irina and Volga gates afforded entrances to the city from different sides.

The Golden Gate was Vladimir's symbol. Patterned after the Golden Gate of Kiev in 1164, it accented Vladimir's role as the successor to Kiev. Now surrounded by many houses, the gate has lost its once militant look, but the monumental whitestone structure, which was a combined observation point and church, still thrills the tourist of our day.

The Uspensky (Assumption) Cathedral, a veritable miracle of twelfth century architecture, was built between 1158 and 1161, during the reign of Prince Andrei Bogolyubsky. Tall, single-domed and spacious, with six pillars and choirs in its western section, the dimensions of the Uspensky Cathedral of Vladimir awed worshippers. Its façades of whitestone with two staircased towers were decorated with carvings, a golden belt and portals which, combined with the golden dome, produced an unforgettable impression.

After a fire that destroyed 32 of Vladimir's churches, the damaged cathedral was completely reconstructed (1185-1189). It acquired a five-dome roof, and its interior was more sumptuously adorned with fine fabrics, gold and precious stones.

In that tomb of the Vladimir princes the great Andrei Rublyov, jointly with Daniil Chorny, painted his world-renowned frescoes, among them *The Day of Judgment.*

Another notable architectural monument is the whitestone Dmitrievsky Cathedral. Built between 1194 and 1197, it was intended to dramatize the stature and wealth of Vladimir, which had become an important city by that time.

Well preserved in spite of later reconstruction, the cathedral is a fine example of the Vladimir-Suzdal school of architecture. Small, and yet monumental, elegant in proportion and silhouette, it carries its helmet-like dome with the narrow window slits lightly.

Between the pilasters dividing the walls are splendid carved compositions. These works by folk masters show a wealth of imagination, taste and skill. Besides animals and plants, there are figures of Alexander of Macedon floating skyward and Prince Vsevolod holding up his baby son, in whose honor the cathedral was built. Dmitrievsky has a number of interesting frescoes.

Vladimir is also famous for its monasteries, the fortresses of the old Russian towns. The most venerable are the Rozhdestvensky, built by Prince Vsevolod in 1192, and the Uspensky (Princess), built by his wife in 1200.

An interesting view opens on picturesque Vladimir from the village of Bogolyubovo, the country residence of Prince Andrei Bogolyubsky in the twelfth century, some six miles away. His summer palace must have been a remarkable architectural ensemble. Unfortunately, hardly any of it remains, and only a faint idea of its former beauty is provided by archeological excavations. Near the Bogolyubsky castle stood the whitestone Rozhdestvensky Cathedral, whose towers gave access to the prince's chambers.

It was there that the prince was brutally murdered by the local boyars in the summer of 1174. His younger brothers subjected the murderers to refined torture and then drowned them in Lake Plavuchi. This retribution must have discouraged all other attempts at a *coup d'état* by the boyars fighting against autocracy. None of Prince Andrei's brothers, however, risked living in Bogolyubovo, and it quickly deteriorated.

For 800 years now the Church of Pokrov has been standing near the Bogolyubsky Castle on the bank of the quiet Nerli. Rising on a man-made hillock in the meadows, this is one of the most charming monuments of ancient Russian architecture. The green of the lush grass and old trees, the gray-blue haze of the open spaces and the silvery ripple of the river surface combine to arouse serene thoughts in the viewer's mind. It is in this happy mood that he leaves Vladimir, the city that incarnates the Russian soul.

ABRAHAM LINCOLN AND RUSSIAN PUBLIC OPINION

SCANNING THE PAGES OF OLD RUSSIAN NEWSPAPERS

A CENTURY ago Abraham Lincoln was assassinated. His death was a tragedy, not only for the United States. People the world over felt the loss of the Great Emancipator, for Lincoln's fight to abolish slavery in America was an example and inspiration to all enslaved peoples.



The crew of the Russian frigate Osliabya *in Alexandria, Virginia. Russia was the only major power that favored the North in the Civil War.*

In Russia too Abraham Lincoln's statements and policy were followed with intense interest. His Emancipation Proclamation evoked a particularly warm response. The issue that agitated all progressives in Russia throughout the first half of the nineteenth century was serfdom. Lincoln's Proclamation found its way into the Russian press two years after the czarist government had been forced to issue a manifesto emancipating the serfs. The enormous interest of Russians in any move to end slavery can therefore be readily appreciated. It was to be expected that from the day the slaveholders' guns fired on Fort Sumter, which marked the beginning of the Civil War, all radically-minded circles in Russia would take their stand with the North.

Russia's support was of no small significance to the Union. It was, in fact, the only great power to sympathize with the North. As a token of solidarity, Russia sent naval squadrons to New York and San Francisco. This helped strengthen Lincoln's position abroad. Apprised of their arrival, Lincoln's Secretary of the Navy Gideon Welles made this eloquent entry in his diary: "God bless the Russians!"

Needless to say, the motives of the czarist government and those of Russian progressive circles in supporting the North were hardly the same. The government was interested in a unified and strong United States to counterbalance Britain and France, Russia's principal rivals at the time.

As for the freedom-loving section of Russian society, it unreservedly acclaimed the heroic fight of America's best sons to liberate the slaves. Nikolai Chernyshevsky, the great Russian revolutionary democrat, expressed his faith in the victory of the North from the very beginning of the war and saw Lincoln as the leader of the American people in the fierce struggle to end slavery. Chernyshevsky wrote: "The day victory came to the party that nominated Lincoln was a great day, the beginning of a new era in the history of the United States, a day that marked the turning point in the political development of the great North American nation."

In Russia the victory of the North was equated with the abolition of slavery. The magazine *Russkoye Slovo* wrote that "slavery, the real cause of the conflict, is forced more and more to retreat. Wherever this despicable institution disappears, the war itself stops, just as a fire dies out for lack of combustible material. . . . The slaveholders hold a whip in one hand and a gun in the other. Take their instrument of torture away, and they will themselves throw away the instruments of war."

Only a very few publications, those that reflected the interests of reactionary Russian landowners, opposed Lincoln's Proclamation. They were bitterly opposed to a revolutionary solution of the slavery issue.

The overwhelming majority of Russian newspapers and magazines hailed the Emancipation Proclamation. Even the liberal *Sankt-Petersburgskiye Vedomosti* wrote on January 5, 1863, that the Proclamation "will have a salutary effect on the future policies of the Federal Government, deter those who may want it to revert to the old path of half-measure and compromise." The paper saw in the Proclamation an important weapon against race prejudice. "It will lead to closer relations between blacks and whites . . . shake the prejudice against Negroes." The Proclamation said the paper was the biggest victory the progressives had yet won in their fight against slavery. "There can be no two opinions as to the consequences of the Proclamation. It is a mortal blow to slavery."

Russkoye Slovo greeted the Proclamation as an event of the greatest moment. "At last a great day has come to America, and the impatiently awaited edict on the emancipation of the Negroes has been issued in Washington. . . . Lincoln may confidently rely on the sympathy of all reasonable people and feel sure that posterity will deeply revere his memory."

The Russian press found fault with the Proclamation too. The magazine *Sovremennik*, for instance, wrote that "it betrays some lack of determination, some excessive caution. Limitations here and there and exceptions in favor of certain states and localities . . . there should have been no such things in so important an act."

Progressives in Russia believed that the Proclamation would mean an end to slavery and a crushing defeat for the slaveholders. *Sankt-Petersburgskiye Vedomosti* observed that while it applied to the rebel states alone, Lincoln's Proclamation had also shaken slavery in the loyal states, so that slavery could hardly recover from the blows it had received.

Nikolai Shelgunov, an associate of Chernyshevsky, had this to say in *Russkoye Slovo*: "The present American war, the second great war of independence and liberty for millions of people . . . will end, like the first, in the triumph of those fighting for human rights over the savage slaveholders."

Commenting on the President's assassination, Russian revolutionary democrats underscored the determination of Americans to bring the emancipation of the Negroes to a successful conclusion. "The American people," wrote *Sovremennik*, "now that they have come to realize the need for completely uprooting slavery, will not abandon their decision because one of the men who framed this great idea is dead."

It is noteworthy that a century ago attention was drawn in Russia to a factor which is assuming ever-increasing contemporary significance. Thus *Sovremennik* pointed out in 1864 that "the North cannot help but free the slaves because on that depends its own freedom." The following year the magazine observed that "their own (the Northerners—*Ed.*) well-being demands that slavery be ended once and for all." *Russkoye Slovo* was even more emphatic. It called for "granting them (the Negroes—*Ed.*) equal political rights with the white population, *i.e.*, the right of full participation in the internal administration of the country and complete independence from the dominant race. Unless this is done . . . the economic exploitation of the free Negroes will be no more bearable to them than their personal slavery—without the land soaked with their sweat and blood, deprived of civil rights, they will remain paupers."

The struggle for Negro emancipation was crucially important for the history of the United States. Vladimir Lenin, in his letter to the American workers in 1918, wrote that the Civil War of 1861-1865 was in the American revolutionary tradition. He characterized it as of "the greatest, epoch-making, progressive and revolutionary importance."

Its most far-reaching result was the abolition of Negro slavery. But, as history shows, the problem of full equality for national minorities cannot be solved by legislative act alone, even one so great and so revolutionary as the Emancipation Proclamation.

HORROR STORY





By Mikhail Andrasha

THE EDITOR of the popular magazine *Your Health* asked me to write a story for smokers.

"Make it a real hair-raiser," he said, "something that'll get tobacco out of their minds once and for all."

I started boning up on the history of tobacco. And who do you think started the whole thing? Christopher Columbus again! His sailors were the first to begin smoking, and Europeans picked up the habit from them. There was a time when it was considered a mortal sin. Pope Urban VII forbade smoking on pain of excommunication.

I soon had the story ready.

Two young Italians smoke. They carry their tobacco pouches and pipes in secret pockets. They are hunted down by secret agents of the Church, and Pope Urban VII excommunicates them.

It was convincing all right, but then I reread the story and it seemed to me that excommunication might not, after all, be much of a deterrent for the contemporary smoker.

I decided to shift the action from Italy to sixteenth century England, where the penalty for smoking was the headsman's ax. After a series of hair-raising adventures(?) my heroes are hunted down by the king's sleuths, and it's off with the beggars' heads. That seemed to be a reasonable enough way to stop smoking. At the end of the story our friends' heads, pipes in mouths, are exposed to public view in a London square.

Rereading this version, I was not so sure that even decapitation would intimidate today's hardened smoker. Hadn't I better lay the action in Turkey, where they impaled tobacco addicts? But then it was questionable whether smokers here would identify with their opposite numbers who were citizens of a foreign power, even in the throes of so unpleasant a death.

It was a legitimate objection, and I thought I'd cast about for some genuinely Russian data.

I found Russian history quite satisfactory. As far back as Czar Mikhail Romanov the smoker risked death plus confiscation of property. The Codex of Czar Alexei Mikhailovich decreed that "whosoever smoked and kept tobacco" would be tortured until he named his procurer.

Well, now my story ran like this. A Russian merchant is cruelly tormented with red-hot irons. They want to know who sold him tobacco. He can't stand the torture and gives his accomplice away. The latter is seized and, in accordance with the Czar's decree, his nose is slit and then cut off completely.

I reread the story.

The picture of the smoker's ordeal was sufficiently vivid. But would a single execution satisfy the editor? To make quite sure, I wrote a new version, incorporating every historical cruelty I could find.

Now the hero of the story lives in Italy. He smokes a pipe and is caught. Excommunication threatens him, but he manages to escape to England. Here, poor fellow, he all but loses his head on the scaffold, but he is saved when the executioner cuts off somebody else's by mistake. Then he escapes to Russia by stowing away in the hold of a ship. He lives there unmolested for a while. Then he is betrayed by a tobacco dealer. Our hero escapes with his life but minus a nose. He has no passport for travel abroad and has to steal across a mountain border. The inexorable fate of smokers overtakes him in Turkey—a slow death on a pointed stake.

It was all so horrible that when I reread the story I felt queer myself.

However, an author's opinion of his own work is never wholly impartial, so by way of a test, I gave the story to my neighbor who, as I well knew, had been an inveterate smoker since he was 11.

"Did it make your flesh crawl?" I asked when he returned the manuscript.

"It certainly did," said my neighbor. "I was deeply moved by your story. Just think what ruthless persecution smokers suffered until they won their freedom. Now that I've read your story I find each puff a rare pleasure. It's nice to know there's nobody waiting to chop off your head or impale you on a stake."

It was all I could do to inform the editor that the topic he had given me wasn't suitable for a horror story.

Drawings by Anotoli Sukhov





These deputies to the City Soviet represent neighboring election precincts. They have organized themselves into an informal Deputies' Group that meets once a month to discuss the needs of their district as a whole. The meetings, to which local citizens are invited, have been most productive. They have uncovered new sources of funds and enlisted volunteer help for needed community projects.

ENDLESS TASKS

A VISIT TO THE DEPUTIES OF STROITEL SETTLEMENT

BY IGOR SAKHAROV AND NIKOLAI ANASTASYEV
PHOTOS BY IGOR VINOGRADOV AND LEON DUBELT



GROWING Moscow has been pushing out far beyond the old city limits. A new highway built three years ago rings the city and what used to be its distant outskirts. It's not easy to tell these days where the metropolis ends and the countryside begins. Amid fields and woods you find multistory housing developments cheek by jowl with the sagging log cottages of former villages. Our ever-accelerating housing construction notwithstanding, there is the fact of the old adage—that Rome, or Moscow, if you please, was not built in a day.

The settlement we are concerned with here, Stroitel by name, lies north of Moscow, outside the town of Noviye Mytishchi. Though the town is new and modern, one can hardly say the same of the settlement. It too was built piecemeal, without a plan, over the years. This was where Muscovites built and rented summer homes during the thirties. Later the Forestry and Timber Institute was established in the vicinity and with it the townlet where its staff lived. Still later, the institute was followed by factories, and the settlement acquired new houses for the workers. As happens when people drift into a situation, neither the Mytishchi municipal authorities nor the local enterprises stopped to consider that because the settlement had been mushrooming it was sorely in need of wide streets, shops and other urban conveniences, that you had to walk all of a mile for a movie.

The 8,000 voters who now live in the settlement are represented by the 20 deputies they elected to the Mytishchi City Soviet. Most of the deputies who held office before them were very insular. Rarely did they leave their own election precincts when seeking the solution of a problem, even though so many of the problems were mutual and cooperation with at least the neighboring election district was obviously called for. The new deputies went to work in a different way: One day, soon after their induction, they constituted themselves a single Deputies' Group.

Now this does not imply that it was the first time such a group appeared. However, the point is that, as elsewhere, the advent of the Deputies' Group heightened the activity and power of the deputies and enabled the executive branch of the local government—the City Soviet—to deal with its problems more effectively.

How it Began

Valentin Bashinsky, assistant professor at the Forestry and Timber Institute and now assistant chairman of the Deputies' Group, recalls the momentous day that the Deputies' Group was formed. It began much as usual with a seminar he was leading at the institute, followed by a session with a graduating student about his thesis. Then came a discussion at the City Soviet on funds for the construction of a new school.

In the evening Bashinsky was scheduled to meet his constituents. These meetings are usually quite unpredictable; people are likely to pop up with all sorts of questions and complaints, each one of which has to be looked into. Those with justified complaints have to be helped, the others pacified.

The deputy of the local Soviet is the legislative authority on the neighborhood level. He is usually the first one to whom voters come with their problems, whether civic or, as is very often the case, personal. If a man wants his house repaired or needs a new apartment, he goes to the deputy for help. If two neighbors have a disagreement, both are likely to bring their differences to him. If a young man drifts from job to job, it is the deputy whom the parents consult.

Reaching his office well ahead of time, Bashinsky found that his constituents had not yet arrived. But his fellow deputies were there! It turned out that they had become so involved in an argument after the City Soviet meeting that they simply could not break up until some sort of decision had been reached.

The elections had taken place only recently; many of the deputies had been elected to office for the first time and had only a hazy idea of how to perform their duties. At pre-election meetings the voters had made clear what they expected their deputies to do. But how to go about it was the problem. It boiled down to this—the people in the settlement wanted improvements, and they wanted them now.

"We've got to insist that the City Soviet give our settlement priority!" was the opinion of some of the deputies. "There is no reason our settlement should have to wait so long for city conveniences."

To which others, more cautious, countered: "But as members of the City Soviet we too pass on budget expenditures. The town has a good many building problems besides ours. We can't expect to get everything we need at once."

"We argued about many things that evening," said Bashinsky, continuing the account, "and finally decided that there would be little point in going to the City Soviet separately, each of us trying to get things done for his own neighborhood. It would make more sense,



Valentin Bashinsky tells City Soviet chairman Zinaida Bobrova of a communal services project which the Deputies' Group has under way.

we thought, to present our case in a body, only after we had put our heads together to decide where the available budget funds should be spent. That would make things easier not only for us but for the City Soviet.

"Our spontaneous get-together was soon followed by a formal meeting. The deputies invited the directors of the city's enterprises in the settlement, both industrial and otherwise, the chairman of the volunteer street and house committees, and anyone else who cared to come."

The dean of the Forestry and Timber Institute, Alexander Pimenov, who is a deputy of the Moscow Region Soviet and chairman of the Deputies' Group, picked up the story:

"At this meeting we tried to calculate what the city's budget could reasonably allocate to us for the next few years. The budget had run to about four million rubles the year before; now it was 4.52 million. The city was spending more than 80 per cent of its funds on housing construction, communal services, public education and public health. A good deal, it seemed to us. But the population of our settlement was only a tenth that of Mytishchi, and it was obvious that even with the largest allocation we could hopefully get, it would take a long time before the settlement would get the improvements we wanted.

"We deputies assured the electors that we would press for the largest possible appropriation from the city. At the same time we asked the people of the settlement to do their share. In short, we wanted them to realize that they were the masters of the settlement; a good master will reach for a hammer or shovel himself, if necessary."

The Results

The first structure to rise was the new school building; construction and equipment cost more than 200,000 rubles. But no sooner had the school moved to its new quarters than the City Soviet had to loosen its purse strings once more.

The city had wanted an evening school for young workers and meant to use the old school building for the purpose. The settlement's deputies, however, decided that the young workers could study in the new school for the time being, since it stood empty evenings. The old school building, they suggested, should be converted into a hospital. An estimate of the costs was drawn up and calculations were made of the number of hours of volunteer labor that could be expected from the people of the settlement to accomplish the task.

The allocation of every ruble in the city budget had been figured out beforehand, as always, and additional funds had to found elsewhere. Some of the city's industrial enterprises came to the rescue with funds from their surpluses; that is how an additional grocery was built. And so it went: For each new project more and more people volunteered to help improve the settlement.

Only a few years ago the streets of Stroitel were bare and rather gloomy. They look quite different now that they have been lined with 10,000 trees. The streets and sidewalks have been paved, and every house has gas and running water. All this cost the City Soviet, the institute and the factories more than 1,150,000 rubles. And they will be spending a great deal more. New nurseries and kindergartens are needed, and the City Soviet has already appropriated 200,000 rubles for the purpose. Many old dwellings have to be torn down and new ones built. In short, the Deputies' Group has more than enough with which to keep busy.

One of the interesting side effects of the group's activity is the way it has put individual abilities to use. Assistant Professor Bashinsky proved himself an efficient economist and was entrusted with various communal affairs. Deputies Ivan Prokhorov and Galina Makarenkova have assumed responsibility for the schools and children's facilities. Deputy Anna Mzhelskaya, who works for a large bakery, heads a retail trade commission, and Deputy Tigran Mikhitoryan, a doctor, is responsible for the settlement's medical services. This distribution of responsibilities has put knowledge and talent to work where they will be most productive.

The electors, for their part, have stopped making distinctions between "their own" deputies and those of "some other neighborhood."

A People's University

Deputy Vera Berezina is a popular figure in the settlement; everyone is pleased with the University of Culture, an adult education project that she initiated.

A teacher of English at the Forestry and Timber Institute, she first served as deputy back in 1958. In her first two-year term she got the University of Culture started and its activities well under way. At first only students were interested. As time went on the emphasis of the program was changed to attract workers, housewives and pensioners as well.

When the university opened its doors, the lectures on music, its major offering, were overly technical and not especially interesting to the layman. The lecturers from the Moscow Philharmonic Society were asked to simplify their terms, and the concert programs were built around the more popular works.

There is no need for that elementary approach any longer. The people who attend its lectures regularly have learned to appreciate the more complex music. Here is an entry in the university's Visitors Book: "I'm very fond of music, but, more often than not, the composers are known only for their major works. Your concert lectures, on the other hand, draw attention to the lesser-known compositions that I had not heard before. They are no less delightful." (Vinogradova, third-year student at the Forestry and Timber Institute.)

This is what Valentina Frenkel, a housewife, wrote:

"To tell the truth, I was too lazy to go to the university regularly at first. There was always so much to do at home, and I knew so little about music. It was only to keep up with my husband that I enrolled. I hope this does not create the impression that I know it all now! By no means! I find the lectures interesting and learn a lot from them. I have come to appreciate music a little late in life—but 'better late than never,' as the saying goes."

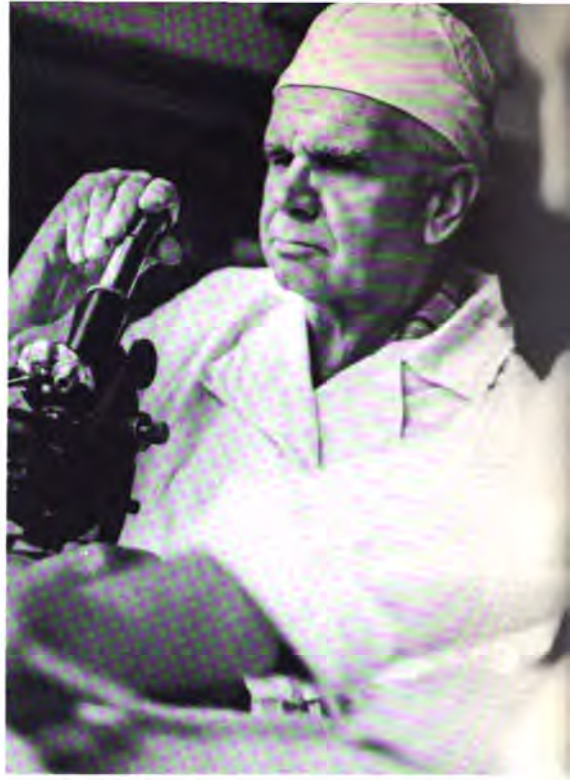
One problem is resolved and another crops up. Right now, for example, attendance at the lectures on painting has fallen off, and the university is trying lectures on the theater. These are given by actors and directors of the Moscow Art Theater and are doing well.

As chairman of the Cultural Committee of the Deputies' Group, Vera Berezina's mission is to get everybody in the settlement to use the cultural facilities available in Mytishchi. The town has clubs, four libraries and a large moving picture theater. Most of the clubs are attached to factories in the locality and offer a large variety of activities, including choral singing, dramatics, painting and dancing. They give frequent exchange shows.

* * *

That is how 20 deputies of a small settlement and the other two million deputies who were elected to the local Soviets at the last elections responded to the needs of their constituents.

Many of them will soon relinquish their mandates to successors, but they too will find plenty of room for initiative; the tasks are endless.



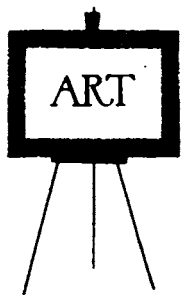
An old school building was converted into a clinic. Retired biologist Alexander Tretyakov volunteered to do the lab work.



Several of the deputies call on Dr. Maria Kuzmina of the new out-patient clinic to ask how she likes her new apartment.

The local University of Culture announces a concert. This popular adult education project was begun by deputy Vera Berezina.





INTRODUCING FIVE YOUNG PAINTERS

BY YURI OVSYANNIKOV

MY RECENT VISIT to five of Moscow's leading young painters took me to Izmailovo. Formerly a forest where 300 years ago the early Russian czars of the Romanov dynasty hunted with falcons, it is today one of the Soviet capital's new residential districts. Here you will find the bright and spacious studios of quite a number of Moscow artists.

The five painters I wish to introduce to the reader began their careers no more than seven or eight years ago. Although they seem to have found their direction in art, they themselves feel that the way is barely marked out. They are seekers and will remain seekers, learning through trial and error, so that they may again and again embark on what seems the only true course. They have been praised, and they have been hauled over the coals. Their answer to both has been serious thought about their work and more persistent searching.

While they are not identified with any particular genre and work with equal interest in still life, in portrait painting and murals, these artists show a common leaning toward the real and the concrete. Why? To answer this question let their own careers speak for themselves. Perhaps, most eloquent is the career of Boris Birger, the oldest of the five.

After graduating from the Moscow Art Institute, he was successively influenced by a number of the early twentieth century Russian painters. In one corner of his studio stand some canvases of his cubist period. Today, however, Birger is a confirmed exponent of realism. It is the only school, he holds, which gives the artist full scope for the expression of his ideas; and the onlooker, for the exercise of his imagination. The entire history of the arts from the ancient Egyptians to Picasso bears witness to this, he says.

Lean and trim, he greets visitors to his studio with amiable courtesy, but is reluctant to show his work to the casual onlooker. When he paints a portrait, Boris Birger is not interested in copying the outer shell; he wants to reveal the inner being. This tendency of his to probe beneath the surface may be due to his early life experiences. While still a boy, he fought in the Second World War. He was one of the defenders of Stalingrad (now Volgograd) and received decorations for valor.

Kirill Mordovin, the youngest of the five artists, is poles apart from Birger in personality. He is happy to talk for hours about Russian history and can give you the biographies of all the great generals and statesmen of the past. He has a good mind for facts and dates, he told me, but is weak in mathematics. His interest in history is apparent in his work; he likes to paint the old, disappearing corners of Moscow.

Vladimir Veisberg, on the other hand, has a passion for mathematics. Cybernetics and the theory of information are his hobbies. He even read a paper on the theory of information at a conference about three years ago. Talking to Veisberg, you are hard put to get from him a definite answer as to what interests him more, the history of early Russian painting and architecture or the latest type of computer. This dualism seems to have told on his work. He builds his compositions on the principles of early Russian icon painting, conveying a maximum of information with a minimum of color, using only white and gray tones. Veisberg holds that abstract painting restricts the artist's self-expression, narrows down what he has to say to a rigid, rhythmic color pattern.

Not that Veisberg and his fellow artists are averse to nonrepresentational arrangements of color. Mikhail Nikonov, who likes poetry and is a close friend of Yevgeni Yevtushenko's, will tell you that when he is thinking out a new big canvas, he will try out new color combinations, new rhythmic color effects by painting small abstract sketches. But these are conscious experiments by which he learns to convey a certain mood through color.

Mikhail Nikonov, who graduated from the Moscow Art Institute 10 years ago, is not a prolific painter. He works slowly, thoughtfully, and it takes months for an idea to mature in his mind. Sociable by nature, Nikonov becomes withdrawn when he begins to paint.

The last of the five artists, stocky Nikolai Andronov divides his time between painting and hunting. Shortly after my visit he left for two months of hunting—and sketching, of course—somewhere in the north woods.

There is a symbolic quality and an atmosphere of romantic courage in Andronov's paintings. The rugged, somewhat taciturn faces of raftsmen, builders and assembly workers look down at us from his canvases, their characters revealed in dynamic rhythm, line and accented color.

This artist, as well as the other four, is sometimes criticized for being overly influenced by the early Pyotr Konchalovsky, Ilya Mashkov, Aristarkh Lentulov and Robert Falk. But you can also see the influence of Alexander Deineka, Vassili Meshkov and other talented Soviet painters. All artists have their teachers. What matters in the long run is how good an artist the teacher is and what talent the pupil has. The five artists I discussed here have chosen for their teachers painters who brought glory to Soviet art. They are not imitating their teachers, but making use of their experience for their own independent work.

They all see prospects ahead for the development of painting, provided it is not fenced in by abstractionism or turned into a parlor art. About pop art Kirill Mordovin comments, "This kind of art may interest window display people or commercial artists, but it offers nothing to the painter."

To become established as a serious painter is not easy. You can't do it with stunts or by starting a fad, although we do have a few young artists who think they can. But the true artist knows that only the ability to convey, through the medium of design and color, great depth of human thought can win him lasting recognition. It is for this reason, very likely, that the five young painters I have introduced here take the criticism directed at them far more seriously than they do the praise.

I am not going to explain their works; let the reproductions speak for them.



Boris Birger: "Just as a musician conveys his perceptions through a combination of sounds and the poet his feelings through a combination of words, so do I try to do the same through a combination of colors. Even the simplest still life, I believe, carries its creator's philosophy. Of all the great masters, I cherish Rembrandt. His every brush stroke glows and glitters."



JARS



NUDE

BORODINO BRIDGE



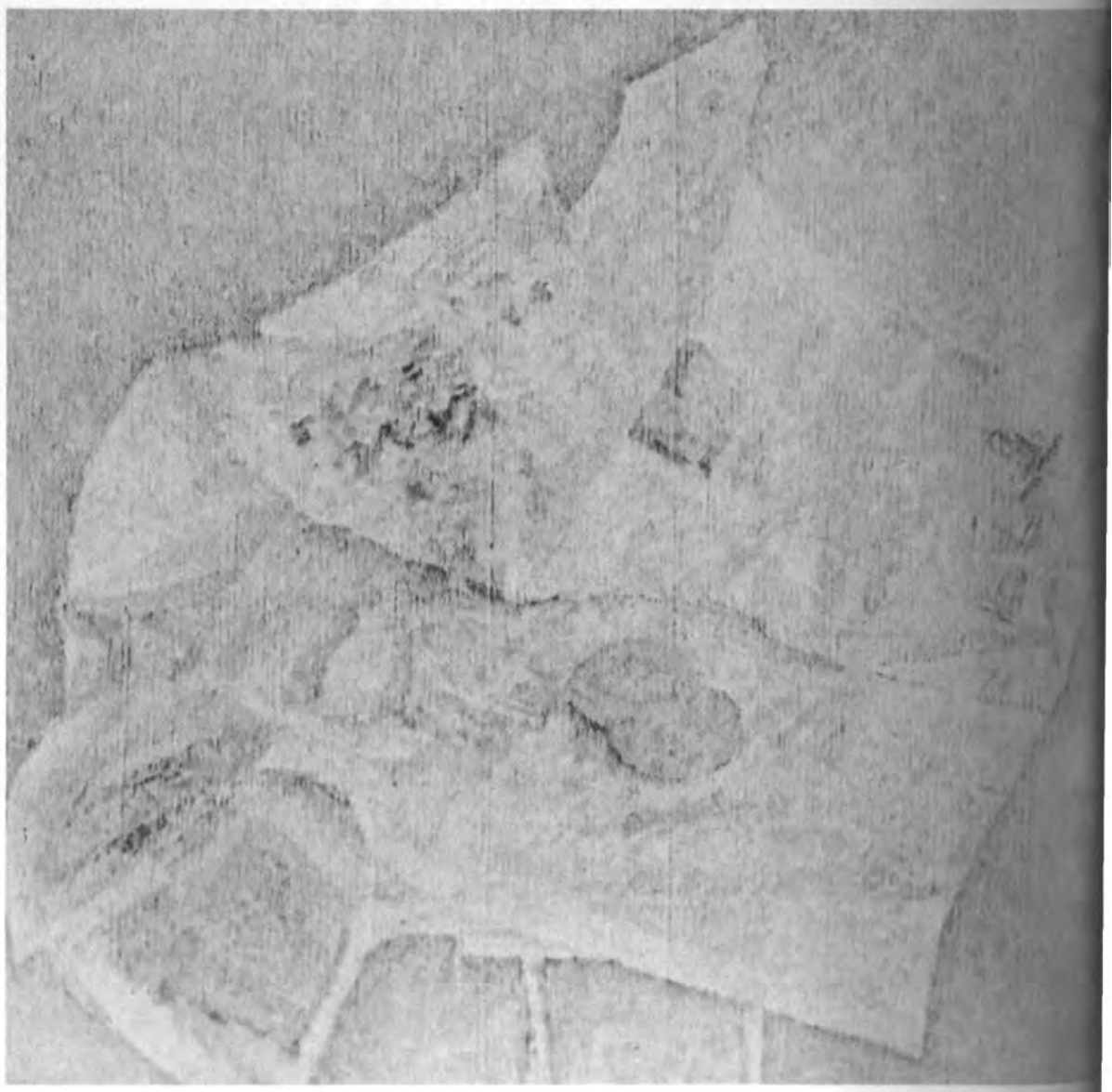
Nikolai Andronov: "Certainly the most interesting things in the world are people, with their joys and sorrows. I try to look at the world through the eyes of the people I want to portray. This is how I think construction workers, electricians—the ones building it—see Moscow."



Kirill Mordovin: "I can't say that I'm completely satisfied with this landscape. Whether conscious or unconscious, it's too much influenced by that wonderful Russian painter Falk. But I also know that this dissatisfied feeling I have means better work to come."



Vladimir Veisberg: "My aim is to say as much as possible as economically as possible. What I'm grappling with now is to reveal the great range of values hidden in white. How well I do, the viewer, the expert and my brother artists will have to judge. For myself, I have to keep working at it."



LEMONS ON NEWSPAPER

D STREET



Mikhail Nikonov: "This, unfortunately, is not my most recent painting. If your magazine could wait, I'd ask you to show my latest and, I think, better and more interesting picture. But alas, time won't wait. We never have enough of it for everything we want to do."

SPRING

LOVE, SEX, THE YOUNG FAMILY

(Continued from Page 3)

imperfect types as we have and the inability to use them properly place the woman in a position in which she may become a mother not because she chooses to do so, but by sheer accident. This is definitely a great evil!"

The problem of the early appearance of a child in the family is a complicated one. Nor does this concern young families alone. To have or not to have a child is a question that should be decided by the spouses. If they agree to have a child, it should be of their own free choice. Such a choice can be really free, however, only if the contraceptive devices and techniques science has to offer are really available.

The Soviet Union once had legislation prohibiting abortions. That law failed to justify itself as a way of safeguarding the health of women and strengthening the family (many families, on the contrary, found themselves in difficult circumstances because of that law). Deprived of the possibility of skilled professional care at hospitals, women resorted to unqualified individuals for operations under unsanitary conditions, often with tragic results. Nor was the birth rate increased, since legal abortions were simply replaced by illegal ones.

The law was abolished and abortions are no longer prohibited, provided they are done under hospital conditions. Those who perform abortions outside hospitals or other medical institutions are subject to prosecution. This law is certainly more consistent with the socialist view on the family and woman's position in our society.

But the question has another side. The fact remains that an abortion can harm a woman even if it is performed under proper circumstances. That is why the replies to all questionnaires on the subject keep stressing the importance of contraceptives plus instruction in their use. This is a problem of primary importance. The answer lies in spreading contraceptive information and in developing the pertinent areas of medical research and industry.

Society Must Take Action

The response to one of the questions indicated that about 65.6 per cent of all boys and girls received what knowledge they had about sex from companions their own age, 16.8 per cent from school, and 6 to 7 per cent from their parents. This should cause us grave anxiety and move us to immediate action. The kinds of action are implicit in the questionnaire answers: legislation and the assignment of responsibility to judicial, medical and other government agencies; wide-scale sex education through books, newspapers, radio, etc.; sex education in the school and the family. Nor is it the education of the children alone that should be seen to; adults need it just as badly.

In conclusion, some responses to the questionnaire on this matter of education.

"We need some organized way of preparing young people. Adolescents and teenagers need thoughtful counselors well-versed in the subject. The young must be taught to regard sex as one of the most important and serious problems of human relations." (L.P., Moscow.)

"Medical workers must explain sex physiology and hygiene. Even more must be done by the parents in this respect. We must rid ourselves of false modesty when dealing with this question. If we learn to talk about it straightforwardly, without embarrassment, we shall prevent many misfortunes for young families. Before marriage young people ought to be urged to consult a doctor as to whether any insoluble problems might arise in their conjugal life. If everything is in order, then everything is all right. But if one of the partners is ill, the constancy of the other will be tried. It will also show whether the young people will be able to surmount further difficulties easily. If they are not sure of this, they had better part at once rather than curse their destinies in the future. I am sure that a set of sensible measures are applicable here, measures that will not humiliate anyone but, on the contrary, prove of great benefit." (Z.I., Voronezh.)

As we have tried to show, the solution depends on many factors—on the economic and judicial policies of the state, better education in the family and at school, the quality of the work done by our civic organizations, the emphasis of our literature and art, and the striving of our people to acquire for themselves and instill in others the values of communist morality and psychology.

Courtesy of the magazine *Molodaya Gvardiya*

SPACE PSYCHOLOGY

By Vladimir Zhukar
Master of Science (Medicine)

Irina Pushkina
Psychologist

TO A GREATER or lesser degree all the sciences contributed to the world's first manned space flights. In the process of adapting themselves to the new tasks, they evolved such new branches as space biology and space medicine, each with its own problems and investigative techniques. Of late, space psychology has been a focal area of research interest.

It stands to reason that safety in flight and the cosmonaut's physical well-being received primary attention. But close on their heels came the study of his psychological capabilities, his behavior in space, his emotional conditioning for the most formidable mission that man ever faced.

Important for the cosmonaut's psychological conditioning is to duplicate in training the circumstances he will be encountering in space. That, however, cannot cover his complete psychological conditioning. He must be prepared to cope not only with the known factors but with new and unforeseen eventualities.

It is in the nature of man to be attracted to the new. But the novel and unexpected can also distract him from the immediate job. The would-be cosmonaut must therefore be tested for his reactions to the novel, the unexpected, the unaccounted-for irritant. Only a person with exceptionally high resistance to strong disruptive surprise irritants can be considered for space flight.

How are we to order time on a space flight, sleep and waking periods, work and leisure? We are accustomed to work by day and sleep at night. But in space there is no day and night. We must create an artificial day-night cycle for the cosmonaut. Researchers incline to a six-hour alternation of sleep and work. The cosmonaut must be conditioned to this time schedule.

"Sensory hunger," group compatibility, and "fear of the abyss"—very human problems, more so in space flight conditions—all have to be grappled with by the space psychologist.

What is "sensory hunger"? Scientists involved in flight preparation were much concerned with the effect of forced isolation on the cosmonaut. Loneliness is always oppressive; one of the most powerful of human urges is the need for communion with others. Protracted isolation has disastrous effects on the mind. In space flight we have more than one factor to warrant a feeling of loneliness. There is the isolation from earth and other human beings, and the fact that one is shut up in

a small place. "The bit too much" or "the bit too little" is what unbalances a human being. In the cosmonaut's case you have both, and in conflict. On the one hand, there is the fear induced by "a bit too much"—space itself—and on the other hand, the fear that comes from "a bit too little"—the small, closed cabin of the spaceship.

A word about the fears man experiences under new and unaccustomed conditions. In fiction we often encounter characters isolated for long periods in a desert, jungle or the Arctic who experience an inexplicable fear that we have no better name for than fear of the desert, the jungle or the Arctic. One of Jack London's characters suffers from this fear of the Arctic in addition to his other fears of the cold and the silence.

Much has been written in countries other than the Soviet Union about the "fear of the abyss," which irresistibly dominates a human being in space, and of the dire effects of weightlessness on the mind. Soviet scientists have never been that pessimistic, though they do not deny the complexity of these problems. Indeed, they are only two of a large number of space flight factors to which the human being is unaccustomed. However, man has demonstrated truly unlimited possibilities for adaptation, and the preflight training draws on these possibilities.

But what about extended isolation in a closed space? How will that affect the human being? Doctors often see cases of claustrophobia, a morbid dread of closed space. There are people, in fine mental health otherwise, who cannot stand closed rooms. The cosmonaut is tested for his reaction to small, closed spaces in an isolation chamber, the space doctor's very helpful tool.

Once in space, the cosmonaut encounters a silence never before experienced. It has no relation to the soothing, relaxing quiet he is accustomed to, although it is true that not every kind of quiet here on earth is soothing.

The soundlessness of outer space does not reduce tension, it increases it. For some people lengthy isolation in a spaceship is likely to induce such psychic disorders as claustrophobia and monotony neurosis. Cosmonaut ground training, let alone actual flight, takes extraordinary stamina and nerves of steel.

In the final analysis, the space psychologist's problem is to get the most efficient work out of a human being on a space flight. Besides its biological and medical aspects, the problem has a special psychological angle. There are several ways to make a person's work more efficient—by calling on machines and various automatic devices to do part of his job, for one thing. We can also use drugs which, although they will increase a person's work capability for a time and, indeed, increase the period in which he will work without error, are likely to have undesirable side effects.

There is also this consideration in dealing with a man's work efficiency. On the one hand, he may have too much information, a factor which tends to reduce efficiency since he is not able to assimilate all the information he gets. On the other hand, we know that when a person receives insufficient information, when there are too few optical, aural and other irritants, his ability to work is also adversely affected. For that very complicated system known as man to function properly, it must have a certain minimum of optical, aural, tactile and other sensations. The fewer there are of these irritants, the more inert the brain grows and the more difficulty it has in solving problems. When the number of irritants is excessively small, the human brain will not function normally.

We all know from personal experience that monotony makes for drowsiness, which in turn reduces a person's mental activity. Ivan Pavlov gave the scientific explanation for the transition of the human organism to the state of sleep: for the brain to function normally it must be continuously charged with impulses from the various senses. We know of cases of animals and human beings who, for one reason or another, have lost the use of their optical and aural senses and whose waking existence is one long doze.

This phenomenon has particular significance on mapped space flights. In the spaceship cabin the environment remains unchanged for a long period, while the number of optical, aural and other sensations and impressions are reduced to a minimum. Therefore, provision has to be made for a change of impressions. This may be done through radio and TV communication with the earth, arhythmic changes in the coloring of light sources, the illumination level, etc. The monotony must be broken with that seemingly insignificant but so important element of chance that makes life interesting.

Previously our problem was to counter the harmful effects which inevitably follow on isolation. But now, when the flight of a spaceship with a crew of several is a fact, the problem of loneliness has been replaced by another, every bit as acute, the adjustment of a group of individuals who must work and live together for periods of some duration in the narrow confines of a spaceship cabin.

Two of the many decisions that had to be made in selecting the complement of the first spaceship crew were the number and the skills to be represented. The choice was Colonel Vladimir Komarov, who piloted the ship; engineer Konstantin Feoktistov, who has a master's degree in the technical sciences; and Boris Yegorov, who is a physician. This turned out to be the best combination for carrying out the assigned research program. The *Voskhod,* an intricate piece of machinery, needed a competent captain at the controls—that was Komarov's job. Engineer Feoktistov checked on the ship's many technical systems, and Dr. Yegorov collected data for a whole array of medical, biological and psychological studies.

When engineers and space physicians tackle such problems as how to seat the cosmonauts most comfortably or how best to provide for their vital functions, they think in terms of human beings generally. The psychologist, however, must think of particular human beings when he selects a crew that will work as a team.

On a protracted space flight, the cosmonauts not only work together, they also rest together. They spend the whole flight, to all practical intents, harnessed together. Generosity, cooperation, optimism and other such traits are obviously important.

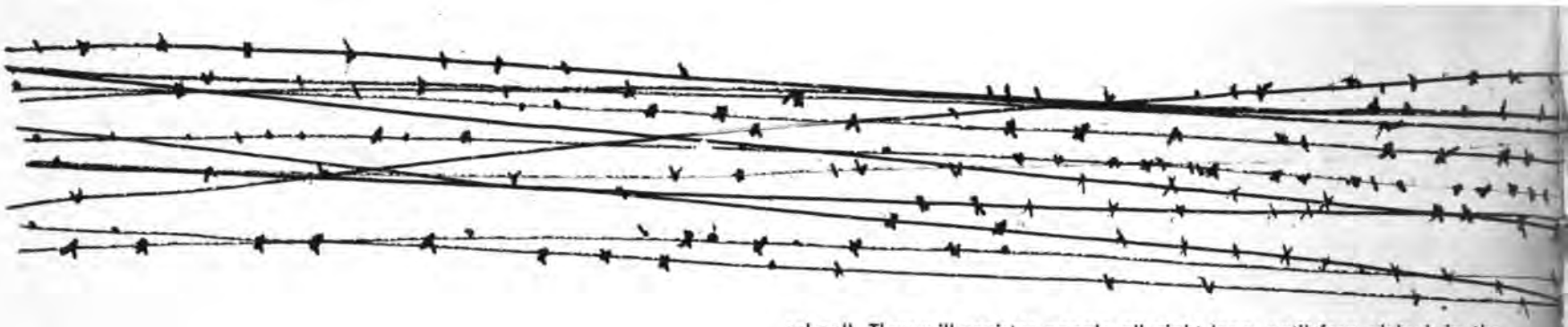
The goal of communist education is precisely the inculcation of such traits. But since even in identical conditions we all behave differently, there is the problem of choosing and training two, three or more people who will complement each other and work and live together harmoniously in a confined area for lengthy periods. This moves us into the special field of group psychology. The task is to study not only the character peculiarities of each member of the group but also the simultaneous interdependent activity of the entire group.

Studies made by Soviet specialists show that even with a good knowledge of the individual characteristics of each member in a collective, we are not always able to predict the reaction of the collective as a whole. In other words, the character of the whole collective is not the sum of the characters of its members. The special methods Soviet scientists worked out for spaceship crew recruitment enables us to model simultaneous and independent activity for two or three people and get smooth teamwork. It is interesting to note that in the process of carrying out activity organized in this fashion, the individual characteristics of each member of the group are not sponged out; on the contrary, they manifest themselves even more prominently. And reasonably so, because individual traits are best revealed in communion between people, when they work and play together. For that reason the experimental task was designed to conform to real life.

It was established in preparation for the first space flights that when the cosmonaut actively contributes to the studies under way and understands the reason and necessity for every stage of training, he is able to withstand isolation and other unfavorable conditions much better. In isolation experiments done by space scientists in other countries, the people tested were told to put on light-dispersing goggles and antitactile gloves. The overwhelming majority could not stand the isolation long, and some experienced optical and aural hallucinations and other such mental disturbances.

What explains these reactions is not so much the "superisolation" these subjects were undergoing as the fact that they were deprived of any purposeful work, which, as is true in life generally, is the best antidote for mental disturbance. Of course, if your experimental purpose is to see how much an individual's nervous system can stand before it gives way, that is another question—but a rather abstract one which has nothing to do with the actual problem of manned space flight. Soviet scientists maintain that the isolation factor must be investigated in its application to the conditions that obtain on real flights.

We have discussed only a few of the problems that space psychology is currently investigating. This young science has already achieved much, as the Soviet cosmic flights bear out. The farther afield man goes into outer space and the longer his travels become, the more intricate, difficult and fascinating will the tasks of the space psychologist be.



I MUST TELL ABOUT THIS

BY MASHA ROLNIKAITE

"I Must Tell About This," a book by Masha Rolnikaite, was recently published in the Lithuanian Republic. The author was not yet 14 when World War II began. The city of Vilnius, where she lived, was occupied by the Nazis. She was shut up in the Vilnius ghetto with her mother, two sisters and a brother. Two years later the girl was separated from her family and sent to the concentration camps at Strasdenhof, and later to another camp at Stutthof.

When the war was over Masha Rolnikaite returned to school and was graduated from the Gorky Institute of Literature. These are excerpts from her book.



It is almost 20 years since I was freed. I no longer keep a diary, but through force of habit my memory has retained and absorbed the most significant details. That is why those days now past seem so near, as though they were right at hand, right behind me. All I have to do is beckon to them and they will appear . . . .

. . . By the calendar it is an ordinary winter day. Outside the window everything is as usual—snowflakes whirling about in the air, cars rushing down the street, people hurrying on their way.

Before me lie the galley proofs, the pages of my book, just brought from the print shop. But now they are no longer simply my notes. They will leave me and enter the homes of other people to let them know what I had to tell them. . . .

Again things are unquiet in the ghetto. Yesterday evening we were told that all those with yellow certificates have to register in the *Judenrat,* at No. 6 Rudninku Street (in what used to be the secondary school). They will register people all night long, until four o'clock in the morning, with the members of their family, the husband or wife and children under 16. Children over 16, parents, brothers and sisters will not be included in the certificates.

Mother has a yellow certificate. Of the 230 people working in the shops, only 80 got them. What luck that Mira also got one; she's 17 years old already.

Early tomorrow morning those with yellow certificates must report to work with the members of the family included in their certificates. They will not return to the ghetto until the evening of the next day. The others will stay in the ghetto. . . .

We are going to register. People walk slowly down the dark streets.

The *Judenrat.* The wide staircase is full of people. Some are trying to make their way through the crowd to the top, to the desks that will save them. Others are coming down, most of them weeping. In one case they refused to include a mother in the certificate, in another case a 17-year-old son. The ghetto police are trying to keep order, but no one pays any attention to them; when death is at hand, you do not feel the blows.

Mama shows her certificate to the registrar. She writes something down and gives mama some small dark blue numbers.

We return home. Seventeen people in our apartment do not have certificates and numbers. They will remain here. But several managed to have their children entered on the certificates of friends and even mere acquaintances. Now the parents take leave of their children. The children cry because they do not want to leave their mothers, and the mothers, for the last time, kiss the beloved faces and whisper, with pain in their hearts: "Go with uncle and auntie, mind them. They have saved you." Who knows if they have saved them? . . .

It is becoming light. There is a crowd at the barrier. F. Muhrer, Weiss and other Gestapo officers carefully check the certificates and inspect every member of the family. Those who are "rejected" (that is, those whose age they suspect) are driven to the gate of the neighboring house.

A girl approaches the exit. She leads her old parents by the hand. Muhrer takes her certificate and tells her to pass through, but he shoves her parents over to the "rejected" ones. The girl pulls them back. Muhrer hurls her against the wall and pulls out his pistol.

When I open my eyes, she is already lying on the ground . . . Muhrer calmly returns to his place and begins checking certificates again.

The night began turbulently. Night passes have been abolished, and with the exception of the ghetto police, no one has the right to be on the street.

With our faces glued to the windows, we try to see, hear and understand what is going on. But we hear only the whistles of the police. Several shots are fired.

A neighbor returns. He brings very bad news. The underground City Committee of the Communist Party has been tracked down. And the tracks lead to the ghetto. The Gestapo has demanded that J. Gensas* turn over I. Vitenberg, member of the City Committee of the Communist Party, who is also the leader of the FPO.**

Gensas summoned Vitenberg, arrested him, and turned him over to the police. But when Vitenberg was being led through the ghetto, his

* Chairman of the ghetto, active helper of the Nazis.

** United Partisan Organization (Jewish).

Drawings by Gherman Cheryomushkin



partisan comrades attacked the police, got their commander away and hid him.

Gensas is furious. He and his police have been rushing through the entire ghetto, sniffing about, seeking. The Gestapo says that if it does not get Vitenberg, it will wipe out the ghetto. That means an end to Gensas himself and to all his police.

I have now learned more details about the events of last night.

It seems that when the ghetto partisans learned of Vitenberg's arrest, they gave the agreed upon signal "Lisa is calling,"* which signified the fighting readiness of the entire FPO organization.

Gensas' attempts to find Vitenberg again were futile. The ghetto partisans repulsed all attacks of the police.

Gensas then changed his tactics. He ordered the search stopped and, through his messenger, delivered the Gestapo ultimatum, "Vitenberg—or the whole ghetto."

The messenger returned with the reply: "The Party organization believes that turning over Vitenberg will not save the ghetto. If Kittel has decided to wipe out the ghetto, he will do so regardless. But the partisans will resist."

Gensas sent his messenger off again.

But Vitenberg unexpectedly declared he did not want to be the cause of the death of 20,000 people.

He said farewell to his comrades and asked them to go on fighting. Then he resolutely set off for Gensas' house.

A Gestapo car pulled up. Gensas led Vitenberg out. Armed guards grabbed him and shoved him into the car.

They will torture Vitenberg and then kill him.

I don't know how long I myself will remain alive, but today Vitenberg saved me from death. And not only me. He also saved Mama, Mira, the children, and thousands of other mothers and children. . . .

* Lisa, a young girl, was a member of the FPO. She was caught smuggling arms into the ghetto and was shot. Her name became the symbol of struggle against the fascists.

It is a late September evening. The ghetto is again paralyzed with terror. Nothing has happened yet, and there isn't a single Hitlerite in the ghetto, but people are upset.

Kittel came with several Gestapo men. Oberhart met them at the gate and took them into the yard of the *Judenrat*. On the way he ordered the police to summon all the ghetto residents for an important announcement.

I also ran down there.

One of the Hitlerites read an order of the Gestapo chief to the effect that the Jews of the Vilnius ghetto are to be evacuated to two labor camps: one in Estonia and the other right here in Lithuania, not far from Shaulyai. The evacuation must be finished in one day. We may take only as many of our things as we ourselves can carry.

On his own, he advised us to take a pail, a pot, and other household articles because we would not get them in the new place. We have four hours to prepare for the evacuation.

That is all. We must be in Rudninku Street at 11 p.m.

Mama tells the children to empty their brief cases so she can put some clothing into them for each one.

"Can't we take my books?" Ruvik asks, frightened. "Won't we be able to read there?"

"When you're free, dear, you'll read," Mama says to quiet him, but her voice trembles.

Mama packs some things. The children, huddling together on the bed, watch her fearfully. She is crying and keeps blinking her big eyes.

Mama says it is time to go.

The side streets are full of people. Silent and gloomy, they all walk slowly in one direction, toward Rudninku Street. Some drag huge bundles, while others have taken almost nothing. Why torture oneself in the last hours of life?

Rudninku Street is full of commotion. Everyone is there. If we are to be wiped out, there is no sense in staying in the ghetto. It means death just the same.

Neugebäuer, Kittel, Weiss and several other Gestapo men stand at the exit from the ghetto. They count the people. There are soldiers on both sides of the street, many with dogs.

We walk slowly down Etmanskaya Street, cross Bolshaya Street and turn into Subachaus.

Then we go down Subachaus Street. We have no more strength left to drag our things. The abandoned bundles lie there in the mud.

We stop not far from Rasu Street; there is a crush there.

Will they really shoot us right here in the city?

They drive us through a gate behind the church. The men are left in the street, the women and children are driven into the yard.

It is a huge yard and full of soldiers. Sick people brought down from the hospital are lying on the grass. Here, too, are children from the children's home. They are standing there, blue from the cold.

We are driven further on, to the ravine. It is surrounded by soldiers.

Our feet stick in the mud. We slowly approach the soldiers. One has already raised his tommy gun. He does that to tell us to keep moving. He will probably shoot us in the back. It is terrible to look around. If only he shoots right through the heart!. . .

In spite of it all, I look around. The soldiers just stand there, indifferent and vicious.

They keep driving more and more people into the ravine. We are already tired from standing there so long. I put my valise down, in the dirt, and Mama and I sit on it. We take the children on our knees. Mama is crying.

People keep coming and coming. . . .

It is dark. It is still raining. From time to time the guards throw a light on us with rockets. They want to be sure we will not run away. But where can we run to?

The night drags on terribly slowly. . . .

At last the darkness begins to give way. They will probably take us somewhere soon.

It is almost day. A sparrow lights on a branch quite close to us. It turns its head, looks around and flies away. It is free. . . .

A new group of prisoners from the ghetto have been driven down, among them the families of the police. The police themselves have been held at the gate, like all the other men. That means they have not escaped the general lot.

One of the newcomers sits down near us. She tells us that they just hanged two men and a girl in the yard. They were partisans, and had been picked up in the city. They had shot back, had killed one of the Hitlerites and wounded several. But the Germans outnumbered them.

All three partisans met their death like heroes. Even the girl, still quite a child, looked contemptuously at the executioner, even spat in his face. She died, her face turned toward the ravine so that everyone might see she was smiling! . . .

The guards order us to get up and to return to the yard. There is a terrible crowd there and we can hardly move.

What is going on near the gate? Are they beating people?

The gate is closed, they are letting people pass only through the wicket. We, too, approach it. They let people through one at a time. Mama is afraid we will get lost and she tells me to go first. After me Ruvik will go, then Rayechka, and the last to pass will be Mama.

I go through. A soldier shoves me aside. There are no cars in sight. I turn around to tell that to Mama, but she is nowhere in sight. There is a file of soldiers across the street. Behind it is another file, and further on a huge crowd. And Mama is there. I run over to a soldier and ask him to let me go there.

But the soldier does not even listen to me. He keeps looking at the women passing through the wicket and from time to time shoves one toward us. The others he drives over to the crowd.

Suddenly I hear Mama's voice. She yells for me not to follow her. And she asks the soldier not to let me join her because I am young and can work well.

"Mama!" I call out as loud as I can. "Then you come here, to me!"

But she shakes her head and shouts in a strangely hoarse voice:

"Live, my child! At least you live on! Avenge the children! She bends over to them, says something, and with difficulty lifts them, one after the other. Ruvik has such a strange look in his eye. He waves his little hand. . . .

They are shoved aside. I cannot see them any more. I climb up a stone near the wall and look around. I cannot see Mama anywhere. . . .

Where is Mama? Everything blurs.

Kittel and Weiss come over with some other Gestapo men and order us to line up, ten to a row.

They count us and then recount us. Kittel shouts to the soldiers standing near the gate to add seven more to finish up.

There are 1700 of us. We start off. I look around to where Mama and the children were. . . .

We are taken down Rasu Street to a large yard not far from the railway station.

They count us off in groups of 80 and line us up near the railway cars.

At last the doors are opened, and we clamber into the cars. The soldiers hurry us, hit us on the head with their gun butts.

A Hitlerite comes over, counts us again, shuts and bolts the door.

The train starts. We are on our way. But what about Mama? Where is she? Why did they separate us? Even death would not be so terrible if I were near her. . . .

A prison guard comes into our barracks. She orders all those who are well to line up. The sick, thinking we were going to be sent off to work, try to get up. But she spots them right away.

There are only a few of us. The guard selects eight (I am one of them) and tells us we are a "funeral team." Until then, those who died lay in the barracks for several days. Now we must strip the clothes from the corpse immediately, pull out the gold teeth, and four of us must carry it out to the door of the barracks.

I wonder how I will carry others if I can hardly lift myself. I cannot see clearly, and my feet give way beneath me. I have to hold on to the wall when I move.

We go over to a woman who died only that morning. I take her cold foot but cannot raise it even though she is just skin and bones.The other three have already lifted the body, but I cannot. The guard gives me a slap in the face and shoves scissors and pliers into my hands. I must strip the corpse and pull out the gold teeth.

They place the dead woman at my feet. But she is alive! Her eyes are open and they move. The guard keeps rushing me. I timidly touch the body with my finger—it is cold. But why the eyes? I finally guess that it is the ceiling lamp, swaying in the wind, reflected in her eyes. With shaking hand I cut her dress. I try to raise the body, I want to undress it, but it does not stay put; it falls back, the head strikes the floor with a dull thud. As if making fun of me, the dead woman's gold teeth glitter. What shall I do? I simply cannot pull them out! I look around to see if the guard is watching and quickly shut the corpse's mouth with the pliers.

"*Dumme Liege, was machst du?*" the guard shouts and strikes me so hard that I fall down on the corpse. I jump up. That is what she is waiting for. She begins to hit me on the head with a very heavy stick. There is blood on the floor.

She keeps hitting me until she herself is breathless.

The whole aisle is full of corpses. They have to be stripped of their clothing. But I cannot. I simply cannot! I would rather carry them than strip them. Someone take pity on me. I cannot . . . I feel sick . . . very sick. . . .

Some 40-60 women die in our barracks every day. There are heaps of stiff, blue corpses lying around near the doors all the time. A cart pulls up; prisoners are harnessed to it. Two men take a withered, frozen body by the hands and the feet, swing it and throw it on to a pile of other naked corpses.

The crematorium works all day long. Huge piles of corpses are heaped up near it. About a thousand people a day die in the camp.

Explosions rent the earth until evening.

When it grew dark, the armed guards told us to line up. We are to move further on. At night? That means we are to be shot. So we, too, have not escaped death. . . .

I will not go! I will stay behind. I will hide in a corner from the Hitlerites until I hear that our soldiers have come. But what if they see me? It is death in any case, so let it come an hour earlier.

The women urge me to go with them. Perhaps they are not taking us to be shot but are merely driving us further on. But that will no longer save me since I'll never get to the place.

They drag me out anyway. They will not leave such a young girl behind; that would mean certain death.

We are ordered to move very quietly. Even the armed guards are forbidden to speak and smoke. They hold their dogs by the collar so the animals will not bark .

The silence is terrible. We hear no explosions. Only a short while before they seemed so near. The snow sticks to our shoes. Our feet do not obey us, they keep stumbling. I fall several times, but the women pick me up and drag me along. Can't they understand that this will no longer help, that I have absolutely no strength left and that even with their aid I cannot move? I can no longer breathe and just gasp for air convulsively. They themselves are having a hard time of it, pulling me along; they change very often. They ask me to stand up, but I keep falling. . . .

It is all over. . . .

I am lying on the ground. They pick me up but my feet no longer obey

me. I cannot overcome my weakness. The women are driven on and are forced to let go of me. I close my eyes so as not to see how they will shoot me. . . .

I seem to be alive, only my side aches. Perhaps they only wounded me? Why am I lying in a ditch? There is no one on the road. That means they have all left. What has happened? Of course! Why didn't I guess immediately. The armed guard pushed me off the road into the ditch.

How beautiful it is here! The forest is so silent it seems to be petrified. And there is so much snow! So soft. How nice and quiet it is. . . .

I hear a voice, or do I merely seem to hear it? A woman is asking me if I am alive.

I open one eye. Up above, on the highway, is a woman. She says I must not lie there. I will freeze. I must move.

But what if I no longer have the strength to move, what if I can't even speak?. . .

No, she has come back. She has brought a stick. What does she want?

She wants me not to fall asleep.

But that is the very thing I want to do.

She tells me not to be a fool. Especially now, when freedom is so close, I must hold out.

But I have no strength left whatever. . . .

Even so, she says I must keep struggling. She will not leave me until I crawl out of the ditch. Even if I have to crawl on all fours, even if it takes me till morning to climb out, I have to do it. She will help me. She will bring me another stick.

Explosions from beyond the forest again. Perhaps our people are really quite near? I must try to get up, come what may!

My rescuer lies down on her belly and pulls me by the hand. I slide, fall back, again try to crawl out. At last, exhausted, I somehow get out. But I find it very hard to stand up. Me feet won't support me. My new friend gives me a stick.

We are all alone on that long, empty highway. The forest surrounds us on both sides. Someone seems to be looking at us from behind every tree.

My companion must also feel frightened,she keeps talking without a stop. She is a teacher and comes from Hungary. Her whole family was shot, first her parents, and then her husband. He was a very fine man. And her parents were fine people, still not very old. Now she is all alone. Completely alone. She can't even imagine how she can go on living, yet she does not want to die. And so she pretended she was weak in order to lag behind the others and wait for the Red Army. She heard one of the armed guards tell another that the sergeant's new order was not to shoot even if someone fell, a shot might give them away.

Halt! Hände hoch!" An armed Hitlerite with a dog comes running out of the forest. We raise our trembling hands. . . . He orders us to give up our weapons. He will not believe we haven't any; he searches us. Then he demands our papers. We tell him we have none, that we are from the concentration camp that was taken down this road a short while before. We felt sick and had lagged behind, but now we feel better and are trying to catch up with the others.

The Hitlerite refuses to listen to us. He keeps insisting that we are Russian spies and that he is going to shoot us. We keep telling him we really are from the camp. Would spies wear the kind of clothing we did? But he insists we are traitors and are waiting for the Russians.

Just then another Hitlerite appears from somewhere. He happens to know about our camp, which really did pass by here and apparently had stopped in Khine.

The first Hitlerite brings out a bicycle hidden behind a tree, gets on it, and orders us to follow him. He warns us not to try to run away or he will set the dog on us and it will tear our throats open.

He rides on, and we try not to fall behind. Again I cannot catch my breath, and I fall. But hearing the vicious snarl of the dog, I force myself to keep moving. My friend helps me.

At last we come to a small house. The Hitlerite orders the dog to guard us and goes into the house. The dog keeps its eyes fixed on us.

It is already quite light. We see the guard of our camp come riding up on a cart. He beats us and orders us to climb in. I barely manage to.

We are taken through some village. No one is there, not a single living being. The shutters are closed and the doors locked. Silence all around. Perhaps the people are still asleep?

Beyond the village are fields, and in the distance, near a huge shed, are many carts. This is probably where they brought our camp. Everything will begin all over again. . . .

There is a terrible noise, the hollow rumble of explosions. The dog, sitting right beside us, pricks up its ears. The Hitlerites, gathered near the shed, fuss about. Some look at the sky, the others argue.

We ride up. What's going on? The guards are rolling some barrels up to the shed. In a minute they will set it on fire! We will be burned alive!

We are driven into the shed. There are many women there, not only from our camp. On the ground, in a mixture of straw, husks of grain, and manure, lie dying women and those already dead. It is all the same to them now.

There are explosions all around. We look through a crack but can see nothing, neither the Hitlerites nor smoke.

We hear a roar. Planes? The Germans will most likely bomb us to be able to say, later, that the Russians themselves had murdered us.

Someone is shaking my shoulders. Who? It is that Hungarian woman again. She is asking if I understand Polish. She says someone is knocking on the wall, he is speaking Polish. What is he saying? That the Red Army is already in the village and that the Hitlerites have run away!

Provocation, perhaps? Better not answer. The man keeps shouting and knocking, but we do not say a word.

At last he leaves.

It is quiet . . . Perhaps the Hitlerites actually did take to their heels?

Why so much noise? Why are they all crying? Where are they all running? They'll trample me underfoot! Help me get up, don't leave me here alone!

Men's voices from behind the shed. Red Army men? Really? I want to go there, to them!

Many Red Army men come running into the shed. They hurry over to us, look for those who are still alive, help us stand up. And they take off their hats for those who no longer need help.

"Shall I help you, sister?" They pick me up, try to put me on my feet, but I cannot move, my feet tremble. Two Red Army men cross their hands, make a seat for me and carry me that way.

Ambulances keep rushing from the village to the shed, and Red Army men keep running back and forth. One gives me a piece of bread, another gives me his gloves. Their kindness makes me feel so good that I begin to cry. The soldiers console me, calm me, one of them pulls out a dirty handkerchief and wipes my tears away, as though I were a little child. "Don't cry, sister, we won't let anyone hurt you any more!"

A little red star shines on his cap. How long it has been since I have seen one! . . .



















TWINS CLUB



Igor and Oleg Bachillo attended the same institute and are both hydraulic engineers now.



Outsiders looking in on the Twins Club members at the Romantiki Café got a shock.



Valeri and Yuri Golikov dancing with the Sabelnikova girls, Olya and Tatyana. They weren't too sure who was who.



The judges had a job choosing between the Doronina sisters and the Galperin boys for the Most Alike title winners.

ONE Eve is good, but two are better," was the answer two student sisters gave to a query in a humorous questionnaire: "What Was God Thinking About When He Created Twins?"

That could have been the theme for an unusual get-together held recently at Moscow's Romantiki Youth Café. Its council, composed of the workers, engineers and students who patronize the café, had widely publicized the establishment of a Twins Club.

At the appointed hour the guests began to arrive. They were greeted with flowers and marched in to the welcoming strains of the band. The walls of the café were decorated with appropriately comic drawings and posters bearing such legends as, "Tell us who you are, and we'll tell you who your brother is!"

The assembled twins spent the evening exchanging stories. Alexander and Edward Salmans, both power engineers now, recalled how they passed their exam in physical education at college.

"Neither of us were any great shakes as athletes," said Alexander, "and we decided to substitute for each other in the 1,500-meter run, figuring that together we'd manage it somehow. We made it, more or less, for my passing mark. When Edward's turn came, I was supposed to take his place on a forest path, about halfway to the finish. But then someone from the dean's office stopped me. Edward started, got as far as the spot where I was to take over, and looked for me. I wasn't there, so he covered the whole distance himself.

Twin sisters Natasha and Tatyana Doronina are 21 years old. They attend a medical institute and work as lab assistants. Once when Tatyana flunked physics she went to the dean several times and begged him to let her take the examination over again. He gave in finally, saying: "I consent, but only because of your touching concern for your sister." He thought it was her sister making the appeal on her behalf!

The oldest twins present were Lev and Sergei Alimov. Both hold master's degrees and work at the Institute of History of the USSR Academy of Sciences. They are 38 years old, and what happened to them is very much like the Mark Twain story in which a character insists that he was not the brother who didn't get drowned when the mother was bathing the babies in the bathtub, he was the one who did.

The Alimovs' story had a somewhat happier ending; neither of them got drowned, they just got mixed up. Mother Alimov tied a ribbon on the wrist of each baby—blue on one, green on the other—so as not to mix them up. However, when the boys were about two weeks old, the ribbons came loose and Mother tied them up again. They noted at the time, so they say, that she made a mistake. Not wanting to make her unhappy, they did not let on. Those listening to this story made a mental note of the Alimovs' consideration for their mother and the powers of observation the future scientists manifested almost as soon as they were born. To this day the twins have not disclosed their mistaken identity to Mother. "Who knows?" they conjecture, "the ribbons may come loose again."

Courtesy of the magazine Soviet Union



Lake Onega. Karelia provides 8 per cent of the country's timber, 20 per cent of its newsprint, and 60 per cent of its paper bags.

KARELIA, THE FOREST REPUBLIC

TO APPRECIATE what has been accomplished in Karelia, it is not enough to compare our present and prewar economic levels. It must be remembered that the Nazis destroyed 200 of our industrial enterprises, ruined all of our farms and wiped off the face of the earth 64 cities, towns and villages, including our biggest cities. In Petrozavodsk, the capital of the republic, more than 60 per cent of the dwellings and public buildings were burned down or shelled.

After the war we had to start practically from the ground up. Nevertheless, as early as 1960, when we were celebrating the fortieth anniversary of Soviet Karelia, our total volume of industrial production was almost four times greater than before the Second World War.

Land of Forests and Lakes

Our republic is almost completely covered with forests and dotted with many lakes. Lumbering and fishing have therefore always been traditional industries. The Karelian forest areas are especially valuable because they are located in the European part of the Soviet Union, where forests are now rather scarce, and also because they are close to industrial centers and ports. Our republic is one of the country's leaders in the lumber and woodworking industries.

In 1953 we cut 367.2 million cubic feet of timber, and in the past year about 706.3 million, enough to meet the needs of all of Karelia's pulp-and-paper and woodworking enterprises as well as of the three largest enterprises in Leningrad Region. We also export over 35 million cubic feet of props and about 53 million cubic feet of sawn timber.

To conserve our forest areas, we will not be cutting at the same rate in the future. Our lumbermen now follow the rule, "If you cut one tree, plant two." We are very careful about reforesting and in other ways conserving and improving our felled areas.

But this does not mean that our wood industry will stop growing. With the help of other republics, we have invested more than a billion rubles in our economy in the past decade. (In 1917-1952 the sum was 607 million.) A considerable part of it went to mechanize lumbering. Since 1953 the output of wood per worker has grown from 9,500 to 15,000 cubic feet. We built the Onega plant to manufacture skidding tractors and other machines for our wood industry.

Our fishing industry will also continue to grow. By 1970 we plan to set up 10 fish-breeding enterprises, each of them with a production capacity of more than 6,500 tons of fish annually.

Progressing Industry

Our wood chemical industry has developed into an important area for capital investments. Previously the republic exported almost half its wood in the form of timber; now it has renovated its old pulp-and-paper plants, sawmills and furniture factories and built new ones. The production of paper, wood pulp and board has more than doubled in the past 10 years. The republic has begun and is accelerating its output of ethanol, nutrient yeast, turpentine, resins and other wood chemistry products.

Natural Resources

Karelia has many resources which in the past were barely tapped. For instance, the production of electricity in 1958 was only a little



BY PAVEL PROKKONEN

PRESIDENT OF THE PRESIDIUM OF THE SUPREME SOVIET OF THE KARELIAN AUTONOMOUS SOVIET SOCIALIST REPUBLIC

Photographs by Semyon Maisterman

more than 16 per cent of our rivers' potential. In recent years seven big hydroelectric power stations were put into operation, and two more are under construction, quadrupling our 1958 output. Now we are building a single power grid.

Our growing power supply is making it possible for us to develop a Karelian iron and steel industry around our rich Kostomuksha and Pudozhgorsk iron ore deposits.

Agriculture

The rigorous climate (a considerable part of our republic is located within the polar circle) and unproductive soils make farming difficult. And yet Karelia raises its own potatoes and other vegetables and soon hopes to supply itself with milk.

Fur farming is a new and growing endeavor for us. Our representatives figure ever more prominently at fur auctions. Last year we sold 306,000 pelts of polar fox and mink raised by our fur farms.

Welfare

The welfare of the people is, of course, our first consideration. In the past 11 years per capita income has increased by 130 per cent. As much as 77 per cent of the republic's budget is spent on social and cultural services and on consumer needs. We have an extensive housing construction program. In the past 10 years we built about 10,000 apartments, 138 new schools and dozens of hospitals. Before the Revolution there were only 62 doctors in all of Karelia. Today there are more than 1,200, assisted by about 35,000 other medical personnel with a specialized secondary education.

Nineteen newspapers and a considerable number of literary and art magazines are published in Karelia. Our republic has 467 houses of culture and clubs, 586 moving picture theaters and 506 libraries, as well as a university, a teacher training institute, many secondary technical schools, a museum of history and regional studies, an art museum, three professional theaters, a state philharmonic society, a symphony orchestra, and Kantele, a national song and dance ensemble. In the past several years 45 people's universities of culture have been founded. Thus in the multinational family of the USSR, as the country progresses, so do all its peoples, large and small.



American journalist Esther Shields (right) and Australian Ray Watt talking to Tamara Polityko, worker at a Karelian logging camp.



Housing construction in Segezh, the paper industry center. Karelia has built more than 100,000 apartments in the past 10 years.



Rare book department of the Petrozavodsk public library. The republic publishes 19 newspapers and a number of magazines.

Sulo Yuntunen lectures to children at the now traditional exhibition of paintings by native Karelian artists.



Spring

By Alexei G. Bushkin

"When the light of spring floods snowbound wi er
those close to the soil worry and wc le
what this spring will bring. Year in, year o .
is never the same, no one spring ever like anoti r."

Mikhail P thi

Learning Russian

FRUITS OF THOUGHT

The Thoughts and Aphorisms of Kozma Prutkov

Kozma Prutkov's name has become a byword in Russian; his thoughts and aphorisms are known and quoted all over the Soviet Union. He is regarded as a wit with sly, but often profound, views on life and the ways of man.

Kozma, for all that, is an imaginary figure sprung from the minds of Alexei K. Tolstoy and the Zhemchuzhnikov brothers in the middle of the last century.

Here are some of Kozma's aphorisms.

Лучше скажи мало, но хорошо!

Say little, I pray, but say it well!

Не будь портных,— скажи: как различил бы ты служебные ведомства?

Who could tell office from office and rank from rank if there were no tailors?

Все говорят, что здоровье дороже всего, но никто этого не соблюдает.

There's nothing like good health, says everybody, but no one ever does anything about it.

Если у тебя спрошено будет: что полезнее, солнце или месяц? — ответствуй: месяц. Ибо солнце светит днем, когда и без того светло; а месяц — ночью.

If someone asks whether the moon is better or the sun, bravely say the moon. For the sun shines in the daytime when there's already light enough, while the moon shines in the black of night.

Принимаясь за дело, соберись с духом.

If you want to get something done, first find the gumption.

Болтун подобен маятнику: того и другого надо остановить.

A chatterbox is like a pendulum: both will go on forever unless stopped.

Не все стриги, что растет.

Not everything that grows should be shorn.

Продолжать смеяться легче, чем окончить смех.

It is often easier to keep laughing than to stop.

Если хочешь быть счастливым, будь им!

If you really want to be happy, then be so!

И устрица имеет врагов.

Even the oyster has his enemies.

Магнит показывает на север и на юг; от человека зависит избрать хороший или дурной путь жизни.

The magnet points North as readily as South. It's man who chooses the right way.

Человек раздвоен снизу, а не сверху,— для того, что две опоры надежнее одной.

A person is double down below and not up above; a double prop is better than a single.

Многие люди подобны колбасам: чем их начинят, то и носят в себе.

Many people are like sausages: What they're stuffed with is what they carry.

Если на клетке слона прочтешь надпись «буйвол», не верь глазам своим.

Don't trust your eyes if the sign reads "Ox" on the elephant's cage.

Глядя на мир нельзя не удивляться.

A good look at the world always brings surprise.

Из всех плодов наилучшие приносит хорошее воспитание.

Good upbringing is the most fruitful of all fruits.

Не ходи по косогору, сапоги стопчешь!

Beware of treading the side of a steep hill; it's bad for the shoes.

Всякая человеческая голова подобна желудку: одна переваривает входящую в оную пищу, а другая от нее засоряется.

Heads are like stomachs in a way; while some digest what is put into them, others may just get clogged.

Взирая на солнце, прищурь глаза свои, и ты смело разглядишь в нем пятна.

Squint your eyes when you look at the sun, for that's the way you'll see the spots.



SOVIET SCHOOLCHILDREN ON ABC-TV



Ira and Yura at the Edward Bleeker Jr. H. S.



Talking to Russian-speaking puppet



Norman Rockwell



At Rockefeller Center

Calling Mama in Moscow



By EDWARD SARATOV

"Do you like America?", "What do you like most?", "How do you like hot dogs?"

Ira and Yura, two Soviet schoolchildren visiting the Edward Bleeker Junior High School in Flushing, New York, hardly knew which of the questions showered on them to answer first.

"America is a very nice country," they replied. "We are glad that we can get to know her people and customs. We want most of all to learn how American children live, how they study and amuse themselves."

"Your hot dogs are delicious, very much like our Moscow sausages."

No one had prepared the New York schoolchildren for the visit. But word spread fast, and at recess Ira and Yura were literally overwhelmed by their hosts. The most sociable of them elbowed their way forward and shot out three Russian phrases in one breath: "My name is Ivan. What is yours? I am learning Russian."

And though this was as far as they got with their Russian, by the expression on their faces it was clear that they were thrilled to meet the Soviet youngsters.

Irina (Ira for short) Tolstikova, 13, and Yura Popov, 14, are students in the seventh and eighth grade of Moscow's School No. 1. Their visit last November was at the invitation of the American Broadcasting Company's prize-winning children's program "Discovery '65." They came to help make another film for the program.

Ira lives in Moscow with her parents and 18-year-old sister Natasha. Her mother and father are both doctors. Ira wants to be a doctor too when she grows up. Parental influence?

Yura, who has decided to be a chemist, lives with his mother, father and 8-year-old twin brother and sister in Moscow. His mother is a former reporter on a Moscow newspaper; his father teaches college history.

In January 1964, ABC-TV suggested to the Novosti Press Agency that they shoot a joint film on Soviet schoolchildren for the American network. Work on the film began in Moscow shortly thereafter. Ira and Yura, both doing well in English at school, were invited to act in the film as guides to explain things Soviet to American viewers.

Many of our readers will remember the première of "Discovery '64" last spring and the warm audience response it received. Producers Jules Power and Danny Wilson received many thank-you letters from viewers grateful for the chance to visit the Soviet capital almost at first hand and see how Soviet children study and play.

The success of this first documentary on Soviet schoolchildren prompted the producers to make a second, again with Novosti Press Agency. This one was about Soviet and American school kids meeting. It was for the filming of this follow-up program that Yura and Ira came to the United States last November. And by January 24 and 31, 1965, American TV audiences were watching "Discovery '65."

During the two weeks' time it took to shoot the film, Yura and Ira worked like Trojans

from morning to night. Pressed for time, the film makers could not make allowances for their ages. But the children did not complain.

At times, at the end of a long shooting day, they would tire and their voices would drop. "Speak as loud as you can!" was Jules Power's merciless demand. Usually he did not get the chance to finish the sentence. As soon as the children heard the beginning ("Speak as loud . . ."), they filled in the ending (". . . as you can!") in clear, loud voices. Everybody grinned and work continued on the double.

While the film was being made, Ira and Yura had many interesting meetings. The one that impressed them most, they said, was the meeting with the pupils at Edward Bleeker Junior High.

More of the questions they were asked: How did you like your lunch at our school and what do you have for lunch in your school in Moscow? How much does it cost?

"Our lunch was very nice, thank you," Yura replied, and went on to say that patties with minced meat, rice or jam, at five kopecks (approximately five cents), were his favorites for school lunch in Moscow.

"How much do you get from your parents for your weekly allowance and how do you spend it?" a ninth-grade pupil asked.

Ira said that her parents gave her pocket money for movies or the theater and for ice cream, which she, like all Moscow children incidentally, is very fond of. She spends 10 kopecks a day (about 10 cents) for carfare to and from school.

"When you help your parents with home chores," another senior asked Yura, "how much do they pay you for it?"

"I often help my parents with the dishes and to clean the house. I also do some shopping," Yura replied. "But I don't do it for money. We have never discussed it in my family or in any other family that I know. I think it is only natural for children to help their parents, and money should have nothing to do with it. When I need money to buy something or for amusements, I ask my father and mother, and usually they give me what I need. But I try not to take advantage of their good nature."

World problems were also discussed, for today's schoolchildren are not free from the cares and anxieties that plague the adults of the world.

"How do you think we can keep peace between the USSR and the United States?" David Lebenstein, a ninth-grader and reporter on the school newspaper, asked.

A long silence. And then, with dozens of pairs of curious eyes on her, Ira answered, calmly and simply:

"If everyone on earth really loves peace, there will never be any war. We must all love peace, and then all people on the globe will live tranquilly and happily." Her words brought noisy assent. Yura added that he thought Soviet and American children should meet more often and exchange ideas so they would understand each other better. "Then," he said, "we could avoid suspicion and mistrust from our school years on, and it would be easier for us as adults to work with each other and be friends."

"And what do you think?" he asked David in return.

David agreed with the Soviet children, and in response to everyone's obvious approval, again said how important it was to exchange ideas.

When the noise quieted down, Yura commented: "Now you see how useful meetings like this can be. It looks like we have the same ideas about many things. We'll make it a point to tell that to our friends when we get home."



DMITRI SHOSTAKOVICH'S "LAKE" QUARTETS

THE SMALL HALL of the Moscow Conservatory was astir with anticipation when music lovers of the Soviet capital gathered there recently to hear Shostakovich's Ninth and Tenth Quartets.

True to its tradition of introducing Shostakovich's chamber works to the world, the Beethoven Quartet, as always, gave an inspired and consummate reading of the Soviet composer's latest compositions. The two violins, viola and cello told their fascinating stories like four conversationalists, each with its own peculiar temperament and character.

The Ninth Quartet consists of five small movements with contrasting moods but a single construction. The pensiveness of the viola's opening passages and the consoling tones of the cello's responses resolve into a charming Allegretto that needs no verbal explanation. The dramatic undertones lead up to a culmination of intense ideas.

The Tenth Quartet begins with a harmonious duet between violin and cello. But soon their serene intimacy is broken by the alien and grating notes of the Allegretto furioso (the second movement), and one is reminded of the barbarism that still exists in the world. The viola strikes a note of peace again with its poetic tale of the powers of beauty and harmony triumphant over the powers of evil, and the instruments pick up the mood in turn. The finale is reached when the soulful, moving melody gradually turns into a gentle hymn of praise to life.

Both quartets were written last summer, the Ninth in Armenia and the Tenth in Hungary. "I wrote them at two lakes," said Shostakovich, "the Sevan and the Balaton."

RADIO MOSCOW PROGRAM

(All P.M., except Sunday PST—A.M.)

WHAT IS COMMUNISM?: *Tuesday at 8:15 and 10:15 EST; 8:15 and 10:15 PST and repeated on Sunday at 10:00 PST.*

SCIENCE AND ENGINEERING: *Tuesday and Friday at 9:15 and 10:15 EST; 7:45 and 9:45 PST; Sunday at 9:30 PST.*

YOUTH PARADE: *Thursday at 7:15 and 9:15 EST; 7:45 and 9:45 PST and repeated on Sunday at 10:45 PST.*

PERSPECTIVE ON THE ARTS: *Sunday at 7:15 and 9:15 EST; 7:45 and 9:45 PST.*

HANDS ACROSS THE OCEAN: *interviews and discussions on how the Soviet-American relations find expression at the person-to-person level: Monday at 8:15 and 11:15 EST; 8:15 and 10:15 PST.*

MOSCOW MAILBAG: *Wednesday, Thursday, Saturday and Sunday at 8:15 and 10:15 EST; 8:15 and 10:15 PST, and on Sunday at 10:15 PST.*

CONVERSATIONAL RUSSIAN: *weekly lessons: Monday at 6:15 and 12:15 EST; 7:45 and 9:45 PST.*

NEWS AND COMMENTARY: *daily on the hour at 5:00 to 12:00 midnight EST; 7:00 to 11:00 PST.*

MUSIC FROM MOSCOW: *daily at 9:45, 11:15 and 12:45 EST; 7:15, 8:45, 9:15, 10:45, 11:15 PST (except Friday); and Sunday at 9:45, 10:30 and 11:00 PST.*



After the October 1917 Revolution many of Russia's intelligentsia left the country. The young Soviet Republic needed scientists, engineers and technicians desperately. Junior officers were given army commands and old revolutionaries appointed to head ministries. But it took more than courage and revolutionary fervor to create a scientist or an engineer. And there was no time to wait for the new generation to grow up.

Early in the twenties the government set up workers' schools. Their object was to give people with little formal schooling sufficient background in a three- or four-year period to enter schools of higher education.

Here are brief biographies of four students and a teacher at one such workers' school, in Vologda. Among its graduates are diplomats, academicians and even a minister. The people we shall tell you about have more modest vocations, but their lives, like those of the more highly placed graduates, reflect this stirring epoch in the country's history.

BY PAVEL ANTONOV

WORKERS' SCHOOLS



AN OPTIMIST AT 80

Alexander Golovin is a Russian intellectual who looks as though he just stepped out of a Chekhov story. When he talks about someone's good points, he overflows with enthusiasm; when he inadvertently mentions a bad point, you might think he was apologizing for himself.

For more than 50 years he has been teaching literature, and the profession has left him with certain speech mannerisms. He is a little old-fashioned and inclined to a rather florid style of expression.

The old teacher carefully preserves dozens of invitations to alumni gatherings at the many institutes where he has taught. He has four such invitations from his Vologda Workers' School students.

"A poet," Golovin likes to say, "should be remembered for thousands of years; for a teacher it is enough if he is not forgotten after a few dozen years."

Alexander Golovin is typical in many ways of the generation of Russian teachers at the turn of the century. He graduated from the St. Petersburg Institute of History and Philology in 1911. He took part in student demonstrations, and his record contained the note: "Inclined toward Bolshevism." He was sent to work in a far-off province—to the town of Bratslav in the Ukraine—as a kind of exile.

Soviet power came to Bratslav early in 1918. You were risking your very life if you were an active supporter of the new regime. In less than two years reactionaries murdered two full staffs of the local revolutionary committee. Principal of the town school, Alexander Golovin became a member of the third committee in 1920. A brave teacher—this somewhat unusual combination of words characterizes him in that period of his life.

In 1922 he moved to Vologda where his wife's relatives lived. Soon the local Department of Education invited him to teach at the newly established Workers' School. "The students," recalls Golovin, "came from the very depths of the people; they turned out very well.

"Take, for instance, Gennadi Obichkin. Today he is a well-known Soviet historian. When he first came to me, he was a simple peasant youth in a homemade shirt. 'Well,' I thought then, 'it will be no small problem making intellectuals out of such students.' I gave him an extract from Pushkin to read aloud. I did not notice that the text contained several lines in French. Suddenly I was aware of his reading French. It turned out that during the First World War he had served in the Russian expeditionary forces in France."

Alexander Golovin will soon be 80. He retired on pension only recently—much later than the law allows. Despite his advanced age he has a fine memory and can vividly recall things that happened half a century ago.

Optimism is a word we usually associate with the future. Alexander Golovin is optimistic about the present as well because he remembers the past.



SHE CAUGHT UP WITH TIME

Time seemed to run ahead of itself for Khristina Zaplatina; things happened all too early to her.

Her father died early, and Khristina had to stop school. She started working early, at the age of 10, taking care of somebody else's children to support her family—an invalid mother and a younger brother. She was married early (before she was 17) when the son of a rich peasant on whose farm she had worked for two years took a fancy to her. After she bore a child, her husband took up with another woman and threw Khristina and the baby out of the house. It was then that her mother, who had been sick for a long time, died—also too early. And there was no money to pay the doctor.

At the beginning of the twentieth century "revolution" was a word often heard in Russian villages. It entered Khristina's life with the Bolshevik slogan "Land to the peasants!" One of the poorest peasant women in the village, she was among the first to join the Communist Party.

In 1928 she became a member of the militia, the police force. Not too long after that she doffed her militia uniform to enroll at the Vologda Workers' School. Three years later, on September 1, 1933, she entered the First Medical Institute in Moscow. She lived in a student hostel on Pirogovskaya Street with her daughter Natasha. Khristina used to take her daughter along to the lectures; there was nobody to leave her with. Those days people needed ration coupons for food, and Khristina's fellow students chipped in theirs to provide additional food for the child.

When Khristina graduated from the Medical Institute, she wanted to return to her native Arkhangelsk Region. But Moscow needed doctors badly, and she stayed on.

In June 1941 she was wearing a uniform again, this time an army medical officer's. During the first months of the war, when the Red Army was retreating, Zaplatina was in charge of several evacuation hospitals. In 1942 she supervised the distribution of stored blood, a very precious commodity those years. And in 1943, when the Soviet troops began their general offensive, she was at the head

of one of the epidemiological groups that entered the liberated towns together with the Soviet Army. Their task was to prevent epidemics.

Since 1954 Khristina has been working directly at the Ministry of Public Health. She hears the complaints of those who, because of red tape or some other reason, are not getting the medical aid at home they are entitled to. Two years ago the country's principal medical newspaper carried a story about Khristina, and since then letters have been arriving in a stream from patients she had long forgotten. They all begin: "Dear Khristina Vasilyevna, Thank you so much for your help. . . ."



MIKHAIL KISELEV'S MOUNTAINS

One day in March of 1917 the portraits of the czar and czarina were pulled down from the school walls, the teachers left, and the children went home. Third-grade pupil Mikhail Kiselev liked it that way and announced himself for the Revolution.

In 1921 his father decided that since the family had no cattle and nothing to eat, two of the four brothers should go to town to look for work. They drew lots. Mikhail won—or lost; there was no telling which at the time.

He went to the nearest town, Vologda, one of the 50,000 jobless crowding the Labor Exchange. For three years he took what jobs he could find. At the evening school attached to a cannery he went through the fifth grade.

To enter the Vologda Workers' School, you had to take an entrance examination. The first question was in arithmetic: Which is larger, one-third or two-fifths? The second was in politics: What is the difference between a poor peasant, a middle peasant and a kulak? Mikhail answered both question correctly.

The Workers' School students lived communally. They pooled their stipends (27 rubles each) and, with a ration coupon provided by the local trade union, bought shirts, shoes and trousers for those who needed them.

Kiselev finished the four years in three. In September 1931 he became a geology student at Moscow University, where he specialized in field exploration of soils preparatory to the laying of communication lines.

After graduating from the university, he went to the Far East. His first independent job was a study of icing in railway tunnels of the Trans-Siberian line, very important then—they were building the second track of the world's longest rail line.

With the war came sleepless months of nerve-racking work when he was helping to build defenses around Moscow. The most vivid of his wartime impressions was that of February 2, 1943, in Volgograd. Against a bright sun, gray columns of war prisoners shuffled out of the shattered city, and banners, dark because of their having been so long in smoke-filled dugouts, waved all along the Volga.

After the war he worked in the Institute of Foundations for Underground Structures. In 1949 Kiselev defended his master's thesis and several years later got his doctor's degree.

At present he lectures to future geologists. A chunk of nickel ore and a piece of coal lie on his desk. Once, when a graduating student who was not happy about leaving the capital for a job in a distant part of the country came to see him, Kiselev pointed to the two minerals and said: "These are samples from two big underground mountains, nickel and coal. I found them in Western Siberia. There are no such mountains in Moscow."

Two years later Mikhail Kiselev received a heavy parcel containing several mineral samples. The student had followed his professor's advice. He had gone looking for his own mountains.



VOWS SHE NEVER KEPT

Talleyrand, the early nineteenth century French statesman, once said: "Don't act on first impulse. It's likely to mislead you." Klavdia Nechayeva has done precisely that—acted on impulse. The results have often been frustrating and disappointing, but just as often they have been rewarding.

Klavdia joined the Young Communist League (Komsomol) as a protest. Her mother was a scrubwoman in a Kargopol high school, and that gave her daughter the right to study there and to join the Girl Scouts.

Early in 1921, when the White Guards were attacking the city, Nikolai Khudyakov, head of the Kargopol Young Communists, addressed the local Boy Scouts. He urged them to put away the bows and arrows they were playing with and to take up rifles instead. The meeting was held on the second floor, and in the uproar that followed Khudyakov was kicked down the stairs.

Nechayeva resented this as well as the fact that the Boy Scouts wouldn't let the Komsomol leader have his say, so she joined his organization. A few days later all Komsomol members were mobilized for the front. Nechayeva wept all night, tied up her belongings in a bundle, and in the morning left for the Komsomol District Committee. There she found a notice tacked on the door: "Boys to the front; girls go home. District office closed." Klavdia swore she was finished with the Komsomol.

Subsequently she took another vow, never to be a teacher. On a bet, one spring day when the ice was breaking up, she was jumping from one piece to another across the Onega River. A teacher happened to see her. The school principal was informed and Klavdia was expelled.

But Klavdia kept neither of her vows.

She joined the Komsomol again. The organization sent her to the Vologda Workers' School, gave her a new start. "Technique instead of talk" was the slogan of the students at the school. By talk they meant the humanities.

Half a year before Klavdia was to graduate, a representative of the Komsomol Central Committee came to Vologda. He said: "We not only need people who know how to smelt steel but also those who will teach young people how to do it." Nechayeva was moved to speak and urged everyone present to go to teacher-training school. Someone in the audience asked, "How about you?" "That's where I'm going," she said. It was the first time the idea had occurred to her.

She went to the Leningrad pedagogical institute. Asked to select her specialty, she decided against the customary history, geography or literature and chose teaching deaf-mutes instead. Klavdia has devoted 32 years of her life to it, and both of her daughters have followed in her footsteps.

The principal of a model school for deaf-mutes, she has written several books and textbooks, and talks about her profession with great enthusiasm. But if she had to choose a profession now, she would probably select another. Moscow, with a population of more than eight million, has only one remaining school for deaf-mute children; all the rest have been closed. Most deafness among children comes mainly from complications after typhus, scarlet fever and encephalitis. And these diseases have been practically wiped out.

Klavdia's husband, Nikolai Kamkin, is also a former workers' school student. For husbands and wives to have different surnames was not unusual at the time. Those years many marriages were not registered. But the law declared: If marriages are not registered, the children are illegitimate. Kamkin and Nechayeva registered in 1954, 30 years after their wedding. According to Soviet law there must be a 10-day wait between the time the marriage application is handed in and the license issued. The clerk saw no reason to depart from the letter of the law even in this long-delayed instance. Nikolai was annoyed, Klavdia unruffled. "Gives you 10 days to change your mind," she said.

Nikolai Kamkin, an aviation engineer, retired on pension a year ago. Now he spends a good deal of his time reading about flying. His favorite writer is St. Exupéry.

There is much flight talk in this family, partly out of respect to grandfather but mostly due to the fact that the grandsons were born in the space age. Klavdia is still impulsive, even on this subject. This comment of hers is very much in character:

"Remember that Italian pilot who perished in the desert? The remains of his plane and diary were found 25 years after his death. He waited in vain to be rescued by his wife, also a flier. That's something I can't understand."

By Yevgeni Vinokurov

POETRY AND THOUGHT

I HAVE NEVER HEARD a definition of poetry, nor of anyone who ever provided one, that covered its multiform aspects. About poetry I can only repeat what the ancient sage said about time: "I know what it is, but ask me what it is, and I no longer know." The fact that poetry defies definition, that it cannot be wrapped in a formula, is a promise to me that it will always search the immeasurable depths of thought and feeling for its values.

Only those whom poetry itself has rejected, reject poetry. When there is poetry, it passes unnoticed by many; but when there is no poetry, everyone is throttled. There are, of course, people who are hostile to poetry. Fyodor Dostoyevsky had such a character in his novel *The Brothers Karamazov*. Smerdyakov, he called him, was the very embodiment of mediocrity and sycophancy. Poetry meant nothing to him: "To poetize, why that's stuff and nonsense! Judge for yourself: Who in the world ever talks in rhyme?"

But try to purge the ages of poetry. The less poetry, the more emptiness. If a definition there must be, then I would say that poetry represents mankind's unremitting effort to transcend death. Mankind fears to be left without poetry.

To me poetry is essentially thought. Great though the importance of music may be, the word, the logos, the foundation of all principles, is immeasurably greater. Thought never ages; Dante, "the universal man," he was once called, stays forever young.

Poetry is the highest reach of thought.

Nikolai Zabolotsky once wrote: "He who lives his life most fully, who is accustomed to poetry from childhood, has true faith in the invigorating force of the pithy Russian language."

The search for originality, first of all, is not a problem of searching for means of expression; it is a problem of the poet's conscience. There are those who think that innovation is a mechanical exchange of one set of artistic "methods" for another. They conceive of the history of poetry as a straight and endless stretch of track on which each new racer outruns his predecessors to set a new record. Both the athletic analogy and the poetic attitudes it engenders are false. The real "search," if you like that word, is not in the area of poetic technique, where progress is measured in millimeters, but in the sphere of thought, of the psyche, where leaps of hundreds of thousands of miles are feasible. True innovation proceeds vertically and in depth.

Technique is an important matter, but in poetry technique is not nearly so much craftsmanship as it is obstetrics. Technique is not the sum of ways to manufacture a puppet but the various means to assist at the birth of a living child.

Poets are Masters of Thought. Otherwise they are embellishers of sweet nothings, who only pretend to be saying something. They keep waving their hands and opening and closing their mouths, but what they are saying is quite inaudible. This kind of poetry has its exponents. They see all of world poetry as technique and care not a whit what the poet happens to be saying.

Vladislav Khodasevich, an early twentieth century poet, said of such people in an essay he wrote about Innokentii Annensky that they could not see the human drama for the lyrics. What Annensky's poetry is about does not really interest them: "They are content with the fact that the poet has splendid vocal cords. Reacting to pain (the nature of which is no concern of theirs), he displays all the qualities of a master, in their view, for his cries of distress are both loud and poignant. Just what it is he is shouting about matters nothing to them."

YEVGENI VINOKUROV

INTERNATIONALE

The struggles and strivings of my native land
Cannot be grasped by a mind so rational
That its mean powers do not expand
At the sound of the word:
"Internationale!"
Unhurried is the West
and practical-minded,
Making laws . . . money . . . sober speeches . . .
But oh, my country, how noble do I find
Your yearning to achieve the fathermost reaches!
I believe that,
though the many years pass,
Peace and abundance will come.
In stages
Are we slaking a thirst after the ideal
Unprecedented in the annals of the ages.

* * *

I serve my Muse. At attention I stand
In her presence, trembling 'neath her gaze.
From earliest youth have I obeyed her command
And, submissive, followed along tortuous ways.
A kindly mistress?
Merciful?
Benign?
A brief hour's happiness have I known at best!
She wakes me up in the middle of the night,
Undressed.
A soldier on the march gets more rest!
Still am I faithful, and will be to the death,
Though she be my huntress and I her kill;
And meekly will I murmur with my dying breath:
"Forgive me if ever I have served thee ill!"

* * *

All is not well with me. I have never suffered.
Mere pricks, no more than the burst of a bubble.
No cry, no sob has passed these lips.
What if trouble comes now?
If suddenly I meet trouble?
How shall I accept this evil unknown?
All is peace. All banners furled.
Yet in the deep recesses of my heart I own
The tragedy that underlies the world
And am filled with apprehension.

At the beginning of the 1920's the poet Georgi Shengeli calculated that Pushkin's poem "The Monument" was exactly 1.35 times better than Bryusov's poem of the same title. The proof, he claimed, was that Pushkin used 1.33 consonants for every vowel, while Bryusov had to use 1.44.

The virtue of a poem lies in the depth of its thought, something which neither a simple abacus nor the most up-to-date computer can measure. Why do so many poems say so little? Norbert Wiener, the founder of cybernetics, once remarked that people who choose communication as their specialty often find they have nothing to communicate.

The aim of poetry is truth.

We must not, of course, dismiss technique. In surmounting technical difficulties, the poet develops energy that might well kindle fresh thought. There is both useful and disserviceable friction in nature. The disserviceable kind hampers motion. Motion, however, would be impossible without resistance. This is art's great *limitation.*

Arthur Rimbaud began to write poetry without meter and rhyme in the second half of the past century. I like free verse. I have used the form and will go on using it. What I object to is it absolutism. If we are going to be free of dogma in poetry, let us be free of the dogma of free verse as well.

Rhythm is a vital element. Poetry is rhythmically arranged emotion. Language has a tendency to think for itself. Every language has its own spirit, its own inner laws by which it abides.

In verse language is shaped into whole blocks rather than separate letters. A poem will usually constitute a large mixture of language, a single ramified unit. Its earmarks and its limitations as well are the interdependence of its words and its musical reiteration.

I am for exploration, for boldness in poetry, even at the risk of error. Poetry, however, requires not only the heavy hammer of innovation but also the firm, secure and resistant anvil of the old and tempered. Tradition, after all, is our meager living heritage of the past. Only that which is truly alive now will in due course become a tradition, be alive for those who come after us.

A single poem, no matter how good, can tell us nothing about a poet. It is the collection that proves his integrity. There are poems that seem good enough taken individually but clash with one another in a collection, crowding, contradicting and interfering with one another.

On the other hand, there are poems that immediately take on three dimensions when they are brought together. The individuality of the poet is found in the cement of his collected poems. Poetry is the art to which its creator must bring everything, even to the last thing he owns, himself.

Poetry cannot be faceless; it cannot help being introspective. There are poets, however, who, like Narcissus, are fascinated by their own reflection in their inkwell, and it is they, more likely than not, who regard the aspiration to understand one's age as an old-fashioned caprice.

The world is in a crucial moment, and poets must not earn themselves the unpardonable reproach that they estranged themselves from their brothers.

Our twentieth century is the age of specialization in science, of the division of knowledge. Individual problems grow to the proportions of whole fields of study. Scientists working in a single area find it increasingly difficult to understand one another. That Tower of Babel is not frightening so long as we still have poetry with its mission to unite the human race.

Russia was always a land of poetry, the homeland of great poets. Pushkin still lives amid the people, still teaches them, as of old. He teaches them to think deeply, if such a thing can be taught. His poetry is the poetry of thought, and thought is a ray that penetrates all countries in all centuries.

Pushkin was a complete microcosm, and he had his own polarity: the fervor of youth and the wisdom of old age. Gogol once complained that Pushkin had departed without leaving a stairway to his august heights.

All of Russia's writers venerated Pushkin. This was true of Dostoyevsky, Tolstoy, and the entire "holy" Russian literature, as Thomas Mann called it.

No one ever achieved such inner perfection, such harmony of spirit. It was from the foundation he left us that our poetry moved in two directions—the ideal and the real.

Still living amid the people, too, is Mayakovsky. He is very much alive for me. When I read his verses, I feel him breathe, hear all the modulations of his voice. I can still see the inner workings of his spirit.

Mayakovsky shattered all surface poetry, all pseudo beauty, everything that he thought was literary inertia. Though coarse and sometimes smacking of the streets, his language had the angry passion of the Bible, and its artistic impact was extraordinary. It was with the angularity of his verses that he made war on dogma. This was the struggle of truth newborn. His poetry did not serve its own ends but an element which I would call the parent of poetry, Revolution.

Mayakovsky demanded everything from life. Poetry was identical with life. If life had meaning, then poetry had meaning too.

But what about our definition? Poetry is joy. The troubadours of old Provence came close to the truth indeed when far back in the Middle Ages they spoke of poetry as the "cheering science."

I wait—breath bated, head bowed low:
What when trouble breaks this tension?
How shall I meet it?
I do not know.

* * *

Poets have been everything: princes and paupers,
Sailors on the high seas, tillers of the soil,
Clerks scribbling in musty offices,
Squandering on their lyrics the midnight oil,
Reprobates hung for thieving, like Villon,
Cockaded dandies strutting on parade,
Courtiers struggling to suppress a yawn,
Patriots dying with a song on a barricade,
Blind fiddlers in the market place with outstretched hand,
Scholars hemmed in by thick-tomed shelves . . .
But whosoever they were, in whatever land,
They have always been true to their own selves.

NIGHTINGALE

A nightingale is toiling in the midnight air:
Swing the hammer! Push those boulders about!
Lift that load to the stars! Lively, there!
Sweat like a worker, like a laboring lout!
Swing the hammer! Cleave the stone!
More, give us more of your ecstasies!
Sing on in the darkness—frenzied, alone,
You hewer of marble, you feller of trees!
Chop down the oak! Lop off its limbs!
Dig sackfuls of clay to haul on your back!
Sing on, oh toiler, till your head swims,
Till your breath gives out and everything goes black.

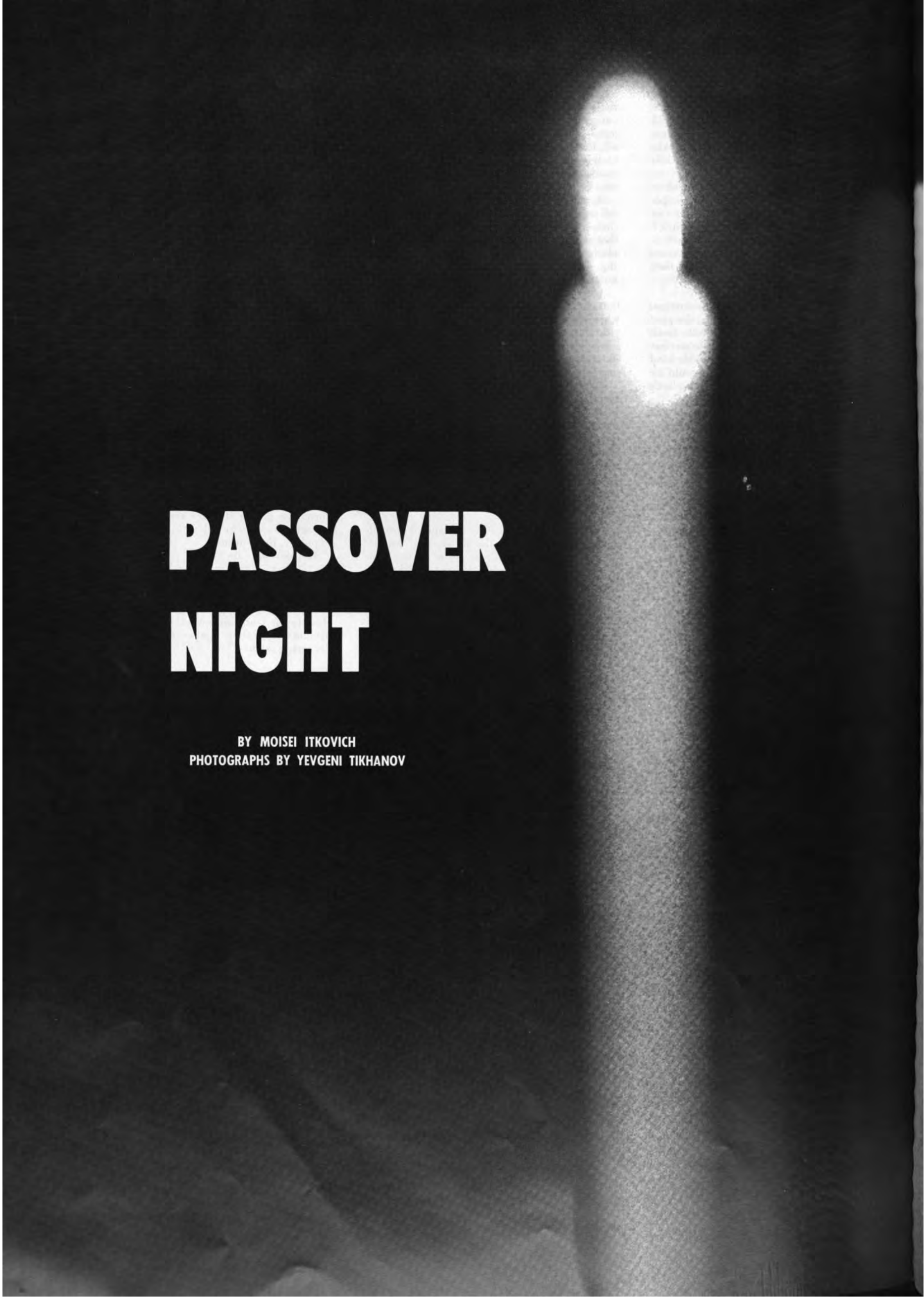
WORD

If ever our physicists should succeed
In splitting the word as they have split the atom,
The peoples of the earth would curse their seed
And curse the fathers who begat them.
"Life," then? And "death"?
The nucleus interred
Within the so sonorous shell,
Once shattered by the splitting of the word,
Would turn our ordered planet into hell.

* * *

The cover of a foreign magazine.
A girl on it, in titillating negligee.
A beauty prize is hers at 17.
Measurements of Venus! Sensation of the day!
Here she is displaying hose.
Here on the beach.
Here at the phone (how her mouth does laugh!),
Here in the shower (skin like a blushing peach),
Here in red tights (that is, her lower half),
Here posed in repose with studied art,
The queen to whom the world bows down.
A chill of horror creeps into my heart:
Is this life's aim, end, sum and crown?

Translated by Margaret Wettlin



PASSOVER NIGHT

BY MOISEI ITKOVICH
PHOTOGRAPHS BY YEVGENI TIKHANOV





SAMUEL MESHOIRER, an old-time friend, has been a linotype operator from his early years. Coming from a Jewish family that never questioned the traditional beliefs, he, too, was religious. When I last saw him, he was a well-built young man with a clean-shaven face. The man who now stood before me was elderly, stocky, bespectacled, his thick beard touched with gray.

We were both glad to meet again. We talked and talked, each telling the other what had happened over the years. Thus I learned that Samuel was the father of 10 and that his wife had been awarded a Mother Heroine gold medal, bestowed upon her in the Kremlin.

As such conversations often do, this one led to an invitation, Samuel asking me over for the Seder. He said his wife would be especially happy for me to meet their children—the eldest were already parents themselves—on the eve of Passover. I was touched by Samuel's invitation; he and his wife were devout Jews, yet he had asked me over, even though I had informed him I was still an atheist.

"If that doesn't bother you," I had said, "I'll be happy to come."

And so at the appointed time I was there. The host himself opened the door when I rang. As I stood in the foyer and looked around, I recalled the rickety old house on the outskirts of the city where he had once lived with his parents, sister, wife and three small children. How crowded that had been! And all the furniture they owned then was a kitchen table, a few wooden benches pushed up against the bare walls, and an old iron bedstead.

I asked Samuel if his married children lived with him.

"No, they have their own apartments. Only my wife and I and the children still at school live here."

The lady of the house, Pelageya Meshoirer, and two boys soon joined us. After greeting and thanking me for having come on time, she smilingly rebuked her husband for not having asked me to sit down in the living room.

"Many guests?" I asked.

"Many people, but only one guest," my hostess answered graciously. "Just our family: the children, our sons' wives, our daughters' husbands, our grandchildren and the in-laws. So you see, you are our only guest."

"Are you sure no one will be offended because I'm not religious?" I asked. "I mean, I respect your beliefs and wouldn't want to hurt anybody's feelings."

"You're not the only heathen here," Pelageya answered with a smile. "Just enjoy the *kneidlach*, the raisin wine and the other good things I've prepared. Our children *are not* religious either. They come to the Seder because they want to please us. They *like these* family evenings around the holiday table."

When we entered the living room, everyone turned toward us. Samuel made the introductions.

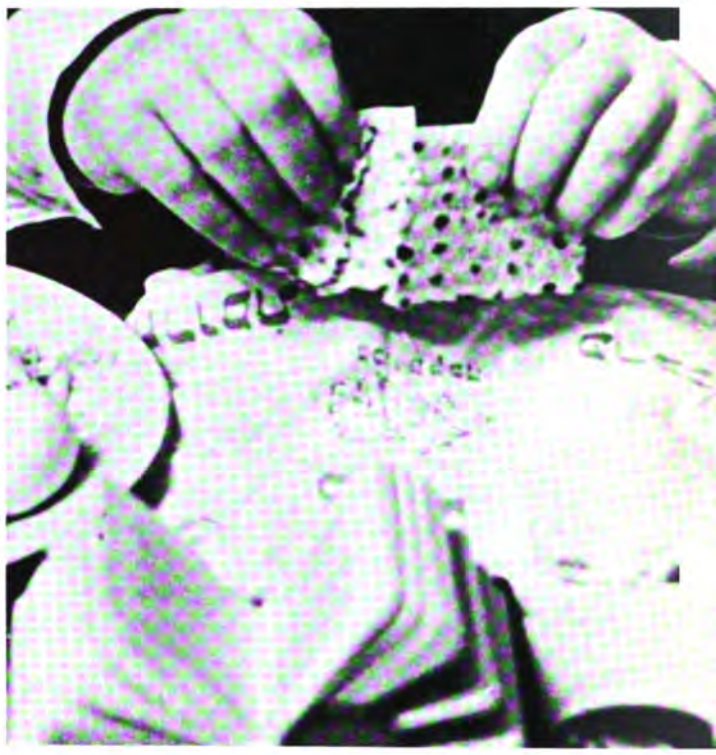
"My eldest son, Alexander. He's 28 already, thank God, and has finished his army service. He's a highly skilled factory worker. His wife Maria works in a hospital. I'm sorry you can't meet her; she got sick and is in the hospital for treatment. This is their son Mikhail. He's close to two-and-a-half years old, a real little



(Left) In the usual order are: the Seder host Samuel Meshoirer, son Alexander and daughters Tamara and Bella. (Right) Mother Heroine Pelageya's hands are shown in prayer. Quiet now, they had kept a furious pace preparing the holiday feast—the magnet which always draws the couple's children and their families to this annual celebration. Only the matzoth (unleavened bread) were not homemade. They were ordered long in advance from the bakery of the synagogue to which the older Meshoirers belong. This year they bought 35 pounds, which are to be eaten instead of bread for the duration of the eight-day holiday. (Below) Samuel raises his glass of raisin wine for the first of many times during the service. We also see him breaking the matzoth at the start of the meal.







devil. So far he's their only child. His grandmother is crazy about him. You can see why."

"This young man is my second son, Mark. He's an aviation engineer. He knows a lot about many things but not too much about religion; he's been too busy with his mathematics. But that doesn't seem to stop him from enjoying a Seder!"

"It's just that I have no principles," Mark said. "You know, the flesh is weak. You have to be made of iron to be able to pass up the *kneidlach* Mother makes. And as for her wine. . . ."

"All right, all right!" Samuel interrupted. "Let me introduce you to his wife Mila. She's an engineer too."

"Bella, Bella, come here!" my host continued, addressing a tall, statuesque woman. "This is my eldest daughter. She's a seamstress in a clothing factory. And this young man is her husband Yevgeni, a subway mechanic. His father is on pension, but his mother still works. They'll be here soon, so you'll meet them. And this is their daughter Marina. She's three years old. Marina is our second grandchild."

The children came running into the room, yelling, "Come to the table, come to the table! Grandma wants you to come to the table."

We all went into the dining room. There, on a long table, set for 20, stood a pair of tall silver candlesticks with candles. In the center of the table was a large goblet of Passover wine, for the Prophet Elijah. On either side of it were the traditional *haroset*, a dish made of nuts, and *morar*—"the bitter herbs," horseradish. Goblets of wine were at each place setting, small ones for the children.

The hostess came into the dining room. Bowing to all, she said, "*Gut yontev* (Happy holiday)!"On the left side of her blouse she wore the gold star of Mother Heroine. The greetings over, she approached the table, lit the candles, and stood there, her hands folded across her breast in prayer.

Then the others took their places. The first to be seated was Samuel. He sat on a small divan piled high with cushions, the Seder "throne" for the head of the family. His wife took her place beside him.

When all were seated, Samuel placed three squares of matzoth one on top of the other. The one in the middle was the *afikoman*, to be eaten at the end of the feast. According to tradition, he hid the *afikoman* under a cushion. Then the youngest boy turned to the head of the family with the first of the four traditional questions:

"Why is this night different from all other nights of the year?"

The head of the family read the answer with deep feeling:

"We were slaves unto Pharaoh in Egypt. . . ."

The young people sat quietly and listened to the prayers and the ancient recital of the Exodus from Egypt. Then the glasses of tasty raisin wine were filled; Samuel passed the *morar*, the *haroset*, the hard-boiled eggs and other traditional dishes; the women brought in mountains of matzoth and plates piled high; and everyone set to.

After the feast the old folks continued to read the old tales and sing the old songs. It was not until after midnight that they sang the "Khasalsidur Pesach" (The Passover Feast Is Over). And the guests departed.

CUTS IN MILITARY SPENDING: THREA

BY IGOR GLAGOLEV
Chairman, Economic Commission
Soviet Peace Committee

IN 1964 the Soviet Union slashed its military spending by 600 million rubles (4.5 per cent), and in 1965 it will cut it by another 500 million rubles—a reduction, by comparison with the 1963 figure, of 1.7 billion rubles.

The Soviet Union is ready to cut its military budget still more if other powers follow suit. Its proposal is that the Great Powers reduce military spending by 10-15 per cent or any other amount agreed upon.

The reduction in defense expenditures made it easier for the Soviet Union last fall to raise the wages of 18 millions of its citizens—notably teachers, medical personnel and those in the service industries—and to readjust pensions upward. Our country's planned socialist economy, we should note, would suffer no serious dislocation even if defense allocations were reduced to zero as a result of general and complete disarmament. All funds thus released would immediately be used to develop the economy, scientific research and cultural facilities more rapidly, and to raise living standards.

Defense cuts make more capital available for such pressing peacetime needs as the development of the chemical industry, fertilizer manufacture and farm mechanization. There are other advantages too. By reducing military personnel, we can increase the civilian labor force; and we can use the war materiel we have on hand, ammunition and the like, for peaceful purposes.

The Soviet Union presently uses discarded tanks (after a slight adaptation) in agriculture and for peacetime jobs in the Arctic, and artillery in fighting avalanches. It is even simpler to find uses for military supplies and installations that do not differ essentially from their civilian counterparts—various raw materials, fuel, transport, communications systems, barracks, airports, etc.

A very interesting and economically important example of the peaceful application of military supplies is the use of explosives for earth-moving work. Theoretical and practical research in the problem has been done by Professors Georgi Pokrovsky, Mikhail Dokuchayev and other Soviet scientists. Using nonnuclear bombs, mines and torpedoes (without additional expenditure on adaptation) released by the arms reduction, the Soviet Union has started building, with directed blasts, dozens of dams and canals and hundreds of reservoirs in arid localities. War materiel is also being used to strip mineral deposits for open-cut mining, to erect islets for off-shore oil extraction, and for other operations. The procedure is economically valuable not only because we are using explosives to create rather than destroy, but also because it requires much smaller expenditures of manpower, machines, fuel and auxiliary work than building the same installations with excavators, bulldozers and dump trucks. We can cite many examples to prove the point.

The Soviet public realizes that in countries where the economy is based on private ownership and where annual government war orders have become very important mainstays of business activity and a source of profit for the big monopolies, the idea of cutting military expenditures is violently opposed by those who reap the fruits of the arms race. However, we believe that a coordinated cut in military expenditures is consistent with the fundamental interests of every country. Besides reducing taxes, it releases funds to develop the civilian branches of the economy, provide housing, build schools and medical facilities, and to solve many social problems for which the necessary funds are presently lacking. In the final analysis, the life and death interests of the overwhelming majority of the people should certainly override the selfish interests of the small groups that grow rich on the arms race.

A gradual and coordinated reduction in military expenditures by 10-15 per cent would be easier to carry through than general and complete disarmament. It would require no special domestic or international preparation. A statement issued simultaneously by all the powers, for instance, would do the job. This would not alter the existing balance of forces; each country's defense system would remain at much the present comparable level. At the same time an agreement by all countries, and especially the Great Powers, to begin reducing military spending (which has now become chronic) would do much to normalize the international situation. Following on the Moscow treaty on banning nuclear tests in the atmosphere, the agreement on banning the orbiting of space vehicles with weapons for mass annihilation, the joint steps taken by the USSR and the USA for conducting peaceful research in outer space, and the peaceful utilization of nuclear energy, an agreement for a coordinated reduction in military spending would indubitably be a new and important step toward disarmament.

Cuts in military budgets would have a beneficial effect on the economy of all countries. It would stabilize currencies, cut budgetary deficits, weaken inflationary trends, provide more money for socioeconomic needs and lower taxes.

Nor should the politico-psychological effect of such a step be underestimated. The knowledge that the arms race has stopped would certainly have a favorable effect on the international atmosphere. Perhaps not all countries would immediately agree to cut military allocations. In that case the initiators could slow down the rate at which they would reduce their military budgets. The signatory powers would retain their existing defensive forces for some years, while the other countries would have time to appraise the situation, overcome their fears, go along with the decision to reduce military budgets, and ultimately agree to general and complete disarmament.

An agreement on the simultaneous reduction of military spending would not require especially complicated controls, so often a stumbling block to disarmament. Control over the reduction in military spending could be carried out in two ways: Firstly, representatives of the United Nations or the initiator countries could sit in when each country discusses and adopts its military budget. It stands to reason that the countries would have to make public the total sum of their military allocations before and after reductions are made. Secondly, the countries would undertake to publish progress reports on their projects for the peaceful development of the economy, science, engineering and culture financed with the funds saved. Such a double control would be a sufficient guarantee that the announced cuts in military spending were being carried through.

Verification would also come through the existing media of national and international information. Large-scale reallocations of manpower and material resources could not pass unnoticed by other states. The reduction of military expenditures by approximately 10 per cent a year

...R BLESSING?

and the corresponding expansion of civilian programs would mean, in the case of the United States or the USSR, for instance, the reallocation of billions of dollars and rubles, hundreds of thousands of people, and millions of tons of various materials from military to civilian uses.

Internal controls could also be established to check up on military spending. There would be no disarmament at this stage and therefore nothing to set up international controls for. If, however, other agreements were concluded at the same time—for instance, to reduce armaments and troops in a particular region—control posts could be set up in that region and some elements of international or bilateral control maintained.

While the Soviet Union is a consistent advocate of general and complete disarmament and strives for international measures and agreements that would rid mankind of the threat of a new world war, it is well aware of the special problems of other countries.

The USSR does not insist, for example, that the United States immediately cut its military budget to the level of the Soviet Union's defense allocations, although there would be nothing unfair in this demand. In this instance the Soviet Union takes into consideration the difficulties the American economy may face in conversion and is willing, as a step toward disarmament, to agree to a proportionate reduction of military spending.

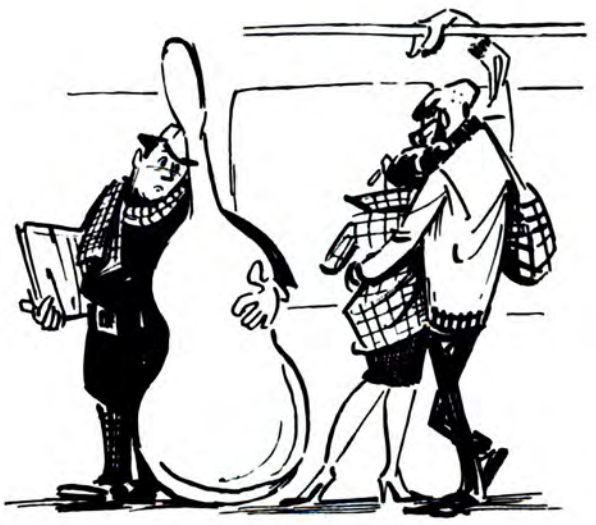
Not only would the countries that take the step benefit economically from a reduction in military spending but many others as well, particularly the developing countries of Asia, Africa and Latin America. Estimates show that if 25 per cent of present military allocations were used for economic assistance to the developing countries, they would reach the level of the industrially developed countries of Western Europe in a decade.

Smaller military budgets would, as a matter of course, curtail some of the very expensive diversified research now being done to improve armaments. The brain power and facilities presently devoted to military research could be channeled for peaceful progress. According to data at hand, from 50 to 66 per cent of all scientific and technical personnel in the world is now engaged in creating and improving armaments. Consider how enormous a drag this is on the rate of scientific-technical progress in every other field of endeavor.

A simple reduction in military expenditures would almost at once facilitate fulfillment of such international scientific and technical development programs as the International Years of the Quiet Sun (1964-1965), the world meteorological service and cooperation in the peaceful uses of outer space and in Antarctic exploration. With general and complete disarmament there would be not only the direct accrual from the retooling of science and technology for peace but an enormously expanded development as a result of unhampered international scientific and economic cooperation, the lifting of existing restrictions, the free exchange of information, etc.

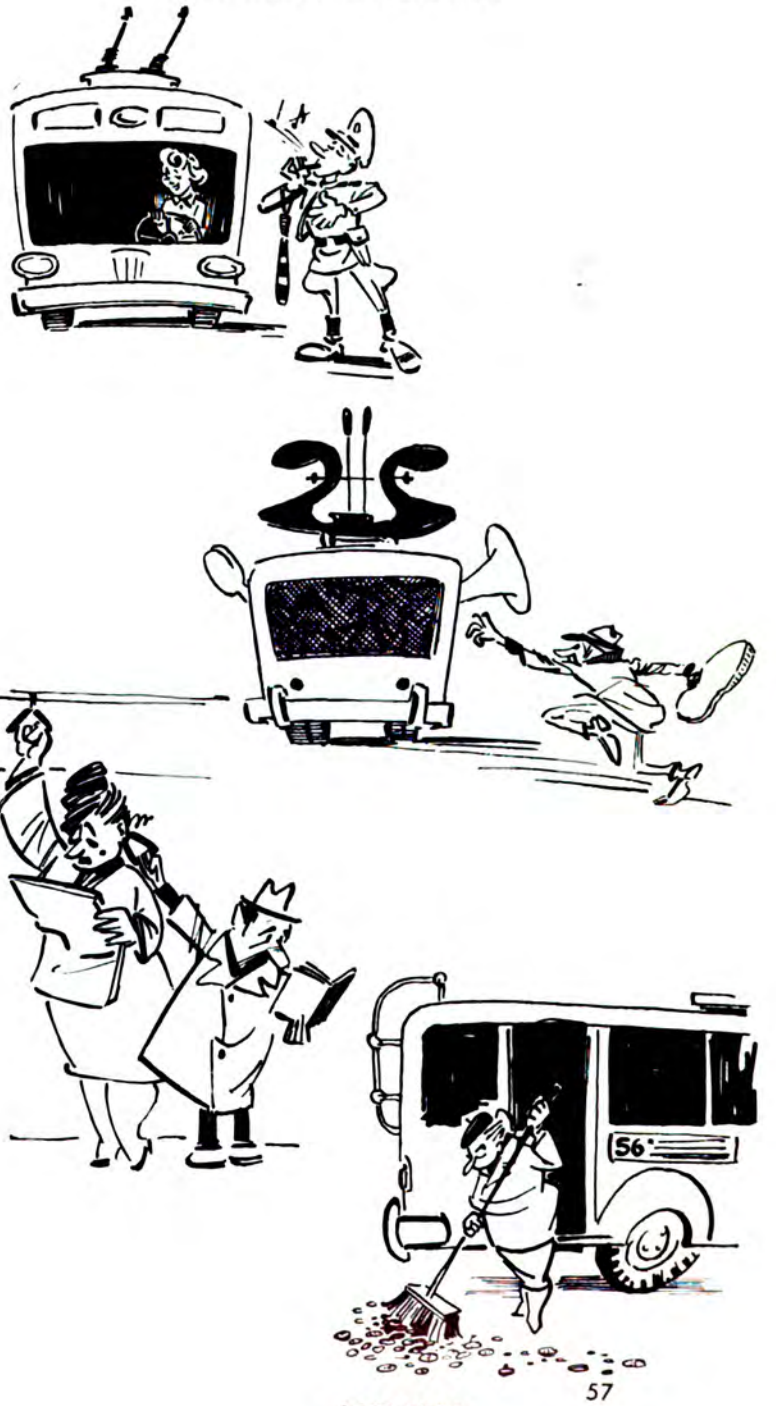
The Soviet Union calls on all countries to reallocate military budgets for peaceful purposes. That step would reduce the danger of a new war, would help expand economic cooperation among all countries, and would pave the way for an international agreement on general and complete disarmament.

HUMOR



MOSCOW TROLLEY

Drawings by Vitali Chernikov



LAST STOP

YUNOST FOR ALL GROWNUPS



By Marina Khachaturova

Photographs by Sergei Solovyov

The muse still haunts this spot, where the heroine of Leo Tolstoy's War and Peace, *Natasha Rostova, sat a century and a half ago.*



London residents know the house where Sherlock Holmes lived. Muscovites are just as familiar with the mansion of the Rostovs, the characters in Leo Tolstoy's *War and Peace*. The central part of the Rostov House is now occupied by the Union of Writers of the USSR, and the right wing by the editorial offices of the magazine *Yunost (Youth)*. The quarters are not large, and the magazine was offered others, which it refused because it could not bring itself to move out of so famous a fictional landmark.



The hall outside the editorial offices is a gallery for the works of young Soviet artists.

This same narrow corridor in the quarters of the magazine has echoed the jubilant cries and doleful laments of scores of would-be authors.



These young men who make up the humor and satire department are more inclined to the quixotic than to Sancho Panza's pragmatism. This is a magazine edited by youths for the youthful, yet its readers' ages range from 14 to 70.

FROM 100,000 TO 1,000,000

Yunost is a magazine of the young and for the young. But both these assertions need to be qualified. In the first place, the material published in *Yunost* is not limited to the works of young authors. Many distinguished Soviet prose writers and poets appear and reappear in the magazine. Secondly, it is read by people as young as 14 and as old as 70 plus. It is printed in 1,025,000 copies, an unusually large number for a youth magazine, considering that it started with 100,000 only a decade ago.

How does *Yunost* differ from other similar Soviet magazines, for example *Molodaya Gvardiya* (*Young Guard*) or *Smena* (*The New Generation*)? And why has it won so large an audience?

Yunost makes it a practice to discuss some very important issues, to search out and publish controversial works around which feeling runs high. It constantly looks for, finds, and features new names. It has an editorial style as individual as magazines many years its senior. It is addressed to the young people of our day, of the 1960's, entering on adulthood. Its themes are eternal—love, friendship, duty, work, ideals—with the changes of interpretation life and time make. Ten years is not a long time, but it is long enough for a new generation to grow up, different from the one preceding in some ways, alike in others.

The fiction in *Yunost* reflects the current trend in Soviet writing. We can trace the changes in character emphasis over the decade the magazine has appeared. Some eight or nine years ago the typical young character was more infantile, more introverted. The stories were of the confession type, interesting and candid, but their characters were criticized for too much self-analysis and too little action. Today, as we can see from the stories published in *Yunost*, the young character is more mature, he is moved to action, overcomes inertia, knows where to use his energy, feels responsible for everything going on everywhere.

Every young reader of *Yunost* finds something of special interest to himself in its 112 pages. The magazine is not only literary, it is concerned with every aspect of the country's cultural and social life. It helps young people decide not alone what careers they will follow but what sort of people they will be. Among the contributors to the nonfiction section of the magazine are such well-known personalities as physicist Bruno Pontecorvo, Lenin's companion-in-arms Elena Stasova, outstanding World War II general Marshal Konstantin Rokossovsky, and national hero of Greece Manolis Glezos. Glezos did an article for *Yunost* while he was still in prison. He wrote it on small pieces of paper and turned it over piecemeal to someone outside.

FAMOUS, THANKS TO *YUNOST*

Many works of recent years that created something of a stir on literary Olympus were first published in *Yunost*—the poems of Andrei Voznesensky, Vasili Aksyonov's story "Oranges from Morocco," and Victor Rozov's play *A,B,C,D,E* . . . Incidentally, these last two authors are now on the editorial board.

Vasili Aksyonov's "Stellar Ticket," a story of 16- and 17-year-old boys and girls, stirred up heated discussions and rather violent differences of taste and opinion. Some contended that the characters spoke in a language that was not human but some sort of unnatural slang. Others condemned them for their frivolous attitude toward life. Still others felt that Aksyonov should not have written about such people sympathetically. A fourth protested that they were not typical of Soviet youth. But many others passionately defended the story and approved of the characters for their independent thinking and their insistence on seeing for themselves.

Yunost does not publish only controversial works, of course; many receive unanimous approval. Examples are Boris Balter's "So Long, Boys!" Vasili Aksyonov's "Colleagues," and Yuri Pilyar's "People Remain People." It would be quite impossible to list all the works that have become widely known thanks to *Yunost*. They are filmed and staged and frequently published abroad. Yaroslav Golovanov's story "The Forgers of Thunder" is a case in point. It has been published in 30 different languages. A first work by this young author, it is, perhaps, not perfect from the craft point of view, but the theme is engrossing—rocket builders and cosmonauts getting ready for a space flight.

The magazine can also take credit for discovering many writers who are now popular. It is very receptive to beginners and looks for signs of the future master in the immature young writer. *Yunost* introduces its readers to new poets, fiction writers, essayists, journalists and critics. The June issues of the magazine are traditionally devoted to authors not yet 25. An interesting sidelight—*Yunost* introduced one of the "space trio," Boris Yegorov, to the public by printing two of his articles about space medicine. He was just a doctor at the time, not a cosmonaut.



FROM ALL OVER

Before its tenth birthday—this June—*Yunost* has already outgrown its present million-copy edition. And the more readers, the more letters and manuscripts the magazine receives. Its mailbag is most diverse, varying from short notes written by children to bulky manuscripts of novels. The staff people who work with the young writers and in the letter department don't have an easy job; the magazine receives as many as a hundred letters and manuscripts a day. But no one complains; full mailbags are proof of the magazine's popularity. Most of the letters are reactions to works published in *Yunost*. One article or story may bring in a thousand letters.

Another evidence of *Yunost's* wide popularity is the number of foreign writers who visit the office when they come to the Soviet Union. John Steinbeck, Jean-Paul Sartre, J. B. Priestley, Richard Aldington, Mitchell Wilson and Thor Heyerdahl have all dropped in for a talk. Heyerdahl's *Kon Tiki* was first published in the Soviet Union in this magazine.

What is there to say about *Yunost's* plans for the future?

Only that the magazine will try not to age. It wants to stay as spirited and pugnacious as it is.



Yunost *readers like poetry. Yevgeni Yevtushenko, sitting directly under the off-beat Pegasus, is on the editorial board of this 112-page magazine.*



Yunost's *editor in chief, young in spirit if not in years, is Boris Polevoi, author of* A Story of a Real Man. *With deputy editor Sergei Preobrazhensky.*

(Left) Poetry lovers often gather in the lounge to hear a new effort. Rozhdestvensky's now-famous Requiem *and some of Yevtushenko's poems were first recited here.*

"If walls could talk, they'd have a lot to say," is an old saw. Those in this office do, and most eloquently. The title of the cartoon is "The First Critic."



DISCRIMINATION AGAINST JEWS?

REPLY TO MR. GEORGE N. BLINICK

Dear Sir:

In your December 1964 issue you claim that "No one in the Soviet Union is required to tell anyone what his religious sentiments are." You also state that "Any citizen has the right to pursue his religious faith and worship any god he pleases." I am a firm believer in the COMPLETE separation of church and state, but I would like to pose several questions to you. . . .

1. Why are members of the Jewish faith (or even those who are not religious but of Jewish parentage) required to list as "nationality" on their identification cards the fact that they are Jews? I am told by friends of ours who have visited in the Soviet Union that this is so. I am also told that local nationals (such as Ukrainians, Georgians, etc.) get first pick of job openings in their respective republics. However, since a Ukrainian Jew is listed as "Jew" and not Ukrainian, he does not get this consideration. It would seem to be a case of "Heads you win—tails I lose."

2. Since the right to worship (or not to worship) is guaranteed, why is it that it has been made impossible for Jews to obtain Matzah during the Passover holidays? As I understand it, not only can't it be obtained from Russian bakeries, but the USSR has not allowed imports from the United States. You say the "Soviet state does not interfere in the affairs of its citizens." I would say that you are not correct. I would hope that I was not correct instead. I would also hope that this letter could be printed and answered in your magazine.

Sincerely,
George H. Blinick

We should like to dwell on the problems raised by Mr. G. H. Blinick of Chicago, Ill., in his recent letter to us. Similar problems have already been dealt with in the March and September 1964 issues of our magazine. The fact that the same questions are asked again and again shows that many Americans are still very inadequately informed on the actual state of things in the Soviet Union. For these questions can arise only as a result of misinformation or an erroneous interpretation of the facts.

A brief digression into history seems necessary. Czarist Russia was rightly called "the prison of the nations," for though more than 100 peoples and nationalities inhabited it, one nation, the Russians (Great Russians) occupied a dominating position.

That is why the complete elimination of national oppression was one of the main tasks of the Socialist Revolution in Russia. From its inception Soviet power has shown great concern for the rights and interests of the formerly oppressed nationalities. Our state is a federation of equal union and autonomous socialist republics. All citizens of the USSR, irrespective of nationality or national origin, have equal rights and equal opportunities.

As a federation composed of once downtrodden national minorities, our sole interest is to do everything possible to give dignity and equality to each people living in our multinational country. In view of this, was it possible to disregard the nationality of citizens in issuing identification cards? Would this not have been considered the continuation of the former policy of great-power discrimination, of the times when every non-Russian was treated as an alien? The acknowledgment of nationality in a Soviet identification card is a measure aimed against the survivals of national inequality. This holds for Jews as well, who were particularly cruelly discriminated against in czarist times. Today the Jews have equal rights with all other citizens of the USSR.

Under no circumstances is anyone ever asked about his religious beliefs when he is issued an identification card, applies for a job, or in any other case. Under Soviet law a man's religion (just as his right not to profess any religion at all) is purely a matter of his conscience. That is what we mean when we say that our state does not interfere in the religious affairs of citizens.

Misunderstanding often arises from the fact that the word "Jew" is, evidently, interpreted differently in the USSR and the USA. Americans usually apply the word "Jew" only to a person professing the Jewish religion. In the USSR the word is applied to all persons of *Jewish*

(Continued on page 63)

Brief Comments

For the Consumer

by Semyon Rosenberg



Semyon Rosenberg, 61, was graduated from the Tomsk Technological Institute. He has been a newspaperman on Uralsky Rabochy and Komsomolskaya Pravda and is now on Izvestia as assistant editor of the Construction Department.

People of the older generation, those who worked and sacrificed for the socialist industrialization of our country, used to dream of the time when a great industry, created by the labor and genius of the people, would be able to produce in sufficient quantity to give every man the goods and services for a better life. That time has come. Our heavy industry, even after meeting the requirements of economic development and defense, can now provide our agriculture, light, food and other consumer industries with a much greater volume of the means of production. The systematic growth of national income and, in particular, that part of it which goes into the public consumption fund, makes it possible to raise material and cultural standards very considerably.

That is why the important emphasis in the state economic plan and budget for 1965 adopted at the recent session of the USSR Supreme Soviet is on elevated living standards. When the USSR Council of Ministers studied the draft plan, it sought out additional resources to increase the rate of production and with it to raise living standards. This emphasis is apparent in every section of the 1965 plan and budget.

More specifically, what is planned is to bring the rate of growth of consumer goods output to the level of the rate of production of the means of production; to increase real income by 7.3 per cent as against last year's 3.9 per cent, principally by raising wages; to introduce the new minimum wage everywhere in the country beginning next year; to raise the wages of more than nine million service workers earlier than planned.

Housing construction and public services have a special place in the 1965 plan. In the past six years approximately a third of the population moved to better housing. But the demand is still unsatisfied. That is why we cannot permit any slowdown in the residential construction program of the last two to three years. In 1965, 2.4 million apartments will be built. This is 300,000 more units than last year and more than the number built in any preceding year. Housing designs will also be revised for maximum operating efficiency and convenience.

Policy of Mutual Example

by Lev Sedin



Lev Sedin is a member of the editorial board of New Times magazine and commentator on world affairs. He studied at Moscow's Institute of Philosophy, Literature and History, and from 1941 to 1947 was Trud's foreign editor.

Notwithstanding the skeptics, international confidence has been growing lately. It is noticeable not only in a general relaxation of international tension but in specific approaches hitherto unused. I have in mind what we might call the policy of mutual example.

A morbid suspicion was one of the most pernicious psychological derivatives of the long years of the cold war. It became almost a rule of good behavior for some Western Powers to discredit the best intentions of the Soviet Union and the other socialist countries. The consequence was an inertia of suspicion that handcuffed any and every initiative aimed to improve East-West relations. The more significant, therefore, is the fact that at one stage this inertia was to some degree overcome and several steps taken which contributed to strengthening confidence between countries, in particular between the Soviet Union and the United States.

In 1963 the Soviet Union set an example by unilaterally reducing its military budget. Our defense allocations were cut by 600 million rubles. Subsequently, the United States cut its military expenditures similarly. These parallel actions undertaken by the two Great Powers made a global impression because they were novel, bold and taken without prejudice. They showed that, granted a minimum of mutual confidence, results could be achieved in situations where the usual talks and agreements might be of no avail.

Somewhat later, the same mutual example policy made it possible for the United States, the Soviet Union and Great Britain to take important steps to reduce the manufacture of fissionable materials for military purposes.

The close of 1964 was marked by another success for this policy. The USSR Supreme Soviet approvad a new cut in defense allocations, reducing the 1965 military budget by 500 million rubles. The defense budget this year accounts for 12.9 per cent of total expenditures as compared with 14.5 per cent in 1964. And once again the United States made known its intention to carry out a parallel reduction in military expenditures in the 1965-1966 budget year.

That is how the policy of mutual example operates. As Soviet Foreign Minister Gromyko defines it: "The states do not conclude formal agreements but undertake corresponding measures simultaneously on the basis of mutual understanding, following one another's example."

It stands to reason that this mutual example policy is not a universal panacea nor is it the only means of settling international problems. It will not give us the radical solution to the disarmament problem, this No. 1 problem in present-day international relations. For that we must have the carefully formulated obligations of all parties and precisely defined forms and methods of control. The Soviet Government has time and again expressed its readiness to explore this more difficult but more reliable road to agreement with the Western Powers. However, all this in no way weakens the value of the mutual example policy, which has made major progress possible.

The Soviet Government attaches great importance to reductions in military budgets. It is no accident that in the Memorandum on Measures for Further Relaxing International Tension and Restricting the Arms Race which the Soviet Government submitted for the consideration of the nineteenth session of the UN General Assembly, the first paragraph is concerned with reducing military budgets. The Soviet Union proposes that the big military powers agree to cut their military budgets by 10-15 per cent or some other agreed upon percentage. At the same time the Memorandum reiterates our country's belief that this in no way need rule out the big powers' taking action to cut military budgets on a mutual example basis.

Thus, the Soviet Union by no means feels that opportunities for the mutual example policy have been exhausted. Quite the contrary, we are confident that the strength of a positive example can in the future, as it has in the past, play a great role in international life.

The drawing up of annual plans for cultural, educational, scientific and technical exchanges between the USA and the USSR has become a fine tradition in Soviet-American relations. This was noted with equal satisfaction by the representatives of both countries during their meeting at the U. S. State Department in Washington at the end of January 1965.

MUCH of what was accomplished in 1964 is undoubtedly a source of great satisfaction to both sides. The outstanding companies and individual soloists who performed in the United States and the Soviet Union all enjoyed great success, as evidenced by the 14-week tour of the Leningrad Kirov Ballet in the United States and the warm reception accorded the Oberlin College chorus in 11 Soviet cities.

Sports exchanges have been developing successfully, and the number of American tourists visiting the Soviet Union has increased. It is to be hoped that the number of Soviet tourists visiting the United States will also increase. Encouraging signs have been observed in cinema, medical and agricultural exchanges.

The planned educational, scientific and technical exchanges were not carried out quite completely last year. To remedy this, both sides agreed to a more extensive program in the current year. Both sides have also agreed to exert more effort in improving the distribution of **America** and **Soviet Life** magazines in the Soviet Union and the United States, respectively, on a mutual basis, as envisaged by the agreement between the governments of the USSR and the USA.

It is extremely gratifying to see the great interest of the public in these mutual exchanges. Half a million Americans saw the performances of our Soviet artists in the United States last fall, and the U. S. exhibition of your achievements in communications was visited by 800,000 people in three Soviet cities.

Naturally, considerable expansion is provided for in the plan for 1965. There will be a greater number of teachers and scientists exchanging visits. Two exhibitions will be held in each country, including a Soviet children's art exhibition in the United States.

The Soviet-American cultural exchanges began this year with the performance of the Moscow Art Theater in New York, and before long such outstanding artists as the Moiseyev Dance Ensemble and the Moscow Philharmonic Orchestra, with Kirill Kondrashin conducting, will be visiting the United States.

In addition to the names of Svyatoslav Rikhter and Yakov Zak, already well known to American audiences, I should like to mention two artists who will be giving concerts in the United States for the first time—Tamara Milashkina, a mezzo soprano of the Bolshoi, and pianist Nikolai Petrov, who participated with success at the Van Cliburn contest in Texas.

Soviet music lovers were delighted to learn that Van Cliburn was included in the list of Americans to perform in the Soviet Union this year. There is no question but that the Cleveland Orchestra, the Juilliard String Quartet, the pianist Eugene Istomin, the violinists Isaac Stern and Joseph Fuchs, the bass Jerome Hines and the soprano Mary Costa and all the other groups and individual artists scheduled to appear under the mutual exchanges program will receive a hearty welcome.

The meeting provided for broader exchanges in all fields, and this is extremely gratifying. By now it is recognized that knowledge of one another's achievements in culture, science or any other area of life brings the peoples of the world closer together, fosters better understanding and thereby strengthens peaceful cooperation. And this is the great goal in which the peoples of the United States and the Soviet Union are equally interested.

Soviet Life Correspondent Alexei Snegov

DISCRIMINATION AGAINST JEWS?

(Continued from page 61)

national origin. We have Moslem Jews, whole districts in the Caucasus, for example (we shall have an article about them in a future issue), Russian Orthodox Jews, and Jews professing other religions. There are, of course, many Jews who profess Judaism, but the great majority of Soviet Jews are atheists.

So, when a Soviet citizen says he is a Jew, he is saying, "My *nationality* is Jewish," just as when a Soviet citizen says he is Russian, he is saying, "My *nationality* is Russian." In the former case this does not necessarily mean the individual is professing Judaism as his religion anymore than in the latter case it means the individual embraces the Russian Orthodox religion.

When we take a population census (the last one was in 1959), each citizen has the right to declare whatever nationality he wishes. No documents are required for confirmation.

It is wrong to say that preference is shown to any nationality in the matter of getting a job. The Soviet Constitution guarantees the right to employment to all Soviet citizens alike. The only kind of job "privilege" that exists is the conscious Soviet policy of raising the general level of the formerly economically depressed minority groups. Russian workers and peasants are encouraged, even urged, to assist the peoples of the former hinterlands of czarist Russia. The policy of "Russification" carried out in many regions of the country in czarist times was replaced by the policy of training and advancing to leading positions the indigenous population of the republic concerned. But how can this just measure be interpreted as discrimination against the other nationalities living in the republic?

The Soviet people take particular pride in the fact that in all the republics, in all the regions of our multinational country there are now scientists, engineers, doctors, teachers, writers, artists and other specialists representing the many nationalities inhabiting the USSR. Everyone enjoys equal educational and job opportunities, irrespective of nationality, race or creed.

Soviet citizens of Jewish nationality occupy a worthy place in every field of endeavor. According to the 1959 census, there are 8,783,700 Russians, 1,338,400 Ukrainians, 427,100 Jews, 257,700 Byelorussians, 130,000 Armenians, etc., among the specialists with a university, college or high school education. The number of scientists of Jewish nationality is the third largest (next to Russians and Ukrainians) in the country. There is approximately the same proportion among the university and college students.

According to this same census, there were 114,114,000 Russians, 37,253,000 Ukrainians, 7,913,000 Byelorussians, 2,787,000 Armenians, and 2,268,000 Jews in the USSR. Accepting Mr. Blinick's way of reasoning, one could conclude that there is obviously some kind of privilege in the field of science and education for persons of Jewish nationality—18.8 per cent of the Jewish population are specialists with secondary or higher education compared with 7.6 per cent of the Russian population and 3.5 per cent of the Ukrainian population! Do these figures not eloquently tell our accusers that we in the USSR rejoice in the achievements of every nation or nationality, appreciate their talents and inclinations and, most important of all, help each other?

This is the moral code of our society. As for the few who try to ignore it (the survivals of the past still linger in some people's minds), they are severely condemned by the public. Soviet law provides for the punishment of any attempt to sow racial or national discord (anti-Semitism included). The Penal Code of the Russian Federation, for example, provides for imprisonment for from six months to three years or exile for from two to five years for such offenses. Analogous penalties are provided in the Penal Codes of the other union republics.

Lastly, it is not that the "Russian bakeries" in our country do not want to make matzoth. It is true, though, that state bakeries, no matter where they are—in the Russian Federation, in the Ukraine or in Central Asia—do not make *anything* specially connected with religious rites. It is true that they do not make matzoth, but neither do they make *kulich* (Easter cakes used by members of the Russian Orthodox Church). This is in accordance with the strict policy of complete separation of church and state in the Soviet Union.

However, no one has ever forbidden the religious organizations to produce whatever they deem necessary, including matzoth. This is usually done in cooperative bakeries or at home. Every community manages this matter as it sees fit. In Moscow, for instance, the members of the Maryina Roshcha Synagogue did it at a cooperative bakery. (An account of the Passover holidays in a Jewish family in Moscow appears on pages 52-55 of this issue.) In Tbilisi the Jewish religious community supplies matzoth from its cooperative bakery to believers not only in the city but also throughout Georgia. It is the same in the other regions of the country.

The EDITORS

IN THE NEXT ISSUE

Twenty years ago, as the Allies roared through Western Europe, Soviet troops blasted their way into Berlin and took the Reichstag—the last stronghold of nazism. Thus did the most horrible war in man's history come to an end. The Soviet Union, treacherously attacked by Hitler's Wehrmacht on June 22, 1941, driven back to the walls of Moscow, recovered to accomplish one of the most glorious feats ever known and saved mankind from slavery. The 25-page account contains exclusive photos and stories about the Battle of Moscow, guerrilla warfare, the meeting on the Elbe River, and an interview with Marshal Ivan Konev.





A new series on outer space exploration by Soviet cosmonauts, called "Countdown at Baikonur" gives inside information on the *Voskhod* spaceship and answers the questions: Who can become a cosmonaut? What do cosmonauts eat? What do they think about in orbit?

The home of the Chatka king crab is the Okkotsk Sea, off the western shore of the Kamchatka Peninsula, land of belching volcanoes. The article in the May issue about one of the most exotic spots in the USSR is a must for anyone interested in geography.





World record holder, the first swimmer to give the Soviet Union an Olympic gold medal, and only 15 years old! Read about Galya Prozumenshchikova, swimming champion of the Tokyo Olympics last year.

Some of the other articles in the May issue:
Sex and Early Marriage—the second article on the problems of marriage in the Soviet Union; **The Deer's Antlers**—a short story by Yuri Kazakov; **They Will Always Be 20**—the young poets who went off to the war to stop Hitler and never came back; plus our regular features

NOVOSTI PRESS AGENCY

SOVIET LIFE

Public Opinion A provocative analysis by a Soviet authority on how public opinion makes itself felt in the USSR, how it is formed and how it functions.

Economy The Baltic Republics—a mathematical model of their economy today as well as their plans for the future.

Communications USA The American exhibition held in the Soviet Union under the USSR-USA cultural exchange agreement.

COMING SOON



OUR SHAGGY PETS

By Alexander Shaposhnikov
Photographs by Abraham Shternberg

IS THERE ANYONE who does not love dogs, those faithful, affectionate and intelligent friends of ours?

A tot just learning to walk is jealously guarded by a handsome collie. The child has strayed too far from home, and the shaggy nurse gently, albeit unceremoniously, grabs its ward by the collar and hauls him back to safety.

When the child grows up and goes to school, his four-legged pal sees him off and welcomes him back every day, always ready to share his master's joys and sorrows, to die for him if need be. These two will be friends for life.

Swift as the wind, the borzoi speeds after its victim in the steppelands of the south and east of Russia. The fox terrier and dachshund drive the foxes, raccoons and badgers out of their holes in the forests. The pointer and setter hunt for wild fowl in the meadows and bogs during the early misty hours of August, and the sharp-eared Eskimo bays loudly as it courses over the snows of the taiga. Though the hunter moves slowly and ever so carefully through the dense woods, he may suddenly stir up the master of the taiga—old Bruin. There is no time to reload his gun—the bear is too close—but the hunter is not alarmed; at that very moment his dog springs at the beast and sinks its sharp fangs into its flesh.

When the shepherds of the Caucasus drive their sheep up the mountains in spring and down into the valleys in autumn, they have little trouble herding their fleecy charges, for the Caucasian sheepdog is there to see that they do not stray.

Tiger hunters never venture out without their quadruped aides in the Ussuri taiga, and it is dogs that deliver the food, mail and books to the remotest villages and camps of the tundra.

Throughout the world dogs serve man faithfully. Is it any wonder we love them so dearly?

Service and hunting-dog shows are held regularly in all Soviet cities. They are arranged by the Dog-Breeding Society, an organization with innumerable local branches and its own funds, quarters and instructors.

The big event of the year is the All-Union Dog Show, which no canine of any consequence misses.

A really functional hairdo.





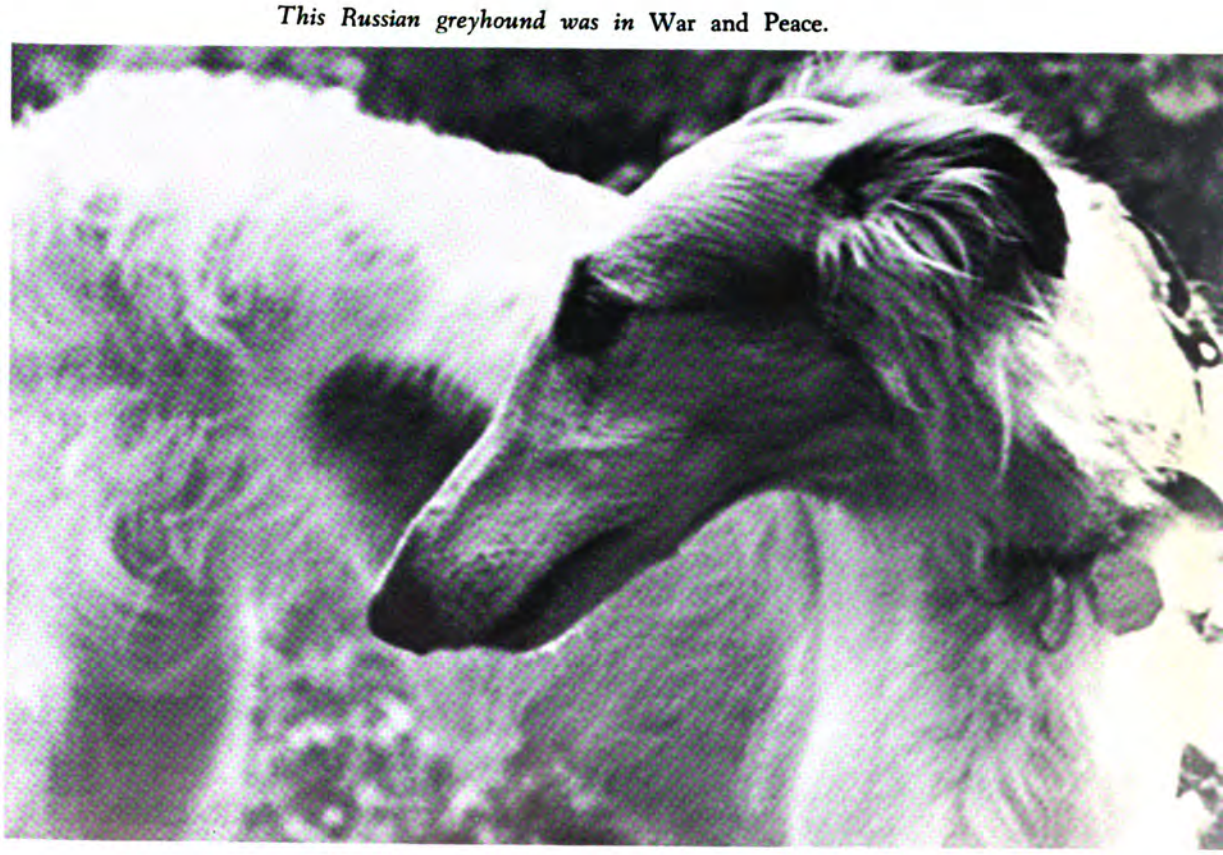
il dress for the occasion—both of them.





Candidates for membership in the Twins Club.

This Russian greyhound was in War and Peace.





The Soviet turbojet IL-62 designed by Sergei Ilyushin is capable of accommodating 182 passengers. Its cruising speed is 560 miles per hour. The plane is meant for long-distance nonstop flights. It was put into regular passenger service last year.

Photograph by Vladimir Akimov

SOVIET LIFE

May 1965 • 35 cents

WORLD WAR II IN RUSSIA

Twenty years ago the Soviet flag fluttered over the Reichstag, signaling the end of the most horrible war in history. In this issue—the story of how the Soviet Army dealt the Wehrmacht the death blow on the Eastern Front and saved mankind from nazi enslavement.

UNIVERSITY OF MINNESOTA
APR
13
1965
LIBRARY



SOVIET LIFE

MAY 1965 No. 5 (104)

The magazine* SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* AMERICA *in the Soviet Union.



Front Cover: "To the Last Drop of Blood" describes the heroism of the Soviet soldier who preferred death to retreat.

PICTURE CREDITS

Ivan Shagin Cover I, 54; State Archives 2-4, 13, 14; Arkadi Shaikhet 5, 10; Isaac Kapustiansky 6-7, 21; Georgi Zelma 11 (bottom), 30; Dmitri Baltermants 15; Victor Kinelovsky 16-17; Georgi Petrusov 24-29, 31, 45; Naum Granovsky 32-33; Gherman Cheryomushkin 42; Alexander Mokletsov 46-47; Rach Sachlyan 50-51; Vadim Gippenreiter 58-61; David Sholomovich Cover IV.

Editor in Chief (Moscow Editorial Board): Yuri S. Fantalov, APN, Pushkin Sq. 2, Moscow, USSR.

Managing Editor (Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director (Moscow Editorial Board): Marina T. Zabolotskaya, APN, Pushkin Sq. 2, Moscow, USSR.

***Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine* SOVIET LIFE.**

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second-class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Haynes Lithograph Co., Rockville, Md.

Page

The Frontier of the Impermissible (Our Trends) by Spartak Beglov 1

SOVIET PEOPLE

The Great Patriotic War 2
Guerrilla Warfare by Panteleimon Ponomarenko 12
1944: Smashing the Wehrmacht 16
The Real Story of Soviet Strategy by Marshal Ivan Konev 20
From Burning Hell to Victory 30
Volgograd 32
They Shall Always be Twenty by Yuri Rozenblum 56
Love, Sex and the Young Family by Boris Grushin 37
Yerevan Is As Old As Rome by Nikolai Tarasov 50

INTERNATIONAL CONTACTS

Russia Revisited by Eugene List 52
Arms of Friendship by Sergei Borzenko 54

LITERATURE AND THE ARTS

The Volokolamsk Road by Alexander Bek 6
Every Day the Longest (War Diary Excerpts) by Konstantin Simonov 22
Antlers House by Yuri Kazakov 42

ECONOMY AND SCIENCE

Countdown at Baikonur 45
Three Stages of Space Conquest by Academician Anatoli Blagonravov 48
Plasma Motors by Academician Mikhail Millionshchikov 48
Spaceman's Menu by Olga Molchanova 49
About the Voskhod by Yuri Marinin 49
The Land of 100 Volcanoes by Myuda Derevyankina 58

RECREATION AND SPORTS

Teenage Olympic Mermaid by Alexei Srebnitsky 64

MISCELLANEOUS

Children's Corner 34
Learning Russian 35
Queries from Readers 36
Around the Country 40
Letters to the Editor 53
Brief Comments 62
Next Issue 63

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

THE FRONTIER OF THE IMPERMISSIBLE

BY SPARTAK BEGLOV
Novosti Press Agency Commentator



Spartak Beglov (born 1924) is a graduate of the Moscow Institute of International Relations and the author of several books on international problems. He has a master's degree in history.

The pages of human history are so spattered with blood that the temptation to declare war "man's natural condition" would seem reasonable were it not so immoral.

However, it was not until the second world conflict that the immorality of war as an instrument of aggressive policy was bared in all its ugliness. What can be more immoral than a sneak attack on peaceful cities, without a declaration of war, by thousands of tanks and planes stuffed with millions of tons of explosives? What can be more vicious than the cold-blooded murder of tens of thousands of civilians? What can be more cynical than a blockade of two million women, children and old people in Leningrad, where every day, every hour, for three years they faced the choice of death from shells or from starvation? Think of Oswiecim. Think of the torpedoing of the convoys carrying food. Think of the ruins in Coventry and Stalingrad.

These thoughts bring to mind again the history of that vast and crucial arena of the Second World War which the whole world knew as the Eastern Front and which we Soviet people called the Great Patriotic War, a war to the bitter end. It was there that the destiny was decided not only of a single or even the largest sector of the world war, but of a nation, of a social system, and, I venture to say, of human history.

It was there that the destiny was decided of a nation that was the first to choose a new social system and to stand as the bulwark against the most depraved manifestation of the old order—fascism. It was there that the destiny was decided of a social system that had to prove its viability in the hours of cruel trial by bombs, tanks and executions, or vanish from the face of the earth. It was there that the direction of human history was decided, a history that could have been quite different had the new social system been unable to prove its capacity to live, to fight back and to win.

What made the Soviet soldier at the front and the worker in the rear strong in that unequal battle was the conscious or subconscious awareness that they were fighting for their country, for a socialist society, for history. History not only showed them their duty but fortified them with examples and thus gave them faith in victory. For it was Russia that bore the terrible brunt of the Tatar and Mongol invasions, shook off that yoke and freed the rest of Europe of the dire threat. It was Russia that beat back Napoleon, inflicting the first of the blows that were to end in his final defeat at Waterloo.

And what about the social system that Hitler personified? Hitlerism was more than armed brigands, an army intoxicated with its victories. Hitler personified more than so many bayonets, field pieces and squadrons. With him came the "new order," promoted with the gold of the Reich and other countries; the "new order," which with comparatively little effort broke through the barriers set up by its adversaries; the "new order," which found Quislings and Petains when the old order chose to capitulate instead of to fight. And there was nothing surprising about this, for it was the very same old order that had nurtured Hitler.

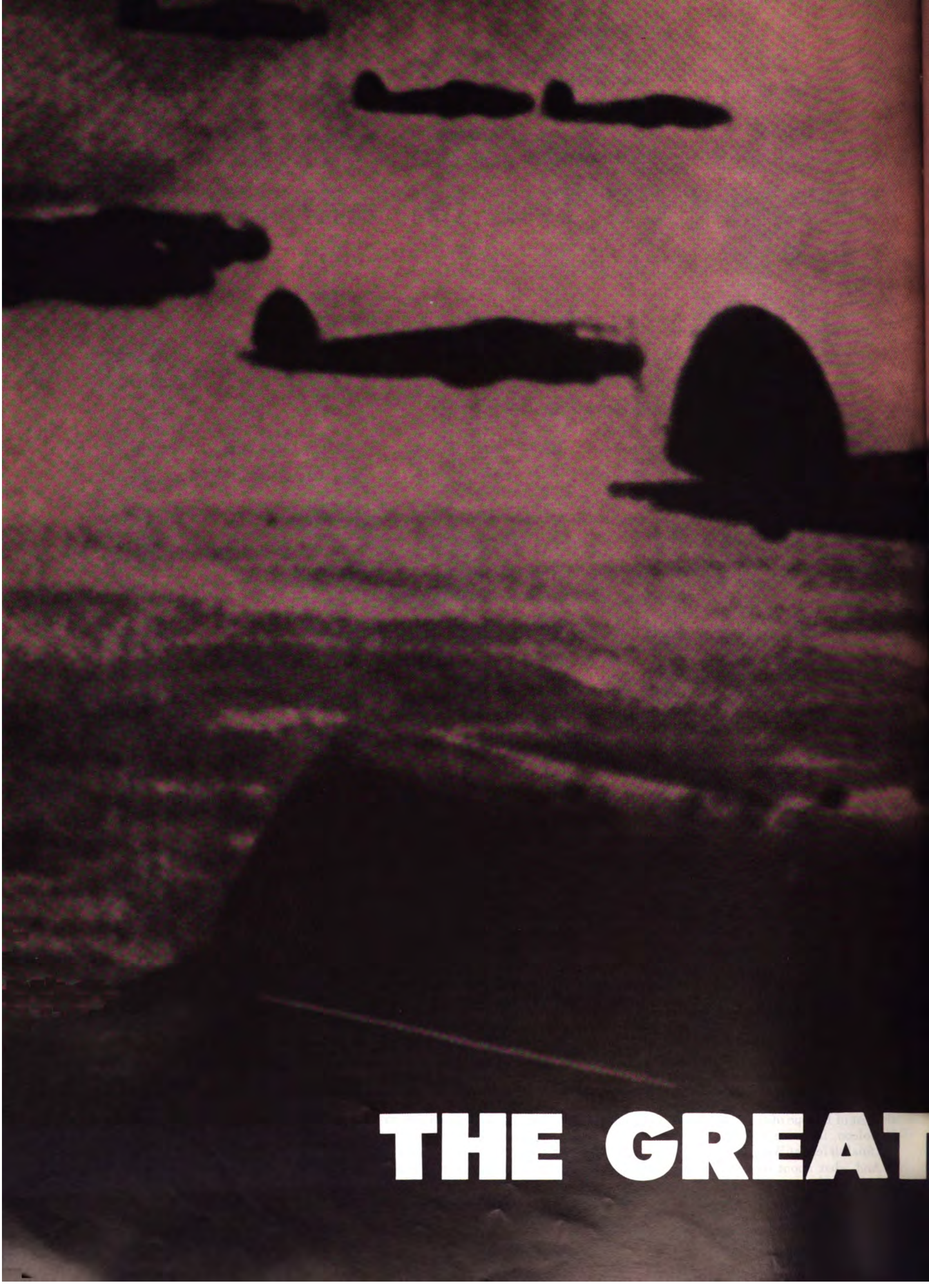
Naziism, with its 300 divisions in the vanguard and 13 obedient regimes behind it supplying cannon fodder and ammunition, could not destroy what the dreams and the hands of the people had created. The Soviet Union suffered enormous losses: 20 million people in the prime of life killed, 25 million left homeless, billions of rubles of treasures lost irretrievably.

These sacrifices would have been harder to endure had they been made only for our own sake. That they helped others to avoid enslavement, that they contributed to the common cause which developed into the United Nations, made them easier to bear, made our victory greater.

And now, 20 years later, are we all as mindful as we should be of the purpose for which we joined forces and made pledges at Yalta, Potsdam, Dumbarton Oaks and San Francisco? The tens of millions of war dead would not believe their ears if they could hear some of the speeches in the UN, the organization set up to honor their sacred memory. They would look incredulously at those who would once again plant explosives in Europe's most inflammable area.

History knows many wars that men have cursed for the suffering and disaster they brought. The Second World War marks the point of no return, the frontier of the impermissible. It was that war that taught mankind its last and most important military lesson. Now humanity must be mature enough to learn these most profound of truths: the truth of the atom and the truth of new social experiments. Can it?

The new social system that broke the backbone of the Nazis provides the answer. The answer is peaceful economic competition, not nuclear competition. The answer is that peace is man's natural condition, not war. The answer is coexistence, not at the cost of principle, not by conciliating the oppressor and the oppressed (that is no more possible than trying to stop the birth of the new and the death of the old), but by outlawing everything that breeds war: militarism, racism, revanchist claims, unsettled disputes in the world markets, every immorality that was promoted to the rank of "big policy" by those who started the imperialist wars of the past.


THE GREAT



JUNE 22, 1941

It is 4 a.m. Sunday, and Soviet cities and towns are silent. The people are sleeping after a hard week's work. The clear dawn heralds a sunny day of peace and serenity.

It is four o'clock in the morning, and 3,900 aircraft take off and head eastward from German airfields in Poland, East Prussia and Rumania. Gunners level their cannon at targets on Soviet soil, and five million trained, disciplined and well-fed soldiers stand ready, awaiting the command "*Vorwarts.*"

It is four o'clock in the morning, and the people are asleep, luxuriating in the promise of a good Sunday rest.

Theirs is a fearful awakening. The crash of bombs and falling walls, blood, groans and death blast them from their dreams. Nazi fliers, who have had good schooling in vandalism and destruction in Warsaw, massacre innocent children and their misery-stricken mothers in cold blood.

It is four o'clock in the morning, and 190 divisions crash through the frontier defenses to overrun our country. They come to kill, plunder, rape and burn, to crush the land that blocked fascism's road to world supremacy.

Four o'clock in the morning, the hour that stands between peace and war, a war which for us became

PATRIOTIC WAR

BARBAROSSA PLAN BLASTED

AFTER THEIR BLITZ VICTORIES in the Western theater of operations, the nazi generals thought their Eastern campaign would be a walkaway. Hitler had said that he would not change his shirt until his armored divisions entered Moscow.

The Germans launched their campaign the morning of June 22, 1941, a surprise attack by an army many millions strong. Our soldiers fought back with everything they had and retreated to the East from their native villages and towns only after bloody battles.

As early as June 24, the second day of the campaign, General Halder, chief of the Nazi General Staff, made this entry in his diary: "The Russians are fighting stubbornly and desperately. There were cases of whole garrisons blowing themselves up with their pillboxes rather than be taken prisoner."

Exhausted by interminable retreat and last ditch battles with an enemy superior in armaments and experience, the Soviet Army still did not give way. With each week that passed its resistance became stronger and better organized, slowing down the enemy's progress more and more, until it ground to a halt. The nazi horde did not seize Russia's vital centers, Leningrad and Moscow, as was contemplated by its Barbarossa Plan.

On the 147th day of the campaign the Nazis initiated a new general offensive against Moscow. They called it "Typhoon." Hitler sent 51 divisions against Moscow—13 armored, 7 motorized and 31 infantry. That was more armored units than he had used against France.

It was near Moscow that the Wehrmacht suffered its first great defeat, and the myth of its invincibility ended.

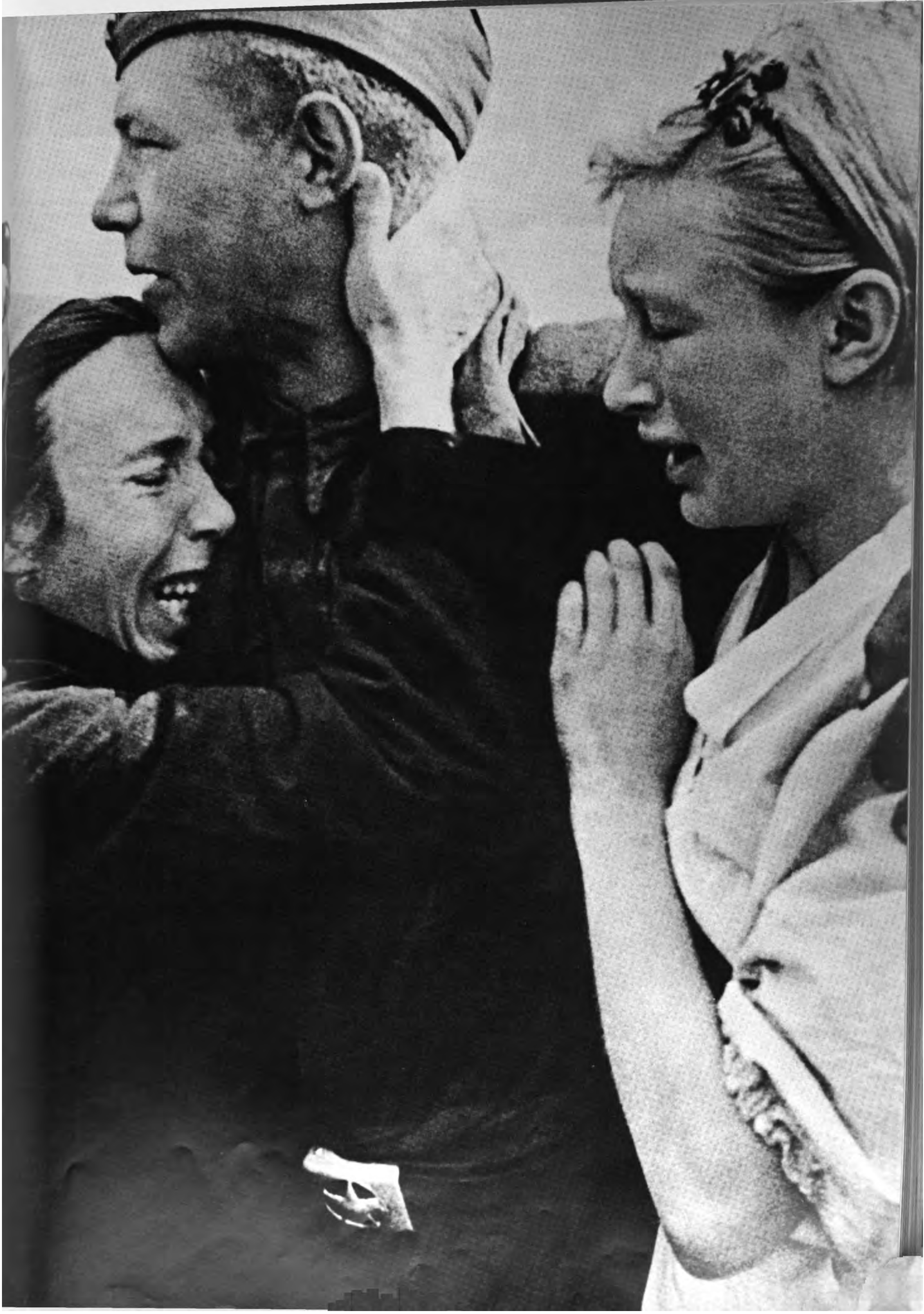
On Volokolamsk Road, one of the main approaches of the Nazis to Moscow, their way was barred by the division under General Panfilov. This unit threw back five nazi divisions. In a single month of battles in the Volokolamsk sector Panfilov's division killed 30,000 German officers and men and destroyed more than 150 enemy tanks.

An excerpt from *The Volokolamsk Road* by Alexander Bek appears on page 6. One of the best documentary accounts of the Great Patriotic War, it was published in 1942.



The front is the next village.

PHOTOGRAPH BY ARKADI SHAIKHET



BARBAROSSA PLAN BLASTED

AFTER THEIR BLITZ VICTORIES in the Western theater of operations, the nazi generals thought their Eastern campaign would be a walkaway. Hitler had said that he would not change his shirt until his armored divisions entered Moscow.

The Germans launched their campaign the morning of June 22, 1941, a surprise attack by an army many millions strong. Our soldiers fought back with everything they had and retreated to the East from their native villages and towns only after bloody battles.

As early as June 24, the second day of the campaign, General Halder, chief of the Nazi General Staff, made this entry in his diary: "The Russians are fighting stubbornly and desperately. There were cases of whole garrisons blowing themselves up with their pillboxes rather than be taken prisoner."

Exhausted by interminable retreat and last ditch battles with an enemy superior in armaments and experience, the Soviet Army still did not give way. With each week that passed its resistance became stronger and better organized, slowing down the enemy's progress more and more, until it ground to a halt. The nazi horde did not seize Russia's vital centers, Leningrad and Moscow, as was contemplated by its Barbarossa Plan.

On the 147th day of the campaign the Nazis initiated a new general offensive against Moscow. They called it "Typhoon." Hitler sent 51 divisions against Moscow—13 armored, 7 motorized and 31 infantry. That was more armored units than he had used against France.

It was near Moscow that the Wehrmacht suffered its first great defeat, and the myth of its invincibility ended.

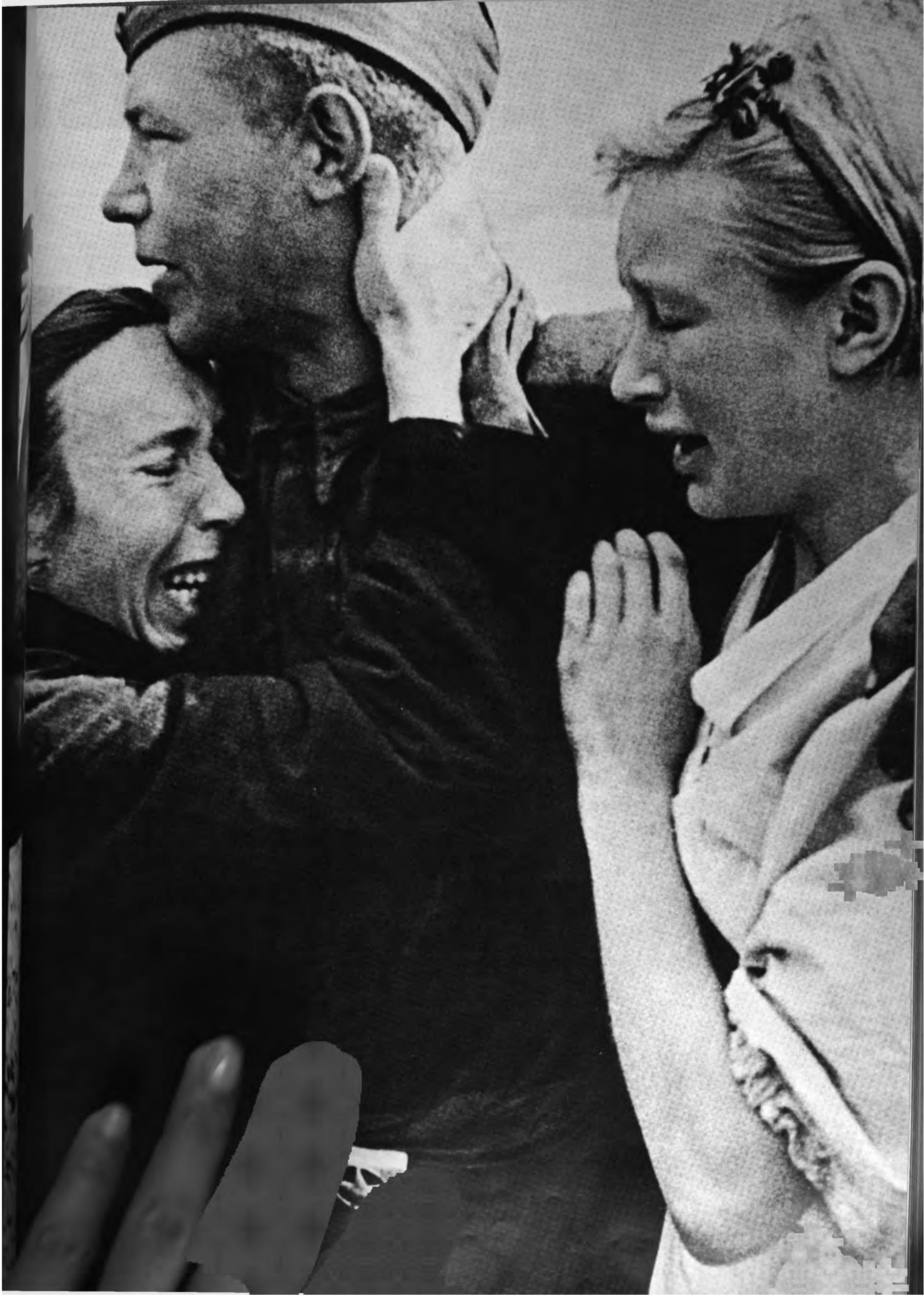
On Volokolamsk Road, one of the main approaches of the Nazis to Moscow, their way was barred by the division under General Panfilov. This unit threw back five nazi divisions. In a single month of battles in the Volokolamsk sector Panfilov's division killed 30,000 German officers and men and destroyed more than 150 enemy tanks.

An excerpt from *The Volokolamsk Road* by Alexander Bek appears on page 6. One of the best documentary accounts of the Great Patriotic War, it was published in 1942.



The front is the

PHOTOGRAPH BY AP



THE VOLOKOLAMSK



GERMAN TANK DESTROYED BY THE FIRST GUARD TANK BRIGADE
VICINITY OF THE VILLAGE OF SKIRMANOVO, VOLOKOLAMSK

ROAD

By ALEXANDER BEK

I set out to meet the division commanded by General Panfilov, not knowing as yet the name or rank of the person who would be telling me the story of that epic two-months' engagement, but certain that I would meet him.

And meet him I did.

It was Baurjan Momysh-Uly, a senior lieutenant in the Battle of Moscow, and now, two years later, a colonel of the Guards.

When he introduced himself, I did not quite catch his name and asked him to repeat it.

"Baurjan Momysh-Uly," he said again, articulating every syllable distinctly.

Through force of habit I took out my pad and pencil. "How do you spell your surname?"

"I have no surname," he replied.

I stared at him. He explained that Momysh-Uly meant "son of Momysh."

"So that's my patronymic," he continued. "Baurjan is my given name, and I have no surname."

He selected a cigarette, closed his cigarette case with a sharp snap and concluded obstinately:

"If, after all, you should write about me some time, call me by my Kazakh name, Baurjan Momysh-Uly. And tell your readers: 'He is a Kazakh, a shepherd who used to tend the flocks on the steppe, a man without a surname.'

"I set this condition—that you promise to write only the truth," he went on. "When the book is ready, you will bring it to me. I'll read the first chapter and I'll say: 'No good, lies! Put your left hand on the table!' Swish—and your left hand is gone! I'll read the second chapter: 'No good, lies! Put your right hand on the table!' Swish—and you right hand's gone! How's that?"

He leaned back slightly and took his sword out of the scabbard. In the low, damp dugout, dimly lit by an oil lamp that was shadeless, the damascened blade gleamed brightly.

"All right," I said, "I'm willing."

We were both joking, but neither of us smiled.

His wide-set eyes, so unlike the general run of Mongol eyes, bored right through me.

"Good," he said. "Get out your paper, take your pencil. Write: Chapter I. Fear.

"So why do you and your brother yarn spinners imagine that the men at the front are supernatural and not like you yourself? Why do you suppose the soldier hasn't got human feelings like you? Is he of a lower order? Or perhaps he's a creature of a higher order?

"Maybe, according to your way of looking at it, heroism is a gift of nature? Or perhaps you think the quartermaster sergeant issues fearlessness with the rations and checks off who received his share and who didn't?

"I've seen a lot of fighting since the war began. I am now a regimental commander, and I think I've had enough experience to say that's not so!

"What were the Germans expecting when they invaded a country as vast as ours? They were certain that on their march east General Fear would be at the head of their tank columns, and that every living thing would cringe or flee before him. We saw our first fighting on the night of October 15, 1941—it was a battle against fear."

Judge Me

I WAS SITTING in my dugout, staring at the floor, my bent head resting on my arms, like this (here Baurjan Momysh-Uly showed me how he sat), and completely engrossed in my thoughts.

"May I come in, Comrade Battalion Commander?"

I nodded but did not lift my head.

Jalmuhamed Boszhanov, political officer of a machine-gun company, came in.

"*Aksakal,*" he said softly in Kazakh. Literally translated, *aksakal* means "graybeard," which is our name for the oldest in the clan, the father. Boszhanov sometimes called me that.

"*Aksakal,* a terrible thing has happened in the company. Sergeant Barambayev shot himself through the hand."

Something seemed to clutch at my heart. Barambayev was a Kazakh like me, a Kazakh with good capable hands, commander of a machine-gun section.

He came in slowly. At first I could scarcely recognize him. His face was ashen and flabby, lifeless, like a mask. You see such faces on insane people. He held his bandaged left arm crooked as if in a sling. The blood had oozed through the gauze.

"Well?" I said grimly.

"I really don't know myself how it happened, Comrade Battalion Commander. It was an accident. I really don't know how it happened myself."

Although he must have expected me to swear at him, I did not. There are times when there is no sense in swearing. Barambayev went on to explain that as he was running into the woods he stumbled, fell, and the rifle went off.

"That's not true!" I exclaimed. "You're a coward. A traitor!"

I looked at my watch. It was almost three.

"Lieutenant Rakhimov!"

Rakhimov was chief of staff of the battalion. He stood up.

"Tell Private Blokha to report here at once."

"Yes, Comrade Battalion Commander."

"In an hour and a quarter, at 16.00 hours, the battalion will fall in at the glade here on the edge of the forest. That is all. You may go," I ordered.

"What are you going to do with me? What are you going to do with me?" Barambayev began hurriedly, as though afraid he would not be able to get it all out.

"Have you shot in front of the battalion!"

Suddenly Barambayev fell to his knees.

His hands, both the unharmed one and the bandaged one—stained with the blood of shame—were stretched out toward me.

"Comrade Battalion Commander . . . I'll tell you the truth . . . Comrade Battalion Commander . . . I did it myself . . . I did it intentionally. . . ."

"Get up!" I said. "At least try and die without crawling like a worm."

He got up.

"Ah, Barambayev, Barambayev!" Boszhanov said softly. "Tell me, what were you thinking of?"

For an instant it seemed to me that I myself had said it, as if the words I had been trying to smother had burst from my lips in spite of everything.

"I didn't think," Barambayev muttered. "I didn't think. I don't know how it happened."

He grasped at that phrase like a drowning man at a straw.

Maybe he was actually telling the truth at that moment. Maybe it actually did happen as he said, a momentary mental aberration, a momentary crisis in a soul undermined by fear.

But that is just how men flee from the scene of action, that is how they become traitors to their country—and often later are unable to grasp how it all happened.

Private Blokha, his breath coming in short, quick gasps and his eyebrows working in the excitement, came into the dugout and reported, somewhat awkwardly.

"Do you know why I've sent for you?" I asked.

"No, Comrade Battalion Commander."

"Look at that man. Do you recognize him?"

I pointed to Barambayev.

"What the. . . ." Blokha began. Contempt and pity mingled

THE VOLOKOLAMSK ROAD



in his voice. "Well, you look like a real scarecrow, I must say."

"You will shoot him," I said to Blokha, "you and your section. . . ."

At the appointed time, at 16.00, I went out to the battalion drawn up on three sides of a square. In the center of the open side, the object of everyone's gaze, stood Barambayev in his long army coat but without his belt. He was facing the men.

"Battalion, attention!" Commander Rakhimov barked.

A peculiar noise resounded through the silence and ceased sharply, a sound which a commander's ear never fails to catch—the rifles moved and stopped as if they were all one.

"The battalion has fallen in as ordered," Rakhimov reported in a clear voice.

At that moment, in that Russian glade, when a man, with his hand bandaged, stood disgraced before his unit, without his belt and without his Red Army star, every word, even each routine word of the report, was tense and gripping.

"Section Commander Blokha, advance with your section!" I ordered.

In silence they crossed the field. First came Blokha, who was of medium height, with six-footer Galliulin at his side; behind them came Murin and Dobryakov, the man who had been on duty at the machine gun the day before. They walked gravely, in step, in line, without turning their faces from the wind that was blowing up from the side.

But they were in a state of excitement.

Blokha gave the order:

"Section, halt!"

Their rifles came down from their shoulders to their feet in one movement.

I turned toward Barambayev and pointed my finger at him. His eyes were fixed on me, on me alone, hoping against hope.

I began:

"He loves life, he wants to enjoy the air, the earth and the sky. So he decided: 'You can go ahead and die; I want to live.' But that is the way parasites live, on someone else's back."

The hundreds of men facing me knew that not all of them would come through alive, death would take its toll, but at that moment they all stepped across a certain boundary. I had expressed the thought that just then filled their hearts.

"Yes, war takes its toll. But those who fall like warriors will not be forgotten by their country. Your sons and daughters will say with pride: 'Our father was a hero of the Great Patriotic War.' And your grandchildren and great-grandchildren will repeat their words. But are we all going to die? No. The soldier goes into battle not to die, but to kill the enemy. And he who returns home after doing his duty as a soldier, he, too, will be called a hero."

"Forgive me," Barambayev said softly, "send me into battle."

Barambayev's voice scarcely rose above a whisper, yet I knew that every man there had heard him.

"No!" I exclaimed. "Do you see these soldiers I have called out of the ranks? Do you recognize them? They are the section you commanded. . . . You lived with them under the same roof, you ate from the same pot, slept with them under the same coat, like an honest soldier. They will go into action. But first they will shoot you because you are a coward who deserted in the face of the enemy!"

Then I gave the command:

"At the coward, traitor to his country, violator of his oath, section. . . ."

The rifles rose into position, froze to the men's shoulders. But one rifle trembled. Murin was shaking violently and his lips were white.

And suddenly I felt unspeakably sorry for Barambayev.

Murin's rifle, trembling in his hands, seemed to be crying aloud, "Forgive him, have mercy on him!"

And the men who had not yet been in battle, who were not yet hardened against cowards, who waited tensely for me to pronounce the word "Fire!" also seemed to be begging me: "Don't do it; forgive him."

I am not a beast; I am only human. And so I shouted:

"As you were!"

It seemed as if the rifles were not put down but fell to the ground like iron. And a weight lifted from everyone's heart.

"Barambayev!"

He turned around, with questioning, still unbelieving eyes but eyes that already glowed with life.

"Get back to your place in the ranks!" I shouted at him.

Murin, good-natured, bespectacled Murin, whose rifle had trembled, furtively beckoned to him to fall in alongside and then gave him a comradely nudge in the ribs. Barambayev was a soldier once more and our comrade.

And the reader of this tale will also breathe a sigh of relief when he gets to the command: "As you were!"

But that wasn't what really happened. Everything I have just told you took place only in my imagination. The whole scene merely flashed through my brain, flashed by like a dream.

The truth was different.

When I noticed that Murin's rifle was shaking, I shouted:

"Murin, are you trembling?"

He shuddered, straightened up and gripped the stock of his rifle tighter.

I repeated the command:

"At the coward, traitor to his country, violator of his oath, section. . . . Fire!"

And the coward was shot.

Judge me!

A poisonous desert spider once bit my father, he was then a nomad. My father was all alone in the desert with no companion but his camel. That spider's poison was fatal. My father pulled out a knife and cut out a piece of flesh from his own body, the part which the spider had bitten.

And now I did the same thing—with my knife I cut out a piece from my own body.

I am a human being. Yet although every human feeling in me was crying aloud, "Don't do it, have mercy, forgive him!" I could not forgive him.

I command a battalion, I am their father. I killed one son, but before me stood hundreds of other sons.

I wanted every man to know: If you turn tail, if you betray, you will not be forgiven, much as we may want to forgive you.

The First Attack

They were marching along the field over which we were riding, approximately a thousand yards away. They were advancing in open order, at intervals of two to three paces. I knew that they wore greenish greatcoats and helmets, but now, against the snow, the figures looked black. Up to tricks as usual, they were firing their submachine guns as they marched, sending out thousands of tracer bullets to intimidate us.

I shouted:

"Boszhanov! You'll go with the machine gunners! Repeat your orders!"

"To die," he said in a low tone, "but. . . ."

"To life! Your gun must not be silenced! Hold on till we turn our flank!"

"Yes, Comrade Battalion Commander. The gun will hold the front till. . . ."

"Make your way through the gully. Act coolly. Bide your time: let them come up close. . . ."

I looked over the machine gunners, glancing in turn at Murin, Dobryakov and Blokha, weighed down with ammunition belts. "On the double! Pin those swine to the ground, comrades! Krayev, follow me! Sinchenko, follow me!"

We dashed past Novlyanskoye through the open space between the river and the village to the flank of the battalion, but the orderly had not yet arrived. From here the advancing Germans could not be seen because the hill was in the way, but the men had already come out of the end bunkers. Some of them were sitting in the communication trenches with only their heads above the ground; others had bunched together in groups. All of them were staring behind the trenches to where the crackle of submachine guns and the random red dots of the tracers came from.

Lieutenant Burnashev, a young platoon commander in Company No. 2, ran a few paces in the direction of the firing, stopped short and stood there, completely at a loss, dumbfounded. This is something you sense immediately in battle. He was clenching his revolver so tightly that his fingers were white, but his arm hung down helplessly. Staggered by the unexpectedness of the situation, Burnashev did not know what to do or what orders to give. He was at a loss for only a minute in all, perhaps, but during that minute—that horribly critical moment—the men had lost a commander.

As yet no one was running, but. . . . One soldier, his eyes fixed on the flying lines of gleaming dots, was slowly moving, slowly edging away along the bank.

So far slowly. . . . So far alone. . . . But supposing he turned and ran, would not all of them go the same way?

Suddenly someone pointed authoritatively toward this soldier who was edging away. Strange. Who was in command here? From the distance I recognized Tolstunov's smart figure.

Only then did I make out a few figures at various spots standing apart from the others: they seemed to have caught their pose of silent, concentrated determination from Tolstunov, who was in the center. I saw that this was not the usual backbone of the platoon which I knew

so well; but I saw, too, that these men were now holding together, cementing, the platoon.

Another force had made itself felt here, the Communist Party.

Riding over, I shouted:

"Burnashev! Who's in charge here? Why so down in the mouth? Where are the section commanders?"

Burnashev started and flushed, ashamed at having been caught off guard. Hurriedly he shouted:

"Section commanders!"

In a loud voice I announced my decision briefly: to turn our flank after abandoning the village to the enemy. Then I ordered:

"No. 1 Section Commander! Turn out your men! Each man take up his position according to his number in the ranks. I will lead Section No. 1, Tolstunov No. 2, and Burnashev No. 3! . . . Keep at an interval of 50 paces from me. Don't fall behind! Don't bunch up. Section No. 1, attention! On the double, follow me!"

I started off for all I was worth up the rising ground, past the dark houses of the village, whose windows were glowing with the reflection of the setting sun, over the crater-pitted field toward the woods. I could hear the footsteps of the section behind me.

The Germans spotted us. Red curves crisscrossed and cut the air in front and behind us, passing over our heads or expiring at our feet with a faint hiss.

The Germans, with the instinct of the pursuer—aha, the Russians are running!—quickened their steps. But there were the woods a hundred paces away. And suddenly I felt with anguish that my breath was giving out. The panting and the tramping of feet behind me came closer and closer. The men were catching up with me. I had given orders not to bunch up, but they had anyway.

I filled my lungs with air.

"Section, hit the dirt!"

Do you understand? In that one instant, in that command, our entire past history was compressed—the history of a battalion of Panfilov's Division. Into it entered consciousness of duty and the shooting of a coward before the troops on parade and the fact that we had beaten the Germans in a night raid not long before.

But suppose the men had not halted, suppose they had dashed into the woods in headlong flight? In that case. . . . In that case that would have been the end of Battalion Commander Baurjan Momysh-Uly. Such is the law of our army: for the inglorious flight of his men, the inglorious commander must answer.

The men were firing at random with feverish speed and feverish inaccuracy. Still sending out showers of tracer bullets, the Germans were advancing on our thin line, none of them falling.

The unusually bright sun was casting its rays from the side and somewhat in front of them. The Germans no longer looked black and faceless. The sun picked out the colors. Under the greenish helmets gleamed beardless white faces on some of which eyeglasses glittered.

But why, why weren't they falling? Only at this point did I realize that actually the Germans were still a good way off—some three to four hundred yards. And we were firing away in a tearing hurry with our sights set at a hundred yards.

"Sights for two hundred and fifty!" I shouted above the din.

The Germans were drawing nearer. One and then another fell. But among us, too, someone groaned. The far end of the enemy ranks was hidden behind the houses. The enemy was already in Novlyanskoye. We had surrendered the village.

Meanwhile the Germans were coming on and on. At any moment they would be given orders to advance on the double.

I gauged the distance with a glance. They would crush us! Oh, if only you knew that sickening expectation: they would crush us! The machine gun! Where is the machine gun, the machine gun?

Nearby someone cried out:

"Oh, oh, I'm dying! Oh, oh. . . ."

The cry of pain was nerve-racking and unmanning.

Everyone felt: In a minute the same thing will happen to me; in a minute a bullet will get me too. The blood will spurt from my body, and I shall be crying out in my death agony. I said "everyone." Yes, myself included. Yes, those harrowing cries made me tremble as well. A cold wave swept over my body, depriving me of strength and robbing me of will power.

The Germans were still coming. Marching confidently [illegible], erect, their submachine guns crackling as they advanced a[illegible] if they were fitted with long needles of fire that reached all the way to us—that's what tracer bullets look like when they are fired continuously. I realized that the Germans were trying to deafen and blind us, to keep us from raising our heads and taking aim coolly. Where was Boszhanov? Where was the machine gun? Why was it silent?

At last, at long last, I heard the trill of the machine gun. A long burst: rat-tat-tat-tat. . . . Oho! How close Boszhanov had let them come! He had managed to hold out and not give himself away until the very last moment. And now, to make up for it, his machine gun was mowing them down at point-blank range.

The first burst cut through the middle of the German line. What a clean sweep it made! For the first time I heard the yells of the enemy. Later we learned from repeated experience that this is one of the peculiarities of the German Army: Whenever the fighting goes against them, their wounded yell at the top of their lungs under fire, calling for help. Our men almost never yell like that.

All the same, we had a thoroughly drilled force in front of us. A command in a foreign language rang out and the German line, to a man, fell flat.

Well, at last we could draw a deep breath.

A minute later Tolstunov came crawling over to me.

"What do you think, Battalion Commander? Shall it be 'Hurrah!'?"

I shook my head. In stories of the cheaper kind it's quite easy: "Hurrah!"—and the Germans run. But war isn't like that.

All the same the "Hurrah!" of our charging soldiers did sound that evening. My battalion was not the only one on earth and I was not the only commander directing operations. The "Hurrah!" came from a quarter which surprised us as well as the Germans.

From the wedge of a wood slightly to the rear of the prone Germans a group of men had appeared. They were running in open order.

In the rays of the setting sun we recognized the Red Army helmets and coats, the leveled bayonets. There weren't very many of them, 40 or 50 in all.

Not we but the Germans would now feel what a blow from the flank and the rear was like.

"Battalion Commander!" Tolstunov exclaimed excitedly.

I nodded affirmatively and then shouted:

"Pass the word to stand by to charge!"

I did not recognize my own voice. It was muffled and hoarse. The words "stand by to charge" passed from man to man, and the hearts of all stopped stock-still for an instant and then began to pound furiously.

Meanwhile the firing from our ranks had died down. The men were lying flat on the ground, clutching their rifles and waiting for the moment that had been in their thoughts from the day they entered the service, the most terrifying moment in war—waiting for the word to attack.

I was aghast at this instinctive cease-fire. That was wrong, altogether wrong! But there was no longer time to correct the mistake. We had to act quickly, quickly, while the enemy was still bewildered, before he set up his other machine guns and brought them into action.

"Burnashev!" I shouted.

Lieutenant Burnashev, the platoon commander who had recently blushed with shame for his momentary confusion on the river bank, was lying on my left some fifty yards from me. He immediately raised and lowered his hand to show that he had heard me.

"Burnashev, take the lead!"

A second passed.

No doubt you have read and heard about the mass heroism in the Red Army. Mass heroism is an absolute fact. But at the same time I want you to realize that there is no mass heroism without a leader, without someone who takes the first step. It is not easy to get up and rush into attack. And no one gets up if there is not one man who does so first, leads the way and draws all the others after him.

Burnashev jumped up. His tense, eager silhouette was outlined against the sunset. In front of him, on a level with his shoulder, was the sharp black line of a bayonet. He had evidently snatched up a rifle from someone. His open mouth was moving. As he rose from the ground in obedience to a command that was not mine only but that of a beloved country, Burnashev yelled out at the top of his lungs:

"For home and country! Forward!"

Before this I had often read newspaper reports of attacks. In these descriptions the men most always went into attack with this cry on their lips. On paper it often looked too glib somehow, and I used to think that when our turn came, when we would have to make a bayonet



This bell was pre[illegible] of the U.S. [illegible]ghter Townsend Harris to Soviet seamen
a token of th[illegible] [illegible]ainst [illegible] Both countries sent ships across the
rn seas, wh[illegible] [illegible]dy [illegible]i submarines lay in wait. For many,
on was th[illegible] [illegible]ll, like many then, tolled for the
heralded [illegible] on display at the Naval Museum.

THE VOLOKOLAMSK ROAD



in his voice. "Well, you look like a real scarecrow, I must say."

"You will shoot him," I said to Blokha, "you and your section. . . ."

At the appointed time, at 16.00, I went out to the battalion drawn up on three sides of a square. In the center of the open side, the object of everyone's gaze, stood Barambayev in his long army coat but without his belt. He was facing the men.

"Battalion, attention!" Commander Rakhimov barked.

A peculiar noise resounded through the silence and ceased sharply, a sound which a commander's ear never fails to catch—the rifles moved and stopped as if they were all one.

"The battalion has fallen in as ordered," Rakhimov reported in a clear voice.

At that moment, in that Russian glade, when a man, with his hand bandaged, stood disgraced before his unit, without his belt and without his Red Army star, every word, even each routine word of the report, was tense and gripping.

"Section Commander Blokha, advance with your section!" I ordered.

In silence they crossed the field. First came Blokha, who was of medium height, with six-footer Galliulin at his side; behind them came Murin and Dobryakov, the man who had been on duty at the machine gun the day before. They walked gravely, in step, in line, without turning their faces from the wind that was blowing up from the side.

But they were in a state of excitement.

Blokha gave the order:

"Section, halt!"

Their rifles came down from their shoulders to their feet in one movement.

I turned toward Barambayev and pointed my finger at him. His eyes were fixed on me, on me alone, hoping against hope.

I began:

"He loves life, he wants to enjoy the air, the earth and the sky. So he decided: 'You can go ahead and die; I want to live.' But that is the way parasites live, on someone else's back."

The hundreds of men facing me knew that not all of them would come through alive, death would take its toll, but at that moment they all stepped across a certain boundary. I had expressed the thought that just then filled their hearts.

"Yes, war takes its toll. But those who fall like warriors will not be forgotten by their country. Your sons and daughters will say with pride: 'Our father was a hero of the Great Patriotic War.' And your grandchildren and great-grandchildren will repeat their words. But are we all going to die? No. The soldier goes into battle not to die, but to kill the enemy. And he who returns home after doing his duty as a soldier, he, too, will be called a hero."

"Forgive me," Barambayev said softly, "send me into battle."

Barambayev's voice scarcely rose above a whisper, yet I knew that every man there had heard him.

"No!" I exclaimed. "Do you see these soldiers I have called out of the ranks? Do you recognize them? They are the section you commanded. . . . You lived with them under the same roof, you ate from the same pot, slept with them under the same coat, like an honest soldier. They will go into action. But first they will shoot you because you are a coward who deserted in the face of the enemy!"

Then I gave the command:

"At the coward, traitor to his country, violator of his oath, section. . . ."

The rifles rose into position, froze to the men's shoulders. But one rifle trembled. Murin was shaking violently and his lips were white.

And suddenly I felt unspeakably sorry for Barambayev.

Murin's rifle, trembling in his hands, seemed to be crying aloud, "Forgive him, have mercy on him!"

And the men who had not yet been in battle, who were not yet hardened against cowards, who waited tensely for me to pronounce the word "Fire!" also seemed to be begging me: "Don't do it; forgive him."

I am not a beast; I am only human. And so I shouted:

"As you were!"

It seemed as if the rifles were not put down but fell to the ground like iron. And a weight lifted from everyone's heart.

"Barambayev!"

He turned around, with questioning, still unbelieving eyes but eyes that already glowed with life.

"Get back to your place in the ranks!" I shouted at him.

Murin, good-natured, bespectacled Murin, whose rifle had trembled, furtively beckoned to him to fall in alongside and then gave him a comradely nudge in the ribs. Barambayev was a soldier once more and our comrade.

And the reader of this tale will also breathe a sigh of relief when he gets to the command: "As you were!"

But that wasn't what really happened. Everything I have just told you took place only in my imagination. The whole scene merely flashed through my brain, flashed by like a dream.

The truth was different.

When I noticed that Murin's rifle was shaking, I shouted:

"Murin, are you trembling?"

He shuddered, straightened up and gripped the stock of his rifle tighter.

I repeated the command:

"At the coward, traitor to his country, violator of his oath, section. . . . Fire!"

And the coward was shot.

Judge me!

A poisonous desert spider once bit my father, he was then a nomad. My father was all alone in the desert with no companion but his camel. That spider's poison was fatal. My father pulled out a knife and cut out a piece of flesh from his own body, the part which the spider had bitten.

And now I did the same thing—with my knife I cut out a piece from my own body.

I am a human being. Yet although every human feeling in me was crying aloud, "Don't do it, have mercy, forgive him!" I could not forgive him.

I command a battalion, I am their father. I killed one son, but before me stood hundreds of other sons.

I wanted every man to know: If you turn tail, if you betray, you will not be forgiven, much as we may want to forgive you.

The First Attack

They were marching along the field over which we were riding, approximately a thousand yards away. They were advancing in open order, at intervals of two to three paces. I knew that they wore greenish great coats and helmets, but now, against the snow, the figures looked black. Up to tricks as usual, they were firing their submachine guns as they marched, sending out thousands of tracer bullets to intimidate us.

I shouted:

"Boszhanov! You'll go with the machine gunners! Repeat your orders!"

"To die," he said in a low tone, "but. . . ."

"To life! Your gun must not be silenced! Hold on till we turn out flank!"

"Yes, Comrade Battalion Commander. The gun will hold the front till. . . ."

"Make your way through the gully. Act coolly. Bide your time; let them come up close. . . ."

I looked over the machine gunners, glancing in turn at Murin, Dobryakov and Blokha, weighed down with ammunition belts. "On the double! Pin those swine to the ground, comrades! Krayev, follow me! Sinchenko, follow me!"

We dashed past Novlyanskoye through the open space between the river and the village to the flank of the battalion, but the orderly had not yet arrived. From here the advancing Germans could not be seen because the hill was in the way, but the men had already come out of the end bunkers. Some of them were sitting in the communication trenches with only their heads above the ground; others had bunched together in groups. All of them were staring behind the trenches to where the crackle of submachine guns and the random red dots of the tracers came from.

Lieutenant Burnashev, a young platoon commander in Company No. 2, ran a few paces in the direction of the firing, stopped short and stood there, completely at a loss, dumbfounded. This is something you sense immediately in battle. He was clenching his revolver so tightly that his fingers were white, but his arm hung down helplessly. Staggered by the unexpectedness of the situation, Burnashev did not know what to do or what orders to give. He was at a loss for only a minute in all, perhaps, but during that minute—that horribly critical moment—the men had lost a commander.

As yet no one was running, but. . . . One soldier, his eyes fixed on the flying lines of gleaming dots, was slowly moving, slowly edging away along the bank.

So far slowly. . . . So far alone. . . . But supposing he turned and ran, would not all of them go the same way?

Suddenly someone pointed authoritatively toward this soldier who was edging away. Strange. Who was in command here? From the distance I recognized Tolstunov's smart figure.

Only then did I make out a few figures at various spots standing apart from the others: they seemed to have caught their pose of silent, concentrated determination from Tolstunov, who was in the center. I saw that this was not the usual backbone of the platoon which I knew

so well; but I saw, too, that these men were now holding together, cementing, the platoon.

Another force had made itself felt here, the Communist Party.

Riding over, I shouted:

"Burnashev! Who's in charge here? Why so down in the mouth? Where are the section commanders?"

Burnashev started and flushed, ashamed at having been caught off guard. Hurriedly he shouted:

"Section commanders!"

In a loud voice I announced my decision briefly: to turn our flank after abandoning the village to the enemy. Then I ordered:

"No. 1 Section Commander! Turn out your men! Each man take up his position according to his number in the ranks. I will lead Section No. 1, Tolstunov No. 2, and Burnashev No. 3! . . . Keep at an interval of 50 paces from me. Don't fall behind! Don't bunch up. Section No. 1, attention! On the double, follow me!"

I started off for all I was worth up the rising ground, past the dark houses of the village, whose windows were glowing with the reflection of the setting sun, over the crater-pitted field toward the woods. I could hear the footsteps of the section behind me.

The Germans spotted us. Red curves crisscrossed and cut the air in front and behind us, passing over our heads or expiring at our feet with a faint hiss.

The Germans, with the instinct of the pursuer—aha, the Russians are running!—quickened their steps. But there were the woods a hundred paces away. And suddenly I felt with anguish that my breath was giving out. The panting and the tramping of feet behind me came closer and closer. The men were catching up with me. I had given orders not to bunch up, but they had anyway.

I filled my lungs with air.

"Section, hit the dirt!"

Do you understand? In that one instant, in that command, our entire past history was compressed—the history of a battalion of Panfilov's Division. Into it entered consciousness of duty and the shooting of a coward before the troops on parade and the fact that we had beaten the Germans in a night raid not long before.

But suppose the men had not halted, suppose they had dashed into the woods in headlong flight? In that case. . . . In that case that would have been the end of Battalion Commander Baurjan Momysh-Uly. Such is the law of our army: for the inglorious flight of his men, the inglorious commander must answer.

The men were firing at random with feverish speed and feverish inaccuracy. Still sending out showers of tracer bullets, the Germans were advancing on our thin line, none of them falling.

The unusually bright sun was casting its rays from the side and somewhat in front of them. The Germans no longer looked black and faceless. The sun picked out the colors. Under the greenish helmets gleamed beardless white faces on some of which eyeglasses glittered.

But why, why weren't they falling? Only at this point did I realize that actually the Germans were still a good way off—some three to four hundred yards. And we were firing away in a tearing hurry with our sights set at a hundred yards.

"Sights for two hundred and fifty!" I shouted above the din.

The Germans were drawing nearer. One and then another fell. But among us, too, someone groaned. The far end of the enemy ranks was hidden behind the houses. The enemy was already in Novlyanskoye. We had surrendered the village.

Meanwhile the Germans were coming on and on. At any moment they would be given orders to advance on the double.

I gauged the distance with a glance. They would crush us! Oh, if only you knew that sickening expectation: they would crush us! The machine gun! Where is the machine gun, the machine gun?

Nearby someone cried out:

"Oh, oh, I'm dying! Oh, oh. . . ."

The cry of pain was nerve-racking and unmanning.

Everyone felt: In a minute the same thing will happen to me; in a minute a bullet will get me too. The blood will spurt from my body, and I shall be crying out in my death agony. I said "everyone." Yes, myself included. Yes, those harrowing cries made me tremble as well. A cold wave swept over my body, depriving me of strength and robbing me of will power.

The Germans were still coming. Marching confidently, quickly, erect, their submachine guns crackling as they advanced and looking as if they were fitted with long needles of fire that reached all the way to us—that's what tracer bullets look like when they are fired continuously. I realized that the Germans were trying to deafen and blind us, to keep us from raising our heads and taking aim coolly. Where was Boszhanov? Where was the machine gun? Why was it silent?

At last, at long last, I heard the trill of the machine gun. A long burst: rat-tat-tat-tat. . . . Oho! How close Boszhanov had let them come! He had managed to hold out and not give himself away until the very last moment. And now, to make up for it, his machine gun was mowing them down at point-blank range.

The first burst cut through the middle of the German line. What a clean sweep it made! For the first time I heard the yells of the enemy. Later we learned from repeated experience that this is one of the peculiarities of the German Army: Whenever the fighting goes against them, their wounded yell at the top of their lungs under fire, calling for help. Our men almost never yell like that.

All the same, we had a thoroughly drilled force in front of us. A command in a foreign language rang out and the German line, to a man, fell flat.

Well, at last we could draw a deep breath.

A minute later Tolstunov came crawling over to me.

"What do you think, Battalion Commander? Shall it be 'Hurrah!'?"

I shook my head. In stories of the cheaper kind it's quite easy: "Hurrah!"—and the Germans run. But war isn't like that.

All the same the "Hurrah!" of our charging soldiers did sound that evening. My battalion was not the only one on earth and I was not the only commander directing operations. The "Hurrah!" came from a quarter which surprised us as well as the Germans.

From the wedge of a wood slightly to the rear of the prone Germans a group of men had appeared. They were running in open order.

In the rays of the setting sun we recognized the Red Army helmets and coats, the leveled bayonets. There weren't very many of them, 40 or 50 in all.

Not we but the Germans would now feel what a blow from the flank and the rear was like.

"Battalion Commander!" Tolstunov exclaimed excitedly.

I nodded affirmatively and then shouted:

"Pass the word to stand by to charge!"

I did not recognize my own voice. It was muffled and hoarse. The words "stand by to charge" passed from man to man, and the hearts of all stopped stock-still for an instant and then began to pound furiously.

Meanwhile the firing from our ranks had died down. The men were lying flat on the ground, clutching their rifles and waiting for the moment that had been in their thoughts from the day they entered the service, the most terrifying moment in war—waiting for the word to attack.

I was aghast at this instinctive cease-fire. That was wrong, altogether wrong! But there was no longer time to correct the mistake. We had to act quickly, quickly, while the enemy was still bewildered, before he set up his other machine guns and brought them into action.

"Burnashev!" I shouted.

Lieutenant Burnashev, the platoon commander who had recently blushed with shame for his momentary confusion on the river bank, was lying on my left some fifty yards from me. He immediately raised and lowered his hand to show that he had heard me.

"Burnashev, take the lead!"

A second passed.

No doubt you have read and heard about the mass heroism in the Red Army. Mass heroism is an absolute fact. But at the same time I want you to realize that there is no mass heroism without a leader, without someone who takes the first step. It is not easy to get up and rush into attack. And no one gets up if there is not one man who does so first, leads the way and draws all the others after him.

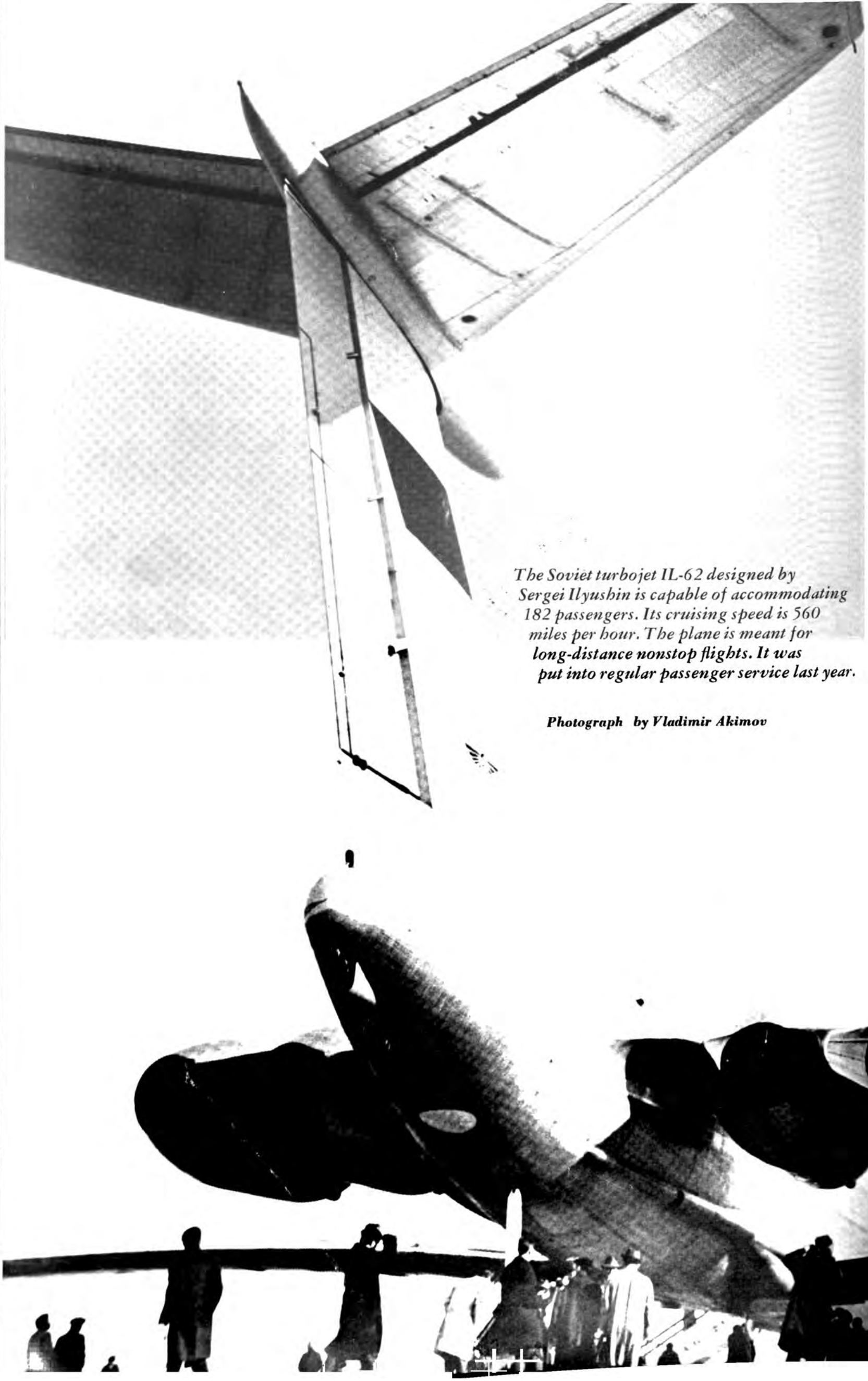
Burnashev jumped up. His tense, eager silhouette was outlined against the sunset. In front of him, on a level with his shoulder, was the sharp black line of a bayonet. He had evidently snatched up a rifle from someone. His open mouth was moving. As he rose from the ground in obedience to a command that was not mine only but that of a beloved country, Burnashev yelled out at the top of his lungs:

"For home and country! Forward!"

Before this I had often read newspaper reports of attacks. In these descriptions the men most always went into attack with this cry on their lips. On paper it often looked too glib somehow, and I used to think that when our turn came, when we would have to make a bayonet



This bell was presented by the crew of the U.S. freighter Townsend Harris to Soviet seamen as a token of their common fight against fascism. Both countries sent ships across the northern seas, where storm, fog, mine fields and nazi submarines lay in wait. For many, the ocean was their final resting place. This ship's bell, like many then, tolled for the dead and heralded the coming victory to the living. It is on display at the Naval Museum.



The Soviet turbojet IL-62 designed by Sergei Ilyushin is capable of accommodating 182 passengers. Its cruising speed is 560 miles per hour. The plane is meant for ***long-distance nonstop flights. It was put into regular passenger service last year.***

Photograph by Vladimir Akimov

SOVIET LIFE

May 1965 • 35 cents

WORLD WAR II IN RUSSIA

Twenty years ago the Soviet flag fluttered over the Reichstag, signaling the end of the most horrible war in history. In this issue— the story of how the Soviet Army dealt the Wehrmacht the death blow on the Eastern Front and saved mankind from nazi enslavement.

UNIVERSITY OF MINNESOTA
APR
13
1965
LIBRARY



SOVIET LIFE

MAY 1965 No. 5 (104)

The magazine SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* AMERICA *in the Soviet Union.*



Front Cover: "To the Last Drop of Blood" describes the heroism of the Soviet soldier who preferred death to retreat.

PICTURE CREDITS

Ivan Shagin Cover I, 54; State Archives 2-4, 13, 14; Arkadi Shaikhet 5, 10; Isaac Kapustiansky 6-7, 21; Georgi Zelma II (bottom), 30; Dmitri Baltermants 15; Victor Kinelovsky 16-17; Georgi Petrusov 24-29, 31, 45; Naum Granovsky 32-33; Gherman Cheryomushkin 42; Alexander Mokletsov 46-47; Rach Sachlyan 50-51; Vadim Gippenreiter 58-61; David Sholomovich Cover IV.

Editor in Chief (Moscow Editorial Board): Yuri S. Fantalov, APN, Pushkin Sq. 2, Moscow, USSR.

Managing Editor (Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director (Moscow Editorial Board): Marina T. Zabolotskaya, APN, Pushkin Sq. 2, Moscow, USSR.

Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine SOVIET LIFE.

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Hayhes Lithograph Co., Rockville, Md.

The Frontier of the Impermissible (Our Trends) by Spartak Beglov

SOVIET PEOPLE

The Great Patriotic War
Guerrilla Warfare by Panteleimon Ponomarenko
1944: Smashing the Wehrmacht
The Real Story of Soviet Strategy by Marshal Ivan Koney
From Burning Hell to Victory
Volgograd
They Shall Always be Twenty by Yuri Rozenblum
Love, Sex and the Young Family by Boris Grushin
Yerevan Is As Old As Rome by Nikolai Tarasov

INTERNATIONAL CONTACTS

Russia Revisited by Eugene List
Arms of Friendship by Sergei Borzenko

LITERATURE AND THE ARTS

The Volokolamsk Road by Alexander Bek
Every Day the Longest (War Diary Excerpts) by Konstantin Simonov
Antlers House by Yuri Kazakov

ECONOMY AND SCIENCE

Countdown at Baikonur
Three Stages of Space Conquest by Academician Anatoli Blagonravov
Plasma Motors by Academician Mikhail Millionshchikov
Spaceman's Menu by Olga Molchanova
About the Voskhod by Yuri Marinin
The Land of 100 Volcanoes by Myuda Derevyankina

RECREATION AND SPORTS

Teenage Olympic Mermaid by Alexei Srebnitsky

MISCELLANEOUS

Children's Corner
Learning Russian
Queries from Readers
Around the Country
Letters to the Editor
Brief Comments
Next Issue

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

THE FRONTIER OF THE IMPERMISSIBLE



Spartak Beglov (born 1924) is a graduate of the Moscow Institute of International Relations and the author of several books on international problems. He has a master's degree in history.

BY SPARTAK BEGLOV
Novosti Press Agency Commentator

The pages of human history are so spattered with blood that the temptation to declare war "man's natural condition" would seem reasonable were it not so immoral.

However, it was not until the second world conflict that the immorality of war as an instrument of aggressive policy was bared in all its ugliness. What can be more immoral than a sneak attack on peaceful cities, without a declaration of war, by thousands of tanks and planes stuffed with millions of tons of explosives? What can be more vicious than the cold-blooded murder of tens of thousands of civilians? What can be more cynical than a blockade of two million women, children and old people in Leningrad, where every day, every hour, for three years they faced the choice of death from shells or from starvation? Think of Oswiecim. Think of the torpedoing of the convoys carrying food. Think of the ruins in Coventry and Stalingrad.

These thoughts bring to mind again the history of that vast and crucial arena of the Second World War which the whole world knew as the Eastern Front and which we Soviet people called the Great Patriotic War, a war to the bitter end. It was there that the destiny was decided not only of a single or even the largest sector of the world war, but of a nation, of a social system, and, I venture to say, of human history.

It was there that the destiny was decided of a nation that was the first to choose a new social system and to stand as the bulwark against the most depraved manifestation of the old order—fascism. It was there that the destiny was decided of a social system that had to prove its viability in the hours of cruel trial by bombs, tanks and executions, or vanish from the face of the earth. It was there that the direction of human history was decided, a history that could have been quite different had the new social system been unable to prove its capacity to live, to fight back and to win.

What made the Soviet soldier at the front and the worker in the rear strong in that unequal battle was the conscious or subconscious awareness that they were fighting for their country, for a socialist society, for history. History not only showed them their duty but fortified them with examples and thus gave them faith in victory. For it was Russia that bore the terrible brunt of the Tatar and Mongol invasions, shook off that yoke and freed the rest of Europe of the dire threat. It was Russia that beat back Napoleon, inflicting the first of the blows that were to end in his final defeat at Waterloo.

And what about the social system that Hitler personified? Hitlerism was more than armed brigands, an army intoxicated with its victories. Hitler personified more than so many bayonets, field pieces and squadrons. With him came the "new order," promoted with the gold of the Reich and other countries; the "new order," which with comparatively little effort broke through the barriers set up by its adversaries; the "new order," which found Quislings and Petains when the old order chose to capitulate instead of to fight. And there was nothing surprising about this, for it was the very same old order that had nurtured Hitler.

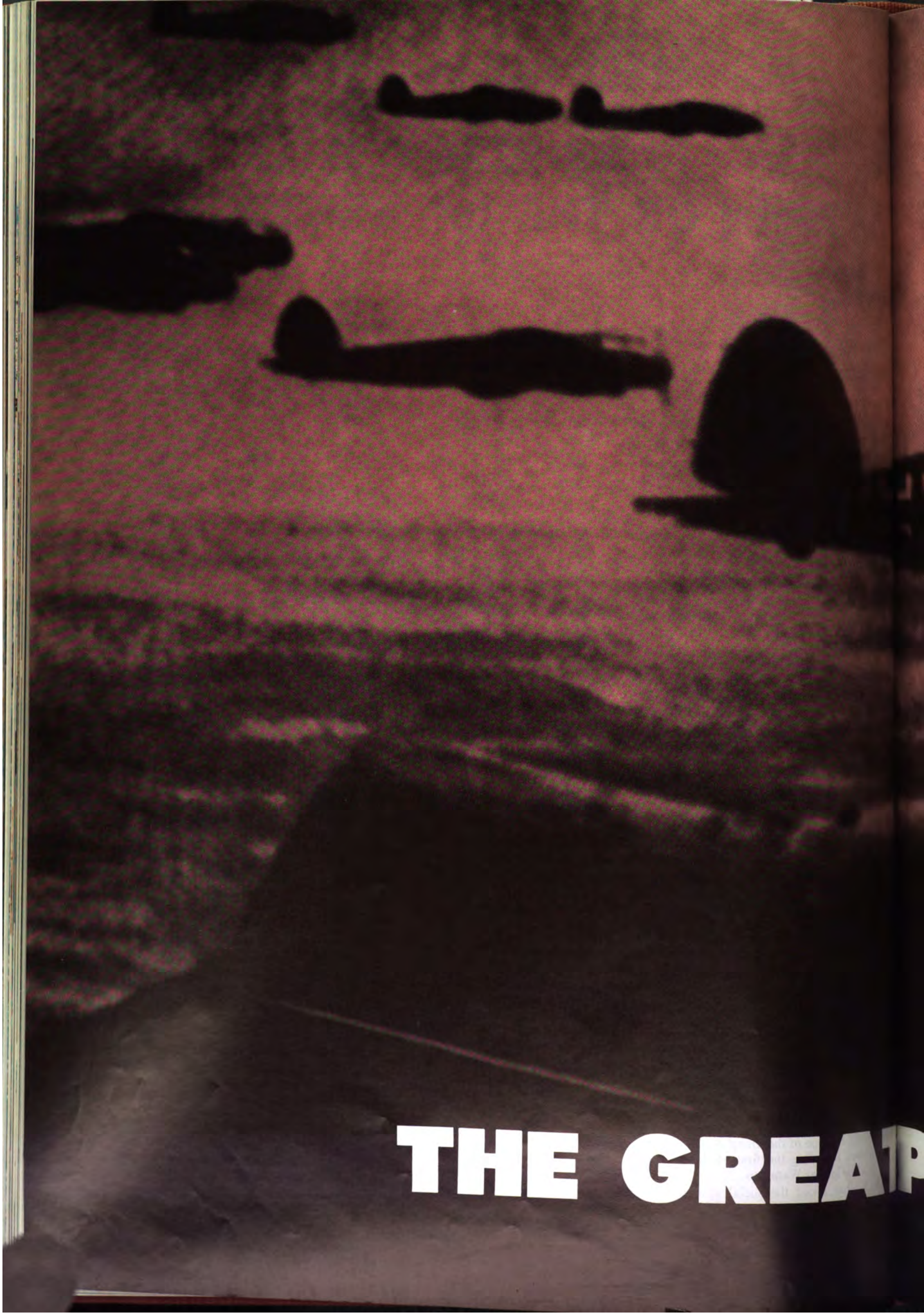
Naziism, with its 300 divisions in the vanguard and 13 obedient regimes behind it supplying cannon fodder and ammunition, could not destroy what the dreams and the hands of the people had created. The Soviet Union suffered enormous losses: 20 million people in the prime of life killed, 25 million left homeless, billions of rubles of treasures lost irretrievably.

These sacrifices would have been harder to endure had they been made only for our own sake. That they helped others to avoid enslavement, that they contributed to the common cause which developed into the United Nations, made them easier to bear, made our victory greater.

And now, 20 years later, are we all as mindful as we should be of the purpose for which we joined forces and made pledges at Yalta, Potsdam, Dumbarton Oaks and San Francisco? The tens of millions of war dead would not believe their ears if they could hear some of the speeches in the UN, the organization set up to honor their sacred memory. They would look incredulously at those who would once again plant explosives in Europe's most inflammable area.

History knows many wars that men have cursed for the suffering and disaster they brought. The Second World War marks the point of no return, the frontier of the impermissible. It was that war that taught mankind its last and most important military lesson. Now humanity must be mature enough to learn these most profound of truths: the truth of the atom and the truth of new social experiments. Can it?

The new social system that broke the backbone of the Nazis provides the answer. The answer is peaceful economic competition, not nuclear competition. The answer is that peace is man's natural condition, not war. The answer is coexistence, not at the cost of principle, not by conciliating the oppressor and the oppressed (that is no more possible than trying to stop the birth of the new and the death of the old), but by outlawing everything that breeds war: militarism, racism, revanchist claims, unsettled disputes in the world markets, every immorality that was promoted to the rank of "big policy" by those who started the imperialist wars of the past.


THE GREAT



JUNE 22, 1941

It is 4 a.m. Sunday, and Soviet cities and towns are silent. The people are sleeping after a hard week's work. The clear dawn heralds a sunny day of peace and serenity.

It is four o'clock in the morning, and 3,900 aircraft take off and head eastward from German airfields in Poland, East Prussia and Rumania. Gunners level their cannon at targets on Soviet soil, and five million trained, disciplined and well-fed soldiers stand ready, awaiting the command "*Vorwarts.*"

It is four o'clock in the morning, and the people are asleep, luxuriating in the promise of a good Sunday rest.

Theirs is a fearful awakening. The crash of bombs and falling walls, blood, groans and death blast them from their dreams. Nazi fliers, who have had good schooling in vandalism and destruction in Warsaw, massacre innocent children and their misery-stricken mothers in cold blood.

It is four o'clock in the morning, and 190 divisions crash through the frontier defenses to overrun our country. They come to kill, plunder, rape and burn, to crush the land that blocked fascism's road to world supremacy.

Four o'clock in the morning, the hour that stands between peace and war, a war which for us became

PATRIOTIC WAR

BARBAROSSA PLAN BLASTED

AFTER THEIR BLITZ VICTORIES in the Western theater of operations, the nazi generals thought their Eastern campaign would be a walkaway. Hitler had said that he would not change his shirt until his armored divisions entered Moscow.

The Germans launched their campaign the morning of June 22, 1941, a surprise attack by an army many millions strong. Our soldiers fought back with everything they had and retreated to the East from their native villages and towns only after bloody battles.

As early as June 24, the second day of the campaign, General Halder, chief of the Nazi General Staff, made this entry in his diary: "The Russians are fighting stubbornly and desperately. There were cases of whole garrisons blowing themselves up with their pillboxes rather than be taken prisoner."

Exhausted by interminable retreat and last ditch battles with an enemy superior in armaments and experience, the Soviet Army still did not give way. With each week that passed its resistance became stronger and better organized, slowing down the enemy's progress more and more, until it ground to a halt. The nazi horde did not seize Russia's vital centers, Leningrad and Moscow, as was contemplated by its Barbarossa Plan.

On the 147th day of the campaign the Nazis initiated a new general offensive against Moscow. They called it "Typhoon." Hitler sent 51 divisions against Moscow—13 armored, 7 motorized and 31 infantry. That was more armored units than he had used against France.

It was near Moscow that the Wehrmacht suffered its first great defeat, and the myth of its invincibility ended.

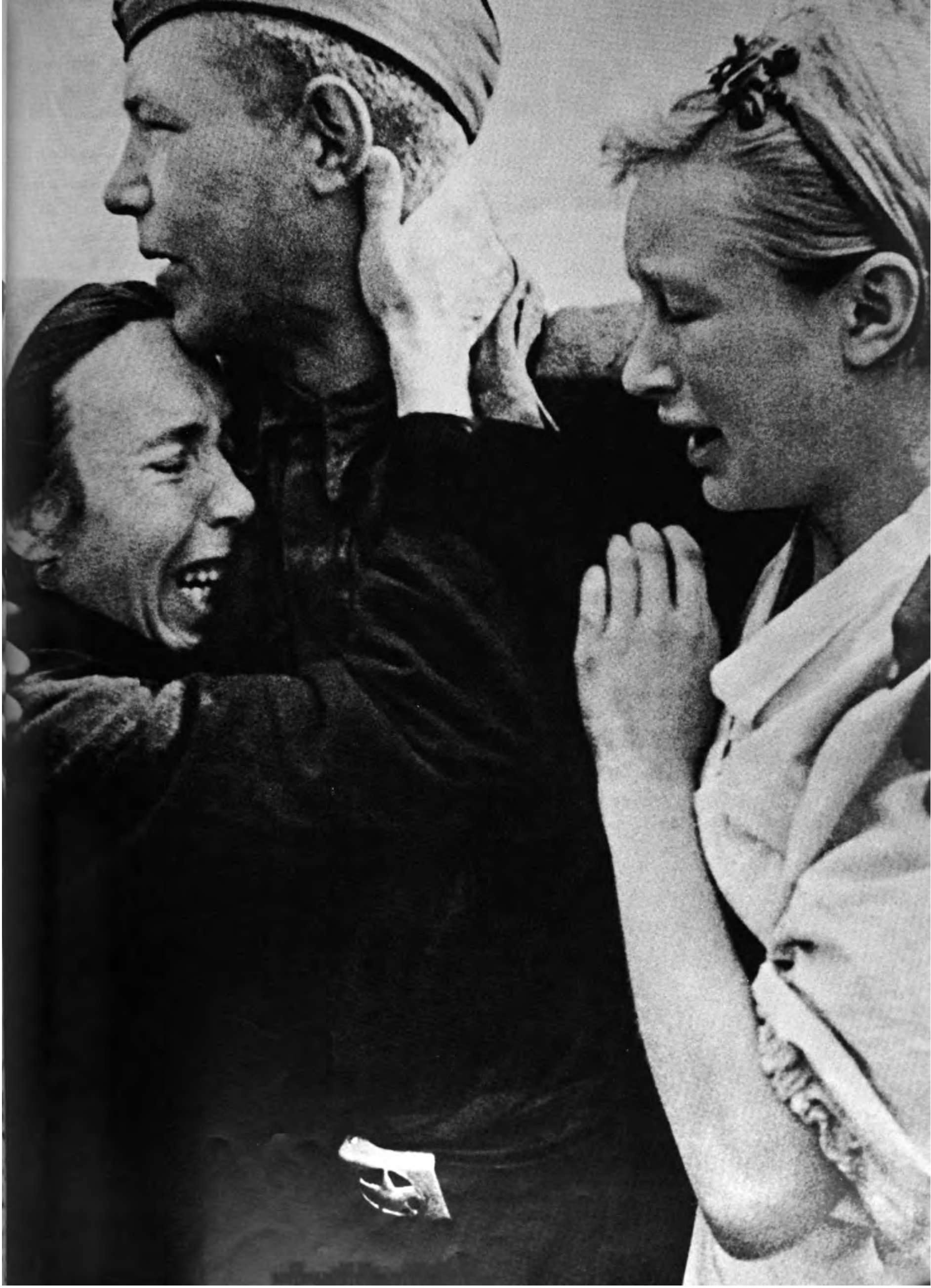
On Volokolamsk Road, one of the main approaches of the Nazis to Moscow, their way was barred by the division under General Panfilov. This unit threw back five nazi divisions. In a single month of battles in the Volokolamsk sector Panfilov's division killed 30,000 German officers and men and destroyed more than 150 enemy tanks.

An excerpt from *The Volokolamsk Road* by Alexander Bek appears on page 6. One of the best documentary accounts of the Great Patriotic War, it was published in 1942.



The front is the next village.

PHOTOGRAPH BY ARKADI SHAIKHET/TASS



THE VOLOKOLAMSK



GERMAN TANK DESTROYED BY THE FIRST GUARD TANK BRIGADE *IN TH*
VICINITY OF THE VILLAGE OF SKIRMANOVO, VOLOKOLAMSK REGION

ROAD

By ALEXANDER BEK

I set out to meet the division commanded by General Panfilov, not knowing as yet the name or rank of the person who would be telling me the story of that epic two-months' engagement, but certain that I would meet him.

And meet him I did.

It was Baurjan Momysh-Uly, a senior lieutenant in the Battle of Moscow, and now, two years later, a colonel of the Guards.

When he introduced himself, I did not quite catch his name and asked him to repeat it.

"Baurjan Momysh-Uly," he said again, articulating every syllable distinctly.

Through force of habit I took out my pad and pencil. "How do you spell your surname?"

"I have no surname," he replied.

I stared at him. He explained that Momysh-Uly meant "son of Momysh."

"So that's my patronymic," he continued. "Baurjan is my given name, and I have no surname."

He selected a cigarette, closed his cigarette case with a sharp snap and concluded obstinately:

"If, after all, you should write about me some time, call me by my Kazakh name, Baurjan Momysh-Uly. And tell your readers: 'He is a Kazakh, a shepherd who used to tend the flocks on the steppe, a man without a surname.'

"I set this condition—that you promise to write only the truth," he went on. "When the book is ready, you will bring it to me. I'll read the first chapter and I'll say: 'No good, lies! Put your left hand on the table!' Swish—and your left hand is gone! I'll read the second chapter: 'No good, lies! Put your right hand on the table!' Swish—and you right hand's gone! How's that?"

He leaned back slightly and took his sword out of the scabbard. In the low, damp dugout, dimly lit by an oil lamp that was shadeless, the damascened blade gleamed brightly.

"All right," I said, "I'm willing."

We were both joking, but neither of us smiled.

His wide-set eyes, so unlike the general run of Mongol eyes, bored right through me.

"Good," he said. "Get out your paper, take your pencil. Write: Chapter I. Fear.

"So why do you and your brother yarn spinners imagine that the men at the front are supernatural and not like you yourself? Why do you suppose the soldier hasn't got human feelings like you? Is he of a lower order? Or perhaps he's a creature of a higher order?

"Maybe, according to your way of looking at it, heroism is a gift of nature? Or perhaps you think the quartermaster sergeant issues fearlessness with the rations and checks off who received his share and who didn't?

"I've seen a lot of fighting since the war began. I am now a regimental commander, and I think I've had enough experience to say that's not so!

"What were the Germans expecting when they invaded a country as vast as ours? They were certain that on their march east General Fear would be at the head of their tank columns, and that every living thing would cringe or flee before him. We saw our first fighting on the night of October 15, 1941—it was a battle against fear."

Judge Me

I WAS SITTING in my dugout, staring at the floor, my bent head resting on my arms, like this (here Baurjan Momysh-Uly showed me how he sat), and completely engrossed in my thoughts.

"May I come in, Comrade Battalion Commander?"

I nodded but did not lift my head.

Jalmuhamed Boszhanov, political officer of a machine-gun company, came in.

"*Aksakal,*" he said softly in Kazakh. Literally translated, *aksakal* means "graybeard," which is our name for the oldest in the clan, the father. Boszhanov sometimes called me that.

"*Aksakal,* a terrible thing has happened in the company. Sergeant Barambayev shot himself through the hand."

Something seemed to clutch at my heart. Barambayev was a Kazakh like me, a Kazakh with good capable hands, commander of a machine-gun section.

He came in slowly. At first I could scarcely recognize him. His face was ashen and flabby, lifeless, like a mask. You see such faces on insane people. He held his bandaged left arm crooked as if in a sling. The blood had oozed through the gauze.

"Well?" I said grimly.

"I really don't know myself how it happened, Comrade Battalion Commander. It was an accident. I really don't know how it happened myself."

Although he must have expected me to swear at him, I did not. There are times when there is no sense in swearing. Barambayev went on to explain that as he was running into the woods he stumbled, fell, and the rifle went off.

"That's not true!" I exclaimed. "You're a coward. A traitor!"

I looked at my watch. It was almost three.

"Lieutenant Rakhimov!"

Rakhimov was chief of staff of the battalion. He stood up.

"Tell Private Blokha to report here at once."

"Yes, Comrade Battalion Commander."

"In an hour and a quarter, at 16.00 hours, the battalion will fall in at the glade here on the edge of the forest. That is all. You may go," I ordered.

"What are you going to do with me? What are you going to do with me?" Barambayev began hurriedly, as though afraid he would not be able to get it all out.

"Have you shot in front of the battalion!"

Suddenly Barambayev fell to his knees.

His hands, both the unharmed one and the bandaged one—stained with the blood of shame—were stretched out toward me.

"Comrade Battalion Commander . . . I'll tell you the truth . . . Comrade Battalion Commander . . . I did it myself . . . I did it intentionally. . . ."

"Get up!" I said. "At least try and die without crawling like a worm."

He got up.

"Ah, Barambayev, Barambayev!" Boszhanov said softly. "Tell me, what were you thinking of?"

For an instant it seemed to me that I myself had said it, as if the words I had been trying to smother had burst from my lips in spite of everything.

"I didn't think," Barambayev muttered. "I didn't think. I don't know how it happened."

He grasped at that phrase like a drowning man at a straw.

Maybe he was actually telling the truth at that moment. Maybe it actually did happen as he said, a momentary mental aberration, a momentary crisis in a soul undermined by fear.

But that is just how men flee from the scene of action, that is how they become traitors to their country—and often later are unable to grasp how it all happened.

Private Blokha, his breath coming in short, quick gasps and his eyebrows working in the excitement, came into the dugout and reported, somewhat awkwardly.

"Do you know why I've sent for you?" I asked.

"No, Comrade Battalion Commander."

"Look at that man. Do you recognize him?"

I pointed to Barambayev.

"What the. . . ." Blokha began. Contempt and pity mingled

THE VOLOKOLAMSK ROAD



in his voice. "Well, you look like a real scarecrow, I must say."

"You will shoot him," I said to Blokha, "you and your section. . . ."

At the appointed time, at 16.00, I went out to the battalion drawn up on three sides of a square. In the center of the open side, the object of everyone's gaze, stood Barambayev in his long army coat but without his belt. He was facing the men.

"Battalion, attention!" Commander Rakhimov barked.

A peculiar noise resounded through the silence and ceased sharply, a sound which a commander's ear never fails to catch—the rifles moved and stopped as if they were all one.

"The battalion has fallen in as ordered," Rakhimov reported in a clear voice.

At that moment, in that Russian glade, when a man, with his hand bandaged, stood disgraced before his unit, without his belt and without his Red Army star, every word, even each routine word of the report, was tense and gripping.

"Section Commander Blokha, advance with your section!" I ordered.

In silence they crossed the field. First came Blokha, who was of medium height, with six-footer Galliulin at his side; behind them came Murin and Dobryakov, the man who had been on duty at the machine gun the day before. They walked gravely, in step, in line, without turning their faces from the wind that was blowing up from the side.

But they were in a state of excitement.

Blokha gave the order:

"Section, halt!"

Their rifles came down from their shoulders to their feet in one movement.

I turned toward Barambayev and pointed my finger at him. His eyes were fixed on me, on me alone, hoping against hope.

I began:

"He loves life, he wants to enjoy the air, the earth and the sky. So he decided: 'You can go ahead and die; I want to live.' But that is the way parasites live, on someone else's back."

The hundreds of men facing me knew that not all of them would come through alive, death would take its toll, but at that moment they all stepped across a certain boundary. I had expressed the thought that just then filled their hearts.

"Yes, war takes its toll. But those who fall like warriors will not be forgotten by their country. Your sons and daughters will say with pride: 'Our father was a hero of the Great Patriotic War.' And your grandchildren and great-grandchildren will repeat their words. But are we all going to die? No. The soldier goes into battle not to die, but to kill the enemy. And he who returns home after doing his duty as a soldier, he, too, will be called a hero."

"Forgive me," Barambayev said softly, "send me into battle."

Barambayev's voice scarcely rose above a whisper, yet I knew that every man there had heard him.

"No!" I exclaimed. "Do you see these soldiers I have called out of the ranks? Do you recognize them? They are the section you commanded. . . . You lived with them under the same roof, you ate from the same pot, slept with them under the same coat, like an honest soldier. They will go into action. But first they will shoot you because you are a coward who deserted in the face of the enemy!"

Then I gave the command:

"At the coward, traitor to his country, violator of his oath, section. . . ."

The rifles rose into position, froze to the men's shoulders. But one rifle trembled. Murin was shaking violently and his lips were white.

And suddenly I felt unspeakably sorry for Barambayev.

Murin's rifle, trembling in his hands, seemed to be crying aloud, "Forgive him, have mercy on him!"

And the men who had not yet been in battle, who were not yet hardened against cowards, who waited tensely for me to pronounce the word "Fire!" also seemed to be begging me: "Don't do it; forgive him."

I am not a beast; I am only human. And so I shouted:

"As you were!"

It seemed as if the rifles were not put down but fell to the ground like iron. And a weight lifted from everyone's heart.

"Barambayev!"

He turned around, with questioning, still unbelieving eyes but eyes that already glowed with life.

"Get back to your place in the ranks!" I shouted at him.

Murin, good-natured, bespectacled Murin, whose rifle had trembled, furtively beckoned to him to fall in alongside and then gave him a comradely nudge in the ribs. Barambayev was a soldier once more and our comrade.

And the reader of this tale will also breathe a sigh of relief when he gets to the command: "As you were!"

But that wasn't what really happened. Everything I have just told you took place only in my imagination. The whole scene merely flashed through my brain, flashed by like a dream.

The truth was different.

When I noticed that Murin's rifle was shaking, I shouted:

"Murin, are you trembling?"

He shuddered, straightened up and gripped the stock of his rifle tighter.

I repeated the command:

"At the coward, traitor to his country, violator of his oath, section . . . Fire!"

And the coward was shot.

Judge me!

A poisonous desert spider once bit my father, he was then a nomad. My father was all alone in the desert with no companion but his camel. That spider's poison was fatal. My father pulled out a knife and cut out a piece of flesh from his own body, the part which the spider had bitten.

And now I did the same thing—with my knife I cut out a piece from my own body.

I am a human being. Yet although every human feeling in me was crying aloud, "Don't do it, have mercy, forgive him!" I could not forgive him.

I command a battalion, I am their father. I killed one son, but before me stood hundreds of other sons.

I wanted every man to know: If you turn tail, if you betray, you will not be forgiven, much as we may want to forgive you.

The First Attack

They were marching along the field over which we were riding, approximately a thousand yards away. They were advancing in open order, at intervals of two to three paces. I knew that they wore greenish greatcoats and helmets, but now, against the snow, the figures looked black. Up to tricks as usual, they were firing their submachine guns as they marched, sending out thousands of tracer bullets to intimidate us.

I shouted:

"Boszhanov! You'll go with the machine gunners! Repeat your orders!"

"To die," he said in a low tone, "but. . . ."

"To life! Your gun must not be silenced! Hold on till we turn our flank!"

"Yes, Comrade Battalion Commander. The gun will hold the front till. . . ."

"Make your way through the gully. Act coolly. Bide your time; let them come up close. . . ."

I looked over the machine gunners, glancing in turn at Murin, Dobryakov and Blokha, weighed down with ammunition belts. "On the double! Pin those swine to the ground, comrades! Krayev, follow me! Sinchenko, follow me!"

We dashed past Novlyanskoye through the open space between the river and the village to the flank of the battalion, but the orderly had not yet arrived. From here the advancing Germans could not be seen because the hill was in the way, but the men had already come out of the end bunkers. Some of them were sitting in the communication trenches with only their heads above the ground; others had bunched together in groups. All of them were staring behind the trenches to where the crackle of submachine guns and the random red dots of the tracers came from.

Lieutenant Burnashev, a young platoon commander in Company No. 2, ran a few paces in the direction of the firing, stopped short and stood there, completely at a loss, dumbfounded. This is something you sense immediately in battle. He was clenching his revolver so tightly that his fingers were white, but his arm hung down helplessly. Staggered by the unexpectedness of the situation, Burnashev did not know what to do or what orders to give. He was at a loss for only a minute in all, perhaps, but during that minute—that horribly critical moment—the men had lost a commander.

As yet no one was running, but. . . . One soldier, his eyes fixed on the flying lines of gleaming dots, was slowly moving, slowly edging away along the bank.

So far slowly. . . . So far alone. . . . But supposing he turned and ran, would not all of them go the same way?

Suddenly someone pointed authoritatively toward this soldier who was edging away. Strange. Who was in command here? From the distance I recognized Tolstunov's smart figure.

Only then did I make out a few figures at various spots standing apart from the others: they seemed to have caught their pose of silent, concentrated determination from Tolstunov, who was in the center. I saw that this was not the usual backbone of the platoon which I knew

so well: but I saw, too, that these men were now holding together, cementing, the platoon.

Another force had made itself felt here, the Communist Party.

Riding over, I shouted:

"Burnashev! Who's in charge here? Why so down in the mouth? Where are the section commanders?"

Burnashev started and flushed, ashamed at having been caught off guard. Hurriedly he shouted:

"Section commanders!"

In a loud voice I announced my decision briefly: to turn our flank after abandoning the village to the enemy. Then I ordered:

"No. 1 Section Commander! Turn out your men! Each man take up his position according to his number in the ranks. I will lead Section No. 1, Tolstunov No. 2, and Burnashev No. 3! . . . Keep at an interval of 50 paces from me. Don't fall behind! Don't bunch up. Section No. 1, attention! On the double, follow me!"

I started off for all I was worth up the rising ground, past the dark houses of the village, whose windows were glowing with the reflection of the setting sun, over the crater-pitted field toward the woods. I could hear the footsteps of the section behind me.

The Germans spotted us. Red curves crisscrossed and cut the air in front and behind us, passing over our heads or expiring at our feet with a faint hiss.

The Germans, with the instinct of the pursuer—aha, the Russians are running!—quickened their steps. But there were the woods a hundred paces away. And suddenly I felt with anguish that my breath was giving out. The panting and the tramping of feet behind me came closer and closer. The men were catching up with me. I had given orders not to bunch up, but they had anyway.

I filled my lungs with air.

"Section, hit the dirt!"

Do you understand? In that one instant, in that command, our entire past history was compressed—the history of a battalion of Panfilov's Division. Into it entered consciousness of duty and the shooting of a coward before the troops on parade and the fact that we had beaten the Germans in a night raid not long before.

But suppose the men had not halted, suppose they had dashed into the woods in headlong flight? In that case. . . . In that case that would have been the end of Battalion Commander Baurjan Momysh-Uly. Such is the law of our army: for the inglorious flight of his men, the inglorious commander must answer.

The men were firing at random with feverish speed and feverish inaccuracy. Still sending out showers of tracer bullets, the Germans were advancing on our thin line, none of them falling.

The unusually bright sun was casting its rays from the side and somewhat in front of them. The Germans no longer looked black and faceless. The sun picked out the colors. Under the greenish helmets gleamed beardless white faces on some of which eyeglasses glittered.

But why, why weren't they falling? Only at this point did I realize that actually the Germans were still a good way off—some three to four hundred yards. And we were firing away in a tearing hurry with our sights set at a hundred yards.

"Sights for two hundred and fifty!" I shouted above the din.

The Germans were drawing nearer. One and then another fell. But among us, too, someone groaned. The far end of the enemy ranks was hidden behind the houses. The enemy was already in Novlyanskoye. We had surrendered the village.

Meanwhile the Germans were coming on and on. At any moment they would be given orders to advance on the double.

I gauged the distance with a glance. They would crush us! Oh, if only you knew that sickening expectation: they would crush us! The machine gun! Where is the machine gun, the machine gun?

Nearby someone cried out:

"Oh, oh, I'm dying! Oh, oh. . . ."

The cry of pain was nerve-racking and unmanning.

Everyone felt: In a minute the same thing will happen to me; in a minute a bullet will get me too. The blood will spurt from my body, and I shall be crying out in my death agony. I said "everyone." Yes, myself included. Yes, those harrowing cries made me tremble as well. A cold wave swept over my body, depriving me of strength and robbing me of will power.

The Germans were still coming. Marching confidently, quickly, erect, their submachine guns crackling as they advanced and looking as if they were fitted with long needles of fire that reached all the way to us—that's what tracer bullets look like when they are fired continuously. I realized that the Germans were trying to deafen and blind us, to keep us from raising our heads and taking aim coolly. Where was Boszhanov? Where was the machine gun? Why was it silent?

At last, at long last, I heard the trill of the machine gun. A long burst: rat-tat-tat-tat. . . . Oho! How close Boszhanov had let them come! He had managed to hold out and not give himself away until the very last moment. And now, to make up for it, his machine gun was mowing them down at point-blank range.

The first burst cut through the middle of the German line. What a clean sweep it made! For the first time I heard the yells of the enemy. Later we learned from repeated experience that this is one of the peculiarities of the German Army: Whenever the fighting goes against them, their wounded yell at the top of their lungs under fire, calling for help. Our men almost never yell like that.

All the same, we had a thoroughly drilled force in front of us. A command in a foreign language rang out and the German line, to a man, fell flat.

Well, at last we could draw a deep breath.

A minute later Tolstunov came crawling over to me.

"What do you think, Battalion Commander? Shall it be 'Hurrah!'?"

I shook my head. In stories of the cheaper kind it's quite easy: "Hurrah!"—and the Germans run. But war isn't like that.

All the same the "Hurrah!" of our charging soldiers did sound that evening. My battalion was not the only one on earth and I was not the only commander directing operations. The "Hurrah!" came from a quarter which surprised us as well as the Germans.

From the wedge of a wood slightly to the rear of the prone Germans a group of men had appeared. They were running in open order.

In the rays of the setting sun we recognized the Red Army helmets and coats, the leveled bayonets. There weren't very many of them, 40 or 50 in all.

Not we but the Germans would now feel what a blow from the flank and the rear was like.

"Battalion Commander!" Tolstunov exclaimed excitedly.

I nodded affirmatively and then shouted:

"Pass the word to stand by to charge!"

I did not recognize my own voice. It was muffled and hoarse. The words "stand by to charge" passed from man to man, and the hearts of all stopped stock-still for an instant and then began to pound furiously.

Meanwhile the firing from our ranks had died down. The men were lying flat on the ground, clutching their rifles and waiting for the moment that had been in their thoughts from the day they entered the service, the most terrifying moment in war—waiting for the word to attack.

I was aghast at this instinctive cease-fire. That was wrong, altogether wrong! But there was no longer time to correct the mistake. We had to act quickly, quickly, while the enemy was still bewildered, before he set up his other machine guns and brought them into action.

"Burnashev!" I shouted.

Lieutenant Burnashev, the platoon commander who had recently blushed with shame for his momentary confusion on the river bank, was lying on my left some fifty yards from me. He immediately raised and lowered his hand to show that he had heard me.

"Burnashev, take the lead!"

A second passed.

No doubt you have read and heard about the mass heroism in the Red Army. Mass heroism is an absolute fact. But at the same time I want you to realize that there is no mass heroism without a leader, without someone who takes the first step. It is not easy to get up and rush into attack. And no one gets up if there is not one man who does so first, leads the way and draws all the others after him.

Burnashev jumped up. His tense, eager silhouette was outlined against the sunset. In front of him, on a level with his shoulder, was the sharp black line of a bayonet. He had evidently snatched up a rifle from someone. His open mouth was moving. As he rose from the ground in obedience to a command that was not mine only but that of a beloved country, Burnashev yelled out at the top of his lungs:

"For home and country! Forward!"

Before this I had often read newspaper reports of attacks. In these descriptions the men most always went into attack with this cry on their lips. On paper it often looked too glib somehow, and I used to think that when our turn came, when we would have to make a bayonet

---



This bell was presented by the crew of the U.S. freighter Townsend Harris to Soviet seamen as a token of their common fight against fascism. Both countries sent ships across the northern seas, where storm, fog, mine fields and nazi submarines lay in wait. For many, the ocean was their final resting place. This ship's bell, like many then, tolled for the dead and heralded the coming victory to the living. It is on display at the Naval Museum.

charge, it would most likely be quite different. Something else would escape our lips, something savage and vicious, like "kill," or just simply "ah-ah-a-a-ah!" Yet in this great and terrible moment, after breaking loose from the thousands of threads that pin a man under fire down to the ground, Burnashev was advancing with the very same shout on his lips.

"For home and country! Hur-r-ah!"

Burnashev's voice broke off suddenly. He stumbled as if he had tripped over a wire stretched in his path and fell. I felt that he must get up immediately, must begin to yell and run on, while all those who had not yet risen, all of them with their bayonets leveled in front of them, would dash forward at the enemy with him.

But Burnashev lay motionless, his arms outflung. The men of the company stared at the figure of the lieutenant sprawled in the snow. They were waiting for something.

Again a tense second. The men lay pressed to the ground.

The forty or fifty Red Army men who had chosen the proper moment to strike a blow at the rear of the enemy were drawing closer to the Germans, who had already formed a front and opened fire on that side too. Meanwhile we lay pinned to the ground, lay there dooming our handful of daring comrades to death.

And suddenly I felt that everyone's stare was fixed on me, that the strained attention of everyone was centered on me, the commander, as if I were the focal point of the battle, although I lay on the outskirts; I felt that everyone was waiting for what the Battalion Commander would say, how he would act. I realized that I was acting insanely, but I tried to rush forward to set an example.

But the moment I jumped up someone grabbed me by the shoulders and threw me down in the snow. It was Tolstunov. He let out a string of curses.

"Don't be a damn fool! Don't you dare, Battalion Commander! I. . . ."

His pleasant, plain face had changed in an instant, and his expression was tense and set. He made a move to jump to his feet, but this time I grabbed him by the arm.

I had already come to my senses. It was not the business of the Battalion Commander, of course, to lead the company in a hand-to-hand fight with the enemy. I remembered all we had been taught, recalled Panfilov's instructions: "You can't fight with the infantry's heads. We must take care of the soldier. Protect him by action, with fire."

I'm telling you this at length and in detail, but over there, on the field, the whole thing was a matter of seconds. During those seconds I, as all of us, was learning to fight, learning from the enemy.

I shouted:

"Rapid fire at the machine gunners! Pin them to the ground!"

The men understood. Now our bullets whistled over the heads of the firing Germans. One of our light machine guns was close by. It too had ceased firing after I had given the order to Burnashev: "You lead!" Now one of the crew was hurriedly inserting a new round. The men were firing feverishly. Then that machine gun too set to work.

So! The German machine-gunners had fallen flat, taken cover, crouching behind the shields. Ha! We'd hit someone over there. One machine gun sputtered and the long needles of flame stopped. Or perhaps they were only changing the belt? No; that was not so simple under fire. Well, this was the moment to give my order. But before I managed to do so, Tolstunov's fierce shout roared over the whole line:

"Communists! . . ."

But his appeal was addressed to everybody and not merely to the Communists. We saw Tolstunov scramble to his feet, holding a submachine gun, and dash forward, firing and shouting as he ran. And once more, for the third time, the same words rang out over the field, a fierce and passionate cry:

"For home and country! Hur-r-ah!"

Tolstunov's voice was lost in the roar of all the other voices. The men had jumped up. Yelling fiercely, their faces distorted with rage, they rushed the enemy, overtaking Tolstunov.

I just managed to see the huge, peculiarly shaped butt of a light machine gun wave in the air. Tolstunov had taken it by the muzzle, swung it over his head and was laying about him, using it like a club.

The Germans did not accept our challenge to a hand-to-hand encounter, did not wait for our bayonets. Their orderly ranks broke and they fled pell-mell before us.

Pursuing the enemy and killing those whom we managed to overtake, we burst into Novlyanskoye from two sides.

* * *

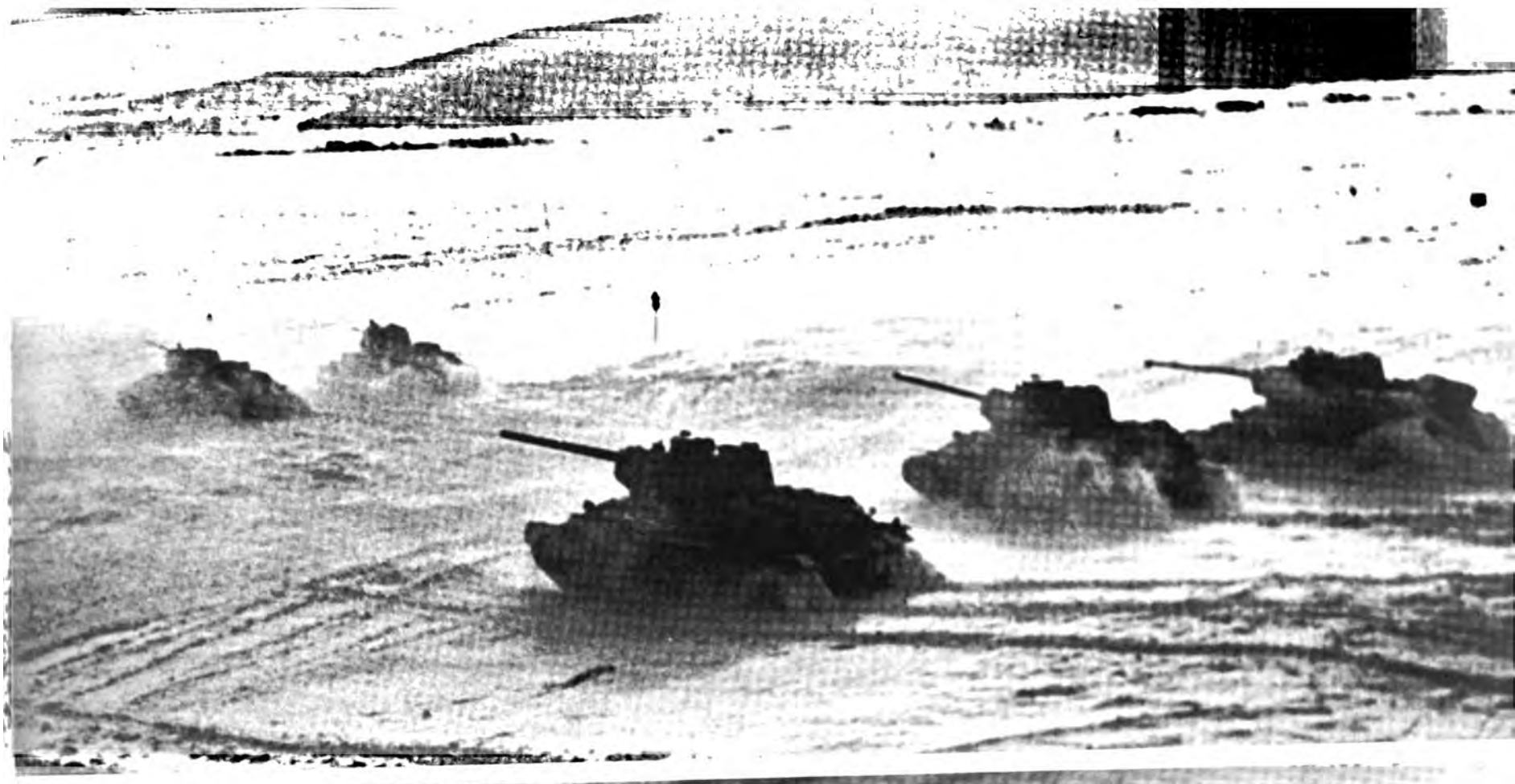
"Put a great big full stop here," said Baurjan Momysh-Uly. "With this we finish our chronicle of the battalion. Soon I stopped being battalion commander. I was called to army headquarters and appointed commander of a regiment.

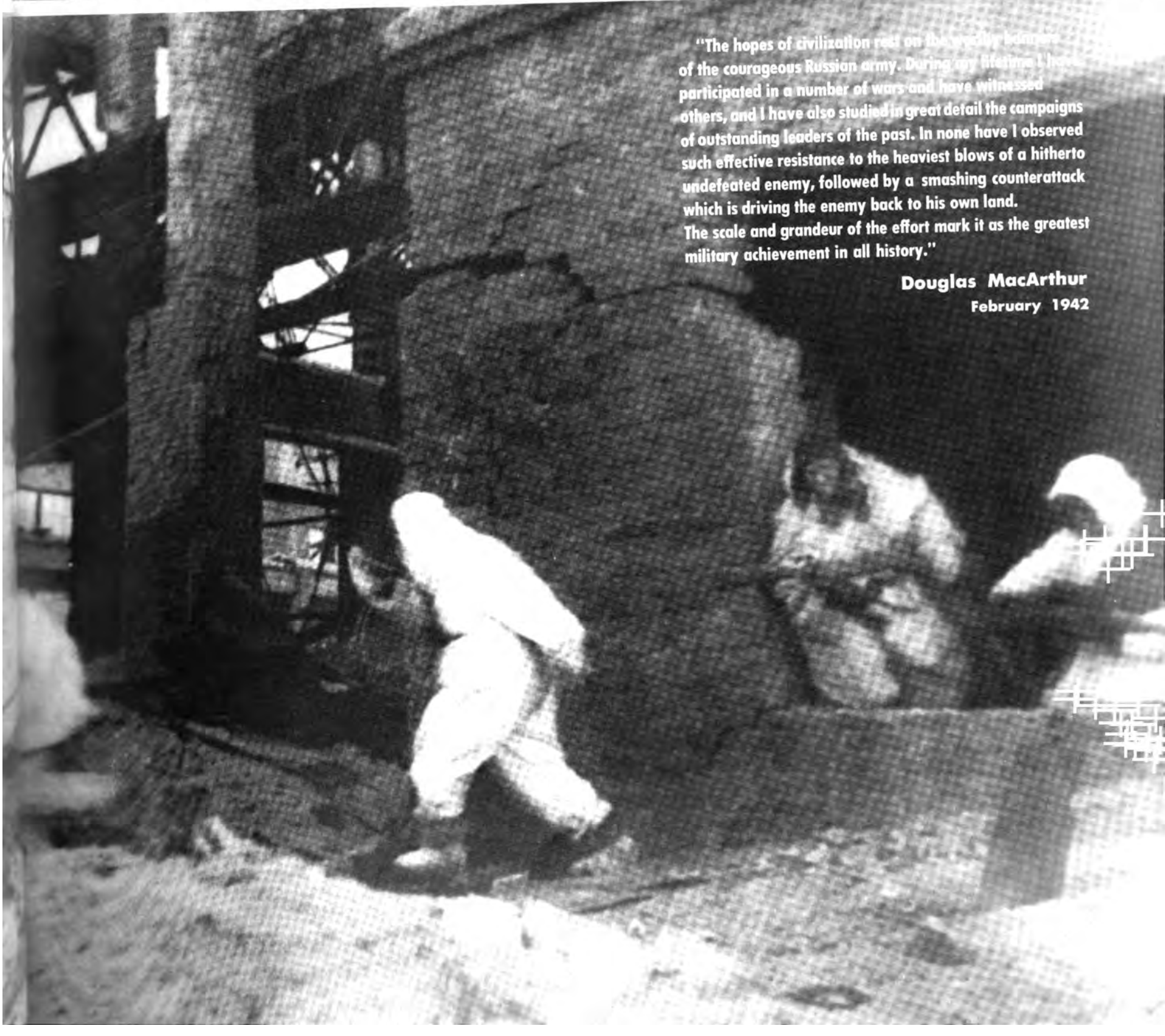
"Using Panfilov's spiral spring tactics, scorching the Hitlerites with slashing fire, the regiment made its retreat to the village and station of Kryukovo where, on the Leningrad Road, we held out against the enemy in a six-day battle. Together with other Red Army units, we turned the wheel of history, drove the enemy away from Moscow. About this another novel, entitled* The Leningrad Road, *could be written."

(Abridged)









"The hopes of civilization rest on the [illegible] of the courageous Russian army. During my lifetime I have participated in a number of wars and have witnessed others, and I have also studied in great detail the campaigns of outstanding leaders of the past. In none have I observed such effective resistance to the heaviest blows of a hitherto undefeated enemy, followed by a smashing counterattack which is driving the enemy back to his own land.
The scale and grandeur of the effort mark it as the greatest military achievement in all history."

Douglas MacArthur
February 1942

GUERRILLA WARFARE

BY PANTELEIMON PONOMARENKO
LIEUTENANT GENERAL OF THE RESERVES
FORMER CHIEF OF CENTRAL PARTISAN HEADQUARTERS

MORE THAN a million Russian, Ukrainian, Byelorussian, Karelian, Moldavian, Lithuanian, Latvian, Estonian and other partisan and underground fighters were engaged in the struggle against the nazi invaders in the occupied regions of the Soviet Union in the last war. That was a record figure even for Russia, which has a long history of resistance fighting.

The Nazis' plan was to break the spirit of the people in the occupied areas, to turn them into submissive slaves of the "Aryan master race." They tried terror, they tried inciting one nationality against another, they tried starvation. But they could not paralyze the will of the Soviet people or beat down their determination to be free and independent. Despite the bloodiest reprisals, they would not betray their national heritage or surrender their socialist ideals.

There are historians in the West who argue that the partisan movement in the occupied Soviet territories developed from "mistakes" made by the occupation authorities; had the Nazis not been so harsh, they would have had the support of the civilian population, they say.

And the Nazis did make decided efforts to win that support. In Byelorussia, for example, they went so far as to form a pseudo government, to which they gave the name "Rada of Confidence." The Byelorussian people renamed it "*zrada*"—"betrayal." To induce people to work for them, the Germans offered land, farm stock, houses, food. But only a handful of renegades took the bribe.

The partisans were called "people's avengers." For those who lived under the Germans, it was natural to want to repay death with death. But in general the partisan movement was not motivated by individual vengeance. It was a movement in which millions of people rose at the call of the Communist Party to drive the foreign invader out of their country.

The Front Behind the Front

The scope and the political and military consequences of the partisan fighting and underground resistance in the rear of the nazi armies were of strategic importance and a decisive factor in defeating the Wehrmacht. In *The Results of the Second World War*, a book compiled by a group of German generals, this passage occurs: "Never in the history of wars has a guerrilla movement played such an important role as in the last world war. The scale of the movement made it something quite new in the art of warfare. The colossal effect it had on the front and on problems of supply, work in the rear and administration of the occupied regions made it part of the total war. The guerrilla movement influenced the nature of the whole world war."

The dedicated struggle waged by the partisans showed that the time was forever gone when war was decided only by the strength and training of armies or the number and power of guns, planes and tanks. The patriotism of the peoples, their will to freedom and independence, as reflected in the partisan movement, was a crucial factor in the victory of the anti-Hitler coalition.

Partisans and underground resistance fighters disorganized war production in the occupied territories. They slowed down work, fomented strikes, damaged machinery, destroyed food supplies and sabotaged factories, power stations and mines. They organized boycotts of deliveries of farm products and attacked truck convoys and supply trains. They obstructed the recruiting and kidnapping of civilians for export to fascist slavery in Germany, wiped out punitive detachments and freed concentration camp prisoners. They destroyed communications, blew up rail lines, bridges and stations, blocked highways, derailed trains and motorized columns, and created accidents on ships. They destroyed telephone and telegraph lines and radio stations, cutting off enemy troops from their commands. Nazis responsible for outrages against the civilian population were punished with death by the partisans, as were traitors who collaborated. The partisans provided the Soviet Army with vital information on the strength, defenses and intentions of the enemy.

In the course of the war the partisans and underground resistance fighters killed, wounded or took prisoner more than a million and a half nazi soldiers and officers, German officials, railwaymen and workers in the occupation administration. That total includes several German Army and SS generals.

The first nazi general killed by the partisans was division commander Lansel in the first months of the war. "Lansel perished," said the German press, "when he and his staff were attacked by guerrillas."

The partisans killed such high-ranking occupation officials as Wilhelm Kube, chief administrator of Byelorussia, and General Herman Knut, deputy administrator of the Ukraine.

According to incomplete data, Soviet partisans wrecked 20,000 freight and passenger trains, blew up 58 armored trains, put 10,000 locomotives and 110,000 railroad cars out of commission, blew up or set fire to 12,000 rail and highway bridges, destroyed 65,000 motor vehicles and hundreds of thousands of tons of fuel, wrecked or damaged 2,300 tanks and armored cars, and shot down or destroyed at airfields 1,100 planes.

There is no calculating the quantities of weapons, ammunition and foodstuffs the partisans captured. German warehouses and trains were their major source of supply.

The people's avengers frustrated the plans of the nazi leaders to make the occupied territory a base of supply for their armies, particularly for oil and grain. At a conference of gauleiters of occupied regions in August 1942 Goering said: "At the present time we hold, from the Atlantic to the Volga and the Caucasus, the most fertile lands in Europe. . . . This notwithstanding, the German people are starving. . . ."

To this Gauleiter Lose said, "I could give you more, if conditions made it possible. The crop is good, true enough, but it will be impossible to harvest more than half the planted areas unless an end is put to these guerrilla outrages. . . . They burn down buildings and haystacks. . . . Agricultural commandants are killed every day. Regional administrators have been killed."

Meanwhile partisan activity kept growing. In August 1943 the occupation authorities reported that only 10 per cent of the 965 big farms in Byelorussia (former state farms) were producing. The partisans had wrecked 546 state farms, while 312 state farms were under such constant attack they could not be worked.

The country's timber wealth also proved impossible to exploit. A German forest inspection team reported that because of partisan action "the plan for timber cutting in the Ukraine is only 15 per cent fulfilled."

Although the Germans held a few oil fields in the Caucasus for a short time, partisans prevented them from shipping out even a single ton of oil.

Partisan units saved millions of Soviet citizens and Soviet war prisoners from death or slave labor. They tracked down punitive detachments that had burned towns and villages and wiped out the inhabitants. They attacked trains and freed civilians and war prisoners being shipped to concentration camps or to forced labor in Germany. They hid hundreds of thousands of people in the forests, mostly women, children and old people.

Rescue operations were often on a large scale. For example, a Ukrainian partisan unit under Naumov attacked a concentration camp in the town of Vorozhba in February 1943, killed the guards and freed the war prisoners. "On February 13, 1943, guerrillas freed 700 prisoners in the prisoner-of-war camp in Vorozhba," the headquarters of the Ger-



Partisans return to their base in the Pinsk woods, one of many guerrilla strongholds in occupied Soviet territory, after raiding an enemy garrison.

man Second Tank Army reported to the command of the group of center armies. Actually, 2,000 men were freed, but the staff officers were afraid to report the higher figure.

The partisans were responsible for tens of thousands of sabotage actions against nazi troops, war plants and enemy installations.

An SS detachment killed 240 civilians in a district in Byelorussia during the first half of November 1942. When the punitive group gathered to see a film, underground resistance fighter I. Konopadsky blew up the motion picture theater; some 152 SS men were killed in the explosion. Leningrad partisans blew up a motion picture theater in the town of Porkhovo on November 13, 1943, and killed 380 German officers and soldiers. On July 21, 1943, underground resistance fighters blew up a theater in Minsk where the Germans were celebrating the anniversary of the capture of Byelorussia; 200 officers, soldiers and occupation officials were killed.

The Wehrmacht planned a powerful breakthrough by tanks in the Kursk area the summer of 1943 on the assumption that an onslaught by 300 of the new Tiger tanks would change the course of the entire war on the Eastern Front. On July 30, 1943, Fyodor Krylovich, member of a youth resistance group in the town of Osipovichi, planted two magnetic mines in a train carrying fuel. The German writer E. Mideldorf says in his book *Tactics in the Russian Campaign:* "The guerrillas won a big victory at Osipovichi station when they destroyed a train carrying gasoline and lubricants, two trainloads of ammunition, and an exteremely valuable trainload of Tiger tanks."

This was one of the many acts of sabotage credited to the partisans.

Battle of the Rails

When the partisan movement had become well organized, with a widespread system of radio communication, simultaneous operations with large forces was possible. They were directed and provided with arms, ammunition and medical supplies by the Central Partisan Headquarters and those in the union republics and regions. The largest operations were simultaneous massive attacks against railroads, timed to coincide with Soviet Army offensives.

The first operation in the Battle of the Rails took place on the night of August 2, 1943, with 540 partisan detachments in Byelorussia, the Ukraine, Russia and the Baltic Republics participating.

At a signal from Central Partisan Headquarters the detachments overwhelmed the guards and blew up rails, bridges, water towers, railroad stations and enemy trains. Repeated throughout August and September, these operations paralyzed the nazi transport system. Troop transfers were disrupted. Reinforcements headed for the front had to leave the trains and continue in trucks or on foot. The enemy was faced with a catastrophic shortage of rails. Tracks had to be torn up in Germany, France and other countries and shipped to the Eastern Front. According to a report by the Minsk railroad administration, 13,890 cars and 358 locomotives were put out of commission on its lines in August 1943 alone.

Operations in the Battle of the Rails were repeated periodically until the German invaders were driven out of the country. Outstanding was an operation by Leningrad partisans when Soviet troops took the offensive on the Leningrad and Volkhov fronts at the beginning of 1944, and a Byelorussian partisan operation in mid-1944. Concerning the latter, H. Teske, former chief of military communications, said: "The powerful guerrilla raid on all the important roads the night before the general Russian offensive against the sector of the group of center armies at the end of July 1944 deprived the German troops of all direction for several days."

The great military-political importance of the Battle of the Rails was that it forced the invaders to concentrate all their guard duty divisions and units on their communication lines.

Thanks to the energetic and regular activities of the partisans, the Germans virtually lost control of large districts of the territory they had occupied.

The "Harehunt" Snafu

The nazi invaders sent out innumerable punitive expeditions against our partisans. One was an operation which the Germans too flippantly (as the results showed) nicknamed "*Hasenjagd*," or "Harehunt." A dispatch sent by the German secret field police sums it up: "Operation Harehunt was conducted between February 6 and 15. The aim of the operation was to wipe out the partisans who had broken out of the Mamayev forest. Of 1,200 men, we lost 51 in killed and 37 in wounded. The partisans lost 15 men in killed. The High Command considers the operation a mistake."

Partisan formations were so strong that they stood up against enemy groups consisting of several divisions. One punitive expedition against partisan brigades was made up of six divisions led by General Reinhardt, commander of the Third Tank Army, and totaled 16,000 men. The battles in the enemy rear went on for almost two weeks. This operation did not justify its optimistic code name, "*Fruehlingfest*" (Festival of Spring), either. The Germans suffered substantial losses. In the end the partisans broke through the blockade and returned to their zone.

Such other big punitive operations as "Gypsy Baron," "Kottbus" and "Herman" were no more successful.

The partisan code of military ethics was high. As unyielding and merciless as they were in battle, they never refused to take prisoners and never degraded themselves by torturing their prisoners. Soviet partisans sent more than 30,000 prisoners, many officers and several generals included, across the frontline. They gave those prisoners and enemy deserters who wanted it an opportunity to fight with them against the nazi invaders. As a matter of fact, there were several partisan detachments made up of former soldiers and officers of the Wehrmacht.

But the war criminals who murdered civilians and burned down towns and villages they regarded as bandits and hangmen and destroyed without mercy.

From practically the beginning of the Eastern campaign the Germans were forced to concentrate large military forces against the Soviet partisans—12 guard duty, police and SS divisions, several brigades, a large number of gendarme battalions, and various detachments. These forces had to be augmented to the point where they appreciably reduced the reserves the Germans were able to send directly to the front.

"We have more sentries than soldiers now," the nazi leader Haase noted in 1943. It was no exaggeration. That year the Germans had dozens of divisions fighting the partisans. In addition, the partisans tied up many frontline divisions.

Thus, by diverting large nazi forces, the Soviet partisans established a second front, an invisible front on which they fought with courage and heroism for three years. Not for a minute did an enemy soldier feel safe, no matter how far behind the lines he was stationed. The Nazis suffered enormous losses in manpower and materiel at the hands of the partisans.

This is the historic service which the partisans rendered not only to their own people but to the people of all the countries that were freed from fascist enslavement by World War II.

THE NEW ORDER

To enslave or annihilate—this was the program of nazi total war against the Soviet Union. History has never seen such deliberate brutality, such mass enslavement, such calculated destruction of whole peoples. The victims—some 20 million men, women, children.









THE EXECUTION OF SOVIET PATRIOTS IN THE TOWN OF VELIZH, SMOLENSK REGION, 1941. THESE PHOTOGRAPHS WERE FOUND ON A CAPTURED GERMAN OFFICER.





PHOTOGRAPH BY DMITRI BALTERMANTS

1944: SMASHING THE WEHRMACHT

On the Eastern Front in 1944 the Nazis and their a
lies lost 126 divisions and 25 brigades. More tha
2.6 million nazi officers and men, 11,000 tank
some 42,000 guns and mortars, and 17,000 plane
were captured or destroyed by the Soviet force



The Eastern Front—nearly 2,750 miles long—stretched from the Barents to the Black Sea. It was in this great theater of operations that the Soviet armies in 1944 dealt the Nazis a series of crushing blows that destroyed their main forces.

(SEE MAP PAGES 18-19)

1-2. January-February The Leningrad, Volkhov and Baltic fronts, supported by the Baltic Fleet, took the offensive. Soviet spearheads, making rapid headway, routed a German grouping in that area. Blockaded Leningrad was finally freed. In bitter fighting from January to March Soviet troops threw the enemy back 100-200 miles.

In the Ukraine the Soviet offensive was launched on an 870-mile front, Soviet forces making a thrust 300 miles deep. Two enemy groupings were encircled and destroyed: one in the Korsun-Shevchenkovski area and another in the Zvenigorodka-Uman area. Advancing westward, the Soviet Army liberated most of Moldavia and on March 26 reached the Rumanian frontier. The territorial frontiers of the Soviet Union were being re-established. In the fighting, 59 enemy divisions lost more than 50 per cent of their complement and materiel, and 10 divisions and one brigade were completely destroyed.

3. April. Soviet forces attacked the positions of the Seventeenth German Army trapped in the Crimea. By May 12 the entire Crimean Peninsula was cleared of the enemy.

By summer of 1944 the Soviet Army had liberated approximately three-quarters of the occupied territory, reached the foothills of the Carpathians and cut the Hitler front in two. The satellites of Hitler Germany became increasingly demoralized, and differences in the nazi bloc more aggravated. Nazi Germany was on the verge of complete political isolation.

On June 6, 1944, Anglo-American forces landed in Normandy. This marked the beginning of the war on two fronts—what the nazi leaders had feared most. From then on the fighting alliance founded in 1941 was strengthened by Allied offensive action not only in Italy but in France as well. However, even though Hitler was now waging war on two fronts, the East, like a powerful magnet, still drew two-thirds of his forces. In the summer of 1944 the nazi High Command had 325 divisions and five brigades. Of this number 179 divisions and five brigades were on the Soviet-German front; 60 divisions were committed to France, Belgium and Holland, and 26 to Italy; and 60 were inside Germany and the occupied countries. In addition, 49 divisions and 18 brigades of Germany's satellites were stationed on the Eastern Front.

Thus the Soviet Army was fighting 228 enemy divisions and 23 brigades. Even after the Allied landing in Normandy the German Command transferred to the East an additional 59 divisions and 13 brigades. Besides these, 25-27 divisions were formed directly at the Eastern Front from reinforcements sent from Germany.

4. June. The Leningrad and Karelian fronts took the offensive on the Karelian Isthmus and liberated the cities of Vyborg and Petrozavodsk. The enemy was pushed back to the hinterland of Finland. In August the Finnish Government asked for an armistice and on September 4 broke relations with Germany.

5. June-July. The forces of the First Baltic Front and three Byelorussian fronts executed one of the biggest strategic operations of the war. The objective was to liberate Byelorussia and rout the enemy's center army group. The over-all strength of the groupings was 1.2 million officers and men, 10,000 artillery pieces, over 1,000 tanks and 1,400 aircraft.

More than half a million enemy officers and men were killed or taken prisoner. In 24 days Soviet forces covered 300 miles and approached the German frontier.

6. July-August. Pursuing the enemy for 50 days, the First Ukrainian Front advanced 215 miles to liberate western Ukraine and southeastern Poland. Thirteen divisions of the North Ukraine German Army Group were destroyed.

7. August. Spearheads of the Second and Third Ukrainian Fronts broke through the German defense lines. In 40 days of fighting Soviet forces advanced 500-600 miles. The enemy lost 47 German and Rumanian divisions and the brigades comprising the South Ukraine Army Group. Twenty-two enemy divisions were surrounded in the Kishinev area alone. Moldavia was totally cleared of the enemy. Rumania and Bulgaria broke relations with Germany and joined the anti-Hitler coalition.

8. September-October. The Soviet Army scored another impressive victory over the Wehrmacht in the Baltic countries. Estonia and a major part of Latvia were liberated. The nazi Baltic grouping of 33 divisions was locked in at the coast and cut off from East Prussia, and its North Army Group of 56 divisions and three motorized brigades was routed. The group had a strength of 700,000 officers and men, 1,216 tanks and self-propelled guns, about 7,000 artillery pieces and mortars, and some 400 operational aircraft.

9. October. Soviet forces defeated units of the Twentieth German Mountain Army, numbering 200,000 officers and men. Here, too, in the Far North, the invaders were cleared out of Soviet territory and the frontier of the USSR totally re-established, from the Barents Sea to the Black Sea. Northern Norway was also freed of the Nazis.

In the last months of 1944 the Soviet Army executed several large-scale offensive operations beyond the Soviet borders.

10. September-October. Soviet forces threw the Nazis out of eastern Czechoslovakia and Transylvania. Eighteen enemy divisions were either destroyed or put out of action.

11. September-October. Belgrade was liberated by forces of the Third Ukrainian Front and units of the Yugoslav People's Army. The main forces of the "F" Army Group in Yugoslavia were routed. An enemy grouping 20,000 strong was surrounded southeast of Belgrade and destroyed.

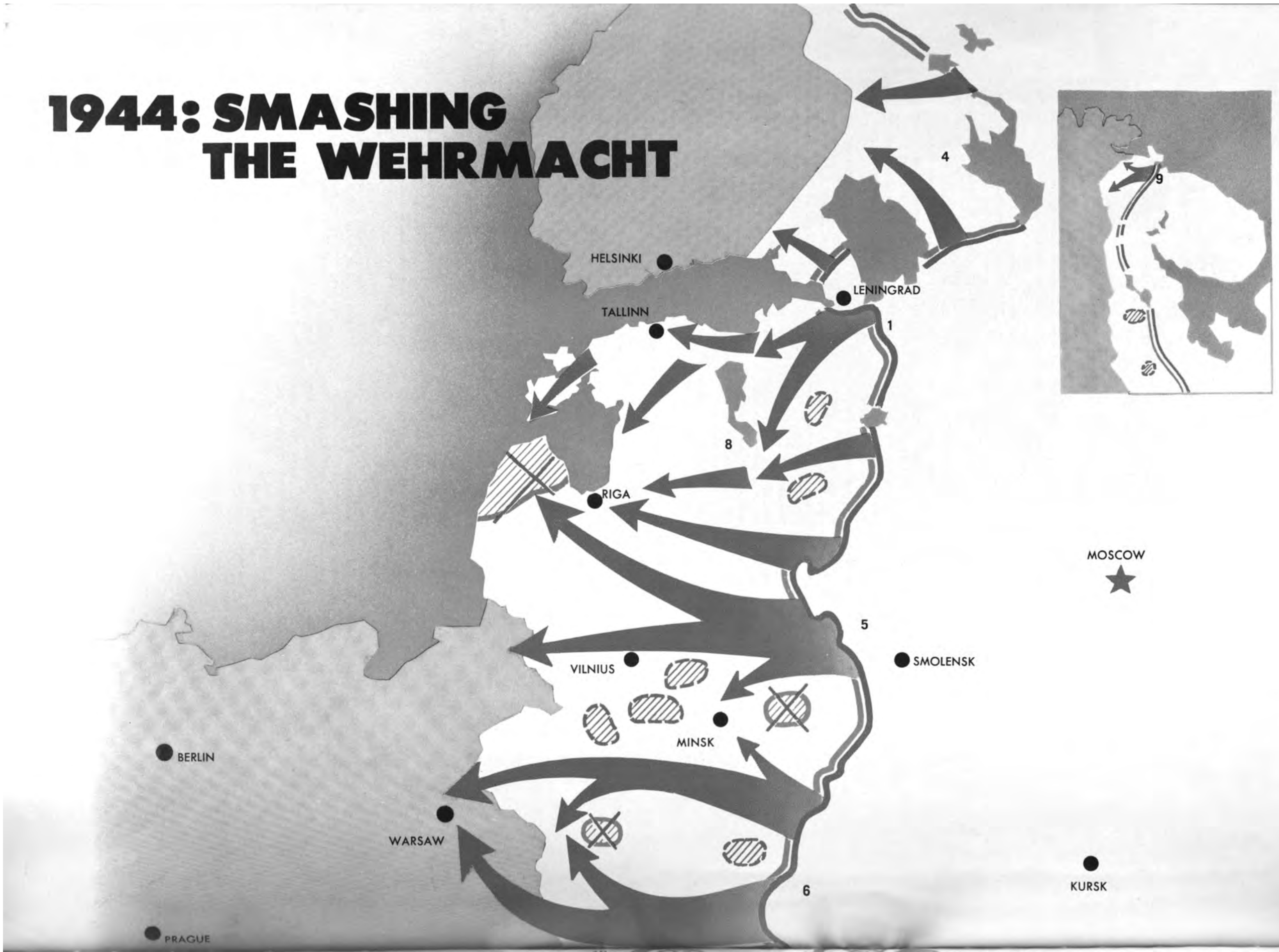
12. November-December. The Soviet offensive in 1944 was completed at Budapest, where forces of the Second and Third Ukrainian Fronts encircled an enemy grouping of 180,000 officers and men. Some 50 enemy divisions were routed in the last three offensive operations.

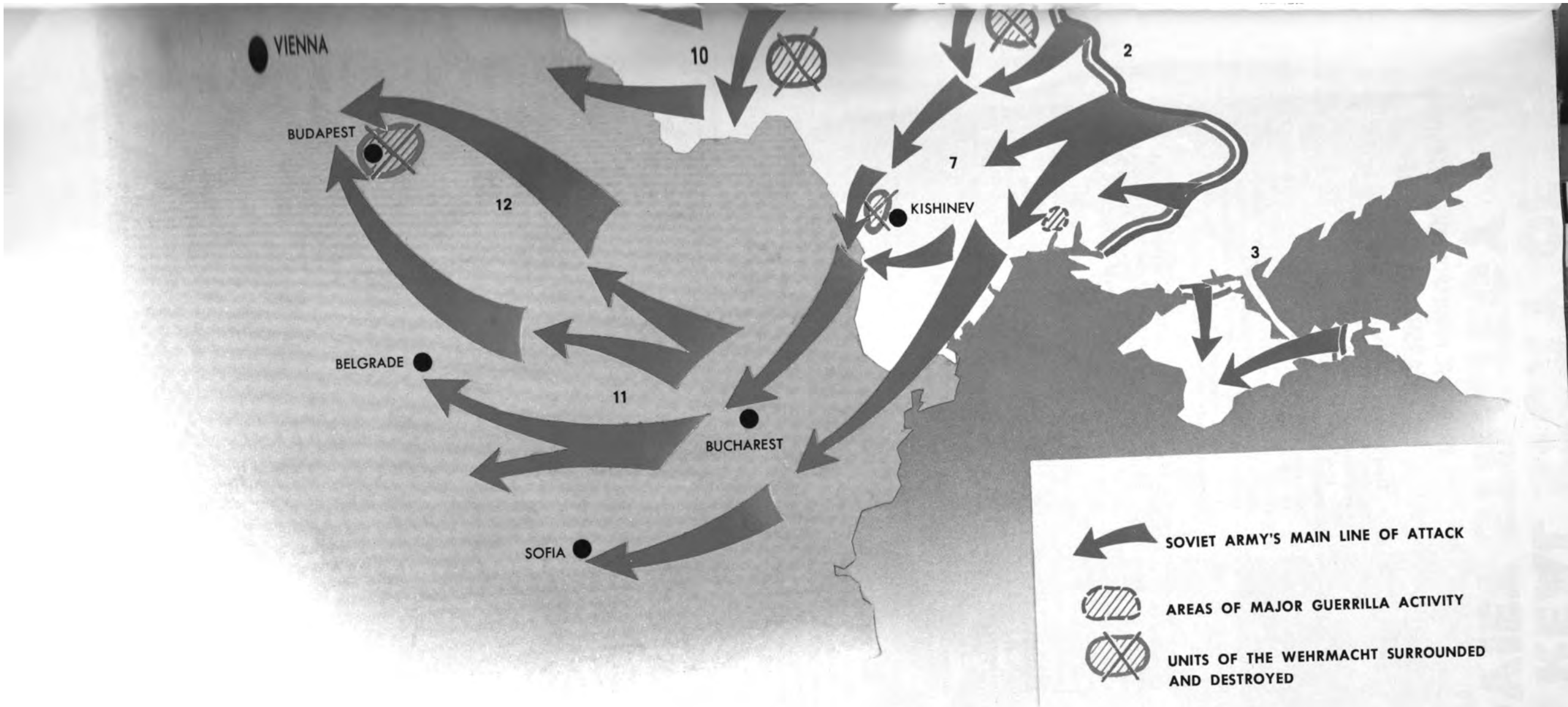
In 1944 the Soviet Army advanced westward from 340 to 685 miles.

The victories scored in 1944 by the Soviet and the Allied armies brought Hitler Germany to the verge of collapse.

PHOTOGRAPH BY VICTOR KINELOVSKY

1944: SMASHING THE WEHRMACHT




VIENNA
BUDAPEST
BELGRADE
BUCHAREST
SOFIA
KISHINEV
10
2
7
12
11
3
SOVIET ARMY'S MAIN LINE OF ATTACK
AREAS OF MAJOR GUERRILLA ACTIVITY
UNITS OF THE WEHRMACHT SURROUNDED AND DESTROYED



THE REAL STORY OF SOVIET STRATEGY



Marshal Ivan Konev (left) confers with General Omar Bradley (center), 1945.

SOVIET LIFE CORRESPONDENT INTERVIEWS MARSHAL IVAN KONEV

Ivan Konev was born to a peasant family in 1897. He fought at the front in World War I and against the Whites and interventionists during the four years of the Civil War. Subsequently he graduated from the Frunze Military Academy. When World War II broke out, he was a lieutenant general and army commander. By the time the war was over, he was the commander of a front and a Marshal of the Soviet Union. The armies of the First Ukrainian Front he commanded took part in the Berlin operation and liberated Prague. After the war he served as Deputy Defense Minister, Supreme Commander of the Land Forces and Commander in Chief of the Armed Forces of the Warsaw Treaty member-countries.

It is generally recognized that Nazi Germany's attack placed the Soviet Union in a very critical situation. How would you explain the defeat of the Soviet troops in the first months of the war?

The treachery of the attack alone put us at a disadvantage. The Germans sent more than two-thirds of their armed forces against us—190 fully staffed and technically equipped divisions. Besides that, they had the experience of their military campaigns in Europe.

The Soviet troops were not organized or armed to the degree the situation demanded, and as a result we lost 1200 planes the first half of the first day of the war. The Soviet Army units were scattered over a vast area, and although they fought back valiantly, they were unable to form an unbroken frontline.

Last but not least, because of a poorly organized communications system, the Supreme Command was too slow in forming an accurate picture of the situation as it developed during the first days of the war.

The military superiority of the German armies in the first six months of the war was indisputable, and in spite of their heroism, the Soviet troops were forced to retreat.

Why then did the Germans fail to rout the Soviet Army and win the war?

Military superiority is only one of the factors that decide the outcome of a war. The clash between Nazi Germany and the Soviet Union was more than military; it was also social, economic and ideological. The very viability of the Soviet system and the spiritual strength of its people were put to the test.

The source of the courage of our soldiers, expressed in the words "I'm dying, but not surrendering," is to be found in the great social transformation we had made. The Soviet people rose up to defend the gains of the Revolution, as precious to them as their homeland.

The capacities inherent in our socialist system of economy also measured up to the fighting spirit of the people. Consider this: On the eve of the war Germany surpassed the Soviet Union in the production of the major types of industrial goods by two or two and a half times. Also, the Nazis had economic resources almost everywhere in Europe. The Soviet Union, quite the contrary, lost its main industrial areas in the western part of the country in the first months of the war.

In spite of this, our productive forces were evacuated behind the lines in an unprecedented maneuver, a maneuver that made it possible for us, a year after the beginning of the war, to manufacture more armaments than Germany and its satellites.

To go back to Germany's surprise attack. Why did Stalin ignore the information that an invasion was being prepared?

In spite of the fact that he had information about a nazi attack, Stalin did not order our troops put on the alert. Stalin was a politician and not a military leader. He thought the mobilization and deployment of our troops would be regarded by Germany as an act of political pressure, and he did not want to push Hitler and arouse his suspicions. Apparently he thought the Reich leaders would adhere to the terms of the Pact. In any event, Stalin wanted to postpone the outbreak of war and hoped this would do it.

The tragedy of it all was that the information, which was quite trustworthy, was regarded by Stalin as provocative and aimed at starting a war between the Soviet Union and Germany. This grave miscalculation of his was the reason for the defeats suffered by our armed forces in the first months of the war.

If I am not mistaken, the time schedule of the fascist armies in the West and in Poland, worked out by Hitler's General Staff, was followed with almost day-to-day precision. What about the time schedule of the military campaign against our country?

The Barbarossa Plan, which forecast an 8-16 week campaign, was torpedoed in the very first stage. And when the nazi troops were routed near Moscow, the absurdity of the schedule for the advance of the German armies became very apparent indeed.

What, in your opinion, were the most critical periods of the campaign on the Eastern Front, and why?

Our most critical period was in October 1941, when Guderian's tanks were at the threshold of the capital. We stood firm and Moscow was saved, but the toll of blood was cruel. Even had the Germans seized the capital, it would not have meant the end of the war, but the situation would have become much more difficult.

This crisis was ended by the Battle of Moscow, which put our troops in a strategically advantageous position, for it was already obvious that the German army groups in the Vyazma area would be encircled. The only reason we did not carry this operation through at the time was that we lacked the additional reserves necessary.

We also had a difficult situation near Stalingrad in 1942. The complications there were of a different order. All the Soviet fronts were stable at that time, and a breakthrough was made only at the Southern Front. Hitler may have profited economically by winning the Battle of the Volga, but from the strategic point of view it would not have been a critical victory.

The significance of the routing of the German army group in the Battle of Stalingrad was tremendous, because that was a turning point in the war in favor of the Soviet Army.

What do you think of the technical aid rendered by our American allies? How effective was it? Did it help the Soviet Army hold its ground and smash the Nazis?

I do not have sufficient data at my finger tips to assess this technical aid as a whole. In general, the military equipment and armaments we received from the Allies came to four per cent of the total armaments of our armed forces. As a soldier, I should like to pay tribute to the U.S. Cobra fighters, the field communication equipment, the transport aircraft and the trucks, which were particularly useful in our offensive operations.

What was your personal reaction to the opening of the second front in Europe?

The landing of the Allies in Europe, the largest landing operation ever carried out, could not but impress me with its scope, its excellent organization and the gallantry shown in the struggle for the springboard.

If you want an idea of our reaction to the second front, think back to 1944. For the Soviet Army this was a year of unceasing offensives, with the operations to liberate Soviet territory nearing completion. Our troops were as strong as they had ever been. We had superiority over the enemy, our morale was higher than ever, and our army leaders had accumulated a great deal of combat experience. Our military machine, in full swing, was capable of breaking the bones of a stronger army than the Wehrmacht. This is why the measure of our gratitude to the Allies for opening a second front was inversely related to the time it took them to open it. Had the Allies landed on the continent, say, a year earlier, the impression would have been much greater. And had the second front been opened in 1942, it would have been simply wonderful!

What operation in which you took part do you think was the most successful?

In the initial period of the war I would say perhaps the Kalinin operation, an integral part of the Battle of Moscow. Another was the Vistula-Oder operation. It began with a powerful artillery offensive. Then, with a broad and incisive maneuver of our tank forces, we routed the nazi troops piecemeal. The city of Cracow and the entire Silesia industrial area were taken almost undamaged. And, of course, there is the last act of the war—the gigantic Battle of Berlin.

What would you like to wish American World War II veterans on the twentieth anniversary of the defeat of the nazi aggressors?

I would like to wish them this: that they become the last veterans of the last world war in man's history.



These soldiers have driven the retreating nazi army across hundreds of miles of scorched Soviet earth, past the Vistula in liberated Poland. Ahead is the Oder, Berlin and V-Day.

PHOTOGRAPH BY ISAAC KAPUSTIANSKY

EVERY DAY THE LONGEST



(WAR DIARY EXCERPTS)

BY KONSTANTIN SIMONOV

Konstantin Simonov is one of the Soviet Union's outstanding journalists, novelists and poets. His principal works in English translation are *No Quarter* (war stories), *The Russian People* (play), *Four Soviet War Plays, Days and Nights* (novel), *The Whole World Over* (play), and *The Living and the Dead* (novel).

Reviewing the novel *Days and Nights* for the *Saturday Review of Literature*, Harrison Smith wrote: "Simonov has accomplished two remarkable feats in his novel. . . . First that a war novel of such stature should have appeared so soon after hostilities ceased . . . that a modern Russian novel should speak the universal human language of suffering and heroism. . . . It is no wonder that *Days and Nights* has swept over Russia and is regarded there as the best novel of the war."

Simonov has visited the United States twice, in 1946 and again in 1960.

Through all the four years of the war I covered different sections of the front for the newspaper* Krasnaya Zvezda: *from South to North—from the Black Sea to the Barents Sea; and from East to West—from Stalingrad to Berlin. I kept my diary up-to-date so far as the war would permit me to. More often than not I managed to scribble only a few lines—to be deciphered later. Back with my newspaper between trips to the front, I dictated my jottings and filled the gaps from memory. Many notebooks were lost, of course. Several of them were burned in a blazing car or went to the bottom of a river. Some are still awaiting my attention. Though these war diaries eventually totaled nearly 2,000 pages, I find several fragments of the war picture missing now that I reread them. These war correspondent's diaries contain things that are important and things that are not, major events and trifles of war routine, ideas in which I still believe, and ideas that surprise me though they were once mine. For all that, I would like the reader to see the war as I did and to know what I thought of it then, not now.

LATE IN APRIL I was recalled by my newspaper in Moscow for two days and then sent back to the front—this time to Marshal Konev's First Ukrainian Front, whose right wing was approaching Berlin while the center was striking for the Elbe. I went to General Zhadov's Fifth Army of the Guards which, judging by all signs, was about to contact the Americans. On the 25th of April this contact was made near the town of Torgau on the Elbe. Though I witnessed the occasion, I can find no mention of it in my diary or any of my notebooks. Probably I wrote nothing at the time, not so much from war weariness as from wild exhilaration: the end of the war! I still have a few snapshots of Soviet and American soldiers and officers taken on the Elbe and some souvenirs of those days in one of the drawers of my desk—nickel-plated American insignia which I received in exchange for the officer's stars plucked from my shoulder straps. I also have a rough copy of a short report I sent to *Krasnaya Zvezda* with the names of the commanders of the first divisions that had met: the U.S. division under General Reinhardt and the Soviet division under General Rusakov. The record also carries the names of Lieutenant Robertson, in command of a U.S. patrol, and Lieutenant Silvashko, in charge of one of our patrols. They were the first to meet on the Elbe as the Nazis were crushed between the Allied anvil and the Soviet hammer. These tokens have survived, but nothing else, not a single line. True, something else has survived: my memory of the joy of that experience—at that time unclouded by doubts or fears. I remember how dizzy we were with joy, how we plied one another with all available army rations, including vodka and whisky. With two other Soviet correspondents I darted across the Elbe, first to Leipzig, where I was surprised to find German policemen in full regalia, though unarmed, at every crossing, and then to Naumburg, where the Americans had a press camp for war correspondents. All through the evening and the night we had a press conference of American, British, French and Soviet correspondents, the first of the war. Evidently those two or three days were so crowded with chance meetings, events and impressions that I discarded my notebook in despair. At any rate, the first pertinent record in my diaries has to do with the night we made our way back across the Elbe.

Having returned from our visit with the Americans, Krivitsky * and I went to Marshal Konev's headquarters. They had been moved some 60 miles ahead, a distance we covered by morning. When we arrived, I managed to break through to Petrov,** thanks to our old ties. The general was too busy to do anything but wave to me: "Wait a while, sit down!"

I asked about Berlin. The fighting, it seemed, was nearly over, and we could easily get there by car if we wanted to. The Germans falling back from the Oder had tried to block the highway, but according to the latest reports, communications had been restored.

Some time before we reached the main Autobahn ring, we came upon a sight, right there on the highway, which I shall never forget as long as I live. The Autobahn ran through dense woods at this spot and crossed a lane which vanished in the distance on both sides. This was the lane the Germans had used in their attempt to fall back on the capital (some German troops still held out on the Oder when the assault on Berlin began). A few hours before, probably at daybreak, this crossing was the scene of their debacle. This is what it looked like: Berlin loomed ahead, while the lane on the right side was piled high with smashed tanks, cars, armored cars, trucks, ambulances and what not. They were all entangled, upside-down, rearing, toppling back, their metal guts spilling, after having uprooted and crushed hundreds of trees in their frantic attempts to turn around and flee. And there were corpses in this jungle of metal scrap, twisted weapons, gutted valises, fluttering papers, and some unidentifiable black and sooty mess. All this continued on up the lane into infinity. Other corpses lay about in the forests—the bodies of those who had tried to get away. Suddenly I noticed that they were not all corpses. Some were alive—wounded, lying on trench coats and blankets, or sitting with their backs against the trees. Some were bandaged, others were still bleeding. Some of the wounded—how could I have overlooked them before?—were bedded on their trench coats and blankets right along the edge of the road. Then I saw—and at first I hadn't noticed them either—several figures wandering about among them, evidently doctors and first-aid men. This was the scene on the right. In the center lay the broad highway, by now cleared for traffic. For about 200 yards it was punched with hundreds of potholes, large and small, with army cars

* *Krasnaya Zvezda* correspondent.

** General in command of the defense of Odessa and Sevastopol.

zigzagging among them, Berlin bound. Then I looked up the lane on the left. Part of the German column must have crossed the highway. There, too, the river of blasted metal stretched to the horizon. There, too, lay corpses and wounded. An officer explained that the enemy column had been hit by the fire of several heavy artillery and Katyusha jet-motor regiments which had been concentrated here, just in case, and ranged beforehand since the enemy's breakthrough had seemed most likely at this spot.

A few miles on we saw a column of five or six ambulances approaching from Berlin. Apparently someone had sent our medics to the rescue.

Finally we reached the suburbs of Berlin. It was hard to say which unit was where. At first we came up with an infantry army, but we moved on since this force was transferring the section of the city it had captured to its neighbor on the right and was moving elsewhere. Next we stumbled on Marshal Rybalko's* tankmen. A jeep hugged the curb at a crossing of two battered streets, and tanks with open hatches trundled along. Marshal Rybalko sat on the jeep's bumper with his back to the radiator, watching them go by. Though this was a fine day in May, he was dressed in a winter fur-lined cape. He was evidently ill, for his face had a yellowish hue and he seemed to be fighting down acute pain. He talked to us almost with his teeth clenched. I told him we would like to stay with his army for a while and asked which unit we ought to join to be as close to the heart of Berlin as possible.

"There's no such unit," he answered. "We're finished with Berlin. Moving away. Where? You want to know too much! Stay with us and you'll see."

When I said we had to go to Berlin, he shrugged and turned to his subordinates.

Toward evening we were approaching the half-shattered walls of the zoo. Many corpses lay along the urban railway embankment, some heaped together, others alone, with their faces down or staring up. The blood on the pavement had not yet dried. Death had come a few moments before. A small SS detachment had been engaged here. Now there remained only two twisted machine guns and a dozen corpses, including those of two women in SS uniform, alongside the embankment. As always, when I saw dead women at the front, I felt a pang of pity, even if these two were wearing SS regalia. We climbed over the zoo fence and made our way into an elephant enclosure. Most of it had been blasted by bombs. A hungry elephant was lolling despondently in the only sector remaining. An old German warden told me the animal was hungry. He and his wife had stayed with the zoo throughout. No sooner had I addressed him in broken German than he asked me if I could help him get food for his animals. He then asked us if we would like to see the zoo. Precious little of it was left. The old man strode off, and we followed. He showed us around with professional confidence. Here, too, lay the corpses of German soldiers. A dead Soviet soldier lay on one of the benches, his head wrapped in a trench coat. Someone must have put him on that bench because there was no time to bury him. The warden paid no attention and led us on, talking about the animals. There was something weird about it all. We were approaching a hippo pond with a cement rock in the background. One of the ponderous animals lay on the rock, breathing heavily. Another floated in the water, dead, the stabilizer of a mine sticking out of his side. The missile had killed him without exploding. Eyeing that stabilizer, I had the odd feeling that all this was unreal, even improbable. The first hippo slid into the water but gave a wide berth to his companion, as though aware of the danger. Then came the monkey enclosure. Several of our soldiers were watching monkeys scampering about in a large hollow. The men looked tired. They were sooty, spattered with mud, but fascinated. One of the men ducked under the railing and adroitly captured an animal. The monkey bit him viciously, and I thought the soldier would kill it. Instead he laughed and said, "Look how it bites!" He was surprised and pleased. This was a living thing, something funny that had no connection with the war. Suddenly he flung the monkey away, ducked back under the rail, shuffled wearily down the alley and stretched himself on a bench, two or three benches beyond the one on which the dead man lay. By now we were approaching a red brick house. The old man told us this was where Europe's largest gorilla and chimpanzee lived. We entered a square room, about 20 by 20 feet, partitioned by a heavy grating. On an elevation of some three feet of concrete behind the grating we saw a huge gorilla and a very large chimp separated by another grating. Two dead SS men lay at the concrete base of the grating. A third, also dead, sat against the concrete base, a submachine gun still resting on his knees. And three feet higher lay the chimp and the gorilla, also dead, as we realized by then, noticing ribbons of blood stretched from their bodies across the concrete. The warden stood silently by the door, shaking his head. We could see that he was really grieving for those animals.

We entered one of Berlin's surface blockhouses. This was said to have been the SA headquarters and the headquarters of an SS unit. We swung back the heavy steel door and made room for a file of prisoners being marched the other way. The second lieutenant who was escorting them said that a German general had just shot himself on the fourth floor. While searching the place, they had found a locked door. The general had committed suicide while they were breaking in. We went up to the fourth floor. The local power station had been either blown up or switched off. We had to use our flashlights to make our way along a passage lined with cubbyholes on both sides. Two or three SA and SS commanders shared each room. The door of the general's compartment slid back into the wall as in a railway carriage. Why had they taken the trouble to force it instead of blowing it up with hand grenades, as was usual in such circumstances? Probably they had wanted to take that general and others alive. There was a desk with one side against the wall and the other facing a bed. An SS tunic hung over the chair in front of the desk. The dead general lay on his bunk staring at the door. He was a strapping man of 45 or thereabouts, with close-cropped hair and serene, handsome features. His right hand lay extended beside him, still gripping a revolver; his left embraced a young woman crowded between him and the wall. Her eyes were closed. She was young, pretty, and wearing a short-sleeved blouse and a uniform skirt. The general was in his uniform, unbuttoned at the neck. He still wore his high boots. An uncorked bottle of champagne was clenched between his knees. Since the general was wearing his uniform, the SS tunic hung over the chair must have belonged to the dead woman. Here it was again—the rotten air of a blind alley! I could not escape it no matter where I went in that battered city.

Then we made for the chancellery. Our men were looking for Goebbels' corpse. They had found one version of it but were looking for another. Hitler's corpse was also wanted. We looked up at the huge building, designed to overwhelm. Hitler's study had been damaged by bombs and cluttered with debris. One of the adjacent rooms was intact, however, and someone suggested that this might have been Bormann's office. Perhaps he was right. There was no bomb damage here, but everything had been turned upside down. Small square bits of paper littered the floor. I picked up one of them, an *ex-libris* of Hitler's library. A large roll-top desk had been thrown open and stuffed with papers. Among them I found two old drawings. One was of a pillbox planted in a hill and bore the words, "Les Grettes, early December of 1917. The brigade command post." The other was of a shattered church and carried the inscription, "Comines, May 9, 1918." It occurred to me that these drawings might have been made by Hitler himself. They may not have been, but then again they might; he had served somewhere in France during the First World War. I put both drawings in my field pouch. To this I added a photo inscribed: "Fighting against the Spartacists in Munich in May 1919." Several officers seated

(Continued on page 26)

* Marshal of the Armored Corps in command of the Third Tank Army.

MAY 1945: BERLIN

THE SHATTERED REICHSTAG





on a cart were numbered in India ink. No. 1 was Rudolf Hess. Besides *ex-libris* there were postcards of all sorts scattered on the floor. I picked up four at random and put them in my pouch, too. What were they doing here? Perhaps they had been prepared to be autographed. Three of them were pictures of Hitler in the company of little girls. The fourth was of heavy-jowled Keitel handing a paper to an emaciated French general across a table: "The peace terms dictated in the railway coach at Compiègne." I wandered through the rooms. Some of them were littered with orders and medals. All sorts of orders—from iron crosses to medals for firefighting—covered the floor, ankle deep, in blue packages and boxes of all sizes. There were so many of them that I had the impression this was a factory that made medals and orders, rather than a chancellery. Through a break in the wall I made my way out into the courtyard. Here there were more corpses of SS men who had fought to the last ditch. Ambulance men were extricating the wounded. In the inner yard, plowed up by shells, amid charred trees and various junk I saw a small concrete turret. This was the entrance to Hitler's underground quarters. As I looked at all this I thought that some historians would one day dramatize this scene. At that moment it suggested not fighting, but a clinging to life, blind, frantic. The exaggerated centralization of nazi power looked especially absurd at the moment of its collapse. There was something grisly about it. Now I find it difficult to recapture that feeling. Today we recall the event as something insignificant, stripped of all the pomp of the predatory Third Reich. I never believed in the need for belittling an enemy, no matter how brutal and treacherous he might be, for underestimating his strength and refusing to give him his due, where his intelligence, courage, or simply desperation were concerned. Near Tarnopol in April 1944 I could not help respecting the enemy's courage. Those battles still stand out in my memory as a sinister, but impressive, panorama. Not at all like this chancellery, this last ditch—the doomed SS men, the underground cubbyholes of Hitler and Goebbels, and the rooms above them bursting with iron crosses sufficient to last for another five years of war, and the *ex-libris* of the nonexistent library, and the charred corpses identified by physical defects as the ex-rulers of Europe.

May third was a sunny, dusty day. Several of our armies that had participated in the storming of Berlin were moving in various directions, raising huge columns of dust: tanks and more tanks, self-propelled guns, superheavy mortars, thousands upon thousands of trucks, cannons of all calibers, antitank guns bumping over the debris, infantry and, of course, an infinity of supply trains. All this kept converging upon the city. On the battered streets and crossings or from the windows of their houses the befuddled inhabitants stared, overwhelmed at this roaring, endless tide of soldiers and machines. Even I had the sensation that these were no mere brigades and divisions but the whole of Russia pouring in. Moving in the opposite direction were long columns of prisoners blocking all the bylanes.

We were invited to supper at Marshal Chuikov's* headquarters. The Marshal was lucky. True, the Reichstag, which had come to symbolize victory in the past few days, was seized by Kuznetsov's army, but it was Marshal Chuikov who formally accepted the surrender of Berlin's garrison. This was the same Chuikov who had defended Stalingrad in September, October and November of 1942. Or to put it more accurately, not Stalingrad, but the three last isolated strips on the bank of the Volga near Stalingrad and a few dozen houses strung out toward the bank. It was as if history itself had intervened to enable the defender of Stalingrad to accept the surrender of Berlin. Marshal Chuikov was accustomed to dine with his staff when the war permitted. And this was one of the nights when it did. We gathered at a smug middle-class house in the suburbs. The first half-hour was filled with elation, what with toasts to victory, to the fall of Berlin and to Stalingrad. But suddenly there was a hush —because the tension of the last days was telling and because it was odd that tomorrow there would be no war. Everyone knew that the army was not to be moved from Berlin for the time being. We had long been saying, day after day: "Wait till we get to Berlin, till we crush the monster in his own lair, till we capture the Reichstag and the chancellery!" And all this had now been done: The Reichstag had been captured, the chancellery had been captured, and here we were sitting in the nazi lair. And there was nothing more to capture after Berlin. And no enemy's death would be as important as the death of Adolf Hitler. Even if the war went on, there would be nothing greater and more difficult to do than that which we had done. This is what gave us that curious feeling: in spite of our triumph we were a bit uneasy. We had to live on, didn't we, though the main thing had been done.

All the correspondents who could be found were urgently summoned. Halfway between Berlin and the front headquarters we saw the horizons crisscrossed with tracer bullets and shells. This was the surest sign that the war was over. I suddenly felt spasms in my throat and nausea. Ashamed though I was, I had to climb out of our jeep. It was bile I was vomiting. What could have happened to me? The sudden relaxation of nerves, perhaps. Through all these four years of war I had tried to keep myself under control and seemed to have been successful. And now when the tension was unnecessary, my nerves gave way. My friends seemed to understand. No one cracked any jokes. At the front headquarters Telegin* told us that the Germans had today declared that they were ready to surrender and even signed the document at the Allied headquarters. The formal signing of the unconditional surrender was to take place at the Karlshorst Engineering College in Berlin. We had been called to be prepared for the occasion.

At Karlshorst we inspected the assembly hall before the ceremony. The hall was not too large—about 1800 square feet. The American, British, French and Soviet flags were festooned on one of the shorter walls. De Lattre de Tassigny, Commander in Chief of the French Army, was reported to have already arrived or to be on his way by plane. A table extended nearly all along the wall under the flags. This would be occupied by the representatives of the Allied Command. Three other tables, two long ones and one a bit shorter, had been set at right angles to the first. The shorter table was meant for the German delegation, the one in the middle for Allied generals and officers, and the third and furthermost for newsmen.

We had been lolling about the Engineering College all day. This was because the Soviet and the other commands could not come to terms on some procedural matters, we were told. That must have been true, because the ceremony had originally been scheduled for two o'clock but did not begin until evening. Finally the representatives of the Allied Command entered the hall—Zhukov, Telegin, Vyshinsky, Tedder, Spaatz, and De Lattre de Tassigny, whom I saw for the first time. He was a smart-looking general, hardly more than 45. The newsmen and military hurried to their seats. There was a slight incident that created some merriment. Several of the Soviet generals (they had come a bit later) found vacant seats at the shorter table and promptly occupied them. An officer supervising the procedure immediately darted over and began to whisper something to them. The generals realized they had usurped the places reserved for the capitulating Germans and bounced off as though they had been stung.

Zhukov was smiling. So was Tedder and so was De Tassigny.

After smiling to each other and to the unsmiling Spaatz for a while, they took their seats. The photographers and newsreel men went into a frenzy. They were jumping on the table, hanging over the shoulders of generals and clipping and twirling away. A Soviet newsreel man happened to graze the head of a U.S. admiral with his camera handle. But the admiral, evidently used to newsmen's horseplay, just smiled good-naturedly, say-

* In command of the 62nd Army in the Battle of Stalingrad.

* Member of the War Council of the First Byelorussian Front.

ing: "That's all right!" Our supervising officers, however, almost dragged the culprit from the hall.

Those seated at the main table were studies in contrast. Spaatz' face was placid. Vyshinsky was fidgeting. Zhukov was beaming; his expression was both benign and ominous. His neighbor Tedder, whose features were pleasant though rather nondescript, was saying something with half a smile to Zhukov through an interpreter. He seemed to me the only man who regarded the ceremony with some irony. De Tassigny looked like someone who had come a bit late, was anxious about it, and eager to come to grips with the matter at hand. Watching Zhukov's heavy but handsome features, I recalled my meetings with him during the fighting against the Japanese at Khal-Khin Gol, when he held the rank of corps commander* and was in charge of our forces in Mongolia. I had not seen him for six years and would never have dreamed that I would see him next in Berlin, accepting the surrender of the nazi army.

When the hubbub subsided, Zhukov arose and announced the beginning of the proceedings. The list of plenipotentiaries was read out in different languages: who was representing whom. All this took ten minutes or so. Then Zhukov rose again.

"Let the German delegation in," he said dryly to the officers at the entrance.

The door swung open and in came Keitel, Friedeburg and Stumpf. They were followed by several German officers, presumably their adjutants. Keitel had to take only three steps to reach his table. He stopped beside the middle chair, extended his marshal's baton, pumping it backward and forward, as one would a dumbbell in a gym. Then he moved the chair back, sat down and laid the baton in front of him. Friedeburg and Stumpf sat down too, their adjutants standing behind them. Zhukov rose and said something I could not hear. His words were promptly translated for the benefit of the Germans, and Keitel's head bent in affirmation. The ceremony went on. I had my eyes on Keitel. His gloved hands lay on the table in front of him. Stumpf seemed to be calm. Friedeburg froze, but there was something about his immobility which bespoke utter despair. Keitel was at first perfectly placid, then turned his head and looked at Zhukov. His eyes kept shifting between the table and the Soviet marshal. Oddly enough, it was curiosity that I read in his eyes whenever he looked up. It was as though he were looking at a man who had interested him for a long time and whom he could now view a few steps away.

The ceremony of the signing began at the long table. The first to sign the document were Zhukov, Tedder and Spaatz, and the last, De Tassigny, who sat nearest the Germans.

Keitel's face darkened. He was rigid now, waiting for the crucial moment of his turn. The tall officer behind him stood at attention and wept without moving a muscle of his face. Keitel continued to sit straight up; then he extended his hands and clenched them. He tossed his head back as though to contain the tears about to roll from under his lids.

"It is proposed that the German delegation sign the unconditional surrender act," said Zhukov.

The interpreter translated the sentence, but Keitel grasped the meaning before he had finished and moved his hand over the table as though asking for the document to be laid in front of him. Zhukov, however, stayed on his feet and curtly gestured the Germans to the table.

"Let them sign it here!" he said harshly.

Keitel was the first to get up. He approached the short side of the table, sank into an empty chair and signed several copies of the document. Then he returned to his seat and resumed his former pose, except that he was putting on the glove he had taken off for the signing.

Stumpf and Friedeburg followed suit. I still had my eyes on Keitel. He sat, half turned to the table of the Allied Command, eyeing them so tensely that he did not seem to notice how his gloved hand went over his chin and sagging jowls, almost kneading his skin.

Stumpf, the last of the three, signed the document and went to his place.

"The German delegation may leave the hall!" announced Zhukov.

Whereupon the Germans got up, Keitel repeated his dumbbell act, turned on his heel and strode off, with the others following.

The tension suddenly broke as the door closed behind the Germans. The hall heaved a sigh of blissful relief. The surrender had been signed and the war was over.

On the evening of the tenth we were on our way through Sudetenland, bound for Prague, which had already been liberated by Konev's army. The tanks of Rybalko, who had spoken to us so curtly and enigmatically in Berlin, had been the first to enter the city. We paused in front of a wrecked bridge. This called for a two-mile detour through the woods. But the dozen cars lined up before the bridge would not budge because the last car that had taken that detour had been fired upon by Germans unaware of the surrender, and someone had been hit. The war was over, and no one cared to take any more risks. Only two or three days ago any officer or driver would have laughed at such timidity. We, too, bided our time at the bridge, waiting for an armored troop carrier which had allegedly been summoned. My companion suddenly flared up against this vain hope, himself, me, and everything in the world: "What are we waiting for? Let's go!" he shouted. I hesitated. I hated the idea of being hit by some cursed Germans who hadn't heard about the surrender. My companion was seething now, and I grew ashamed of myself. We got into the car and took the road through the forest. The other cars filed behind us at once. I realized that someone else would have taken the initiative in about five minutes if we hadn't, and we would have followed, just as the others were doing now. This thought brought no relief, however, and I was as scared as before. The forest was very still as we entered. Unable to bear the tension, we opened fire with our machine guns, hurtling along at full speed. When we had cleared the forest, we realized that we did not know whether we had been fired upon or not, for we had heard only the frantic shooting of our own guns. We were embarrassed and said nothing. It was impossible to get ourselves back into that special war state in which one is afraid of death, of course, but takes it for granted. Nor could we as yet return, without embarrassment, to the natural state in which violent death seems unnatural and horrible.

So much for the last days of the war. As I was rereading these pages of my diaries and notebooks, I often thought of what I could say in conclusion. But now I feel that no conclusion is necessary. If my recollections have conveyed something of the feeling of the war and have made those who read it realize that a third world war cannot and must not be, I have nothing further to add. If I have failed, everything I have written here is worthless, and any epilogue would be meaningless—and the longer, the more meaningless.



"The Shattered Reichstag" and "The Signing of the Act of Capitulation" are by Georgi Petrusov, special correspondent for *Soviet Life*. The 62-year old photographer has received many prizes and medals for his pictures, which have been exhibited at international shows in New York, Washington, Paris and elsewhere. He was a frontline cameraman with the Soviet Army all through World War II.

* A former Red Army rank. The closest present rank is lieutenant general.



MAY 1945: BERLIN

THE SIGNING OF THE ACT OF CAPITULATION



During their occupation of the Soviet Union the Nazis either completely or partly destroyed

1,710 cities,
more than 70,000 villages and inhabited centers,
more than 6,000,000 buildings,
and 25,000,000 people were left without shelter.

The Nazis razed

31,850 industrial enterprises where nearly 4,000,000 workers were employed,
40,000 hospitals and other medical institutions,
84,000 general and specialized schools and institutes,
43,000 libraries,
427 museums,
1,670 Orthodox and 237 Roman Catholic churches,
532 synagogues.
Historical monuments were ruined, among them the Petergof Palace, the Kiev-Pechersk Monastery, the New Jerusalem Monastery.
The total value of the material losses suffered by the Soviet Union as a result of fascist aggression amounted to 679 billion rubles (1941 currency).

Four years of war . . .

The Soviet people needed five years to put the national economy back on its feet . . .
War retarded the economic and social progress of our country more than a decade.

FROM BURNING HELL TO . . .



STALINGRAD 1943




VICTORY



VOLGOGRAD:

where a city was wiped off the face of the earth



Volgograd is athrob with life, but there are mementos of death wherever you walk in the city. You stand admiring the new apartment buildings on the Square of Fallen Heroes and suddenly find yourself facing a granite tomb inscribed: "Here Lie Buried the Heroic Defenders of the City."

In 1942 the Nazis broke through to the Volga River in several places, but the Soviet people stopped them there in a pincer movement that finally crushed their armies.

Every factory and store of the city (then Stalingrad) was destroyed, not a single dwelling was left standing—just debris and ashes, with an occasional wall and chimney sticking out like a burned tree in a clearing. The damage to the city and its outlying districts was estimated at 18 billion rubles.

The fascists were no sooner driven back than work began on rebuilding the city. Volunteer help came from all over the country. Fifteen thousand construction teams were formed; people contributed 200 million hours of their labor.

Now Volgograd is one of the most beautiful cities on the Volga, stretching for 43 miles along its banks. Its population exceeds 700,000. The city now has three times the number of apartment houses it had before the war, while its volume of industrial production is seven times the prewar figure.





PHOTOGRAPHS BY NAUM GRANOVSKY



DRAWINGS BY LEONID SERGEYEV

THE LITTLE GINGERBREAD

A RUSSIAN FOLK TALE

ONCE UPON A TIME there lived a little old man and a little old woman. One day the little old man said to the little old woman:

"Wife, look in the flour box and see whether there's enough flour there to make a little gingerbread."

The little old woman peeped into the flour box and found enough to make a little gingerbread. She stirred some sour cream into the flour, kneaded a gingerbread, fried it in butter and put it on the window sill to cool. It lay there for a while and then rolled off the window sill onto the bench, and then from the bench onto the floor. On the floor it rolled toward the door, hopped across the threshold to the porch, and from there skipped into the yard and out of the gate, along the path.

As the gingerbread was running along the path, a bunny came its way and said:

"Listen, little gingerbread, I am going to eat you!"

"Please don't eat me, bunny, I'll sing a song for you."

I'm the gingerbread,
I got away from the little old man,
And the little old woman,
And I can get away from you, bunny,
I can, I can!

And the gingerbread rolled away still faster, out of the bunny's sight.

Then a wolf met it and said:

"Listen,little gingerbread, I am going to eat you!"

"Please don't eat me, big wolf, I'll sing a song for you."

And again it sang:

I'm the gingerbread,
I got away from the little old man,
And the little old woman,
I got away from the bunny, too,
And I can get away from you, wolf,
I can, I can!

The gingerbread skipped along the road still faster, out of the wolf's sight.

It ran into a bear, and the bear said:

"Listen, little gingerbread, I am going to eat you!"

"You, brown bear, will never eat me!"

I'm the gingerbread,
I got away from the little old man,
And the little old woman,
I got away from the bunny
And from the big wolf, too,
And I can get away from you, brown bear,
I can, I can!

And it ran on still faster out of the bear's sight.

At last a wily fox met it and asked:

"Little gingerbread, where are you going?"

"Along the path."

"Little gingerbread, sing me a song, please!"

And the little gingerbread began to sing:

I'm the gingerbread,
I got away from the little old man,
And the little old woman,
I got away from the bunny,
And from the big wolf,
And from the brown bear,
And I can get away from you, wily fox,
I can, I can!

Then the wily fox said:

"What a nice little song. But I don't hear you very well. Little gingerbread, jump onto the top of my nose and sing me your song once again and a bit louder, please."

The little gingerbread jumped onto the fox's nose and sang its song still more loudly.

Then the fox said:

"Little gingerbread, jump onto my tongue and sing your song once again for the last time."

The gingerbread jumped onto the fox's tongue and snip! snip! the fox gobbled it up!



Learning Russian

FRUITS OF THOUGHT

The Thoughts and Aphorisms of Kozma Prutkov

Kozma Prutkov's name has become a byword in Russian; his thoughts and aphorisms are known and quoted all over the Soviet Union. He is regarded as a wit with sly, but often profound, views on life and the ways of man.

Kozma, for all that, is an imaginary figure sprung from the minds of Alexei K. Tolstoy and the Zhemchuzhnikov brothers in the middle of the last century.

Here are some of Kozma's aphorisms.

Бросая камешки в воду, смотри на круги, ими образуемые; иначе бросание будет пустою забавою.	If you've thrown a stone into water, watch where the circling ripples go or you'll be idly pitching pebbles.
Не будь цветов, все ходили бы в одноцветных одеяниях!	If there were no colors at all, there would be one color for all.
Век живи — век учись. И ты, наконец, достигнешь того, что, подобно мудрецу, будешь иметь право сказать, что ничего не знаешь.	Live and learn so that some day you'll have the sage's right to say that you know nothing.
Брошенный судьбой, ты все ж не отчаивайся!	Even if forsaken by destiny itself—never despair.
Одного яйца два раза не высидишь!	No egg is hatched twice.
У всякого портного свой взгляд на искусство!	Every tailor has his own view of art.
Мудрость, подобно черепаховому супу, не всякому доступна.	The subtleties of wisdom and of turtle soup are far from perceptible to every man.
Не всякая щекотка доставляет удовольствие!	It is not every tickle that is pleasant.
Купи прежде картину, а после рамку!	First buy the picture, then the frame.
Отыщи всему начало, и ты многое поймешь.	Find the beginnings of all things—you'll learn a lot that way, no doubt.
Если хочешь быть покоен, не принимай горя и неприятности на свой счет, но всегда относи их на казенный.	If you want tranquility and peace, don't lay unpleasant charges to your score, but charge them rather to the state.
Новые сапоги всегда жмут.	New shoes always pinch.
У человека для того поставлена голова вверху, чтобы он не ходил вверх ногами.	If man's head is on top, it's to keep him from walking upside down.
Смерть для того поставлена в конце жизни, чтобы удобнее к ней подготовиться.	Death has been placed at the end of life so one can prepare for it at leisure.
Щелкни кобылу в нос — она махнет хвостом.	Fillip a mare on the nose and she's sure to wave her tail.
Где начало того конца, которым оканчивается начало?	Where is the beginning of the end of the beginning?
Чрезмерный богач, не помогающий бедным, подобен здоровенной кормилице, сосущей с аппетитом собственную грудь у колыбели голодающего дитяти.	The excessively rich man who refuses to aid the needy is like a hefty wet nurse sucking her own breasts at the cradle of a hungry infant.
Специалист подобен флюсу: полнота его одностороння.	The specialist is like a swelling: his plumpness is one-sided.
Самый отдаленный пункт земного шара к чему-нибудь да близок, а самый близкий от чего-нибудь да отдален.	The farthest point on earth is sure to lie near something, and the nearest point on earth is equally sure to be farthest from something else.
Вакса чернит с пользой, а злой человек — с удовольствием.	The bootblack blacks with honest zeal, while the slanderer does the same with malice.
Человеку даны две руки на тот конец, дабы он, принимая левою, раздавал правою.	A man has two hands so that he can accept things with one and give them away with the other.
Не всякий генерал от природы полный.	Not every general is fat.
Что есть хитрость? — Хитрость есть оружие слабого и ум слепого.	What is cunning? It is the weapon of the weak and the intelligence of the blind.
Не во всякой игре тузы выигрывают!	It is not the ace that wins in every game.

QUERIES FROM READERS

QUESTION: "Are there national parks in the Soviet Union? If so, how are they managed?" asks Robert B. Turnberg of South San Francisco, California.

ANSWER: Yes, there are. We call them preserves. There are 66 in the country and they occupy an area of 16,500 square miles. Twenty-four of these preserves are in the Russian Federation and are supervised jointly by the USSR Council of Ministers and the USSR Academy of Sciences. The others are under the jurisdiction of the Councils of Ministers of the union republics in which they are located and their Academies of Sciences. Hunting, felling trees or any similar activity is forbidden in the preserves. These public parks are for those who love the outdoors and want its natural state preserved.

QUESTION: "Where are the Soviet mints located? Is it possible to bring back to the United States examples of the memorial medals the mints put out?" again Robert B. Turnberg.

ANSWER: The mints are located in Moscow and Leningrad. They coin money and strike badges and memorial medals like the gold medals issued to commemorate the flights of the cosmonauts. These medals can be bought for dollars at the USSR Bank for Foreign Trade, at airports and elsewhere. The price of a 10-gram medal is $30.00; a 17-gram medal is $51.11. The medals can be taken out of the country without any restriction or duty.

It is also possible to purchase these medals by mail from outside the Soviet Union. For this purpose you merely deposit the proper amount to the account of the USSR Bank for Foreign Trade with the Chase Manhattan Bank.

QUESTION: "Are religious believers permitted to work in government institutions?" Robert Turnberg's final question.

ANSWER: They are. The Constitution of the USSR guarantees all citizens freedom of conscience. The law forbids anyone to question a job applicant about his religious beliefs. No application form asks questions about religion; that is the personal affair of the individual. The practice holds for any job, including those in government institutions and embassies abroad. Generally, no statistics are kept on the number of religious believers.

QUESTION: "Is it true that you have only one party? I tried to convince a friend that you have more than one, but could not," writes Don Coe of Modesto, California.

ANSWER: Your friend was right. In the Soviet Union there is only one party, the Communist Party. We think of parties as political organizations representing the interests and views of definite social classes. We have two classes, workers and farmers, and both have the same view on property and social ownership of the means of production. They have the same goals and interests, and are therefore represented by the one party. This does not imply that everyone has the same opinion about everything. Within the Party there are disagreements and debates on all sorts of domestic and foreign policy questions.

The one-party system in the Soviet Union is a result of its historical development, of the specific features of our Revolution. Other socialist countries have multiparty systems.

QUESTION: "What are the prices of foodstuffs and consumer goods—for example, a pair of winter shoes, a man's coat, a man's suit (two piece and three piece), meat, fish, sausage, bread, potatoes? How much does a pound of butter, beef and pork cost?" Edward Emmerick of Rego Park, New York, inquires.

ANSWER: A pair of men's winter shoes costs from 7 to 40 rubles, a man's suit—from 40 to 150 rubles, and a man's coat—from 50 to 150 rubles. (The ruble is equivalent to $1.10;there are 100 kopecks to a ruble.)

The prices of the most common foods per pound are:

beef—80 kopecks-1 ruble
pork—90 kopecks-1.1 ruble
fish—about 60 kopecks
sausage—(boiled) 1 ruble, (smoked) 2 rubles
butter—1.6-1.8 rubles
bread—6-15 kopecks
potatoes—5 kopecks

QUESTION: "What are the average earnings of a high school teacher in a large city? What advantages do teachers have?" another reader wants to know.

ANSWER: The earnings of a schoolteacher depend on his education, number of teaching hours, length of service, additional duties, etc. The average earnings are 140-150 rubles a month. One of the many advantages of the teaching profession is the two months' paid summer vacation.

QUESTION: "Why the drop in population increase? (Table in the November 1964 issue of* USSR*),"Mr.S.Taneyew of New York City asks.

ANSWER: The drop in population increase began in 1961. That was when young people who were born during the war years (1941-1945) were old enough to have children. During the war the birth rate dropped sharply, and that drop is being felt today, 20 years later. A rise in the population increase is expected after 1966, when young men and women born after the war will have grown up.

QUESTION: "Is there a system of birth control in your country? Are abortions permitted?" continues Mr. S. Taneyew.

ANSWER: Contraceptives are sold openly in all drugstores. Abortions are perfectly legal and cost five rubles (this includes operation and hospitalization).

QUESTION: "How successful has your medical profession been in fighting venereal disease?" Mr. S. Taneyew also asks.

ANSWER: Syphilis and gonorrhea have been eradicated in the Soviet Union. A case of venereal disease is a rarity, and steps are immediately taken to isolate the carrier and cure him. We have a wide network of preventive and first-aid stations where anyone may come for examination and treatment.

QUESTION: "Do religious sects or religion in general create problems for communist ideas or theories?" Gary C. Perasso of San Mateo, California, asks.

ANSWER: Communist ideas and theories evolved long after the development of religion and in spite of religious opposition. So it is rather the other way around: Communism has created problems for religious theory and ideas.

QUESTION: "Are communism and capitalism coming closer to each other in many respects?" This question is also from Gary C. Perasso.

ANSWER: If you are asking whether the two social systems are coming closer to each other in any fundamental way politically, economically and ideologically, the answer is no. Such a rapprochement is out of the question. Communism is by no means tending toward private capitalist ownership of the basic means of production (factories and land), and capitalist countries have no intention of introducing communist forms of ownership.

If what you have in mind, however, is not these basic political and social aspects but peaceful coexistence of the two systems, then your question is very much in order. There are any number of areas where this rapprochement is evident. Capitalism is trying to make use of planned economic development, which originated with communism. Communism and capitalism exchange findings in technology and production processes. There is a two-way traffic of goods between the two systems. And, finally, the concept of peaceful coexistence, actively upheld by our country, rests precisely on the possibility of rapprochement and even coincidence of views of the socialist and capitalist countries on the most vital of international problems—how to achieve lasting world peace.

QUESTION: "What is the percentage of Communist Party members in the countries of the communist bloc?" inquires Steve Behm of Kettering, Ohio.

ANSWER: About 3.4 per cent.

QUESTION: "As a Latin teacher I would be interested to know to what extent Latin and Greek are taught in Soviet schools and colleges," writes M. H. Shagam of Ojai, California.

ANSWER: Latin and Greek are not taught in Soviet high schools largely because the six hours a day six days a week course of study (this is exclusive of an average three hours a day of homework) must include what our educators believe to be more important subjects. In college, however, Latin is a must for all future physicians, lawyers, historians, philologists and linguists, and Ancient Greek is required for students of classical philology. But any college student is free and is encouraged to study Latin and Greek even if he does not fall into the categories we listed.

LOVE, SEX, THE YOUNG FAMILY



BY BORIS GRUSHIN

This is the second and concluding section of an article begun in the April issue.

WITH regard to the reasons marriages are made and broken, where do we draw the line between the serious and the frivolous? A very hard boundary to establish, for it is almost impossible to isolate with any degree of certainty the objective symptoms that would permit us to say with confidence, "This is a typical case of light-minded marriage."

The Hasty Marriage

Most people believe that marriages of short duration are to be explained by the fact that the partners did not take the time to get to know each other before they were wed.

The answers to a questionnaire circulated by Justice Gromov of Moscow City Court, who analyzed 546 divorces, throws a good deal of light on this aspect of the problem. In many of these cases, he observes, you would be led to believe that the divorce occurred for quite different reasons: the husband "insulted" by the wife, the wife complaining that "my husband always comes home drunk"; or the husband wanting a child, while the wife does not; and so on. For all the differences in these cases, you will find that they have this common feature: a very brief acquaintance period before marriage and a brief marriage itself. Here are some examples:

He was born in 1933, and she in 1938. They had met each other four months before marriage, and sued for divorce three months after the wedding.

He was born in 1932, and she in 1937. They had known each other one month, and sued for divorce six months after marriage.

He was born in 1929, and she in 1937. They were married in March, and sued for divorce in June.

And so on. Of the 546 divorces, 47 were of couples married for less than a year, and 107 were marriages of from one to three years' duration.

No one would argue that every brief marriage is explained by the irresponsibility of the parties concerned. There are instances, we know, of marriages after short acquaintance that are happy and lasting.

For all that, the rule applies: A light-minded attitude toward marriage will usually lead to an early breakup.

The frequency with which people join such phrases as "brief premarital acquaintance" with "frivolous," and "short" with "light-minded marriages" defines fairly well the boundaries they establish. But public opinion, although right enough in censuring a frivolous attitude, is wrong in attributing practically all marriages of short duration to light-mindedness. That conclusion is contradicted by the figures.

Neither judicial nor any other bodies, so far as we know, have ever tried to determine the length of premarital acquaintance. Nor do we have any precise data on the number of "unconcluded marriages" that (but for some rare exceptions) can be explained by light-mindedness.

Many people who fill out their statements of intention at the registry offices never return to register their marriages after the week they are required "to think it over." What we do have, however, are the figures on the duration of the marriage before it was dissolved; and they show that light-mindedness is a much exaggerated explanation.

Of all the divorces in 1961, for instance, about 30 per cent involved couples married ten years or longer, more than 30 per cent involved couples married five to ten years, and only 3.9 per cent involved couples married less than a year. The last figure does not, of course, take in the "unofficial" breakup of young families. Because of our unwieldy divorce procedures people are not always able to legally record the dissolution of their families at the time it happens. But even with this in mind, it is obvious that the greater number of divorces do not occur in the early years of marriage. An irresponsible attitude toward marriage, therefore, is apparently not a basic cause for divorce.

Moreover, we have every reason to say that the attitude of Soviet people toward marriage and family life has been growing more rather than less serious and responsible as socialist society has developed. This is also borne out by the figures. Of the total number of divorces in 1939 and 1940, marriages of up to one year accounted for 22.7 and 21 per cent respectively; marriages of up to two years accounted for 26.3 and 25.9 per cent; of five to nine years, for 18 and 18.4 per cent; and of more than ten years, for 16.5 and 16.9 per cent. These figures obviously speak well for our times.

Age at Marriage

For some reason, people hold on to the idea that early marriages are a sure and certain consequence of an immature and frivolous attitude toward family life. That is true only with important qualifications. We are still suffering the results of the serious shortcomings of the recent past in raising our children. It left us unfortunate examples of infantilism. Many young people at even the age of 20 turned out to be completely undeveloped socially, with no experience of work or of practical living, and hence unable to think and act independently.

In this sense our existing legislation on family relations, legislation based on the concept that the 18-year-old is mature both biologically and socially and is therefore eligible to marry, was at variance with educational practice not too long ago. We had husbands and wives, and even papas and mamas, who could not earn a kopeck by themselves. In this sense early marriage did reflect an immature and unthinking attitude toward family responsibilities. And we know that the marriages of such immature young men and women frequently ended, and still do, in early divorce.

For all that, "early marriage" and "light-minded marriage" are not always identical concepts. Nor were they identical in

the past, since it was only a part of our youth who were suffering from infantilism even then. It is even less accurate to say they are identical now, when our country has been paying so much attention to the civic and social maturation of the growing generation. This is recognized by the general public as well, since only 3.6 of those who filled in the questionnaire defined early marriage as a cause of divorce.

Even if we were to admit that early marriage is a sign of light-mindedness, we should also have to admit that its extent has been greatly exaggerated, for the statistics show that most people in the Soviet Union marry at a mature age.

That growth of maturity was quite noticeable in the years after the Revolution. Of all the men who married in 1910, those under 20 constituted 14 per cent in the cities and 35.2 per cent in the villages. By 1926 these figures had declined to 5 and 20.5 per cent, and by 1934 to 3.2 and 10.7 per cent. The figures for women were approximately the same.

As for more recent times, the number of early marriages continues to be low, far lower than before the war, despite those who claim that frivolity is so general. In 1961 the number of men under 18 who married was 0.3 per cent of the total. The equivalent figure for women was 1.3 per cent. For 18-year-olds, the figures were 1.1 and 4.7 respectively; for 19-year-olds, 2.6 and 7.8 per cent. Up to and including the age of 19 the figures stood at 3.73 and 13.8. Up to and including the age of 20 they were 8.2 and 24.9.

Most of the men who married in 1961 were from 22 to 25 years old (47.7 per cent of the total number of marriages). Most of the women who married that year were from 20 to 23 years old (42.5 per cent). Such adjectives as immature and frivolous hardly fit this age group. It should be noted, moreover, that 48.7 per cent, *i.e.*, nearly half of all the marriages, were contracted by men of 25 and more, and 43.7 per cent by women of 24 and more.

Age at Divorce

Those who claim that frivolity is widespread also refer to the ages of the divorcees, claiming that a large fraction (if not most) are "young, immature people," unable to evaluate such a step seriously or to gauge its sad consequences.

Here, too, the facts refute the opinion. It is the 30- and 40-year-olds and not the younger men and women who constitute most of the divorcees.

In the Soviet Union in 1961 only 0.1 per cent (the figure was 1.0 in 1940) of the men and 0.8 per cent (it was 7.8 in 1940) of the women who obtained divorces were under 19. Divorcees between 20 and 24 were 12.6 and 25.1 per cent, respectively, of the total. And 61 and 50 per cent respectively were 30 years and older.

Why is the notion so widespread that frivolity, immaturity, and so on are the prime explanations for marriages of short duration?

First of all, it provides a facile explanation for a complex phenomenon. Since there is no opportunity, more often than not, to analyze the case any more concretely, it becomes a very convenient rubber stamp.

The advocates of that theory often put the cart before the horse. Take the relationship between light-mindedness and the duration of the marriage. If a marriage has really been frivolous and should be annulled, this will happen soon after the wedding in the great majority of cases. Nor is every brief marriage short-lived because of light-mindedness. Many people confuse cause and effect here. Instead of assuming that a marriage is light-minded and hence short-lived, they assume that the marriage is short-lived and hence light-minded.

The range of error is even greater when early marriage is equated with light-mindedness. There is no denying that a frivolous attitude about raising a family is sometimes reflected in early marriage. The reverse conclusion, however, would be even more far-fetched here than in the previous case, that is to say, that a marriage is light-minded because it was an early one. Yet this, precisely, is how the average person thinks. And this is what makes for the prevailing view that frivolity is so widespread and, indeed, is characteristic of our time.

But the error on the quantitative side notwithstanding, there is no question but that many people do have an irresponsible, frivolous attitude toward marriage and family life and that it does play a melancholy role in the lives of many families. This undoubtedly is the explanation for a fraction of the divorces in marriages of less than three years' duration and of couples in the youngest category, say up to 20 years old.

What Is Light-mindedness?

A hard question to answer. The 6,500 people who mentioned light-mindedness in the questionnaire gave all sorts of definitions. Despite the variety, however, they group into these three attitudes:

What do the questionnaires say about this?

V. Myslivets, Minsk worker:

"Love at first sight has become a stereotype for many of us. We forget that one 'can fall in love' at first sight only with a marble statue—soulless, heartless and characterless. People, on the other hand, have living souls, warm hearts, different characters and, far from always, cool heads. More often than not people do not wait to study a person or to test his feelings. They are in a hurry, forgetting that he who hurries is sure to go wrong. They are the ones who 'marry in haste and repent at leisure,' as they say."

A Urals boarding school teacher, 24 years old:

"The trouble is hasty marriage. People often marry as follows in our villages in the Urals: A young man arrives in search of a bride. His acquaintances tell him, 'The Ivanovs have a very nice girl.' Whereupon the young man calls upon the Ivanovs, proposes and gets married. In a month or two the young couple separate."

V. Lipegov, Kazakh collective-farm chairman, 35 years old:

"Our young people often marry because of 'love at first sight.' This results in a good family sometimes, but not very often. I know of many cases in which young people married the evening they met. Young people should know each other a bit longer, not just from a first meeting at a dance. They need not fuss over each other's family tree, of course, but knowing one's prospective spouse well is half the guarantee of a lasting marriage."

And this is from someone who suffered the consequences of such a marriage, N.U., a truck driver of Kiev Region.

"While I was still in the army one of my buddies gave me a girl's address and suggested I write to her. I wrote to the girl and received a reply. Soon we were corresponding regularly. Her letters were pleasant and well written. When I was demobilized, we met for the first time. I liked her, and we were married two months later. It was only after our marriage had been registered that Galina confessed she had not written any of the letters. They had all been written by a girl friend. I did not think it mattered much then, but . . ." and so on.

What are we dealing with here? With hasty marriages, with people who marry without knowing each other, without having tested their feelings. The most frequent justification for such haste is "love at first sight." But sometimes even this excuse doesn't apply. Some marriages are concluded through matchmakers or "by mail."

M. O. Koido, 55-year-old pensioner, Kaliningrad:

"Many frivolous young people marry with the idea: 'If we don't get along, we'll just separate!' They don't realize what a mistake they are making. All they care about is getting married. . . ."

N. Petrov, a worker from Latvia:

"Ask anyone you like and you'll find that they are all sure nothing is easier than getting a divorce. The girls are mostly to blame, in my opinion. They find themselves handsome chaps, jump at the chance of getting married, and start hunting for a pretext to sue for divorce soon afterward. . . ."

A. D. Martynova, 58-year-old pensioner from Tula Region:

"I've talked to girls about to marry. When I asked them: 'Have you known that young man very long? What is it you like about him?' they often answer: 'Oh, I've known him for a long time, for about a month. He's a good dancer and earns pretty good wages. Anyway, I'll marry him and see.' 'What if there is a child?' 'What if there is? The courts will force him to support it.' Young people marry quickly without even taking the trouble to register their marriages. They shorten the period of courtship, though that ought to be the loveliest time in their lives."

Marriage without any real intention of building a lasting relationship; the oversimplification of relations between the sexes; the view that marriage and divorce are mere trifles; and the "streetcar theory," according to which marriage is as simple as getting on a streetcar: If you've taken the wrong one, don't get excited, just get off and change—here we have a whole set of frivolous attitudes that say in effect, "If we can't get along, we'll just separate!"

A. Motorin, 24-year-old university laboratory worker, Saratov:

"Most young people who marry are hardly ready for it. The frivolity with which some of them begin their new lives is astonishing. It is pleasant, of course, to be with the person one loves, but here one should ask oneself: Will I be able to support myself and my wife properly? Where will we live and what will our children's lives be like?"

Raisman, engineer, 27 years old, Leningrad:

"Many young people who marry have no idea what a family is. Apart from its pleasant side, family life harbors many difficulties, namely: friction because of differences in character and views, learning to keep within the family budget, relations with relatives, adjusting one's daily schedule and enjoyments to the new life, housekeeping, and so on. When the first joys are over, therefore, the newlyweds learn that life together is a laborious and difficult struggle for happiness. The young people all around us are hardly ready for such a struggle. They are soon disillusioned. The first quarrels are quick to come, and they soon find that life together is quite impossible."

D. K., a student, 32 years old, Dnepropetrovsk:

"Many people think that divorces result mainly from marriages contracted without love. I don't agree. Divorces, in my opinion, occur because the husband or the wife did not foresee the complexity of family life, because one or the other did not have the faintest idea about housework and proved utterly unable to cope with temporary difficulties, etc. Some girls no more than 20 and still students declare: 'I'm going to teach my husband to eat in restaurants. . . .' A family built on this principle offers the spectacle of a pair of flighty, helpless people. . . . Young people ought to be able to live independently —not in the sense that they should be offered the keys to a new apartment on a silver platter, but in the sense that they should be capable of serious, independent thought."

This is frivolity of another kind: dismissing the problems of family life, inability (or unwillingness) to give any thought to the obligations marriage imposes and the fatuous idea that "everything will turn out all right."

A Grain of Truth and the Whole Truth

Our definitions above are neither categorical nor irrevocable, of course. They are all open to argument, and there is argument on the questionnaires. Some put all the blame on "love at first sight," while others insist there is nothing light-minded about such love. Both sides, moreover, cite numerous examples from "life."

The difficulty is that life really offers contradictory examples. There is no reason to doubt that "love at first sight" does happen or that many ideally well-suited couples come together almost by chance.

But such exceptions, and exceptions they are, do not refute the general rule that the happiest and most durable families are those founded on deep, firm affection well tested by life, and hence on the kind of feeling that did not spring up at the very beginning of the couple's relations but was a result of those relations, their natural continuation, as it were.

The people who answered the questionnaire also argued about the flighty attitude young people have to the complications of family life. In reply to the charge that the young are light-minded, some of the answers insist that no one can be expected to learn the ropes all at once, that there is nothing so terribly hard about it, that young people with no experience at the outset learn to get along in time, and so on.

That too is true. Many newlyweds who, at the beginning, had not even the most elementary experience in coping with family life eventually acquired it and hurdled all the obstacles, so plentiful at the outset of married life. But it is self-evident, too, that the family would have been even more solidly grounded had it not been subjected to many unnecessary trials and tribulations which are considered inevitable, but which, in fact, are nothing of the sort if the young people could have learned the ropes before life tested them.

Thus the arguments against the definitions given above contain only a grain of truth, while the definitions actually encompass the truth as a whole. The spouses got acquainted only "an hour or so before they were married," or gave no consideration to the question of children, or thought divorce was no problem for them—all these imply light-mindedness, naivete, and frivolity. Divorce is the natural consequence of such marriages, for the breakup of the family is guaranteed by the very manner of its foundation.

Man-Woman Ratio

Looking into the probability prospect of marriage, there is the very complicated problem of the ratio of men to women in our country.

According to the 1959 census, there were 94 million men and 114.8 million women in the Soviet Union, *i.e.*, a ratio of 45 to 55, on the average.

In the middle age groups, starting with 32, the number of men and women are strongly disproportionate. The reason for this is partly the enormous wartime casualties. Under these conditions women of 32 find their chances of getting married limited; and it is hardly surprising that some of them should marry without love.

Another telling factor is the unequal distribution of men and women throughout the country. In his book *The Population of the USSR*, Pyotr Podyachikh says: "The percentage of men is far greater in the regions where heavy industry is being developed than in those where light industry and agriculture predominate. This is exemplified by Vladimir, Ivanov and Kostroma Regions, where light industry and mainly textile mills predominate. There are only 42 to 43 men for every 100 of the population in these regions. . . . The distribution of men and women in many of the northern districts is governed by the fact that more men than women seek jobs there because of the rigorous climate."

Does this have any bearing on the number of "light-minded" marriages? Unquestionably it does. There is also an uneven distribution of men and women in the cities and villages. Finally, there is the important fact that the number of men and women in the main "marriageable ages" (20 to 25 among the men, and 20 to 23 among the women) are really out of balance even where they are more or less evenly distributed because so many of the men are in the army at that time.

Courtesy of the magazine Molodaya Gvardiya

AROUND the COUNTRY

SURGEON-INVENTOR

Professor Anatoli Serednitsky, who teaches at the Lvov Medical College and works at the city hospital (where he has done more than 10,000 operations of various kinds, including some on the heart), also designs surgical apparatus.

The defibrillator he developed, to stop cardiac arrhythmia during complicated operations, is far more efficient than existing models. It is more compact and operates directly from a power line.

His other inventions include a remote-control electric thermometer used in operations on the alimentary canal and apparatus that determines the dangerous concentration of ether in narcotic mixtures.



GEOLOGY EXCURSIONS

Amateur prospecting expeditions are especially popular in the Urals. The parties are made up of high school and college students and workers. Geologists, who act as leaders, plan the itineraries with interested excursionists, teach them prospecting methods and explain safety rules. Some 22,000 young people take part in these excursions every year.

Teenage geologists have staked claims on many new deposits: Ivdel students discovered a copper site, and pupils of a Kosminsk school found manganese deposits.

These geology trips have additional values: The young people return in better physical shape and more knowledgeable about nature.







THAT IS HOW WE LIVE

A collection of documentary sketches just published in Moscow in Yiddish, *That Is How We Live*, gives a wide-ranging account of the way Jews in the Soviet Union live.

The 489-page book covers a large part of the country. Alexander Gubnitsky describes the life and work of Jews in the Azerbaijanian city of Sumgait, in the Siberian city of Bratsk, and in the old Donbas. Samuel Gordon and Shira Gorshman write of the virgin land area, Iosif Kerler ("A Urals Mosaic") of the industrial Urals, and Tevye Ghen of the Far East. Iyekhiyel Felikman, Avram Gontar, Meyer Yelin, Chaim Melamud, Gersh Polyanker, Oiser Goldes and others picture the old Jewish centers in the Ukraine, Byelorussia, Lithuania and Moldavia.

The people described are equally varied. One sketch gives the story of Associate Professor Shimon Shchegol, who heads the laboratory of a rubber factory, and his father Solomon Shchegol, chief engineer of a repair shop in the port of Sevastopol. Another ("Sumgait") tells about Zalman Gutman, all of whose seven sons became engineers. Gordon ("The Virgin Soil") and Gershman ("Come When the Tulips Are in Bloom") write about Leah Goldberg, a farmer. The main character in Irina Radunskaya's "A Journey to the End of the World" is the distinguished scientist Alexander Friedman, who dared to enter into a theoretical dispute with Albert Einstein.

The authors of the sketches are not simply journalists who picture Soviet Jewish life today; they are social historians who see the contrast with the past.

A 15-YEAR-OLD ARTIST

When Rockwell Kent visited Armenia three years ago, he was impressed with the work of Vagan Kochar, a 15-year-old schoolboy.

In a show in Armenia last year, Vagan exhibited 80 canvases, all mature, colorful and with interestingly varied subjects.

Vagan's works have also been seen in Moscow, Leningrad and Riga and at the World Exhibition of Children's Art in Chile and Lebanon.

Aside from his precocity in painting, Vagan Kochar's behavior is like that of any boy his age: he likes adventure stories and films, plays football, volleyball, basketball and other games. His favorite sport is swimming, and he is now attending a special training school for swimmers.

LARGEST HOTEL IN EUROPE

The largest hotel in Europe, the Rossiya, is going up in Moscow a couple of hundred yards from the Kremlin. It is scheduled to open in 1966.

A 12-story rectangle with a 20-story central section, it will have 3,200 rooms to accommodate 6,000 guests. The Rossiya will have 93 passenger and freight elevators and eight escalators. Several restaurants and cafés, each with its own cuisine, will be able to feed 4,000 diners simultaneously.

The hotel's 3000-seat concert hall is so designed that it can be transformed into a ballroom or sports arena in a matter of minutes through the mechanical lowering of the stage and seats.



HALF-MILLION-KILOWATT GENERATOR

The Elektrosila Plant of Leningrad, where large-capacity generators for Siberian hydropower stations are made, has its first 500,000-kilowatt turbogenerator ready for the Krasnoyarsk station. Giant generators are also being built at the Electrotyazhmash Plant in Kharkov. Photo shows the rotor of a 500,000-kilowatt turbogenerator being machined at Electrotyazhmash for the Nazarov heat and power plant.





30,000 DUELS

Hunter-biologist Vsevolod Potopolsky has caught more than 30,000 snakes. The venom is used to treat hypertension, radiculitis and other diseases.

Potopolsky first came to Central Asia 35 years ago, hunting birds, beetles, lizards, rodents, scorpions and solpugida. He worked as an agronomist and participated in locust control projects.

"But I spent most of my time catching snakes," Potopolsky says. "The most beautiful are of the Echis genus. I've caught about 10,000. Their skin is like a purple sunset over a gray desert. I've trapped 5,000 gyurza snakes and some 400 cobras."

Although bitten more than a dozen times, he has killed only one snake, out of necessity.

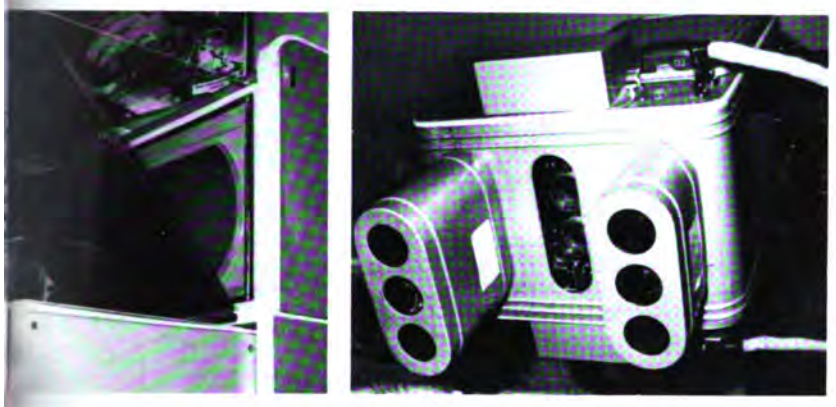
"I've never had any dislike for snakes," Potopolsky says. "On the contrary, I'm fond of them. They're useful, for one thing, preying on susliks, jerboas and mice, which eat the grain crops."



DIESEL-ELECTRIC DUMP TRUCK

The BELAZ-524, a 65-ton diesel-electric dump truck, has been built at the Belorussian Auto Plant. Compared with the conventional model, this diesel truck can climb grades twice as steep.

The BELAZ-524 is to be used in open-cast ore mines and on big power station building sites.



COLOR STEREOTELEVISION

A two-channel stereotelevision set is on display at the USSR Exhibition of Economic Achievements in Moscow.

A striking three-dimensional effect is achieved through an optical device orienting light rays in a certain plane.

Add to this a color picture tube, and you get a three-channel industrial TV set with a full-color image.

Color stereotelevision will find plenty of uses: in the "hot zone" of an atomic reactor, in bacteriology and chemistry labs, in metallurgy and elsewhere. Ultimately it will find its way into the home.

RUSSIAN MUSHROOMS

These delectable fungi can be fried, pickled and dried. Dried mushroom soup with potatoes, barley, onions and sour cream makes a tasty first course.

Five Soviet varieties, each in its typical woodsy surroundings, appear on postage stamps in denominations of 2, 4, 6, 10 and 12 kopecks.



TWO CHESS CROWNS AT 23

Nona Gaprindashvili, world chess queen since 1962, became the national titleholder in the Soviet Union for the first time. In the USSR championships, held in her home town of Tbilisi, the capital of Georgia, in December 1964, the 23-year-old world queen got 15 points out of a possible 19. There was a triple tie for second place with Yelena Rubtsova, 18-year-old daughter of ex-world champion Olga Rubtsova.

HOME MUSEUM

When Pavel Kurdyukov is not adjusting automatic instruments in the Siberian town of Angarsk, he collects watches (most of them musical) from many countries for repair. They range from miniatures (a tiny pile of wheels and screws wrapped in a piece of newspaper) to grandfather clocks weighing as much as 66 pounds and which require a cart for transportation. One of the latter kind, made in seventeenth century Germany, shows not only the time but the date as well. All its parts are made of wood.

The most interesting exhibit in this private collection is a plastic box with an "eye" through which can be seen a slim ballerina from one of Andersen's fairy tales dancing in a purple haze amidst the petals of a blossoming rose.

"I made the box myself," Kurdyukov explains. "I wanted to prove that a worker of today is capable of showing the same skill as craftsmen of old."



"WINTER BOUQUET"

This is the name of an exhibition sponsored by young nature lovers of Leningrad for the fifth successive season. On display are bouquets and arrangements of autumn leaves and branches of linden, maple and willow, which make attractive interior decorations in the wintertime. Evergreens—moss, twigs of cowberries, and branches of spruce, pine and cedar—are shown in a miniature representation of their natural setting. The bouquets contain barberries, ashberries, guelder-roses, cattails, water plantain and cotton grass.



MASTERPIECE RESTORED

One of the attention-getters at the Paris International Exhibition of 1900 was an openwork wrought-iron pavilion. The walls, nearly 40 feet high, were ornamented, and at each of the three entrances stood a sculptured figure. The young female figure in front of the main entrance personified Russia.



This masterpiece in wrought iron, a product of the Kasli works in the Urals, won a Grand Prix.

Unfortunately, the quality of the work was not recognized in Russia; when the Paris exhibition closed, the pavilion was brought back to Kasli and scrapped.

It was not restored until 1957. More than 1,000 parts were recast from old pictures by descendants of the earlier Kasli craftsmen.





DRAWING BY HERMAN CHERYOMUSHKIN

ANTLERS HOUSE

By YURI KAZAKOV

***Yuri Kazakov is not a newcomer to the pages of* Soviet Life. *Our readers have known him since March 1963, when we published his short story "There Goes A Dog" along with his answers in a young writers' poll conducted by the magazine* Voprosy Literatury (Problems of Literature). *Kazakov has had his stories published in many Soviet literary journals. He is the author of* At the Small Station, *a collection of short stories, and* Northern Diary, *a series of essays published in the magazine* Znamya (Banner).**

She had been living at the rest home near the seashore for many days. Arriving there after a long illness, she did not go out for three days but sat on the windy veranda, sadly eyeing the squirrels darting amid the pines.

On the fourth day she awoke very early, when her window was still barely touched with the slow dawn of spring. She got dressed and went out on the veranda, exhilarated by the cold and the fragrance of the snow of March. The clean, quiet break of day over the wooded hills thrilled her. Descending cautiously to the path that had thawed in the evening but had frozen again at night, she took a few steps with her arms timidly parted. The hoarfrost crunched and tinkled under her feet. The sound was loud and bright, reminding her of something she had long forgotten, a secret so sweet it set her heart racing. Never looking back, she walked on and on, ascending a hill from where she looked out over the frozen sea to a strip of ice-free water at the horizon. Daylight stole in everywhere until the sun rose, dimly white and powerless as yet.

Fragrant with frost, she returned and greeted everyone as she entered the dining room, her head bent, hiding a smile and the ecstasy in her eyes.

Like all convalescents, she was seized with gusts of happiness, though hers were especially fervent—because she was sixteen, because there was mystery in her dark, moist eyes, because she was alone and free and her imagination was romantically attuned, and also because everything seemed so extraordinary, so fairylike around her.

Every morning she was thrilled by the deep, kindly voice of the radio announcer: "*Runa Riga!*" he called. "*Pareizs laiks.*" Every morning, too, she would set her heels crunching in the footsteps she had left yesterday and head for the hills. Rising on her toes, her thin, pale face upturned, she broke a branch from a willow, took it home, and put it in a vase. She roamed farther and farther from the house, all by herself, reaching the pine forests, emerging on the seashore and venturing out onto the ice, faint with fear until she stopped, afraid to move, even to breathe, as she felt the troubled ice rock beneath her.

Turning back, she eyed the empty houses, boarded up for the winter with pensive curiosity. Awed but suddenly merry, she felt as though she were entering the world of the fairy tales with which she still was wont to hide away, reading them insatiably. She did not make friends with anyone at the rest home but greeted people conscientiously in her childish voice, almost dropping a curtsey as at school, always blushing, shy, afraid to look at the person she was greeting.

She came to love her loneliness, freedom and long walks more and more, and was afraid to think of the time she would have to leave. But the more she sought to be alone and the more adult and severe she tried to appear, the more obvious it was that she was a little girl.

Once she met a young skier in a knitted sweater. He brought his long, firm legs to a halt and stood looking hard at her back while she hurried on, keeping her eyes down, trying to appear too absent-minded to notice him, never realizing how frantic her gait had become. The skier came to this spot often from that day. Darting to the top of a hill, he would look around long and hard, but in vain.

There were houses in the woods, each lovelier than its neighbor. The sun was shining, casting blue-green shadows along the fences and beneath the trees. Squirrels leapt through the branches of the pines, and dry yellowing moss hung densely from the stone pillars supporting the fences. The clock on the church tolled solemnly through the night. At rare intervals came the double-voiced blare of an electric train. The house creaked in its joints. Ice rustled in the drainpipes, and the sea resumed its distant murmering. The air was pungent with the smells of granular snow, pine bark and bitter, sticky buds. Twilight grew longer and more luminous every day. The sky grew deeper and colder, and the stars ever bluer and more piercing in the East. The last rays of the sun left feeble yellow tints turning to green and lilac. Etched in black against this background were the trees, the houses with

their transparent verandas, the church, and the cross at the top.

During the night she dreamed she was floating over the hills, hearing quiet music that made her heart ache with fear and delight. When she awoke, she felt so light it made her dizzy, and she earnestly wondered what was coming over her. It was something extraordinary, imponderable. She hardly answered any of the letters she received; she was in love with the deep woods, with the music in them, and with her solitude. She was fascinated by these forgotten places, by their silence, the quiet, sunny meadows, the spreading shrubs, the silver-gray Canadian firs, and the somber stone grottos in the hills.

A fire was made every evening in the old-fashioned parlor. The flaming birch logs crackled on one another in the fireplace as the reddish reflections of the flames danced on the walls. There was a slight catch of smoke in the air, and the big, cold western windows were set shining.

Always waiting for that moment, she would tiptoe down to the parlor, climb into an armchair and stare at the fire with huge shining eyes. Looking around at the windows or listening to the murmur of talk from the dining room, she would approach the walnut grand piano and raise the lid over the keys, which were stiff, cold and darkened by time. She would step on the creaking pedal and strike a chord. It sounded sad and faded quickly. She was trying to recall the music she had heard in her dreams and feverishly sought another chord, her fingers growing numb. It would come to her at any moment now. But no, it wasn't like this, nor anything like it. Carefully she would close the piano and breathe on the lacquer, leaving a misty spot. Then she would climb into the armchair, tucking her feet under her, and would look absently at the fire, listening to the crackling and inhaling the sadly familiar aroma of birch smoke. "What's happening to me?" she wondered. "Why does my heart ache so? And why is that pain so soothing?"

For some time now her attention had been taken with one of the empty houses. It could hardly be seen amid the trees behind the fence, for it stood in the depths of a huge plot of land. Its doors were boarded up, and its windows closed with wooden shutters. The dark tiled roof rose steeply to a sharp crest. The veranda was covered with snow which had thawed only on its upper stairs. A pair of lacquered brown antlers were fastened beneath the attic window, which was not boarded up for some reason and feebly reflected the fading light of sunset and the glass enclosing the veranda. The snow around the house was unblemished, and the plot on which it stood was especially large and clean. The tall, massive fence was broken only at one spot where some planks were missing. Dogs frequently climbed through this opening, leaving deep clear imprints running toward a knotty old pine and fanning out from there into the depths of the grounds.

Antlers House is what the girl came to call it. No longer roaming about at random, she made for the house each time, noticing her footsteps of yesterday with pleasure, reassured that no one else had been there. She would sink to a tree stump, gather her coat around her knees, and sit very still, thinking of this enchanted house, imagining its dark, echoing rooms and its silence by night, when fingers of moonlight stole through the shutters.

The clearing around the house, meanwhile, was flooded with sunlight. The sun was hot enough now to melt the sap on the sunny side of the pines. The willow trunks were dripping over their pools of thawed snow. Those grayish, misty trees seemed to have grown fluffy; their branches appeared to be more flexible and swelling with life.

II.

This happened on a day when the spring air was especially warm and fragrant. It made her feel dizzy and filled her with strange languor. The girl gasped suddenly and stared at the house with her hands over her mouth. She saw the attic window open and a little man peep out!

He crawled out of the window backward, reached for the antlers with his feet and then firmly took hold of one of them. A long thin ladder was shoved through the window after him. The little man set it in place and descended to the veranda. He was soon followed by another little man just like him. "Those are trolls!" she exclaimed to herself. "They must be living in the enchanted house!" Bending forward open-mouthed, she watched the doings of the mysterious tenants of Antlers House with shining eyes.

Their clothes belonged to a different era. Both wore handsomely tasseled nightcaps, short trousers, stockings and long lilac vests. Both were bearded, very dignified, and both were smoking old-fashioned Dutch pipes. Sitting down together on the warmed upper step of the veranda, their legs dangling, they lifted their faces to the sun and sat motionless. Only a greenish puff of smoke would dart now and then from the mouth of one or the other.

When whiffs of it reached the girl, she at once smelled the exciting aroma of the South, the fragrance of the tropics. She took a deep breath, feeling the air tremble and flow around her. She could hear on all sides the whispers of bits of snow falling from the pine branches. Suddenly the trolls got up and strode off across the blueing snow, one behind the other. Reaching the willows, they kept sniffing at them for a long time. They dug up some tiny roots and brought them close to their eyes and noses. Then they wiped their hands and began to play, tossing fluffy willow buds to each other and running about. All this, however, proceeded with solemnity. Never once did they drop their pipes or change their dreamy, pensive expressions. Having played their fill, they wandered back to the veranda, climbed to their window and hauled their ladder in behind them. The window slammed shut and the house seemed uninhabited again.

Hardly able to breathe and dizzy from the sun and the pipe smoke of the trolls, the girl went home, quiet and withdrawn. She was afraid her face might tell people what had happened, that she would be asked all sorts of questions. She was not herself all day, regarding everything wild-eyed, tormented by doubts, wondering if she had actually seen the trolls, and waiting impatiently for nightfall.

When night came, she lay down without undressing and was lost in thought over the trolls. She could not sleep. Her head was hot, and her lips dry and chapped. The church clock chimed, and the rest home was silent. Suddenly she felt that someone was walking about, looking in through the window, touching the keys of the piano in the parlor.

Faint with excitement, fear and a joyous tremor, she got up, looked around and listened, stole out to the veranda and was again poignantly aware of the silence, the sharp blue stars, and the smell of snow.

Afraid to look back, she hurried through the park, reached the street, passed the slumbering houses and the shuttered shops beneath the dim street lights, her heels clicking on the rude flagstones as she made for the sea, the woods and Antlers House.

The street lamps were soon behind her, and the woods grew deep blue and quieter still. The pines and firs seemed to reach the edge of the path, now spotted with moonlight. Deep, sharp shadows lay beside the fences, and the shining snow seemed to be steaming.

Reaching Antlers House, she rose on her toes and peered through the dense, dark trees. Light was coming through the shutters. As though in a dream, she walked along the fence to where several planks were missing, stopped and climbed through the hole. She took several long strides along the whitened path made by the dogs, but then turned straight for the house. The snow was firm and crunched underfoot. It was the sort of noise one hears when a watermelon is cut in half.

She came closer to the house, but stopped. There was a fire inside; transparent smoke wafted from the chimney, and feeble shadows quivered on the snow. She could hear the strains of a flute and several unfamiliar instruments inside. The flute was lonely and tender, evenly accompanied by chords struck from sonorous strings. The melody was old, delicate, and slow. Wasn't this the tune she had heard in her dreams? She recalled those light, flitting dreams, and at once knew she had experienced all this before, that she had floated here from hill to hill, through the pine branches and misty columns of moonlight, hearing the same unearthly music.

Approaching closer, she saw trembling reddish lights and curious misshapen shadows on the ceiling inside. Hands on chest, she peered through a chink in a shutter.

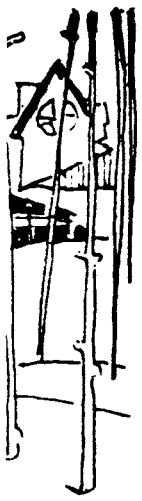
Inside a fire was blazing in the fireplace. A large, crude table stood in the middle of the room, surrounded by equally high and clumsy chairs. On the table were a small cask of wine, several tin mugs and round heads of cheese. Trolls were sitting around the table. There were many of them now, all of them bearded, comically earnest and important. They were drinking, eating, playing cards and smoking. Equally serious were the trolls sitting on logs beside the fireplace. The oldest of them was playing the flute, his brownie cap well down over his eyes and his hands sharply bent at the wrists. The others around him were strumming sadly on instruments that resembled lutes. There was animation only in the faces of the dancers. Their dance was old-fashioned, the motions smooth and well rounded, their bows graceful and reverential. The smoke-filled room was illuminated by rose tapers in copper candlesticks. "What could it all mean?" wondered the girl. "Could the house be enchanted? What if I went in?"

She left the window, ascended the veranda and touched the door. To her surprise it swung back, and the music at once grew clearer, louder, as though the house itself were playing, as though its old girders were singing and its furniture, forgotten by its owners, were dancing.

The girl passed along the veranda enclosed in multicolored glass, felt her way through the corridor inside and timidly opened the door of the room where the trolls were gathered. Whereupon the flames in the fireplace subsided at once, the music broke off, and the dancers came to a standstill with a start. The trolls were eyeing her angrily, ominously. She wanted to say something, to tell them something friendly. She moved her lips but could not produce a sound. Her eyes were shining, however, and her face was flushed with embarrassment, curiosity and joy. Everything showed that she was drawn to the trolls, and they regained their composure at once.

But the secrecy of their lives had been invaded, and they got up, cleared the table of food, gathered their cards, opened a hatch, extinguished the candles and the embers in the fireplace, bowed to their unbidden guest very earnestly, one by one, and vanished through the floor.

Only one troll remained, the oldest, the most important looking, and the ugliest—the one who had been playing the flute. She eyed him questioningly, pleadingly, waiting for him to speak. He said nothing, however. Approaching the open hatch with the last candle in his hand, he too was about to descend. But he paused for an instant and fixed his eyes on hers. There was kindness in his eyes and a promise of something splendid, something most extraordinary. He was telling her something with his eyes, with his wise, aged face, conveying his weighty knowledge of sadness and joy; but she could not understand him, and her heart ached because of this. He put a finger to his lips, nodded to



her significantly, blew out the candle and closed the hatch over himself with a bang.

With some difficulty she made her way to the veranda through the dark and sat down on one of the steps. Her cheeks were burning, and her heart was racing. "Why didn't he tell me anything?" she wondered. "Ah yes! They can't talk to us. . . . But he did want to talk to me. That was plain. How wonderful all this has been!"

Suddenly she felt she was not alone. Turning, she saw the old troll again. Like before, he was regarding her with pensive kindliness. In the moonlight his features seemed even more expressive and mysterious, even wiser and more dignified. But he was so small and frail that she would have liked to stroke his beard or at least touch his brownie cap. He nodded to her silently, hopped down from step to step, looked back, and beckoned her to follow. She obediently arose, and he led her to the window shutter through which she had first seen the gathering of trolls. He pointed to it significantly. Quivering with anticipation, she looked through a crack in the shutter and cried out in surprise.

Instead of the room there was a sunny day. She could see the hills overgrown with pines, and the familiar skier gliding silently from hillock to hillock. She could plainly see his ruddy, determined face, his strong, lean figure, how he leapt forward on his skis, shoving himself furiously ahead with his ski sticks.

Having looked her fill, she turned to the troll, but he had gone. She was alone in the moonlight. The diamond stars had opened their shining lashes, and hoods of snow kept sinking from the firs, frail and lightly powdered under the moon.

III.

It was late when she woke up the next morning. The sunshine was pouring in through the window, tracing the square of it in fire on the floor. Again she was thrilled by the new day and the voice of the announcer: "*Runa Riga!*" She was delighted with the frosty air from her window, the fragrance of coffee and the warmth of the house. All morning she kept singing and dancing (when no one was looking) in imitation of the trolls, finally falling face down on her pillow in a fit of uncontrollable laughter.

Too impatient to wait until evening, she went to Antlers House in the afternoon but was afraid to look or even to turn her face toward it. She was afraid the trolls would be angry if they found her here again. But she could not help going there. Timidly she brushed the thawing hoarfrost from the tree stump with her red mitten, sat down, took several deep breaths with her mouth open, and mustered the courage to look up at the house.

It was uninhabited now. Its shutters were firm and forbidding. The antlers shone dimly beneath the attic window, which was closed. There were no trolls! Whereupon she looked around to find the footsteps she must have left in the night. Her heart sank when she saw none. She was bitterly disappointed. Hadn't she even been here?

She sprang up and ran toward the fence, climbed through the hole without fear of discovery, and looked carefully around, even touching the dazzling virgin snow. But there were no traces—only the frozen tracks the dogs had made to the pine. She went up to the house, walked around, touched the door, recognized the window pointed out by the troll, and looked for the chink in the shutter. But the shutter was as firmly shut as the door. There were no traces anywhere. There had been no trolls, no music, no candles and flaming fireplace. For the first time she was filled with loneliness and pain. She wept, wiping her tears on her mittens.

Through the pines just then she caught sight of the skier skimming swiftly down a hill in an aura of shining snow dust, climbing the next and darting down again to rise on a third, and so on along the sea, reappearing and vanishing in a snowy mist.

She recognized him at once and hid behind a corner of the house to watch him. She didn't trust her eyes now and tearfully went out to look for the skier's tracks when he had vanished in the woods.

Mounting the hill and getting her boots full of snow, she saw the deep fuzzy tracks, the round indentations left by the ski sticks and suddenly recognized the scene the troll had shown her: the splendid day in March, the bluish firs, the dark green pines, and the sea entirely free of ice. Joy surged through her, for she believed in wonders again, in dreams and fairy tales. Smiling, she raised her rosy, now pretty, face, threw back her head, closed her moist eyes and shouted, "Oh-ho-ho!" Delighted, she listened to the firm ringing echoes.

That exultant cry prompted the skier to check his flight with his sticks. Turning for an instant, he swung his skis sharply around and flew back along his tracks, scattering the snow.

She stood waiting with racing heart behind a pine, listening for the answer. She was excited, her coat unbuttoned. Her red cap was almost like that of the trolls, her bare thin neck was straining forward, and her large dark eyes were beaming.

What answer was she anticipating from the pines, the sea, and the spring? Why did she dream of music and of floating amid the pines? Why had the troll's message seemed so important to her? Why was her face so expectant, her smile so eager when she awoke every morning, passionately and confidently waiting for something?

Who was destined to find her and guess what she was waiting for?

COUNTDOWN AT BAIKONUR

The first seven-year sp ***period is over. It started*** ***October 4, 1957, when the*** ***artificial earth satellite*** ***launched, and ended when*** ***11,728-pound three-seater sp*** ***ship Voskhod was put into*** ***on October 12, 1964.***

Its culmination means the ***ginning of a new stage.*** ***wants to travel beyond*** ***earth's near space to reach c*** ***worlds and planets. This ass*** ***is being prepared in the Sc*** ***Union by regular launching*** ***Baikonur, the Soviet cosmodrc***

The exploration of outer s ***is the most stirring episode in*** ***history of mankind. Space*** ***grams reflect the level of a c*** ***try's technical maturity, the l*** ***of its scientific, designing and*** ***gineering capability.***

This soaring obelisk in M
symbolizes the explorat
space. It is the work of Mi
Barsch and Alexander Kolchin.
sculptured figure i
foreground, by Andrei Fa
is that of Konstantin Tsiolko
who developed the theory
propulsion, designed the
rockets and long ago for
interplanetary f

Пользуясь предоставленной мне журналом „Совьет лайф" возможностью, передаю привет от всех советских космонавтов читателям журнала и нашим космическим коллегам в США.

Пусть развивается советско-американское сотрудничество в покорении космоса.

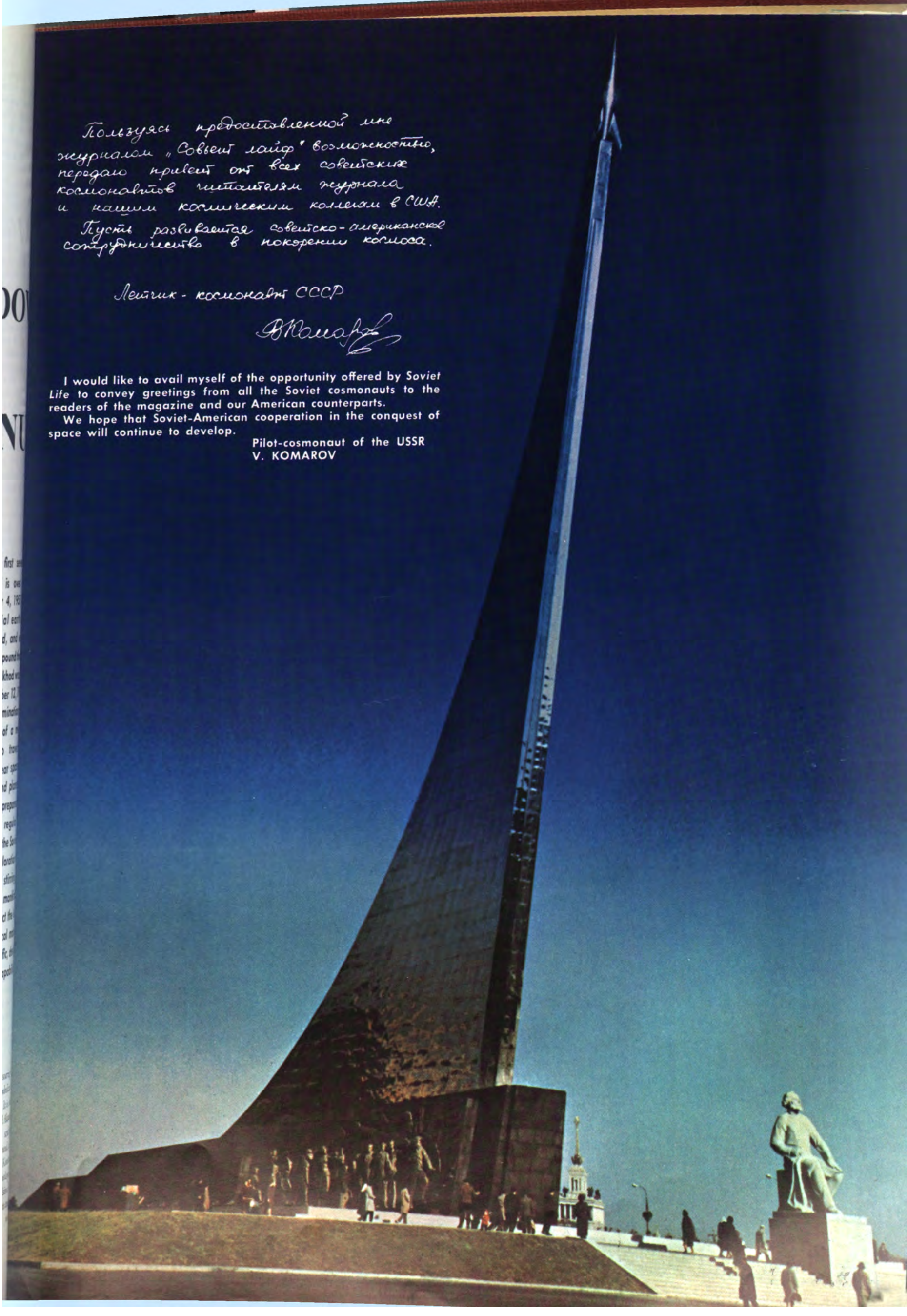
Летчик-космонавт СССР

В. Комаров

I would like to avail myself of the opportunity offered by Soviet *Life* to convey greetings from all the Soviet cosmonauts to the readers of the magazine and our American counterparts.

We hope that Soviet-American cooperation in the conquest of space will continue to develop.

Pilot-cosmonaut of the USSR
V. KOMAROV



ting: Dr. Boris Yegorov, Konstantin Feoktistov, Valentina Nikolayeva-Tereshkova, Col. Vladimir Komarov.



Photograph by Alexander Mokletsov



THREE STAGES OF SPACE CONQUEST

BY ACADEMICIAN ANATOLI BLAGONRAVOV

OUR KNOWLEDGE of the upper atmosphere, of near space, how infinitely meager it was only a few years ago, when we launched the world's first man-made earth satellite! I remember that nitrogen-filled aluminum-alloy ball with four long antennae. It carried only accumulators, radio equipment and a tiny fan to circulate its nitric atmosphere. Could such a sputnik do much? Yes, very much, for it was the first of its kind.

It revolutionized our conception of the density of the upper atmosphere, determined by the speed with which the sputnik was slowed down. It made possible the development of tracking methods for sputniks and spacecraft in near space. Most important, it demonstrated the feasibility of maintaining continuous and safe contact with a body moving in space. Previously, the ionosphere was thought to be layered and impenetrable by practically the entire range of radio waves. Only after the flight of *Sputnik I* did we know for certain that contact with space was possible, that cosmonauts would not be isolated from their home planet.

A no less significant problem was solved by *Sputnik II*. It carried the dog Laika, whose behavior in flight was to supply the answer to the question as to whether there were unknown factors that ruled out the possibility of a living being existing in space. At the cost of her life, Laika gave the answer. Manned space flight was possible.

The task of the third Soviet sputnik was to explore many parameters of near space in detail. The instruments of this veritable automatic flying laboratory reported the atmospheric pressure; the concentration of positive ions in the atmosphere; the intensity of the sun's corpuscular radiation; the composition of primary cosmic radiation; the distribution of protons and heavy nuclei in cosmic rays; the micrometeorites; the electrostatic and magnetic fields of the earth; the sputnik's surface, internal temperature and electrostatic charge.

The data obtained from the sputnik, added to the information from other launchings, were used in preparing the flight of the three-seat ship. Our third sputnik investigated the problem of micrometeorites. We knew very little then about the danger they might present. But the heroes of that flight entered their cabin without space suits.

After the sputnik launchings spaceships were sent up to reconnoiter the upper layers of the atmosphere.

A spaceship differs in principle from a sputnik, although it often takes the same elliptical trajectories. A spaceship is designed to carry a man, not merely instruments. The ship must have a hermetic cabin equipped for man's vital activities, with the proper temperature, chemical composition, humidity, air pressure, etc. It must have devices for controlling the spaceship and ensuring its safe return to earth.

The first spaceship, which weighed close to five tons, was orbited on May 15, 1960. Its cabin went into space with a load that simulated a man's weight. It carried everything necessary for his vital functioning, but it did not carry a man. The devices required to land the spaceship had not yet been fully developed, so that it eventually burned up in the upper atmosphere.

The next ship, with Belka and Strelka aboard, returned safely. But three more ships trailed their fiery paths across the sky before man's turn came. This was on April 12, 1961.

The later flights into space are, I think, recent enough for everybody to remember. Not one of them was a repetition of a previous flight, but exceeded those before it in duration or some other way. The flight of three men in space had its qualitatively new aspects too. This flight was notable, among other reasons, because it solved the problem of a soft landing on return to earth.

This flight of a group of scientists was a magnificent achievement. But it was only a stop on the road. Modern astronautics is developing in three directions:

The first is the study of the earth's upper atmosphere and the portion of space adjoining our planet, which Konstantin E. Tsiolkovsky called free.

The second is the study and exploration of the heavenly body closest to us, the moon.

The third is the study of solar space, including the nearest planets, Mars and Venus.

Soviet scientists are working in all three directions.

The first to be launched, always, are the automatic scouts, followed by men.

The earliest man-made satellites marked the start of work in the first direction, the investigation of near space. And, of course, only the start. These researches are being continued by such sputniks as the *Cosmos* series, of which 51 (59 as of March 7. Ed.) have already been launched.

As a result, we have made considerable headway. Together with these automatic devices, scientists themselves have traveled into near space. There will be many more such flights. The final stage in the solution of the first problem—exploration of near space—will probably be to set up a permanent manned space observatory-town, with bilateral contact maintained through rockets. Of course, long before this, reliable systems of meterological sputniks, worldwide television sputniks, navigation sputniks, etc., will have been established.

The flight of the world's first three-seat spacecraft was an essential step toward a flying space observatory-town. Several interesting moves have been taken in the second direction. A space rocket was launched in the direction of the moon on January 2, 1959. This was the first reconnaissance of the trajectory between the earth and its eternal satellite. Next, our rocket reached the surface of the moon itself on September 14, 1959. For the first time the trail of a rocket ship linked up two worlds. Then a unique photograph of the dark side of the moon was taken.

Here too, automatic scouts are the trail blazers, but, it seems to me, they have not yet completed all their tasks. The automatic devices have not yet explored the moon's surface in detail, have not yet determined the conditions prevailing there. Presumably, they will be followed by animals. Only after the safe return of the ship to earth has been assured will man go to the moon.

Manned landing will be preceded by numerous earth-moon flights. In the course of these flights the conditions along the entire route will be studied, detailed maps of the lunar surface made, and lunar space investigated. Need I add that all these flights will be made by teams of scientists only?

The first stage in the exploration of the moon will be to set up a permanent research station on its surface. This, of course, will be the very first stage; a comprehensive study of our nocturnal satellite will take decades and even centuries. We are dealing with a completely new world.

In the third direction—the exploration of near solar space and near planets—only the first steps have been taken, the first flights of automatic scouts. In May 1961, a Soviet automatic station passed near Venus. In December 1962, the American automatic station Mariner flew over the same route. A Soviet automatic station passed near Mars also, with radio contact maintained for more than 100 million kilometers (62 million miles). Late in 1964 another two rockets, Soviet and American, were shot to Mars.

I should make clear that a manned flight to the planets is immeasurably more difficult than a flight to the moon. The interplanetary routes will be explored again and again by automatic stations that will bring back much needed information on space and the nature of the planets to which they are sent. Only then will the first interplanetary expeditions take off. They will carry even larger teams than the lunar reconnaissance expeditions.

Courtesy of the weekly Ekonomicheskaya Gazeta

PLASMA MOTORS

BY ACADEMICIAN MIKHAIL D. MILLIONSHCHIKOV

VICE PRESIDENT OF THE USSR ACADEMY OF SCIENCES

ZOND-2, the Soviet automatic station, has started a new chapter in the chronicles of outer space conquest. For the first time plasma motors have been successfully put through their paces aboard a spacecraft.

At a great distance from earth the orientation system was switched over to plasma motors at a command from the control panel, and the motors began operating in compliance with signals received from the space attitude control system. The six motors have now been maintaining the station in a required position relative to the sun for a long period. The efficiency of the plasma motor in outer space has thus been proved in practice.

Plasma is a gaseous mixture of negatively charged particles (electrons), positively charged particles (ions—*i.e.*, atoms deprived of one or more electrons) and neutral atoms. Plasma may be "cold" or "hot" with temperatures of from thousands to hundreds of millions of degrees. Hot plasma no longer has neutral atoms. Though plasma contains charged particles, it is electrically neutral on the whole (has an equal number of positively and negatively charged particles).

The presence of free electrons in plasma makes it a good conductor of electricity. This property can be used for building electromagnetic plasma motors.

If plasma is placed in a magnetic field and current is fed through it, it will be accelerated. The ejection of plasma accelerated to a great speed will produce a jet thrust. This is one of the possible types of plasma motors.

High-temperature plasma is used in other projects. Powerful electric arcs yield much higher temperatures than any chemical reaction. If the

"working gas" is heated up in the flame of such an arc and ejected through the nozzle of a space motor, a substantially greater speed of outflow is achieved than with rockets operating on a chemical fuel. The high ejection speed of the working substance is a major advantage of electric motors.

Unfortunately, the energy of chemical reactions makes it possible to accelerate the working substance to no more than four kilometers (2.5 miles) a second. But for plasma motors the limit is much higher. Electromagnetic plasma motors, for example, can eject fuel at more than 100 kilometers (62 miles) a second. True, such engines are unable to overcome the force of gravity and tear the rocket away from the earth, but their use in "open" space is definitely promising.

These motors can be power-supplied in outer space directly from solar batteries or from some special source. The thrust of the plasma motor can be very easily controlled over a broad range by changing the parameters of its power supply. The operation time of such motors is very long.

On the Zond-2 automatic station, plasma motors are used in the attitude control system that is so vital to any modern spacecraft. All along the multimillion-kilometer-way to the far-off planets, the attitude control system has to maintain the preset position of the craft in space or change it if need be. This system keeps the transistor panels of the solar batteries at right angles to the sun's rays so that maximum solar energy is absorbed. The space attitude control system directs the station's antenna toward the earth during radio communication.

Suppose the automatic station deviated from the course. In that case the attitude control system would turn the craft toward its destination in order to actuate the correction engines.

As you can see, the range of the plasma motor's functions in the attitude control system alone is quite extensive. But this by no means exhausts its potentialities. The plasma motor can be used for transferring sputniks from one orbit to another and for executing various maneuvers during the assembly of near-earth space stations. They can also serve as "step engines" for the multistage rockets that will probably power the interplanetary cargo liners of the future.

Courtesy of Izvestia

SPACEMAN'S MENU

INTERVIEW WITH OLGA MOLCHANOVA

CORRESPONDING MEMBER, USSR ACADEMY OF MEDICAL SCIENCES

Question: How does a "space" diet compare with an ordinary one? Do cosmic rations include any tonics?

Answer: Space flight conditions make for certain peculiarities in a spaceman's diet. His food must be nourishing, easily digested and lasting. It must be light and compact, yet contain everything the body needs.

It is the mental and nervous strain rather than physical exertion, however, that largely determines a spaceman's rations.

His diet provides 3,500 calories a day: 500 more than are required for mental work and 500 less than a miner working in a mechanized pit needs.

No pharmacological preparations such as tonics, analgesics or others were added. Thanks to our spacemen's excellent training, there was not the slightest need for such supplementation.

Question: What changes were made in the diet with each successive flight?

Answer: Before Gagarin's flight, no one knew how food could be taken in the state of weightlessness—whether it could be chewed and swallowed, and whether it would pass through the alimentary canal. The food consisted of paste and juices packed in vacuum tubes.

The first Soviet space flights showed that all these processes proceed quite normally. That is why the menu of Andrian Nikolayev and Pavel Popovich included beef cutlets, roast veal, chicken fillet, and pies and sandwiches with different kinds of fillings, besides food in tubes. They had fruit, pastry and candy with their meals. To make eating easier, the portions were small: thin slices, small sections, buns or pies served in polythene vacuum packs, all of which made biting unnecessary. All they had to do was pop it into the mouth and chew.

The first flights disclosed that the sense of taste undergoes certain changes in space, and this was subsequently taken into account.

Question: Is any work being done on a diet for spacemen heading for other planets?

Answer: At present it is the earth's environment we are duplicating while acquiring the know-how necessary for distant interplanetary flight. Up to now all the food has been taken ready-made from earth, the individual daily rations amounting roughly to four and a half pounds, including a quart of water, besides iron rations.

Longer flights mean more provisions so that a spaceship may to all intents become a storehouse. As for more distant flights, it may be advisable to try and set up a closed ecologic system, *i.e.*, duplicate our earth cycle.

Scientists have evolved a method of purifying water to make it fit for repeated use. We can do the same for edible substances.

A good deal of work is being done on chlorella. This fertile seaweed, which freshens stale air—*i.e.*, restores its oxygen content—can be fed to such fast-maturing animals as chickens or rabbits to provide sufficient fresh meat. Chlorella itself can form part of the cosmonaut's diet.

Scientists believe that fast-ripening vegetables like radishes, cucumbers, turnips and lettuce should also be used. They can be grown by the hydroponic method with artificial light.

However, there are great obstacles to overcome before we have an efficient closed system worked out.

Courtesy of the newspaper Sovetskaya Rossiya

ABOUT THE VOSKHOD

BY YURI MARININ

NOVOSTI PRESS AGENCY SCIENCE COMMENTATOR

1. *Why is the flight of the* Voskhod *considered a new stage in space development?*

The shift from one-seat to multiseat ships is truly a qualitative leap. Orbital stations, assembly in orbit, flights around the moon, moon-landing interplanetary flights—all require multiseat ships manned by crews like that of the *Voskhod*. A one-man crew combining the functions of a pilot, engineer, researcher, radio operator and doctor was sufficient only at the dawn of the space era, when ships were too small to hold several persons and flight conditions too complicated to permit anyone aboard other than a cosmonaut.

2. *Why a three-man crew?*

This is a minimal group crew. With three men on board it is possible to arrange the work in shifts, divide responsibilities, and permit mutual assistance and mutual control. Three is the minimum but by far not the maximum. There is no doubt whatsoever that within our generation there will be much larger crews. However, research on the basic problems related to cosmonauts' flight conditions can be handled by three men.

3. *Why were specialists on motion dynamics, astronavigation and a doctor selected?*

They were the natural choices. Flight dynamics and astronavigation are the cardinal problems of space technology. Progress in astronautics hinges on their solution. Some of the problems are more difficult, others are impossible, to solve without leaving the earth's surface.

The system of telemetric measurements worked out by medical researchers made it possible to keep a check on the functioning of the heart, the respiratory organs and the nervous systems of the cosmonauts. But it did not fully satisfy the medical scientists. They thought a more thorough examination at various flight stages was necessary. That could best be done by including a doctor in the crew.

4. *Why no space suits?*

The systems that ensure normal living conditions in the *Voskhod* have been so perfected and are so reliable that there is no need for a space suit. Thus the area of movement is enlarged and the work capacity of the cosmonauts increased, making the flight more pleasant. Obviously, suits are mandatory for certain operations in outer space—leaving a ship in orbit, for example, or landing on the moon. However, the rest of the time the cosmonauts will be in light suits that do not restrict movement. The reason for space suits is not only to ensure the vital activities of the cosmonaut but to protect him from overload when his ship orbits and returns to earth. Hence, to get along without space suits, systems had to be created to adjust the crew to the overload and to brake the ship for a gradual, soft landing. The creation of such a system has made it possible to dispense with space suits, which indicates the great progress achieved in making Soviet ships comfortable.

5. *Why a higher orbit?*

The higher the initial orbit, the longer the sputnik can stay aloft. A multiseat spaceship doing complex scientific research should be in orbit many days, otherwise there is no point in sending it up. Of course, the first such experimental ship was not scheduled for a prolonged flight. The *Voskhod* cosmonauts felt that they could have stayed in orbit longer, but the flight program was planned for a one-day orbit. As time goes on we shall be seeing more protracted flights of multiseat spaceships. More powerful booster rockets are required to place a spaceship in a higher orbit. Thus the fact that the *Voskhod* had a higher orbit than the *Vostock* spaceships indicates that a more powerful booster was used.



Memorial to Sasuntzi Davith (David of Sasun), hero of the Armenian folk epic said to date from the seventh to the tenth centuries (sculpture by Y. Kochar 1960). The epic, a paean to man's labor and love of peace, tells of the Armenian people's courageous defense of their country against foreign invaders. The epic was first written down in 1873. Between that time and 1954, 50 versions were found. It has been translated into Russian, Ukrainian, Georgian and other languages of the Soviet people, and portions into German, English and French.

YEREVAN— AS OLD AS ROME

BY NIKOLAI TARASOV
DRAWINGS BY RACH SACHLYAN

YEREVAN is a three-and-a-half hour plane ride from Moscow. From my comfortable seat in an IL-18 airliner I leafed through a tourist guide for information on the city's geography, history and industry.

I knew Yerevan was old, but I was surprised at how old it actually is. Until quite recently historians dated it to 607 A.D., the year the old Armenian Chronicles first mention the city. But in recent excavations near the ancient fortress of Yervuni, from which Yerevan derives its name, archeologists unearthed stone slabs with cuneiform inscriptions that prove the city was founded by King Arguishti I of Urartu in 783 B.C. That makes Yerevan 2,748 years old—as old as Rome.

What was the city like in the Middle Ages? The caravan routes that passed through it led from the towns on the Black Sea to Iran and India. But all the monuments to its ancient glory were destroyed by the many successive invaders and conquerors.



Modern Yerevan is one of the larger industrial and cultural centers of the Soviet Union. The Armenian capital has chemical, machine-tool and building material plants; light industry and food processing factories; the Armenian Academy of Sciences and research institutes; a university, polytechnic, medical, agricultural and other professional schools; and museums, theaters and stadiums. Its population, about 600,000, is 20 times greater than it was 40 years ago.

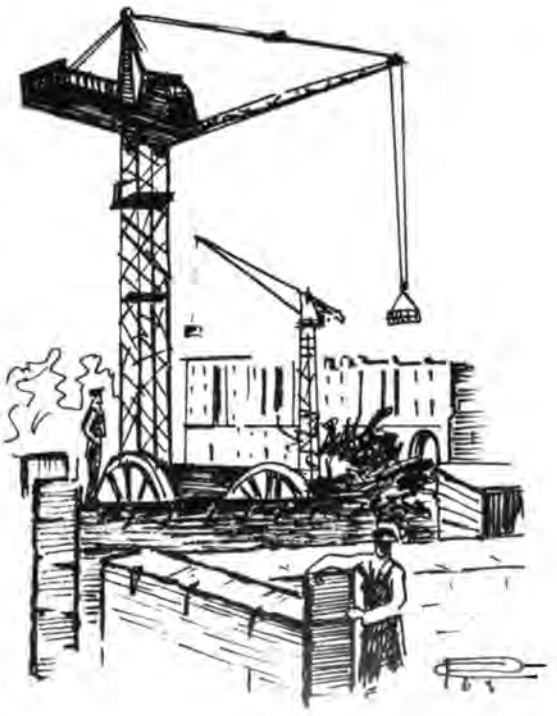
The guide book gave me several dozen pages of such informed detail before the familiar *No Smoking* and *Please Fasten Your Seat Belts* signs flashed above the pilot's cabin door and the plane touched down at the airport runway.

I spent a week in Yerevan. Hrachya Bunetyan, vice president of the republic's Academy of Sciences, showed me his collection of paintings by modern Armenian artists. Composer Edgar Hovanesyan, director of the Yerevan Opera and Ballet Theater, talked cybernetics and color music.

At the film studio I met lovely Maya Aiartyan, who is doing a new film. After acting hours she does research at the Matenadaran Library, a repository of ancient manuscripts, which contains, among other treasures, the first book printed in Armenian. Pianist Yakov Zargaryan played his rendition of Gershwin's *Rhapsody in Blue* and then took me through the city's new housing projects. He spoke of each house as though it were his own creation. I learned from him that 6,000 families move into new apartments yearly and that more houses have been built in the city in the past four years than in the preceding 50.

I keep visualizing Yerevan as a slender, broad-shouldered giant pushing the surrounding mountains aside so he can stand up full height under the blue skies.

My companion, Moscow artist Rach Sachlyan, did many sketches on the trip. Some of them are reproduced here.







RUSSIA REVISITED

BY EUGENE LIST

This article is re published by courtesy of the American magazine **Music Journal.**

AFTER the exciting events of my first concert tour of the Soviet Union, I am still in a happy haze of recollection and often reflect on the vividly kaleidoscopic and swirling memories. As the poet Shelley so fittingly wrote, "Music, when soft voices die, vibrates in the memory." And so, in my heart, my recent tour in the USSR will always *vibrate* movingly in *my* memory. A never-to-be-forgotten experience.

Although my previous visit to Russia in 1962, as a member of the Piano Jury at the International Tchaikovsky Competition, had given me some inkling of the warmth of the Russian public, I was still inadequately prepared for the enthusiastic welcome which my concerts evoked. I was deeply touched. Artists are treated like kings, and I was royally "spoiled" everywhere. In short, I had the time of my life! One doesn't often find this sort of reception in other countries. I had the feeling that music is an integral part of the life of the Russian people, and that it is not only broad, but deep. People really *care*, and that is a rare phenomenon today in the world of jet planes and computers.

My tour began in Moscow with two recitals: one in the beautiful Con servatory Hall, which I remembered so well from the Tchaikovsk Concours, and the other in the Tchaikovsky Hall. A pianist is reall on his mettle in the Soviet Union, what with its old and distinguishe tradition and its glittering array of magnificent artists through the years Not only was I pleased with the artistic reception accorded me, but I wa decidedly impressed by the quality of the listening on the part of th concertgoers. By this I mean that there was a concentrated silence i the hall during the softest of pianissimos (always a sure sign of a attentive public, and a mark of deference dear to the hearts of all per formers). There was no fidgeting in the seats, no rustling of programs And toward the end of the program, and for the encores, there was tha characteristic rhythmical applause, that clapping in unison, which we don't have in the United States and which is rather exciting. Also, mos enjoyable is the lovely custom of presenting flowers to the artist ove the footlights. This we also have in America, of course, but only fo ladies. Therefore, it is especially nice for us to be honored in this way as well.

In Leningrad, which was the next stop on my itinerary, I found myse in a most extraordinary pianistic "sandwich." In the brief space of fou consecutive days, there were piano recitals by Rikhter and Gilels (i addition to an orchestra appearance by Gilels), and my own two recitals A real pianistic "traffic jam." And the halls were crowded each time and there were standees. As I wrote to friends in America, "It's a ter rible shame that there is nothing going on here, pianistically speaking at the moment!!"

In Leningrad, the happy coincidence of the three elements which ad immeasurably to any concert were all present in the highest degree and these concerts stand out particularly in my mind. The three ele ments I refer to are—the public, the hall and the piano. The Philhar monic Hall in Leningrad is very pleasing esthetically, and the acoustic are exceptional. Also, as I wrote to Mr. Henry Steinway, the Presiden of the Steinway Piano Company in New York, the concert grand Stein way in this hall is one of the greatest instruments it has ever been m privilege to play anywhere in the world. The Leningrad concert publ is certainly discerning, and definitely among the cognoscenti.

Additional pleasures in Leningrad included a delightful lunch wit Gilels at the Evropa Hotel. Here we reminisced about our first meetin in New York in 1955, after his brilliantly successful debut there, an also about the interesting activities in Moscow during the Tchaikovsk Competition in 1962. I also had the good fortune to see another co league from the Tchaikovsky Competition, Mr. Serebriakov, the he of the Leningrad Conservatory. He received me with the most gracio hospitality, took me on a tour of the Conservatory, and played for m on tape recordings, some interesting contemporary Soviet compositio

In Kiev, my next port of call, several unusual things took place. Fir of all, I saw yet another colleague from the Moscow Competition 1962, Prof. Lyatoshinsky, the composer. It was a splendid reunio I found to my utter astonishment that in Kiev, Russia's third largest cit I was performing the Shostakovitch First Piano Concerto for the ver first time in that city. Since I had given the American première of thi work with Stokowski in Philadelphia in 1934, it struck me as rathe novel. It also happened that this performance of the Shostakovitch i Kiev marked a very special milestone for me personally. It was m 200th performance of this concerto over a span of 30 years. I hav played it in Europe (Vienna, London, Oslo, Berlin, Paris, Cologn Frankfurt, etc.), in South America (Lima and Bogota), all over th United States and Canada (including Juneau, Alaska, and a special per formance in Louisville, Kentucky, with Robert Whitney conducting. which Shostakovich himself was present), and with my own touring Chamber Orchestra during three nationwide tours of the U.S. and Can ada. In fact, I now claim the "unofficial world's record" for this Pian Concerto in total number of performances! It has always been my "go luck" concerto, because it was the springboard to success for me fro the very beginning of my career. And I recently recorded it, for Wes minster Records, along with the Second Piano Concerto by Shostako vitch. Because of the many vibrant memories this work holds for me I sent a telegram to Mr. Shostakovitch, in care of the Composers Union in Moscow, telling him that it seemed especially fitting to be playing his Concerto at my orchestral debut in the Soviet Union, for the 200t time. Shostakovitch responded with a warm telegram of good wishes I was moved by this manifestation of welcome, and have framed the telegram along with his autographed picture, which I already had, and have hung it, with pride, on the wall of my studio.

Another thing which interested me particularly about Kiev is that it is the birthplace of Vladimir Horowitz. Horowitz is a legendary figure Many years ago, I had the privilege of studying with him for one summer. It was a great experience. As a matter of fact, one of the things I studied with him that summer (1941) was the Tchaikovsky Piano Concerto. Thus, it seemed eminently fitting that this was one of the concertos I played in his home town. The others were the Liszt in Flat Concerto and the aforementioned Shostakovitch. I wrote Mr. Horo witz a letter from Kiev and enclosed a picture post card of the main thoroughfare, with the familiar buildings on either side.

Aside from the purely musical aspects of my visit to Kiev (and als

pleasures of sightseeing in this attractive city), I was pleased that as able to see a distant cousin of my mother's. Part of my mother's nily came originally from Kiev, and various members of this branch the family came to my concerts. I also visited them in their new artment in one of the new housing developments in the suburbs.

I was impressed with the orchestra in Kiev. The musicians played th enthusiasm and with true musical feeling. The new chief conductor, ung Stepan Turchak, displayed youthful fire and excitement, and ould go far in his chosen field. He is only 26 years old.

An amusing incident occurred after my orchestral concert in Kiev. lecided to go immediately to the restaurant in the hotel without thering to change clothes. When the doorman at the entrance saw : in my full dress suit, he objected to my entering the restaurant on : grounds that I was not "properly or decently dressed." He thought vas just being capricious or frivolous in being so "overdressed" in ls. white tie, etc., just to eat. When the maître d'hôtel heard about he just chuckled and ushered me immediately to a nearby table. I plained to him that although I was indeed wearing full dress clothes, ey were actually, for me, my "working clothes." Thus ended this odd le adventure.

Next stop: Tbilisi. And the Georgians more than lived up to their famous reputations as warmhearted hosts. What hospitality! Seldom ve I been assaulted so pleasantly on all sides with such fabulous food, arvelous wines, and openhanded warmth and hospitality. In fact, I ink I barely escaped in time from this sustained gastronomic assault th my digestive system still intact! Here too I met friends from the oscow Competition of 1962. In fact, I went directly from the airport the concert hall because Elisso Virsaladye, the young laureate of the 2 Concours, was playing that very evening, and I didn't want to miss r recital. And poetic, beautiful playing it was!

On my arrival, because two concerts were sold out, I was asked to ay an additional recital. This I was delighted to do. The weather was seasonably cold, and the audience had to sit in overcoats during the ncerts, but the warmth of the reception in contrast to the cold air in- le the hall was magnificent. On stage, the bright floodlights and the aying itself kept me warm. And what with the people milling around tside the entrance, etc., it made me feel, practically, like a movie star!

My first rehearsal with Zachary Churodze, the conductor of the chestra, had its entertaining moments. He speaks, of course, perfect ssian and Georgian. I speak English, some German and some French. e finally got together somehow through the international body lan- uage of active gesticulation, and were able to communicate also through e language of Italian musical terms. After all, "presto" is "presto," r musicians, in any language. The orchestra in Tbilisi is excellent. ne musicians were most cooperative, and Mr. Churodze did a beautiful b.

And so, on to Baku, the last stop on my tour. Here the landscape began to take on a rather exotic aspect. It reminded me very much even Southern California where I lived as a child. It seemed terribly mantic to me, somehow, to be suddenly on the shores of the Caspian a, which I remembered from my geography books at school as pearing very remote.

In Baku, I had the interesting experience of playing with Russia's st gifted woman conductor, Veronica Dudarova. Mme. Dudarova is e fourth woman conductor with whom I have appeared. The first was American lady, the second a Canadian, the third a Rumanian (last ar in Cluj), and Mme. Dudarova, who conducted wonderfully for me the Schumann and Shostakovitch Concertos. After playing three ncertos in one evening in both Kiev and Tbilisi, I almost felt as ough I had an evening off playing just two concertos at one concert, Baku. The orchestra supported me splendidly in the concertos, and ayed in lively fashion throughout.

And so back to Moscow after an incredibly rich and soul-satisfying perience on this trip through the vast and varied reaches of this huge untry. From this visit I have memories and souvenirs which will last lifetime.

After a final appearance on Moscow Television, I was able to relax a bit in the capital, and enjoy the festivities of the May Day Holidays. he last three evenings in Moscow were spent at the Bolshoi, at the braztsov Puppet Theater and listening to the Moscow Chamber Orches- a under Barshai. What a climax to my sojourn!

The day before I left the Soviet Union, I was taken to Zagorsk. The hurches, and all the auxiliary buildings there, are strikingly beautiful. ervices were going on, and there were many visitors. I remember the cons as being completely dazzling, row upon row of them, from floor ceiling. It was a moving experience to visit this old Russian shrine.

It was with a real misting of the eyes that I took off from the Moscow Airport the next day en route to Berlin. It was exactly a month and a lay after my arrival. Looking back, I wish to express my deepest thanks o all the wonderful people who made this tour possible. To Steinway, o my friends at *Gosconcert*, to the Philharmonic Societies in all the ities, to the orchestra musicians and conductors, and to that great armhearted body, the marvelous Russian public, my profound grati- ude and appreciation. Until we meet again, a flame of friendship will urn in my heart. *Dosvedanya!*

LETTERS TO THE EDITOR

On this, the twentieth anniversary of victory over Nazi Germany by the Allied Powers, we publish a few letters from Soviet citizens in which they express their concern about punishment of those Nazis who started the war, who participated in the killing of millions of innocent people. The letters appeared in the Soviet press or were sent to *Soviet Life* magazine. One of the letters (from Professor Andrei Piontkovsky) was addressed to *Time* magazine.

JUSTICE MUST BE DONE

If Hitler were alive today, he would be perfectly free to walk any street of West Germany after May 8 of this year. Inconceivable? Blasphemous? Monstrous? But this is the meaning of the amnesty the FRG is going to grant to the nazi criminals, the amnesty which thousands of the mad fuehrer's henchmen, escaping punishment to this day, will gladly avail themselves of.

I read in the press that Mr. U Thant, UN Secretary General, publicly condemned that decision as going against the United Nations resolution ond international law. Austria, a small country, has adopted a law denying any amnesty to the nazi monsters. The German Democratic Republic adopted such a law long ago. Can it be that the Great Powers, which fought shoulder to shoulder against the nazi aggressors, will permit the war criminals, guilty of the destruction of millions of innocent lives, to go unpunished?

Miron Sverdlov
Moscow pensioner

My heart was heavy when I brought myself to take pen in hand. Wrath and sorrow made it difficult for me to express my thoughts and feelings clearly. Isn't it a disgrace that many of the former fascist pogromists and murderers are walking the earth freely to this day, escaping a just punishment?

The village of Ivot, where I was born and grew up, was razed to the ground by the Nazis; the villagers (those who remained alive) were turned into cripples or orphans.

The memory of March 10, 1943, hounts me still. A punitive detachment arrived in Ivot on that tragic day and the Hitlerites arranged a wholesale massacre of the defenseless women, children and old folks. More than 300 people were shot down, hanged or burned alive.

How can one forgive the fascists for such outrages?

Pavel Pishchik
Konotop, Ukraine

When Soviet troops liberated Ozarichi in March 1944, there were 15,960 children under the age of 13 still alive in the nazi death camp there: the Hitlerites had not had enough time to destroy them all. I was one of those saved.

I became an orphan at nine. All those near and dear to me were killed by the nazi monsters and I myself was put into the Ozarichi camp, which was a real hell. People were cruelly beaten up and starved there; dogs were set on them. The Nazis invented newer and more exciting ways of killing prisoners. Once they brought bread into the camp and laid mines under it. The hungry prisoners rushed toward the food and perished on the mines.

The Nazis were destroying whole nations coolly and in a planned manner. They killed six million Jews in Europe. Byelorussia was the first victim of their attack on the Soviet Union. In the implementation of the "Ost" plan the Nazi Command intended to destroy three-fourths of the Bylorussian population and to turn the rest into slaves.

How can anyone think that this can be forgiven?

Antonina Moroz, teacher
Minsk, Byelorussia

TO THE PROSECUTOR

of the Allied Powers
at the Nuremberg Trial
of the Main Nazi War Criminals

Dear Colleagues:

You remember how unanimous and concerted were our joint activities in Nuremberg. There, at the international trial, faced with the evidence of the monstrous crimes perpetrated by the Hitlerites against peace and humanity, the idea could not enter our minds that anyone would dare to apply to the nazi war criminals superannuation as to ordinary criminals. . . .

All of us were in solidarity with the Chief Prosecutor for the United States, the late Justice Robert Jackson, when in his introductory speech he said that punishing several top nazi leaders and leaving unpunished in postwar society the whole web of nazi organizations would mean encouraging the possibility of developing the germ of new nazism. He was right then too when he said that the accused in Nuremberg personified the sinister forces that could lurk in the world long after the bodies of these people would turn into ashes.

Unfortunately, for many years a considerable number of the Hitlerite wor criminals avoided just punishment, and now the FRG Government intends to apply to them superannuation, to bury in oblivion the gravest crimes perpetrated by German fascism, and to actually grant a complete amnesty to the nazi criminals.

The peoples of the whole of Europe, the public opinion of the entire world are coming out against this action. To leave the Hitler war criminals unpunished is an insult to the memory of many millions of murdered and tortured-to-death victims of Hitlerism, is a blasphemous outrage against them, and is fraught with danger to peace and the security of the peoples. . . .

We call on you to protest together with us against employing the statute of limitation in the case of the nazi war criminals and thus come out in defense of the principles proclaimed by the Charter of the International Military Tribunal and the sentence passed by that tribunal, which was fully endorsed by the decisions of the General Assembly of the United Nations. . . .

Nazi criminals must be duly punished!

R. Rudenko
USSR Procurator General
Former Chief Prosecutor
for the USSR at the
Nuremberg Trial
Former assistants to the Chief
Prosecutor for the USSR at
the Nuremberg Trial:
L. Smirnov, Chairman, Supreme Court of the RSFSR;
Professor D. Karev, Doctor of Science (Law), Dean, Law Faculty, Moscow State University

Moscow, February 27, 1965

Sir:

I would like to make several remarks concerning the article "When Does Justice End?" (*Time*, December 25, 1964).

I consider that the intention of the West German government to terminate the criminal prosecution of the nazi war criminals runs contrary to international law. The references to Article 67 of Germany's Criminal Code of 1871 (on the 20-year limitation for instituting criminal prosecution) do not hold water. One should take into account the specific nature of the crimes perpetrated by the Nazis. These were not crimes against some individuals or the law and order in some country, these were crimes against humanity. That is why their criminal liability should be determined on the basis of international law, and not on the basis of the criminal codes of a single country.

There are a series of international agreements determining the liability of the nazi war criminals. For instance, the 1943 Declaration on the responsibility of the Nazis for the crimes perpetrated by them (it was signed by the heads of government of the USA, the USSR and Britain) pointed out, among other things, that "the three Allied Powers would certainly find them even on the edge of the world and place them in the hands of those who accuse them, so that justice would be done." This clause is of an absolute nature, and the Declaration

(continued on page 58)



After the Elbe linkup. May 1945: American and Soviet troops meet again in the town of Torgau.

ARMS OF FRIENDSHIP



Left to right: Ex-fighter pilot Richard Darlington (Philadelphia host) and sister, Lt. Gen. Victor Poznyak, Col. Sergei Borzenko, and Grant Pendill (officer in the Arms of Friendship) and Mrs. Darlington.

I MADE my first visit to the United States in the late fall of 1964 with a delegation of Soviet war veterans. Lieutenant General Victor Poznyak, Hero of the Soviet Union, Lieutenant Colonel Irina Levchenko, guerrilla commander Ovidi Gorchakov and I were welcomed at Kennedy Airport by representatives of the Arms of Friendship organization.

We spent the night at Paul Farrell's place. He had been to the Soviet Union and published his fine pictures of Moscow and the article "Let Us Trade with the Soviets" in a New York business journal. During the war Captain Farrell commanded an antitank battery, served with General George Patton's army, stormed Cherbourg and took part in the liberation of France.

"I scratched my name on the top of the Eiffel Tower," he reminisced. "Young people like to leave memories of themselves."

We talked far into the night about American and Soviet military cooperation in the Second World War. Paul commented on the battles of Moscow and Stalingrad, the tank slaughter at the Kursk Bulge, Kishinev and Jassy. He has an excellent memory, spoke of Soviet Marshals Zhukov, Konev, Sokolovsky and Malinovsky, mentioned Soviet aces Pokryshkin, Kozhedub and the Glinka brothers, popular in the United States. I told him about my first meeting with American airmen whose flying fortresses were stationed at the Poltava airfield. From there they flew bombing missions to Germany. They were wonderful people, made friends with our officers, and many of them were decorated with Soviet orders.

Paul Farrell was rather surprised that we knew the names of American commanders and generals—Courtney Hodges, Matthew Ridgeway, Lawton Collins, Devers Jacobs—and were familiar with details of the African campaign, the landing in Sicily, the invasion of Normandy, the fall of Cherbourg, the crossing of the Rhine.

The next day we left New York for Princeton, where we were to meet veterans of the 69th Division at the university restaurant. The 69th had fought in the Ardennes, freed Leipzig and was the first to link up with the Soviet troops on the Elbe.

After handshakes and hellos, we took our seats at a candlelit table.

Irina Levchenko sat with the wives of the veterans. Irina—who had commanded a tank, a company and, finally, a tank battalion in the war—charmed her hosts. They were surprised to learn that she had graduated from two Soviet military academies and to see the many decoration ribbons pinned to her jacket. Irina, driving a Sherman tank, had made contact with tankmen of the First U. S. Army west of Berlin.

Seated opposite me at the table was retired Colonel Edward J. Leary, a red-enameled Soviet Order of the Red Star shining on the lapel of his coat. Former sergeants Loar Quickle and Sol Rosenblit sat beside me.

Colonel Leary pulled a photograph out of his wallet and said, with a smile: "Here it is, the historic moment!"

The photo showed Major General Vladimir Rusakov, commander of the 58th Krasnogradsk Guards Division. which was awarded the Order of the Red Banner, and Major General Emil Reinhardt, commander of the 69th Division of the First U. S. Army. Surrounded by their officers, the generals were shaking hands. Brigadier General R. V. Maraist stood under an American banner which was presented to our division as a symbol of combat friendship and in memory of the blood shed



Gen. Charles Bolte (center) with wartime partisan leader Ovidi Gorchakov and Lt. Col. Irina Levchenko.

BY SERGEI BORZENKO
Member of the Presidium
Soviet War Veterans Committee
Hero of the Soviet Union

by Russians and Americans in the fight against the Nazis, the most ruthless enemies of mankind.

I remembered that truly historic moment. I was a *Pravda* correspondent at the First Ukrainian Front at the time and took personal pride in the fact that the troops on my front were the first to link up with the Americans.

The Soviet people and the whole world awaited the linkup of the two Allied armies. This was something I had to cover. I took a liaison plane from a Berlin suburb to the small, half-destroyed and deserted town of Torgau, Saxony. What happened there on April 25, at 1:30 P.M. was one of the great events of the war. Contact established, the Allied armies broke Hitlerite Germany in two. The frontline newspaper *Za Chest Rodiny* published Veniamin Briskin's cartoon showing a serpent chopped in half.

The roads were crowded with homebound former concentration camp prisoners—Poles and Norwegians, Italians and Serbians, French and Belgians, Czechs, Danes and Greeks. Europe rejoiced in its freedom regained.

I still have a sleeve chevron of the division—a violet shield edged in red silk with the figure "69" inscribed in a square. It was given to me in exchange for a five-pointed star by Lieutenant Robertson, commander of the American patrol that met up with our scouts north of Torgau.

The first Russian and the first American to shake each other's hand on the bank of the Elbe were Senior Lieutenant Grigori Goloborodko and the commander of an American scout group, Lieutenant Buck Kotzebue. They were the heroes of the day, much sought after by Soviet and American cameramen. In Princeton 20 years later I recalled all this, and my hosts produced sheaves of snapshots that showed them standing side by side with Soviet soldiers.

What a wonderful thing memory is! In my mind's eye I could see a vivid and sharp picture of that 20-year-old event—the narrow Elbe covered with iridescent spots of oil, its bridges blown up, and American GI's in battle dress, nailed boots, the white insignia on their steel helmets.

The Americans hugged the Russians, and the Russians hugged the Americans. This was the apotheosis of combat friendship and soldiers' brotherhood. For four years and on different fronts they had been fighting the common enemy who had stained half the planet with blood.

Sergeant Loar Quickle told me that 300 American veterans of the 69th Division had raised funds for a trip to Europe. They want to meet Soviet veterans in Torgau next August. Many of them are bringing their wives and children.

The veterans had no doubt but that their division was the best in the American Army, and they said so. But then, so did we. Each of us thought his unit the best in the Soviet Army.

"Be sure to see General Bolte in Washington," Colonel Leary said. General Bolte is one of the founders of the 69th Division and a leader of the Arms of Friendship organization.

In Philadelphia we visited the Veterans Administration and were shown through a very modern eight-story hospital for veterans.

We also met American veterans in the mining town of Hazleton, Pennsylvania. All former soldiers, we talked of peace, friendship, the nuclear weapons ban, general disarmament and the need for closer contact between the veterans of our two countries.

And in Washington we called on General Charles L. Bolte. He is one of the few generals who do not want war. And when generals do not want war, that is a tribute to the nation's good sense. General Bolte told us he was glad to see that relations with the Russians are improving.

In Washington our delegation visited Arlington Cemetery and laid a wreath of red carnations on President Kennedy's grave. A gold-lettered inscription on a white moire ribbon reads: "To American Veteran John F. Kennedy from the Veterans of the Soviet Union."

At the State Department we were received by Under Secretary of State Averell Harriman, who served as Ambassador to the Soviet Union during the war. An old diplomat, well known in the Soviet Union, he recalled the joint struggle of our two peoples against German fascism. In the two last world wars fate brought us together as allies, Harriman said. When we left, he presented each of us with his book *Peace with Russia*. The autograph on my copy reads: "May your visit bring better understanding between our two continents and the fulfillment of our peoples' hopes for peace."

"Arms of Friendship"—that is what the American veterans of World War II, our comrades in arms in the struggle against German militarism, call their organization. And when I recall the firm and sincere handshakes on American soil, I see the depth of its meaning. We soldiers who faced death and lost our comrades in battle have to extend a hand of friendship to each other so that our children, boys who grew up after the war, need never lie pinned to the ground by artillery fire, need never hear the whine of shells, need never be burned alive in the whirlwind of nuclear blasts. A hand of friendship, a pledge of peace!

THEY SHALL ALWAY(

IT IS a bitter truth that only the dead remain eternally young. In war death comes unexpectedly; there is no logic to it, only pure chance. Age does not count. The photograph of a young soldier remains as a token of the everlasting youth of the fallen warrior. Love remains suspended, school uncompleted, inventions unperfected, poems unfinished. If the tale about the water of life were to come true, if the dead could be restored to life, how many happy lovers there would be, scientific discoveries made, books written! War has robbed mankind of all of this.

In Moscow's Central House of Writers there is a plaque on which the names of writers who did not return from battle are inscribed in letters of gold. Among the names are not only those who won recognition before they left, but also those whose verse was read only at student gatherings. They had never seen their books, never held an author's copy, and on the bookshelves there is no presentation volume with their signature.

The war cut short their lives, wrote finis after their last, often unfinished, poems, which were kept not in literary archives but in the loving care of their comrades in arms, who, on returning home from the war, gathered together the fragments of their legacy. Now their names are known to the whole country—Pavel Kogan, Mikhail Kulchitsky, Nikolai Mayorov, Nikolai Otrada and Vsevolod Bagritsky.

Their youth has passed into the history of the thirties, when the air smelled more and more of gunpowder. Their youth belonged to prewar times, but their verse was marked by the threat of war. They led different lives but shared a common foreboding and a common fate.

Pavel Kogan wrote:

> ***And when we fall,***
> ***We'll stay there where we fall.***
> .....
> ***The* Internationale *our final whisper,***
> ***To hit the dust and even not expect***
> ***To rise again, or be set down in the annals,***
> ***No glory to our near ones to reflect.***

In another poem he wrote of his generation:

> ***. . . The time will come, when in the fifties,***
> ***The artists will endeavor to portray***
> ***The ones who gave their all and perished***
> ***Upon the distant banks of the Spree.***

Pavel Kogan did not perish "upon the distant banks of the Spree" but on the hill Sakharnaya Golova, near Novorossiisk, in 1942.

He wrote poems about the war he foresaw, but when he found himself at the front, there was no time for poetry; it had to be put aside until some future. But for him there was no future. His last poem was dated 1941.

Letters that he wrote from the front have been saved. They supplement his verse:

". . . I wish I could send you a piece of this frontline night, riddled by machine guns and rifles, torn by mines. You are in it next to me. Half of my calm courage must be due to your presence. . . . Three hundred yards away the land has been defiled by enemy boots. The land where I was born and first heard the song of birds. And so you exist side by side—my love and my loathing. . . ." ". . . In a village abandoned by the Germans, the floor of the ruined school was a yard deep in torn volumes of Pushkin, Goethe and Shakespeare. I picked up a page—Heinrich Heine's portrait seemed to wink at me. Here were the two deaths of fascism—the guns of my comrades and the mocking smile of Heine." ". . . I deeply love life . . . But if I were to die, I'd die as a man should. We were taught in childhood to maintain human dignity. And we can no more cast it off than forget how to breathe." ". . . About ten miles from here lies the country where you and I were born. We must have loved intensely in our youth. I am forced to think so by the intensity with which I have learned to hate. I often think of the fact that we are the first generation of Jews in several thousand years to have a homeland. That is probably why I love this land with the intensity of a first love. It is hard and bitter to think of death here at the front—why I might not even finish writing this letter—a mortar shell will pop. I'll wriggle my legs like a spider, they might be torn off, I'll say something utterly absurd, and then the extremely abstract state known as death will ensue. But sometimes I'm full of ambition. . . . Dear friend. if something happens to me, write about me, a fellow who desired much. could do a good bit and had done little."

The correspondence is broken off . . . The triangular soldier's letter reached the addressee after it's author "had fallen prone among the withered grasses."

He desired very much, could do a good bit and had done little. . . . The word "little" is hardly apt, for in art there is no inevitable transformation of quantity into quality. Pavel Kogan's poetic legacy hardly exceeds four or five thousand lines, but his voice, losing none of its poetic sonority, has penetrated time. He wrote of himself, and now his verse is perceived as a confession of the generation which bore the brunt of the great patriotic struggle in World War II.

> ***. . . And let them call me narrow-minded,***
> ***I shall offend their high esteem.***
> ***I love my land, the air of Russia,***
> ***The purest on the earth, I deem.***
> ***I'm sure that nowhere in creation***
> ***Another such will e'er be found***
> ***Where sunrise freshness is so fragrant,***
> ***Like incense spreading o'er the ground.***
> ***And where does nature make such birches,***
> ***As in my land in summertime?***
> ***I'd die, a vagrant, of nostalgia***
> ***In any palm-infested clime.***

Pavel Kogan was a native of Moscow. **Mikhail Kulchitsky** had come to Moscow from the Ukraine. He had come to attend the Institute of Literature and had found lodgings in a basement where, in his words, there was "a showcase of moving footwear." Hard work and lack of home comforts could not obliterate what to him was paramount—poetry. He could go without eating, but he could not go without writing poetry. To this he gave himself completely, keenly feeling the times and attempting to express what he felt. Perhaps it is this that makes his verse so impetuous.

Mikhail Kulchitsky was a "romanticist of ultimate assaults," a man who believes that "the most terrible thing in the world is to be contented." Little wonder that he wrote with enthusiasm:

> ***. . . I sing to young men like Eden,***
> ***In a far and distant land,***

Of men who had to leave
their sweethearts
And even half-smoked
cigarettes.


Pavel Kogan


Mikhail Kulchitsky


Nikolai Mayorov


Nikolai Otrada


Vsevolod Bagritsky

E TWENTY

BY YURI ROZENBLUM

Who write poems in the morning
And in chilling draughts drink them down.

It was only natural that he should volunteer on the very first day of the war. He was assigned to a frontline newspaper but thought that he was not doing enough. So on December 26, 1942, Second Lieutenant Mikhail Kulchitsky, who had not graduated from the Institute of Literature but had graduated from a mortar school, left for the front. The same date marks his last poem:

. . . Buttons on the soldiers' tunics glisten,
Scaly medals heavy on the breast.
What are medals?
May the homeland prosper,
Dearest homeland that we love the best!

We do not know where he fell. War robbed him of life, and death shrouded him in mystery.

. . . We were tall, our hair was flaxen.
You'll read in books and voice regrets
For men who had to leave their sweethearts
And even half-smoked cigarettes.

These lines were written by **Nikolai Mayorov.** He called his poem "We," for he spoke of boys, future soldiers, who were destined to take up the rifle instead of the pen. He knew that there was little resemblance between war and a military parade and that many would leave for the front never to return to kiss their sweethearts or smoke their cigarettes. Perhaps that is why there is such love of life in his verse:

I fell in love with pithy, weighty words,
With spacious August, butterflies a-flitting,
With dreamy gardens full of luscious grass
And throaty nightingales upon the branches sitting.

"My voice is harsh with the sound of metal," proudly wrote Mayorov. That "sound of metal" imparted a virility to his verses. They give us a picture of a youth learning to live, learning to love and to hate.

Nikolai Mayorov was killed near Smolensk on February 8, 1942. He was one of those who paid with their lives to keep the fascists out of Moscow. From the front he wrote to his friend: ". . . You wish me courage in battle. Thanks. But you know I hardly shine at this. Still, I'll do what I can."

The budding poet **Nikolai Otrada,** a student at the Institute of Literature, knew while taking his history exam that the next day he would be leaving for the war. The examiner was not satisfied with his answers and gave him a barely passing mark. Otrada said: "I'll take the history exam over when I come back, but now I'm leaving for the front to make history."

He never bettered his history mark but went down himself in the history of the war and the history of Soviet poetry with the highest mark for his work and his life.

. . . Life's so good,
It's worth our utmost effort
To make nature bloom for all it's worth,
So that life would bubble
Like a fountain,
Sweeping all that's rotten from the earth.

As for fame, you needn't worry,
It will not be tardy with its birth.

But fame was tardy, arriving only after Nikolai Otrada was dead.

The well-known Ukrainian poet Platon Voronko, who witnessed Otrada's death, said: "Our platoon was surrounded, and the enemy shouted 'Surrender!' Nikolai shouted 'Muscovites, don't surrender!' and led the attack. The platoon broke through, but Otrada's body remained a black spot on the snow. Then Aaron Kopstein, also a student and a budding poet, looked at us with his compassionate eyes, got off his skis, took the sledge strap in his hand and began crawling toward Otrada. Snipers shot at him. When he was on his way back with Nikolai, one bullet grazed his shoulder, another got him in the head. . . ."

They could argue at seminars, quarrel, get angry at each other, but in battle they stood side by side; there was no "I," only "we."

If you are injured in battle fierce
Or wounded in a furious raid,
Your friend will tear his shirt for you,
Your friend will bind your wounds for you,
Your friend will come to your aid.

This was written by **Vsevolod Bagritsky,** the son of the famous poet Edward Bagritsky.

His was a hard life. At the age of 12 he lost his father and learned early the meaning of grief. He cherished the lines his father had dedicated to him.

I know you were born with a soul crystal clear,
And you're on the threshold of times full of cheer.

He had a "crystal clear" and noble soul and a great heart. He did not succumb to adversity. There was little "cheer" those days, but the times strengthened his character, and he chose the hardest job of all—the front. "I shall see and have already seen," he wrote from the front, "what man will never again have to witness. Our victory will rid mankind for a long time of that greatest crime—war." He wrote this ten days before his death.

He was buried near a woods at a crossroads created by the war, under a spreading pine tree, on which the artist Yevgeni Vuchetich carved the inscription:

POET-SOLDIER VSEVOLOD BAGRITSKY
killed 26 February 1942

Eternity I'll not accept,
Why have they buried me?
I'd no wish to go into the earth
From earth that I loved ardently.

These lines are by Maritsa Tsvetayeva, whose poetry Vsevolod loved.

They began their lives as poets and ended them as soldiers. They had no time to *write* their most important, for each one cherished a dream, but they *did* the most important—they kept their homeland free.

Nikolai Mayorov once wrote:

We know the regulations all by heart.
What's death to us! We succumbing to death are higher.
Within our graves we all have toed the mark
And wait for orders for another start.
And let all know that he is but a liar,
Who claims the dead to living do not hark.

(continued from page 53)

holds no reservations on limitations for the nazi war criminals. The Rules of the International War Tribunal, adopted by the four Allied Powers on Aug. 8, 1945, also do not specify any limitations for the nazi war criminals. The principle of inevitable punishment for war criminals was also reaffirmed by the UN General Assembly resolutions in 1946 and 1947.

In its Article 25, the FRG Constitution directly states that the norms of international law have a priority over the internal laws of the FRG. By virtue of the Instruments of Surrender, Germany (and the Federal Republic of Germany is one of the legal heirs of the former German Reich) had pledged to carry out the decisions of the four Allied Powers of the anti-Hitlerite coalition, decisions dealing with the elimination of the consequences of the Second World War, including the question of punishing the nazi war criminals. Therefore, if the FRG Government applies the statute of limitations to terminate the prosecution of nazi war criminals, it will thereby violate one of the clauses of its own Constitution and its international pledges.

Respectfully yours,
Andrei Piontkovsky
Professor of Criminal Law
Moscow

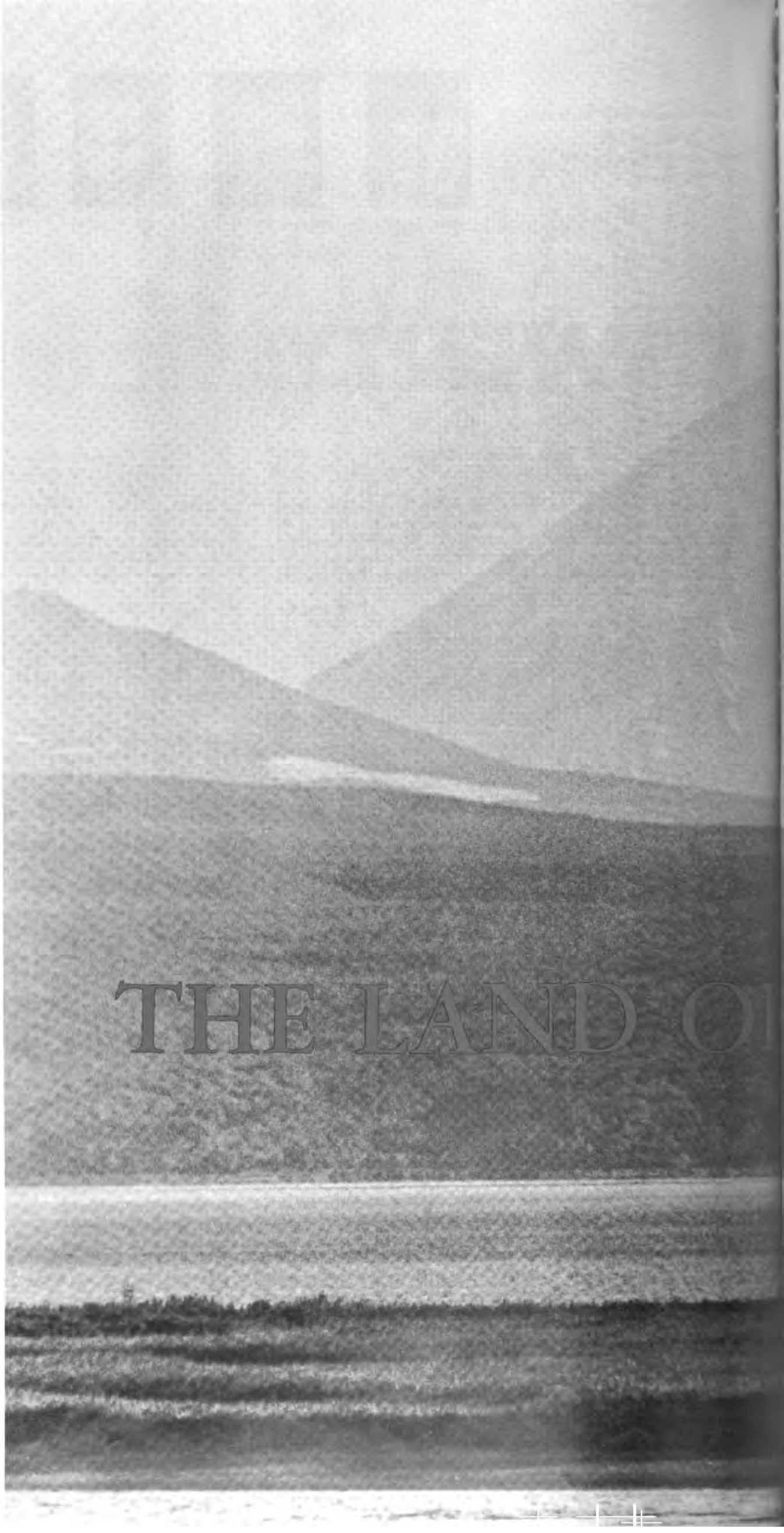
RUSSIAN PATRIARCH PROTESTS

The Russian Orthodox Church condemns the intentions of the Federal Republic of Germany to discontinue, as of this coming May 8, in view of the statute of limitations, the meting out of retribution to nazi war criminals for their atrocities.

The blood of the slain, the flames of peaceful dwellings, and the tears of the robbed and dishonored all cry out for great and just retribution. The ancient prophet Isaiah, that adamant guardian of justice and unmasker of evil doings, said. "Woe to the wicked! It shall be ill with him, for what his hands have done shall be brought to him." (Isaiah, III,xi).

In the eyes of our Christian conscience the intentions of the West German authorities to terminate the legal prosecution of the criminals of the past world war cannot be taken as an act of mercy; it is merely the blasphemous consignment to oblivion of unprecedented inhuman crimes. Everlasting infamy has branded the war criminal of German fascism. The unfair and unlawful act that the FRG Government is taking is also pregnant with tangible peril to peace in Europe and throughout the world generally, as the amnestying of war criminals legalizes their participation in the public and state life of the FRG, and will consequently have inevitable effects on the destiny of peace.

Alexius, Patriarch
of Moscow and All Russia



Miss Catherine Montcalm, Seattle, Washington, writes: "I would very much like you to do a long article with pictures on the Kamchatka Peninsula and the people in Petropavlovsk and the rural areas. That is one of the areas of the Soviet Union in which I am most interested."

100 VOLCANOES

BY MYUDA DEREVYANKINA
PHOTOGRAPHS BY VADIM GIPPENREITER

IN THE Soviet Far East is a peninsula washed by two seas, the Bering Sea and the Sea of Okhotsk. The peninsula looks like a hand held out to the Pacific Ocean. This is Kamchatka, the "land of fire-breathing mountains." Forty years ago it was called the "land without men," because its population was one person for every one and a half miles. These uninhabited miles were very rich in fur, gold and curative waters, but to get there from the center of the country took a three-month journey across the entire continent.

Today it takes 14 hours.

The City

A flight across Central Europe and Asia, and you make the jump from Moscow's noisy thoroughfares to the easternmost city of our country, Petropavlovsk-Kamchatski (called the City by its residents for the good reason that thus far it is the only one on the peninsula).

It is very beautiful, this maritime city, with its unique background of three harmless-looking white-capped volcanoes: Avachinskaya, Koryakskaya and Vilyuchanskaya. But the smoke issuing from their cones is ominous evidence of their real character. Two years ago Mt. Koryakskaya flew into a temper, with the result that the city was almost eight inches deep in ashes. The residents quickly cleared the streets—they have machines ready for the purpose. But they were not the least bit upset by the eruption.

Petropavlovsk boasts the only Institute of Volcanology in the world. The whole peninsula is its laboratory: 129 volcanoes, of which 22 are active! The director of the Institute, Corresponding Member of the USSR Academy of Sciences Boris Piip, warned the peninsula against an "ashfall" from Mt. Koryakskaya three months in advance. Kamchatka knew seven months ahead of time that Shiveluch would act up last May.

But there the uniqueness of Petropavlovsk ends. Otherwise the city is everything a regional center should be. It has two institutes, six specialized secondary schools, 10 polyclinics, a dozen motion picture theaters, a playhouse, a bank, any number of stores, and building cranes wherever you cast your eye. The city is in perpetual construction.

Petropavlovsk is one of the largest Soviet ports on the Pacific Ocean. From your hotel window the fishing boats and passenger ships seem to be anchored at the hotel door. Further out you can see the sparkling blue of Avacha Bay, one of the finest in the world. Kamchatkans say you can crowd the navies of the whole world into that harbor. And the keen-witted ones add that it is deep enough to make a fine cemetery for all those navies on that great day when the world disarms.

Fishing on the High Seas

Kamchatka's chief industry is fishing. Its fleet accounts for close to a billion pounds of fish a year, 15 times that of 30 years ago.

The fishing used to be done in the rivers and offshore. Now the sailing range of the peninsula's new vessels is practically unlimited. Kamchatka's trawlers ply the Sea of Okhotsk and the Bering Sea, go out as far as Bristol Bay. Aside from its state-owned fishing fleet, Kamchatka has many fishing artels. The Lenin Artel was set up in 1930 not far from Petropavlovsk on the shore of a bay poetically named Gray Eyes. At one time the carved wooden figure of a girl with gray eyes stood there peering out at the sea.

Among the first to join the artel was Mikhail Staritsyn, a young, fair-haired mechanic and skilled helmsman. Today he is the artel's chairman, a man who is consulted by all the artels around whenever the research institute broadcasts the news that the herring migration has started. He is a legislator besides, a deputy to the Supreme Soviet of the RSFSR.

"We began with barracks and now have multistoried houses," he told me. "We used to fish in wooden boats, and now we have modern ships and use reconnaissance planes. A single seiner of ours hauls in as much fish at one time as all the fishermen of Kamchatka used to catch 10 years ago.

"Some poetic souls say that a fisherman's home is the sea. Nonsense. The fisherman's home is on land. And that home has to be good, and he should be there as much as possible. That is why we are doing our best to make our trips shorter so the crews of



They spent a combined 456 hours in space. Top row (left to right): Lieut. Col. Valeri Bykovsky, Lieut. Col. Gherman Titov, Col. Yuri Gagarin, Lieut. Col. Andrian Nikolayev, Lieut. Col. Pavel Popovich. Sitting: Dr. Boris Yegorov, Konstantin Feoktistov, Valentina Nikolayeva-Tereshkova, Col. Vladimir Komarov.



Photograph by Alexander Mokletsov



THREE STAGES OF SPACE CONQUEST

BY ACADEMICIAN ANATOLI BLAGONRAVOV

OUR KNOWLEDGE of the upper atmosphere, of near space, how infinitely meager it was only a few years ago, when we launched the world's first man-made earth satellite! I remember that nitrogen-filled aluminum-alloy ball with four long antennae. It carried only accumulators, radio equipment and a tiny fan to circulate its nitric atmosphere. Could such a sputnik do much? Yes, very much, for it was the first of its kind.

It revolutionized our conception of the density of the upper atmosphere, determined by the speed with which the sputnik was slowed down. It made possible the development of tracking methods for sputniks and spacecraft in near space. Most important, it demonstrated the feasibility of maintaining continuous and safe contact with a body moving in space. Previously, the ionosphere was thought to be layered and impenetrable by practically the entire range of radio waves. Only after the flight of *Sputnik I* did we know for certain that contact with space was possible, that cosmonauts would not be isolated from their home planet.

A no less significant problem was solved by *Sputnik II*. It carried the dog Laika, whose behavior in flight was to supply the answer to the question as to whether there were unknown factors that ruled out the possibility of a living being existing in space. At the cost of her life, Laika gave the answer. Manned space flight was possible.

The task of the third Soviet sputnik was to explore many parameters of near space in detail. The instruments of this veritable automatic flying laboratory reported the atmospheric pressure; the concentration of positive ions in the atmosphere; the intensity of the sun's corpuscular radiation; the composition of primary cosmic radiation; the distribution of protons and heavy nuclei in cosmic rays; the micrometeorites; the electrostatic and magnetic fields of the earth; the sputnik's surface, internal temperature and electrostatic charge.

The data obtained from the sputnik, added to the information from other launchings, were used in preparing the flight of the three-seat ship. Our third sputnik investigated the problem of micrometeorites. We knew very little then about the danger they might present. But the heroes of that flight entered their cabin without space suits.

After the sputnik launchings spaceships were sent up to reconnoiter the upper layers of the atmosphere.

A spaceship differs in principle from a sputnik, although it often takes the same elliptical trajectories. A spaceship is designed to carry a man, not merely instruments. The ship must have a hermetic cabin equipped for man's vital activities, with the proper temperature, chemical composition, humidity, air pressure, etc. It must have devices for controlling the spaceship and ensuring its safe return to earth.

The first spaceship, which weighed close to five tons, was orbited on May 15, 1960. Its cabin went into space with a load that simulated a man's weight. It carried everything necessary for his vital functioning, but it did not carry a man. The devices required to land the spaceship had not yet been fully developed, so that it eventually burned up in the upper atmosphere.

The next ship, with Belka and Strelka aboard, returned safely. But three more ships trailed their fiery paths across the sky before man's turn came. This was on April 12, 1961.

The later flights into space are, I think, recent enough for everybody to remember. Not one of them was a repetition of a previous flight, but exceeded those before it in duration or some other way. The flight of three men in space had its qualitatively new aspects too. This flight was notable, among other reasons, because it solved the problem of a soft landing on return to earth.

This flight of a group of scientists was a magnificent achievement. But it was only a stop on the road. Modern astronautics is developing in three directions:

The first is the study of the earth's upper atmosphere and the portion of space adjoining our planet, which Konstantin E. Tsiolkovsky called free.

The second is the study and exploration of the heavenly body closest to us, the moon.

The third is the study of solar space, including the nearest planets, Mars and Venus.

Soviet scientists are working in all three directions.

The first to be launched, always, are the automatic scouts, followed by men.

The earliest man-made satellites marked the start of work in the first direction, the investigation of near space. And, of course, only the start. These researches are being continued by such sputniks as the *Cosmos* series, of which 51 (59 as of March 7. Ed.) have already been launched.

As a result, we have made considerable headway. Together with these automatic devices, scientists themselves have traveled into near space. There will be many more such flights. The final stage in the solution of the first problem—exploration of near space—will probably be to set up a permanent manned space observatory-town, with bilateral contact maintained through rockets. Of course, long before this, reliable systems of meterological sputniks, worldwide television sputniks, navigation sputniks, etc., will have been established.

The flight of the world's first three-seat spacecraft was an essential step toward a flying space observatory-town. Several interesting moves have been taken in the second direction. A space rocket was launched in the direction of the moon on January 2, 1959. This was the first reconnaissance of the trajectory between the earth and its eternal satellite. Next, our rocket reached the surface of the moon itself on September 14, 1959. For the first time the trail of a rocket ship linked up two worlds. Then a unique photograph of the dark side of the moon was taken.

Here too, automatic scouts are the trail blazers, but, it seems to me, they have not yet completed all their tasks. The automatic devices have not yet explored the moon's surface in detail, have not yet determined the conditions prevailing there. Presumably, they will be followed by animals. Only after the safe return of the ship to earth has been assured will man go to the moon.

Manned landing will be preceded by numerous earth-moon flights. In the course of these flights the conditions along the entire route will be studied, detailed maps of the lunar surface made, and lunar space investigated. Need I add that all these flights will be made by teams of scientists only?

The first stage in the exploration of the moon will be to set up a permanent research station on its surface. This, of course, will be the very first stage; a comprehensive study of our nocturnal satellite will take decades and even centuries. We are dealing with a completely new world.

In the third direction—the exploration of near solar space and near planets—only the first steps have been taken, the first flights of automatic scouts. In May 1961, a Soviet automatic station passed near Venus. In December 1962, the American automatic station Mariner flew over the same route. A Soviet automatic station passed near Mars also, with radio contact maintained for more than 100 million kilometers (62 million miles). Late in 1964 another two rockets, Soviet and American, were sent to Mars.

I should make clear that a manned flight to the planets is immeasurably more difficult than a flight to the moon. The interplanetary routes will be explored again and again by automatic stations that will bring back much needed information on space and the nature of the planets to which they are sent. Only then will the first interplanetary expeditions take off. They will carry even larger teams than the lunar reconnaissance expeditions.

Courtesy of the weekly Ekonomicheskaya Gazeta

PLASMA MOTORS

BY ACADEMICIAN MIKHAIL D. MILLIONSHCHIKOV

VICE PRESIDENT OF THE USSR ACADEMY OF SCIENCES

ZOND-2, the Soviet automatic station, has started a new chapter in the chronicles of outer space conquest. For the first time plasma motors have been successfully put through their paces aboard a spacecraft.

At a great distance from earth the orientation system was switched over to plasma motors at a command from the control panel, and the motors began operating in compliance with signals received from the space attitude control system. The six motors have now been maintaining the station in a required position relative to the sun for a long period. The efficiency of the plasma motor in outer space has thus been proved in practice.

Plasma is a gaseous mixture of negatively charged particles (electrons), positively charged particles (ions—*i.e.*, atoms deprived of one or more electrons) and neutral atoms. Plasma may be "cold" or "hot" with temperatures of from thousands to hundreds of millions of degrees. Hot plasma no longer has neutral atoms. Though plasma contains charged particles, it is electrically neutral on the whole (has an equal number of positively and negatively charged particles).

The presence of free electrons in plasma makes it a good conductor of electricity. This property can be used for building electromagnetic plasma motors.

If plasma is placed in a magnetic field and current is fed through it, it will be accelerated. The ejection of plasma accelerated to a great speed will produce a jet thrust. This is one of the possible types of plasma motors.

High-temperature plasma is used in other projects. Powerful electric arcs yield much higher temperatures than any chemical reaction. If the

"working gas" is heated up in the flame of such an arc and ejected through the nozzle of a space motor, a substantially greater speed of outflow is achieved than with rockets operating on a chemical fuel. The high ejection speed of the working substance is a major advantage of electric motors.

Unfortunately, the energy of chemical reactions makes it possible to accelerate the working substance to no more than four kilometers (2.5 miles) a second. But for plasma motors the limit is much higher. Electromagnetic plasma motors, for example, can eject fuel at more than 100 kilometers (62 miles) a second. True, such engines are unable to overcome the force of gravity and tear the rocket away from the earth, but their use in "open" space is definitely promising.

These motors can be power-supplied in outer space directly from solar batteries or from some special source. The thrust of the plasma motor can be very easily controlled over a broad range by changing the parameters of its power supply. The operation time of such motors is very long.

On the Zond-2 automatic station, plasma motors are used in the attitude control system that is so vital to any modern spacecraft. All along the multimillion-kilometer-way to the far-off planets, the attitude control system has to maintain the preset position of the craft in space or change it if need be. This system keeps the transistor panels of the solar batteries at right angles to the sun's rays so that maximum solar energy is absorbed. The space attitude control system directs the station's antenna toward the earth during radio communication.

Suppose the automatic station deviated from the course. In that case the attitude control system would turn the craft toward its destination in order to actuate the correction engines.

As you can see, the range of the plasma motor's functions in the attitude control system alone is quite extensive. But this by no means exhausts its potentialities. The plasma motor can be used for transferring sputniks from one orbit to another and for executing various maneuvers during the assembly of near-earth space stations. They can also serve as "step engines" for the multistage rockets that will probably power the interplanetary cargo liners of the future.

Courtesy of Izvestia

SPACEMAN'S MENU

INTERVIEW WITH OLGA MOLCHANOVA

CORRESPONDING MEMBER, USSR ACADEMY OF MEDICAL SCIENCES

Question: How does a "space" diet compare with an ordinary one? Do cosmic rations include any tonics?

Answer: Space flight conditions make for certain peculiarities in a spaceman's diet. His food must be nourishing, easily digested and lasting. It must be light and compact, yet contain everything the body needs.

It is the mental and nervous strain rather than physical exertion, however, that largely determines a spaceman's rations.

His diet provides 3,500 calories a day: 500 more than are required for mental work and 500 less than a miner working in a mechanized pit needs.

No pharmacological preparations such as tonics, analgesics or others were added. Thanks to our spacemen's excellent training, there was not the slightest need for such supplementation.

Question: What changes were made in the diet with each successive flight?

Answer: Before Gagarin's flight, no one knew how food could be taken in the state of weightlessness—whether it could be chewed and swallowed, and whether it would pass through the alimentary canal. The food consisted of paste and juices packed in vacuum tubes.

The first Soviet space flights showed that all these processes proceed quite normally. That is why the menu of Andrian Nikolayev and Pavel Popovich included beef cutlets, roast veal, chicken fillet, and pies and sandwiches with different kinds of fillings, besides food in tubes. They had fruit, pastry and candy with their meals. To make eating easier, the portions were small: thin slices, small sections, buns or pies served in polythene vacuum packs, all of which made biting unnecessary. All they had to do was pop it into the mouth and chew.

The first flights disclosed that the sense of taste undergoes certain changes in space, and this was subsequently taken into account.

Question: Is any work being done on a diet for spacemen heading for other planets?

Answer: At present it is the earth's environment we are duplicating while acquiring the know-how necessary for distant interplanetary flight. Up to now all the food has been taken ready-made from earth, the individual daily rations amounting roughly to four and a half pounds, including a quart of water, besides iron rations.

Longer flights mean more provisions so that a spaceship may to all intents become a storehouse. As for more distant flights, it may be advisable to try and set up a closed ecologic system, *i.e.*, duplicate our earth cycle.

Scientists have evolved a method of purifying water to make it fit for repeated use. We can do the same for edible substances.

A good deal of work is being done on chlorella. This fertile seaweed, which freshens stale air—*i.e.*, restores its oxygen cantent—can be fed to such fast-maturing animals as chickens or rabbits to provide sufficient fresh meat. Chlorella itself can form part of the cosmonaut's diet.

Scientists believe that fast-ripening vegetables like radishes, cucumbers, turnips and lettuce should also be used. They can be grown by the hydroponic method with artificial light.

However, there are great obstacles to overcome before we have an efficient closed system worked out.

Courtesy of the newspaper Sovetskaya Rossiya

ABOUT THE VOSKHOD

BY YURI MARININ

NOVOSTI PRESS AGENCY SCIENCE COMMENTATOR

1. *Why is the flight of the* Voskhod *considered a new stage in space development?*

The shift from one-seat to multiseat ships is truly a qualitative leap. Orbital stations, assembly in orbit, flights around the moon, moon-landing interplanetary flights—all require multiseat ships manned by crews like that of the *Voskhod*. A one-man crew combining the functions of a pilot, engineer, researcher, radio operator and doctor was sufficient only at the dawn of the space era, when ships were too small to hold several persons and flight conditions too complicated to permit anyone aboard other than a cosmonaut.

2. *Why a three-man crew?*

This is a minimal group crew. With three men on board it is possible to arrange the work in shifts, divide responsibilities, and permit mutual assistance and mutual control. Three is the minimum but by far not the maximum. There is no doubt whatsoever that within our generation there will be much larger crews. However, research on the basic problems related to cosmonauts' flight conditions can be handled by three men.

3. *Why were specialists on motion dynamics, astronavigation and a doctor selected?*

They were the natural choices. Flight dynamics and astronavigation are the cardinal problems of space technology. Progress in astronautics hinges on their solution. Some of the problems are more difficult, others are impossible, to solve without leaving the earth's surface.

The system of telemetric measurements worked out by medical researchers made it possible to keep a check on the functioning of the heart, the respiratory organs and the nervous systems of the cosmonauts. But it did not fully satisfy the medical scientists. They thought a more thorough examination at various flight stages was necessary. That could best be done by including a doctor in the crew.

4. *Why no space suits?*

The systems that ensure normal living conditions in the *Voskhod* have been so perfected and are so reliable that there is no need for a space suit. Thus the area of movement is enlarged and the work capacity of the cosmonauts increased, making the flight more pleasant. Obviously, suits are mandatory for certain operations in outer space—leaving a ship in orbit, for example, or landing on the moon. However, the rest of the time the cosmonauts will be in light suits that do not restrict movement. The reason for space suits is not only to ensure the vital activities of the cosmonaut but to protect him from overload when his ship orbits and returns to earth. Hence, to get along without space suits, systems had to be created to adjust the crew to the overload and to brake the ship for a gradual, soft landing. The creation of such a system has made it possible to dispense with space suits, which indicates the great progress achieved in making Soviet ships comfortable.

5. *Why a higher orbit?*

The higher the initial orbit, the longer the sputnik can stay aloft. A multiseat spaceship doing complex scientific research should be in orbit many days, otherwise there is no point in sending it up. Of course, the first such experimental ship was not scheduled for a prolonged flight. The *Voskhod* cosmonauts felt that they could have stayed in orbit longer, but the flight program was planned for a one-day orbit. As time goes on we shall be seeing more protracted flights of multiseat spaceships. More powerful booster rockets are required to place a spaceship in a higher orbit. Thus the fact that the *Voskhod* had a higher orbit than the *Vostock* spaceships indicates that a more powerful booster was used.



Memorial to *Sasuntzi Davith* (David of Sasun), hero of the Armenian folk epic said to date from the seventh to the tenth centuries (sculpture by Y. Kochar 1960). The epic, a paean to man's labor and love of peace, tells of the Armenian people's courageous defense of their country against foreign invaders. The epic was first written down in 1873. Between that time and 1954, 50 versions were found. It has been translated into Russian, Ukrainian, Georgian and other languages of the Soviet people, and portions into German, English and French.

YEREVAN— AS OLD AS ROME

BY NIKOLAI TARASOV
DRAWINGS BY RACH SACHLYAN

YEREVAN is a three-and-a-half hour plane ride from Moscow. From my comfortable seat in an IL-18 airliner I leafed through a tourist guide for information on the city's geography, history and industry.

I knew Yerevan was old, but I was surprised at how old it actually is. Until quite recently historians dated it to 607 A.D., the year the old Armenian Chronicles first mention the city. But in recent excavations near the ancient fortress of Yervuni, from which Yerevan derives its name, archeologists unearthed stone slabs with cuneiform inscriptions that prove the city was founded by King Arguishti I of Urartu in 783 B.C. That makes Yerevan 2,748 years old—as old as Rome.

What was the city like in the Middle Ages? The caravan routes that passed through it led from the towns on the Black Sea to Iran and India. But all the monuments to its ancient glory were destroyed by the many successive invaders and conquerors.



Modern Yerevan is one of the larger industrial and cultural centers of the Soviet Union. The Armenian capital has chemical, machine-tool and building material plants; light industry and food processing factories; the Armenian Academy of Sciences and research institutes; a university, polytechnic, medical, agricultural and other professional schools; and museums, theaters and stadiums. Its population, about 600,000, is 20 times greater than it was 40 years ago.

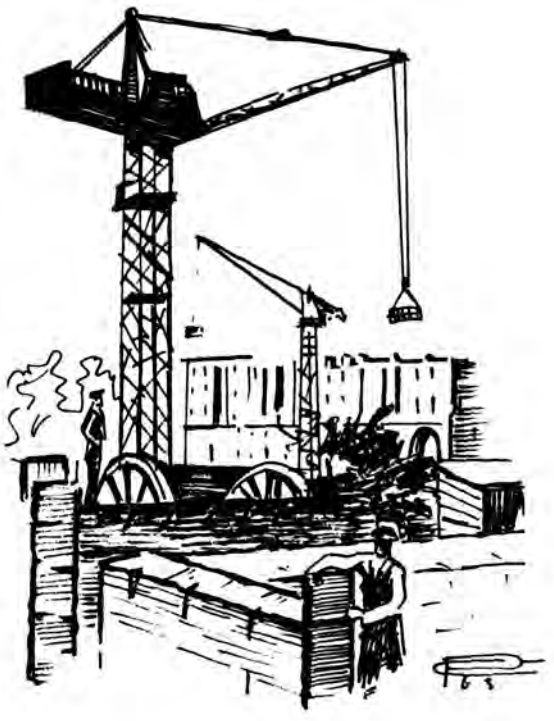
The guide book gave me several dozen pages of such informed detail before the familiar *No Smoking* and *Please Fasten Your Seat Belts* signs flashed above the pilot's cabin door and the plane touched down at the airport runway.

I spent a week in Yerevan. Hrachya Bunetyan, vice president of the republic's Academy of Sciences, showed me his collection of paintings by modern Armenian artists. Composer Edgar Hovanesyan, director of the Yerevan Opera and Ballet Theater, talked cybernetics and color music.

At the film studio I met lovely Maya Aiartyan, who is doing a new film. After acting hours she does research at the Matenadaran Library, a repository of ancient manuscripts, which contains, among other treasures, the first book printed in Armenian. Pianist Yakov Zargaryan played his rendition of Gershwin's *Rhapsody in Blue* and then took me through the city's new housing projects. He spoke of each house as though it were his own creation. I learned from him that 6,000 families move into new apartments yearly and that more houses have been built in the city in the past four years than in the preceding 50.

I keep visualizing Yerevan as a slender, broad-shouldered giant pushing the surrounding mountains aside so he can stand up full height under the blue skies.

My companion, Moscow artist Rach Sachlyan, did many sketches on the trip. Some of them are reproduced here.







RUSSIA REVISITED

BY EUGENE LIST

This article is re published by courtesy of the American magazine **Music Journal.**

AFTER the exciting events of my first concert tour of the Soviet Union, I am still in a happy haze of recollection and often reflect on the vividly kaleidoscopic and swirling memories. As the poet Shelley so fittingly wrote, "Music, when soft voices die, vibrates in the memory." And so, in my heart, my recent tour in the USSR will always *vibrate* movingly in *my* memory. A never-to-be-forgotten experience.

Although my previous visit to Russia in 1962, as a member of the Piano Jury at the International Tchaikovsky Competition, had given me some inkling of the warmth of the Russian public, I was still inadequately prepared for the enthusiastic welcome which my concerts evoked. I was deeply touched. Artists are treated like kings, and I was royally "spoiled" everywhere. In short, I had the time of my life! One doesn't often find this sort of reception in other countries. I had the feeling that music is an integral part of the life of the Russian people, and that it is not only broad, but deep. People really *care*, and that is a rare phenomenon today in the world of jet planes and computers.

My tour began in Moscow with two recitals: one in the Ha... servatory Hall, which I remembered so well from the T... Concours, and the other in the Tchaikovsky Hall. A pianist... on his mettle in the Soviet Union, what with its old and dis... tradition and its glittering array of magnificent artists through... Not only was I pleased with the artistic reception accorded me... decidedly impressed by the quality of the listening on the pa... concertgoers. By this I mean that there was a concentrated ... the hall during the softest of pianissimos (always a sure ... attentive public, and a mark of deference dear to the heart... formers). There was no fidgeting in the seats, no rustling of ... And toward the end of the program, and for the encores, there ... characteristic rhythmical applause, that clapping in unison ... don't have in the United States and which is rather exciting. ... enjoyable is the lovely custom of presenting flowers to the ... the footlights. This we also have in America, of course, bu... ladies. Therefore, it is especially nice for us to be honored in ... as well.

In Leningrad, which was the next stop on my itinerary, I fou... in a most extraordinary pianistic "sandwich." In the brief spa... consecutive days, there were piano recitals by Rikhter and ... addition to an orchestra appearance by Gilels), and my own to... A real pianistic "traffic jam." And the halls were crowded ... and there were standees. As I wrote to friends in America, "It... rible shame that there is nothing going on here, pianistically ... at the moment!!"

In Leningrad, the happy coincidence of the three elements w... immeasurably to any concert were all present in the highe... and these concerts stand out particularly in my mind. The ... ments I refer to are—the public, the hall and the piano. The ... monic Hall in Leningrad is very pleasing esthetically, and the ... are exceptional. Also, as I wrote to Mr. Henry Steinway, the ... of the Steinway Piano Company in New York, the concert gra... way in this hall is one of the greatest instruments it has ever ... privilege to play anywhere in the world. The Leningrad con... is certainly discerning, and definitely among the cognoscenti.

Additional pleasures in Leningrad included a delightful lu... Gilels at the Evropa Hotel. Here we reminisced about our firs... in New York in 1955, after his brilliantly successful debut t... also about the interesting activities in Moscow during the Tc... Competition in 1962. I also had the good fortune to see an... league from the Tchaikovsky Competition, Mr. Serebriakov, ... of the Leningrad Conservatory. He received me with the most ... hospitality, took me on a tour of the Conservatory, and played ... on tape recordings, some interesting contemporary Soviet com...

In Kiev, my next port of call, several unusual things took pla... of all, I saw yet another colleague from the Moscow Compe... 1962, Prof. Lyatoshinsky, the composer. It was a splendid ... I found to my utter astonishment that in Kiev, Russia's third lar... I was performing the Shostakovitch First Piano Concerto for ... first time in that city. Since I had given the American premier ... work with Stokowski in Philadelphia in 1934, it struck me a... novel. It also happened that this performance of the Shosta... Kiev marked a very special milestone for me personally. It ... 200th performance of this concerto over a span of 30 years... played it in Europe (Vienna, London, Oslo, Berlin, Paris, ... Frankfurt, etc.), in South America (Lima and Bogota), a... United States and Canada (including Juneau, Alaska, and a spe... formance in Louisville, Kentucky, with Robert Whitney cond... which Shostakovich himself was present), and with my own ... Chamber Orchestra during three nationwide tours of the U.S.... ada. In fact, I now claim the "unofficial world's record" for ... Concerto in total number of performances! It has always been ... luck" concerto, because it was the springboard to success for ... the very beginning of my career. And I recently recorded it f... minster Records, along with the Second Piano Concerto by ... vitch. Because of the many vibrant memories this work holds ... I sent a telegram to Mr. Shostakovitch, in care of the Compose... in Moscow, telling him that it seemed especially fitting to le... his Concerto at my orchestral debut in the Soviet Union, for t... time. Shostakovitch responded with a warm telegram of gre... I was moved by this manifestation of welcome, and have fr... telegram along with his autographed picture, which I already ... have hung it, with pride, on the wall of my studio.

Another thing which interested me particularly about Kiev ... is the birthplace of Vladimir Horowitz. Horowitz is a legendar... Many years ago, I had the privilege of studying with him ... summer. It was a great experience. As a matter of fact, on... things I studied with him that summer (1941) was the Tc... Piano Concerto. Thus, it seemed eminently fitting that this w... the concertos I played in his home town. The others were the ... Flat Concerto and the aforementioned Shostakovitch. I wrote H... witz a letter from Kiev and enclosed a picture post card of ... thoroughfare, with the familiar buildings on either side.

Aside from the purely musical aspects of my visit to Kiev ...

ures of sightseeing in this attractive city), I was pleased that le to see a distant cousin of my mother's. Part of my mother's ıme originally from Kiev, and various members of this branch ımily came to my concerts. I also visited them in their new ıt in one of the new housing developments in the suburbs.

impressed with the orchestra in Kiev. The musicians played ıusiasm and with true musical feeling. The new chief conductor, ʃtepan Turchak, displayed youthful fire and excitement, and ;o far in his chosen field. He is only 26 years old.

nusing incident occurred after my orchestral concert in Kiev. :d to go immediately to the restaurant in the hotel without g to change clothes. When the doorman at the entrance saw ıy full dress suit, he objected to my entering the restaurant on ınds that I was not "properly or decently dressed." He thought ıst being capricious or frivolous in being so "overdressed" in ıite tie, etc., just to eat. When the maître d'hôtel heard about ıst chuckled and ushered me immediately to a nearby table. I 'd to him that although I was indeed wearing full dress clothes, re actually, for me, my "working clothes." Thus ended this odd venture.

top: Tbilisi. And the Georgians more than lived up to their ous reputations as warmhearted hosts. What hospitality! Seldom ɔeen assaulted so pleasantly on all sides with such fabulous food, us wines, and openhanded warmth and hospitality. In fact, I barely escaped in time from this sustained gastronomic assault / digestive system still intact! Here too I met friends from the Competition of 1962. In fact, I went directly from the airport oncert hall because Elisso Virsaladye, the young laureate of the cours, was playing that very evening, and I didn't want to miss tal. And poetic, beautiful playing it was!

ıy arrival, because two concerts were sold out, I was asked to additional recital. This I was delighted to do. The weather was nably cold, and the audience had to sit in overcoats during the s, but the warmth of the reception in contrast to the cold air in- hall was magnificent. On stage, the bright floodlights and the itself kept me warm. And what with the people milling around the entrance, etc., it made me feel, practically, like a movie star! first rehearsal with Zachary Churodze, the conductor of the ra, had its entertaining moments. He speaks, of course, perfect ı and Georgian. I speak English, some German and some French. ally got together somehow through the international body lan- ɔf active gesticulation, and were able to communicate also through guage of Italian musical terms. After all, "presto" is "presto," sicians, in any language. The orchestra in Tbilisi is excellent. ısicians were most cooperative, and Mr. Churodze did a beautiful

o, on to Baku, the last stop on my tour. Here the landscape ɡan to take on a rather exotic aspect. It reminded me very much ı Southern California where I lived as a child. It seemed terribly ic to me, somehow, to be suddenly on the shores of the Caspian hich I remembered from my geography books at school as ing very remote.

Baku, I had the interesting experience of playing with Russia's ifted woman conductor, Veronica Dudarova. Mme. Dudarova is ırth woman conductor with whom I have appeared. The first was erican lady, the second a Canadian, the third a Rumanian (last ı Cluj), and Mme. Dudarova, who conducted wonderfully for me Schumann and Shostakovitch Concertos. After playing three tos in one evening in both Kiev and Tbilisi, I almost felt as ı I had an evening off playing just two concertos at one concert, u. The orchestra supported me splendidly in the concertos, and in lively fashion throughout.

so back to Moscow after an incredibly rich and soul-satisfying ence on this trip through the vast and varied reaches of this huge y. From this visit I have memories and souvenirs which will last me.

a final appearance on Moscow Television, I was able to relax a t in the capital, and enjoy the festivities of the May Day Holidays. ıst three evenings in Moscow were spent at the Bolshoi, at the tsov Puppet Theater and listening to the Moscow Chamber Orches- der Barshai. What a climax to my sojourn!

day before I left the Soviet Union, I was taken to Zagorsk. The ıes, and all the auxiliary buildings there, are strikingly beautiful. es were going on, and there were many visitors. I remember the as being completely dazzling, row upon row of them, from floor ting. It was a moving experience to visit this old Russian shrine. as with a real misting of the eyes that I took off from the Moscow rt the next day en route to Berlin. It was exactly a month and a fter my arrival. Looking back, I wish to express my deepest thanks the wonderful people who made this tour possible. To Steinway, friends at *Gosconcert*, to the Philharmonic Societies in all the to the orchestra musicians and conductors, and to that great hearted body, the marvelous Russian public, my profound grati- ınd appreciation. Until we meet again, a flame of friendship will in my heart. *Dosvedanya!*

LETTERS TO THE EDITOR

On this, the twentieth anniversary of victory over Nazi Germany by the Allied Powers, we publish a few letters from Soviet citizens in which they express their concern about punishment of those Nazis who started the war, who participated in the killing of millions of innocent people. The letters appeared in the Soviet press or were sent to *Soviet Life* magazine. One of the letters (from Professor Andrei Piontkovsky) was addressed to *Time* magazine.

JUSTICE MUST BE DONE

If Hitler were alive today, he would be perfectly free to walk any street of West Germany after May 8 of this year. Inconceivable? Blasphemous? Monstrous? But this is the meaning of the amnesty the FRG is going to grant to the nazi criminals, the amnesty which thousands of the mad fuehrer's henchmen, escaping punishment to this day, will gladly avail themselves of.

I read in the press that Mr. U Thant, UN Secretary General, publicly condemned that decision as going against the United Nations resolution and international law. Austria, a small country, has adopted o law denying ony amnesty to the nazi monsters. The German Democratic Republic adopted such a law long ago. Can it be that the Great Powers, which fought shoulder to shoulder against the nazi aggressors, will permit the war criminals, guilty of the destruction of millions of innocent lives, to go unpunished?

Miron Sverdlov
Moscow pensioner

My heart was heavy when I brought myself to take pen in hand. Wrath and sorrow made it difficult for me to express my thaughts and feelings clearly. Isn't it a disgrace that many of the former fascist pogromists and murderers are walking the earth freely to this day, escaping a just punishment?

The village of Ivot, where I was born and grew up, was razed to the ground by the Nazis; the villagers (those who remained alive) were turned into cripples or orphans.

The memory of March 10, 1943, haunts me still. A punitive detachment arrived in Ivot on that tragic day and the Hitlerites arranged o wholesale massacre of the defenseless women, children and old folks. More than 300 people were shot down, hanged or burned alive.

How can one forgive the fascists for such outrages?

Pavel Pishchik
Konotop, Ukraine

When Soviet troops liberated Ozarichi in March 1944, there were 15,960 children under the age of 13 still alive in the nazi death camp there: the Hitlerites had not had enough time to destroy them all. I was one of those saved.

I became an orphan at nine. All those near and dear to me were killed by the nazi monsters and I myself was put into the Ozarichi camp, which wos a real hell. People were cruelly beaten up and starved there; dogs were set on them. The Nazis invented newer and more exciting ways of killing prisoners. Once they brought bread into the camp and laid mines under it. The hungry prisoners rushed toward the food and perished on the mines.

The Nazis were destroying whole nations coolly and in a planned manner. They killed six million Jews in Europe. Byelorussia was the first victim of their attack on the Soviet Union. In the implementation of the "Ost" plan the Nazi Command intended to destroy three-fourths of the Bylorussian population and to turn the rest into slaves.

How can anyone think that this can be forgiven?

Antonina Moroz, teacher
Minsk, Byelorussia

TO THE PROSECUTOR

of the Allied Powers
at the Nuremberg Trial
of the Main Nazi War Criminals

Dear Colleagues:

You remember how unanimous and concerted were our joint activities in Nuremberg. There, at the international trial, faced with the evidence of the monstrous crimes perpetrated by the Hitlerites against peace and humanity, the idea could not enter our minds that anyone would dare to apply to the nazi war criminals superannuation as to ordinary criminals. . . .

All of us were in solidarity with the Chief Prosecutor for the United States, the late Justice Robert Jackson, when in his introductory speech he said that punishing several top nazi leaders and leaving unpunished in postwar society the whole web of nazi organizations would mean encouraging the possibility of developing the germ of new nazism. He was right then too when he said that the accused in Nuremberg personified the sinister forces that could lurk in the world long after the bodies of these people would turn into ashes.

Unfortunately, for many years a considerable number of the Hitlerite war criminals avoided just punishment, and now the FRG Government intends to apply to them superannuation, to bury in oblivion the gravest crimes perpetrated by German fascism, and to actually grant a complete amnesty to the nazi criminals.

The peoples of the whole of Europe, the public opinion of the entire world are coming out against this action. To leave the Hitler war criminals unpunished is an insult to the memory of many millions of murdered ond tortured-to-death victims of Hitlerism, is a blasphemous outrage against them, and is fraught with danger to peoce and the security of the peoples. . . .

We call on you to protest together with us against employing the statute of limitation in the case of the nazi war criminals and thus come out in defense of the principles proclaimed by the Charter of the International Military Tribunal and the sentence passed by that tribunal, which was fully endorsed by the decisions of the General Assembly of the United Nations. . . .

Nazi criminals must be duly punished!

R. Rudenko
USSR Procurator General
Former Chief Prasecutor for the USSR at the Nuremberg Trial
Former assistants to the Chief Prosecutor far the USSR at the Nuremberg Trial:
L. Smirnov, Chairman, Supreme Court of the RSFSR;
Professor D. Karev, Doctor of Science (Law), Dean, Law Faculty, Moscaw State University

Moscow, February 27, 1965

Sir:

I would like to make several remarks concerning the article "When Does Justice End?" (*Time*, December 25, 1964).

I consider that the intention of the West German government to terminate the criminal prosecution of the nazi war criminals runs contrary to international law. The references to Article 67 of Germany's Criminal Code of 1871 (on the 20-year limitation for instituting criminal prosecution) do not hold water. One should take into account the specific nature of the crimes perpetrated by the Nazis. These were not crimes against some individuals or the law and order in some country, these were crimes against humanity. That is why their criminal liability should be determined on the basis of international law, and not on the basis of the criminal codes of a single country.

There are a series of international agreements determining the liability of the nazi war criminals. For instance, the 1943 Declaration on the responsibility of the Nazis for the crimes perpetrated by them (it was signed by the heads of government of the USA, the USSR and Britain) pointed out, among other things, that "the three Allied Powers would certainly find them even on the edge of the world and place them in the hands of those who accuse them, so that justice would be done." This clause is of an absolute nature, and the Declaration

(continued on page 58



After the Elbe linkup. May 1945: American and Soviet troops meet again in the town of Torgau.

ARMS OF FRIENDSHIP



Left to right: Ex-fighter pilot Richard Darlington (Philadelphia host) and sister, Lt. Gen. Victor Poznyak, Col. Sergei Borzenko, and Grant Pendill (officer in the Arms of Friendship) and Mrs. Darlington.

I MADE my first visit to the United States in the late fall of 1964 with a delegation of Soviet war veterans. Lieutenant General Victor Poznyak, Hero of the Soviet Union, Lieutenant Colonel Irina Levchenko, guerrilla commander Ovidi Gorchakov and I were welcomed at Kennedy Airport by representatives of the Arms of Friendship organization.

We spent the night at Paul Farrell's place. He had been to the Soviet Union and published his fine pictures of Moscow and the article "Let Us Trade with the Soviets" in a New York business journal. During the war Captain Farrell commanded an antitank battery, served with General George Patton's army, stormed Cherbourg and took part in the liberation of France.

"I scratched my name on the top of the Eiffel Tower," he reminisced. "Young people like to leave memories of themselves."

We talked far into the night about American and Soviet military cooperation in the Second World War. Paul commented on the battles of Moscow and Stalingrad, the tank slaughter at the Kursk Bulge, Kishinev and Jassy. He has an excellent memory, spoke of Soviet Marshals Zhukov, Konev, Sokolovsky and Malinovsky, mentioned Soviet aces Pokryshkin, Kozhedub and the Glinka brothers, popular in the United States. I told him about my first meeting with American airmen whose flying fortresses were stationed at the Poltava airfield. From there they flew bombing missions to Germany. They were wonderful people, made friends with our officers, and many of them were decorated with Soviet orders.

Paul Farrell was rather surprised that we knew the names of American commanders and generals—Courtney Hodges, Matthew Ridgeway, Lawton Collins, Devers Jacobs—and were familiar with details of the African campaign, the landing in Sicily, the invasion of Normandy, the fall of Cherbourg, the crossing of the Rhine.

The next day we left New York for Princeton, where we were to meet veterans of the 69th Division at the university restaurant. The 69th had fought in the Ardennes, freed Leipzig and was the first to link up with the Soviet troops on the Elbe.

After handshakes and hellos, we took our seats at a candlelit table.

Irina Levchenko sat with the wives of the veterans. Irina—who had commanded a tank, a company and, finally, a tank battalion in the war—charmed her hosts. They were surprised to learn that she had graduated from two Soviet military academies and to see the many decoration ribbons pinned to her jacket. Irina, driving a Sherman tank, had made contact with tankmen of the First U. S. Army west of Berlin.

Seated opposite me at the table was retired Colonel Edward J. Leary, a red-enameled Soviet Order of the Red Star shining on the lapel of his coat. Former sergeants Loar Quickle and Sol Rosenblit sat beside me.

Colonel Leary pulled a photograph out of his wallet and said, with a smile: "Here it is, the historic moment!"

The photo showed Major General Vladimir Rusakov, commander of the 58th Krasnogradsk Guards Division. which was awarded the Order of the Red Banner, and Major General Emil Reinhardt, commander of the 69th Division of the First U. S. Army. Surrounded by their officers, the generals were shaking hands. Brigadier General R. V. Maraist stood under an American banner which was presented to our division as a symbol of combat friendship and in memory of the blood shed



Gen. Charles Bolte (center) with wartime partisan leader Ovidi Gorchakov and Lt. Col. Irina Levchenko.

BY SERGEI BORZENKO

Member of the Presidium
Soviet War Veterans Committee

Hero of the Soviet Union

by Russians and Americans in the fight against the Nazis, the most ruthless enemies of mankind.

I remembered that truly historic moment. I was a *Pravda* correspondent at the First Ukrainian Front at the time and took personal pride in the fact that the troops on my front were the first to link up with the Americans.

The Soviet people and the whole world awaited the linkup of the two Allied armies. This was something I had to cover. I took a liaison plane from a Berlin suburb to the small, half-destroyed and deserted town of Torgau, Saxony. What happened there on April 25, at 1:30 P.M. was one of the great events of the war. Contact established, the Allied armies broke Hitlerite Germany in two. The frontline newspaper *Za Chest Rodiny* published Veniamin Briskin's cartoon showing a serpent chopped in half.

The roads were crowded with homebound former concentration camp prisoners—Poles and Norwegians, Italians and Serbians, French and Belgians, Czechs, Danes and Greeks. Europe rejoiced in its freedom regained.

I still have a sleeve chevron of the division—a violet shield edged in red silk with the figure "69" inscribed in a square. It was given to me in exchange for a five-pointed star by Lieutenant Robertson, commander of the American patrol that met up with our scouts north of Torgau.

The first Russian and the first American to shake each other's hand on the bank of the Elbe were Senior Lieutenant Grigori Goloborodko and the commander of an American scout group, Lieutenant Buck Kotzebue. They were the heroes of the day, much sought after by Soviet and American cameramen. In Princeton 20 years later I recalled all this, and my hosts produced sheaves of snapshots that showed them standing side by side with Soviet soldiers.

What a wonderful thing memory is! In my mind's eye I could see a vivid and sharp picture of that 20-year-old event—the narrow Elbe covered with iridescent spots of oil, its bridges blown up, and American GI's in battle dress, nailed boots, the white insignia on their steel helmets.

The Americans hugged the Russians, and the Russians hugged the Americans. This was the apotheosis of combat friendship and soldiers' brotherhood. For four years and on different fronts they had been fighting the common enemy who had stained half the planet with blood.

Sergeant Loar Quickle told me that 300 American veterans of the 69th Division had raised funds for a trip to Europe. They want to meet Soviet veterans in Torgau next August. Many of them are bringing their wives and children.

The veterans had no doubt but that their division was the best in the American Army, and they said so. But then, so did we. Each of us thought his unit the best in the Soviet Army.

"Be sure to see General Bolte in Washington," Colonel Leary said. General Bolte is one of the founders of the 69th Division and a leader of the Arms of Friendship organization.

In Philadelphia we visited the Veterans Administration and were shown through a very modern eight-story hospital for veterans.

We also met American veterans in the mining town of Hazleton, Pennsylvania. All former soldiers, we talked of peace, friendship, the nuclear weapons ban, general disarmament and the need for closer contact between the veterans of our two countries.

And in Washington we called on General Charles L. Bolte. He is one of the few generals who do not want war. And when generals do not want war, that is a tribute to the nation's good sense. General Bolte told us he was glad to see that relations with the Russians are improving.

In Washington our delegation visited Arlington Cemetery and laid a wreath of red carnations on President Kennedy's grave. A gold-lettered inscription on a white moire ribbon reads: "To American Veteran John F. Kennedy from the Veterans of the Soviet Union."

At the State Department we were received by Under Secretary of State Averell Harriman, who served as Ambassador to the Soviet Union during the war. An old diplomat, well known in the Soviet Union, he recalled the joint struggle of our two peoples against German fascism. In the two last world wars fate brought us together as allies, Harriman said. When we left, he presented each of us with his book *Peace with Russia*. The autograph on my copy reads: "May your visit bring better understanding between our two continents and the fulfillment of our peoples' hopes for peace."

"Arms of Friendship"—that is what the American veterans of World War II, our comrades in arms in the struggle against German militarism, call their organization. And when I recall the firm and sincere handshakes on American soil, I see the depth of its meaning. We soldiers who faced death and lost our comrades in battle have to extend a hand of friendship to each other so that our children, boys who grew up after the war, need never lie pinned to the ground by artillery fire, need never hear the whine of shells, need never be burned alive in the whirlwind of nuclear blasts. A hand of friendship, a pledge of peace!

THEY SHALL ALWA

IT IS a bitter truth that only the dead remain eternally young. In war death comes unexpectedly; there is no logic to it, only pure chance. Age does not count. The photograph of a young soldier remains as a token of the everlasting youth of the fallen warrior. Love remains suspended, school uncompleted, inventions unperfected, poems unfinished. If the tale about the water of life were to come true, if the dead could be restored to life, how many happy lovers there would be, scientific discoveries made, books written! War has robbed mankind of all of this.

In Moscow's Central House of Writers there is a plaque on which the names of writers who did not return from battle are inscribed in letters of gold. Among the names are not only those who won recognition before they left, but also those whose verse was read only at student gatherings. They had never seen their books, never held an author's copy, and on the bookshelves there is no presentation volume with their signature.

The war cut short their lives, wrote finis after their last, often unfinished, poems, which were kept not in literary archives but in the loving care of their comrades in arms, who, on returning home from the war, gathered together the fragments of their legacy. Now their names are known to the whole country—Pavel Kogan, Mikhail Kulchitsky, Nikolai Mayorov, Nikolai Otrada and Vsevolod Bagritsky.

Their youth has passed into the history of the thirties, when the air smelled more and more of gunpowder. Their youth belonged to prewar times, but their verse was marked by the threat of war. They led different lives but shared a common foreboding and a common fate.

Pavel Kogan wrote:

And when we fall,
We'll stay there where we fall.

.....
The* Internationale *our final whisper,
To hit the dust and even not expect
To rise again, or be set down in the annals,
No glory to our near ones to reflect.

In another poem he wrote of his generation:

. . . The time will come, when in the fifties,
The artists will endeavor to portray
The ones who gave their all and perished
Upon the distant banks of the Spree.

Pavel Kogan did not perish "upon the distant banks of the Spree" but on the hill Sakharnaya Golova, near Novorossiisk, in 1942.

He wrote poems about the war he foresaw, but when he found himself at the front, there was no time for poetry; it had to be put aside until some future. But for him there was no future. His last poem was dated 1941.

Letters that he wrote from the front have been saved. They supplement his verse:

". . . I wish I could send you a piece of this frontline night, riddled by machine guns and rifles, torn by mines. You are in it next to me. Half of my calm courage must be due to your presence. . . . Three hundred yards away the land has been defiled by enemy boots. The land where I was born and first heard the song of birds. And so you exist side by side—my love and my loathing. . . ." ". . . In a vill abandoned by the Germans, the floor of the ruined school was a ye deep in torn volumes of Pushkin, Goethe and Shakespeare. I picked a page—Heinrich Heine's portrait seemed to wink at me. Here were t two deaths of fascism—the guns of my comrades and the mocking sn of Heine." ". . . I deeply love life . . . But if I were to die, I'd die a man should. We were taught in childhood to maintain human digni And we can no more cast it off than forget how to breathe." ". . . Al ten miles from here lies the country where you and I were born. We m have loved intensely in our youth. I am forced to think so by the i tensity with which I have learned to hate. I often think of the fact th we are the first generation of Jews in several thousand years to have homeland. That is probably why I love this land with the intensity a first love. It is hard and bitter to think of death here at the front why I might not even finish writing this letter—a mortar shell will pie I'll wriggle my legs like a spider, they might be torn off, I'll say some thing utterly absurd, and then the extremely abstract state known a death will ensue. But sometimes I'm full of ambition. . . . Dear friend if something happens to me, write about me, a fellow who desired muc could do a good bit and had done little."

The correspondence is broken off . . . The triangular soldier's lette reached the addressee after it's author "had fallen prone among th withered grasses."

He desired very much, could do a good bit and had done little. . . The word "little" is hardly apt, for in art there is no inevitable trans formation of quantity into quality. Pavel Kogan's poetic legacy hard exceeds four or five thousand lines, but his voice, losing none of it poetic sonority, has penetrated time. He wrote of himself, and now h verse is perceived as a confession of the generation which bore the brun of the great patriotic struggle in World War II.

. . . And let them call me narrow-minded,
I shall offend their high esteem.
I love my land, the air of Russia,
The purest on the earth, I deem.
I'm sure that nowhere in creation
Another such will e'er be found
Where sunrise freshness is so fragrant,
Like incense spreading o'er the ground.
And where does nature make such birches,
As in my land in summertime?
I'd die, a vagrant, of nostalgia
In any palm-infested clime.

Pavel Kogan was a native of Moscow. **Mikhail Kulchitsky** had come to Moscow from the Ukraine. He had come to attend the Institute of Literature and had found lodgings in a basement where, in his words, there was "a showcase of moving footwear." Hard work and lack of home comforts could not obliterate what to him was paramount—poetry. He could go without eating, but he could not go without writing poetry. To this he gave himself completely, keenly feeling the times and attempting to express what he felt. Perhaps it is this that makes his verse so impetuous.

Mikhail Kulchitsky was a "romanticist of ultimate assaults," a man who believes that "the most terrible thing in the world is to be contented." Little wonder that he wrote with enthusiasm:

. . . I sing to young men like Eden,
In a far and distant land,

Of men who had to leave
their sweethearts
And even half-smoked
cigarettes.


Pavel Kogan


Mikhail Kulchitsky


Nikolai Mayorov


Nikolai Otrada


Vsevolod Bagritsky

THE TWENTY

BY YURI ROZENBLUM

Who write poems in the morning
And in chilling draughts drink them down.

It was only natural that he should volunteer on the very first day of the war. He was assigned to a frontline newspaper but thought that he was not doing enough. So on December 26, 1942, Second Lieutenant Mikhail Kulchitsky, who had not graduated from the Institute of Literature but had graduated from a mortar school, left for the front. The same date marks his last poem:

. . . Buttons on the soldiers' tunics glisten,
Scaly medals heavy on the breast.
What are medals?
May the homeland prosper,
Dearest homeland that we love the best!

We do not know where he fell. War robbed him of life, and death shrouded him in mystery.

. . . We were tall, our hair was flaxen.
You'll read in books and voice regrets
For men who had to leave their sweethearts
And even half-smoked cigarettes.

These lines were written by **Nikolai Mayorov.** He called his poem "We," for he spoke of boys, future soldiers, who were destined to take up the rifle instead of the pen. He knew that there was little resemblance between war and a military parade and that many would leave for the front never to return to kiss their sweethearts or smoke their cigarettes. Perhaps that is why there is such love of life in his verse:

I fell in love with pithy, weighty words,
With spacious August, butterflies a-flitting,
With dreamy gardens full of luscious grass
And throaty nightingales upon the branches sitting.

"My voice is harsh with the sound of metal," proudly wrote Mayorov. That "sound of metal" imparted a virility to his verses. They give us a picture of a youth learning to live, learning to love and to hate.

Nikolai Mayorov was killed near Smolensk on February 8, 1942. He was one of those who paid with their lives to keep the fascists out of Moscow. From the front he wrote to his friend: ". . . You wish me courage in battle. Thanks. But you know I hardly shine at this. Still, I'll do what I can."

The budding poet **Nikolai Otrada,** a student at the Institute of Literature, knew while taking his history exam that the next day he would be leaving for the war. The examiner was not satisfied with his answers and gave him a barely passing mark. Otrada said: "I'll take the history exam over when I come back, but now I'm leaving for the front to make history."

He never bettered his history mark but went down himself in the history of the war and the history of Soviet poetry with the highest mark for his work and his life.

. . . Life's so good,
It's worth our utmost effort
To make nature bloom for all it's worth,
So that life would bubble
Like a fountain,
Sweeping all that's rotten from the earth.

As for fame, you needn't worry,
It will not be tardy with its birth.

But fame was tardy, arriving only after Nikolai Otrada was dead.

The well-known Ukrainian poet Platon Voronko, who witnessed Otrada's death, said: "Our platoon was surrounded, and the enemy shouted 'Surrender!' Nikolai shouted 'Muscovites, don't surrender!' and led the attack. The platoon broke through, but Otrada's body remained a black spot on the snow. Then Aaron Kopstein, also a student and a budding poet, looked at us with his compassionate eyes, got off his skis, took the sledge strap in his hand and began crawling toward Otrada. Snipers shot at him. When he was on his way back with Nikolai, one bullet grazed his shoulder, another got him in the head. . . ."

They could argue at seminars, quarrel, get angry at each other, but in battle they stood side by side; there was no "I," only "we."

If you are injured in battle fierce
Or wounded in a furious raid,
Your friend will tear his shirt for you,
Your friend will bind your wounds for you,
Your friend will come to your aid.

This was written by **Vsevolod Bagritsky,** the son of the famous poet Edward Bagritsky.

His was a hard life. At the age of 12 he lost his father and learned early the meaning of grief. He cherished the lines his father had dedicated to him.

I know you were born with a soul crystal clear,
And you're on the threshold of times full of cheer.

He had a "crystal clear" and noble soul and a great heart. He did not succumb to adversity. There was little "cheer" those days, but the times strengthened his character, and he chose the hardest job of all—the front. "I shall see and have already seen," he wrote from the front, "what man will never again have to witness. Our victory will rid mankind for a long time of that greatest crime—war." He wrote this ten days before his death.

He was buried near a woods at a crossroads created by the war, under a spreading pine tree, on which the artist Yevgeni Vuchetich carved the inscription:

POET-SOLDIER VSEVOLOD BAGRITSKY
killed 26 February 1942

Eternity I'll not accept,
Why have they buried me?
I'd no wish to go into the earth
From earth that I loved ardently.

These lines are by Maritsa Tsvetayeva, whose poetry Vsevolod loved.

They began their lives as poets and ended them as soldiers. They had no time to *write* their most important, for each one cherished a dream, but they *did* the most important—they kept their homeland free.

Nikolai Mayorov once wrote:

We know the regulations all by heart.
What's death to us! We succumbing to death are higher.
Within our graves we all have toed the mark
And wait for orders for another start.
And let all know that he is but a liar,
Who claims the dead to living do not hark.

(continued from page 53)

holds no reservations on limitations for the nazi war criminals. The Rules of the International War Tribunal, adopted by the four Allied Powers on Aug. 8, 1945, also do not specify any limitations for the nazi war criminals. The principle of inevitable punishment for war criminals was also reaffirmed by the UN General Assembly resolutions in 1946 and 1947.

In its Article 25, the FRG Constitution directly states that the norms of international law have a priority over the internal laws of the FRG. By virtue of the Instruments of Surrender, Germany (and the Federal Republic of Germany is one of the legal heirs of the former German Reich) had pledged to carry out the decisions of the four Allied Powers of the anti-Hitlerite coalition, decisions dealing with the elimination of the consequences of the Second World War, including the question of punishing the nazi war criminals. Therefore, if the FRG Government applies the statute of limitations to terminate the prosecution of nazi war criminals, it will thereby violate one of the clauses of its own Constitution and its international pledges.

Respectfully yours,
Andrei Piontkovsky
Professor of Criminal Law

Moscow

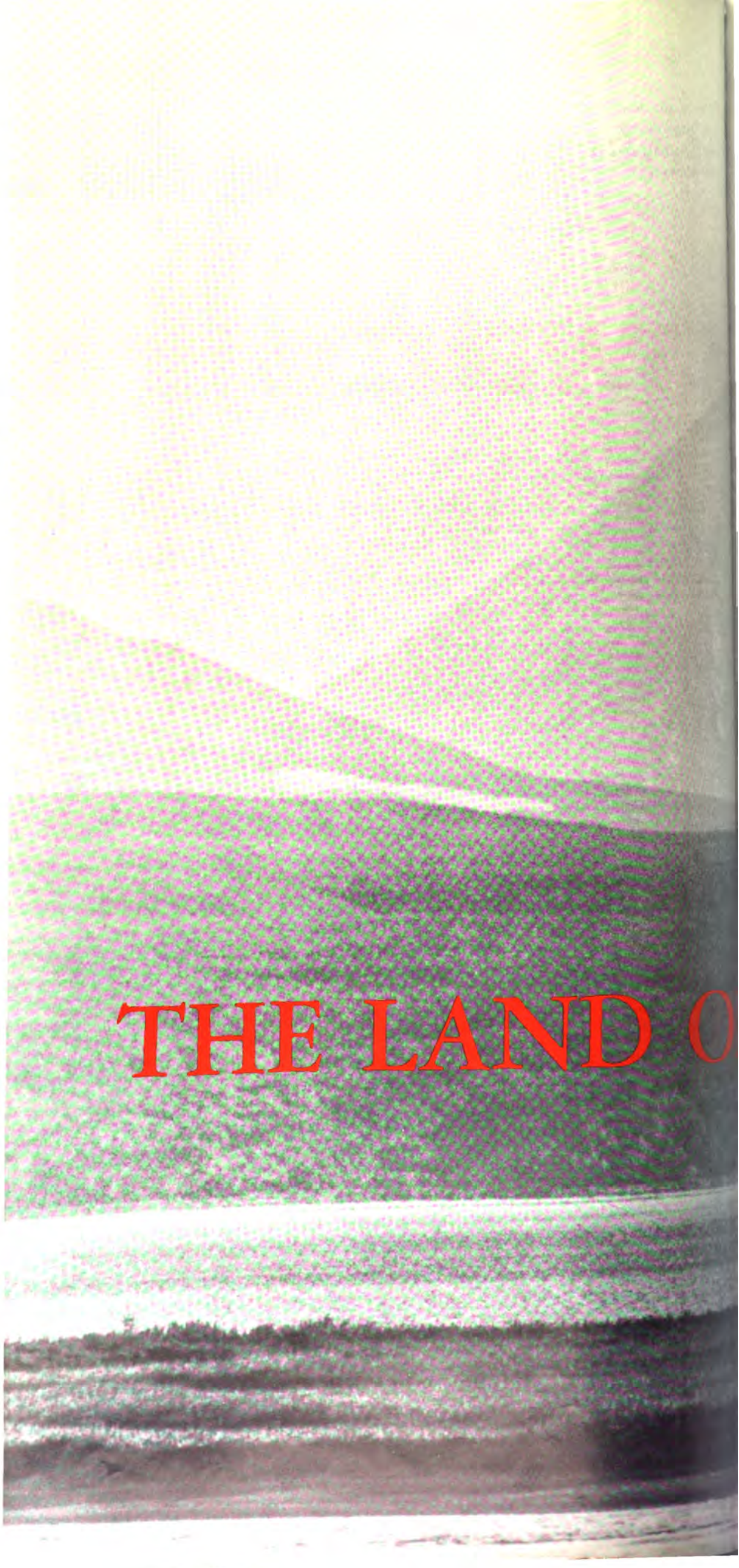
RUSSIAN PATRIARCH PROTESTS

The Russian Orthodox Church condemns the intentions of the Federal Republic of Germany to discontinue, as of this coming May 8, in view of the statute of limitations, the meting out of retribution to nazi war criminals for their atrocities.

The blood of the slain, the flames of peaceful dwellings, and the tears of the robbed and dishonored all cry out for great and just retribution. The ancient prophet Isaiah, that adamant guardian of justice and unmasker of evil doings, said. "Woe to the wicked! It shall be ill with him, for what his hands have done shall be brought to him." (Isaiah, III,xi).

In the eyes of our Christian conscience the intentions of the West German authorities to terminate the legal prosecution of the criminals of the past world war cannot be taken as an act of mercy; it is merely the blasphemous consignment to oblivion of unprecedented inhuman crimes. Everlasting infamy has branded the war criminal of German fascism. The unfair and unlawful act that the FRG Government is taking is also pregnant with tangible peril to peace in Europe and throughout the world generally, as the amnestying of war criminals legalizes their participation in the public and state life of the FRG, and will consequently have inevitable effects on the destiny of peace.

Alexius, Patriarch
of Moscow and All Russia



IN THE Soviet Far East is a peninsula washed by two seas, the Bering Sea and the Sea of Okhotsk. The peninsula looks like a hand held out to the Pacific Ocean. This is Kamchatka, the "land of fire-breathing mountains." Forty years ago it was called the "land without men," because its population was one person for every one and a half miles. These uninhabited miles were very rich in fur, gold and curative waters, but to get there from the center of the country took a three-month journey across the entire continent.

Today it takes 14 hours.

The City

A flight across Central Europe and Asia, and you make the jump from Moscow's noisy thoroughfares to the easternmost city of our country, Petropavlovsk-Kamchatski (called the City by its residents for the good reason that thus far it is the only one on the peninsula).

It is very beautiful, this maritime city, with its unique background of three harmless-looking white-capped volcanoes: Avachinskaya, Koryakskaya and Vilyuchanskaya. But the smoke issuing from their cones is ominous evidence of their real character. Two years ago Mt. Koryakskaya flew into a temper, with the result that the city was almost eight inches deep in ashes. The residents quickly cleared the streets—they have machines ready for the purpose. But they were not the least bit upset by the eruption.

Petropavlovsk boasts the only Institute of Volcanology in the world. The whole peninsula is its laboratory: 129 volcanoes, of which 22 are active! The director of the Institute, Corresponding Member of the USSR Academy of Sciences Boris Piip, warned the peninsula against an "ashfall" from Mt. Koryakskaya three months in advance. Kamchatka knew seven months ahead of time that Shiveluch would act up last May.

But there the uniqueness of Petropavlovsk ends. Otherwise the city is everything a regional center should be. It has two institutes, six specialized secondary schools, 10 polyclinics, a dozen motion picture theaters, a playhouse, a bank, any number of stores, and building cranes wherever you cast your eye. The city is in perpetual construction.

Petropavlovsk is one of the largest Soviet ports on the Pacific Ocean. From your hotel window the fishing boats and passenger ships seem to be anchored at the hotel door. Further out you can see the sparkling blue of Avacha Bay, one of the finest in the world. Kamchatkans say you can crowd the navies of the whole world into that harbor. And the keen-witted ones add that it is deep enough to make a fine cemetery for all those navies on that great day when the world disarms.

Fishing on the High Seas

Kamchatka's chief industry is fishing. Its fleet accounts for close to a billion pounds of fish a year, 15 times that of 30 years ago.

The fishing used to be done in the rivers and offshore. Now the sailing range of the peninsula's new vessels is practically unlimited. Kamchatka's trawlers ply the Sea of Okhotsk and the Bering Sea, go out as far as Bristol Bay. Aside from its state-owned fishing fleet, Kamchatka has many fishing artels. The Lenin Artel was set up in 1930 not far from Petropavlovsk on the shore of a bay poetically named Gray Eyes. At one time the carved wooden figure of a girl with gray eyes stood there peering out at the sea.

Among the first to join the artel was Mikhail Staritsyn, a young, fair-haired mechanic and skilled helmsman. Today he is the artel's chairman, a man who is consulted by all the artels around whenever the research institute broadcasts the news that the herring migration has started. He is a legislator besides, a deputy to the Supreme Soviet of the RSFSR.

"We began with barracks and now have multistoried houses," he told me. "We used to fish in wooden boats, and now we have modern ships and use reconnaissance planes. A single seiner of ours hauls in as much fish at one time as all the fishermen of Kamchatka used to catch 10 years ago.

"Some poetic souls say that a fisherman's home is the sea. Nonsense. The fisherman's home is on land. And that home has to be good, and he should be there as much as possible. That is why we are doing our best to make our trips shorter so the crews of

Miss Catherine Montcalm, Seattle, Washington, writes: "I would very much like you to do a long article with pictures on the Kamchatka Peninsula and the people in Petropavlovsk and the rural areas. That is one of the areas of the Soviet Union in which I am most interested."

00 VOLCANOES

BY MYUDA DEREVYANKINA
PHOTOGRAPHS BY VADIM GIPPENREITER





Some of Kamchatka's 900 plant species are of preglacial origin. Its forests are thick with grotesque stone birches.

the larger ships can change more often.

"Our artel nets a tenth of the peninsula's catch. We fish for humpbacked and Siberian salmon, those Kamchatka delicacies, and for ordinary Pacific herring, halibut and plaice. Salmon fishing is the most lucrative, of course, but the reserves are diminishing.

"Our annual income runs to nine million rubles, each fisherman earning from 4,800 to 5,000 rubles a year each. We have bad months too, naturally, fish being the capricious creatures they are. Those times we pay the men a set minimum.

"Reliable vessels, aircraft and a special life-saving service make our work safe enough. But the sea is the sea, and every time we pull out, the 'Gray Eyes'—the fishermen's wives —are there on the shore, their eyes as gray-blue as the waves of the Bering Sea."

The Land

"Welcome to Nachiki!" is the legend on a large strip of red bunting over the entrance to a village in the heart of Kamchatka. It was put up 19 years ago to mark the opening of one of the first collective farms. Houses appeared in the narrow valley, and two big poles were stuck into the hard virgin soil to make a gate.

The first one through that gate was a bear, a big brown bear, the acknowledged master of those parts. The bruin sniffed the freshly-plowed soil in disbelief, shook his head, and lumbered off. The trappers did not have the heart to shoot down the farm's first visitor. As for the animal's disbelief, he had plenty of grounds for it.

In 1914 a government commission concluded that "there are no prospects whatever" for developing agriculture on Kamchatka. Since the peninsula was first settled, people said that its soil, frozen right down to the core, would never grow anything.

Leo Abashidze, chief agronomist of Nachiki, says Kamchatka can grow almost anything, and does.

"Some of our crops yield as much as those on the mainland," he told me. "We get fine yields of potatoes, kale, beets, rye and oats right in the open soil. And this in our rigorous climate, in country where the earth is anything but black. I'm from the South myself, from the Caucasus. After graduating from college, I asked for a job in the North, where an agronomist has something to fight for. Our soil at home is so fertile that if you stick a piece of wood into the ground, it will grow into a tree. In these parts you've got to pioneer. Every step you take is the first."

That first step is more often than not a step to victory over nature. If you've grown beets, you've won a victory over the earth. If you've brought in a rich catch, you've won a victory over the sea. Even giving a concert in the tundra is a feat of valor, for you have to win a victory over the inevitable snowstorm. But each of these victories over nature makes man still bolder and surer of the stuff his dreams are made of.

Nadezhda Hill

Nadezhda Kulikova, doctor's assistant in the village of Sedanka, and Makar Tynetygin, a zootechnician, held their wedding party at the home of the groom's parents. Makar's father, a Koryak reindeer breeder, gave the bride lovely Koryak costumes, dog and reindeer teams, and—a hill.

"See that big blue hill beyond the lake?" he asked Nadezhda. "It is very beautiful, and in summer it is covered with flowers and berries. It has no name, so today we reindeer herdsmen are giving it to you. From now on it will be called Nadezhda Hill."

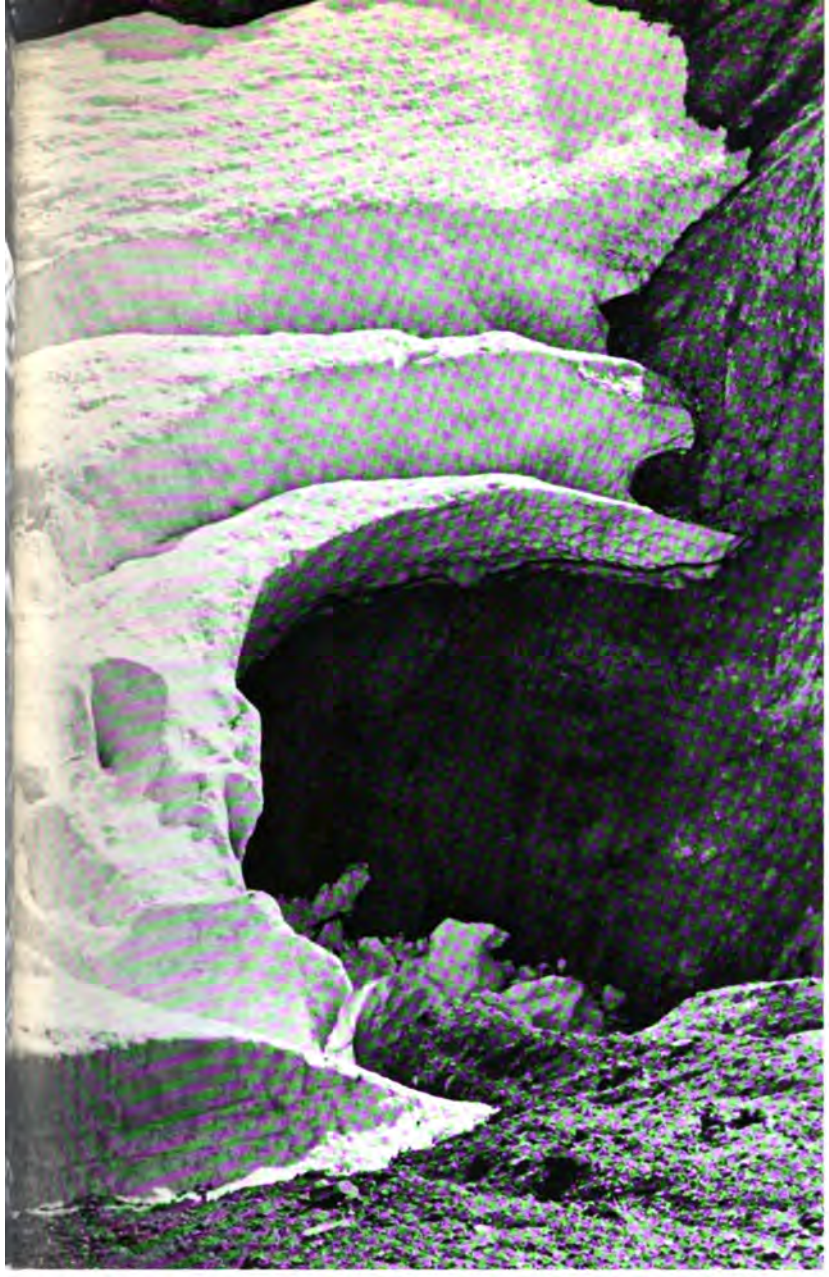
That is how a new name appeared in the northern part of the peninsula.

In winter this region of Kamchatka is one big, snowy expanse of tundra. But in the spring the tundra flowers appear and birds come flocking there from warmer climes. The noise they make is so loud that the sun cannot get to sleep and the Kamchatka nights are luminous white.

The Koryak National Area is in the north of Kamchatka. From time immemorial the Koryaks have been nomad reindeer breeders, fishermen and fur trappers. A small tribe at the bottom of the ladder of civilization, they could not survive the rigorous conditions of life in the extreme north. At one time Sedanka-Kochevaya was a village of no more than 100 reindeer-skin tents, a small herd of reindeer and a few dog teams. The nomads loaded their tents onto reindeer-driven sleighs and roamed from one place to another with their herds. Hunger and disease was killing them off.

Now some 700 Koryaks and Russians live in the village. It has a hospital staffed by five physicians, a seven-year school and a boarding school. Today it is called Sedanka (Kochevaya means "nomad"). Out of the 100 tents only one is left, retained as a momento of the old times. The people now live in 220 well-appointed houses.

Their way of life has changed since they



The Abero volcano. There are 129 on the peninsula, 22 of them active, which the Institute of Volcanology studies.



Every two-and-a-half hours Velikan, the largest in the Valley of the Geysers, ejects a 165-foot column of hot water.

settled down. At the age of seven, a Koryak boy used to start tending reindeer now he goes to school. From the moment of birth, Koryak children are looked after by doctors and teachers. Until they are 18 they are supported completely by the government. There are no longer any illiterates in the tundra.

The natives of Kamchatka bear Russian names brought there centuries ago by the first intrepid travelers and missionaries; they had nothing else to leave the people of these distant parts. In their wake came hordes of merchants and traders who robbed the country and its untutored people with impunity.

Soviet power gave the Koryaks their freedom and independence in the form of an autonomous national area. It gave them, among other things, a written language and medical care. Kamchatka never had more than two doctors, both of whom lived in Petropavlovsk. Now this outlying region has 34 doctors for every 10,000 people—more than West Germany. Almost all Koryak villages have electricity and radio. The 6,000 people in the Koryak National Area have a representative in the Supreme Soviet of the USSR.

Komandorski Islands

The Komandorski Islands, lying off Kamchatka, characterize the peninsula's uniqueness. No ship has ever landed on these islands willingly; they are so rocky and thickly veiled in mist that a landing is made in three stages: from ship to pontoon to motorboat.

On Medny Island you can safely pat a wild polar fox and watch the salmon run in a river still unnamed. On Bering Island, if you are lucky enough, you will see the *kalans*, a rare species of sea otter, in the coastal grounds. But the highlight of the Komandorski is its seals, of whose beautiful fur both poachers and women dream.

The fur seals were killed off in such large numbers by local hunters, the Japanese and a Russian-American company that by 1930 they were almost completely exterminated. Seal fishing is now strictly regulated.

Some 20 miles from Nikolskoye, a large village on Bering Island, is one of the largest of the fur seal's breeding grounds. Not for one moment does the roar of the thousands of animals there abate. The huge 660-pound males surrounded by their harems bellow continuously, while the young bachelors growl and glower at one another. The babies—or "blackies," as they are affectionately called by the seal hunters—join their squeaks to the chorus. Only the bachelors are killed, by a precise blow on the nose with a club after they have been separated from the herd. The breeding season ends in August, and at the end of October the seals migrate to warmer waters.

There is plenty of life on the Komandorski Islands. New villages are going up with hospitals and schools—not easy to build on these woodless isles—and fur farms are being set up for scientific animal breeding. People go to the Komandorski Islands for a season or a year and often stay for good.

Hephaestus' Workshops

In ancient mythology there is a god of fire, Hephaestus, whose workshops were the volcanoes. That noisy god must have lived on Kamchatka. In time the volcanoes grew dormant, but there is enough volcanic heat in the bowels of Kamchatka to last for a long time to come. Despite that, providing heat on Kamchatka is a very expensive matter.

Mikhail Staritsyn, reporting to one of the commissions of the Supreme Soviet of the RSFSR, noted that on the peninsula every hour of standard heating costs 2,000 rubles—10 to 15 times more than on the continent.

Fuel on the peninsula is a problem to this day. It is largely imported, although heat literally spouts up in fountains from the depths of the earth. There is the Valley of Geysers, where hot springs send up jets of boiling water 110-130 feet high. According to an Academy of Sciences commission, the heat of these springs, generously scattered throughout Kamchatka, would take care of all its houses, factories and farms.

At present, the first experimental industrial geothermal electric station is going into operation at the Pauzhet hot springs. The station is expected to pay for itself in a single year.

Kamchatka's springs are not only hot; they are also curative. Two sanatoriums are situated near them. The Nachiki Sanatorium has a big storeroom filled with broken crutches and canes left behind by people completely recovered from rheumatism and gout. The salubrious springs and muds of Kamchatka are also good for skin diseases.

In the Soviet Far East is a peninsula that looks like a hand held out to the ocean. This generous hand yields fish and fur, timber and gold, curative waters and rare minerals. It was discovered by valiant travelers two centuries ago, and is still being discovered by valiant men today.

Brief Comments

Communism and Quality

by Vladimir Smolyansky



Vladimir Smolyansky, born in 1924 in Moscow and a war veteran, is a graduate of the law school of Moscow State University and a Master of Science in Economics. He has written a number of articles and pamphlets on the subject of socialist economics.

According to any number of my Western colleagues, the words "communism" and "quality production" are mutually exclusive. The Soviet system of planning and managing production is incapable, they say, of making quality a "predominating principle."

Indeed, is the economics of communism efficient only where global matters are concerned? Is only the sputnik typical of Soviet industry?

The most convincing evidence of the truth is historical experience. I have deliberately put aside today's issue of *Pravda*, which contains several critical articles under the heading "We Must Concentrate on the Quality of Production" in order to look at things somewhat more broadly and not be led to conclusions simply by today's events.

I am thinking back to the thirties, when our country, which lagged behind the economically developed powers of the world, made the gigantic leap from the wooden plow to the tractor. In these years of industrialization we had to create new branches of industry—auto, aviation, electronics and others. We built them with our own hands, and with almost no experience or skills.

What was the result? By the end of the thirties the Soviet Union had a complex of industries which were modern by the standards of those days. In a period of only ten years we traveled a distance it had taken the Western powers 50 to 100 years to cover. This is the plain and simple fact.

The last world war was a most telling test of our industrial maturity. Hitler threw against our country the military and economic might of conquered Europe. The result we know. But I want to cite one specific illustration. The Soviet tank T-34, the offspring of the Soviet machine-building industry, turned out to be the best fighting machine on the battlefield. Not even the most authoritative military theoreticians of the Wehrmacht armies deny that now.

Perhaps the Soviet economy is fundamentally a military economy? Perhaps it can solve the quality problem only when it concerns defense?

But what about those unique hydroelectric power stations, the largest in the world, created entirely with Soviet materials, the product of its engineering and scientific minds? And the first jet plane in the world to be used on passenger lines? And Soviet surgical instruments which are bought by many other countries? What about the housing development program which made it possible to move a third of the country's population into new houses in only six years?

The Soviet machine-building industry has reached a level of production of technological equipment that makes it possible to introduce new capacities and to replace as much of the old equipment as the country needs.

I am not a visionary. I do not close my eyes to the fact that the output of Soviet industry often does not measure up to its possibilities and that the system of economic planning is far from always a stimulus to quality production. But if we look at the situation as a whole, if we do not pick out isolated defects to prove that the entire system is defective, then it is plain that Soviet industry has been responsible for scientific and technical innovations that stretch all the way from the physics of plasma to electronics.

Our system of planning and managing is sensitive to the changes in the structure of industry and to the growing needs and desires of the people. That is why the last session of the USSR Supreme Soviet placed such emphasis on the quality of output. It directed industry to be more responsive to changing consumer demands and the possibilities offered by technological progress.

More direct ties must be established between the producer and the consumer. Public ownership of the means of production and planning remain the foundation of the economy. But more effective means and incentives are being sought to stimulate production personnel, particularly supervisory personnel, to produce goods of high quality.

For Vacationing Millions

by Alexander Vasilenko



Alexander Vasilenko, born in 1919, is a graduate of one of the country's schools of journalism. He has been on the staff of the newspaper Trud (Labor) since 1962, and is at present assistant editor of its Trade Union Affairs Department.

"They say that figures run the world; there is no doubt, at least, that figures show the way it is run." I recalled this quotation from Goethe as I listened to the figures cited by the speakers—noted scientists and physicians, public officials and trade union leaders—at a plenary session of the USSR Central Council of Trade Unions which was discussing the rest and recreation of working people.

Our trade unions manage almost 2,000 sanatoriums and resorts, and some 6,000 tourist centers in the country's most scenic mountain and seaside areas. The state turned them over to the trade unions in 1960 as part of a continuing process in which the responsibility for running the affairs of the country are being transferred to the mass organizations. The government reserved jurisdiction only of the special sanatoriums for tuberculosis and some other diseases.

Since the transfer more than 25 million factory and office workers have vacationed at the trade union health resorts and additional millions at the holiday homes owned and run by the factories and offices themselves. Each year more than 30 million persons spend their vacation hiking. Four out of five of these vacationers get their accommodations free or for only a third of the cost, which is low to begin with.

Soviet working people can afford to take an annual vacation. Our state not only says it is concerned with the health of its citizens, but backs it up with budgetary allocations for social services which, by the way, are also disbursed by the trade unions.

During the past four years the number of accommodations at the trade union health resorts have been increased by 80,000, the equivalent of 40 more health-building centers with the last word in medical equipment and facilities for rest and recreation. A large army of scientific personnel is engaged in perfecting methods of treatment and prospecting for new spas and curative mud deposits.

But figures also conceal problems, and generally the larger the figures, the larger the problem. Is the figure of 36 million annual vacationers large or small? Large, if you consider that only a decade ago the figure was almost 50 per cent smaller. The problem is that there are now more than 73 million factory and office workers in the USSR, each one a potential resort vacationer.

Besides building more resorts and increasing the number of specialized sanatoriums and those that accommodate families, the trade unions are working to improve the quality of the services. Also, in the current year the number of accommodations will increase by 26,000, and in 1970 it will reach 120-140 thousand. Better designs are being developed for modern resorts with single- and double-room accommodations, medical facilities, restaurants, shops, theaters and athletic fields.

Increasing Rate of Soviet Economic Growth

by Genrikh Emdin



Genrikh Emdin, 51, is a graduate of the Odessa Institute of Finance and Economics. He is an editor of the Ekonomicheskaya Gazeta, specializing in national planning. He has also written articles on economic policy and finance.

Soviet analysts of the country's economic plan for 1965 draw these general conclusions. They find the plan notable for its objective appraisal of the economic situation, successes and failures, an objectivity which permitted the Soviet parliament to adopt far-reaching and scientifically validated decisions.

The plan reflects the resolution of Soviet leaders to step up the growth rate of production. Particularly striking are the consistent efforts to find additional resources for raising living standards substantially. This tendency is evident from the following figures.

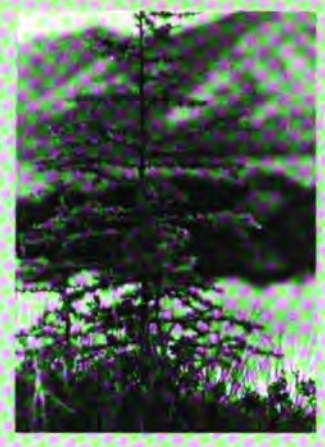
	1964 increase over 1963 (in per cent)	1965 planned increase over 1964 (in per cent)
Gross industrial output	7.8	8.1
including:		
Means of production	8.2	8.2
Consumer goods	6.5	7.7

Statistics show that in 1965 the increase in consumer goods output will surpass both the 1964 level and the growth rate of the past several years. For the 1961-1964 period the growth rate averaged 6.4 per cent.

The rate of industrial growth will increase largely due to the accelerated progress of the most efficient and, consequently, the key branches of production—power, oil, gas and chemistry. In 1965 the output of plastics, synthetic resins, rubber and mineral fertilizers will grow from 25 to 33 per cent. Expanded output of oil and gas will push their share in the country's fuel pattern up to 53 per cent as against 42 per cent in 1961.

The most important feature of the 1965 plan is perhaps the unusually rapid growth forecast for national income, the main source of higher living standards. In the past five years national income grew by an average of six per cent (five per cent last year); in 1965 national income will rise by 14 billion rubles, or eight per cent. This will be an all-time high, in both growth rate and volume for the almost 50-year Soviet period.

IN THE NEXT ISSUE



In 1903 a syndicate that had been set up to build a trans-Siberian railway submitted to the Russian czar a proposal for the construction of a New York-Paris line via Siberia. Nicholas II was so impressed with the syndicate's argument that Russia would be unable to develop the vast expanse of land east of the Ural Mountains without the help of outsiders that he ceded some 60,000 square miles as right of way along the proposed 4,000-mile route. Recently *Soviet Life* sent five of its staff correspondents to report on present-day conditions in what used to be considered the Siberian wasteland. The reader will find their observations on the development of this area as well as on its people of more than usual interest.

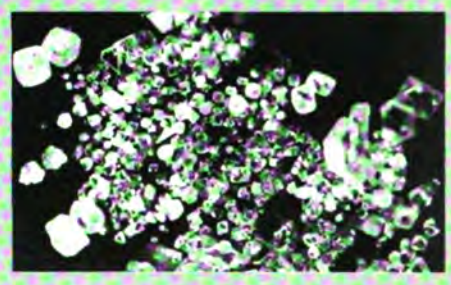
Rostov is 1,100 years old. Long ago, when it was part of Old Rus, it was called Rostov Veliky (the Great). The art critic Ludmila Keidan, no stranger to our readers, describes some of its ancient buildings, both secular and religious: the Rostov Kremlin, Assumption Cathedral, the Church of the Ascension and the Abraham Monastery, among others. In 1953 a hurricane destroyed sections of a number of the ancient structures. A restoration specialist, Mikhail Myshev was able to reproduce the details.





Khanty, Mansi, Nentsy, Tuvinians, Evenki, Chukchi, Yukagirs, Yakuts, Buryats, Khakass. These exotic names belong to the peoples inhabiting Siberia, a vast section of the non-European part of the Soviet Union. Their national costumes are no less exotic than their names. The colorful examples of their unsually patterned clothes that our staff photographer has provided should be a good source of inspiration to clothes designers in other lands.

Before 1954 the Soviet Union purchased its diamonds abroad. In that year, however, geologist Yuri Khabardin sent a cable from Yakutia, in the Siberian taiga, in which he reported finding one of the world's largest diamond deposits. For more about this fascinating subject, read the interview with the Soviet diamond trust's manager.



Other items of interest:

Yakutia—about the autonomous republic situated in the same latitude as Alaska; **Kolyma's Gold Belt**—one of the world's richest gold-bearing areas; **Cosmonauts in Trouble: Who Helps?**—about an international agreement on assisting explorers in outer space; **Forest Fire**—the Forest Protection Air Service in action; **Kriss: the Man Behind the Mask**—the Soviet Olympic fencing champion; **Squirt**—a story by the young writer Andrei Bitov; **Democritus**—an essay on the philosopher.

NOVOSTI PRESS AGENCY

SOVIET LIFE

Baltic Costumes and Fashions

Another detailed and richly illustrated article about the national costumes found in the Soviet Union.

Public Opinion in the USSR

Philosopher Mikhail Ignitkhanian analyzes the conditions and means that make possible its functioning.

COMING SOON

TEENAGE OLYMPIC MERMAID

PROFILES OF OLYMPIC CHAMPIONS

BY ALEXEI SREBNITSKY
NOVOSTI PRESS AGENCY CORRESPONDENT

THEY CALL HER "the goldfish," "the Black Sea gal," and "the 15-year-old sea captain." She is being interviewed, talked about, her swimming style written about and studied by experts.

Galina Prozumenshchikova is basking in the glory that comes to an Olympic heroine. When I first saw her in Sevastopol after her Tokyo triumph, she was at the blackboard of a history class in the ninth grade of Secondary School No. 3. Photographer Yuri Somov and I were quietly led into the room by the principal.

There was nothing to distinguish Galina from the 30 other girls in the room, except perhaps for the color of her hair. It was the gold of wheat one comes across near Yaroslavl, her father's home town.

"History is my favorite subject," Galina told me during recess. I had my doubts. I had heard her recite and get a 4 (Good) instead of a 5 (Excellent) because her answer to the question on the 1848 Revolution in Germany stuck so close to the text. More likely, I had an idea from the fond way she looked at him, she liked her teacher, and history was her favorite subject because he taught it.

"Will you be taking pictures in the physics class too?" she asked.

"We expect to."

"I wish you wouldn't. I'm certain to be called to the board, and it will distract me. I'm not nearly as sure of physics as I am of history."

Galina was obviously no star pupil. "Average," the teacher said. She was disciplined, applied herself, but was not outstanding. She hoped to go on to Moscow University and study journalism. How good a writer she is, I can't say. She let me see only the outside of the diary she began keeping a while back. Its contents were sacred to Galina and her best friend, Natasha Korzhova, who sits next to her in class.

While she was at the Olympic Games, Galina fell behind in her studies. Now she has to work twice as hard to make up for it. She is excused from physical education, and uses the extra time for homework.

The teenage Honored Master of Sport is cramming for a chemistry test, but her nationwide fame interferes with her study plans. Children from a nearby boarding school, a reception committee, crimson Young Pioneer scarves around their necks, wait at the door to escort her to the school. The pupils are eager to hear about Tokyo.

Galina cannot say no to an invitation from "The World Around Us" radio program the next day, even though she has a mathematics test and it means staying up late to study until her father comes into her room and put outs the light.

Besides all that, there are one-and-a-half to two-and-a-half hours of swimming practice daily.

Galina came to the conclusion some time ago that the days are much too short, but with inexhaustible optimism and the strict schedule drawn up by her father, a retired submarine officer, she manages to squeeze everything in.

How to Become a Champion

I spoke with Galina's father, Nikolai Prozumenshchikov, in the living room while she was fixing tea in the kitchen.

"A person can live at the seashore all his life and still never learn to swim," the former naval officer remarked thoughtfully. What followed Nikolai Prozumenshchikov's remark was this hard-to-believe fact: Only four years ago Galina did not know how to swim. In her first lesson she was simply tossed into the sea, at the other end of a rope held by her trainer, Yelena Alexeyenko.

A second lesson, a third, a few more, and Galina untied the safety rope. That was how she learned to swim.

Soon afterward she cut off her braids. It was something of a struggle. To this day her mother hasn't forgiven her, but Galina was convinced she'd swim faster with short hair.

In three years she has collected 28 gold medals, established 15 national records, and trimmed the world record to 2 minutes 45.4 seconds, triumphing in Britain, the German Democratic Republic, Japan, Yugoslavia and, of course, the USSR. Her rapid progress is due to the skill of her trainer, her own determination and perseverance, and, above all, a natural talent.

On June 13, four months prior to the Tokyo games, the Sevastopol girl was rushed to a hospital in Minsk for an emergency appendectomy. The top favorite spent a whole month convalescing and then lost the national championship to her friend, Svetlana Babanina. Her Olympic stock began to fall, but in August Yelena Alexeyenko loaded her pupil with such a practice schedule that to this day Galina does not know how she managed it.

"I never swam more than 60-80 kilometers a month, while my assignment in August was 104 kilometers—three stretches of 200 meters each, followed by four of 100 meters each, and eight more of 50 meters each, then repeat the whole thing again—all in a single workout! And I had to do more than half this distance at full speed! I knew that Yelena Alexeyenko couldn't be wrong, but when I lost the semifinals in Tokyo, I wondered whether it had been such a good idea. Anyway, I slept like a log that night, but the next night I couldn't close my eyes—the excitement of winning the finals was too much for me."

Post-Tokyo Training

After a short rest following her return from Japan, Galina resumed training, not only because she wanted to take part in the *Komsomolskaya Pravda* races, but also because she missed the exercise.

She does not spend as much time in the pool during the winter. More often you'll find her doing special bending and swinging exercises in a gym. She also likes cross-country running; it helps her to slim down. Incidentally, her height is 1.68 meters (a shade over 5 feet 5 inches) and her weight is under 75 kilograms (165 pounds). Her current practice schedule also includes gymnastics, acrobatics, basketball and handball.

"What sport do you like best?" I asked Galina.

"Boxing," she replied, and went on to tell me that she had seen almost all the bouts in Tokyo.

Fan Mail

I had Galina's permission to look through her mail. Of the 44 letters delivered that day, seven bore a foreign postmark. Yoshiyaki Kaneko wrote from Japan that he also was 15 years old; that he liked swimming, basketball and dance music; and that he would like to have a Sevastopol schoolgirl for a pen pal. Another letter, from the United States, was brief: Robert Oppel asked for Galina's picture and autograph.

But the letter which Galina would answer first of all was from Yevgenia Okinchits, one of the Soviet Union's leading breast-stroke swimmers in the twenties, who was happy to see a young fellow countrywoman become a world champion with the same stroke 40 years later.

Galina answers as many letters as possible with help from her younger sister, thirteen-year-old Irina, a sixth-grader and also a swimmer. She already does the 100-meter breast stroke in 1 minute 40 seconds, and will soon start training for the Olympic Games in Mexico City. After all, didn't the Press sisters compete in Tokyo, and the Goichel sisters in Innsbruck?


C
P



THE ETERNAL FLAME

". . . No nation in the history of battle ever suffered more than the Soviet Union suffered in the course of the Second World War. At least 20 million lost their lives. Countless millions of homes and farms were burned or sacked. A third of the nation's territory, including nearly two-thirds of its industrial base, was turned into a wasteland—a loss equivalent to the devastation of this country east of Chicago. . . ."

President John F. Kennedy
June 10, 196

PHOTOGRAPH BY DAVID SHOLOMOVICH



UNIVERSITY OF MINNESOTA
MAY
LIBRARY

SOVIET LIFE

FIRST WALK IN SPACE

CHALLENGE OF SIBERIA

June 1965 • 35 cents







ROSTOV VELIKY

BY LUDMILA KEIDAN

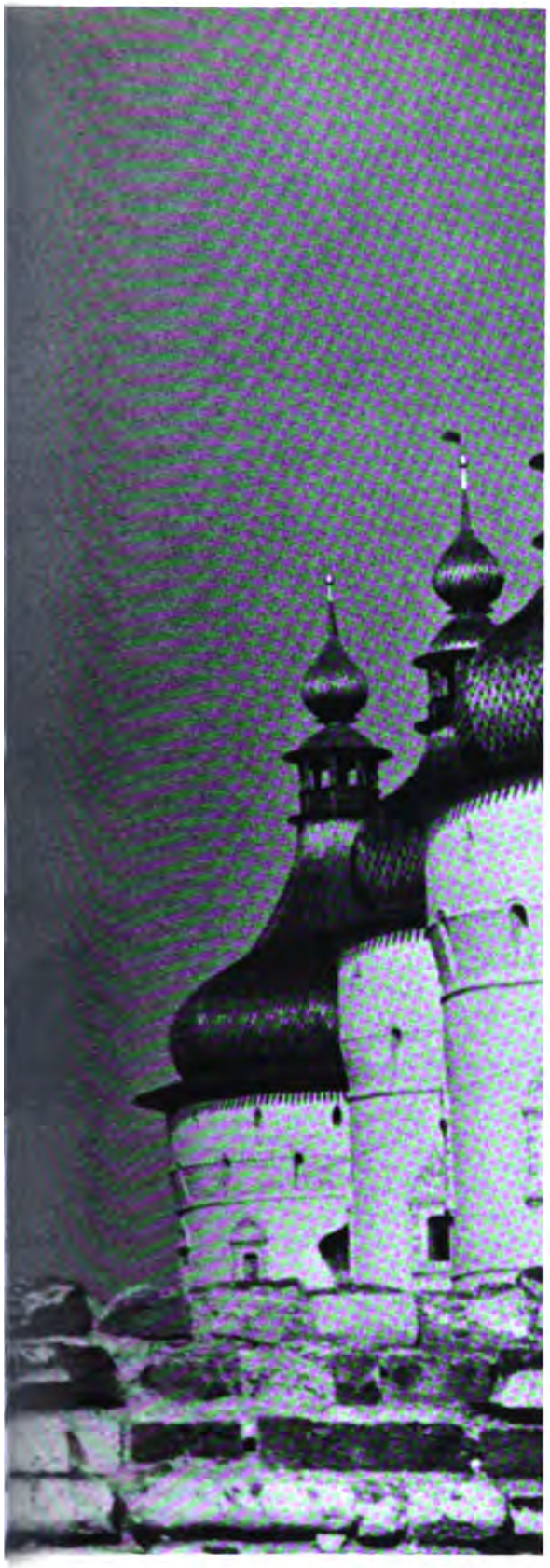
Our journey through Old Russia, which started in the July 1964 issue with a visit to the Troitse-Sergievo Monastery and then went on to Suzdal in August, Pereslavl-Zalessky in September and Vladimir in April 1965, now takes us to the city of Rostov.

A ROAD WINDS its indolent way along a serene, slightly hummocky plain. Twinkling timidly at first, the smooth surface of Lake Nero sparkles ever more brightly as you approach it. In the silvery haze, the shore beyond is a blur of lines. The Kremlin and the Yakovlevsky Monastery loom like a mirage over the water.

Like a ship, Rostov dazzles you with the white sails of its walls. It is a city born 1100 years ago.

Once called Rostov Veliky—*veliky* is Russian for "the Great"—the town traded with the Arab countries, Scandinavia and the Volga Bulgarians, and was also famed as a major center of education in ancient Russia.

Like the other towns of Old Rus, Rostov is noted for its patriotic traditions. In 1238 its soldiers joined the troops of Vladimir, Uglich and Yaroslavl in their battle against the Tatar hordes on the Siti River and were defeated. Taken captive, the proud Prince Vasilko of



Rostov lost his life because he would not serve the Tatar Khan Batyi. The prince's body was thrown to the beasts in the forest.

A memento of those days is Mt. Tugova (the Mountain of Mourning), upon which the Rostovites lamented their kin who had fallen in the battles against the Tatars.

The people of Rostov also fought valiantly in the famous Battle of Kulikovo Field against the Tatars in 1380. Among them were two heroines —Princess Darya and Princess Antonida— whose names have come down to us in the chronicles of those times. In 1608, when Rostov was looted and razed by the Lithuanians and Poles, and the inhabitants who found shelter in the Assumption Cathedral were all slaughtered, Maria Lobanova of Rostov dealt the commander of the invaders, Pan Zaborovsky, a mortal wound.

Brave, rich and brilliant, Rostov coveted supreme power in ancient Russia but never won it. In 1474 the principality was annexed to Moscow.

Two hundred years later, when Rostov finally settled down to peace, the local metropolitan, Iona, built the kremlin—not as a real fortification, however, but as a decorative semblance of one, with thin walls. This structure, a kind of metropolitan's mansion, acquired the name kremlin only in the nineteenth century.

The architects of the Rostov kremlin gave generous vent to their rich imaginations. The structure abounds in passages and galleries leading to the chapels and chambers, with dramatic views of the courtyard, the gardens and the lake. Nothing is simple here; everything was devised to astonish or delight, to induce pensive reflection and a peaceful state of mind.

The churches and houses of the kremlin arranged around the big courtyard are hedged in by a wall with 11 towers. Over the passage gates rise the Churches of the Ascension and John the Evangelist, with their tent-roofed belfries.

A promenade down one of the galleries offers a view of the Church of the Savior-on-the-Passage, the Otdatochnaya, White, Ionim and Garden Chambers, the tower rooms, the Red and Hierarchical Chambers, and more churches—the Grigori Bogoslov and Our Lady Odigitria.

Very original too are the frescoes in the churches, especially in the Savior-on-the-Passage, done by the seventeenth century Rostov painter Timofei Yartz.

On the kremlin's north stands the Assumption Cathedral. In the year 991 a wooden church of the same name was built on the spot. It was replaced in the twelfth century by a stone structure, and in the fifteenth and sixteenth centuries was rebuilt into a cathedral resembling the Assumption Cathedral of the Moscow Kremlin. The four-dome belfry of the Rostov Cathedral stands on a monumental socle, apart from the church's main building.

The Rostov "chimes" were famed throughout Russia. The tone of each bell had been recorded, and it was therefore possible to restore them. Recently the old chimes resounded over the city, when the film *War and Peace* was shot.

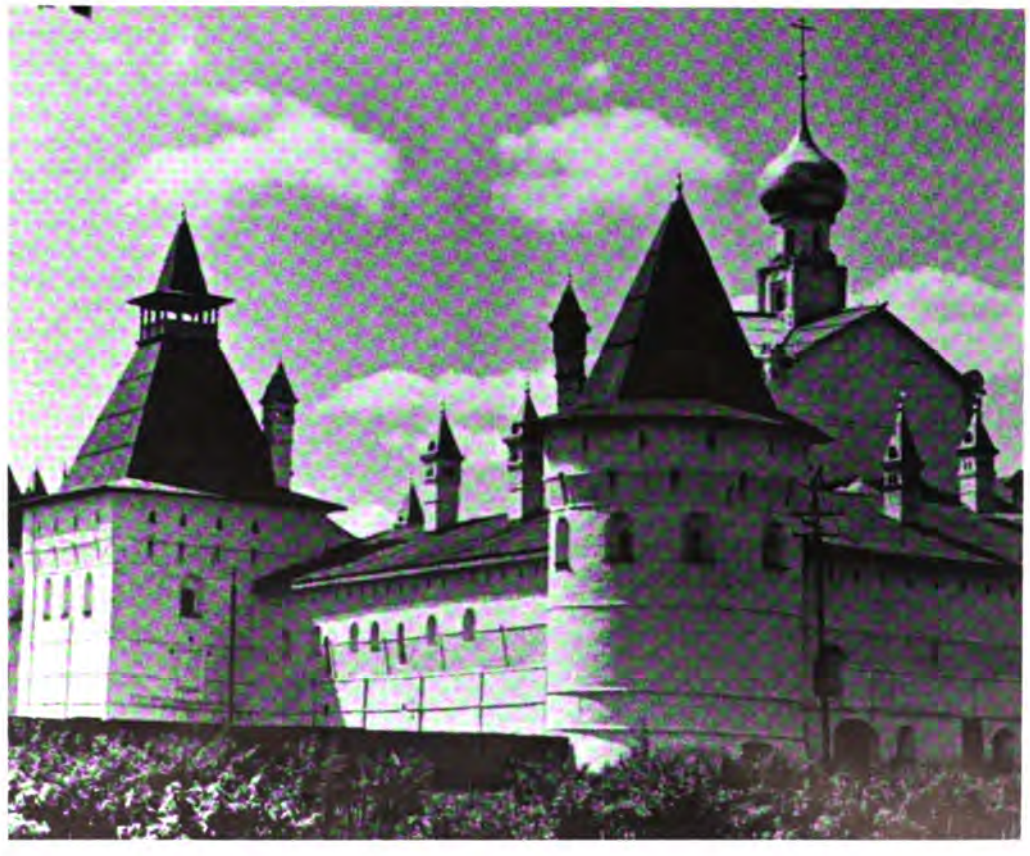
The hurricane that swept over Rostov in 1953 destroyed many of the kremlin buildings. The loss seemed irreparable, but after long and painstaking reconstruction the kremlin was restored to its original state without any of the later additions.

Especially interesting was the restoration of the tower tops. An old carpenter—Mikhail Myshev—the only specialist of his kind, to whom credit goes for preserving many of the ancient wooden architectural monuments, managed with amazing fidelity to reproduce the details of the roof tile in the form of a plowshare. Shaped out of aspen wood with an ax, the tiles gradually darken to a purplish metallic sheen, creating a scaly pattern of great beauty.

The poetic silhouette of Rostov Veliky is not limited to its kremlin and the Assumption Cathedral. Just as picturesque are the Church of the Ascension (1556), in the northeastern part of the town; the Twelfth-Day Cathedral of the eleventh century Avramy Monastery, the oldest in Russia; the ensemble of the Yakovlev Monastery (seventeenth to nineteenth centuries), and the Transfiguration Church (seventeenth century). The quaint wooden church of John the Evangelist on the Ishna River, dating back to the late seventeenth century, is the only architectural relic of wood in this district.

Cathedral of the Assumption. Its four-domed belfry stands apart.

The Rostov Kremlin is only a decorative facsimile of a fortress.



"No one can become a Communist unless his mind has been enriched with all those values that mankind has created."
Lenin

DEMOCRITUS

We Are Their Heirs

BY VALENTINA CHEMBERDJI

The April issue of "Soviet Life" offered our readers an essay on Vladimir Lenin, the man whose heirs we consider ourselves to be. Now, with Democritus, we continue our series about people whose genius has created spiritual values without which no man can dream of happiness.

WE ARE INDEBTED to ancient Greece for nurturing the men of genius who anticipated so much of our learning in the natural sciences, sociology, history, literature, philosophy, the arts, the total body of knowledge that constitutes our cultural history.

Ancient Greece, said Marx, was mankind's golden childhood. Just as a child's intuition often divines the complexities of adult activity, so the genius of antiquity made astonishing revelations thousands of years ago. The Greeks' all-pervading influence on European and, indeed, on world culture is evident enough. Greek art is called immortal, and immortal it is; 25 centuries later we are still deeply stirred by the masterpieces they created. The roots of our modern sciences are deep in the benign soil of ancient Greece.

The ancient Greeks, for the first time in history, placed man at the center of life. Their culture is kindred to ours primarily because it is human. The monuments of Egypt overwhelm man with their magnitude and distance, make him feel his insignificance in the face of infinite and unknown forces. The ancient Greek sculpture and architecture, on the other hand, do not crush man. On the contrary, they elevate him, make him confident, give his life more beauty and meaning.

The ancient Greeks brought science, or rather its basic principles, closer to man by combining reasoning and experience. The first attempt at this synthesis was made by Democritus. He was born in Abdera, Thrace, apparently in 470 B. C., and lived some 90 years or so—the sources differ. We do know, however, that two passions filled nearly the whole of his life: travel and reading. He studied in Asia and spent five years with Egyptian geometricians. In Athens he met Socrates, according to some evidence. Legend has it that Democritus blinded himself so he could concentrate better. Aristotle said that no one else had investigated so many subjects with such penetration.

He lived long, he traveled widely, he observed much, he read prodigiously. And yet it is incomprehensible how one human mind could hold so much knowledge—of mathematics, biology, medicine, physics, ethics, philology, music, psychology.

Unfortunately his works have not come down to us. But we know from Diogenes Laertius that he wrote more than 70 books. His contemporaries called him great. Archimedes tells us that Democritus made important discoveries in mathematics, and it is to him that Newton's calculus can be traced. In biology, he was probably the first to dissect a cadaver. In medicine, more than 2,000 years before Anton van Leeuwenhoek actually saw microbes under the lens of his simple microscope, he had conceived of microorganisms. His supposition was that they caused diseases by penetrating the human body. In logic, he wrote his famous *Canons*. He was familiar with the Pythagoreans, but in contrast to them he urged the progression from inference to practice, thereby breaking up the vicious circle of ratiocination.

Few fragments of his many works have survived, while those of Plato, his contemporary, have come down to us in full. It was said that Plato hoped to see all the works of Democritus burned. Most likely Plato did not realize that hope. But the intention itself is characteristic. Plato, with his tenet that our perceptions of objects are no more than the shadows of shadows, and Democritus, with his sense theory of cognition, are poles apart. What Plato hoped to do was probably done by the church during the sixth, seventh and eighth centuries when it destroyed some ancient manuscripts. The church would hardly tolerate the writings of the philosopher who even then was known as the Father of Materialism.

The word *atomos* (indivisible), invented by Democritus, was to become one of the key words of our century. True, the atom did prove to be divisible, but that the atomistic structure of the universe could have been hypothesized 25 centuries ago still makes one marvel at his genius.

The atomistic theory is Democritus' passport to immortality. Equipped with nothing but a stylus and waxed tablet, he deduced that all matter is made of atoms many centuries before science created the tools for probing into the subject of matter.

In his system Democritus postulates only atoms and void (the void hypothesis is accepted today). Atoms are indivisible, he says, infinitely small and eternal. They move in a vacuum, and this motion of theirs is an inalienable property. Atoms have always existed. From the statement "No thing comes from nothing; no thing can become nothing" stems the law of the conservation of energy.

All substances consist of atoms which merely differ in form (as the letter A from N), in order (as AN differs from NA), in position (as N differs from Z), and in magnitude. They differ only quantitatively. Differences in the quality of things are pure impressions produced on our senses by the various positions and configurations of atoms. An object merely seems to us hot or cold, sweet or bitter, hard or soft, red or blue. Actually, all these notions are subjective. In reality, only atoms exist. Incidentally, Democritus thus made the first attempt to explain color.

His speculations led Democritus to represent nature as the "random motion of atoms in all directions." There is neither top nor bottom, neither middle nor edge to the universe.

Democritus speculated on everything, including those spheres of life which were taboo in his time. He explained the human soul in terms of atoms; soul and body die together. Religion finds no nourishment in Democritus; everything is material. The soul dies with the body, and there is no afterlife. He gave a rational explanation for man's belief in the gods: Man is afraid of what he cannot understand. A flash of lightning, a bolt of thunder, an earthquake—each fills him with awe and fear, and impels him to supplicate protection from the gods. If the gods exist, they are also mortal, said Democritus.

What is the primary mover of life? Love and hatred, as Empedocles contended? Nous or reason, as Anaxagoras believed? No, it is necessity that is basic to life, according to Democritus. Everything originates from natural necessity, not for some purpose.

A true investigator himself, Democritus said that research is the most rewarding of vocations, that the man who has dedicated himself to the explanation of natural phenomena has reason to be happier than any ruler.

He is sometimes called the laughing philosopher, and did indeed laugh at the vanity of illusions. Piety, prayer and sacrifice all earned his laughter. He laughed at those who prayed to the gods to keep them healthy while they ruined their bodies with dissipation. He laughed at prejudices, and the prejudiced took revenge in ridicule.

"He must be insane," they said. "His perpetual reading and writing have driven him mad!" They summoned Hippocrates to cure his imaginary illness, but the visit turned into a friendly dialogue between two great thinkers united by their love of science.

The Democritean discoveries give man stature. Although they credit matter, and not the supernatural, for his origin (Democritus contended that man originated from primordial silt), yet they affirm that man's greatness lies in himself and his ability to comprehend the world and make it better.

In spite of this, or perhaps because of this, no ancient scholar was as vilified as Democritus. For the medieval mind, to interpret life as a manifestation of matter and to teach that even the soul is made up of atoms was to be the very servant of the devil himself.

Democritus wakened lethargic minds, and not everyone likes to be so awakened. He extolled man, gave him a broader vision, raised his intellect to the peaks of cognition.

His name is now remembered with gratitude. The crisp wind of cognition, the wind that invigorates the body and fires the spirit, blows through the pages of Democritus as through the works of those two other much maligned thinkers: Epicurus and Lucretius. This wind is sometimes bitter and piercing, but it is always healthy and beneficial.


Δημόκριτος
ὁ Ἀβδηρίτης

SOVIET LIFE

JUNE 1965 No. 6 (105)

The magazine SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* AMERICA *in the Soviet Union.*



Front Cover: Two Soviet cosmonauts who hastened the day that man will set foot on a planet. Pavel Belyayev (top) piloted the ship from which Alexei Leonov emerged to take man's first walk in space. *See story page 56.*

PICTURE CREDITS

Victor Akhlomov Cover II, Lev Ustinov 8, 9, 12-13, 15-19, 21-22, 29, 36-39; Leseqri 10-11; Alexander Mokletsov 14, 24, Cover IV; Varfolomei Teterin 23-24; Yevgeni Morokhovets 26-27; Boris Kaufman, 31-32, 40-46; Alexander Ptitsin 34-35; Sergei Petrukhin 47; Dmitri Baltermants 48; Yeizaveta Axelrod 54-55; Courtesy of **Soviet Union** '58-59; Dmitri Donskoy 64, Cover III.

Editor in Chief (Moscow Editorial Board): Yuri S. Fantalov, APN, Pushkin Sq. 2, Moscow, USSR.

Managing Editor (Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director (Moscow Editorial Board): Marina T. Zabolotskaya, APN, Pushkin Sq. 2, Moscow, USSR.

Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine SOVIET LIFE.

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second-class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Haynes Lithograph Co., Rockville, Md.

Page

What Siberia Costs (Our Trends) by Nikolai Nekrasov 6

SOVIET PEOPLE

At the End of the World 14
Kolyma's Gold Belt by Sergei Kravtsov 16
On the Road with Ivan Yeryomin by Yuri Grafsky 21
An Unfinished Letter by Valeri Osipov 26
Flying in Siberia Interview with Ilya Zemlyanoy 28
In Mirny 33
Forest Fire by Myuda Derevyankina 34
Mazur's Yarns 42
Man's Job 42
The Auto Autocrat 42
The Dam Breathes 46
Safety Engineering 46

PHILOSOPHICAL PROBLEMS

Democritus by Valentina Chemberdj 2

INTERNATIONAL CONTACTS

Ambassador from Colorado by Alexei Marchuk 47
Cosmonauts in Trouble: Who Helps? by Georgi Zhukov 57

ECONOMY AND SCIENCE

The Deal that Fell Through 5
Where Russia Begins 12
Yakutia by Semyon Ivanov 23
Brown Death 25
Diamond Town by Victor Tikhonov 30
The Siberian Challenge by Nikolai Shilo 33
The Quest for the Dyomin Treasure 36
A Planned Discovery by Victor Ryabenko 39
Science Against Administration by Boris Fox 40
The Mystery of Lake Khaiyr by G. Rukosuyev 41
Bratsk Has Become Warmer 45
The Crew of Voskhod II 56
A Walk in Space Interview with cosmonaut Konstantin Feoktistov 56
No Psychological Barriers by cosmonaut Alexei Leonov 61

LITERATURE AND THE ARTS

Rostov Veliky by Ludmila Keidan 1
The Gold Nugget by Georgi Shelest 20

RECREATION AND SPORTS

Kriss: the Man Behind the Mask by Alexander Maryamov 64

MISCELLANEOUS

Letters to the Editor 5
Come Over for Some Pelmeny 14
Humor 25
Around the Country 50
Learning Russian 52
Queries from Readers 53
National Costumes of Siberia by Konstantin Telyatnikov 54
Brief Comments 62
Next Issue 63

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

LETTERS TO THE EDITOR

COEXISTENCE

Dear Comrade Editor,

As a reader of your magazine I have noticed that it does not contain, as often as I would like, material on one of the principal problems of the present day, the problem of peaceful coexistence.

The nature of my work and public activities is such that I often come into contact with foreigners, especially Americans, to be more specific, with American youth.

I participated in the Anglo-American-Soviet camp in Nalchik in 1963, which your magazine wrote about. At this camp, as at all other meetings with American youth, we had heated discussions on questions of peaceful coexistence. This is not accidental. Today, when there are nuclear and other kinds of weapons of mass destruction, this problem is not a matter of abstroct reflections but a concrete alternative—either we live in peace and prove the advantages of our social systems by means of economic competition, or we will kill one another.

I think that a more systematic treatment in the magazine of the most diverse aspects of peaceful coexistence would help to arouse the readers' interest in it. In my opinion, not only articles by professional journalists should be published on this subject but also statements by ordinary Soviet people—workers, peasants and students.

Sincerely yours,
Boris Grayer
112 Praspekt Mira
Apt. 354
Moscow, USSR

ON AMERICAN YOUTH

Dear Comrade Editor:

As an American college student, a senior, I found the article by Ilya Ehrenburg in the Feb. 1965 issue of *Soviet Life* most interesting; yet one aspect of it I cannot agree with. Comrade Ehrenburg states that a young person in New York, Paris, or London either does not read or confines himself to newspapers, while a young Muscovite always has his head buried in a book.

I realize that Comrade Ehrenburg is only making a very general statement yet I cannot help but feel that the generalization is far too broad and all-inclusive. I shall confine my comment to the "New Yorker" whom I take it is to represent the average American young person in this article, as the youth in the Moscow Metro is meant to represent the average Soviet youth.

Having never visited the Soviet Union I am unable to comment on the general intellectual condition of Soviet youth, and thus I shall accept Comrade Ehrenburg's statement that they are nearly always found with their nose in a book.

I shall further go along with Comrade Ehrenburg to the degree that there is an element of American youth who reads little, in fact, rarely if ever even reads the newspapers. However, this group is today becoming the exception rather than the rule. American youth of today are becoming more liberal in their thinking and more active in their deeds, and are reading more. Would you like an example? The present social revolution going on in the United States is in a large part being carried out by young people; active, thinking, well-read young people. I myself am one and I myself am only the spokesman for many others like myself.

Let me conclude by stating that only this one statement out of the excellent article by Comrade Ehrenburg disturbs. I do not believe that on the average American youth is less well-read or intellectually inferior to Soviet youth.

William N. Fox
Birmingham, Ala.

COSMONAUTS

Dear Sir:

As an avid reader of your publication, I especially noted with interest the account of the Soviet cosmonauts' journey through space. Will you consider reporting more space news in future issues of *Soviet Life*? I would like to know more about the nature of your space effort, its organization and technological and industrial support. What kind of tracking installations are used in near and far-out space flights? Show some rockets and launching platforms. Give us caverage like our publications do on U.S. manned space shots.

Sincerely,
Herbert Singer
Collingswood, N.J.

We cover the *Voskhod* space flights in our May and June issues.
Editor

CORRECTION

The caption to the picture on page 55 of the May issue should read: John Corcoran (center) radio WFIL, Philadelphia, with war time partisan leader Ovidi Gorchakov and Lt. Col. Irina Levchenko.

THE DEAL THAT FELL THROUGH

The Time: 1903.
The Place: The Winter Palace, the czar's residence in St. Petersburg.
The Cast: Grand Prince Nikolai Nikolayevich, the czar's uncle, and Louis de Laubel, a French engineer.

MONSIEUR de Laubel approached the Grand Prince with a very attractive offer. He was acting for a group of financiers whose combined capital exceeded the state treasuries of most countries. Railroad magnates of the United States were not the least important members of the group.

The French emissary was brief. The syndicate offered to build a railroad from New York to Paris via Siberia. The road would pass through Alaska, Uelen, Zyryanka, Yakutsk, Kirensk and Kansk. These were the conditions:

—the syndicate would build the railroad without Russian funds;

—the czarist government would give the syndicate eight miles on each side of the route, 4,000 miles in length, for a term of 90 years. In these 60,000 square miles, an area as large as Greece, the concessionaires would have the rights of an independent state, enjoy exterritorial rights;

—the syndicate would be permitted to acquire other lands in Siberia and build factories on the river banks and coasts, as well as work mines and quarries, operate lumber enterprises, and produce and use electricity and other forms of energy.

De Laubel's persuasive argument was that Russia was in no condition, at least for the next 100 years, to develop the areas east of the Urals.

The Grand Prince was duly impressed and found the conditions acceptable. A document was drawn up which he placed before the czar. Nikolai II, Emperor of All-Russia, approved it.

Now, 62 years later, Siberia, according to the syndicate and the czarist government, should still be a great wasteland.

Soviet Life correspondents Yuri Davydov, Myuda Derevyankina and Yuri Grafsky, and cameramen Boris Kaufman and Lev Ustinov visited the region through which the foreign syndicate's railroad was to pass.

Is central and northeastern Siberia still wasteland? Are there people in these areas who can develop these vast spaces? The answers to these questions can be found in the following pages.

"RUSSIA FUTU WILL RI FROM SIBER







"SIBERIA"



MIKHAIL LOMONOSOV (1711-1765)
FOUNDER OF THE RUSSIAN
ACADEMY OF SCIENCES

We began our Siberian trip by moving from Novosti's office on Pushkin Square in Moscow to Vavilov Street, also in Moscow, the address of the country's oldest scientific organization, the Board for Investigating the Productive Forces. This body initiated industry's movement eastward. Arguing the advantages to be derived thereby, it presented some very interesting figures. However, other economists argued just as convincingly that the move was ill-advised and also submitted interesting figures. We had the problem interpreted for us by economist Nikolai Nekrasov, a corresponding member of the USSR Academy of Sciences. This tireless researcher has traveled up and down the country, and one of his major interests is

WHAT SIBERIA COSTS



The expanses of Eastern Siberia, Kolyma and Chukotka lie beyond the Yenisei. These four million square miles take in roughly half of the country's territory. In the southern and central parts of the region you have impassable taiga; in the north, permafrost. In the winter the temperature drops to 94 degrees below zero, while in the summer it rises to 95 degrees.

It has been known for a long time that this was a rich area. Gold had been found, and in some places rivers flowed through seams of coal. But these were the chance discoveries of lone explorers. Today we not only know what we have there but also how much of it we have.

Still, intensive industrialization was started only recently. Why?

Siberia's development followed a consistent pattern. The first thing needed was social change. This began with the Revolution. It brought the contemporary world to Siberia's 30 nationalities, which were still living a tribal life. These peoples were given a modern educational system and health services. Written alphabets were devised for them. Nomads traditionally, they settled down. That was the first job that had to be done.

Now the second. In order for us to create a society of abundance, our industry needs to be six times as productive as it now is. Raw material resources in the European part of the Soviet Union are running out; in the East they have hardly been tapped.

You may ask: Didn't we need cheap electricity and mineral ores, gold, tin, tungsten and copper, earlier? Of course, we did. The rub lay in the specific features of Siberia's development.

This is a land which has only three inhabitants for every square mile. It is covered by dense taiga, hundreds and thousands of miles of forest that wall it off from the big cities. Here is the basic problem of development, the stupendous investment required. This is a territory half again as large as the United States. Private enterprise in old Russia was nowhere near adequate to cope with industrialization of that magnitude.

Why is the investment so great? Because construction has to be done in totally unpopulated areas. The world's largest hydroelectric power station, at Bratsk, was built 370 miles from Irkutsk, where a neglected fort stood. There were no roads there at all to begin with.

Or take Mirny, the diamond-mining center. It stands where a forest fire once raged. The nearest railroad station is 1200 miles away, and the nearest landing stage, on the Lena, is 185 miles away.

Roads have to be blazed and primeval forests cut down. This costs money. Freight has to be shipped over enormous, roadless distances. This again costs money. Houses, shops, nurseries, TV stations must be built on wasteland. Again money. Skilled workers and engineers must be tempted to these unpopulated places by higher pay. The cost rises in direct proportion to the distance from the central part of the country.

We did not have the necessary funds before. Now we do.

But is the effort necessary? Is it economically justified? It is necessary and it is justified. The more you invest, the more you get. It took seven years and 692 million rubles to build the Bratsk Hydroelectric Power Station. But the electricity it generates costs only a third of that supplied by the stations on the Volga, and all construction expenses will be recouped by 1966. The Irkutsk station began to bring returns even while it was being built. A 160-million-ruble timber industry complex will cover the initial investment after nine months of operation.

How is it that these projects pay their own costs of construction so quickly?

First, because of the region's mineral wealth. In the Donbas coal fields of the Ukraine a 16-foot seam of coking coal is considered a veritable "gold mine." But in Siberia's Cheremkhovo a 160-foot seam is nothing special. We have diamonds in the Urals too, but they don't begin to compare with those mined in Yakutia.

Secondly, because development is planned scientifically.

This seemingly remote territory has been thoroughly explored by prospectors and geologists. Future mines and power stations have been marked out for years ahead. We know almost everything each district has. This makes it possible for us to open up resources not singly but in groups, a most important consideration, commercially speaking.

The lion's share of the cost of Siberian development is the initial outlay for building roads, housing, communications, rail tracks and construction facilities. Naturally, if this is done with an eye to only one industrial project, it will increase costs heavily. So it is more profitable to build whole groups of plants—and, moreover, very big ones, because that too makes for lower production costs.

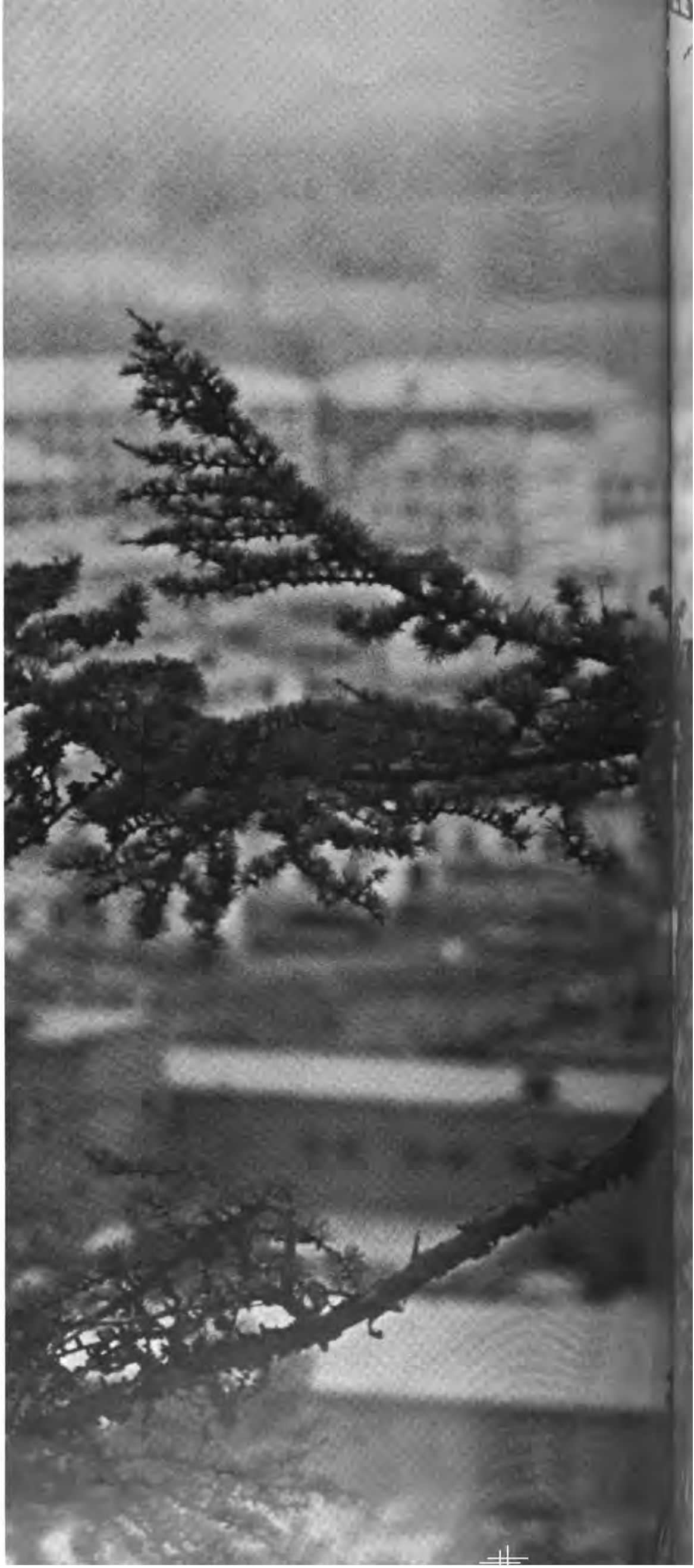
Since we have a planned economy, the state, by taking all these factors into consideration, can build industrial centers not haphazardly but around a plan.

The pivot of one such center—the Bratsk-Taishet—is the Bratsk power station. And not only because it is a source of cheap electricity. The big trust set up to build the station is also building the entire industrial center and is using belt-line techniques to construct both residential towns and factories.

At the beginning we built such centers only near the Great Siberian Route. Now we are building them still further north, in places like Chukotka or Kolyma, where expenses double and triple because of the distance from industrial centers. In these places the law of Siberian development bears down harder. That is why, as a rule, we concentrate on items we do not have elsewhere, such as gold, diamonds and tin. We also tap the richest deposits to cut the initial investment to a minimum. For only then can we recoup the enormous outlay. This creates the special problem of the northeast, which we shall deal with later.

There is still one more reason why these Siberian projects are so profitable—paradoxically enough, because the territory is unpopulated. Though tens of thousands volunteer to pioneer these parts every year, the labor shortage is perennial. Workers are paid well, wages constituting the bulk of the costs. There is only one way to cut costs and that is by stepping up labor productivity. For that reason the industry of this remote territory is being built to met the highest world standards. Otherwise development here makes no sense. Thus, in Mirny the world's largest diamond-dressing plant is being put together from prefabricated elements by only a few dozen people. Irkutsk factories make gold-mining drags, each of which can do the job of 10,000 men. The 12,000 automatic devices at the Bratsk timber industry complex have reduced the labor force needed from 30,000 to 7,000.

It is an integrated industry, making use of the best of Soviet and world practice, that is being built in this vast territory. And that is what determines both the scale and the economics of development.



A view of the village of Bilibino on Chukotka.



SIBERIA AND THE FAR EAST



Eastern Siberia and the Far East cover an area of about four million square miles to the east of the Yenisei River—almost half the total area of the Soviet Union.

It is a vast mountainous region that flattens northward to the Arctic Ocean. River valleys cut through ranges and chains of mountains. The rivers here are powerful and recalcitrant. They start out as small springs, make their way through the mountains, and discharge into the ocean as arteries so wide that one bank is invisible from the other. The Yenisei, the Soviet Union's deepest river, and the Lena, with the most tributaries and the largest basin, both cross Eastern Siberia. The region has 53,000 miles of river.

The first Russian settlers came by river. In the sixteenth century, Pomors* from Arkhangelsk—hardy and daring men—arrived in these parts. They caught fish, hunted fur, and traded with the local peoples—the Yakuts, Evenki, Khakassians and Buryats.

The first "ostrog"—a small fort manned by Cossacks who served the Russian czar—was built here early in the seventeenth century. In 1632 the Yakut Ostrog was added. It grew into the town of Yakutsk. Then in 1638 the Verkhoyansk Ostrog was set up, and in 1643-1644 the Kolyma winter settlements. This migration of Russians eastward terminated with the campaign of Semyon Dezhnev and Fyodor Alexeyev, two Cossacks who rounded the Asian continent and reached the Sea of Ohkotsk from the north. By the middle of the seventeenth century, Russian pioneers had crossed Eastern Siberia, reached the Pacific coast, and added an immense territory of 2.7 million square miles to Russia.

Until then the native population had lived by fishing and fur trading. The Russians brought crop and livestock farming. They also began to mine for gold and polymetal ores, on a very small scale, of course.

The Trans-Siberian Railroad, built at the close of the nineteenth and beginning of the twentieth century, accelerated industrial development. But it was the 1917 Socialist Revolution in Russia that marked the real turning point. It brought Siberia engineers and teachers, medical men and geologists, people whose courage was a match for its great expanses and its promise.

* Russian seashore dwellers, descendants of inhabitants of Novgorod.

Concentrated in Eastern Siberia are:

- ***46 per cent of the country's water resources;***
- ***80 per cent of its coal reserves;***
- ***great quantities of diamonds, gold, nonferrous and ferrous metals.***

Eastern Siberia produces:

- ***4 per cent of the country's metal-making equipment;***
- ***10 per cent of its coal and ore-dressing equipment;***
- ***23 per cent of the equipment for its nonferrous metals enterprises.***

About 50 per cent of the Soviet Union's forests are located in Eastern Siberia.

Eastern Siberia yields more than half the furs produced in the country, including:

- ***50 per cent of its polar fox and hare;***
- ***60 per cent of its squirrel and ermine;***
- ***70 per cent of its sable.***



EASTERN SIBERIA AND THE FAR EAST

UELEN
IULTIN
PEVEK
EGVEKINOT
PROVIDENIYA
BILIBINO
ANADYR
ANADYR RIVER
KOLYMA RIVER
INDIGIRKA RIVER
LENA RIVER
BATAGAI
ZYRYANKA
UST-NERA
SUSUMAN
MAGADAN
UST-KAMCHATSK
YAKUTSK
ALDAN RIVER
OKHOTSK
PETROPAVLOVSK-KAMCHATSKI
ALDAN
AYAN
KOMSOMOLSK-ON-AMUR
CHERVOMAISK
BLAGOVESHCHENSK
BIROBIDZHAN
AMUR RIVER
YUZHNO-SAKHALINSK
KHABAROVSK
IMAN
VLADIVOSTOK

HYDROELECTRIC STATION
HEAT AND POWER STATION
LUMBER INDUSTRY
HIGHWAY
RAILROAD
PORT

WHERE RUSSIA



We soon got the feel of how large Siberia is. Taking off at Irkutsk on a warm summer day, we landed six hours later at the snow-blanketed airport of Anadyr. This was the Chukotka (Chukchi) Peninsula, one of the farthermost points in the Soviet Union.

BEGINS

SOME 50 miles from America's West Coast lies a peninsula between two oceans. It is the Chukotka Peninsula, where the first tracks of the railroad proposed by de Laubel and his syndicate were to be laid. This is where Russia begins.

The Chukotka Peninsula is thousands of miles of tundra and mountain. In winter it is one great stretch of snow and ice; and in summer, moss and stone. Man there can live out his whole life without ever seeing the green foliage of a tree. Forty years ago there was not a single house on the peninsula. The Chukchi lived in deerskin tents called *yarangi*, and the visiting traders in roughly constructed huts. At one time there were as many as 72 witch doctors (shamans) on the Chukotka Peninsula and not a single literate person. The local population—reindeer breeders, hunters and fishermen, who depended for their livelihood on the scant bounty of austere nature—was only too familiar with the ravages of hunger and disease.

Today there are twice as many doctors per 100 of the population on the Chukotka Peninsula (it became a national area in 1930) as in Central Russia. Statistics will tell you that the old witticism "If you want to get sick, find yourself a doctor" does not hold here. Longevity on the Chukotka Peninsula is double what it was half a century ago. There are no illiterates on the peninsula; in the past 10 years alone 70 schools were built and 14 state-maintained boarding schools opened.

It used to take months to get to the Chukotka Peninsula from Moscow. Now an IL-18 plane travels from Moscow to Anadyr in 11 hours. These 11 hours have made all the difference to this distant outpost of Russia.

Even its landscape has changed. Of course, the tundra still spreads to the very horizon, the mountain ridges are as inaccessible as ever, and the fierce blizzards last for days on end. But the Chukotka Peninsula now has mines and villages, factories and roads; the towns of Anadyr, Bilibino, Iultin and Pevek have power stations, tall buildings and stores.

The Chukotka Peninsula's natural riches are hidden by frosts of 94 below zero, blizzards and eternal ice. But its tin and gold were found despite them. The Chukotka Peninsula yields fur, tungsten and coal. Its soil will grow potatoes. Of course, it is just as cold there as it ever was. But in his endless battle with Mother Nature, man has forced the lady back once more.



On the Chukotka Peninsula it was the usual thing for geologists to pitch their tents alongside the skin yarangi. Later both were replaced by houses, and a town began to grow. Now 85 per cent of the peninsula's population live in towns. Many young people come to this harsh land. Last summer alone 450 specialists arrived from Moscow, Leningrad, Kiev and other cities. These men and women in their early twenties do not think twice about leaving home when adventure calls. Some of them just go and buy a ticket for a plane flying eastward; others know for certain where they want to go—Valkumey.

MAN FROM THE END OF THE WORLD

THE END of the world? A ten-minute walk from the settlement. You go down the slope to the steep shore and there's the ocean.

Here, not far from the port of Pevek, is the Valkumey ore mine where Anatoli Yegupov has been working for more than five years now. He is 28. When we met, he was substituting for the chief engineer, who was on leave.

Anatoli first came to the tin mine as a student for practical training. They were short of skilled people, and the section manager put him on jobs that called for engineering skill. The young man liked the idea. He came back a year later to work on his diploma project—a mine design of his own.

Well, when he was through with school, the young engineer naturally wanted to see his design in actuality.

Two years later Yegupov was appointed head of the boring and blasting department. It was exciting and original work; nobody had hitherto studied the process of explosion in conditions of eternal frost. A career is quickly made in this pioneering part of the world, and soon Anatoli was chief engineer of the technology department.

However, rapid promotion means working twice as hard as usual: poring over books, puzzling out problems, seeking explanations, correcting one's mistakes. But experience also doubles every year to make things clearer.

Today Anatoli came home late as usual. His wife Nina was already about to leave. She is a compressor operator and a correspondence student at the Moscow Institute of Culture. She gets her assignments from the Institute Correspondence Department and sends them back for grading. Her diploma and qualifications will not differ from those of a regular student.

"She wants to be a librarian," explains Yegupov, "and Saturday she spends at the club, where our local University of Culture gives lectures on Soviet and Western literature, art, music, and so on."

"How about you, do you go with her?"

"I have no time."

Somebody knocks at the door, a man of thirty or thereabouts in fur boots and a fur-lined leather coat.

Anatoli invites him in and introduces him —Gennadi Shevyakov, mining engineer and section head.

"Tolya," he says. "Ten of us are going hunting. "Want to come?"

Yegupov shakes his head. "Not that I wouldn't like to, but I just haven't got the time, that's all."

He's busy, he explains, studying explosions, investigating and experimenting. Some of his papers have been published by *Kolyma*, a scientific journal.

"I would have finished my dissertation long ago," he says, "if not for that foreign language exam. English is my stumbling block. Maybe I'll find it easier if I start reading professional journals in English. I've ordered *Mining Engineering* and *Engineering and Mining Journal*. I hope it'll help."

Anatoli Yegupov's living standards and interests are much the same as they would be in Moscow, in spite of the fact that he lives at the end of the world.

COME OVER FOR SOME PELMENY



If you should happen to be in Siberia, be sure to get yourself invited to a pelmeny dinner. Not that you'll have to ask; Siberians don't take second place to anyone when it comes to hospitality. And they don't think they've really been hospitable until you've put away several scores of these delicious meat dumplings. It's not hard!

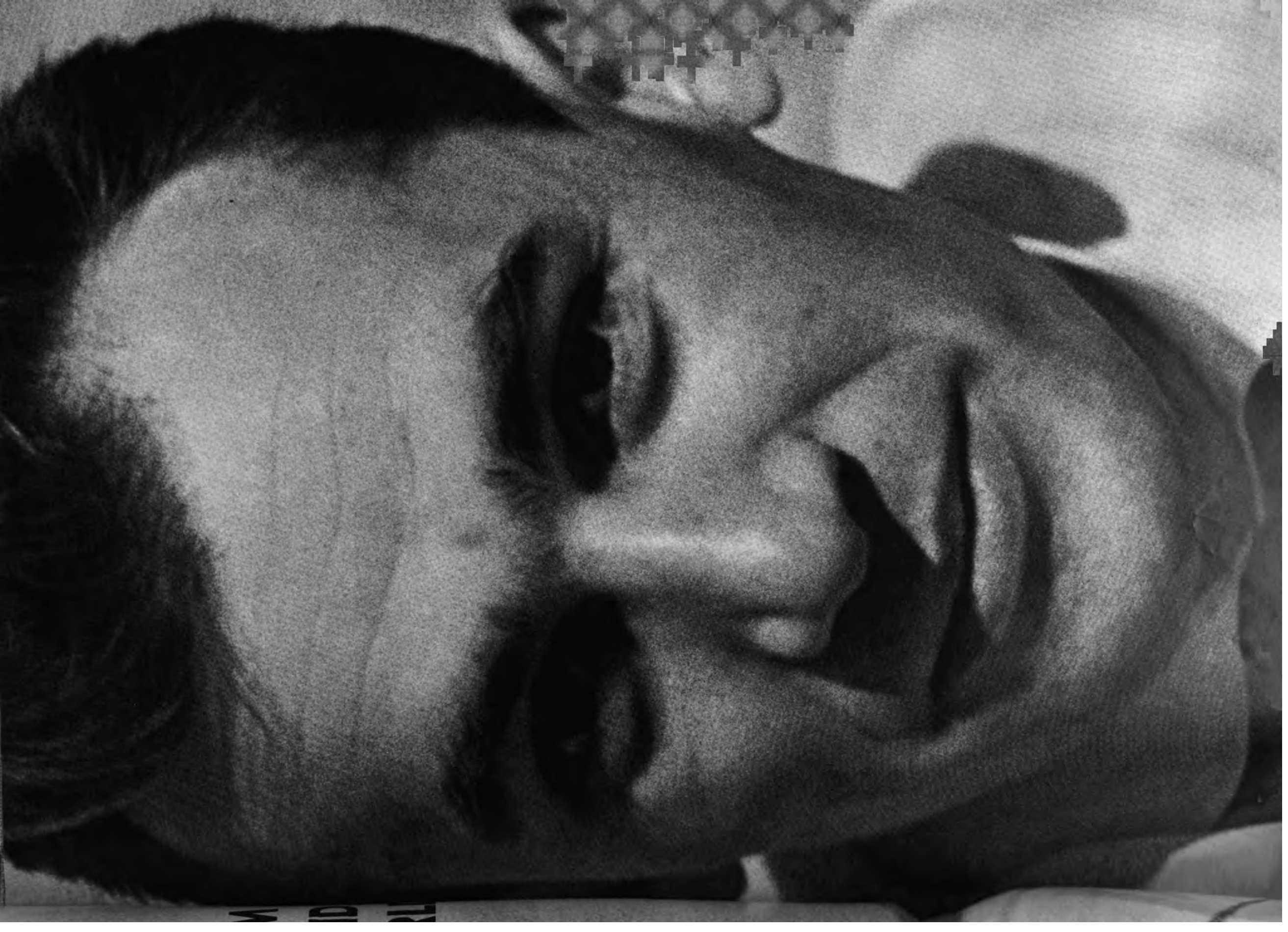
Looking for the recipe, our biggest problem was the size of the proportions. At the Lena Restaurant in Yakutia they make them by the thousands. Their recipe reads: "To a sack of flour add a pail of milk," etc. In largish families they make 500 at a time.

At last we found a recipe for 200. Irina Petrova, a chauffeur's wife, told us that the three main ingredients are flour, meat and frost. "My husband says there is a fourth one: a glass of vodka.

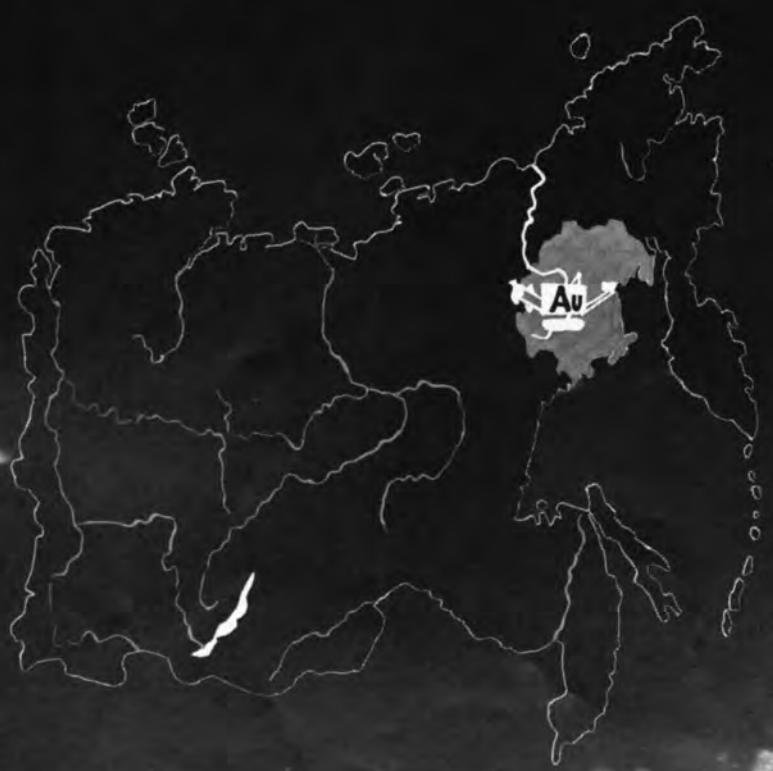
"To make pelmeny take two eggs, a glass of milk and about three glasses of flour. Make a stiff dough and roll it out to one-fifth of an inch thick and cut out round pieces about two inches in diameter—that I do with a wine glass. Then prepare the stuffing: a pound and a half of beef and a half pound of pork. Put it through a meat grinder twice. Add milk, pepper and salt.

"Pelmeny are made in various shapes. I, for instance, make them like a shell. I stick the edges together and then join the ends. The pelmeny are then put out into the frost (they can also be frozen in a refrigerator). Drop the frozen pelmeny into boiling broth. When they surface, have your spoon ready. Pelmeny are served in broth, with mustard diluted in vinegar, with sour cream or with butter."

Hearty appetite!



KOLYMA'S GOLD




ELT

Death of Boriska

WORD OF GOLD in Siberia first came from Yuri Rosenfeld. Traveling inland from the Sea of Okhotsk in 1908, he discovered massive quartz veins on the banks of one of its numerous rivers.

He did not test the veins at the time because he had no instruments with him. He intended to come back the next year, but it was not until six years later that he managed to get out to Kolyma again, this time accompanied by prospectors Mikhail Kanov, Sofei Gaifulin and Safi Shafigulin, who went by the nickname of Boriska. Their prospecting found them nothing, however, and when winter set in, Rosenfeld, Kanov and Gaifulin went home, leaving Boriska behind. Notwithstanding frost and blizzard, Boriska reached the Srednikan River and discovered gold on the banks of one of its tributaries.

Boriska's body was found by passing Yakutians. It lay on the edge of a pit, and near it were a well-used hatchet, a pan and two empty cans. His death was a riddle, since he had enough food. Most probably he was killed and robbed. Later on, the Boriska mine was set up on the spot where the legendary discoverer of Kolyma gold perished.

Nothing much happened until 1928, when a fully equipped expedition led by the distinguished scientist Yuri Bilibin found gold fields in the basin of the Kolyma River, on the coast of the Sea of Okhotsk.

Ivan Penkin and Henry Wallace

The thirties was a period of hectic industrialization in the Soviet Union. One factory after another sprouted up—the Magnitogorsk Iron and Steel Works in the Urals, the Kuznetsk Works farther east, and others still farther out, in the town of Komsomolsk-on-Amur, that bulwark of metallurgy in the Far East.

Young people who wanted to be where things were humming swarmed east and north.

Early in the thirties Ivan Penkin, a boy from the Altai Mountains, arrived at Magadan, in the Bay of Negayevo. At first he worked as a fisherman and longshoreman, but when he heard about the gold fields from a man who came from the Kolyma, he decided to be a miner. In the evenings, after work, he read up on the subject.

Many years later I saw his diary entries. He wrote:

April 10, 1932. *Just learned that four tractors came down from Yablonovy Ridge on March 29. They were loaded with stuff for the new mines. That's where I'd like to work.*

July 1, 1933. *This morning trucks set out from Magadan on the 18-mile trek to the Kolyma. That place is 460,000 square miles big—France, Holland, Belgium, Switzerland, Germany and Austria wrapped in one. An area of 46 square miles for every man living in the basin of the Kolyma! That's what I call space. Plenty of room for roads, factories and cities. And they'll all be built.*

December 19, 1939. *Hurrah! We've got a sound movie now, talkies with music. Simply wonderful! It's symbolic. No more silent movies—no more silent spaces.*

Ivan Penkin was a determined chap. In two years he finished his high school education and entered the newly opened mining school in Magadan. When he graduated, he took a job at the gold mine in the Chai-Urya River Valley.

Then came the war and the great war effort. The men worked day and night at their gold washers.

Ivan Penkin still remembers the morning the radio broadcast the happy news that Soviet troops had reached the country's borders on their march westward.

A few days later the miners welcomed a foreign visitor. During the day shift a dusty car rattled up.

"Get ready to meet an American, boys!" yelled one of the men from the mine offices.

"What American?"

"The Vice President of the United States. Henry Wallace."

Soon the road was clouded with dust as one car after another drove into the grounds. Surrounded by a group of civilians and officers, a broad-shouldered man of 50 or thereabouts approached the washer with a broad smile.

Ivan Penkin says he will never forget the picture the Vice President made as he held up a bucket of gold.

"Vice President Wallace would like to know how many buckets of gold you dig up a day," said the translator.

Penkin smiled. "We don't count them. If we did, we'd never get our work done."

Wallace laughed.

"I suppose you're right," he said.

From Pan to Dredge

Boriska, and thousands of other Kolyma gold prospectors after him, used pans to wash the gold in. The amount of dirt they could pan was, of course, infinitesimal. Romantic as it might seem, theirs was a time of grueling labor. It has vanished without tears. Dredges manufactured by a plant in Irkutsk, hydroelevators doing the jobs of thousands of men, washers with remote control, and powerful bulldozers work the Kolyma now.

The miners themselves invent and build their machines. Among them are people arbitrarily sent to prison camps after 1937. Vindicated and set free, they stayed on in the Kolyma to make that region yield all its riches to the people.

In 1960 Pavel Turilev, a former prisoner, invented a new hydraulic machine that washes 2,600 cubic yards of sand a day. It is operated by four men and does the work it took a thousand men to do in 1938.

A new drill was built that couples pounding and boring operations.

As a result of these innovations, production in the gold fields is making seven-league strides. In Magadan Region productivity in 1960 was 30 times greater than in 1940. Manual labor is practically nonexistent in the factories. Everything is done by machines.

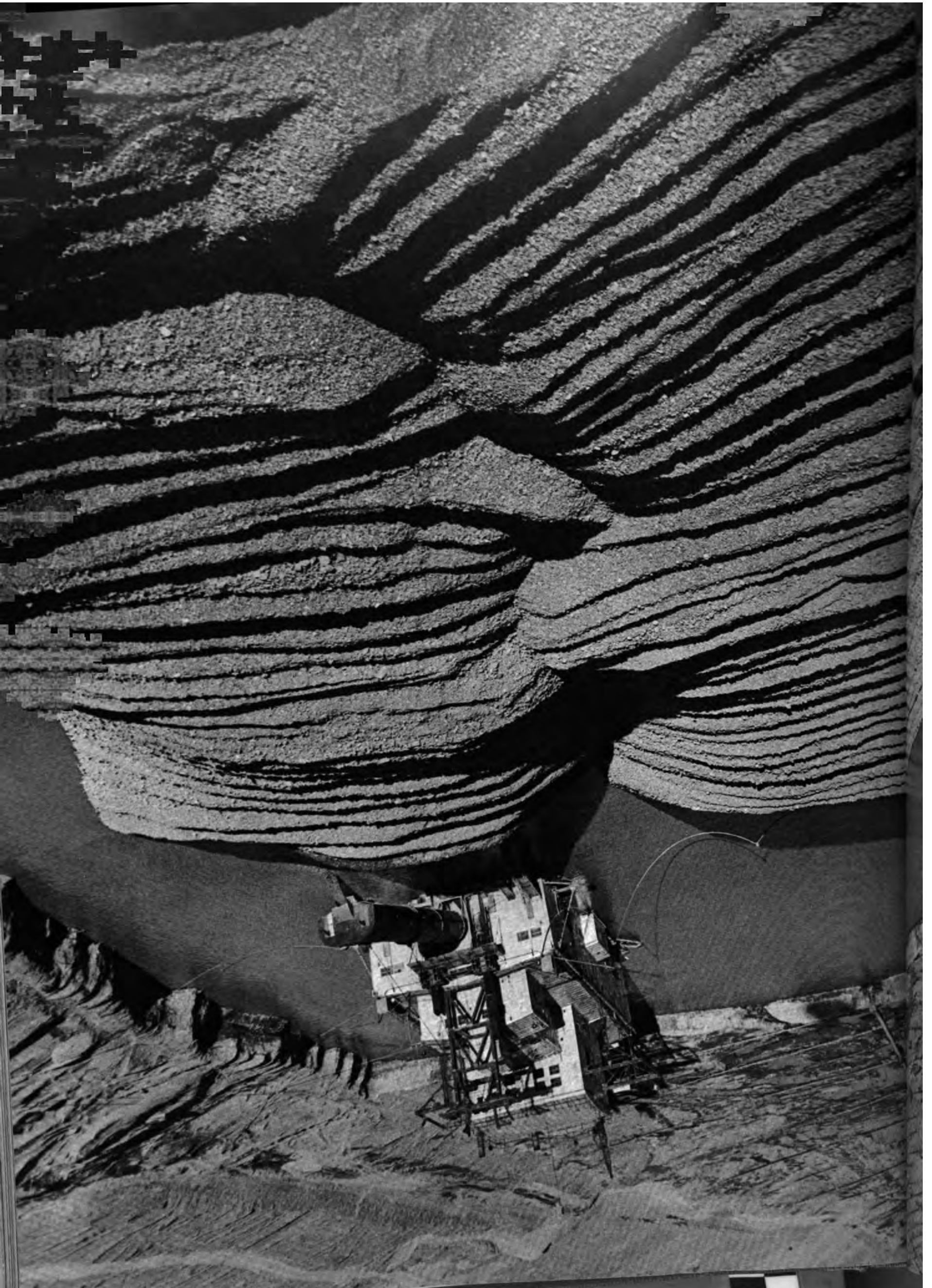
Soviet geologists and engineers keep finding new fields in the Kolyma. There is enough gold there to occupy several generations of miners. As a well-known Soviet geologist put it, our "Golden Calf" lies with its head on Alaska, its shoulders and chest on Chukotka, its trunk on the Kolyma, its tail on the Lena, and its legs stretching all the way to the Transbaikal.



Gold nuggets found in the Kolyma River near the village of Bilibino on the Chukotka Peninsula.



This gold-mining dredge does the work that required 1,000 men a few decades ago. Labor productivity on some of the mining and processing jobs is 20 to 30 times higher than in 1940.



Kolyma is a land of triumph and pain. The triumph is today's—for its gold fields and industrial development that have transformed the life of the region. The pain is yesterday's—when Kolyma was the scene of injustices that violated every principle of our socialist society.

Here, at the time of the Stalin cult, thousands of falsely accused and unjustly convicted Communists were exiled. Cut off from the rest of the country, defamed before their friends and their children, they never wavered in their loyalty to communist ideals. And it was not rancor at their fate but a sense of responsibility for the destiny of their country that guided them during those oppressive years.

Today restitution has been made to these people. They have all had their good name restored, as has Georgi Shelest, the author of Kolyma Notes, from which this excerpt is taken. They are back with their children and grandchildren.

Once again they are building communism.

The yesterday of Kolyma is a sore which we have reopened so that its pain may burn us all, so that every man and woman may know this creeping disease, so that it is never again permitted to poison the country.

THE GOLD NUGGET

WE WORKED in teams washing gold on the Kolyma. For 100 per cent extraction we earned one pound of bread a day and three plates of thin soup. From day to day we grew so thin that our bones stuck out. But that damn gold had to be extracted. "No gold, no food," ran the camp saying.

There were four of us in the team: Kostya Dushenov, Samuel Gendal, Yefim Golubev and myself. All of us were Communist Party members, and the year 1941, with its hopeless prospects, hung heavy on us. The Germans had moved close to Moscow. With terrible apprehension we wondered if they would take the capital. And if they did, where would we be?

Golubev and I harnessed ourselves to the sledge and went off to the stream for water. While we kept fetching the water and heating it in an iron tub over the fire, Dushenov and Gendal "steamed" the sand. All of us then proceeded to wash the "prospected gold."

We would wash about half a ton of the sand on the tray. Dushenov had the most experience. And it was he who would scoop up the gold that looked like mildewed grams of copper.

"Wish we could find a nugget," I said.

Golubev sighed.

"I wouldn't mind having some shag, Biyski brand, No. 1. It's strong!"

"Let's sit down for a smoke," Gendal said.

Arkadi Sinitsin, nicknamed Slim, approached us. He was in camp for some petty crime. He kept a tally of the washed sand and had a certain amount of freedom moving around without the prison guards. His face was clean-shaven and smelled of toilet soap.

"How much?" he asked.

"About half a ton," Dushenov replied glumly.

Slim recorded the figure, dropped down beside us, took out a carved cigarette case and treated each one of us to a whole cigarette of shag. We knew that it was Bulygin, a security official who had gotten himself into trouble, who rolled the cigarettes for him.

Slim had a glib tongue.

"You politicians are a queer lot. Dialecticians, that's what you are. You make martyrs of yourselves instead of getting to know the ropes. When you know the ropes, you can live anywhere. Isn't that clear?"

"Not a bit clear!" replied Gendal.

After a brief pause Slim asked:

"Anything extra? I'll swap it for shag, bread and grain."

"Any idea what's going on at the front?" Dushenov asked.

"Hang it, I've come to talk business, not war. You're such half-wits, you make me laugh. Communism, socialism, kolkhoz, sovkhoz! Party programs, Party rules! Capitalism, internationalism! Why don't you learn the ropes? Well, got any extra gold?"

"Where from? We hardly get enough for our bread ration," Dushenov said, his face darkening.

"Suit yourselves," Slim rose. "I could trade you five half-quarters of tobacco for every gram. Biyski No. 1!"

"If the Germans took Moscow, there'd be some business!" he unexpectedly said in parting.

We were struck dumb by his words.

"If you could lay your hands on a million, what would you do, Arkadi?" Gendal asked.

"An idiotic question," said Slim sitting down again. "There's no telling what I could do with it. I'd hand the prosecutor 100,000 of it for minor expenses. Clear? Then I'd go to Beria and say: 'Lavrenti Pavlovich, let me have 300 convicts and I'll get you gold.' And that would set things off!"

It was Gendal who found the gold nugget. He was shoveling sand when he suddenly stopped, his spade balanced above the ground.

"Comrades! There's something heavy on it." Gendal's eyes bulged and his reddish brows sprung to the middle of his forehead.

"Easy, go easy, Gendal." Dushenov took the spade from him and emptied the sand into the tray.

It was the first nugget our team had found, a hunk of metal compressed by some terrific unearthly force into a small, heavy lump.

"A break for us, at last," exclaimed Golubev in his wailing voice. "Maybe we'll get some thanks for that."

"Thanks my eye! While the old man's in power, we'll only get curses," Gendal said painfully. "That nugget bodes no good for us."

"It weighs at least three pounds. What shall we do with it? Hand it in?" Dushenov asked.

We fell to thinking.

What should we do with the nugget? Hand it in or hide it? We could hide it so that the devil himself wouldn't find it, then go on doing our daily quota. We could get extra bread, shag, perhaps even some tea leaves, a three-month-old newspaper, soap, too. And we could loaf a little on the job. It was tempting, all right. The thing could be handled carefully, and it would make things a lot easier for us.

"What are you so quiet about?" asked Dushenov. "You may disagree, but I think we ought to hand the nugget in," he continued softly. "That's what I think, and I'll tell you why. I'm a Communist and so are you. Lenin said a Marxist must look on life as it is, the facts as they are. And what are the facts? There is a war on. And we, by somebody's evil will, have been falsely accused, slandered and packed away here—to look for gold nuggets. We must do our bit, even here, because regardless of what has happened to us, we are Communists and we must act like Communists."

The fire burned, devouring the dry pine, and the fir branches crackled and sparked.

Our midday meal arrived, and Dushenov and Golubev went to fetch the gruel, which we soon finished.

The nugget lay on a dark blue rag, and we kept our eyes turned away from it.

"A chunk of stone, but it has a power over us. . . ." Golubev mused philosophically, breaking the silence.

Wrinkling his face, Gendal said, "I'm for handing it in. Only because of the war. Go ahead, take it to the chief!"

"What about you?" Dushenov addressed Golubev and myself. "Hand it in," I said.

"Let's hope Hitler chokes on it," Golubev added. "We got along without gold nuggets before, and we'll continue to get along without them. Go ahead!"

Dushenov went to report to the chief of the guards. Presently the chief of the prison camp, a lieutenant with a hard glint in his eyes and reeking of liquor, came up to our fire followed by a checker-examiner with a scale. Weighing the nugget, he said:

"Three pounds 11½ ounces. One like that every day wouldn't be bad!"

"You could live two months like a millionaire on that nugget," said the camp chief after holding it for a while. . . . He handed it back to the examiner. Then, turning to the chief of the guards, ordered in a loud voice:

"Take them to the camp zone, Skvortsov. They can have the afternoon off. See that each one gets a half-quarter of shag."

When we got back to the camp, we were given a meal from the staff messroom. We ate borshch, macaroni with meat gravy, and drank a glass of cranberry juice each. We could fill our stomachs with all the bread we wanted. We licked the metal bowls clean, stuffed our pockets with bread, and went to our barracks.

Next day we worked lazily, often stopping to smoke. Our bread crusts roasted on the fire, and the water simmered in the big tin can.

At midday Slim arrived. He did not treat us to any homemade cigarettes this time. Instead he burst out:

"Well of all the dirty dogs . . . Communists, YCLers, you say! Well, Stalin is damn right to pack you off into camps. You'll rot away here, and it'll be good riddance to bad rubbish."

"Say, Arkadi, when you go to the toilet, do you take your pants off?" Gendal asked.

"What do you think?"

"Do you want us to take them off for you?" Gendal continued politely.

Slim spat into the fire and walked off.

Before the day was over we had another visitor. The chief of the guards was on the go and there was a rushing back and forth.

"Something is up!" Gendal said with a chuckle.

"Some big shot coming," Dushenov snorted.

Sure enough, the chief of all the camps, the famous General Nikishev of Kolyma, had arrived, and with him was Colonel Garanin. Accompanied by a whole suite, they walked around the gold fields.

The big chiefs strode up to us.

"They're the ones who found the nugget yesterday," the camp chief reported to Nikishev.

"How big was it?" Nikishev asked.

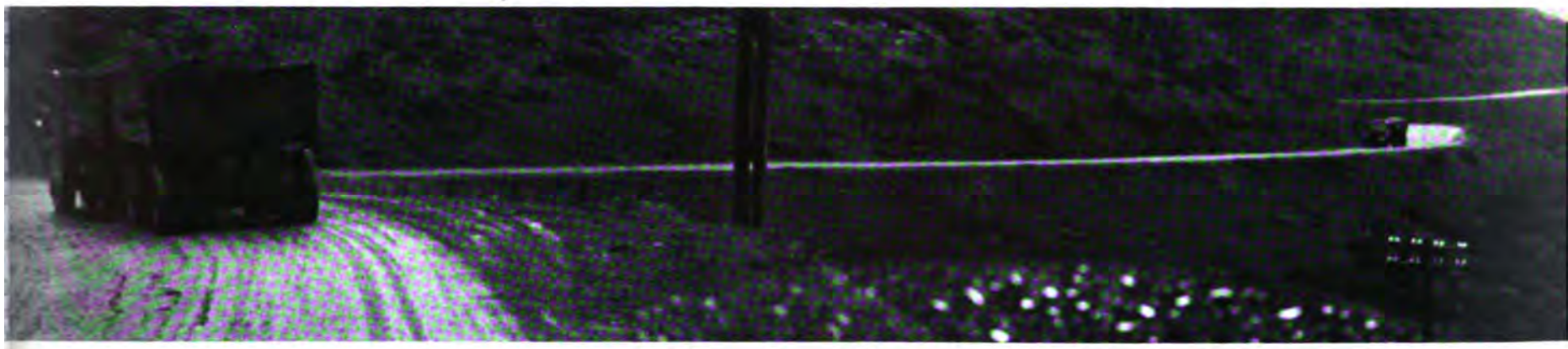
"Three pounds, 12 ounces."

"Is that all? Are you sure they didn't hide anything? Have you checked on it?"

"Yes," lied the chief of the camp. "They're politicals. . . . Stealing's out of the question."



A quarter of a century ago the expression "on the road to Kolyma" would have been meaningless, for there were no roads going there. Today there is a fine highway that extends all the way across Kolyma, from Magadan to Yakutsk. Incredibly difficult to build, it is one of the most beautiful roads in the country, traversing the taiga, marshes and mountain ranges. The highway passes Jack London Lake and one called Dancing Graylings. Over it is a pass called Think It Over, and nearby is So Help Me God! peak. In winter the mercury drops to 76 degrees below zero. At that temperature bolts and nuts crack; the metal cannot take the strain. In summer things are easier, and that is when our correspondent took a 1,250-mile trip.







(Top) Some 13 million tons are hauled on the Yakutsk-Magadan road annually. (Left) A stopover on the 1,550-mile road for a bed, meal, gas or repairs. (Right) Andrei Tokarev (in cap) has 15 years of Kolyma driving behind him.

ON THE ROAD WITH IVAN YERYOMIN

BY YURI GRAFSKY

Monday

I am off to Ust-Nera from Khandyga, which I reached by plane; the summer road from Yakutsk is still under construction.

I am riding in a truck with Ivan Yeryomin, who offered me a lift part of the way. Well over 40, he is tough and stocky, with a bronzed weather-beaten face.

He came to me at daybreak, shaved, natty-looking, wearing boots and overalls bleached white by many scrubbings.

"When do we start?" I asked.

Yeryomin screwed up an eye at me.

"Let's say around five."

"Why so late?"

"Well, I've got to give the truck a going over, for one thing, and there's a bit of packing to be done. I'm taking a rifle, and my dog is coming along. Who knows, maybe we'll run into a bear or an elk. I've got a good pup, I call him Dokuchai. He goes after fox and rabbit. Quail too."

"For heaven's sake, we aren't going hunting, are we?"

"We're going into the taiga," Yeryomin said, "and we've got to be able to take care of ourselves."

We start off at five sharp, Yeryomin at the wheel. In back of us, breathing down our necks and crowding us occasionally, is Dokuchai.

We are driving over a gravel road to the constant tattoo of wet pebbles against the bottom of the truck.

Dusk is rapidly approaching. The lights of oncoming trucks appear far ahead. The trucks, trailers hoisted on their platforms, draw nearer, rumble past, windshields reflecting the last sad glimmer of daylight.

"Bound for Khandyga," comments Yeryomin. "They'll use 'em to haul lumber to the gold fields, the lumber floated from upstream, I mean."

As the miles mount, I learn more about the everyday life of the

highway. They call it the Road of Life. Which it is, providing as it does the only access to the region and carrying annually some 12-13 million tons of freight. Some 5,000 trucks travel on it day in, day out. From Magadan and the seaports they roll into the hinterland, hauling machines, lathes, equipment (I saw flatbed trucks carrying two bulldozers), food, fuel, etc., to the remotest parts of Yakutia and the Kolyma region. On the return trip they bring coal, lumber and other products.

Tuesday

It is wonderful to watch the approach of dawn in this country. All night long a subtle change has been creeping over the sky, a change of color, an intensification of violet, moisture-laden tones. This does not last, however. Soon the sky is gray, and it begins to rain.

Presently we drive into the settlement of Kyubuma, to find it much like so many other places in the region (several dwellings of white brick, a restaurant, a school, a clubhouse, and a medical center) whose economic reason for existence is a gold mine, a resident geological survey party, or road construction. At Kyubuma it is road building; construction is going on some 15, 20 or 30 miles away.

We find a long line of lumber trucks parked near the lunchroom. The lunchroom is closed and the drivers are annoyed.

"What the devil goes on here?" yells a brawny driver, reeking of gasoline and oil, his shirt unbuttoned. "There are plenty of hotels and filling stations and everything else on the old road, and the eateries are open day and night. Why don't we have them here, on this stretch? We'll write to the chairman of the economic council, that's what we'll do!"

The protest is reasonable. The fact is that there are two stretches to the Kolyma highway. One runs from Magadan to Ust-Nera. This is the "old road." There's a drivers' free hotel there every 62 miles, with single and double rooms, showers, a lunchroom and a filling station. Also a dispatcher's office, which sees to it that no driver is at the wheel for longer than a 12-hour stretch; he is stopped and packed off to bed.

The "new road," the stretch between Ust-Nera and Khandyga, has no such facilities. It is of comparatively recent origin. As a matter of fact, it is still being built.

Wednesday

The day breaks fine, with white clouds in a blue sky. The roads runs up hill and down dale as one pass follows another.

We are deep in the mountains of the Verkhoyansk range. They are different from all others. They rise around us, tier upon tier, pale green in the foreground, silent in their canopy of reindeer moss, and reddish, rock-ribbed and weather-beaten farther away. Next they change to indigo blue, towering above us, peeking at us through the rifts in the clouds, finally turning to somber violet and purple shades on the fringe of visibility.

This morning, in Ust-Nera, I bid Ivan Yeryomin good-by. From here on I am to ride in a huge Tatra truck, the kind the Soviet Union buys from Czechoslovakia.

Andrei Sokov is at the wheel. He is a little over 30 perhaps, of slender build, with a narrow face. He sports a black silk short-sleeved shirt with a zipper.

"I've been here for the past six years," he says, "and I like it. We get paid by the ton-kilometer. So we lose pay when the machine is in the repair shop."

The Tatra runs smoothly, rolling a little, like a ship at sea. On level ground, that is; because on a downhill stretch it races along with the high-pitched drone of a jet in flight.

"We make a lot of money here," Sokov confides. "The lousiest driver can earn as much as 400 rubles a month. Some make anywhere from 500 to 600, some even more."

Sokov himself is one of those who "make even more," though he is reticent about particulars.

Kolyma pay is high generally. In the first place, there is the 70 per cent territorial wage differential, to compensate for the harsh climate and the amenities that are lacking. In the second place, there is a 10 per cent annual increment, up to a 100 per cent ceiling in ten years. And, finally, there is the two months' paid vacation, which may be taken annually, but which most people here prefer to let accumulate for three years because once in three years the government pays their vacation travel expenses both ways.

Thursday

I'm getting a lift with Victor Chukhrov. A young man. Very quiet, preoccupied. Not very talkative about himself. He is grieving over something, evidently. A death, perhaps, or a girl who turned him down. Whatever, it was, it made him sign up for Siberia and leave his home town somewhere near Moscow. He's rounding out his fourth year here in the Kolyma area. He is single and lives in a hostel. His monthly earnings come to 350-400 rubles. What does he think about money?

"I can't say that I don't care about money; all of us need it. But here, up in the North, there are other things that attract me. Now, suppose I found 1000 rubles. I'd spend it right away; it wouldn't have the same value for me. It's different with the money I earn myself—that money is real. It has real value for me."

Friday

We topped a mountain pass that the local people call Chifir Pass. Why? Because all the truckers stop here for a cup of tea, brewed strong enough to knock you over, called *chifir*. It is made right here, over a campfire.

The fire is never allowed to go out, a sort of "eternal flame." Every driver is supposed to help keep it going, if only by throwing a handful of coal on it, fetching some firewood, or stirring it up a bit.

What keeps the thoroughfare operating is not only its fine technical services, but the human response as well, the readiness of people to help out in an emergency. No driver would think of passing a standing car or truck without asking what the trouble is. Something to do with those "other things" of which Victor Chukhrov spoke.

"*Via est vitae*" (a road means life), the ancient Romans used to say. It's particularly apropos here.

(Top) At any given moment 5,000 trucks are on this road to the gold fields.
(Left) Victor Chukhrov earns more than double what he would elsewhere.
(Right) Maximum driving stint is 12 hours. Hotel accommodations are free.







YAKUTIA

The western end of the "Road of Life" lies in Yakutsk, capital of the Yakut Autonomous Republic (area—one million square miles, population—600,000). The frigid pole (−104.8°F.) of the Northern Hemisphere is located in the Yakut town of Oimyakon.

In this cold land spreading over the same latitude as Alaska and north of it, live a hospitable, industrious people with an interesting history and customs. About a quarter of a century before de Laubel proposed building a railroad across Siberia, a Yakut custom saved the lives of two American sailors.

In 1881, the Jeanette, an American brig on an Arctic expedition, was shipwrecked off the coast of Yakutia. Her crew crowded into three rowboats and made for the mouth of the Lena River, but the raging storm scattered the boats. One landed on a shore not far from human habitation. Another, commanded by Captain George W. de Long, was cast onto the shore of the uninhabited tundra lying to the west. De Long sent two sailors, Louis Noros and William Nindemann, to look for help. Without food, through a fierce blizzard, they groped their way south for ten days. They were just about to give up when they came upon a hunter's hut. As Yakut custom required, the hut was stocked with fish, frozen meat and fuel. That saved the lives of the exhausted men.

The next day a hunter wrapped in furs skied up to the hut. He was a Yakut, and his name was Ivan Androsov. He gave the sailors all the food he had, a reindeer skin and a pair of kamoos (fur boots), and sped away for help.

The Yakuts took the sailors from camp to camp, showing them every concern. They searched for the third boat, found it and saved its crew, commanded by U.S. Navy Engineer George Melville.

But de Long and his companions perished. Melville buried them on a high cliff which the Yakuts subsequently named Amerikankhei or Mt. American.

During the navigation season, when the river is open, Lena boats passing the cliff on their way north salute the memory of the American sailors buried here with long mournful blasts.





Under czarism, Yakutia was a place of exile. A man sent to that remote outpost was cut off from the world not only by snow, taiga and bog, but also by the terrible monotony of the life. Semyon Ivanov, a Yakut and the present head of the government, tells how his people acquired statehood after the Socialist Revolution.

HEN the first Russian explorers came to Yakutia 322 years ago, they called our le "iron men" because we hunted sable squirrel in the dense taiga in frosts of °F. And yet, in spite of this remarkable ng power, we were a people without a e. The "iron men" were dying out. Tuber- is wiped out whole districts. That was ly surprising considering that in 1913 was only one doctor in a region as large ıe state of Texas. We had more people ed by trachoma than we had literates. e was neither a public health system nor ıool system. For us civilization was em- ed in the Russian merchant or czarist al who bought our furs for a bottle of a.

ıe Revolution saved us. Forty-two years the state of Yakutia was formed as an ıomous republic within the Russian Fed- on.

e are independent within the framework ıe Russian Federation. That means that law guards our territorial integrity. No- can change the territorial boundaries of state without the sanction of the Yakut eme Soviet. We publish government de- s and newspapers in two languages, Yakut Russian. Our radio broadcasts and court eedings are also conducted in the two uages. Yakutia is represented in the legis- e and executive bodies of both the USSR the Russian Federation. The national ts of the Yakut people are represented 1 deputies whom they elect to the Soviet lationalities of the USSR Supreme Soviet.

was not easy for us to build up our blic. Ours was a northern land ten times er than France, without railroads and in- ry, and with a people almost completely ıuched by civilization.

'e became part of the Russian Federation, the Russians were the first to help us. We our children to Russian universities and ges, and the Russians sent us teachers, uists, economists, geologists, engineers and ıtists.

o fight tuberculosis, we set up a network lispensaries. In two years TB specialists nined every person in our republic. Every rcular is now under medical observation. ur infants are vaccinated against TB. We our own Institute of Tuberculosis.

ıe disease is fast retreating, its incidence being a twenty-fifth of what it was. As rachoma, small pox and diphtheria, they disappeared altogether. We have 36 times any babies born now as in 1917.

ly seven men in a thousand could read arist times. We had to teach the other heir ABC's. This was difficult because we no alphabet of our own, no books, no ing facilities and far too few teachers.

hat we need most now are qualified work- nd specialists. At present they are being ed in our university, institutes and tech- schools. We have a branch of the emy of Sciences and seven research insti- including a cosmophysics institute. At okyo cosmic ray conference, our scien- read 15 papers.

e world market is familiar with Yakutia's diamonds and furs. We are building electric stations. Because they must be ructed on a foundation of eternal ice, are unique structures, built so that they ot collapse if the ground under the dams d thaw. We are now making corridors dams through which cool air is pumped. e problem of our severe climate is very with us. Though the yurts in the vil- were replaced by houses, inside plumb- as not installed in the capital until 1936. factories lack sufficient fresh water, and not have enough roads. We are meeting these difficulties, however, and with our own resources.

Our scientists are studying the possibilities of improving Yakutia's climate. Some propose the creation of artificial reservoirs by damming up the mouth of the Lena River. Others suggest blasting cracks in the mountain ridges to let the warm winds of the Sea of Japan through. Still others believe it would be best to build a dam across the Bering Strait to stop the cold water from flowing into the Sea of Okhotsk. These are grand projects, projects for tomorrow. And tomorrow is just around the corner!



st Maria Gavrilova received h degree from Yakut Univers secondary and higher educ annually graduate some 150

storied apartment houses are g ities, where more than half of population lives. A new plant m ıces the prefabricated ferrocon







kutia has seven scientific res ers, including the Institute of C and the Institute of Permafrost Stud Fyodelyanov is shown using a hy

-year-old Igor Naumov lives in th ere's only two means of transportati ers and the airplane. He has heard o ıle and has seen trains only in mov

ceived her Master of University. The re- er educational insti- me 1500 specialists.

es are going up in half of the repub- plant near Yakutsk erroconcrete units.





research insti- of Cosmophysics Studies. Novomir hydrointegrator.

n the tundra and rtation—the rein- rd of the automo- moving pictures.

BROWN DEATH

The international fur auctions held in Leningrad are almost traditional now. This is where millions of dollars and thousands of sable, muskrat and mink skins change hands. But if there were no Eastern Siberia, there would be no Leningrad auctions, for Siberia provides the country with half its stock of furs, even though hunting and trapping have long ceased to be its main industries. Our furs come from Yakutia, the Kolyma area, Chukotka and the environs of Irkutsk—wherever the Siberian frost makes fur-bearing animals don their warmest coats.

IT RESEMBLES a big brown squirrel, this animal streaking from tree to tree across rows of fallen cedar trunks and thick bushes. Shooting into the crown of a tree, it frightens out two big black grouse. Then it slinks down in serpentine fashion, bolts over the ground, dives into a bush and reappears with a big taiga mouse in its teeth. Suddenly it stops in its tracks, glances around warily, then, shadow-like, scales a tree and vanishes into a woodpecker's hole. The next moment it jumps down, dragging with it a squirrel with a slashed throat. Once again it stops, now looking like a cross between a pointer and a cobra. It is about to leap . . . when a gun goes off and the slayer lies slain.

American Indians called this killer *wapestan* or brown death, a proper enough name. Naturalists call it marten, but most people know it as sable—the animal with the most beautiful and valuable fur on earth.

The above hunting scene came from Vladimir Krivosheyev, director of the East Siberian Fur Base, the son of a Siberian trapper himself.

In czarist times, when merchants bought sable skins in Irkutsk Region, they paid their weight in gold. In more remote spots, they bartered flour, bullets, boots and other necessities for pelts, always on the lookout for the prize—sable.

Today professional hunters of our state organizations are equipped with guns, food, horses, even helicopters. It takes years of experience, patience and skill to kill a sable; the cunning animal rarely falls into a trap. It takes a crack shot, too; you have to get it between the eyes not to ruin the skin and cut its value sharply. We have many hunters who bag as much as 10,000 rubles' worth of sable a season.

Sable and other fur-bearing animals are also bred. Thanks to the conservation work of our fur-skin bases and breeding farms, it is impossible even to guess the number of sables, ermines, kolinskys, minks and muskrats in Siberia.

We do know one thing for sure—that there are many more of these animals now than in 1947, when our state organizations first began to hunt sable and muskrat.

YOUR FUR COAT

Last year the Soviet Union sold on the world market

1,400,000 squirrel skins
900,000 muskrat skins
125,000 mink skins
90,000 kolinsky skins
80,000 sable skins
80,000 ermine skins

HUMOR





WHEN the first Russian explorers came to Yakutia 322 years ago, they called our people "iron men" because we hunted sable and squirrel in the dense taiga in frosts of —76°F. And yet, in spite of this remarkable staying power, we were a people without a future. The "iron men" were dying out. Tuberculosis wiped out whole districts. That was hardly surprising considering that in 1913 there was only one doctor in a region as large as the state of Texas. We had more people blinded by trachoma than we had literates. There was neither a public health system nor a school system. For us civilization was embodied in the Russian merchant or czarist official who bought our furs for a bottle of vodka.

The Revolution saved us. Forty-two years ago the state of Yakutia was formed as an autonomous republic within the Russian Federation.

We are independent within the framework of the Russian Federation. That means that the law guards our territorial integrity. Nobody can change the territorial boundaries of our state without the sanction of the Yakut Supreme Soviet. We publish government decrees and newspapers in two languages, Yakut and Russian. Our radio broadcasts and court proceedings are also conducted in the two languages. Yakutia is represented in the legislative and executive bodies of both the USSR and the Russian Federation. The national rights of the Yakut people are represented by 11 deputies whom they elect to the Soviet of Nationalities of the USSR Supreme Soviet.

It was not easy for us to build up our republic. Ours was a northern land ten times larger than France, without railroads and industry, and with a people almost completely untouched by civilization.

We became part of the Russian Federation, and the Russians were the first to help us. We sent our children to Russian universities and colleges, and the Russians sent us teachers, linguists, economists, geologists, engineers and scientists.

To fight tuberculosis, we set up a network of dispensaries. In two years TB specialists examined every person in our republic. Every tubercular is now under medical observation. All our infants are vaccinated against TB. We have our own Institute of Tuberculosis.

The disease is fast retreating, its incidence now being a twenty-fifth of what it was. As for trachoma, small pox and diphtheria, they have disappeared altogether. We have 36 times as many babies born now as in 1917.

Only seven men in a thousand could read in czarist times. We had to teach the other 993 their ABC's. This was difficult because we had no alphabet of our own, no books, no printing facilities and far too few teachers.

What we need most now are qualified workers and specialists. At present they are being trained in our university, institutes and technical schools. We have a branch of the Academy of Sciences and seven research institutes, including a cosmophysics institute. At the Tokyo cosmic ray conference, our scientists read 15 papers.

The world market is familiar with Yakutia's gold, diamonds and furs. We are building hydroelectric stations. Because they must be constructed on a foundation of eternal ice, they are unique structures, built so that they will not collapse if the ground under the dams should thaw. We are now making corridors in the dams through which cool air is pumped.

The problem of our severe climate is very much with us. Though the yurts in the villages were replaced by houses, inside plumbing was not installed in the capital until 1936. Our factories lack sufficient fresh water, and we do not have enough roads. We are meeting these difficulties, however, and with our own resources.

Our scientists are studying the possibilities of improving Yakutia's climate. Some propose the creation of artificial reservoirs by damming up the mouth of the Lena River. Others suggest blasting cracks in the mountain ridges to let the warm winds of the Sea of Japan through. Still others believe it would be best to build a dam across the Bering Strait to stop the cold water from flowing into the Sea of Okhotsk. These are grand projects, projects for tomorrow. And tomorrow is just around the corner!







plogist Maria Gavrilova received her Master of ence degree from Yakut University. The re- vlic's secondary and higher educational insti- ions annually graduate some 1500 specialists.

ltistoried apartment houses are going up in cities, where more than half of the repub- population lives. A new plant near Yakutsk plies the prefabricated ferroconcrete units.





utia has seven scientific research insti- es, including the Institute of Cosmophysics l the Institute of Permafrost Studies. Novomir nelyanov is shown using a hydrointegrator.

year-old Igor Naumov lives in the tundra and ws only two means of transportation—the rein- r and the airplane. He has heard of the automo- and has seen trains only in moving pictures.

BROWN DEATH

The international fur auctions held in Leningrad are almost traditional now. This is where millions of dollars and thousands of sable, muskrat and mink skins change hands. But if there were no Eastern Siberia, there would be no Leningrad auctions, for Siberia provides the country with half its stock of furs, even though hunting and trapping have long ceased to be its main industries. Our furs come from Yakutia, the Kolyma area, Chukotka and the environs of Irkutsk—wherever the Siberian frost makes fur-bearing animals don their warmest coats.

IT RESEMBLES a big brown squirrel, this animal streaking from tree to tree across rows of fallen cedar trunks and thick bushes. Shooting into the crown of a tree, it frightens out two big black grouse. Then it slinks down in serpentine fashion, bolts over the ground, dives into a bush and reappears with a big taiga mouse in its teeth. Suddenly it stops in its tracks, glances around warily, then, shadow-like, scales a tree and vanishes into a woodpecker's hole. The next moment it jumps down, dragging with it a squirrel with a slashed throat. Once again it stops, now looking like a cross between a pointer and a cobra. It is about to leap . . . when a gun goes off and the slayer lies slain.

American Indians called this killer *wapestan* or brown death, a proper enough name. Naturalists call it marten, but most people know it as sable—the animal with the most beautiful and valuable fur on earth.

The above hunting scene came from Vladimir Krivosheyev, director of the East Siberian Fur Base, the son of a Siberian trapper himself.

In czarist times, when merchants bought sable skins in Irkutsk Region, they paid their weight in gold. In more remote spots, they bartered flour, bullets, boots and other necessities for pelts, always on the lookout for the prize—sable.

Today professional hunters of our state organizations are equipped with guns, food, horses, even helicopters. It takes years of experience, patience and skill to kill a sable; the cunning animal rarely falls into a trap. It takes a crack shot, too; you have to get it between the eyes not to ruin the skin and cut its value sharply. We have many hunters who bag as much as 10,000 rubles' worth of sable a season.

Sable and other fur-bearing animals are also bred. Thanks to the conservation work of our fur-skin bases and breeding farms, it is impossible even to guess the number of sables, ermines, kolinskys, minks and muskrats in Siberia.

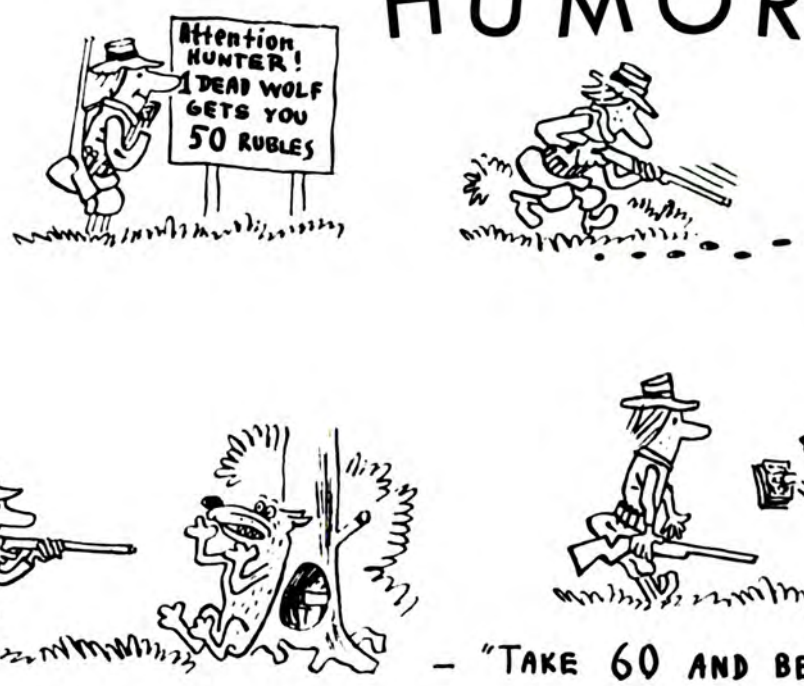
We do know one thing for sure—that there are many more of these animals now than in 1947, when our state organizations first began to hunt sable and muskrat.

YOUR FUR COAT

Last year the Soviet Union sold on the world market

1,400,000 squirrel skins
900,000 muskrat skins
125,000 mink skins
90,000 kolinsky skins
80,000 sable skins
80,000 ermine skins

HUMOR



AN UNFINISHED LETTER

By VALERI OSIPOV

Several years ago, during the heavy autumn rains, four geologists were lost in the taiga. Search parties, planes and boats were sent to look for them, but they were never found. In the spring, when the snow melted, Evenk reindeer herdsmen came upon their last camp site, and some dozen paces away lay the body of Kostya Sabinin, the leader of the party. He was found only 12 miles from an Evenk settlement. He had been crawling toward it when he froze to death.

The herdsmen found a small packet on the body with a map locating diamond deposits and several sheets of closely written paper—a long letter from Sabinin to his wife.

The letter was sent to the Moscow address, and the map was turned over to geological headquarters, where the party's diamond find was confirmed.

The letter, written in installments over a period of several months, formed a single, continuous, but unfinished narrative. Here it is:

VERA DARLING, once more we've called a halt, once more it's night, we've made a campfire, and I long to talk to you. I'll probably deliver this letter to you myself next winter. You wouldn't get it any sooner anyway.

I want to tell you everything that happens to us here.

As you know, we are searching for diamond deposits. We'll find them, and when we do, we'll take some specimens and map our find. After us will come the builders. They'll build the mine and the mining community, and then settlers will come.

I haven't told you about our party. There are four of us: Sergei, our manager, so to speak, also cook, handyman, and general supplier [illegible] we call him Ordnance. He's the oldest and the most experienced— [illegible] had two years more arctic service than I.

[illegible] other two are Herman and Tanya, who are both young and green. [illegible]mparatively young, that is. Herman graduated from a technical [illegible]chool two years ago; Tanya graduated from college three years ago [illegible]d every season since has been "hunting" diamonds in the Far North. [illegible]t that is not much experience for an arctic geologist. Sergei keeps [illegible]nstant eye on them, lectures them, and teaches them taiga lore.

[illegible]ood news, Vera! Yesterday Sergei found a piece of kimberlite! Real, genuine, honest-to-goodness kimberlite! We've marked sev[illegible] spots on both sides of the stream and are digging away for all we're worth! No time to write! No time to sleep! We manage on three hours a night!

[illegible]aven't written for several days. Dead tired. We've dug up some [illegible] sites, and not another sign of kimberlite. Rotten luck. Tanya cries, Herman's eyes are oozing too. Sergei swears like a trooper and keeps on wrestling with the frozen soil. He hardly sleeps at all.

Hurray! Yesterday Tanya and I began digging at a new site and almost instantly struck a blue layer! Sergei and Herman began digging next to us with such fury that in two hours they had caught up to us. They, too, struck solid blue ground. In one clump Herman discovered a lot of tiny diamond crystals, and then Tanya found two octahedra.

We fairly went mad with joy. Even Sergei allowed himself the luxury of a smile. We celebrated the occasion by holding a banquet—stewed all our dried fruit and Sergei managed to make a scrumptious salad out of canned fish and vegetables.

I've found what I was searching for, Vera, and that's important—not only because of the deposit. You know I've never been one to seek beaten paths. I've always said the only true pleasure in life was the pleasure of struggle, of overcoming difficulties, of winning out by testing your own strength. I've had a taste of true happiness here in this remote corner of the Far North. True, not everyone would consider this happiness. It's a hard, uncomfortable happiness which sits heavily on a man's shoulders.

And then I have another happiness, and that is you. It's the light in the window that lures me on, over sea and mountain, river and forest, and for every minute spent with you I am willing to spend months and years on the march.

I haven't written for some time, darling, because a great and irreparable misfortune has befallen us.

We mapped the deposit, filled three rucksacks with specimens and began moving down stream. We struck a camp for the last time on a spot about a mile from the point where the stream joins the river. Utterly unsuspecting, we pitched our tents, pulled our boats up on shore and went to sleep. We were so tired that we covered our specimens and supplies with a tarpaulin without bothering to drag them from the boats to the tents.

The first to wake up was Sergei. That was at six o'clock in the morning. Hearing the roar, he took it for wind and was about to turn over when he suddenly realized it was rain. He woke us all up. It was impossible to set foot outside the tent. We sat up, shivering with cold, gazing out at the solid wall of water pouring down. Suddenly Sergei leaped to his feet.

"The boats!" he shouted.

We peered down at the shore. It was empty. Water was swirling over the spot where the boats had been tied. The stream was like a wild mountain torrent, sweeping away trees that had been uprooted by the storm.

"Look, a boat!" shouted Sergei, grabbing me by the sleeve. I caught sight of something yellow in the very middle of the tangle—one of our inflated rubber boats with our food and specimens. It was our salvation. But how were we to reach it?

Before I knew it, Sergei had leaped onto the jammed trees and was making his way precariously toward the boat. Suddenly it happened. The trees, as if they had been waiting for someone to push them, fell apart under his weight, and with a thunderous roar went rushing out into the main stream. The last we saw of Sergei was an arm clutching wildly at a log. The next instant several huge trees came crashing down on him.

Tanya screamed, Herman gasped, something seemed to snap inside me. We stood there half naked in the pouring rain for a long time—crushed, dumbstruck, despairing.

It was several hours before the numbness wore off and we grasped the full extent of the danger. There we were alone, the three of us, deep in the taiga, without an ax, a map or a compass.

It didn't take us long to realize we couldn't hope to reach the plane's landing place on foot. Both banks of the river were flooded for about 13 miles. And a boat was no good in this flood. In places the water rushed ahead at breakneck speed, forming whirlpools and tangles of debris; in others it stood motionless, like backwater.

Imagine wading up to the waist in freezing water (it's the middle of September now), shivering as if with fever, unable to see two paces ahead. Herman and Tanya were marvelous—not a word of complaint. Only once did Tanya let out a little cry when she had a particularly bad cramp in her leg.

But fate seemed to take pity on us. Suddenly we felt that we were climbing, which meant we had reached a watershed. After climbing for some time, we came to a gully and on one of its slopes found some fallen trunks that formed a natural shelter. That saved us.

We undressed, hung up our things and began rubbing each other down with alcohol. Tanya was so shy that I practically had to undress her by force. I made Herman turn his back while I rubbed her down from head to toe. Then I wrapped her in a tent and sat her next to the fire. This tent, by the way, was the only dry thing we had, and it stayed dry thanks to Herman, who had carried it all the way with his arms lifted above the water.

After that we each drank a mug of vodka (but I'm afraid we may still feel the bad effects of our night's experience) and got to work drying our cartridges. We have only 19 of them, 17 cans of food, one rifle (we had to throw the other away), three sleeping bags and one tent.

I'm writing during a halt. We're making our way through the taiga.

Yesterday morning, after weighing all the pros and cons, we decided there was no chance of reaching the plane. We've abandoned all thought of traveling by river because we have no craft in which to do so. Then, too, the river follows such a winding course it would add hundreds of miles to our journey, and it might freeze over while we were still in the depths of the taiga. Our people are sure to make a search for us. Planes will be sent out, and we don't want to be too far away from the place they will expect us to be.

To make a long story short, we have decided to strike out on foot and keep going as long as our food, cartridges, and strength hold out, hoping in this way to get out of the taiga. Nothing is as bad as sitting and waiting. In a fix like this you can count on nothing but yourself. Perhaps we're making a mistake, but we'll hope for the best.

We're treading virgin soil. From the looks of it no human being has ever set foot on this part of the taiga. It gets colder every day, but it hasn't snowed yet. Our waterproof jackets are inadequate, and as for our meals—half a can a day for the three of us and as much boiled water as we want. We supplement this with berries, but they are tasteless and it takes a lot of energy to gather them.

It looks as though winter is going to catch up with us after all. In the mornings crusts of ice crunch under our feet. At night the thermometer falls to about 10 or 12 below freezing. I'm very worried about Herman. He has a high fever. We have nothing to take his temperature with, but he's obviously in a bad way. Tanya is taking care of him.

Another misfortune today. While climbing down a stony incline, Herman fell and sprained his ankle. At first he couldn't even get up. With both of us helping, he managed to hobble along slowly.

If only we could spot a moose! Everything in the taiga seems to be dead.

I made Herman a walking stick. He limps badly but keeps up with us. Whenever Tanya looks at him, she stealthily wipes her eyes.

Last night Herman had a bad chill and his teeth chattered so, that Tanya and I couldn't fall asleep. She crawled out of her sleeping bag and got into Herman's to keep him warm. He stopped shivering after a while and fell asleep. I was afraid Tanya would catch his fever, but she seems not to have.

Today Herman can hardly move. His ankle keeps swelling. I carried his pack for him, but we had to call a halt at noon because he had another bout of fever. I wanted to open a can from our emergency supply, but he wouldn't let me.

While we were sitting by the fire this evening we saw the first "white flies"—snow. There were tears in Tanya's eyes. For some reason Herman asked me to show him the map of the diamond deposits. He spread it out on trembling knees, looked at it for a long time and then handed it back to me.

This morning Herman couldn't move a step, not even with a stick. He scratched the swelling, and it has begun to fester. We stayed where we were until noon. I made Herman a crutch. It's snowing again.

At first Herman made good headway with the crutch, but soon he began to lag. He's dreadfully weak, fell down several times. Again we called a halt earlier than usual. I carried Herman to the tent. He lost consciousness. Then he was delirious. Tanya cried. Still no river in sight.

I'm afraid we won't be able to set out at all tomorrow. We decided that Tanya should carry all the packs and that we'll make a sort of drag to pull Herman along on.

Now Tanya and I are going into the woods to make the drag.

How can I describe what has happened? It is beyond words. I broke down also.

When Tanya and I came back with the drag, we were so tired we went straight to sleep, with Herman lying in the sleeping bag between us. When we woke up in the morning, his bag was empty. This note was pinned to the wall of the tent:

Dear Konstantin Petrovich,

Any man would do what I am doing. It is a matter of simple arithmetic: better for one to die than three. My cans are in my sleeping bag, don't forget them. I'm going away. Don't look for me, you'll only waste time and energy. The snow will cover my tracks.

Herman

P.S. You've got to reach headquarters—they're waiting for that map. Take care of Tanya.

We searched for him till evening, but it had been snowing all night and there was no trace. At noon the next day we broke camp and went on our way.

Tanya is in a daze. She doesn't say a word, just walks with her eyes on the ground.

Thirty-six thousand steps. Started at dawn, stopped at night. No river. Afraid we're off the track. Took too sharp a turn to the right. If only we don't circle back on ourselves!

We shouldn't have forced ourselves so. Today Tanya fainted after 7,000 steps. Not once did she say a word about being tired or ask me to slow up.

Pitched the tent. It began to snow again. I made a fire inside the tent. Our hands and feet froze. We crawled into our sleeping bags and Tanya asked me to tell her about you—how we first met and who was the first to speak about love.

Suddenly she asked me if I still had the map. I showed it to her.

I have only two cartridges left. As soon as Tanya falls asleep I'm going into the taiga. Maybe I'll be lucky for once and get an elk.

Vera, Vera! What a terrible year this has been! Three fine people gone in only two months!

I was in the taiga for a long time. I followed a bird for about a mile, then it began to snow and I almost got lost. I was away for about three hours. When I got back Tanya was gone. She had left me this note:

Dear Konstantin Petrovich,

I am going to join Herman. Don't be too harsh judging me —I've got to do this. I've thought it all out. Both of us will die if we go on together, and one of us must be saved. They are waiting for the map at headquarters. You are the one who must deliver it. You are the stronger one. I know what a burden Herman and I have been. If it had not been for us, you would have reached the plane long ago. It won't take me long to reach Herman. Don't look for me. The snow will have wiped out my footsteps. I have saved one can, you'll find it in the sleeping bag. Accept it as my thanks for all you have done for me. You've got to reach headquarters and give them the map. Good-by.

Tanya

P.S. And you must be sure to reach your wife, Konstantin Petrovich. I know how much you love her. Herman and I also loved each other. We didn't let anyone know because we were afraid it would interfere with our work. We weren't destined to be happy. I hope you will be. You must get back to her for sure. One more thing—please write to my mother. They have her address at headquarters.

I searched for her a whole day, but the snowstorm made it useless.

Now my life doesn't belong to me. I must do everything in my power to preserve it and deliver the map. I tore up the tent and made several pairs of foot wrappings out of it. My feet are the main thing. I have four cans of food, a sleeping bag, one cartridge, and 12 matches.

Today I counted 53,000 steps. We really must have gone off our course. I'm afraid we went parallel to the river and that's why we never come to it. It feels as though I am walking downhill, which means I have come to the other side of the watershed.

I have long since lost track of the days, but I think it must be November. It is frightfully cold and I'm afraid I've frozen my face.

Last night I woke up in a cold sweat. Dreamed I had lost the map. Searched for it frantically and found it under my shirt.

I keep brooding over Herman and Tanya. Too bad I never knew they were in love. What an important place in their lives they gave to their work and their duty. And they were so young!

The river at last. A dead river. Boulders of ice piled on top of one another. A freezing ground wind. Would it have been better if we had stayed where we were and waited? They must have searched for us.

I'm afraid it's all over for me. My right foot is frozen. I have only three matches left. My only thought now is to get the map as near to human habitation as possible.

No one is to be blamed for the fact that the map may die alone with me. It is the result of a chain of tragic circumstances. But that isn't the important thing. On this expedition I made a discovery as important for me as the discovery of the deposits. I discovered that my view of life was wrong. I had always thought that if a man really loved, he ought to be able to leave his love and come back to her. I thought our relationship was ideal, Vera. But now I envy Herman and Tanya. They shared all their joys and sorrows. Their lives were joined completely, and their love was so great it did not require external forms of expression. They were together to the end, and their love helped them.

Not so with me. I wrote to you almost every day, I talked about you constantly, I filled the air with you. But that was not happiness, it was consolation.

Many times I asked you to join me here in the North, Vera. I wanted to have you near me. But you did not come. You stayed in Moscow. It hurts me to think of that now! Very hard, very painful. These thoughts rob me of my last strength.

This may be my last entry. . . .

•

No, I'm still alive. What am I to do with the map? They're waiting for it.

•

What shall I do with the map? Probably the last question I'll ever ask. . . .

There's no killing a man. I crawl ahead, pull myself to my knees, fall, crawl ahead again. Maybe I'll get there yet. Can hardly hold the pencil. Writing from force of habit. Scratch two lines and crawl on. I'm more used to writing than eating. Stop writing, stop living. . . .

Heard voices. Dogs barking. Crawled up. Nothing. Back in the [illegible] Warmer. Fire going out. No more matches.

Felt for the map. It's there.

Vera, find Tanya's mother . . . write her . . . and about Herman, too. . . .



FLYING IN SIBERIA

We hitched a plane ride from Yakutsk to Mirny. In Siberia you hitch a plane ride the way you do a car ride in other parts of the country. The pilot had six geologists in his AN-2 and took us along.

Three hours later we saw the winding Viliuy River below. Over the little Yakut village of Viliuchany the plane dropped down sharply. When the altimeter read 100, the pilot leveled off and turned the control wheel several times—left to right, left to right. The wings rocked smoothly. The pilot was paying his respects to a fallen colleague.

"Innokenti Kunitsin is buried here," he said. "You'll hear all about him when we land."

Ilya Zemlyanoy, chief of Aeroflot in Eastern Siberia, told us about Kunitsin. Zemlyanoy was one of Siberia's first pilots himself and is still a first-rate aviator and engineer. He often flies heavy aircraft over the taiga, where there are still new air routes to pioneer.

"The planes have grown longer and the routes shorter," he says. "But I'm just joking. The first route is never short, never easy."

KUNITSIN was one of the men who pioneered the air routes here in Siberia. That was in the forties. In those days we still had pretty poor planes, and it took a real ace to fly them out here. Innokenti Kunitsin, in an old PO-2, had to map out the air space over the Evenk National District—an enormous stretch of country.

He laid the first routes to Vanavara, Strelka and many other trading stations and places that pilots hadn't been able to get to before. Kunitsin founded an air mail service here: When he flew in supplies to geologists, he would often take along bags of mail and parcels that would otherwise have traveled for months by river boat.

I knew him well, our Kesha Kunitsin. He was a real aviator, a pilot "by the grace of God." Many people knew him. But he became really famous after this happened:

A forest fire suddenly came close to an Evenk village on the Taimura River. The frightened Evenki ran into the water. Kunitsin flew out to help. He had a hard time finding the village because of the heavy smoke. Choking, and practically by instinct, he landed his plane on a narrow strip of pebbles on the river bank.

The villagers were standing in water up to their necks. He grabbed four youngsters and ran to the plane. Then he went back for their mothers. The plane was overloaded now, and by every law of aviation he should not have been able to take off. But he did. Kunitsin deposited his passengers a few miles away from the fire and went back.

For 15 hours he flew back and forth, glued to the controls of the plane. On his last trip he carried two old men. When one of them saw that his whole clan was safe and sound, he stroked the still warm body of the plane with his wrinkled hand. "Thank you, Kesha," he said through tears he couldn't control. "You have a pair of kind wings."

A year later Kunitsin crashed, caught in a blizzard that was severe even for these parts. He was buried in Viliuchany, the village closest to where he died. You know, the Yakuts, as a rule, don't permit strangers to be buried in their cemeteries; it's a custom of theirs. But Innokenti Kunitsin, the Russian pilot, was buried in a Yakut cemetery next to their most courageous hunters. As is their custom, the Yakuts built a little wooden tower over his grave and topped it with a propeller. No plane ever flies over it without saluting.

It was a tough job blazing sky trails in Siberia, especially tough because the land itself had not yet been explored. Hydroplanes were used first; they needed no landing fields since they alighted on the rivers. But here too, before the first hydroplane left Irkutsk, the fliers traveled the whole route—some 1200 miles—rather close to the ground, looking for possible landing places.

Winters were hard. Very cold. Blizzards would halt airport operations. The first winter flight from Irkutsk to Bodaibo—about 600 miles in all—took 29 days. Today planes cover the route in three hours.

Air transport is a convenience in the European part of the country; in Siberia it's a necessity. There are towns and whole regions linked only by air; people who have never seen a train are familiar with airplanes. On Chukotka, pilots are greeted as old friends. People in Uelen have even made up a lively dance, Petrenko Has Landed.

Aircraft in Siberia spells doctor, geologist and agronomist. It spells fire brigade and builder of high-voltage transmission-line supports on the peaks of inaccessible mountains. It spells hunter, too. When large packs of wolves show up in the tundra, crack shots in helicopters kill the beasts from 65 to 100 feet in the air.

Airplanes in Siberia are gradually becoming important for freight, too. They transport tractors, motor vehicles and spare parts for dredges from the South to the North. On their return trips they carry gold and diamonds. In summer and in fall they are packed with tomatoes, apples, onions, radishes.

Siberia's progress depends on the development of huge land areas and bridging great distances. The swift wings of Aeroflot do the job.

In 1910 Aeroflot carried 13,000 passengers in Eastern Siberia.

In 1965 Aeroflot expects to carry one million passengers in Eastern Siberia.

In 1945 planes took off from the town of Kirensk (population 10,000) in one direction only.

In 1964 planes took off from the Kirensk airport, headed in 12 directions.

In 1956 only prop planes flew in Eastern Siberia.

In 1964 jet and turboprop craft handled 78 per cent of all air transport.

In 1950 a plane took eight hours to fly from Irkutsk to Yakutsk, making two stops en route.

In 1964 a nonstop flight from Irkutsk to Yakutsk took three hours.

You can travel from Irkutsk to Mama by train to Taishet station, then by train again to Lena station, and finally by boat down the Lena and Vitim rivers. The trip takes five days and costs 39 rubles.

Or you can go from Irkutsk to Mama by plane in an hour and a half for 30 rubles. As its facilities grow, Aeroflot cuts costs. Passengers on the Mama-Bodaibo route have saved 7.5 million rubles in the past five years.



These young people have come from large cities all over the country to teach in Magadan Region, Siberia. Before the Revolution Eastern Siberia had no colleges and only eight specialized secondary schools for training technicians and teachers. Now there are 22 universities and institutes (70,000 students), 146 specialized secondary schools (80,000), 8,000 grade schools (1.5 million pupils) and general education schools for adults (100,000 enrolled). There now are also some 5,000 libraries.



An American economist once said that labor productivity in his country would drop by 50 per cent if its industry had no diamonds. That is true of any industrial power today. Like the United States, we had to buy our diamonds from other countries until very recently. With Mirny, we are no longer dependent on the foreign market. Mirny is a new town in the same latitude as Fairbanks, Alaska. It is the center of our diamond industry, the youngest industry in the country. How were the deposits found? How do they compare with large deposits elsewhere in the world? Is mining them worthwhile? These and other questions are answered by Victor Tikhonov, director of the diamond trust and deputy to Yakutia's Supreme Soviet. Tikhonov helped build India's diamond industry and was awarded the title Hero of Socialist Labor for organizing the Soviet diamond industry.

DIAMOND TOWN

MIRNY, the country's diamond capital, has a very special character: Everything unusual elsewhere seems to be commonplace here, while what is ordinary every place else becomes extraordinary here.

After several years of exploring the taiga in Yakutia, Yuri Khabardin, a young geologist, sent this unusual cable in 1954: "Have lit peace pipe. Excellent tobacco." It meant that his party had found the kimberlite pipe, a diamond source that scientists had spent much time and geologists had tramped many miles searching for.

Khabardin noticed a fox hole and a fresh pile of unusual blue earth alongside it. This was kimberlite! A very ordinary way to make such an extraordinary discovery! The pipe the geologists "lit" turned out to be one of the world's richest diamond deposits, as rich as those in South Africa. They named it Mir (Peace).

Yuri Khabardin, with a group of scientists and geologists, was awarded a Lenin Prize—something rather unusual, because the winners of this prize are generally a good deal older and have a string of academic honors to their credit. Young Khabardin was not even a college graduate.

The newspapers, reporting the world diamond syndicate's reaction, said: "Russian diamonds will not appear on the world market before the twenty-first century; Yakut diamonds were found in absolutely inaccessible places."

We are still in the twentieth century, but the diamond syndicate is already buying Yakut diamonds. And in this "absolutely inaccessible" taiga wilderness stands a town of 25,000 inhabitants, with mines and dressing mills. A 185-mile road now runs from the Lena River to this region, and trucks deliver everything the town needs, from ordinary apples and tomatoes to unusual structural parts weighing many tons.

The mining of these stones is a very ordinary operation, considering their great value. Excavators with 8-cubic-yard shovels load the blue ground into dump trucks. These 25-ton machines carry the kimberlite to the dressing mill. The process is mechanized; the only people you see at the mill are a few mechanics servicing the machines built by the Irkutsk Mining Equipment Plant. Local engineers have developed a basically new technique for extracting diamonds with the use of grease. British, French and Belgian firms have shown interest in the new machinery.

The dressing mills work only in summer; in winter the local frosts of 60-75 degrees below zero penetrate the walls of the mill, and everything freezes, including the water required in the process.

However, the builders of Mirny are not to blame. The fact is that the USSR Academy of Sciences overestimated the importance of artificial diamonds. The feeling was that in time they would replace the natural stones, and so preference was given to the artificial diamond industry. The mistake has now been corrected, and a new mill is being built. Its aluminum-paneled walls, separated by insulation material, will be invulnerable even to the sharpest Yakut frosts. This unusual mill will be the most efficient in the world. To ensure an unfailing supply of water, the Irelyakh River has been dammed and a 20-million-cubic-yard reservoir built.

From the mills the diamonds go to the treasury and become the responsibility of the Ministry of Finance. Diamonds weighing more than 20 carats are given a name. The largest one found in Mirny, the Oktyabrsky, weighs 69.4 carats. In time we shall outproduce the Congo, which supplies half the world's total of these precious stones. Our diamonds are larger. According to the world diamond syndicate's estimate, 20 per cent of our stones are used in jewelry, as compared with only two per cent of the Congolese stones. North of Mirny a new pipe at Aikhal is being worked, richer than Mir. Our geologists, prospecting still farther to the north, forecast that even more abundant deposits will be found on the Olenyok River.

Mining by the opencast method and mechanized dressing guarantee our diamond operations a high profit.

Dave Marais, Johannesburg diamond expert, estimates that a 10-carat stone now brings half a million dollars on the world market. This means that eight such stones will cover all the annual expenditures of the town and mine of Aikhal. Actually, many more than eight such stones are found.

Right now a superhighway is being built through the taiga to the Aikhal diamond field. This will be the first concrete highway in permafrost country. When it is completed, getting to Aikhal will be a simple matter, though the distance from Mirny is somewhat longer than from London to Paris.

Diamond means very strong and invincible in Greek. Yet, though it is a very rare stone, it is an ordinary mineral. The elements of the unusual and the heroic were brought to the Yakut taiga by ordinary Soviet people. There were no roads or houses in these parts, and the water supply was very inadequate. They chopped out roads, built houses and dammed up rivers. There was not much sun here. But they dug blazing mineral suns out of the earth.

Unpolished 0.5- to 50-carat stones from Mirny and Aikhal, the diamond towns of Yakutia. The big ones will be gems, the smaller ones go to industry.





Trucking the diamond-bearing blue ground from the Mir pipe to a concentrating mill at Mirny.

This aluminum-paneled concentrating mill will be insulated against the harsh Siberian winter.



IN MIRNY

BEFORE THE TOWN WAS BUILT

YURI FELDMAN is a geologist and a soil specialist. It's a fascinating job, but it has e drawback: He arrives when there's no vn yet and leaves when the first corner-nes are laid.

Yuri has been working up North for ten ars and is philosophically stoic about the y he is thrown about by his nomadic mode existence. He likes to repeat what some glishman said, that a feeling of inconvence is merely inadequate appreciation of venture.

When describing his adventures (or stories inconveniences adequately appreciated), ri always begins with the same phrase:

'BEFORE THE TOWN WAS BUILT, we l our tent here on Moskovskaya Street. We re digging our first pits in the permafrost l.

'Once I climbed down into the pit and was ing there filling in my chart when pebbles an sliding down on me. I looked up, and at did I see—a bear! He hung his hirsute d, looked at me intently and began throwsome more rocks down.

'I shouted. Did I say shout? I roared!

'Bears don't like shouting. This one got message and walked off.

'I started to climb out. I just had my head shoulders clear when I saw the bear gging a tree toward the pit. I jumped n. He lowered the tree into the pit. Well, ought, that's the end of Yuri Feldman. w he'll climb down, and it's pretty close rters even for one man down here. I hed into the farthest corner and roared louder. The bear shook his head once, e, sympathetically, and again walked off. en my heart went back to normal, I looked and saw two heads. Again I yelled—I t have been heard for miles around. When opped for breath, I heard someone say: 'What's the matter with the chief? He t have had one too many.'

I shouted to them: 'Has he gone away?'

'Who?'

'The bear.'

'What bear?'

'The one that walked up to the pit.'

'Yep, one too many.'"

BEFORE THE TOWN WAS BUILT there a small pond next to where the Almaz ie house now stands. It wasn't deep—just t waist high—but it was as full of fish n aquarium. I once passed it at dawn and a bear sitting on a sand bank fishing. would bang down his clawed paw, hook a fish and sit himself down on it. Then n he'd reach for another fish, the one r him would slip back into the water. I d there watching him. Well, after about our of this, he stopped. With a pleased ession on his face that seemed to say, v I'll have my dinner,' he looked under for the fish. When he found none there, t out a howl that made the birches trem-He really hit the ceiling. Who wouldn't? n general, bears are very good-natured. hem be and they'll let you be. But Mama —brrr! Once the boys came out of the with two tiny bear cubs. They fed them ugar and a can of condensed milk each, d with them a while and sent them back e to the forest. In the morning we got up could hardly believe our eyes. The camp d as though a herd of elephants had aged through it. The sacks were all torn the boxes broken. The barrel of benzine dented as though hit by a meteor. Mama come to the camp at night boiling mad. a, the man in charge of our geological mens, swears he heard the bear mumbling under her nose as she ran amuck: 'These good-for-nothings come and spoil our children. Then we can't do a thing with them.'"

BEFORE THE TOWN WAS BUILT . . . Some of the listeners caustically remarked that these stories were thought up by the bears themselves while they were hibernating during the long winters. Always skeptics around . . . Well, if you don't believe the story, go and see for yourself. But how can you when there is no taiga and no bears in Mirny any more? And Yuri himself—he's a senior engineer at the local research institute: he's given up his nomadic life—he's now a respectable townsman. He's been here eight years already.

Mirny was the first town he did not leave.

WHEN THE TOWN ALREADY WAS

WHEN THE TOWN ALREADY WAS the telephone rang in the office of Victor Tikhonov, director of the Diamond Trust.

"Hello! Send a bus to the airfield. We've arrived."

"Who's we?"

"New graduates—engineers, geologists, architects. We've come to work at the Diamond Institute."

"How many of you are there?"

"Fifteen and one guitar."

Tikhonov did not send a bus. He didn't have any. But he did send a reindeer train. The ride was hard on the guitar—all the strings split from the frost.

There were no apartments either. The young specialists had to live in a dormitory. But the crowning touch was that there was no institute, just the foundation. They had to build the institute themselves. Later the young architects, engineers and geologists wisecracked that at least they started their scientific careers on a good foundation.

The Diamond Institute in Mirny is the only one of its kind in the Soviet Union. The 15 young graduates formed its core. The average age of these scientists is now 26. When they're asked how they find life here in Yakutia, their answer is: "Interesting." The abstract notion "interesting" takes on a multitude of very concrete meanings here.

It is interesting to construct a diamond factory, the only one of its kind. It is interesting to build dwellings on treacherous permafrost soil. It is interesting to spend a Saturday hunting or fishing in the taiga. It is interesting to gather at the Kimberlite Café for a drink, to talk about this and that and to sing to the accompaniment of the guitar that behaved so badly en route here.

WHEN THE TOWN ALREADY WAS the young architects at the institute suddenly noticed that it could stand a lot of improvement. The town had been in a hurry to wrest as much precious blue ground from the taiga as possible, and in the rush its building had been pretty sketchy. The new arrivals suddenly decided to build a blue city that would resemble nothing else in the world.

The project was drawn up by five architects of the Diamond Institute—Georgi Germogenov, a Yakut; Valeri Zakharov from Moscow; Edward Khimin and Alexander Fyodorov from Leningrad; and Valentin Ekimyan, an Armenian. In the austere yet romantic conditions of diamond land, their fantasy zoomed in converse proportion to the sinking temperature.

A town like no other is being built beyond the Arctic Circle in the rich Aikhal diamond field. A blue plastic roof protects it from the marrow-chilling winds and frosts of the Arctic like a warm palm. An artificial microclimate will be maintained in the town regardless of the temperature outside. Twelve five-story houses will be built for a population of 8,000. The heart of the town will be the administrative center, where a palace of culture will be built, a concert hall seating 400, an indoor pool and a winter garden. There will be a school for 600 children as well as kindergartens and nurseries. No matter how cold it is outside, it won't affect the children. They will never have to walk in the frost.

WHEN THE TOWN ALREADY WAS Georgi Germogenov, its present chief architect, had just graduated from college. Like many new architects, he was very modern indeed and thought that everything that had been built before him should have been designed differently. His diploma project for an air-conditioned town in the Arctic barely got a passing grade; the examining board was too conservative. Five years later the chairman of the USSR State Committee for Construction wrote on the blueprints of the new town of Aikhal: "This work deserves the highest possible rating. Congratulations!"

THE SIBERIAN CHALLENGE

The economics of the region through which the New York-Siberia-Paris railroad was to pass is regulated by two large economic councils, one in the northeast, with its center in Magadan (including Chukotka, Kolyma and Yakutia), and the other in Eastern Siberia, with its center in Irkutsk (including the Angara district, the upper reaches of the Lena River, Lake Baikal and the Transbaikal area). The northeast is the less developed and in some places has as thin a population as one person per 45 square miles. Its problems are dealt with by the complex research institute at Magadan. This is the story Nikolai Shilo, the institute's director, has to tell about its activities.

WHEN the czarist government agreed to the foreign syndicate's proposition that Louis de Laubel submitted to it and Nikolai II approved the contract, the czar virtually confessed to the impotence of Russia's monarch-landlord regime.

The past 47 years show that the Soviet system has proved itself able to cope with the comprehensive job of developing Siberia. Why do we talk so much about our accomplishments, take so much pride in them? For us they are the embodiment of a whole nation's heroism, living proof of the boundless possibilities of socialism.

But we also know and will always remember that they were paid for by the deprivation, sweat and effort of our people. In developing northeastern Siberia, we once again face enormously difficult but equally challenging problems:

1. Northeastern Siberia is a land of severe climatic conditions and great expanses. This explains its uneven economic development. In the first stage of development, isolated industrial oases were set up here and there. Now

Trucking the diamond-bearing blue ground from the Mir pipe to a concentrating mill at Mirny.

This aluminum-paneled concentrating mill will be insulated against the harsh Siberian winter.

IN MIRNY

BEFORE THE TOWN WAS BUILT

YURI FELDMAN is a geologist and a soil specialist. It's a fascinating job, but it has one drawback: He arrives when there's no town yet and leaves when the first cornerstones are laid.

Yuri has been working up North for ten years and is philosophically stoic about the way he is thrown about by his nomadic mode of existence. He likes to repeat what some Englishman said, that a feeling of inconvenience is merely inadequate appreciation of adventure.

When describing his adventures (or stories of inconveniences adequately appreciated), Yuri always begins with the same phrase:

"BEFORE THE TOWN WAS BUILT, we had our tent here on Moskovskaya Street. We were digging our first pits in the permafrost soil.

"Once I climbed down into the pit and was sitting there filling in my chart when pebbles began sliding down on me. I looked up, and what did I see—a bear! He hung his hirsute head, looked at me intently and began throwing some more rocks down.

"I shouted. Did I say shout? I roared!

"Bears don't like shouting. This one got my message and walked off.

"I started to climb out. I just had my head and shoulders clear when I saw the bear dragging a tree toward the pit. I jumped down. He lowered the tree into the pit. Well, I thought, that's the end of Yuri Feldman. Now he'll climb down, and it's pretty close quarters even for one man down here. I pushed into the farthest corner and roared still louder. The bear shook his head once, twice, sympathetically, and again walked off. When my heart went back to normal, I looked up and saw two heads. Again I yelled—I must have been heard for miles around. When I stopped for breath, I heard someone say:

" 'What's the matter with the chief? He must have had one too many.'

"I shouted to them: 'Has he gone away?'

" 'Who?'

" 'The bear.'

" 'What bear?'

" 'The one that walked up to the pit.'

" 'Yep, one too many.' "

"BEFORE THE TOWN WAS BUILT there was a small pond next to where the Almaz movie house now stands. It wasn't deep—just about waist high—but it was as full of fish as an aquarium. I once passed it at dawn and saw a bear sitting on a sand bank fishing. He would bang down his clawed paw, hook out a fish and sit himself down on it. Then when he'd reach for another fish, the one under him would slip back into the water. I stood there watching him. Well, after about an hour of this, he stopped. With a pleased expression on his face that seemed to say, 'Now I'll have my dinner,' he looked under him for the fish. When he found none there, he let out a howl that made the birches tremble. He really hit the ceiling. Who wouldn't?

"In general, bears are very good-natured. Let them be and they'll let you be. But Mama Bear—brrr! Once the boys came out of the taiga with two tiny bear cubs. They fed them on sugar and a can of condensed milk each, played with them a while and sent them back home to the forest. In the morning we got up and could hardly believe our eyes. The camp looked as though a herd of elephants had rampaged through it. The sacks were all torn and the boxes broken. The barrel of benzine was dented as though hit by a meteor. Mama had come to the camp at night boiling mad. Petka, the man in charge of our geological specimens, swears he heard the bear mumbling under her nose as she ran amuck: 'These good-for-nothings come and spoil our children. Then we can't do a thing with them.' "

BEFORE THE TOWN WAS BUILT . . . Some of the listeners caustically remarked that these stories were thought up by the bears themselves while they were hibernating during the long winters. Always skeptics around . . . Well, if you don't believe the story, go and see for yourself. But how can you when there is no taiga and no bears in Mirny any more? And Yuri himself—he's a senior engineer at the local research institute: he's given up his nomadic life—he's now a respectable townsman. He's been here eight years already.

Mirny was the first town he did not leave.

WHEN THE TOWN ALREADY WAS

WHEN THE TOWN ALREADY WAS the telephone rang in the office of Victor Tikhonov, director of the Diamond Trust.

"Hello! Send a bus to the airfield. We've arrived."

"Who's we?"

"New graduates—engineers, geologists, architects. We've come to work at the Diamond Institute."

"How many of you are there?"

"Fifteen and one guitar."

Tikhonov did not send a bus. He didn't have any. But he did send a reindeer train. The ride was hard on the guitar—all the strings split from the frost.

There were no apartments either. The young specialists had to live in a dormitory. But the crowning touch was that there was no institute, just the foundation. They had to build the institute themselves. Later the young architects, engineers and geologists wisecracked that at least they started their scientific careers on a good foundation.

The Diamond Institute in Mirny is the only one of its kind in the Soviet Union. The 15 young graduates formed its core. The average age of these scientists is now 26. When they're asked how they find life here in Yakutia, their answer is: "Interesting." The abstract notion "interesting" takes on a multitude of very concrete meanings here.

It is interesting to construct a diamond factory, the only one of its kind. It is interesting to build dwellings on treacherous permafrost soil. It is interesting to spend a Saturday hunting or fishing in the taiga. It is interesting to gather at the Kimberlite Café for a drink, to talk about this and that and to sing to the accompaniment of the guitar that behaved so badly en route here.

WHEN THE TOWN ALREADY WAS the young architects at the institute suddenly noticed that it could stand a lot of improvement. The town had been in a hurry to wrest as much precious blue ground from the taiga as possible, and in the rush its building had been pretty sketchy. The new arrivals suddenly decided to build a blue city that would resemble nothing else in the world.

The project was drawn up by five architects of the Diamond Institute—Georgi Germogenov, a Yakut; Valeri Zakharov from Moscow; Edward Khimin and Alexander Fyodorov from Leningrad; and Valentin Ekimyan, an Armenian. In the austere yet romantic conditions of diamond land, their fantasy zoomed in converse proportion to the sinking temperature.

A town like no other is being built beyond the Arctic Circle in the rich Aikhal diamond field. A blue plastic roof protects it from the marrow-chilling winds and frosts of the Arctic like a warm palm. An artificial microclimate will be maintained in the town regardless of the temperature outside. Twelve five-story houses will be built for a population of 8,000. The heart of the town will be the administrative center, where a palace of culture will be built, a concert hall seating 400, an indoor pool and a winter garden. There will be a school for 600 children as well as kindergartens and nurseries. No matter how cold it is outside, it won't affect the children. They will never have to walk in the frost.

WHEN THE TOWN ALREADY WAS Georgi Germogenov, its present chief architect, had just graduated from college. Like many new architects, he was very modern indeed and thought that everything that had been built before him should have been designed differently. His diploma project for an air-conditioned town in the Arctic barely got a passing grade; the examining board was too conservative. Five years later the chairman of the USSR State Committee for Construction wrote on the blueprints of the new town of Aikhal: "This work deserves the highest possible rating. Congratulations!"

THE SIBERIAN CHALLENGE

The economics of the region through which the New York-Siberia-Paris railroad was to pass is regulated by two large economic councils, one in the northeast, with its center in Magadan (including Chukotka, Kolyma and Yakutia), and the other in Eastern Siberia, with its center in Irkutsk (including the Angara district, the upper reaches of the Lena River, Lake Baikal and the Transbaikal area). The northeast is the less developed and in some places has as thin a population as one person per 45 square miles. Its problems are dealt with by the complex research institute at Magadan. This is the story Nikolai Shilo, the institute's director, has to tell about its activities.

WHEN the czarist government agreed to the foreign syndicate's proposition that Louis de Laubel submitted to it and Nikolai II approved the contract, the czar virtually confessed to the impotence of Russia's monarch-landlord regime.

The past 47 years show that the Soviet system has proved itself able to cope with the comprehensive job of developing Siberia. Why do we talk so much about our accomplishments, take so much pride in them? For us they are the embodiment of a whole nation's heroism, living proof of the boundless possibilities of socialism.

But we also know and will always remember that they were paid for by the deprivation, sweat and effort of our people. In developing northeastern Siberia, we once again face enormously difficult but equally challenging problems:

1. Northeastern Siberia is a land of severe climatic conditions and great expanses. This explains its uneven economic development. In the first stage of development, isolated industrial oases were set up here and there. Now

each has its own definite specialization. What we do is skim off the cream from each—a very wasteful procedure, since it makes for one-sided development. Besides that, we do not extract from nature all that she could give us if we had larger and more productive enterprises. The difficulty is that the oases are separated by great distances and have virtually no association with one another.

This has put a brake on labor productivity. For balanced economic development we must have a broad power base and the necessary auxiliary branches to service the major industries. We need a light industry of our own, since shipping greatly increases the cost of the goods we receive from the central regions. In short, we need all the industries. This is a very serious problem whose solution is still of the future.

2. We have to increase the yields of petroleum and gas that Siberia has in such abundance. For this we need special drilling machines that can bore through the frozen layers of earth. We also need a building industry. Up to now we have been using timber a great deal, but the timber reserves of northeastern Siberia are limited, and wood alone cannot meet our needs. The problem of building materials is urgent.

3. Maritime shipping is our chief form of transportation, a factor which slows down industrial production and raises costs. That, however, is only half the trouble. All our major transport routes—the Okhotsk, Bering and Chukotka seas, the North Sea and the Lena River—are icebound in winter. On the other hand, building and maintaining highways and railroads in our latitudes is a very difficult undertaking. We need radical methods to fight the Arctic ice and give us year-round navigation.

4. Our industrial units maintain contact largely by air, but aircraft should be employed with greater economic effect in the Far North.

As you see, our problems are as big as our land. We talk about them as much as we do about our successes, and draw the press and public into the discussion. That, by the way, is no small factor in solving our problems.

BUILT

several thermal power stations operating on local coal

factories for the manufacture of reinforced concrete construction elements

a highway linking Magadan and Yakutsk

winter roads in the eastern part of the Chukotka Peninsula, linking Iultin, Port Egvekinot and Anadyr

TO BE BUILT

a hydroelectric station on the Vilyui River (Yakutia)

a power project on the Kolyma

a Lower Lena hydroelectric station and others of the Lena cascade

atomic stations in addition to the network of hydroelectric stations (the Far North lacks sufficient water and fuel resources)

petroleum and gas pipe lines and expanded petroleum and oil extraction

year-round navigation to the ports of the Far North



PHOTOGRAPHS BY ALEXANDER PTITSIN

We did not leave Mirny on schedule, not through the fault of the passenger air service but because of the Forest Protection Air Service. Eastern Siberia has 845 million acres of larch, cedar and pine forest. These are the most valuable varieties and also the most susceptible to fire. One fire can destroy 25 million acres, as much forest area as all of Scandinavia has. A forest fire may be caused by lightning or by carelessness. Nowadays big fires are a rarity; the forestry service is on the constant lookout and uses aircraft to do its job. The plane did not take us southward, as we had planned. We flew in the opposite direction. The taiga was burning some hundred miles from Mirny.

FOREST FIRE

By MYUDA DEREVYANKINA

)NE TREE makes a million matches. And one match can destroy a million trees. Everyone who goes into the forest gets this reminder every geologist, lumberjack, hunter. Yet we still have forest fires.

"102 calling! 102 calling! Taiga on fire in sector 12/10!"

Somewhere a match did its treacherous work!

102 is the spotter pilot of the Forest Protection Air Service. Each ıy he patrols his sector of the Yakut taiga in a tiny AN-2 ane. The taiga is squared off, and the plane drones over every one the squares.

As soon as he spots smoke, he signals to the men waiting on the ound.

"102 calling! 102 calling! Fire squad immediately!"

The firemen in their fireproof suits look like knights of old. They ıve to be well insulated.

We flew out in response to 102's signal—"we" being eight airborne remen and myself, a *Soviet Life* correspondent. My student-days' obby of sky diving helped me get permission to jump with the rest of ıe squad.

I caught up with the commander on the airfield and flashed my sky-iver's card.

"So you want to jump with us? It's all right with me. Afterward e'll have a talk. It'll be a pleasure to talk with a woman for a change. ll we have here is men," said the woman chief of the fire-fighting quad, Dasha Efimova.

Under the wing I saw a smoking red patch, like an inflamed wound n the body of the green taiga. That was the center of the fire. The lane circled down.

"Off you go!"

And off we went, diving down into the green darkness. Our fire-ghting suits were good protection against the prickly twigs and ranches. The last to jump was the chief of the squad.

We gathered in a clearing for our briefing.

"It's a two-day job," said Dasha unfolding her map. "We'll dig tches here and spray over there. The fire's burning close to the ound."

The squad picked up the equipment it needed and hurried off into e forest in twos and threes.

The power drills bit into the hard ground. The men placed charges dynamite in the holes.

A string of explosions reverberated through the forest. The fire was t off on that side.

Now explosions sounded on the right. That was where the fire raged the most furiously. The flames crept up the trees, spreading high above the ground. The explosions were placed to direct the blast against the flames. The idea is to make fire fight fire.

The fire was being hemmed in on all sides like a dangerous beast.

That evening we sat around a campfire that gave off a very pleasant warmth and heated our evening meal. Behind the thin green forest wall the fire burned, partially under control but still dangerous.

"This is a small one," commented Dasha. "We were lucky we spotted it in time. Fires are like children—you musn't let them get out of hand. A forest fire burning fast travels about 25 miles an hour with the wind."

"How far can it spread?"

"Hundreds of miles! When that happens, it's too late for our squad to handle it alone. It's an all-out battle then. Everybody in the neighborhood is called on to help. Military units stationed in the vicinity are rushed to the spot, and sometimes even bombers are used."

Dasha is 32 years old and has two children. She has lived in Mirny for five years. In 1960 she placed first in the Siberian sky-diving championships. Her husband is a flier too.

"Is my job dangerous? No, not really. But it can be a physical strain at times. I find it very interesting. I'll keep it up until I make my 200th jump."

This was Dasha's 173rd. But it was only the third for Zhenya Pavlov, a tall 20-year-old to whom things happen. On his first fire a baby moose ran out of the flames straight into his arms. Evidently the moose decided man was safer than fire. The boys, however, say it is because the baby moose took lanky, disheveled Zhenya for another moose, its daddy, probably.

Two days later a helicopter roared over the forest. The boys packed their sacks, tents and clumsy suits. Everything smelled smoky. Their job done, they could return to their base. We climbed up the capron ladder into the helicopter waiting for us, suspended in the air. The last to embark was Dasha.

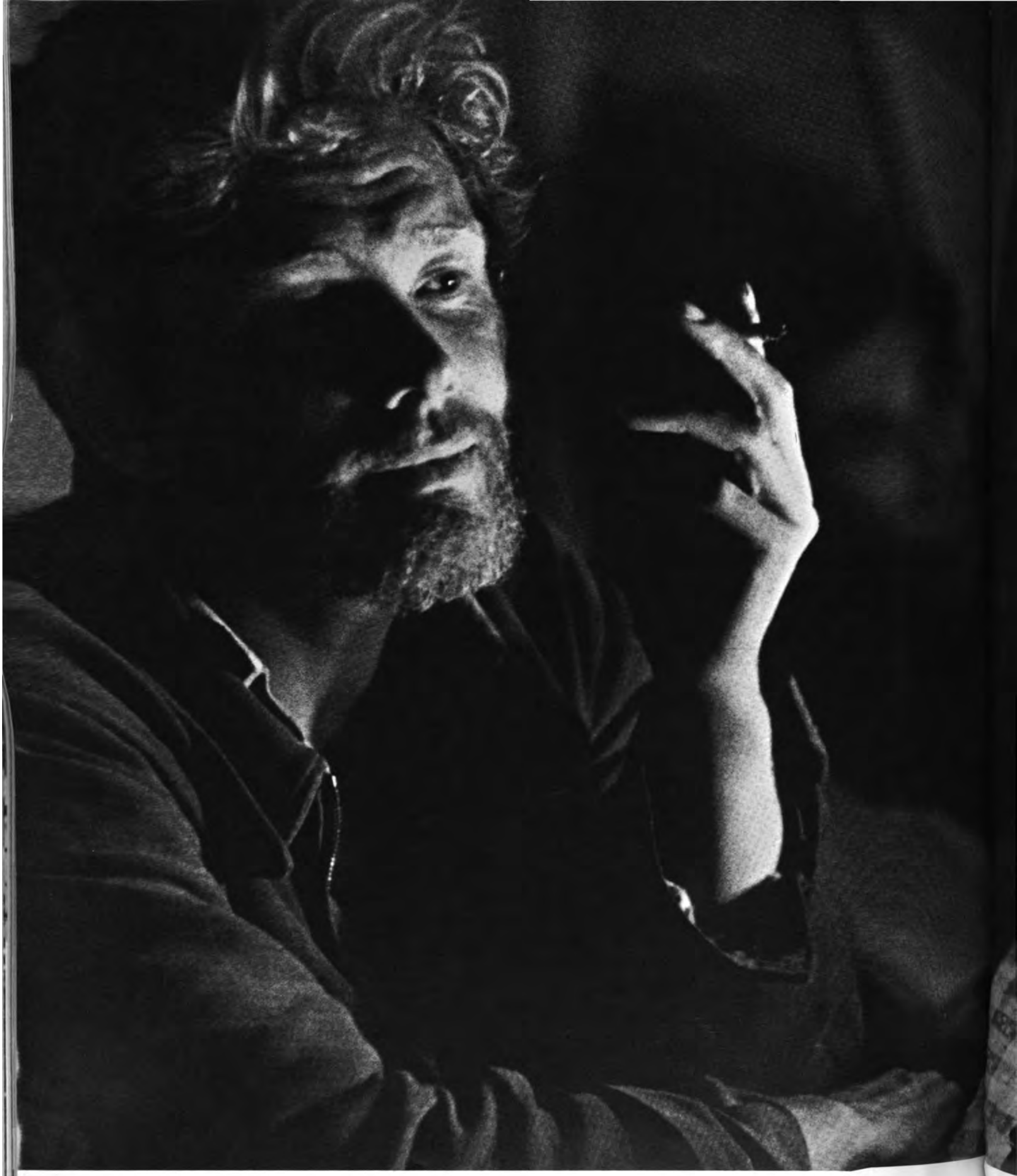
When I said good-by to Dasha, she told me to drop in at the museum in Irkutsk and take a look at an interesting document dealing with forest fires.

I did visit Irkutsk, and I did look up the document. It was an eighteenth century edict issued by Elizabeth, the Czarina of Russia, daughter of Peter the First.

". . . Should anyone be caught setting fire to the forests, he is to be shackled hand and foot and flogged."

Well, that only goes to prove that women and fire have always been enemies!





THE QUEST FOR THE DYOMI



Anatoli Kalinin heads a party prospecting for gold in northeast Siberia. His base is the town of Susuman.

'REASURE

In 1925 the Soviet Government gave Lena Gold Fields, a British company, a concession to work the Lena and Vitim rivers for gold. The company was out to make a fast killing. It worked only the richest sections and did no prospecting. Eventually the amount of gold extracted diminished. The company thereupon set up a howl that the gold was exhausted and demanded new concessions. A British source declared that the gold supply in the Lena would give out in 15 years. The company did not live up to its agreement and the concession was withdrawn; the Soviet Government itself began to work the rivers. It is still extracting gold. A dredge is now being built in Irkutsk which will scoop 165 feet deep into the river. It would not have been built unless the volume of gold dust were large enough to warrant at least 25 years' work.

IN THE PAST 500 years about 60,000 tons of gold have been dug out of the earth. How much still remains in that underground repository? Is it threatened with early bankruptcy?

East Siberian geologists who have pushed through to the most remote tributaries of the Lena River and marked new-found deposits with prospecting kits and drill holes say confidently that even in this region, which has been known from ancient times and where gold has been extracted for more than a hundred years, the supply is practically unlimited.

The Lena hasn't been easy on prospectors. Her gold fields have long been famous, but nobody has ever found the mother lode. There are indications from time to time of its being here or there. It may be that the vein, once discovered, will be one of the major finds of the epoch.

In their search for the mother lode, geologists have literally combed the basin of the Lena. Fly over this area at night and count the campfires of prospecting parties in the valleys and mountains; they add up to well over 100.

Wherever a prospecting party makes a stop, someone has this tale about a legendary treasure. A hundred years ago, in 1861, a group of political prisoners escaped from the Alexander Central Prison to Irkutsk. Almost all of them perished amid the glaciers and peaks. Only three reached the mouth of the Shumak River. Two of them, unable to hold out against hunger and privation, set off for the Tunkin Valley, closer to human habitation, where they parted with their brief freedom. The third, however, did not leave the place; he built himself a shelter and hunted for food.

Dmitri Dyomin, his name was, must have been a man of formidable powers to face up to the hazards that awaited him everywhere in the mountains. It was he who discovered a tremendously rich gold deposit. He bought his freedom from the authorities with gold nuggets, became a rich man, and settled in some city. Shortly before his death he told his sons the secret; they tried to reach the treasure but failed. They almost drowned crossing the mountain river, gave it up as a bad job, and turned back.

Many years later a former White Guard officer, Nikolai Novikov, hiding out in the mountains, came across traces of the Dyomin gold field. For a long time he kept his discovery a secret, but then decided to reveal the deposit to the Soviets and thus atone for his crimes, which were considerable. Novikov himself led a group of prospectors to the mountains. But evidently fate decided to keep that find a secret; the party fell victim to bandits. Seemingly the treasure was fated to remain a legend.

Today geologists keep finding precious landmarks that point to the Dyomin treasure. Only recently a unique deposit was found by a group headed by Alexander Skaryukin, gold in a Cambrian conglomerate. This is an entirely unfamiliar deposit in the Soviet Union, remarkably similar to the Witwatersrand deposit in the Transvaal of South Africa, which has what is probably the largest concentration of gold in the world. Yuri Nechayev, chief engineer of the Trans-Baikal Trust and very knowledgeable about Siberian metalliferous ores, says he was literally blinded by the gleam of the gold they found.

"According to standard practice, a gold field is considered commercially valuable if one cubic meter of sand contains 0.1-0.3 grams of gold," he said. "I myself saw sections where almost a kilogram of gold was obtained from a cubic meter of ore.

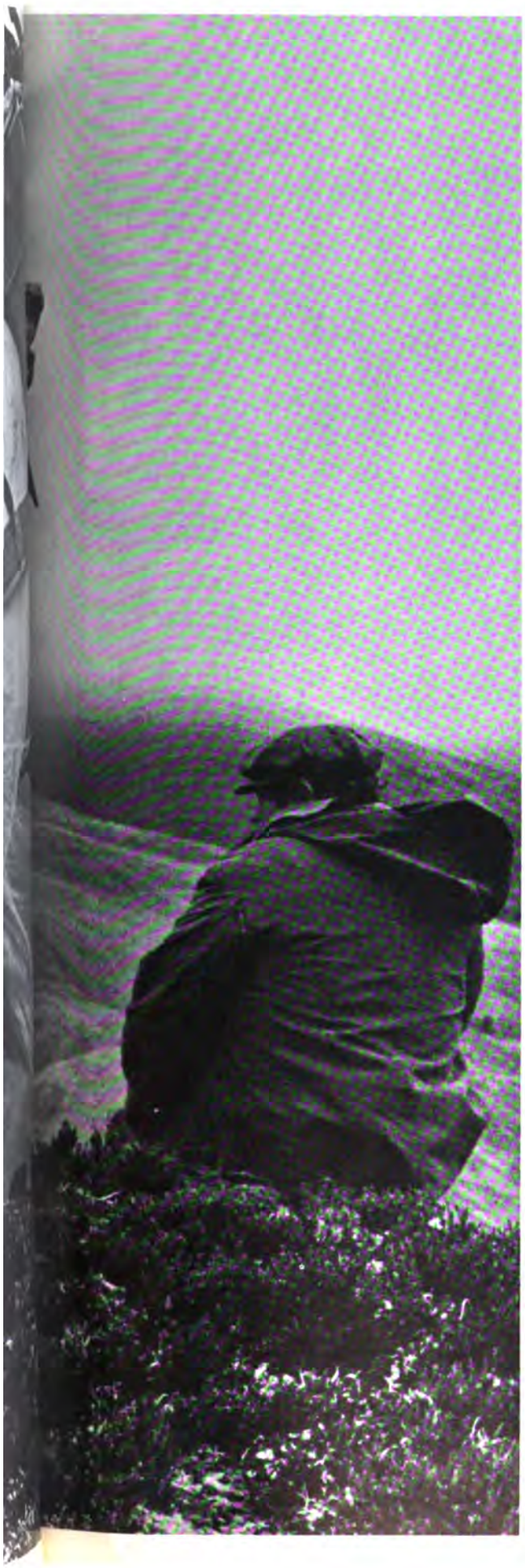
"The geologists made me contribute a case of champagne, but don't mention that when you write your story!"

Geologists say they frequently come upon nuggets at the new deposits. These are not isolated finds but heralds of greater treasures to be discovered.



Geologists prospecting for minerals. This is one of the most popular professions in Siberia today.

Siberian geological parties work in rough country and even rougher weather. A mountain pass.



In the olden days, they used to say that if Eastern Siberia had an official seal, it would probably include a sable. If Siberia had a seal today it would more likely include a geologist. That is what Victor Ryabenko, the most experienced geologist in Siberia, says. He has been all over that country, from the Transbaikal and Yakutia to the basins of the Lena and Kolyma rivers. At present he heads the Geological Board of Irkutsk. He is probably right. In Magadan Region, for instance, every seventh inhabitant is a geologist.

A PLANNED DISCOVERY

IN SO GREAT a territorial expanse as Siberia two factors predetermine the success of geological prospecting: planning and all-round organization. The political and economic structure of our society makes it possible to effectively take advantage of both these factors.

The question is often argued whether a discovery can be planned. It can, in geology.

Where does the discovery of a deposit begin? In the field, where a handful of intrepid prospectors, contending with the taiga, great distances and bad weather, collect rock samples? No, it begins in an office, with an ordinary geological map, a cross section of the earth's crust representing several miles in depth. This map was put together by seismic, air and paleontological prospecting with the aid of radioactive isotopes. It was charted by plan, mile by mile. Thousands of geologists spent years charting that map, but it would have taken decades had they worked without a unified plan.

No scientific prognoses can be made without such maps. Cambrian oil was discovered by scientists in offices long before the first well was drilled at Markovo in the Siberian taiga. Or take diamonds. Mikhail Odintsov, corresponding member of the USSR Academy of Sciences, established that the geological structure of frozen Yakutia was much like that of South Africa. He proved theoretically that Western Yakutia had its own kimberlite pipes where millions of carats of diamonds were cached.

Scientific prognoses are not always well founded. A scientist sees farther than an administrator, but both can be mistaken. Every mistake, however, means hundreds of men dispatched to the taiga unnecessarily. It means a waste of time and money.

A scientific prognosis has to be proved. The doubtful have to be convinced and the skeptics refuted.

Only after a prognosis is made does the geological party set off for the taiga in search of diamonds, petroleum, gold or mica—or to disprove the prognosis. That takes years. It is anything but simple to find a kimberlite pipe 1500-2000 feet wide in the 300,000 square miles that make up Western Yakutia.

Thus are discoveries planned and made.

It would be inefficient to scatter the energy of geologists over so great a territory as Siberia, sending some to look for gold, others for iron ore, a third party for tungsten and still a fourth for coal. The prospectors are all accountable to the people. That is why our geological prospecting is done in a unified manner. Everything the country needs is prospected for. That is another reason why we can accelerate the search for new deposits at no great additional expense.

Consolidated prospecting is important for still another reason. Several branches of industry are being developed in Siberia simultaneously. Around the site of a future hydroelectric station we look for the raw material that will be processed with the power we generate. In the vicinity of an ore vein, we look for the fuel needed for smelting. When rich deposits of iron were found near Zheleznogorsk, geologists continued prospecting and found magnesite, manganese and quartz sand near the town, everything the projected Taishet Iron and Steel Works needed.

New machinery has cut to a half or a third the time required to prepare deposits for exploitation. Dozens of new gold-bearing sites were discovered in the Lena basin and made ready for industry in a matter of two years. Earlier, that would have taken anywhere from six to eight years.

Planned all-round prospecting has thrown new light on this enoromus territory. Industrial deposits of almost all the known minerals have been found. The 40,000-strong army of Siberian geologists have blazed a well-trodden trail in this once sparsely inhabited and almost unexplored region.



The road charted across Russia's Siberia by the French engineer Louis de Laubel passed through the ancient village of Markovo. No railroad passes through Markovo today. Nor has the village an airport. The only way to reach it at any time of year is by the Lena River. Markovo, which lies in the same latitude as Hudson Bay, is the headquarters of the Lena Oil Prospecting Expedition. There are no industrial buildings in the village as yet, but they are already being planned. That is how Bratsk began. That is how Markovo is beginning. Eastern Siberia's petroleum has a dramatic story behind it. Boris Fox, head of the Lena Expedition, is one of its chief characters. He tells how oil was struck.



Nikolai Penkov makes the final turn on a valve, the climax of months of work, that will start the yellow-green Cambrian oil fountaining.

THE DISCOVERY OF OIL in Markovo is the sum total of unshaken faith in scientific forecasting.

Thirty years ago Siberia's geologists proved theoretically that there was petroleum in Eastern Siberia. They went so far as to claim that it was to be found in the lowest layers of Cambrian rock, the most ancient and, therefore, the richest.

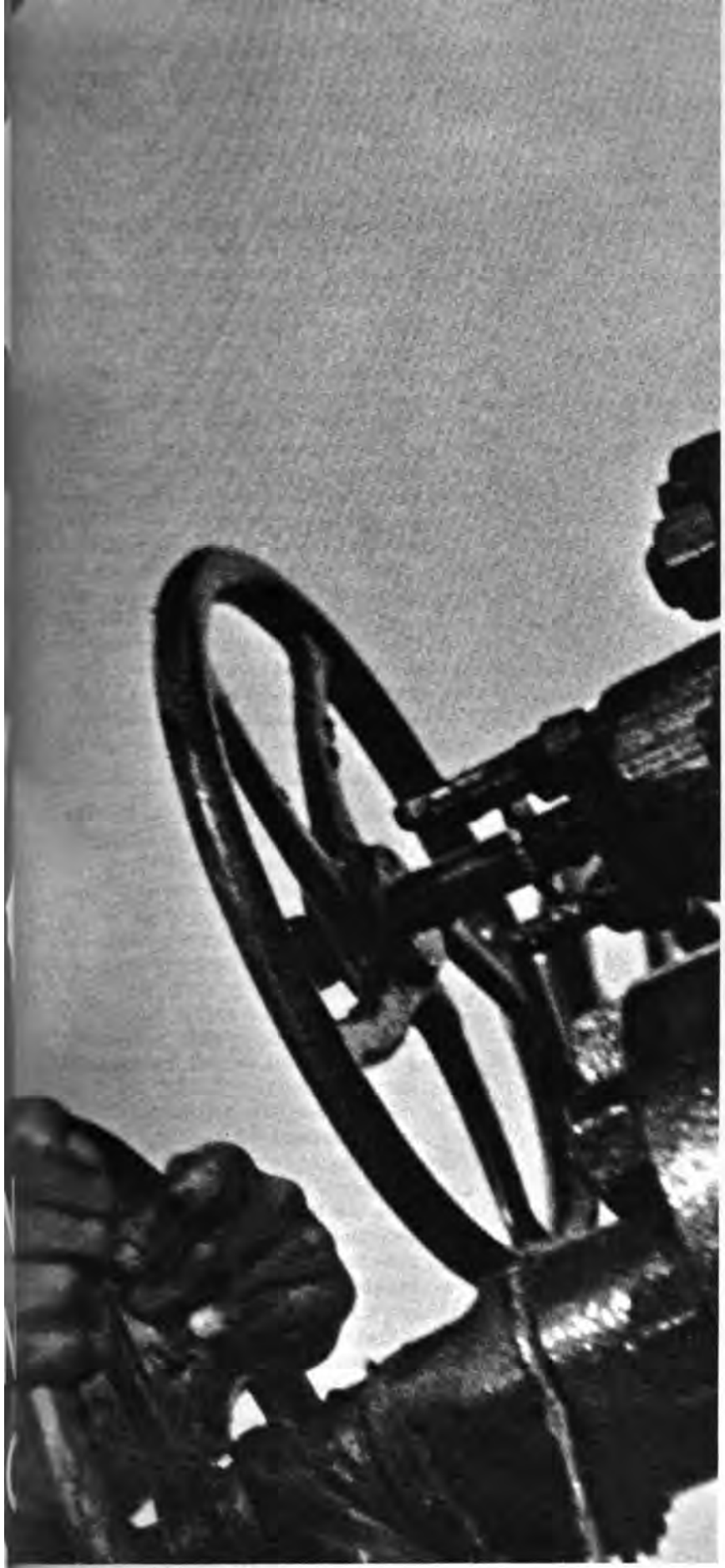
But there were skeptics who maintained the reverse. Since organic matter had just begun to appear in the lower Cambrian strata, where could the petroleum have come from?

The prospect of obtaining oil in Eastern Siberia proved too strong an attraction to resist, the distance between Siberia and the central regions being what it was. When delivered to the Baikal, Tatar oil doubled in price. And so the government, supporting the bold contentions of the Siberian scientists, began prospecting the whole area between Irkutsk and the Arctic Ocean.

If we were to join all the wells drilled in this search for Cambrian lakes, we could pierce our planet with them from top to bottom. But the petroleum seemed to play hide-and-seek with the expeditions. Yellow oil stains were found throughout the length of the Lena River, but no oil. The geologists began to have doubts—perhaps there really was no petroleum in those parts?

The expeditions fell apart. The drillers packed up and left with their families for Bashkiria to see what oil really looked like. In 1957, 25 years after the first searches were made, oil prospecting in Eastern Siberia was discontinued by a decree of the USSR Ministry of Geological Survey and Conservation of Mineral Resources. No use throwing good money after bad.

There were those who took issue with the Ministry. "Cambrian Oil in Eastern Siberia" is the title Georgi Kuznetsov, a young graduate student of the geology department of Irkutsk University, gave his thesis. After a study of the structure of the Lena's basin, he proved that petroleum should be sought near the village of Markovo at a depth of from



a mile to a mile and a half. Siberian scientists had no easy job persuading the Ministry to authorize work on the Cambrian strata again, but they did. And the first deep well drilled near Markovo yielded a giant gusher of yellow-green oil. With a pressure of 200 atmospheres, it fountained 230 feet high. Its triumphant roar was heard for 10 miles around.

The spouter ended all argument. Markovo's truck drivers fill their tanks right from the wells, and those cars run as smoothly on it as they would on gasoline.

Meanwhile the geologists have pushed some 10 miles into the taiga. Cut through the hundred-year-old pines with bulldozers, the roads fan out in all directions from the village. Trucks shuttle along those roads, delivering steel pipes and turbodrills to the taiga clearings.

Every well costs 400,000 rubles to drill. But the Grade-A petroleum extracted will cover these expenses in less than a year. It rises from four levels simultaneously, and those four Markovo levels are the future of Siberia's oil and chemical industries.



THE MYSTERY OF LAKE KHAIYR

A Loch Ness Monster in Yakutia?

Recently the world press reported that scientists in Yakutia had claimed to have seen a monster, very much like descriptions of the Loch Ness Monster, in an isolated lake. Below is an account of the incident by one of the scientists who said he saw the new monster—G. Rukosuyev, assistant chief of Moscow University's Northeast Expedition.

FROM June to October of last year we worked in the Yanski Region of Yakutia, exploring the Quaternary deposits of the Kular Mountain ridge and the adjacent areas.

The expedition consisted of staff members and students from Moscow University.

Local inhabitants told us legends about a mysterious monster that was believed to live west of the Yana River, three miles from the village of Khaiyr—about 100 miles from the Laptev Sea.

We were lucky: our work plan included exploration of the territory around Lake Khaiyr where this mysterious monster lived.

Although travel through the tundra was very difficult in summer because of the swamps and marshes, engineer A. Kharchenkov and a postgraduate of the Siberian Branch of the USSR Academy of Sciences, V. Goncharov, accompanied by six people in reindeer sledges, went to the area of Lake Khaiyr.

In the village of Khaiyr, Kharchenkov and Goncharov were told that even hunters were afraid to approach the lake where the monster lurked, a horror to the inhabitants.

There were plenty of lakes in the basin of the Omoley River, lakes rich in all kinds of fish—pike, trout and others—but this mysterious lake, according to the local inhabitants, had no fish at all. Wild ducks and geese never settled on it, they said.

The lake, being "thermal," usually froze later than the others.

Faulted Strata

According to geological data, the lake coincided with the zone of a recent fault in the earth's crust. Its dimensions were about 600 by 700 yards. The banks were steep. Nobody had ever sounded the depths of the lake.

The inhabitants had often heard strange sounds and splashes coming from the lake, which they ascribed to the monster, but to judge from their stories, no one had actually seen the animal.

N. Gladkikh, a biologist and staff member of the Yakut Branch of the Academy of Sciences, literally ran into it quite unexpectedly. Here is how it happened:

Gladkikh went to the lake to draw water and saw a creature that had crawled out onto the shore, apparently to eat grass—a small head on a long gleaming neck, a huge body covered with a jet-black skin, a vertical fin along the spine.

Badly frightened, Gladkikh ran to wake the chief of the biological station. When the workers at the station ran to the lake with cameras and rifles, the "monster" had already gone. Nothing but the trampled grass. They thoroughly examined the shore but failed to find any traces of grazed grass.

Though the morning was very calm, there were waves on the surface, evidently caused by the creature as it dived in.

Returning to his tent, Gladkikh hastily sketched the animal as he remembered it.

Fortunately, the animal showed up again, and this time it was seen by several people at the same time—the chief of the expedition and two other workers of the biological station.

Suddenly a head appeared in the center of the lake, then a dorsal fin. The creature beat the water with its long tail, producing waves on the lake.

You can imagine our astonishment when we saw with our own eyes that the stories were true.

No one now can tell what animal this is and whether it is known to science.

Is it the last of the long-extinct ichthyosaurs? I do not know. I am a geologist.

This year we will establish our base closer to Lake Khaiyr and will try to photograph this creature.

Courtesy of Komsomolskaya Pravda

MAZUR'S YARNS



WHENEVER a correspondent arrives in Markovo—and there has been no end of them these past two years—he is sent to Volodya Mazur if he is after a story on the exotic side.

The chief engineer of the geological expedition will treat his guest to the incomparable local fish soup. He will also gladly drink a toast to the oil field they will surely find. But if the visitor asks for something on the unusual side, he will invariably say: "That's what we have to watch out for.

"When the unusual happens in our trade, it means something has gone wrong—something unforeseen or someone in too much of a hurry. Of course, there are the unavoidable troubles—snowstorms, ice heading downstream, and the like—but they don't happen too often. At first there were lots of unexpected things happening here—forest fire and oil gushing when we didn't want it to. When we set out for the more distant oil derricks, it was like setting out for a far-off land. We even had a bear invading the driller's canteen. Personally, I don't like meeting bears anywhere, except as meat, of course. What I'm getting at is: I can do without the unusual in Siberia."

The chief engineer of the expedition is just past 30. The youth of its top men is typical for Siberia. Mazur is built for the country. He stands six foot five, and weighs 200 pounds, and the width of his shoulders. . . . Strictly speaking, they should be measured not in inches but in the 20,000 miles of taiga he has behind him.

Volodya began working with geological expeditions at the age of 16. His father was killed in the war, and his mother worked as a nurse. Volodya acquired a college education while in the field, figuratively speaking. His 15 years of work in geology have given him very definite ideas about his profession. He vehemently objects to any dressing up of the geologist's job, looking on the geologist as a peregrinating romantic.

"The really important part of a geologist's body is not his feet but his head," says Volodya. "Like in soccer."

Soccer is Mazur's second passion and even trade, if you like. He is a coach, and judging from results—a pretty good one. He got soccer going in Markovo. Rooting reached an elevated pitch when the local team—the *Borodachi* (the bearded ones) went to the town of Ust-Kut for the district championship. It is still a moot question whom the giant Mazur terrified most—his own team or the

MAN'S JOB



"WHAT made me come to Siberia?" Jiba Sviridze explains it this way.

"First of all because I wanted to see new country. Secondly, I felt I was getting soft. When I lived in Khachaturi, a mountain village in Georgia, I didn't notice it. But the last four years that I spent in Rustavi—that's already a city—I felt myself changing, becoming an entirely different man, and I didn't like it.

"I'd get up in the morning—there was a bus at the door waiting to take us to the plant. In ten minutes we'd be there. I'd go to my shop, give the lathes a once-over. I was a maintenance man, you see. The lathes we had were new ones. Most times I'd go home with my nice white shirt as clean as when I'd come. If anything happened to the lathe that I couldn't fix, we had an engineer on duty, the chief engineer of our shift and the shop superintendent to tell me what to do. I didn't even have to use my own head.

"The other boys used to study and read all sorts of books crammed with information, but I didn't want to. 'Why should I break my head?' I'd say. 'I'm earning good money without it.' Yes, I was earning good money, but softening up from too easy living.

One day my friend Koba came up to me—you've seen him, he also works in Markovo—and said: 'Jiba, the two of us are young, but we live like old men. Let's do something about it, make a change."

" 'Koba,' I said, 'You always had brains. That's exactly what I was thinking myself.'

"And that's how the two of us came to Siberia.

"In the Caucasus it's hot; in Siberia it's cold. In the Caucasus it's fruit and wine; in Siberia, hard liquor. In the Caucasus two miles is a distance; in Siberia 200 miles is next door. There are times when we have to push our way through the taiga with tractors to get to our derricks. This is no bus ride! Koba and I have changed our lives in a big way. Here in Siberia it's a man's job!"

The expedition knows Jiba, assistant drill operator of the twenty-sixth derrick, as a man you can depend upon, even to take risks when

THE AUTO AUTOCRAT



"OVER my dead body!" bellowed Dukhovnikov, brewing up his usual storm in the office of the chief of the Lena expedition.

This always happened at the end of the daily briefing when the garage manager had to distribute his trucks. It might be doing him an injustice to say that he hated to part with any of his trucks. After all, a job is a job. But he certainly let go of as few as he possibly could.

"It's all right to fell sorry for the men," he'd mumble, "but who feels sorry for the trucks? Only Dukhovnikov!"

Everybody knew how Dukhovnikov felt about his trucks, and so this kind of exchange was no surprise:

"Stepan Palych, may I have a truck? I want to pick up some stuff at the dock."

"A truck? Why don't you ask for a tractor too?"

"My furniture is coming in."

"His furniture is coming in! What about the mud? The truck will get stuck. Then you'll come asking for a tractor, and next I'll have to give you a bulldozer. What do you want me to do—send out everything on wheels in the garage for your new furniture?"

Finally, the man with the furniture gave Dukhovnikov up as a bad job and went to the chief of the expedition, who signed another one of his injunctions.

Even with the note from the chief it was no easy matter getting a truck from Dukhovnikov. But once you got it, that was only half your problem solved. There would be murder if the truck came back dirty or if something went wrong. Dukhovnikov would storm: "I give you a brand new truck and look what you bring back—your grandmother's truck!"

It was no use pleading that the "new" truck had already covered 60,000 miles and that a taiga road was not Gorky Street.

Indeed, the roads leading to Markovo were nothing short of impassable. Impassable? No, *impossible!* The best city driver couldn't do a mile along these roads in the rainy season, but the Markovo drivers were made of sterner stuff.

One rainy autumn none of them could make it to the twenty-sixth derrick, the farthest one. Dukhovnikov himself took the wheel. The expedition chief was sitting next to him listened in some alarm as Dukhovnikov, the inflexible, mumbled to himself:

"C'mon old girl. The boys are out there without food. C'mon old girl. . . ."

ther side. At any rate the oil workers won. hey were carried off the field on the shoul- ers of fans who tossed them up for good easure. That kind of handling would have ade anyone dizzy, but the players were all errick men used to working high off the round. Victory was particularly sweet be- ause it came to the expedition team after ree failures.

"Failure," says Volodya Mazur, "is a step discovery. What is failure to a geologist? nother white spot rubbed from the map. We ave been searching for oil in Eastern Siberia r 30 years. During those years of failure we ound mica, wolfram, gold and coal. And now e have found oil." Mazur adds this ancient ke: "Even my very first failure—when I mis- ok a fully domesticated cow that strayed to our camp for a deer and let go both arrels—taught me to be more careful with rearms."

Mazur's aphorisms—some people call them isecracks—get around beyond the borders f Markovo. Rumor has it that since Cambrian il was discovered, some professors even egin their lecture courses at schools of eology with Volodya's: "Not every optimist a geologist, but every geologist must be an ptimist."

---

ey're called for. Of course, back home in the aucasus he was the same, only here in Sibe- a man's character is really put to the test. hen the twenty-sixth derrick hit oil, it hap- ened late at night. Sviridze was the senior an on the job. It was 40 long Siberian miles the engineers and geologists. Yet Sviridze olly took charge and muzzled the explosive untain.

In the morning the new shift, which drove up a cross-country vehicle, told Jiba, all neared with the brownish oil, that his fiancée ad arrived in Markovo.

"She's a beauty," someone said with a gh. "Lucky man, Sviridze."

. . . If you stand under Jiba's windows of an vening you will hear a lullaby, the first time e village of Markovo in the Siberian taiga has eard one sung in the Georgian language. anuli Sviridze sings: "Sleep, my little one, nd you'll grow up to be the man your father . You will conquer giants, rescue a princess nd discover an unknown land. There are al- ays big things for big men to do. . . ."

And the "old girl" showed what she was apable of. Not only that—she led a whole aravan of trucks that followed behind her.

At the derrick the boys gave the garage anager a grand welcome. They were all oungsters working there, and after that they ecognized no deity but Dukhovnikov.

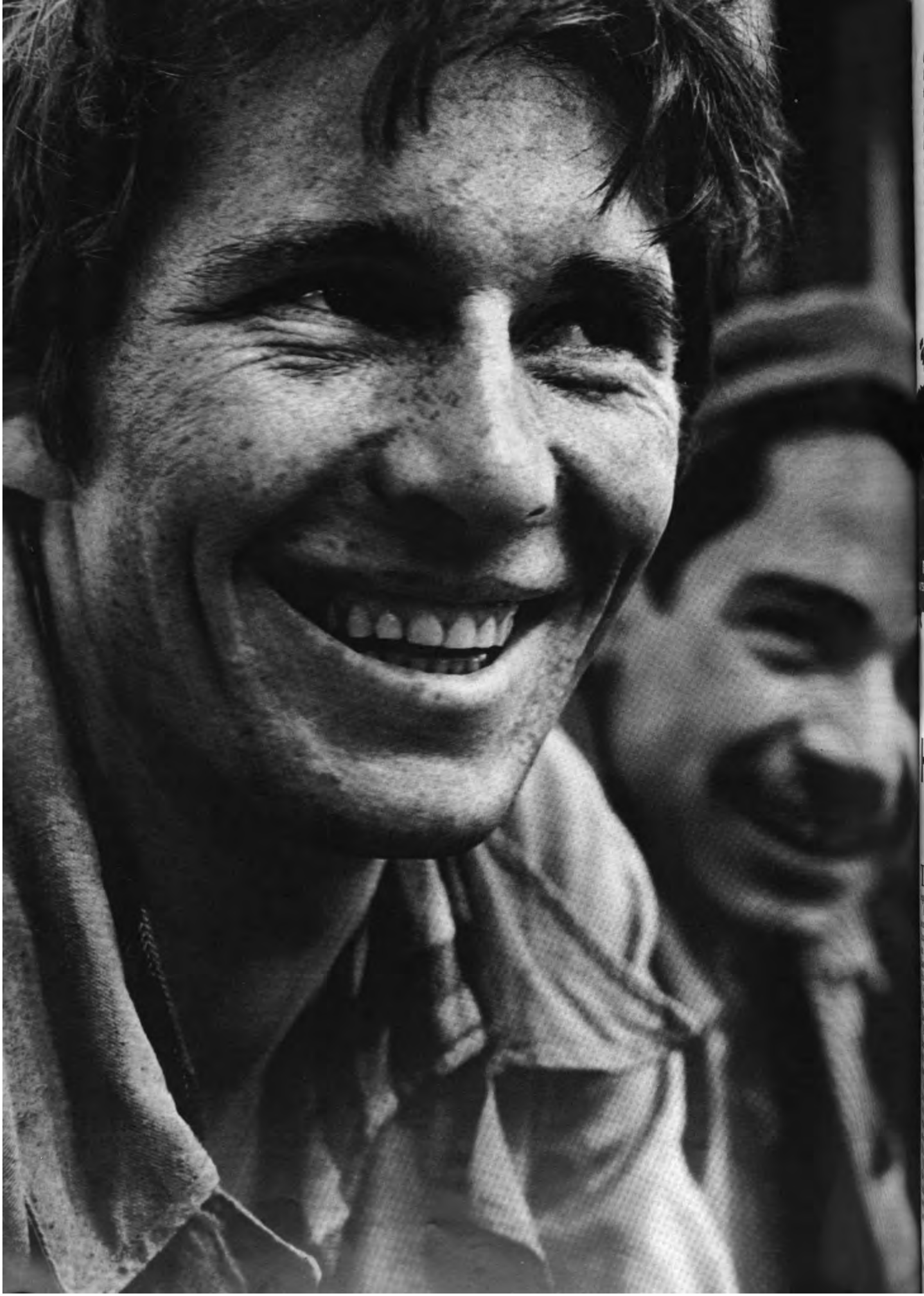
But at the briefing next day there he was undering again, "It's an outrage what you lo to these trucks! Where is the road machin- ry? Where are the bulldozers we were prom- sed?"

And once again Dukhovnikov formally laced his resignation on the chief's desk. veryone knew the text by heart: "In view of he utter impossibility of driving along these oads and in view of the absence of a human ttitude toward the trucks in the expedition— quit."

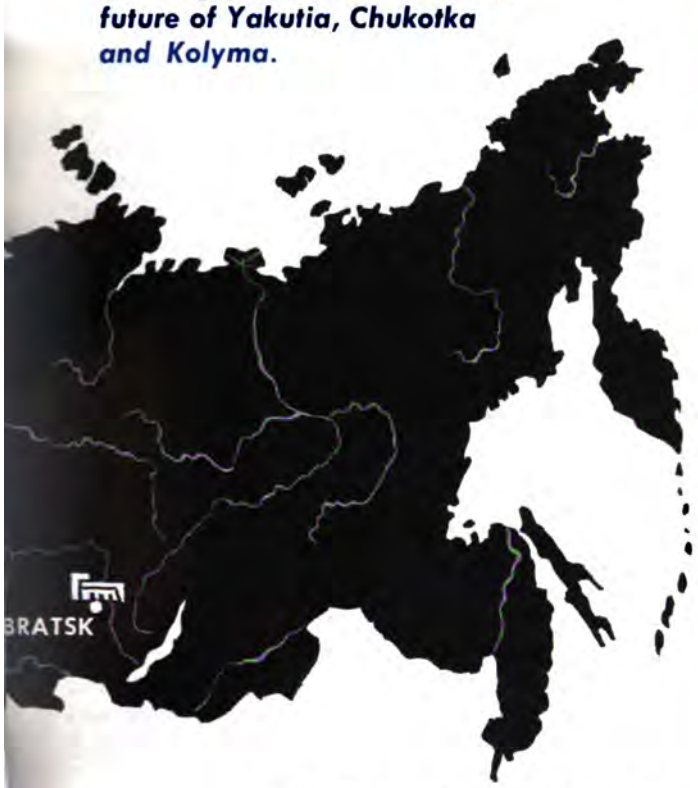
But the following morning a husky, broad- houldered man could be seen walking along he columns of trucks in the expedition's ga- age. Low-standing, powerful tractors, huge dump trucks and light general service ve- icles stood cleaned up and shining like army ecruits at morning inspection.

Dukhovnikov was still there, and the car- ousel started all over again.

The 150-and-more-foot high derricks are mounted on century-old cedar trunks several feet across.



Bratsk was the geographical and logical conclusion of our long trip. It was the terminus of the Louis de Laubel route.
Bratsk is Siberia's present. In Bratsk are also reflected the country's potentials as we see them today—its technical progress, industrial might, and spiritual reach.
The very look of this town and the tremendous scope of its building projects show us the future of Yakutia, Chukotka and Kolyma.



BRATSK HAS BECOME WARMER

THOSE INCLINED to romantic interpretations say that the turbines at Bratsk are moved by the power of love. To prove it, they tell this legend.

Angara, the beloved wife of hoary Baikal, was enamored of handsome Yenisei. Once when old Baikal was out contending with the winds, Angara slipped away to join her lover. The wrathful Baikal was soon on her heels. Hearing his roar behind her back, she fled faster and faster—until she turned into a swift-running river, the swiftest in Siberia.

Geographers explain it by the fact that 333 rivers flow into Lake Baikal, while only one flows out. That is why the Angara can spin turbine blades with twice the force of Niagara Falls.

Power specialists contend that the secret lies in the 416-foot-high dam. A mass of water rushing down from a height of 196 feet upon the turbine blades sets them turning at a dizzy pace. The electricity thus generated costs only a third of that produced by the Volga's waters.

Last year the dam was finished. Beyond it spreads the Bratsk Sea. Some three years from now, when it is filled to capacity, the turbines will be working at design capacity. But even now the power station Stewart Udall described as a grand engineering project generates more electricity than any other in the world. Its operation is controlled by two shift engineers.

The Bratsk hydro unit was built in a phenomenally short time. Only five years after the Minister of Power Station Construction signed the building order, the first turbine began turning. This feat of engineering was made possible by the comprehensive use of industrial construction methods and the enthusiasm of the young builders. Remember the "Go West, Young Man" movement in nineteenth century America? At Taishet, the initial point of the branchline to Bratsk, the militia had a busy time combing the trains for youngsters of school age who had run away from home to go East, in this case.



Precast elements locally produced are being used in building this timber-processing-plant unit.

Bratsk visionaries, unlike the usual type, are practical and ingenious. One of them, Alexei Marchuk, suggested that the river be dammed in the winter months, when it is frozen, to save building bridges. That saved tens of millions of rubles, not to speak of time. There were many Marchuks in Bratsk, and so the station was finished ahead of schedule.

The fact that it was gave birth to several unforeseen problems. The Bratsk hydropower station is the heart of a huge industrial unit of 50,000 square miles. The area forms a triangle with vertexes at Bratsk, Zheleznogorsk and Taishet. The enterprises located within this trangle will be the largest in the world. They include the Bratsk timber industry complex, the Bratsk aluminum plant, the Zheleznogorsk concentrate mill, and the Taishet metallurgy plant.

While the turbines (made in Leningrad) were put into operation ahead of schedule, the work on the rest of the complex proceeded at the former rate. The time gap kept growing until there was more than a year's difference. The construction of the high-voltage line to the Kuzbas had to be speeded up in order to direct the power produced by the mammoth station to the unified all-Siberian system.

The timber industry complex and the aluminum plant, which will consume 80 per cent of the power generated by the Bratsk station, are now nearing completion. Endless columns of trucks leave the Bratsk casting yards loaded with prefabricated ferroconcrete elements to be used in building the first ten factories of the timber industry complex. If not for prefabricated concrete, the project would have taken more than ten years to build. The use of industrial methods cut the time down to two and a half years.

The Bratsk Hydroelectric Power Station is unique, and so are the surrounding industrial projects. The timber industry complex consists of two groups of plants, one of which—the chemical wood-processing—is ready to start operating. It will be producing pulp and cord, which until now has had to be imported.

The complex, one of the largest in the world, was designed by 14 institutes. It will process age-old trees felled on an area as large as Austria. It will supply the country with packing material, cardboard, plywood and half-finished lumber for furniture, in addition to pulp.

Both the timber factories and the aluminum plant are fenced off from the town by a three-mile forest zone. Trolley-bus service will take workers to their jobs and home again.

As Bratsk grows, more and more problems arise. Eighty per cent of its citizens are under 30; there is not a single old-age pensioner among its present 70,000 residents. The number of newlyweds and infants in Bratsk is greater than anywhere else in the Soviet Union. It's understandable that a town boasting 5,000 marriages and 8,000 new babies every year keeps running short of housing and kindergarten accommodations. The designed capacity of the house-building plant is, for the time being, 3,500 apartments a year. The experience of Bratsk was taken into account in planning Zheleznogorsk, where a concentrating plant with an annual capacity of 12 million tons of ore is under construction. That young people's town, as a result, has enough kindergartens and new housing.

Bratsk and the surrounding territory is one huge contruction site—highways, houses, factories, television towers, kindergartens and transmission lines all being built at once.

The taiga has changed, and the rivers. Meteorologists have registered a change in the climate, too; it has become milder. Our romantics ascribe it to human warmth; scientists say the man-made Bratsk Sea is responsible.

Victor Nekrasov and his five-man construction team came to Bratsk after their army service.

THE DAM BREATHES

THE DAM of the Bratsk Hydroelectric Station is a tremendous gray wall stretching across a turbulent river. It weighs 12 million tons—and it breathes. But the breathing is so imperceptible that even if you press your ear to its mighty elephantine chest you will not hear it inhale or exhale.

But in that thick concrete wall there are 2,000 sensitive instruments. Inside the wall, from the very top to the floor of the river, the dam is cut by galleries. Every morning three girls with tiny suitcases can be seen walking through them. There are niches in the walls of the long, dimly lit corridors with wires sticking out of the concrete. The girls attach their instruments to the wires and listen.

The instruments squeak or boom or buzz like bees. That is the concrete singing, the dam breathing. These girls, like experienced doctors, determine the health of the dam by its breathing and its heartbeat. Did the concrete crack from the heat or cold? Is the foundation acting up? These three have been working inside the dam a whole year and know every nuance of its voice.

And the dam knows their voices.

Up front is Inna Markina. She sings as she walks. The echoes sometimes run ahead of her, then come back, and she smiles listening to her own voice. Inna is tall, slim and red-haired with brown eyes and a pug nose generously sprinkled with freckles. She has a fine voice, and in the concrete galleries its resonance is most impressive.

Inna walks up and down an endless number of spiral staircases. She wants to be a singer, and the teachers in the music school she attends evenings are pleased with her progress. She will soon be giving her first concert at the *Yunost* (Youth) Club.

The dam recognizes Zoika, Inna's friend, by her gait. She always climbs two steps at a time and hops down at that same pace, always in a hurry. Zoika is 17, and if she dreams of anything it is to win first prize at the House of Culture's dance contest.

Zoika's life has not been what you would call eventful. She lives with her parents and three younger brothers. Her father is a power plant worker, her mother a waitress. She decided to go to work because she wanted her own spending money. She leaves the job an hour earlier than adults, the law requires that for workers under 18. Zoika wouldn't mind if that hour were two, even though she likes her job. She is still young enough to imagine herself in fairy-tale land as she walks through the long galleries or stands in the deep iron pits. Zoika feels at ease with her sophisticated instruments. She enjoys poking her head with its disheveled mop of hair into the pit and yelling: "Hey, pal, how are you getting along?" The pit repeats: "Hey, pal, how are you getting along?"

"Who me? Fine!" Zoika replies.

Lena Malysheva, the most experienced instrument girl, shakes her head. "Zoika, when will you grow up?"

Lena is a very serious girl. She has been working with these instruments for two years now. Before that she worked on a construction job. All her life is tied to Bratsk—her past, her present and her future. Lena is in her first year at a technical college, where she is taking a correspondence course in instrument design. She heads the instrument brigade.

Lena not only knows the voice of the dam, she knows the intricate beehive of passageways—every entrance and exit. After the shift she sometimes takes the girls to one of the side galleries to show them where they will be working the next day. When the dam is completely equipped their job will be easier. Electronic instruments to be installed in each niche will give them the necessary data automatically.

But that will be in the future. "This past year," Lena said, "we must have climbed as high as Mont Blanc, if you add up all the staircases."

The girls climb their staircases and march through the galleries which hum from the pressure of the water. Often they'll sing along with the hum—to keep the dam company. The dam always sings back.



SAFETY ENGINEERING

YURKA SINITSYN liked to impress newcomers by working on the top scaffolding without a safety belt. Youngsters watched him with gaping mouths, but nobody else was very impressed.

Zina Kostrova, the young technician in charge of that section, told Yurka to cut it out. Finally she warned him that if he did not stop showing off, she would complain to the trade union inspector and to the construction chief.

Yurka snorted defiantly: "Go ahead. Complain to the Minister, if you want to!"

There was a shortage of manpower at the Bratsk Aluminum Mills construction site. Yurka knew that and walked around as though he were indispensable.

A week later Yurka was called to the Personnel Department.

"You are being taken off as steeple jack for repeated violation of the safety rules and reduced to common laborer for one month," he was told.



"What's this!" yelled Yurka indignantly. "I'll go to the chief! I'll go to the Minister!"

"That's up to you," they told him. "You can even go and see Baklanov."

The reception room of the Assistant Director in charge of Personnel and Housing was full. The receptionist asked him: "Do you want to see Baklanov about housing?"

"Housing? No! I want to see him about safety," and he brushed his way past the tiny receptionist.

"Take a look at this!" Yurka shouted from the door, waving a Certificate of Honor from the Young Communist League. He brought it along just in case, to lend weight to his appeal. "What's this anyway—the best workers, trail blazers, men who work and study, are demoted to common laborer by overcautious officials!"

"Hold it, Mr. Trail-blazer. And less noise, if you don't mind," said the man seated at the desk with a smile. "Who is overcautious? Who is studying and working? How many of you are there?"

"Just one. My name is Sinitsyn."

"Sinitsyn. Oh, yes, I heard the name. What's the matter, don't you like living? You know the safety rules. . . ."

"When you worked up on top, did you observe every safety rule?" Yurka knew he couldn't win the day by logic so he tried emotion.

"How old are you, Sinitsyn?"

"Twenty."

"When I was 20, I was responsible for safety techniques."

When Stepan Baklanov was 20, that was in 1943, the war was still on. This fair-haired lieutenant who got into the war at 18 was a prisoner at the Buchenwald death camp when he was 20.

Over the gates of the camp was the inscription *Jedem das Seine* (To each his own). To the Aryans—dominion of the world; to the slaves—forced labor. This was how the Hitlerites read this motto.

The prisoners read it differently. To each his own. And each one of the 250,000 prisoners chose between struggle and submission.

Stepan Baklanov chose struggle. He waged this struggle with the conviction of a patriot, the despair of a prisoner and the caution of an experienced fighter. In this death camp he learned to value and preserve life. The underground resistance group appointed him chief of military safety. Baklanov was responsible for the safe-keeping of the weapons that the prisoners made. In 1945 the weapons that Baklanov collected and tested were used by the Buchenwald inmates to break open the gates of their camp. History interpreted this inscription on the gate—*Jedem das Seine*—in its own way.

The assistant director in charge of personnel still has a camp memento—the number 7029 tattooed on his hand. When Stepan Baklanov was 20, as Yurka is today, he was already one whole war older. He has this special reason for respecting safety techniques.

Baklanov smiled. Enough reminiscing.

"I'll tell you what, Sinitsyn," he said. "It's good that you are one of our best workers. And it's even better that you are studying while on the job. But I'm not going to change that order! You'll have to put in two weeks on the ground. Take it from me, brother, life is worth taking care of."

THE AMERICANS we met are fine folk, like Russians in many ways. They are hospitable and kind, they like humor, are good family men, and are peaceful and friendly. These qualities are particularly evident when an American sees that you are a normal person and that you can crack a joke, sing a song and play with children without trying to eat them.

I am sure that Mr. Eising, who spared no effort showing us a good time in Detroit, already had a place in heaven reserved for the sufferings he endured without complaint as he helped godless Communists. Incidentally, he did not do it alone; he shared the job with Mr. Wilkinson, Chairman of the Industrial Management Club, a very lively elderly man with a great sense of fun. We had a two-hour tête-à-tête which consisted of two English and two German phrases, interjections and pattings on the shoulder. Nevertheless we understood each other very well because the talk was about hunting and fishing, and there was plenty of beer to help it go smoothly. Mr. Wilkinson showed me his three-barrel Winchester and his dog. Then we talked about fish as big as half an arm with gestures and phrases like "What a fish!" After a while the fish stretched to a full arm's length. "That's the kind of fish I catch!" we were both saying, each with an arm extended as far as it would go.

At the farewell party Mr. Wilkinson patted Boris on the shoulder and said, smiling:

"Why don't you stay in Detroit? You'd make a fine chairman for the Industrial Management Club. Then I could retire."

But without flinching, Boris remained loyal to the Moscow Komsomol.

Chicago

We went to Camp Duncan, where we met 20 young men and women who looked like students. Slava and Boris had a ping-pong match with them. Then everybody sang songs and played volleyball.

"It would be nice to have a swim after the game," I told my American teammates.

"You can take a shower over there."

"Why a shower when there's a lake?"

"You can't swim now: it's only 68°."

I burst out laughing as I recalled my last swim in Lake Baikal, where the temperature is 48° even in summer.

"Wait for me, I'm coming" exclaimed one of our hosts with a note of desperate determination in his high voice. With his bulk you can swim in any water. Several minutes later he came running wrapped in a Turkish towel, and we jumped into the water. He became the hero of the day.

Denver

This was the westernmost, southernmost, highest and most hospitable point of our tour. It is a city of greenery and cowboy tradition. Present at the reception were not only the leaders of the YMCA but also the men who support it financially. A Denver judge decorated us with Ambassador from Colorado Medals (a silver dollar on a blue ribbon which he hung around our necks). From then on we represented that beautiful state wherever we went. With these notes I am trying to carry out my duties as ambassador from Colorado.

We shall always remember the trip to the Rocky Mountains. I seemed to be camping again in the Tien Shan or the Pamirs amidst the blue firs and the murmur of the emerald river, so dear to my heart. Only instead of the familiar donkey Shmaga there was a blue Rambler standing nearby, and instead of porridge in a pot there were American hamburgers on paper plates. For the first time in the whole trip I felt sad deep inside me. I recalled the cliffs and the echo of falling rocks in the Narvn gorge, the roaring Panj, the Fedchenko glacier and the trustworthy capron rope held by my friends. I felt homesick.

Detroit

If I ever come to Detroit again, I shall certainly look up Chuck Mitchell, teacher at a public school on the outskirts of the city. We became acquainted at the Retort Student Club, where one of the American guitar players proved himself a master of flamenco. I learned that Chuck also played the guitar and sang folk songs twice a week in a night club.

Chuck invited us to his school, and then in the evening to the night club to hear him play. He sang some wonderful American songs to the strains of the guitar. Suddenly we heard the familiar tune of "Polyushko-polye." Chuck did not know the words to the song, and we had to help him. Then we took turns at the mike. Chuck and his partner Henriette sang "Moscow Suburb Nights" and I sang "Billy Boy." Then we all sang "Sarah Jane" together. We stood at the mike holding each other's shoulders, the guitar passing from one to another. The audience listened to this unexpected Soviet-American concert, applauded, joined us in singing and kept sending more and more bottles of beer to our table.

I have a photograph over my desk. It shows Chuck with his guitar singing at a school to some Negro boys and girls sitting around him.

"This land is your land, this land is my land,
From California to the New York island,
From the redwood forests to the Gulf Stream waters,
This land was made for you and me,"

sings Chuck to his schoolchildren, and they smile and look at him with affection.

We wish you luck, Chuck! I hope we'll meet again and once again sing "Polyushko-polye" and "The Battle of Jericho."

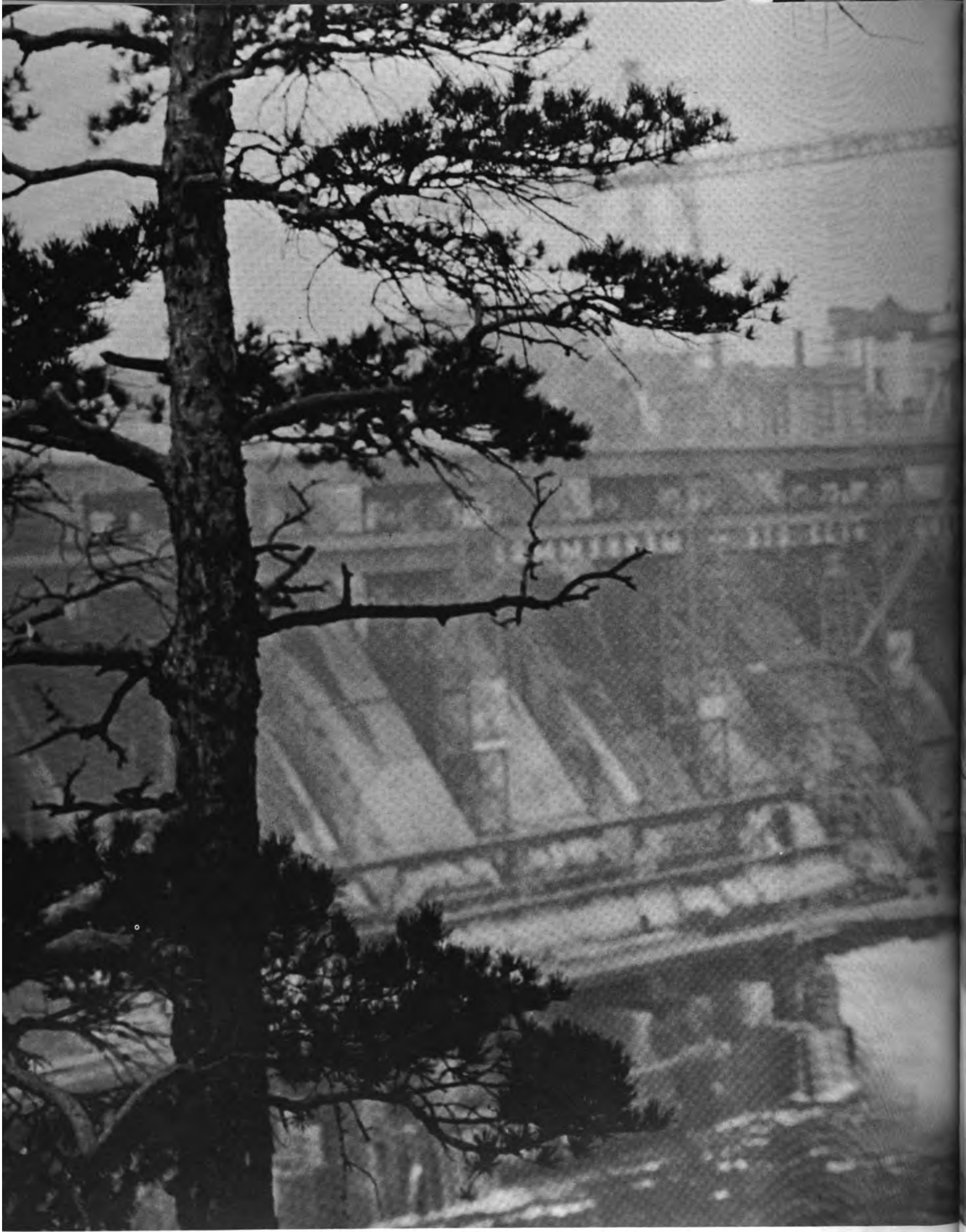
Courtesy of Molodaya Gvardiya

AMBASSADOR FROM COLORADO

"Three young Ivans have come over here to pick up the Olympic challenge." "If these three are typical, there is a relaxation of tension between our two countries." That was how the Detroit Free Press commented in its issue of October 9, 1963, on the arrival of engineers Boris Bastukhov and Alexei Marchuk and graduate student Slava Shimanovsky. They came to the United States on a youth organization exchange program. Siberian Alexei Marchuk was born in Tomsk, is a hydraulic engineer, and has a wife and two sons. Though only 29, he is the engineer in charge of a hydroelectric power project on the Angara River. On returning home he published his impressions of America in the literary monthly Molodaya Gvardiya.



Alexei Marchuk, with the guitar, and engineer colleagues boating on the man-made Bratsk Sea.

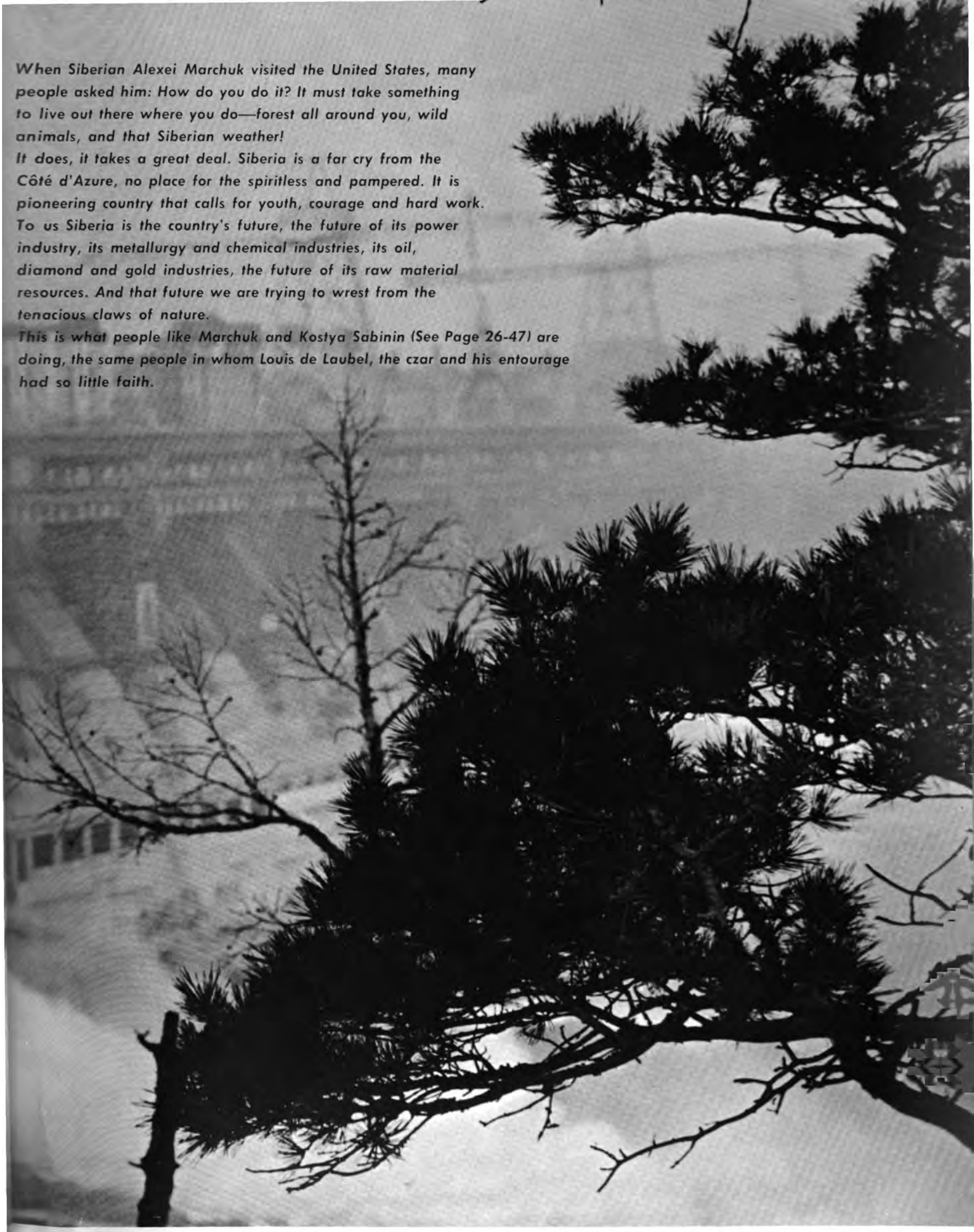


The dam of the 4.5-million-kilowatt Bratsk Hydroelectric Station on the Angara. The pressure of the water on its turbine blades is twice that of Niagara Falls. Plans for Siberian power development are on a grand scale. The Lena, the Yenisei and the Angara rivers will be generating 380 billion kilowatts of electricity, almost as much as all the power stations in the country now produce. The Lena has already been surveyed for the seven stations scheduled. Nizhne-Lenskaya, the largest, will be 4.5 times the size of Bratsk.

When Siberian Alexei Marchuk visited the United States, many people asked him: How do you do it? It must take something to live out there where you do—forest all around you, wild animals, and that Siberian weather!

It does, it takes a great deal. Siberia is a far cry from the Côté d'Azure, no place for the spiritless and pampered. It is pioneering country that calls for youth, courage and hard work. To us Siberia is the country's future, the future of its power industry, its metallurgy and chemical industries, its oil, diamond and gold industries, the future of its raw material resources. And that future we are trying to wrest from the tenacious claws of nature.

This is what people like Marchuk and Kostya Sabinin *(See Page 26-47)* *are doing, the same people in whom Louis de Laubel, the czar and his entourage had so little faith.*



AROUND *the* COUNTRY



PYOTR KAPITSA WINS NIELS BOHR MEDAL

The Niels Bohr Gold Medal has been awarded to Academician Pyotr Kapitsa. The medal bearing the name of the great Danish physicist is conferred by the Danish Engineering Society on scientists and engineers anywhere in the world for important contributions to the development of nuclear physics and its practical application for peaceful purposes. It was established in 1955 on the occasion of Niels Bohr's seventieth birthday. (Left to right: Mstislav Keldysh, President of the USSR Academy of Sciences; Pyotr Kapitsa; Paul Malmstrem, president of the Danish Engineering Society.)

THEATER FOR THE DEAF

As on all building sites, it is very noisy where this building is going up. When it is completed, however, silence will reign—the Central Palace of Culture of the Russian Federation's Society of the Deaf. There will be such facilities as a theater, a gym, dark rooms for developing pictures, a library, a billiard room, and others.

The theater will have special equipment and production accessories.



GEM OF THE SEA

The Baltic seacoast near Riga, capital of Latvia, is famous for its sand beaches. Though the water rarely goes above 65 degrees Fahrenheit, many people from other republics take their summer vacations there, attracted by the mild climate, the aromatic pine groves along the seashore, and the consistently good service of the hotels and restaurants. A new restaurant, Gem of the Sea, with seating for 520 diners, will open in the small town of Bulduri for the new season.



three hours of rubbing sticks together, to light a compfire. They made a flint knife in 9 days and a hammer in 11.

This "primitive life" went on for several months. Nevertheless it was easier for the experimenters than for their remote ancestors: the sense of humor developed through the ages helped them bear it.



A NEW LARISSA

The national title in women's gymnastics was won last December by 15-year-old Larissa Petrik of Vitebsk.

It happened in Kiev. Millions of people watched the contest on television. The chief contenders were Olympic champion Larissa Latynina, Larissa Petrik and Natasha Kuchinskaya. The last-mentioned ran into some bad luck—she fell off the beam. Larissa Petrik wound up with a brilliant and victorious performance.

When she was 10 years old, the new national champion saw the famed Latynina perform on television. It was then she decided to become a gymnast.

KIRGHIZIAN PRESERVE

The picturesque mountain lake Sary-Chelek in the Central Asian republic of Kirghizia is surrounded by a dense forest of nut and fruit trees where wild boar, fallow deer and other representatives of the animal kingdom abound. Several aurochs, a relative of the American bison, were added recently. The area around the lake is a wild life sanctuary where scientists study the flora and fauna of the region.





SCIENTIFIC BARBARIANS

Not many of us twentieth century people would want to trade our modern comforts for the life of our early forebears.

History students of Moscow and Leningrad universities, however, did just that. They built a primitive camp on the bank of the Kadyr River in the East Sayan Mountains and used only stone implements.

Our "primitive men" managed, in

20 MILLION BOOKS

A new publishing house, Progress, was founded at the end of 1963 to issue Soviet books for foreign readers and to bring the works of foreign writers to Soviet readers. The 1965 publication plan lists 1,000 titles in a total edition of 20 million copies.

The works of Marx, Engels and Lenin will be issued in foreign languages. New books about the Soviet Union, like Academician Stanislav Strumlin's *Our World 20 Years Hence*, should interest readers abroad. He pictures the Soviet Union when communism becomes a reality.

The list includes juvenile and adult fiction by Soviet writers, among the former the Russian folk tale "Vasilisa the Beautiful," Leo Tolstoy's *Children's Stories*, and Samuel Marshak's *How to Behave*.

Foreign students of the Russian language will get new textbooks and study aids.

Books for foreign readers are being put out in 35 languages of Europe and the East. Books in 40 languages are being translated for Soviet readers.





FOR THE FAR NORTH

A group of young engineers and technicians at the aviation design bureau headed by Andrei N. Tupolev, the famous designer of jet planes, have built an amphibious aerosleigh for snow-covered areas with many bodies of water.

The cross-country vehicle looks like a flat-bottom boat covered with polyethylene for better sliding. It will do 45 miles an hour on water and 70 on snow, and can carry a 1,545-pound load and a two-man crew.



FOR FOREIGN TOURISTS

Foreigners visiting Moscow know the National Hotel, an old Victorian-style building on the corner of Gorky Street and Karl Marx Prospect. By May 1967 the hotel's new 23-story addition with 576 suites will be finished. On the roof will be a scenic observatory. Tourists coming to the Soviet Union in their own cars will be able to park in one of the hotel's garages.

BASEMENT TREASURES

In treasure hunting it isn't obligatory to dive with an aqualung into the briny sea for the gold sunk by Spanish conquistadors or to search the mountains for the ancient treasures of the Incas. Valuables may be hidden a good deal closer—in the garden or the basement—as, for instance, at No. 9, Yelizarova Street, Moscow.

Workers replacing some water pipes there found 44 pounds of gold and silver, a large part of the treasure-trove in coins. There were about 2,000 of them: silver rubles from the time of Peter I, Catherine II, Nikolai I and Alexander III, Polish zlotys and Austro-Hungarian kronen. The latest date on the coins was 1915. There were also gold earrings, cigarette cases and silverware.





FRENCH MIME IN MOSCOW

Marcel Marceau is the very celebrated representative of an art form that was almost unknown in the Soviet Union three or four years ago. Today it is included in the curriculum of student dance companies, and professional mimes are getting the hearty applause of audiences. Toward the end of last year Marcel Marceau made his second tour of the Soviet Union. (The photo was taken in Moscow.)

WATER'S FOURTH STATE

Everyone knows that water can exist in three states: liquid, gas and solid.

But evidently something new has been added. Experiments at the Physical Chemistry Institute (Moscow) and the Technological Institute (Kostroma) show that it can also exist in a fourth state.

A capillary tube with an inside diameter some tenths of the thickness of a human hair was filled with water vapor. The temperature was reduced to below zero, but the water formed from the vapor did not freeze and viscosity was 15 times greater than usual. Aceton, acetic acid and spirits also behaved unexpectedly in the capillary. The reason? Evidently the molecules of these liquids adhere to the walls of the capillary tube. A layer of molecules settles on the first layer, a third layer on the second, etc., until the entire channel is filled. In the process the usual ties between molecules are destroyed and stronger ones develop. The liquid passes into a new and heretofore unknown state.

Medical researchers, biologists and plant growers are much interested in this discovery. Since the tissues of all living organisms are filled with many tiny channels, it may be that the liquids in these natural capillaries behave in just as unusual a manner as in the artificial ones.

THREE PASTERNAK ESSAYS PUBLISHED

Three critical essays by Boris Pasternak have been published in the weekly *Literaturnaya Rossia*. The essays, appearing under the title "From the Unpublished and the Forgotten," were written at different times and on different subjects.

The first, dated January 1917, is a review of Vladimir Mayakovsky's collection of poetry *Simple as Mooing*. It was to be used in the journal published by the futuristic literary group *The Centrifuge*, to which Pasternak belonged at the time. As the third issue of the journal for which the review was written never did come out, the article remained for almost 50 years in the archives of the journal's publisher, Sergei Bobrov.

The second work is "The Translator's Notes," originally published in 1944 in the magazine *Znamya* in Moscow. It was written in development of a review of *An Anthology of English Poetry*, ordered by the Literary Publishing House, and served as the preface to poems by Shelley published in the same magazine.

The third, an essay on Chopin, is vastly superior to the other two works in both significance of conception and beauty of execution. It appeared in another version in the magazine *Leningrad* in 1945, but was then considerably rewritten by the author and was never published in the new form. The existence of several manuscript versions of the essay speaks of the author's special interest in Chopin.

MEDICAL STATISTICS

There are four million medical workers in the USSR, half a million of them doctors. About 70 per cent of the doctors (348,000) are women. Thus there is one doctor for every 460 people. The number of hospital beds totals 2.1 million. The upkeep of a hospitalized patient costs five-six rubles a day, an appendectomy 40 rubles.

But the state foots the bill for everything. Budgetary expenditures for health promotion and physical education in 1965 will reach 6.5 billion rubles. Besides medical services, the state pays for education, old-age and disability pensions, sick benefits, and partial maintenance of children in nurseries and kindergartens, among other things.

The trade unions maintain more than 2,500 sanatoriums and holiday homes; 4,700 tourist, convalescent and student camps; and 7,000 Young Pioneer camps, where adults and children vacation and get treatment free of charge or at reduced rates. They served 10 million people in 1964.

At the end of 1964 the state raised the pay of medical workers by 23 per cent on the average (650 million rubles a year). Prices of the most commonly used drugs were reduced as of January 1 of this year; some drugs are dispensed free of charge. The public will be saving 40 million rubles a year thereby.



RECEIVE SOVIET DIPLOMAS

Students from 119 countries, 21,000 of them, are enrolled in 300 educational institutions in 80 Soviet cities.

Exchange students come from the United States, England, France, Finland and other countries. Short-term courses and seminars for teachers of the Russian language are given in many countries.

In the past 10 years Soviet educational institutions have trained 25,000 specialists from other countries. More than 1,500 foreigners graduated from Moscow University, 400 of them earning a master's degree. The Moscow Power Institute alone trained 630 specialists.



AROUND *the* COUNTRY

Learning Russian

Starting with this issue, we shall publish in Russian short stories and excerpts from works by Russian authors. Since stress in the Russian language may fall on any syllable and shift with the grammatical change of the word, the stress signs will be marked in the texts to facilitate reading.

The stress sign will not appear in headings and whenever the stressed syllable begins with a capital letter.

Prepositions and the nouns they precede are pronounced together, with the stress often shifted to the preposition. If stress falls on a one-syllable word, the stress sign will not be given.

У-А... У-А...

Иван Тургенев

Я проживáл тогдá в Швейцáрии: я был óчень мóлод, óчень самолюбúв и óчень одинóк. Мне жилóсь тяжелó и невéсело. Ещё ничегó не извéдав, я ужé скучáл, унывáл и злúлся. Всё на земле́ мне казáлось ничтóжным и пóшлым,— и, как э́то чáсто случáется с óчень молоды́ми людьмú, я с тáйным злорáдством лелéял мысль... о самоубúйстве. «Докажý... отомщý...» — дýмалось мне... Но чтó доказáть? За чтó мстить? Этого я сам не знал. Во мне прóсто кровь бродúла, как винó в закýпоренном сосýде... а мне казáлось, что нáдо дать э́тому винý вы́литься нарýжу, что порá разбúть стесня́ющий сосýд... Бáйрон был моúм úдолом, Мáнфред моúм геро́ем.

Однáжды вéчером я, как Мáнфред, решúлся отпрáвиться тудá, на тéмя гор, превы́ше ледникóв, далекó от людéй, тудá, где нет дáже растúтельной жúзни, где громоздя́тся одни́ мёртвые скáлы, где застывáет всякий звýк, где не слы́шен дáже рёв водопáдов!

Что я намéрен был там дéлать... я не знáю... Быть мóжет, покóнчить с собóй...

Я отпрáвился...

Шёл я дóлго, сперва́ по дорóге, потóм по тропúнке, всё вы́ше поднимáлся... всё вы́ше. Я ужé давнó миновáл послéдние дóмики, послéдние дерéвья... Кáмни — одни́ кáмни кругóм,— рéзким хóлодом ды́шит на меня́ блúзкий, но ещё невúдимый снег,— со всех сторóн чёрными клýбами надвигáются ночны́е тéни.

Я остановúлся наконéц.

Какáя страшная тишинá!

Это цáрство Смéрти.

И я здесь одúн, одúн живóй человéк, со всем свои́м надмéнным гóрем, и отчáяньем, и презрéньем... Живóй, сознáтельный человéк, ушéдший от жúзни и не желáющий жить. Тáйный ýжас леденúл меня́, но я воображáл себя́ велúким!..

Мáнфред — да и пóлно!

— Одúн! Я одúн! — повторя́л я,— одúн лицóм к лицý со смéртью. Уж не порá ли? Да... порá. Прощáй, ничтóжный мир. Я оттáлкиваю тебя́ ногóю!

И вдруг в э́тот сáмый миг долетéл до меня́ стрáнный, не срáзу мнóю пóнятый, но живóй... человéческий звук... Я вздрóгнул, прислýшался... звук повторúлся... Да э́то... э́то крик младéнца, грудно́го ребёнка!.. В э́той пусты́нной, дúкой вы́си, где вся́кая жизнь, казáлось, давнó и навсегдá замерлá, крик младéнца!..

Изумлéние моё внезáпно сменúлось другúм чýвством, чýвством задыхáющейся рáдости... И я побежáл стремглáв, не разбирáя дорóги, прямо на э́тот крик, на э́тот слáбый, жáлкий и спасúтельный крик!

Вскóре мелькнýл предо мнóю трéпетный огонёк. Я побежáл ещё скорéе — и чéрез нéсколько мгновéний увúдел нúзкую хúжинку. Слóженные из камнéй, с придáвленными плóскими кры́шами, такúе хúжины слýжат по цéлым недéлям убéжищем для альпúйских пастухóв.

Я толкнýл полураскры́тую дверь и так и ворвáлся в хúжину, слóвно смерть по пятáм гналáсь за мнóю.

На скамéйке молодáя жéнщина кормúла грýдью ребёнка... пастýх, вероя́тно её муж, сидéл с нéю ря́дом. Они́ óба устáвились на меня́. Но я ничегó не мог промóлвить... тóлько улыбáлся и кивáл головóю.

Бáйрон, Мáнфред, мечты́ о самоубúйстве, моя́ гóрдость и моё велúчье, кудá вы все девáлись?..

Младéнец продолжáл крича́ть — и я благословля́л и егó, и мать егó, и её мýжа...

О горя́чий крик человéческой, тóлько что народúвшейся жúзни, ты меня́ спас, ты меня́ вы́лечил!

НИМФЫ

Я стоя́л пéред цéпью красúвых гор, раскúнутых полукрýгом; молодóй зелёный лес покрывáл их свéрху дóнизу.

Прозрáчно синéло над нúми ю́жное нéбо; сóлнце с вышины́ игрáло лучáми; внизý, полузакры́тые травóю, болтáли провóрные ручьи́.

И вспóмнилось мне старúнное сказáние о том, как, в пéрвый век по рождествé Христóве, одúн грéческий корáбль плыл по Эгéйскому мóрю.

Час был полýденный... Стоя́ла тúхая погóда. И вдруг, в высотé, над головóю кóрмчего, кто́-то я́вственно произнёс:

— Когдá ты бýдешь плыть мúмо óстрова, воззовú грóмким гóлосом: «Умер Велúкий Пан!»

Кóрмчий удивúлся... испугáлся. Но когдá корáбль побежáл мúмо óстрова, он послýшался, он воззвáл: — Умер Велúкий Пан!

И тóтчас же, в ответ на егó клик, по всемý протяжéнию бéрега (а óстров был необитáем) раздалúсь грóмкие рыдáния, стóны, протя́жные, жáлостные вóзгласы:

— Умер! Умер Велúкий Пан!

Мне вспóмнилось э́то сказáние... и стрáнная мысль посетúла меня́. «Что, éсли и я клúкну клич?»

Но в видý окружáвшего меня́ ликовáния я не мог подýмать о смéрти — и что бы́ло во мне сúлы закричáл.

— Воскрéс! Воскрéс Велúкий Пан!

И тóтчас же — о чýдо! — в ответ на моё восклицáние по всемý широ́кому полукрýжию зелёных гор прокатúлся дрýжный хóхот, поднялся рáдостный гóвор и плеск. «Он воскрéс! Пан воскрéс!» — шумéли молоды́е голоса́. Всё там впереди́ внезáпно засмея́лось, я́рче сóлнца в вышинé, игрúвее ручьёв, болтáвших под травóю. Послы́шался торопли́вый тóпот лёгких шагóв, сквозь зелёную чáщу замелькáла мрáморная белизнá волнúстых тунúк, живáя áлость обнажённых тел... То нúмфы, нимфы, дриáды, вакхáнки бежáли с высóт в равнúну...

Они́ рáзом показáлись по всем опýшкам. Лóконы вью́тся по божéственным головáм, стрóйные рýки, поднимáют венкú и тимпáны — и смех, сверкáющий олимпúйский смех бежúт и кáтится вмéсте с нúми...

Впереди́ несётся богúня. Онá вы́ше и прекрáснее всех,— колчáн за плечáми, в рукáх лук, на пóднятых кудря́х серебрúстый серп луны́...

Диáна, э́то — ты?

Но вдруг богúня остановúлась... и тóтчас, вслед за нéю, остановúлись все нúмфы. Звóнкий смех зáмер. Я вúдел, как лицó внезáпно онемéвшей богúни покры́лось смертéльной блéдностью, я вúдел, как окаменéли её нóги, как невырази́мый ýжас развéрз её устá, расшúрил глазá, устремлённые вдаль... Что онá увидáла? Кудá глядéла онá?

Я оберну́лся в ту сто́рону, кудá онá глядéла...

На сáмом краю́ нéба, за нúзкой чертóю полéй, горéл óгненной тóчкой золотóй крест на бéлой колоко́льне христиáнской цéркви... Этот крест увидáла богúня.

Я услы́шал за собóю неро́вный, длúнный вздох, подóбный трепетáнию лóпнувшей струны́,— и когдá я оберну́лся снóва, ужé от нимф не остáлось следá... Широ́кий лес зеленéл по-прéжнему,— и тóлько местáми сквозь чáстую сеть ветвéй виднéлись, тáяли клочкú чего́-то бéлого. Бы́ли ли то тунúки нимф, поднимáлся ли пар со дна долúн — не знáю.

Но как мне бы́ло жаль исчéзнувших богúнь!

QUERIES FROM READERS

DRIVER'S LICENSE

Reader Homer Wilcox of California asks about traffic rules and drivers' licenses in the Soviet Union. Vladimir Pridorogin, Chief of Moscow Traffic Control and Motor Vehicle Inspection, provides this answer.

MR. WILCOX most probably drives a car. If so, he already knows some of our traffic regulations even if he has not driven in our country. Our rules, signs and pointers, and light signals follow those generally recommended by the working group on Road Traffic Security of the Inland Transport Committee of the UN Economic Commission for Europe. These recommendations are fairly standard.

Now about a driver's license. A standing joke among drivers anywhere is that they have one more small pleasure and a hundred more worries than the rest of the world. What's more, it's not easy to acquire these headaches. First you face a medical commission and have your balance, sight, etc., tested. That passed, you enroll at a drivers' school. Here you are put through a systematic course of traffic rule study, you practice driving and learn the ABC's of automotive engineering—the mechanics of wheel control and the brake system, on which safe driving depends. Then if your hands still itch for a steering wheel, you face the ordeal of an examination at the Motor Vehicle Inspection Bureau.

It used to be that applicants, mostly those who had flunked their first try, complained the examiners were overworking the safety angle. No complaints of that kind are heard any longer. In places like Moscow, the examiner is an electronic device and very objective. If you answer eight of the ten questions right and pass your driving test, the license is yours.

This speech comes with the document: "Remember that this is easier to lose than to get. The road is full of surprises. When you are in the driver's seat, concentrate! Don't look at the girls. Dismiss your family troubles for the moment. Forget that unpleasant conversation with your boss. You can do all of the above to your heart's content when the ignition is off. Then you will be saved the explanations to the traffic officer, the fines and the entries on your license."

If, in spite of our speech, a driver manages to get three such entries, he can have his license revoked for as long as six months. If we doubt a driver's skill, we send him back for re-examination. Other offenders—whether drivers or pedestrians—are often given a Sunday treat: We invite them to a lecture on street traffic rules.

About penalties, traffic officers may forgive drivers many of their sins, but one is absolutely unforgivable—driving while drunk. A driver who has had a drop too much is often the cause of accidents and even death. A tipsy driver gets little mercy. If it is his first offense of the kind, he loses his license for a year; caught a second time, he is not allowed to drive for up to three years.

What else might Mr. Wilcox want to know? Speed limit and parking, of course. Each of us, the moment he starts out, wants to get where he's going as fast as he can and find a nice, convenient parking place waiting for him.

Our general rule is: Your speed should depend on visibility, how good the road is, and the density and kind of traffic along the way. In towns and other populated areas the speed limit for cars, buses and motorcycles is 37 mph; for all other vehicles it is 31 mph. On a number of thoroughfares in Moscow traffic lights are set automatically for a 34-mph limit. In general, however, we prefer high speed, if it does not result in accidents, of course. For example, a driver in the fast lane of the highway that rings Moscow must travel at a speed not less than 43.5 mph.

Unlike many American and European cities, parking is no problem for us, as yet, and drivers do not have to park their cars a mile away from home or office. We have only two no-parking signs. The first is a blue circle with a red stripe across it. It means no stopping for any kind of vehicle except public conveyances. The second sign is the letter P on a yellow background crossed by a red line. It means no parking except for taxis with meters working, invalids' cars, emergency repairs and medical service cars.

I do not know whether Mr. Wilcox is planning to tour the Soviet Union by car. But if he is, he should be warned that our biggest traffic problem is the pedestrian. Some call pedestrians the better part of mankind. Perhaps they are. At least everyone who does not drive a car thinks so. But those in the driver's seat are of the opinion—which we share—that they are all slightly mad. Pedestrians here are firmly convinced that no matter what happens, they have the right of way. I regret to say that so far we have not been able to make them see things the drivers' way.

In conclusion, I should like to wish Mr. Wilcox and his many fellow drivers in the United States fair traveling on all roads.

CMEA—AIMS AND ACTIVITIES

Gerald Larsen of Los Angeles, California, wants to know what the Council for Mutual Economic Assistance (CMEA) is. Vladimir Smolyansky, Novosti Press Agency commentator on economic affairs, answers his question.

THE MEMBERS of CMEA are Albania, Bulgaria, Hungary, the German Democratic Republic (GDR), Mongolia, Poland, Rumania, the USSR and Czechoslovakia.

Why aren't all the socialist countries represented? For various reasons. One, perhaps the main, reason is that they became socialist countries at different times. Consequently, their economies are at different levels of development. Some apparently have not yet reached the point where they think this form of international cooperation would be helpful. However, CMEA has its doors wide open to those who subscribe to its aims and principles.

What are CMEA's aims? According to its charter: to promote comprehensive economic cooperation on a foundation of an international socialist division of labor that will help the member-states build socialism and communism, and will contribute to a stable world peace.

In the process of cooperation the developing countries rapidly bring their productive levels up to those most economically advanced. For example, in the five years ending in 1963 the USSR and Czechoslovakia increased their production by roughly 40-50 per cent; Mongolia doubled its production in this same period.

The basic form of activity is the coordination of current and long-range economic plans—currently plans for 1966-70. CMEA works out advisable areas for specialization and cooperation in production by the member-states.

The member-states agree to specialization and cooperation that will use their resources for maximum and most efficient productivity. They want the goods they produce to be on a par with the world's best.

The principles on which the economic, scientific and technical cooperation is carried on are: full equality of the member-states, respect for national interests, mutual advantage and reciprocity. Relations between the member-states are purely voluntary. The charter permits the withdrawal of any member. It needs merely to notify the country with which the charter is deposited.

CMEA's Executive Committee must obtain the consent of all members affected by a recommendation or decision. If a state does not wish to be covered by a decision or involved in a project, it so indicates. If it should become interested in the project later on, it may then join the other participants in it.

In the event that CMEA adopts a recommendation, each national delegation must put the question to its respective government and inform CMEA no later than 60 days thereafter what its government's decision is.

The operating principle is unanimity. No member-state is bound by a decision it does not approve.

CMEA does not fence itself off from Western economic organizations; on the contrary, it advocates broader contacts between countries with different social systems—and says so in its charter.

NATIONAL COSTUMES OF SIBERIA

BY KONSTANTIN TELYATNIKOV



Dancing costume inspired by the Even apron design.

SOME 24 MILLION people inhabit the territory of Siberia, the majority Russians. Our February issue carried a story about the Russian national costume. This month we are introducing our readers to the garments worn by some of the peoples of Siberia, such as the Khanty, Mansi, Nentsy, Tuvinians, Evenki, Eveni, Chukchi, Yukaghirs and Eskimos. The Khanty and Mansi live in Western Siberia: the Khanty—in the middle and lower reaches of the Ob River, down to its very mouth, and the Mansi—on the banks of the left tributaries of the Ob and on the eastern slopes of the Urals. The Nentsy are found in the European North, in northwest Siberia and on the Taimyr Peninsula, while the Evenki live in small groups on a vast territory from the Yenisei River to the Sea of Okhotsk. The Eveni occupy the northeastern districts of Yakutia, Kamchatka and the Chukota Peninsula. In the tundra, between the Kolyma and Indigirka rivers, are the Yukagirs, and on the Chukota Peninsula are the Chukchi and the Eskimos. Only the Tuvinians live in southern Siberia, in the upper reaches of the Yenisei River.



Nenets woman's coat of white and brown reindeer with white reindeer and colored cloth insets. The collar and trim are of white polar fox.



Coat worn by the Khanty and Mansi. Black and gray feathers are worked into the shoulders, waistline and skirt. The hem has a white reindeer border.



Nenets man's coat of brown reindeer with white reindeer trim. The shoulders and sleeves have lynx bands. Colored bands trim the bottom.



In addition, Siberia is inhabited by the Yakuts, Buryats, Altaians, Khakassians and many, many other peoples. But to give at least a sample of the national costumes of each of these peoples, we would need more than one whole issue of the magazine. The so-called northern trades—fishing, hunting seals, trapping and hunting fur-bearing animals, and reindeer breeding—still flourish in the northern districts. This, to a certain extent, determines the materials used for clothing and their style. Like other national costumes, the Siberian garments are very colorful and also extremely serviceable. The Siberian national costume not only features the folk art traditions but is also both holiday and daily garb. The chief material used for clothing by the peoples of the North and Siberia is fur of all kinds: reindeer, seal and dog. Lynx, fox—more rarely polar fox—are used for trimming. The garments often have reindeer insets of contrasting colors, such as white on brown. Decorative trimmings of red, blue and green cloth and beads are used to accentuate the outline of the garment. The patterns in the ornamentation usually includes, in stylized form, the tundra landscape and antlers.



Nenets national costume.

Even man's summer suit. The long reindeer jacket, with the fur inside, is trimmed with black cloth. It is worn with a black cloth shirt that has red buttons down to the waist. In addition there is an apron of reindeer striped in black with white and blue beaded embroidery, sealskin trousers, reindeer cap with earflaps, boots of **kamoos** (fur from reindeer legs) with white reindeer trim, and deerskin gloves with beaded embroidery.



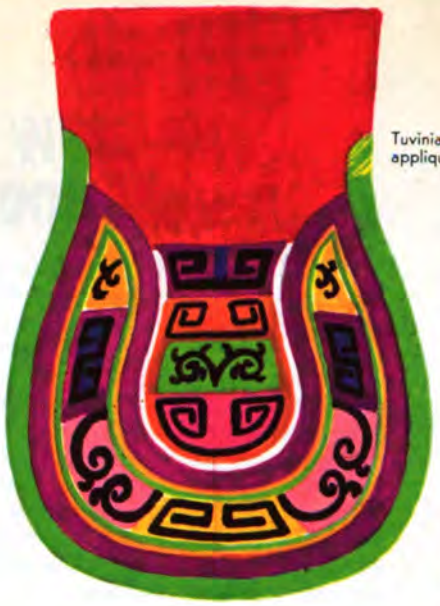
Even deerskin glove embroidered with colored thread and beads on colored cloth.

Chukchi deerskin dress glove worn in the seacoast area. The back is white and the palm brown, the trim—embroidery in colored thread with appliqué and dog fur.



Eskimo sealskin glove. Insets of deerskin with appliqué and embroidery.





Tuvinian saddlecloth with colored leather appliqué.

Even deerskin saddlebag with beaded embroidery and fringe.







Tuvinian woman's robe of patterned silk, trimmed with velvet, gold and silver brocade and gold thread embroidery.



Evenk reindeer coat with hood, white reindeer border trim. Hood, sleeves and hem edged with lynx.



Even holiday coat of black velvet trimmed with red calico and purple velvet embroidered with colored beads.

Yukagir reindeer boot with colored-bead embroidery and fringe.



Even woman's reindeer boot with colored-bead embroidery and ribbons.





Chukchi short boot of white **kamoos** with deerskin, appliqué and embroidery.



Eskimo woman's summer reindeer slipper embroidered with beads and trimmed with white lynx.

Even woman's summer costume: reindeer cap embroidered with white, black and blue beads, and trimmed with spangles; printed kerchief; reindeer coat, the fur inside, with colored beaded embroidery on black cloth edged with red calico; metal chain belt; fringed reindeer apron embroidered with colored beads; deerskin gloves; and reindeer boots embroidered with beads.

DRAWINGS BY YELIZAVETA AXELROD



The cosmonauts report to leaders of the Party and Government. From left to right: Anastas Mikoyan, Leonid Brezhnev and Alexei Kosygin.

Crowds of Muscovites gathered to greet Belyayev and Leonov after their successful flight.





Pavel Belyayev and his wife Tatyana are entertained by daughters Irina, 15, and Lyudmila, 10.

For recreation Alexei Leonov likes terrestrial walks with wife Svetlana and daughter Victoria.



THE CREW OF VOSKHOD II

PAVEL BELYAYEV, commander of the *Voskhod II*, has 20 years of flying experience behind him. During the Second World War he was admitted to the naval aviation school in the war-scarred town of Yeisk on the Azov Sea. On May 9, 1945—Victory Day—he graduated and was assigned to a unit stationed near Vladivostok, part of the Pacific Fleet. He served 11 years in the Far East, participating in the war against Japan and eventually becoming commander of the fleet's best squadron. For meritorious service, Belyayev received many awards.

As one of the best commander-pilots, he was sent to the Air Force Academy in Moscow. He devoted all his time to his studies and got only excellent marks. Upon his graduation six years ago, he was accepted for postgraduate work.

Pavel Belyayev and Alexei Leonov, who were part of the first group of cosmonauts, became friends during their training drills. These same drills almost cost Belyayev the chance to fly into space.

They were having some parachute-jumping exercises at one of the airfields on the Volga. Gagarin, Titov, Nikolayev, Popovich, Bykovsky and Komarov had carried out their day's assignment. Only Belyayev and Leonov were still in the air. When the parachutists bailed out of the plane, the wind started blowing with renewed force, as often happens in the steppes along the Volga. As the two were landing, a wild gust of wind dashed Belyayev against the hard, uneven ground and dragged him over the dry grass. His comrades ran to his aid, but he could not get up. He had received a double fracture of the left leg.

Belyayev spent the next 40 days in a hospital bed, his leg in traction.

One of six children, Pavel was born on June 26, 1925. He spent his childhood in the village of Chelishchevo, deep in the woods of Vologda Region. His father, a doctor's assistant, had fought in two wars. He was an enthusiastic trapper and would often take Pavel along to trap ermine and hunt fox, hare and once even a bear. In those days his father often had to set the bones of fellow villagers, and Pavel remembered the advice he always gave: The injured part should get the most exercise possible to stimulate healing.

When Belyayev was discharged from the hospital, he gradually started putting more and more weight on the healing limb. When he felt stronger, he returned to the hospital. More X-rays were taken. The surgeon whistled softly when he saw them, and said: "My friend, you've certainly surprised me. Your leg has healed very well, so well, in fact, that you won't have any trouble with it for the rest of your life." But the injured leg was still a source of concern for Belyayev. Many people said that the road to space was now closed to him.

With the support and encouragement of Leonov and Gagarin, Belyayev started parachute-jumping exercises again. They could see he was quite nervous as the plane took off, and Gagarin gave him a warm pat on the shoulder. His jump was an excellent one, and it was followed by many others. Belyayev once again took part in all the drills, and soon no one doubted that he would be able to fly into space.

ALEXEI LEONOV, copilot of *Voskhod II*, was born on May 30, 1934. He is the eighth of nine children. His father was a former miner in the Donbas. When he went to fight in the First World War, his family moved to Kemerovo in Siberia. At the end of the war he joined them in the ancient village of Listvyanka. After Soviet power had been established, the local peasants elected Arkhip Leonov chairman of the village Soviet. He was the organizer of one of the first communes, took part in the struggle against the Kolchak bandits, and in the thirties joined a collective farm—by then he was already a zootechnician. Alexei was born here. In 1945 the family moved to Kaliningrad.

From his early schooldays Alexei was beset by conflicting passions: artist or pilot . . . his love for painting and sketching or his fascination for the skies? He visited the Latvian Academy of Arts in Riga and was even accepted by the president himself. Yet his yearning for the sky won out.

After graduating from secondary school in 1953, Alexei entered the Chuguyevskoye Aviation School in the Ukraine. He has served in various Air Force units and is now studying at the Zhukovsky Air Force Engineering Academy.

Though Leonov has found his vocation in flying, he has not stopped painting. The startling colors discovered by the pilot are transferred to canvas by the artist. He does not have much spare time, but what he has is completely devoted to art: to painting from life, visiting art galleries, collecting engravings, and reading about artists. But he is an airman first, and on March 18, 1965, Alexei Leonov became the eleventh Soviet cosmonaut and the first man to walk in space.

A WALK IN SPACE

AN INTERVIEW WITH
COSMONAUT KONSTANTIN FEOKTISTOV
MASTER OF SCIENCE (ENGINEERING)

Konstantin Feoktistov was a member of the three-man team on the orbital flight of *Voskhod I*. He is the first trained scientist to visit outer space. Here he is interviewed by Victor Bukhanov, Novosti Press Agency (APN) correspondent.

What research program did the* Voskhod II *have?

Quite a large one. The major goal was to test man's ability to leave his ship and walk out into space. We wanted to test the design characteristics of the space suit and lock chamber. A man walking out into space is able to observe the cosmos and the ship from the outside. We wanted to appraise the possibilities and prospects for this kind of external observation—to study the physiological problems involved, to determine whether a man could work and coordinate his movements outside the ship's cabin.

Another important goal was landing by manual control. Besides that, we had the whole complex of scientific, technical, medical and biological research initiated by Gagarin's flight.

Would you say that the flight of Pavel Belyayev and Alexei Leonov is comparable in importance to Yuri Gagarin's?

I would say so. They were both unique. They both represent important landmarks in the exploration and conquest of space.

The program calling for a flight lasting a day and a night was successfully completed by the *Voskhod II* crew. Man has moved directly into the cosmos for the first time.

Millions of people watched that truly sensational feat. I, personally, felt as if I were seeing a science fiction fantasy come alive. Alexei Leonov soared weightless in space, watching the ship, the earth and the sky.

The sight was amazing, it was a dream become reality—a triumph of scientific thought and technical calculation. Leonov's emergence

into the cosmos will help clarify many other problems.

And the results of the flight?

It confirmed the general design principle we followed in building a ship that would permit a cosmonaut to emerge into outer space. The very important data obtained demonstrates that throughout the entire flight a cosmonaut can retain a high level of work ability, excellent coordination and normal physiological parameters.

A space suit with its own means of communication and autonomous systems for ensuring the breathing and thermal regimen of a cosmonaut has been tested.

The venture into the cosmos was recorded in its entirety by television equipment and telemeters. Telemeters recorded not only the spaceman's physiological condition but the functioning of the automatic devices, the various parts of the space suit and the lock chamber system.

Will you elaborate on the importance of Alexei Leonov's walk in space.

This is the main achievement of the flight. Alexei Leonov and Pavel Belyayev have literally taken the first step toward the not so distant future, when people, wearing space suits (more or less like Leonov's), will get down to assembling satellite stations and space observatories, and—I believe it will happen in our lifetime—will reach other planets. The experiment was also important for solving the problem of transferring crews from one ship to another when they rendezvous in space. Leonov and Belyayev are the pioneers of the forthcoming mass-scale invasion of space by builders, mechanics and assemblers. Finally, the flight of *Voskhod II* is the beginning of the creation and development of methods for assisting a space crew in distress.

Did the flight break through any psychological barriers?

Undoubtedly. Solving the technical problem was the main thing. But at the same time Alexei Leonov, by floating freely and easily in space and executing certain movements, dispelled groundless apprehensions. In fact, he continued what Yuri Gagarin began—demonstrating to the whole world that the cosmos is accessible to man and obedient to him, that a man need not be afraid of meeting some undefined and unexpected tragedy in outer space.

Could the temperature change endanger the life of the cosmonaut who ventures outside his ship?

The temperature of a body in outer space is determined by the exchange of heat with the surrounding environment. Let us say that a stream of sunrays, a stream of the earth's heat radiation, and the same sunrays, only this time reflected by the earth, fall on the ship; that it is bombarded by the ions which comprise the atmosphere at this height; and, finally, that the ship itself also emits heat. The balance of all these heat currents will determine the general temperature of the ship.

One cannot speak of the temperature of outer space. One can only speak of the temperature of a body in the cosmos, and this temperature is the sum total of several factors.

By selecting certain optical characteristics that determine the radiant heat exchange of the ship's surface, it is possible to attain the necessary temperature with great precision and to regulate it, depending on the distance from the earth, without expending any other additional kind of energy.

As many people saw on television, the spaceman's suit had a light-colored coating whose characteristics were selected to keep the temperature within normal limits.

The thermal media worked out for the flight protected the spaceman when he ventured outside the ship.

Was there any other real danger that could have threatened Leonov?

There is always danger in any such venture. I don't think I need elaborate. The specific act of leaving his ship required caution. For example, he could have become entangled in the line. Then, too, he had to carefully coordinate the intensity of his movements with the state of weightlessness—a slight jerk can take a man too far and set him spinning. Leonov had to exert an almost negligible effort in moving away from the ship in the scheduled direction and in returning. To learn how to do that, he had about 10 training sessions.

The flight of *Voskhod II* gave us important experience in the autonomous navigation of the ship. This was a first. Pavel Belyayev, the ship's commander, was able to orient the ship, to perform the operations required to prepare the braking system to function, and to actually brake the ship so that it landed safely.

If you were to sum up the importance of the* Voskhod II *flight in one phrase, what would you say?

That moon flight is considerably closer.

COSMONAUTS IN TROUBLE: WHO HELPS?

BY GEORGI ZHUKOV, MASTER OF LAW
LEARNED SECRETARY, LEGAL COMMISSION
USSR ACADEMY OF SCIENCE

IN 1963 the UN General Assembly approved the Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space. No. 1962 (XVIII). Article 9 of the Declaration says: "States shall regard astronauts as envoys of mankind in outer space, and shall render to them all possible assistance in the event of accident, distress, or emergency landing on the territory of a foreign State or on the high seas. Astronauts who make such a landing shall be safely and promptly returned to the State of registry of their space vehicle."

On the basis of this Declaration an international agreement on aid to astronauts is being worked out.

The Soviet draft agreement stipulates that each of the signatories is to render all possible aid to the crews of spaceships in case of accident, disaster or emergency landing.

As a rule, distress signals transmitted in flight by a spaceship crew are received by the tracking stations of the state which launched the vehicle. However, it may very well happen that an SOS is received earlier by some other state. At the Third Session of the UN Legal Subcommittee on Outer Space it was decided that any state discovering or receiving information that a spaceship crew of another state had suffered an accident or made an emergency landing at any point on the globe is to immediately inform the state which launched the vehicle and the UN Secretary General.

In emergency situations it is difficult and sometimes impossible to land precisely on the spot designated by the flight program, and an emergency landing of a spaceship on the territory of a foreign state may then be necessary. This foreign state should take every possible step to rescue and render aid to the ship's crew. Aid by the foreign state should be no different than that rendered a crew of its own in a similar emergency. The state which launched the vehicle and the UN Secretary General should be informed of the steps taken.

There may be instances when the state on whose territory a foreign spaceship lands does not have the means necessary for locating and rescuing the crew (helicopters for example). In that event it can apply for aid to the state which launched the spaceship, with the understanding that the joint rescue operations be guided by the state on whose territory the ship made its emergency landing.

After the crew of the stricken spaceship is rescued by a foreign ship, plane or other means, the astronauts are to be returned promptly to their home country. If the health of any member of the crew makes his traveling inadvisable, the state on whose territory this crew member remains is to provide necessary treatment, and the authorities of his country are to be given the opportunity to send medical personnel. The procedure by which he is returned to his homeland and the time for the return are to be determined by the country of his citizenship.

The location and return of space vehicles are vitally important for scientific research. It may happen that a state will receive information that a foreign space object or one of its components has fallen to earth. In this case it should make no difference where the object falls: whether on the territory of the state, on the high seas or on land area which is not under the sovereign control of any state. We believe the country which finds a foreign space object should immediately inform both the country that launched the object and the UN Secretary General. The UN Declaration says among other things: "Ownership of objects launched into outer space, and of their component parts, is not affected by their passage through outer space or by their return to the earth. Such objects or component parts found beyond the limits of the State of registry shall be returned to that State, which shall furnish identifying data upon request prior to return."

When there is a crew on the spaceship, the question of the state to which the vehicle belongs can easily be resolved by the testimony of the crew members. If there is no crew, ownership can be established by identifying markings. Soviet space objects, for instance, carry pennants inscribed with the national seal and the letters *"CCCP"* (USSR).

However, there may be cases when no identifying marks can be made out. In that event, the state that launched the space object should furnish identifying data.

We feel that foreign space objects should be returned only when their launching accords with the UN Declaration. Otherwise the finders should not be obliged to return them to the owners. For instance, a space object should not have to be returned to its owner if it is launched by a private and not a government agency (an act which the Declaration forbids). And indeed, if any corporation does launch its own sputniks or spaceships, if any private group is permitted to use space for its own purposes, space research will be seriously hampered. Outer space belongs to all mankind, and its investigation is too important for the future to be surrendered to any group with private interests.

A space object shall not be returned to its owner if it violates the Declaration's clause on international consultations which are to be held before a potentially harmful experiment is conducted.

The return of foreign space objects involves certain expenditures, and these should be covered by the state of registry of the object. Aid in rescuing the spaceship crew and their return home should be rendered without charge, as is done with rescues at sea as specified by maritime law.

The main points of the Soviet draft agreement have met with wide support in the United Nations, where it was noted that the draft combined humane principle with respect for state sovereignty.

MARS

ARTIFICIAL PLANET

TOWARD VE

COSMOS SATELLITES

FROM MARCH 16, 1962

TO MARCH 25, 1965

CIRCLING THE MOON

EARTH

LABORATORIES

ANIMALS

HUMANS

MOON

PAVEL BELYAYEV, ALEXEI LEONOV
MARCH 18, 1965 VOSKHOD II 26 HOURS 17 ORBITS
447,386 MILES

VLADIMIR KOMAROV,
KONSTANTIN FEOKTISTOV,
BORIS YEGOROV
OCTOBER 17, 1964 VOSKHOD 24.3 HOURS 16 ORBITS 435,000 MILES

VALENTINA TERESHKOVA
JUNE 16, 1963 VOSTOK VI 71 HOURS 48 ORBITS 1.2 MILLION M

VALERI BYKOVSKY
JUNE 14, 1963 VOSTOK V 119 HOURS 81 ORBITS MORE THAN TWO MILLION

PAVEL POPOVICH
AUGUST 12, 1962 VOSTOK IV 71 HOURS 48 ORBITS 1.2 MILLION MILES

ANDRIAN NIKOLAYEV
AUGUST 11, 1962 VOSTOK III 95 HOURS 64 ORBITS 1.6 MILLION MILES

GHERMAN TITOV
AUGUST 6, 1961 VOSTOK II 25.3 HOURS 17 ORBITS 435,000 MILES

YURI GAGARIN
APRIL 12, 1961 VOSTOK I 108 MINUTES ONE ORBIT 25,500 MILES

Oct. 4, 1957
Sputnik I
184.3
pounds

Nov. 3, 1957
Sputnik II
1,120.5
pounds
(dog Laika)

May 15, 1958
Sputnik III
2,925.5 pounds

Jan. 2, 1959
Lunik 1
(artificial
planet Mechta)

Sept. 12-14, 1959
Lunik 2 (first
spacecraft on
the moon,
planted a
Soviet pennant
there)

Oct. 4-7, 1959
Lunik 3 (auto-
matic station
photographed
hidden side of
the moon)

April 2, 1963
Lunik 4
(passed the
moon at a
distance of
5,280 miles)

1962
12 Cosmos
satellites (first on
March 16)

1963
12 Cosmos
satellites

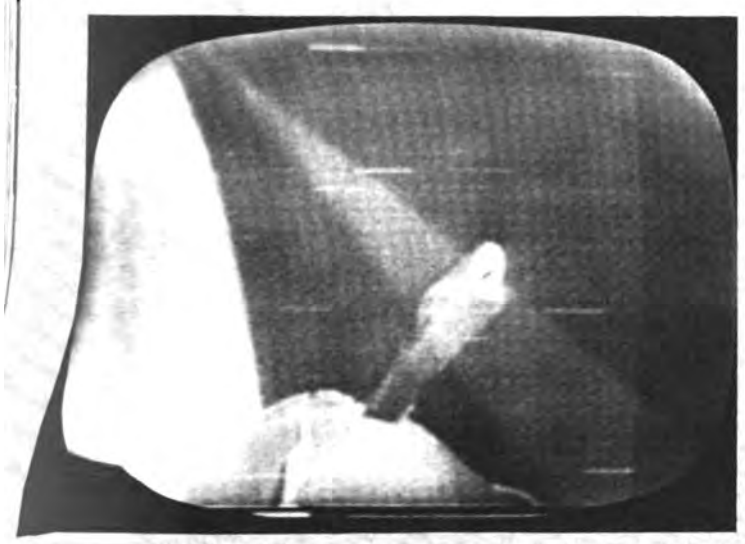
1964-1965
40 Cosmos
satellites

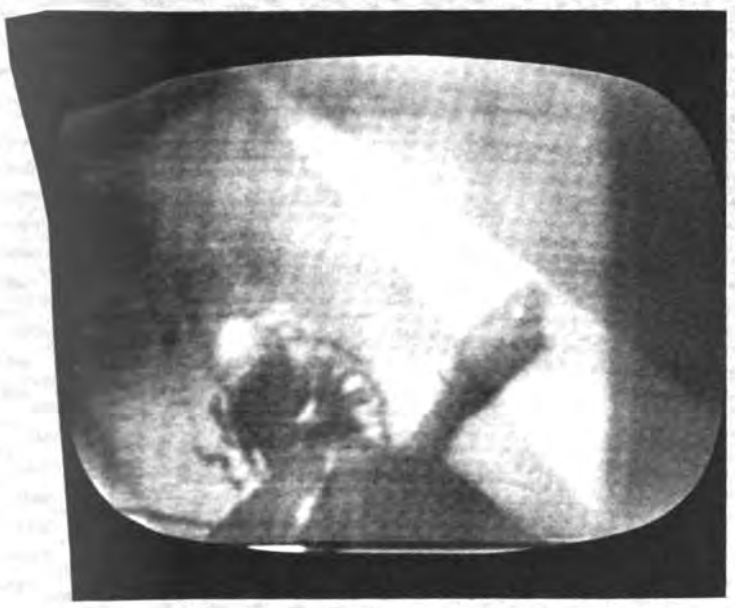
Nov. 1, 1962
Mars 1
(automatic inter-
planetary station
launched toward
Mars, weight
1,965 pounds;
two-way space
telecommunication
record of 66
million miles
established on
March 21, 1963)

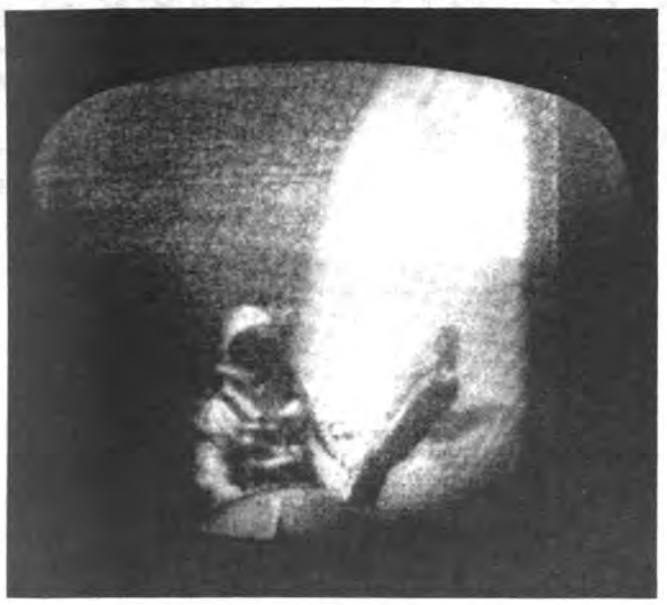


Courtesy of the magazine Soviet Union

	May 15,1960 First satellite spaceship 10,006 pounds	Aug. 19, 1960 Second satellite spaceship 10,140 pounds (dogs Belka and Strelka)	Dec. 1, 1960 Third satellite spaceship, five tons (dogs Pchelka and Mushka)	March 9, 1961 Fourth satellite spaceship 10,360 pounds (dog Chernushka)	March 25, 1961 Fifth satellite spaceship 10,340 pounds (dog Zvezdochka)	Feb. 4, 1961 Heavy satellite 14,292 pounds	Feb. 12, 1961 Heavy satellite (rocket launched with automatic interplanetary spaceship toward Venus)	Nov. 1, 1963 *Polyot 1* (maneuverable —in attitude and orbit plane—spaceship with engine installations)	April 12, 1964 *Polyot 2* (improved maneuverable spaceship for practicing approach to and meeting of objects in space)	Jan. 30, 1964 *Electrons 1 and 2* (twin space stations launched into separate orbits by one carrier rocket)	July 11, 1964 *Electrons 3 and 4* (twin space stations launched into separate orbits by one carrier rocket)



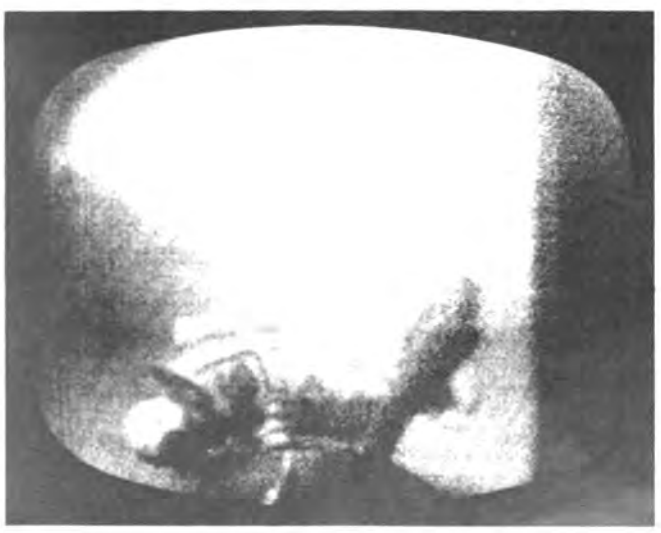


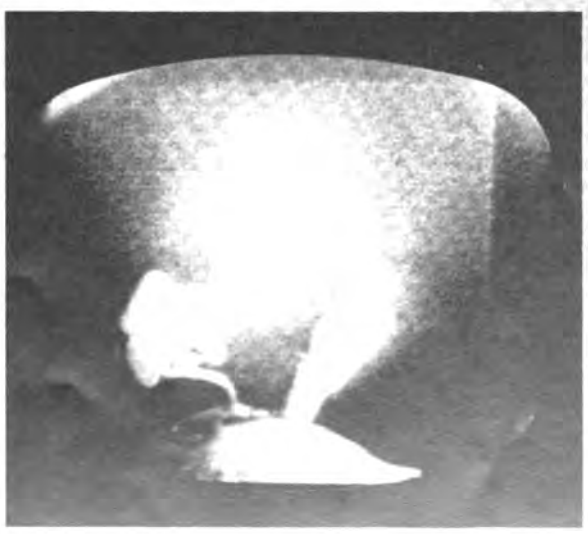


" Man's first walk in space is a magnificent achievement marking an entirely new stage in the study of the universe. It opens grand prospects for the establishment of orbital stations, the linkup of spaceships in orbit, and astronomical and geophysical research in outer space. It should be possible in the near future to orbit a space research institute, in which scientists specializing in a great variety of fields will be able to work."

Academician Mstislav Keldysh
President, USSR Academy of Sciences

The historic walk. Alexei Leonov becomes the first man to step into the cosmos. He spent about twenty minutes in space, ten of them outside the ship taking pictures and making observations. (The top photo shows the hull of the ship with a television camera attached; to the left is the earth).







NO PSYCHOLOGICAL BARRIERS

WHAT ALEXEI LEONOV SAW AND EXPERIENCED DURING HIS SPACE FLIGHT

WHEN we moved into orbit, we immediately started preparing for the experiment. With the commander's help, before entering the lock chamber, I put on the knapsack with the autonomous life-supporting system and switched it on. The pressure in the lock chamber was brought to the level of that in the cabin, the lid of the hatch, opening to the chamber, was lifted, and I floated into the chamber. After bringing the pressure inside my space suit to the required level, making sure that the suit and the helmet were absolutely airtight, verifying the position of the light filter on the helmet, and checking the oxygen supply for the suit, I carefully went over in my mind all the operations to be performed and was ready to step out.

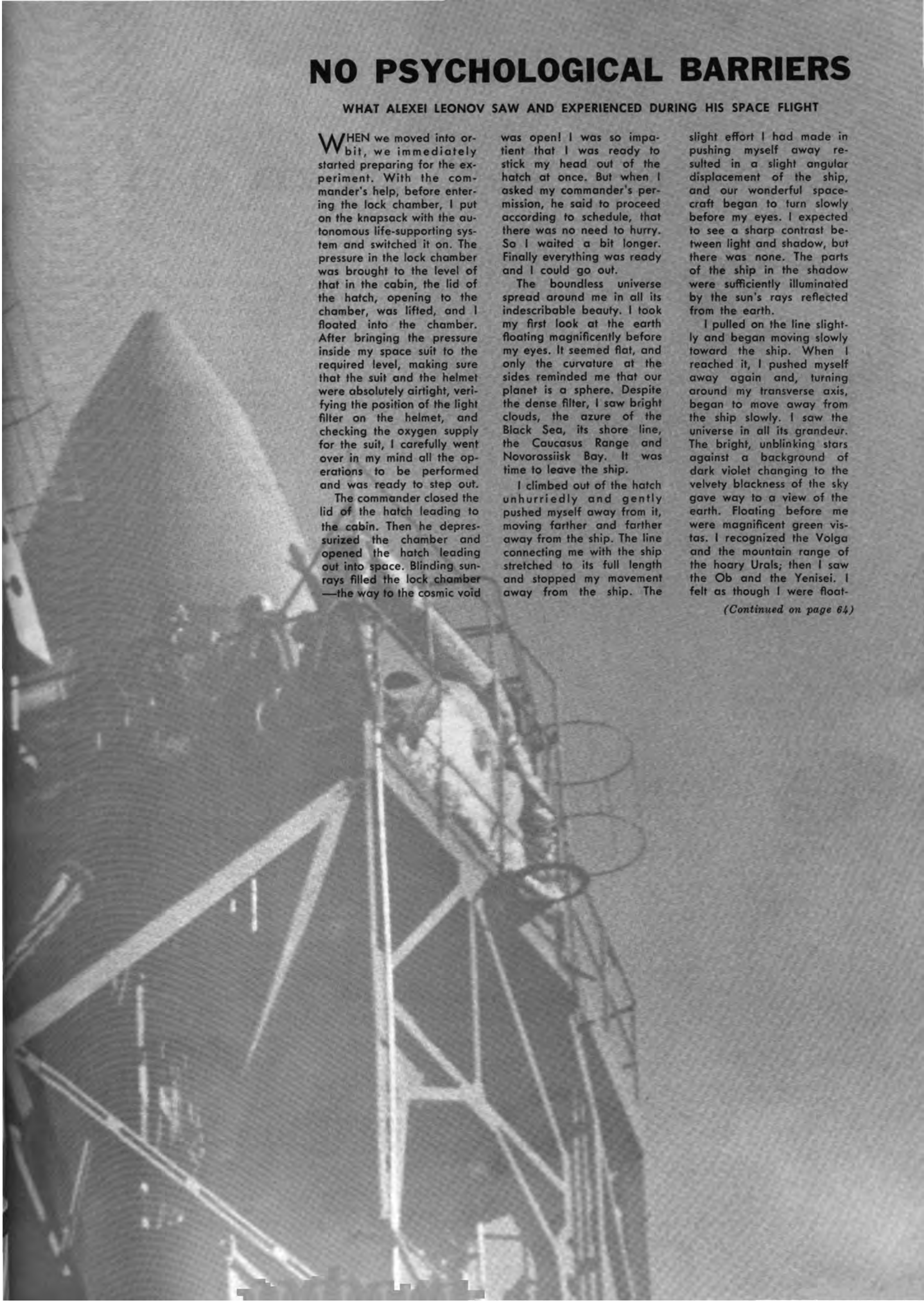
The commander closed the lid of the hatch leading to the cabin. Then he depressurized the chamber and opened the hatch leading out into space. Blinding sunrays filled the lock chamber —the way to the cosmic void was open! I was so impatient that I was ready to stick my head out of the hatch at once. But when I asked my commander's permission, he said to proceed according to schedule, that there was no need to hurry. So I waited a bit longer. Finally everything was ready and I could go out.

The boundless universe spread around me in all its indescribable beauty. I took my first look at the earth floating magnificently before my eyes. It seemed flat, and only the curvature at the sides reminded me that our planet is a sphere. Despite the dense filter, I saw bright clouds, the azure of the Black Sea, its shore line, the Caucasus Range and Novorossiisk Bay. It was time to leave the ship.

I climbed out of the hatch unhurriedly and gently pushed myself away from it, moving farther and farther away from the ship. The line connecting me with the ship stretched to its full length and stopped my movement away from the ship. The slight effort I had made in pushing myself away resulted in a slight angular displacement of the ship, and our wonderful spacecraft began to turn slowly before my eyes. I expected to see a sharp contrast between light and shadow, but there was none. The parts of the ship in the shadow were sufficiently illuminated by the sun's rays reflected from the earth.

I pulled on the line slightly and began moving slowly toward the ship. When I reached it, I pushed myself away again and, turning around my transverse axis, began to move away from the ship slowly. I saw the universe in all its grandeur. The bright, unblinking stars against a background of dark violet changing to the velvety blackness of the sky gave way to a view of the earth. Floating before me were magnificent green vistas. I recognized the Volga and the mountain range of the hoary Urals; then I saw the Ob and the Yenisei. I felt as though I were float-

(Continued on page 64)



Brief Comments

Writing for Children

by Agnia Barto



Agnia Barto, born in 1906, is one of the earliest Soviet writers for children. Her first volume of verse, Wang Li, the Chinese Boy, came out in 1925. She has since also written a number of books and worked on two screen plays.

Our children's books are published in 52 of the languages spoken in the USSR and more than 18 foreign languages. As many as 800-900 titles are issued yearly in a total printing of more than 200 million copies.

A writer of children's stories and poetry must have a sense of the times if his books are to find a broad reading audience. When a writer speaks to a child in simple, poetical language of those most important things—people and their relationships, courage and truth—he invariably leaves a deep imprint on the child's heart.

Significant themes are a must not only for his audience but for the writer too; they challenge his skill, force him to reach higher. During my many years of work I have seen this proposition prove itself time and again: For a writer to have more than the most ephemeral success, he must tackle the major problems of his day. This point, too, I should especially like to emphasize: A significant topic calls for a truly artistic interpretation. We always warn beginners not to approach a problem in a cursory, superficial way, not to write about a topic without giving it a great deal of thought and study.

A 10-year-old schoolgirl once wrote in her diary: "In this diary I shall put down the thoughts that come into my head. Today I had no thoughts; therefore I shan't write anything." A children's writer should do likewise.

"Is a moral necessary in a children's book?" I am often asked. My answer is yes. But the reader must find the moral for himself; it must not be forced upon him. A moral is meaningful only if the reader finds it for himself. Sometimes it is not even expressed, it is so clear from the story.

That is what progressive educators have always advocated instead of preaching. Recently a gay fairy tale written by the young poet Valentin Berestov was very well received by poets and teachers. The tale *About a Truck* is fresh in conception and has an implied moral that children have no trouble understanding. A little girl is given a new toy, a mechanical truck, which has to be wound up. But the little girl does not wind her truck. She tells it: "I love you and I'm not going to wind you."

But this excessive care she shows for her truck makes it ill: It cannot live without a useful load. A truck does not thrive on rest and quiet; it needs movement and work. Children understand the moral of this little tale very well, even though the poet does not say in so many words that man too must work, that idleness is harmful to himself and everyone around him.

A few words about humor and this business of a moral. Humor is a dramatic and most effective form of expressing serious ideas. Children understand it; they catch the ironical notes easily, sense the comic exaggerations perfectly. Many Soviet poets have written very popular books of humorous and satirical verses for children. These poems are not merely superficial witticisms; they are full of deep and kindly humor or sharp satire that carries an educational sting. A true children's writer must have a teacher's gifts.

No matter what a children's author writes about, he must not forget for a minute that his readers are children. The "secret" of a juvenile writer's skill is his ability to plot an entertaining story and dress it in a moving, exciting form.

It is most important that he be able to reproduce in poetry the voice of a child, to convey a child's intonation. People are amazed sometimes how a poet, a grown person, can convey not only the feelings but even the intonations of a little mischievous boy. Since children's poems are so often written in the first person, that becomes one of the good poet's skills. He himself seems to turn into a child, though in between the lines he retains the adult author's attitude toward children.

Children, and therefore poets writing for children, love a play on words. Maxim Gorky wrote: "It is in the play on words that a child learns the finest nuances of his language, drinks in its music, gets an idea of the thing that philologists call the 'spirit of a language.' " . Children must never be talked to in an insipid "dietetic" language, language specially prepared like baby food.

Some of our books are artistically weaker than others, but there is not a single line in any of them that could teach children to hate other people, that could instill a passion for profit, for war, for destruction. We Soviet writers take our inspiration from the thought that we are participating in the creation of a humanist literature for the new, developing man.

The Times Call for More American-Soviet Trade

by Lev Sedin



Lev Sedin is a member of the editorial board of New Times *magazine and commentator on world affairs. He studied at Moscow's Institute of Philosophy, Literature and History, and from 1941 to 1947 was Trud's foreign editor.*

"We believe that extensive and mutually advantageous trade could be developed between the Soviet Union and the capitalist countries," said Alexander Kosygin, Chairman of the Council of Ministers, at a session of the USSR Supreme Soviet. This statement by the head of the Soviet Government should interest businessmen in the West.

The possibility of the Soviet Union as a trade partner is not altogether new to many countries in Europe and Asia, including Italy, Japan, Britain and France. They trade with our country on the basis of long-term agreements, and the volume of trade turnover has been increasing from year to year. Suffice it to say that in six years (1958-1963) trade between the USSR and Italy, for instance, increased fourfold.

Soviet foreign trade is developing fast. It has grown 12-fold, in comparable prices, as against the prewar years; world trade grew only 2.5-fold during the same period.

The Soviet Union has never been an advocate of economic self-sufficiency. It has always favored trade and other contact between countries, irrespective of their social systems. This follows naturally from the foreign policy of the Soviet Union, built on peaceful coexistence.

The structure of Soviet imports and exports testifies to that. In 1963, for example, monufactured goods accounted for almost 65 per cent of Soviet exports, of which machines and equipment comprise 20 per cent. On the other hand, machines and equipment also comprise 35 per cent of Soviet imports.

Our economic planning is not a hindrance to international trade. On the contrary, it opens up wider prospects, the possibility, for example, of a gradual adjustment of some branches of our economy to satisfy the specific needs of our trade partners. Premier Kosygin made the point that the Soviet market could be greatly expanded if the West really wanted to trade with us on mutually advantageous terms, that the export of Soviet raw materials, equipment and other commodities that interest the Western countries could also be increased.

Our long-term plans, Kosygin said, could take all this into account and channel additional capital into the economic branches concerned. This would put trade relations between the Soviet Union and the Western countries on a solid base and would make long-term agreements feasible.

The businesslike, practical character of these relations is perfectly evident; it could hardly have escaped the attention of businessmen in the United States. Last November, shortly before the session of the USSR Supreme Soviet, a group of American industrial executives came to Moscow. It was perhaps the most important single group of business executives ever to visit our country. Not one of these Americans was overly happy with the fact that the United States stands last among the USSR's foreign trade partners and accounts for only 2.5 per cent of the West's total trade turnover with the socialist countries.

This year we hope to see that situation change. Not only the economic but also the political interests of both countries demand it.

More Efficient Investment

by Genrikh Emdin



Genrikh Emdin, 51, is a graduate of the Odessa Institute of Finance and Economics. He is an editor of the Ekonomicheskaya Gazeta, specializing in national planning. He has also written articles on economic policy and finance.

In the past six years the Soviet Union has invested more than 200 billion rubles in its national economy, almost as much as in the 40 years preceding.

The 1965 investment policy shows new trends. Capital outlays and the commissioning of fixed assets have grown by some 60 per cent over last year's figure. The investment pattern is changing.

For several years there has been a gap between installed capacities and money outlays, although the latter exceeded the annual targets of the seven-year plan. Weaknesses in the blueprinting, planning and organization of construction are now being eliminated. Under the 1965 plan further specialization and mechanization and improved production methods will account for the greater share of the increment in the output of the basic industries (over 50 per cent for steel and pig iron, 60 per cent for oil, etc). Equipment expenditures are rising at the expense of construction outlays to provide for extensive factory renovation. Increased equipment funds, comprising one-third of total construction expenditures, are bound to boost technological progress, output and standards.

Traditional economic ratios and the distribution of investments are also changing. More funds have been earmarked for the branches of the economy that serve the public directly. For example, within an 11.3 per cent increase in total capital outlays for 1965, investments in agriculture*have risen 18 per cent; light industry, 19 per cent; food, 23 per cent; and the construction of new public service establishments, over 50 per cent. This year the volume of commissioned capacities to produce plastics, resins and man-made fibers and knit goods will grow from 100 to 200 per cent over the 1964 level.

All this will substantially increase agricultural output, and the expansion rate of consumer goods production will also grow to approximate the heavy industry rate.

In 1965 consumer goods output will rise by 7.7 per cent as against 6.5 per cent last year. Heavy industry has paved the way for the accelerated development of consumer goods production. The technical and economic verification of construction plans, with due consideration of the real possibilities to preclude hasty and rule-of-thumb decisions, will give us the maximum return on investments and will make for a faster rise in living standards.

*In March the CPSU Plenary Meeting approved drafts of the 1966-70 economic plan in which the projected investment in agriculture is 71 billion rubles. This will be discussed in the next issue.

IN THE NEXT ISSUE



Sea and pine, these are the invariable components of a Baltic landscape. People who live on its shores see the sun infrequently, but when it breaks through the sea haze, it has an incomparably soft, almost tender glow at break of day and evening. Antanas Zmuidzinavicius, 88-year-old painter, catches the glow of the Lithuanian sun, the blue of his native lakes and rivers, the flood-land meadows, the majesty of the pine forests in his canvases. He has done 2,000 paintings and innumerable drawings and book illustrations in a long, honored and still active career. His work has been shown at 200 exhibitions in many parts of the world, including the United States, where he lived for two years. Look for his landscapes in the June issue.

Communications USA, an exhibit of American business machines, telephony, radio and TV and communication satellite materials, displayed in Moscow, Leningrad and Kiev, attracted 80,000 interested Soviet observers. In an interview in the forthcoming issue exhibit officials give their reaction to the viewers and cite comments from the Visitor's Book on technical know-how, TV exchanges and pretty girl guides.



That Baltic Look tells why the women of Estonia, Latvia and Lithuania have it. Summer fashions feature rich colors and new textures. Much in vogue are the fresh Baltic seacoast colors: natural clay, golden sand, unbleached linen and amber. Sophisticated simplicity is the design trend, touched up by silver buttons, a pendant or a belt with an ornamental design originated many years ago by some rural smith.





At the Los Angeles meet in the summer of 1964 Soviet coach Gavriil Korobkov told American sports writers something he probably wished later he hadn't, "We lost to you here, but we are going to beat you in Tokyo." It didn't happen, as everyone knows. Korobkov is now readying his team for the Moscow meet. How does it look? Any new blood? Changes in training methods? What's the latest on Valeri Brumel, Igor Ter-Ovanesyan, and that formidable sextet of the women's team? For the background to do a better job of prognostication than Korobkov, see **The Seventh Battle of the Titans.**

Some of the other articles in the July issue:
Saga of Two Georges—the story of the friendship of a Russian and an American; **Public Opinion in the USSR**—a sociological study of the informational media and organizational facilities through which the Soviet public can speak its mind on events and developments at home and abroad; **Summer Watercolor**—short story by the Estonian writer Lilli Promet; **Materialists and Dreamers**—a dramatist on the father-son problem; **Fishermen from Saareme**—photo story; **What Is Socialist Profit?**—Yevsei Liberman, Professor of Economics at Kharkov State University in the Ukraine, makes a reply to *Time* Magazine.

NOVOSTI PRESS AGENCY

SOVIET LIFE

"American" Commune in Russia

A group of immigrants in America answered Lenin's appeal for support by returning to Russia and setting up a commune in the Salsk Steppe.

Miscarriage of Justice

Quite a few cases have come to light of repressions made possible by an official's arbitrary interpretation of the law. What steps are being taken to prevent this from recurring?

COMING SOON

NO PSYCHOLOGICAL BARRIERS

(Continued from page 61)

ing over a huge colored map. The great distance made it impossible for me to identify the cities or make out the details of the relief. Even those familiar with easel and brush could hardly conceive of a more majestic picture than the one which I beheld. The rays of the sun, so bright against the black sky, penetrated my visor, I could feel their warmth. Then I saw the stars and the expanses of the earth again.

A short while later I pulled myself up rather vigorously by the life line and had to put out my hands to avoid colliding with the rapidly approaching ship. My first thought was not to strike the visor of the helmet against the ship. Floating up to the lock, I cushioned the blow with my hands. This proved easy to do, and I saw for myself that once you get the hang of it, you can move about with precision and sufficient coordination under these unusual conditions.

I felt fine, was in good spirits, and had no wish to leave free space. Even when I got the order to come back to the ship, I pushed myself away from the hatch once again to find out what causes the angular velocity in the first moment after a push. I realized that the slightest shift in the direction of the push produced rotation in a corresponding plane. People who will be working in space will have a considerable job finding adequate ways of maintaining a fixed position in weightlessness.

As for the so-called insurmountable psychological barrier that a man is supposed to encounter on meeting the space void face to face, I did not feel any and even forgot that such a barrier could exist. I had no time to think about them.

I did not feel lonely in space. And, most important, I had no doubts whatever about the reliability of my space suit, equipment and the life-supporting system. Unfortunately, the time passed too quickly, and the last moments of my venture outside the ship came too soon.

I took off the movie camera with which I had photographed my walk in space, and tried to enter the lock chamber. But that proved no easy matter. After all, you cannot move with complete freedom in a space suit. Reentry required quite a strenuous physical effort, and so my parting with the cosmos took longer than I expected. Finally I got into the lock chamber and, a while later, was in the cabin.

Excerpt from the Cosmonauts' Press Conference held in Moscow on March 26.



PHOTOGRAPHS BY DMITRI DONSKOY

KRISS: THE MAN BEHIND THE MASK

BY ALEXANDER MARYAMOV

SEVEN YEARS after he began fencing, Grigori Kriss of Kiev won a gold medal at the Tokyo Olympics.

On October 19, 1964, Englishman William Hoskins, as big a man as he is a sportsman, embraced Kriss in the Waseda University fencing hall, exclaiming: "You're stronger. You're a real champion!"

Champions have to answer a lot of questions—that's part of the game, so to speak. Kriss only recently had his first question from a sports writer. He still remembers it.

"What helped you beat Hoskins?"

"Youth and strong nerves."

"Don't call Kriss's victory sensational. That sounds too much like 'accidental.' He should have won it and he did." So said coach Semyon Kolchinsky. He should know; he is the man who placed the sword in the fair-haired boy's hand and has felt the point of the champion's épée many times. "It is interesting working with Kriss because he loves the épée so much," says Kolchinsky.

It has been said about Kriss that he is a natural-born fencer. I have seen him behind the scenes at matches and during the exhausting hours of training. He is a swordsman mainly because of his tremendous capacity for hard work and his single-minded stubbornness. He seems to find an antidote for any kind of opponent; his fencing is always clever and tricky. The champion has a sober mind and a cunning sword, an unbeatable combination.

Of medium height and quite spare (5 feet 9 inches, 150 pounds), Kriss is usually jolly. However, on the fencing strip he is formidable. He has the powerful legs of a sprinter, the explosive reaction of a boxer, and the eye of a marksman. Actually, he doesn't look like a champion at all. Perhaps it is because his fame has not yet overtaken his youthfulness that passers-by on the streets of Kiev do not recognize the champion in him.

Why does a sportsman become a sportsman, and why does he pick the sport he does? Questions he himself probably can't answer. Perhaps it is because there is no more romantic sport than fencing. It brings the Middle Ages to mind—the knights with their cloaks and swords, their duels and street fights. Says Kriss:

"Every bout is primarily a great pleasure for me. I am happy to win, but I do not feel discouraged when I lose."

Kriss might have been a soccer player, a gymnast or a swimmer. Childhood is like Santa Claus's big sack—it contains many kinds of gifts. In the Kriss yard the children played musketeers and guardsmen, using sticks for

Grigori Kriss (second left) brought back to Kiev a gold medal from Tokyo Olympics. With some fellow swordsmen from the Dynamo Sports Club.

swords. Grigori Kriss wanted to be the No. 1 musketeer. Today, at 24, he is one of the world's top swordsmen.

When he first went to the fencing hall of Kiev's Dynamo Sports Club, he was 17. Coach Semyon Kolchinsky said at the time it was a little late. But the young fellow paid no attention to the remark—he knew his own stubborn character.

"I too got to know it very soon," the coach said with a smile.

A fitter in a machinery plant, Kriss literally spent all his evenings at the fencing hall. He picked two instructors: Iosif Vitebsky—who played cat-and-mouse with him, bearing down hard on the future champion for his excitement and rashness; Semyon Kolchinsky—who parried and swept aside Kriss's épée with a barely perceptible movement that frequently pulled it out of his pupil's hand. At that point the novice decided he needed training with weights to develop speed, coolness and precision—the arsenal of a swordsman.

He did not become a champion immediately, but he did come up fast. He climbed all the rungs of the ladder leading to big-time sports. He competed in citywide junior championships, in republican contests, made the Ukrainian Dynamo team and, like Iosif Vitebsky, won a USSR championship jersey.



Beleaguered by challengers when he leaves the gym. Not unreasonable odds for a world champ.

His equipment on his back Kriss looks more like musician than sportsman when he leaves the gym.



Experts began to pay keen attention to Kriss only after the Third Spartakiad of the Peoples of the USSR (1963). He gave an excellent account of himself as a member of the Ukrainian team, whereupon the coaches drafted him for the USSR team. "No one has done more for me than my friends on the team, they and my coach."

Kriss had 18 bouts at the Tokyo Olympics, and he had to bow to his opponents only three times. In the finals, when his teammate Guram Kostava made five touches against him, Kriss did not feel that the gold medal had slipped away from him. He knew that the champion would not only have the surer sword but also the stronger nerves. Optimism helped make Kriss's épée the most formidable.

Like everyone else, he has his weaknesses, a fiery temper for one.

"I have to fight constantly against my shortcomings. I consider them more formidable opponents than the best swordsmen," Grigori admits.

Today Kriss is a lieutenant in the Soviet Army and married. It is not always easy for him to preserve a balance between family, work and sports. There are always the usual doubts and problems.

He likes music, painting and small children. "So far, other people's," adds his wife Natasha.



Being lifted in Mother's arms is not quite like taking off in a spaceship, but it will do for Baby's first taste of weightlessness. Cosmonaut Valentina Nikolayeva-Tereshkova with her daughter Elena.

Photograph by Alexander Mokletsov

SOVIET LIFE

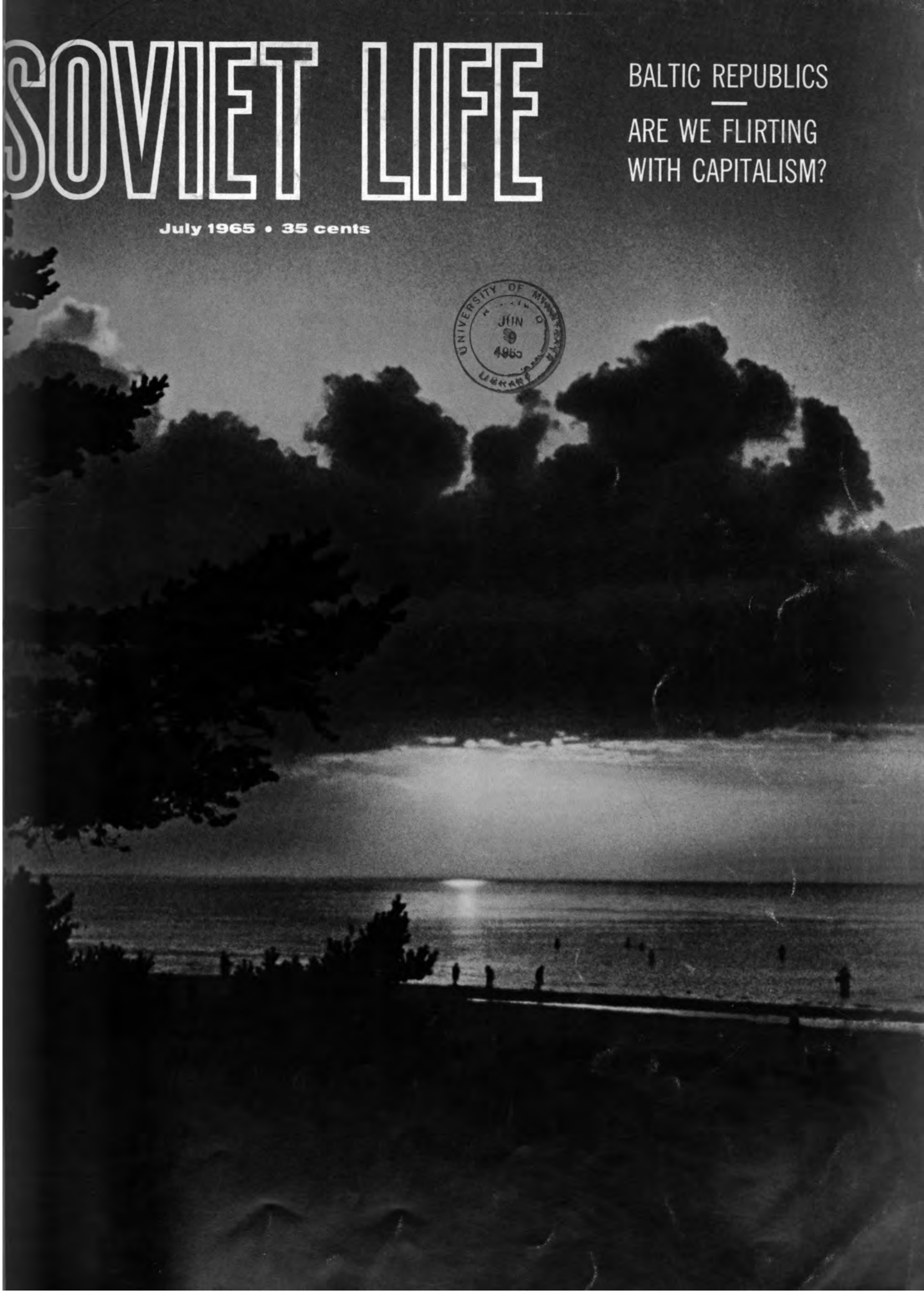
BALTIC REPUBLICS

—

ARE WE FLIRTING WITH CAPITALISM?

July 1965 • 35 cents

UNIVERSITY OF MICHIGAN
JUN
9
1965
LIBRARY









800,000 VISIT COMMUNICATIONS USA

BY VLADIMIR LUTIN



FROM December 2 to January 5 nearly 800,000 people, representing a wide cross section of the population, entered the steel-and-glass pavilion that housed the "Communications USA" exhibit, stopped at the entrance for a free booklet, and then went on to look over the four main displays: Telephony, Business in Industry, Radio and TV, and Communication Satellites.

I interviewed George E. Perry, deputy director of the exhibit, and John Segall, the technical director, who were there, day in day out, observing the reactions of their Soviet visitors.

QUESTION: Mr. Perry, could you give me a breakdown of the people who came to the exhibit? Would you say, for instance, that there have been more men than women?

PERRY: Well, we haven't really looked at it that way, but there probably have been more men. This might be because of the technical nature of the exhibit. I noted several distinct groups, like children and military people. Also, we have had several groups from the *Sovnarkhoz.**

SEGALL: Particularly interesting to me are the engineers and students who want precise information. They often engage in serious technical conversation with the guides and come to my office to read what additional material we have on a variety of subjects.

QUESTION: What display would you single out as the most popular?

PERRY: Although the four central sections have all attracted interest, I would say that the IBM display is pretty much the center of interest.

SEGALL: I think that depends on the kind of people we get—you have to be specific. Consumer radio, TV and Hi-Fi are by far the most popular items with the layman, while IBM and, in particular, microminiaturization attract specialists.

QUESTION: What about your satellites?

SEGALL: They certainly interest many people. In fact this is an area where discussions tend to become so technical that we supply special literature with detailed explanations of the communication satellite systems.

QUESTION: Is the literature in English or in Russian?

SEGALL: English.

QUESTION: Would you say that many of those who came here have enough English to understand these booklets or to discuss technical problems of communications?

SEGALL: Oh, certainly. In fact, I think that more English-speaking people come here than you would get Russian-speaking Americans at a similar exhibit in the U.S.

PERRY: I would like to add something here. We are exhibiting equipment commonly used today throughout the United States. For instance, the 1440 IBM is a typical work horse. We decided against bringing over any experimental or relatively rare equipment, anything straight out of a lab. So it has been hard to satisfy everybody—for the layman this exhibit might be a little too technical, while the specialist will find nothing new. Yet we think it more honest to show the Soviet people what we live with—communications-wise in this case.

QUESTION: Mr. Segall, you mentioned the fact that you get quite a few Soviet engineers here. Judging from what you saw of them, how do they compare with their American counterparts in technical know-how?

SEGALL: I think we can safely say there is really no difference in technical know-how. Soviet engineers are competent and show great interest in what we are doing in the States. Not long ago a man came into my office and asked for a copy of a telephony technical journal. I gave him the September issue—the most recent I had. It turned out that he had already read it and wanted the December issue. That is just one typical example of how closely your technical specialists follow American literature in their fields.

QUESTION: Have you found the Soviet side cooperative in helping you to organize this exhibition?

PERRY: Yes, we have had very good cooperation from the Soviet Chamber of Commerce. In fact, I would say that cooperation this time compares favorably with that of 1963—we have become used to each other, gotten closer together.

QUESTION: Now that touches on another important point—contacts. What kind of contacts, besides official, have you made during your stay here?

PERRY: We naturally welcome personal contacts. I have a basis for comparison, since I was here with the U.S. Technical Book Exhibit in 1963, and I feel there has certainly been improvement. But we need more of it.

QUESTION: Would you agree that the real aim of this exhibit is to bring the American and Soviet people closer together?

PERRY: That is absolutely correct.

QUESTION: Do you feel you have made any omissions in this exhibit?

PERRY: Well, we all have 20-20 hindsight, so now it's easy to find shortcomings. On the whole I would say this exhibit has been a success both in organization and in results.

QUESTION: I wonder if you found Soviet specialists to be fully acquainted with such innovations as, say, the laser?

SEGALL: I had the occasion to visit student labs at Moscow Electrotechnical Institute. They have two gas lasers and one ruby laser for students to work at. So it only stands to reason that graduate engineers are familiar with the laser.

QUESTION: Was the equipment there comparable to what students have in the United States?

SEGALL: It's been some time since I graduated from college, but I'd say that equipment standards are pretty much the same, although the approach in the United States is probably slightly different.

PERRY: I'm sure Mr. Segall will agree with me in saying that this has been a very inspiring experience for all of us. We have had a chance to meet your people and they have been very warm. They have given us a wonderful reception. We feel we are welcome, that we are doing a useful job—that of establishing people-to-people communications.

*Local council of the national economy.

(Upper left) A message from President Johnson.

(Upper right) Center of interest—IBM display.

(Center) Satellites and microminiaturization.

(Left) First foreign ham to transmit from USSR.



Communications and a little cheesecake.





Our teacher couldn't answer that either!

My own visit certainly confirmed Mr. Perry's feeling. Watching the crowd at the exhibit, I saw any number of gestures of friendship. I saw young Pioneers give their red neckties to three guides; I saw one man give flowers to an American girl; I saw a young Russian trying to date a pretty American young lady.

But probably the best confirmation are the comments in the Visitors' Book, which I quote at random:

"The exhibit is small but gives food for large thoughts."

"Would like U.S. achievements in communications to be used in the USSR."

"Would like our two countries to exchange TV programs."

"I found your show unforgettable. Please come to Kishinev, Moldavia."

"I knew you had many beautiful girls in America, but your guides proved it. Wow!"

"We, students of Moscow Cinematography Institute, admire your technical achievements. Thank you."

"Judging from this exhibit, we both have much to learn from one another."

There were some unfriendly comments, too. But they were few and far between and in no way typical.

In view of all this, the following quote from President Johnson's statement to the Soviet people who visited "Communications USA" is apropos:

"Communication between people is essential to forge bonds of friendship between nations. These bonds of friendship, resulting from knowledge and respect, will further the great cause of peace to which all peoples of good will throughout the world aspire. This communications exhibit is dedicated to that cause."



Do you see what I mean, tovarishch?

Hey Ivan, listen to me communicating!



LETTERS TO THE EDITOR

TO THE READERS OF *SOVIET LIFE*

We warmly thank all Americans who congratulated us on the first "walk" in space.

After the flight we were happy to learn about the successful experiment with the Gemini-3 spaceship.

May the competition and cooperation on earth be as good as it is in space.

Flyers-Cosmonauts of the USSR,



Pavel Belyayev



Alexei Leonov

DEVELOPMENT OF FRIENDSHIP

Dear Sir:

I have just finished reading another issue of SOVIET LIFE, and I feel compelled to thank you for publishing this intriguing magazine. I hope you will continue to do so well into the future.

Although Americans may not always be in agreement with everything expressed in these pages, at least the magazine is to be applauded for providing an introduction to the Soviet Society.

Suppose we examine the development of a friendship: First, you are introduced to someone. Then you both talk about things of mutual interest, and in this way you learn obout eoch other. You'll notice thot the more you communicate with this new ocquaintance, the more you come to know him and understand him. And the more you understand each other, the stronger the friendship becomes.

Following your magazine's introduction of the Russian People to the Americans, let us genuinely hope that the remainder of this process of friendship will evolve.

Sincerely,
Michael J. Dempster
Seattle, Washington

Dear Editor:

I feel it is time for me to finally say a word. I have been reading *Soviet Life* regularly and have found your fine magazine both interesting and informative, but the article on the Ufa Corrective Labor Camp in the February issue inspired me to write you.

In view of our inadequate facilities for young lawbreakers here in the United States, it is most heart-warming to see how genuinely your country cares for her future citizens. A positive attitude towards rehabilitation instead of one of merely revenge is morally right, and, it seems to me, your country is successful in proving this.

I had the honor of meeting and making friends with one of your young exchange students when he was studying at our University of Chicago. He told me such wonderful things about the Soviet Union I hope someday that I may see for myself.

I also would like to mention how very much I enjoyed the articles on your Public Health Service, and a special "thank you" for the beautful drawings of some of your national folk costumes. I om especiolly groteful for these, since I teoch folk dancing to school children.

I must also mention the touching letters from a soldier to his mother. In fact, the whole mogazine is of great worth.

In human understanding,

Miriam Bazell
Chicago, Illinois

Dear Editor:

I have just read your February issue and would like to comment on it. You take in our Soviet life widely and that is your magazine's main attraction. So I hope you will continue to stick to this principle. It is also nice to see that you don't shun such "ticklish" probems as, far example, juvenile reformatories. I particularly liked Ehrenburg's thoughtful father-son article. The jazz items were also interesting, though I think Z. Levina's article not quite appropriate, as it is clearly intended for the Soviet reader. Why, indeed, canvass for jazz in its homeland, where people know its merits better than we do? I would like the interesting folk costume series to be less puzzling, because, if I couldn't find the pattern motives depicting the Sun-God Yarilo and the Tree of Life, though I tried very hard to do so, how will your American reader make out?

I shall be happy if you find my remarks useful.

Yours sincerely,
M. Koreneva
Postgraduate at the Institute of World Literature,
USSR Academy of Sciences
Moscow, USSR

RETURN TO CAPITALISM?

Dear Editor:

I have read in some American newspapers that certain factories in the USSR ore being mode part of o "profit plon." The editors of these papers call this somewhat of a return to capitalism. What is the real meaning of this plan? The way it is reported to us, it would seem that this is against the socialist principle of production for necessity, not for profit. I would be very pleased if you would send a reply. Many thanks.

Very sincerely,
Edmond J. Hay, Jr.
Sunbury, Ohio

You will find the answer in this issue in Professor Yevsei Liberman's article on pages 37-39.
Editor

ON RAILWAYS

Dear Sirs:

Your issue of August 1964 I find contains an article on Soviet railways, modernization, and employees, a subject in which I am particularly involved, and interested. As an employee, and Union Officer, involved with the problems of railway modernization and automation, I would like to know more of the Soviet approach. An approach where the worker and his welfare is of a greater importance than here, in our situation, where capital appears to be the only concern, or consideration. At least the article will give us an enlightened point of view, and a broader understanding of the problem, as any information of other railway workers is of great interest to me, particularly Russia or other state systems.

I would also like to express my appreciation of your magazine, and regret not having subscribed sooner, but would add also that it is not widely known in Canada, I am sorry to say.

Yours truly,
Donald P. McLeod
North Kamploops, B.C.

RADIO MOSCOW PROGRAM

(All P.M., except Sunday PST—A.M.)

WHAT IS COMMUNISM? *Tuesday and Friday at 8:15 and 10:15 EST; 8:15 and 10:15 PST and repeated on Sunday at 10:00 PST.*

SCIENCE AND ENGINEERING: *Tuesday and Friday at 6:15 and 9:15 EST; 7:45 and 9:45 PST; Sunday at 9:30 PST.*

YOUTH PARADE: *Thursday at 8:15 and 10:15 EST; 7:45 and 9:45 PST and repeated on Sunday at 10:45 PST.*

PERSPECTIVE ON THE ARTS: *Sunday at 6:15 and 9:15 EST; 7:45 and 9:45 PST.*

HANDS ACROSS THE OCEAN: *interviews and discussions about Soviet-American relations on the person-to-person level: Wednesday at 8:15 and 10:15 EST; 8:15 and 10:15 PST.*

MOSCOW MAILBAG: *Saturday and Sunday at 8:15 and 10:15 EST; 8:15 and 10:15 PST, and on Sunday at 10:15 PST.*

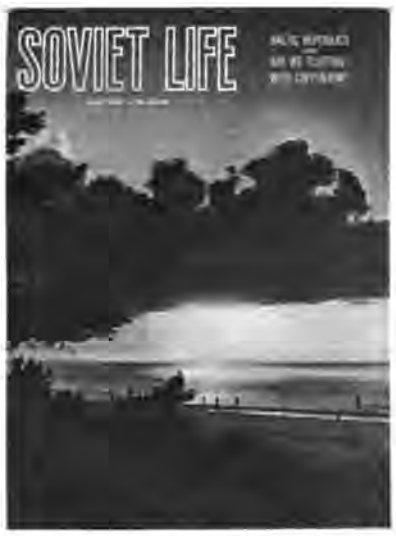
NEWS, COMMENT AND MUSIC: *daily at 7:00, 9:30, 11:00 and 12:30 EST.*

MUSIC FROM MOSCOW: *daily at 12:15 EST; 9:15 and 11:15 PST; and Sunday at 9:45, 10:30 and 11:30 PST.*

SOVIET LIFE

JULY 1965 No. 5 (106)

The magazine* SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* AMERICA *in the Soviet Union.



Front Cover: *Sunset on the Baltic*, a photograph by Victor Kinelovsky

Page

Baltic Youth (Our Trends) by Justinas Marcinkiavicius 5

SOVIET PEOPLE

Marite—Café for Kids by Yakov Tikhonov 14
Champion Waiter by Rudolph Hiltunen 18
That Baltic Look by Nadezhda Zheleznova 21
Electrenai, Power Workers' Town by Vitautas Polivanas 29
About People Who Leave Good Memories by Vera Kalnyn 31
Fishermen from Saaremaa 52
Realists and Dreamers Interview with Victor Rozov 60
All's Well in Nurek by Ilya Baru 66

SOVIET DEMOCRACY

Lutheran Church in Latvia Interview with Archbishop Dr. Turs 14
News and Public Opinion by Mikhail Igitkhanyan 26

PHILOSOPHICAL PROBLEMS

Thomas Paine by Vladimir Pozner 18
Freud and Esthetics by Vladimir Dneprov 50

INTERNATIONAL CONTACTS

800,000 Visit Communications USA by Vladimir Lutin 1
Saga of Two Georges by Alexander Milchakov 85

ECONOMY AND SCIENCE

Mathematical Models for the Economy of the Baltic Republics by Vladimir Kossov 6
He Hunted Mammoths by Lenina Kaibusheva 12
They Fish All Seas by David Timofeyev 14
Grand Prix Balsam by Karl Krumin 15
Are We Flirting with Capitalism? by Yevsei Liberman 30
Man and His Heart by Myuda Derevyankina 56

LITERATURE AND THE ARTS

Beauty on His Brush by Ludmila Urazova 32
Summer Water Colors by Lilly Promet 42
Baron von Münchhausen's Castle by Tatyana Gerasimova 52

RECREATION AND SPORTS

TTT Team by Zigurds Mezhavilks 16
Camp Festival 49
Seventh Battle of the Titans by Alexei Srebnitsky 64

MISCELLANEOUS

Letters to the Editor 3
Radio Moscow 3
Baltic National Costumes 18
Learning Russian 20
Around the Country 40
Queries from Readers 47
Brief Comments 58
Next Issue 59

PICTURE CREDITS
Victor Kinelovsky, Cover I; Vsevolod Tarasevich, Cover II, 2; Yakov Tikhonov 6-11, 14-15, 54-55, Cover IV; Alexander Makarov 6-11; Nikolai Vorobyov 12-13, 42; Yelizaveta Axelrod 18-19; Edward Krastoshevsky 21-24; Victor Ulasevich 29-30; Yuri Bagryansky 29-30; Igor Vinogradov 32; Max Alpert 36-39; Lev Borodulin 48, Cover III; Miroslav Murazov 49, 52-53; Alexander Gerinas 52, 54-55; Yevgeni Tikhanov 57; Victor Sakk 60-62.

Editor in Chief (Moscow Editorial Board): Yuri S. Fantalov, APN, Pushkin Sq. 2, Moscow, USSR.

Managing Editor (Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director (Moscow Editorial Board): Marina T. Zabolotskaya, APN, Pushkin Sq. 2, Moscow, USSR.

***Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine* SOVIET LIFE.**

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second-class postage paid at Washington, D. C, and at additional mailing offices.

Printed by Fawcett-Haynes Printing Corporation, Rockville, Md.

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY



BALTIC YOUTH

By JUSTINAS MARCINKIAVICIUS
Lithuanian poet

Permit me to introduce myself. I am 35 and have a rather long name, which Americans, as I found on a recent visit to the United States, have trouble pronouncing. It is my pleasant duty to welcome you, dear reader, on this excursion to the three Baltic republics. Imagine that you are crossing the street to a neighbor's. Your host will be considerate, plain-spoken and prosperous enough to receive you properly.

For us Estonians, Letts and Lithuanians, history for many centuries has been more stepmother than mother. The Baltic southern coast, which these three nations inhabit, was the theater of devastating wars. We were the target of aggressors from the north and the west.

For more than 200 years, in the thirteenth and fourteenth centuries, we had to fight the Teutons, whom all Western Europe supported. Whole Lithuanian tribes were wiped out.

Two hundred years of war is more than enough for any nation. Indeed, can there be too few wars for a nation? Our many burial mounds and castles bear silent witness to events long past. They draw visitors from our own lands and tourists from abroad. For the younger generation, who knows war only by hearsay, they are visual aids to history. We are proud of our history. It records no aggressive wars or predatory conquests. It is an unbroken chronicle of defense of the native soil we love.

It is our misfortune that the geographical latitude we lie on is at the crossroads of Europe and of history. This has meant endless wars and countless victims, ruined cities, looted wealth, national and personal dignity outraged.

Napoleon marched through Lithuania. Kaiser Wilhelm of Germany ravaged the Baltic countries in the First World War. And in the Second World War the Baltic peoples suffered under the nailed boot of the fascist and his brute-like hatred of other nations. With us the nazi occupation was a particularly long one. We were the first to see the Germans and the last to feel the joy of liberation. The nazi occupation cost Lithuania almost a third of its population. The Lithuanians are perhaps the only people in the world who have still not recovered their prewar strength. We know too well what war is. Therefore the distinctive quality in the character make-up of the Soviet Baltic peoples is, I believe, their love of peace. It is not exclusive with them, of course. Peace is what all nations aspire to. A people shows its worth and genius best in times of peace!

I should have liked to avoid excursions into history. Unfortunately, I cannot. History, like litmus paper, reveals what is hidden to the unaided eye.

Visitors often wonder at the care we give our national historical and cultural relics. We intend to live for more than one day, and we want everything—the thirteenth century castles, the common graves of nazi victims and the war memorials—to provide a vivid lesson for present and succeeding generations.

History allotted to the Baltic peoples a picturesque but poor land. The age-old struggle for existence has shaped them, given them such characteristics as diligence, conciseness and dedication. At a cursory glance the local folk may appear somewhat stiff and reserved, even distant. But one need only see how we enjoy our friends or the depth and breadth of the national character revealed in our folk art to realize that this is not so.

I have already told you how old I am. My years group themselves this way: Ten years were spent in the old Lithuania, which, despite the facts, was called independent then. Three were wasted under the nazi occupation. I have been living in the new Lithuania a total of 22 years.

I would say that a person of my age and of my lot, if I can put it that way, is most typical of the people in all three Baltic republics today. And indeed, if you pay a visit to any factory here, you are sure to be met by someone my age—a skilled worker, a shop foreman, an engineer or a manager. In any village the college-educated agronomist or farm-machine operator, the state-farm manager or collective-farm chairman who greets you will be a person about 40 years old.

In the quiet of a research laboratory you will again shake hands with a man my age, who may, in many cases, already have the academic degree of doctor. And at concert halls and exhibitions and in books, what you listen to and look at and read about will be the inner world of my generation, the dialectics of its thinking, its aspiration to learn more about the world and make it a better place to live in.

We have what to compare and with what to compare it. We acquired our educations, our professions and trades in Soviet times. I must unwillingly invoke statistics to point this out. Of the total number of college-trained specialists in Lithuania, 94 per cent graduated in Soviet times. People my age are today shaping the economy and culture of the Baltic republics. The sons and daughters of parents who were illiterate address international conferences of scientists, build giant industrial plants, design intricate electronic computers, contribute to world art festivals, and export their handiwork to almost 100 countries. Is this a miracle? No, it is the logical development of socialism.

On different occasions and for different reasons I have met writers and publishers from many countries. And each time our conversation touched on books, they marveled at our huge editions. And they had reason to. Printings in the Baltic republics, in per capita terms, are the biggest in the USSR, and not only in the USSR.

I could cite many things in our economic, social and cultural life to illustrate the national flowering of the Baltic peoples. Though personally what interests me more are the changes already clearly discernible in our national character. Most significant, to my mind, is the turn to collective activity. This is the prime cause of our rapid economic and cultural progress.

No individual can grow up in isolation, much less a whole people. The social and cultural revolution in the Baltic republics is above all the fruit of the resolution, the effort and the creative energy of our peoples.

Socialism is our historic calling. It opened for us vast opportunities for our national character to show its quality and its potential. It holds out before us the prospects of a life worthy of man.





(Left) The nitrogen fertilizer plant in Ionava, Lithuania, took two and a half years to build. It will produce an annual 400,000 tons of ammonia water needed by agriculture.

(Right) Riga, Latvia, is famed for its cafés, and its cafés for their pastries. Skaidrite Matskevich, who works for Riga's confectionery factory, can take some of the credit.

(Below) Ellen Heinsoo is a machine operator at the Kokhtla-Yarve shale processing works in Estonia. Its products go to chemical plants in the other Baltic republics and elsewhere.

TICAL MODELS FOR THE ECONOMY OF THE BALTIC REPUBLICS



An economist by training, 29-year-old Vladimir Kossov heads the Laboratory of Regional Systems of the Central Economico-Mathematical Institute of the USSR Academy of Sciences. He is now working with others on an automated system of economic planning and control for the Baltic Republics.

BY VLADIMIR KOSSOV

LATVIA, Lithuania and Estonia account for 0.8 per cent of the Soviet Union's territory and 2.9 per cent of its population. Estonia's deposits of shale supply two-thirds of the Soviet Union's total output. But nature is not benign here: minerals are scarce, soils are poor and too wet, and the terrain, with its dense forests, its lakes and marshes, is not conducive to farming.

However, there are two compensating factors: skilled manpower, and a good geographical location on the Baltic Sea with favorable conditions for fishing (10 per cent of the country's catch and processing).

Complexity Calls for Mathematics

The war devastation in the Baltic was enormous. In Lithuania the death toll reached 700,000, with another 40,000 people shipped off to Germany for slave labor. Property losses were estimated at 1.7 billion rubles. (The USSR's entire national income in 1940 came to 32.3 billion rubles.)

Financial and technical aid from other republics helped the Baltic through the postwar rehabilitation. Between 1940 and 1965 industrial output increased 11 fold in Lithuania (between 1910 and 1939 it in-

creased twofold), 12 fold in Latvia and 13 fold in Estonia. The industrial output of the Soviet Union as a whole increased sixfold.

Growth at such rates inevitably brings qualitative changes and hence requires new and more effective methods of planning and control. Besides expansion of production, economic relations become more intricate with the development of such new industries as electronics and synthetic chemistry. Thus, the mathematical development of input-output tables for each republic has become an absolute must.

Input-Output Tables

The conventional methods of planning do not make sufficient allowance for interbranch relations. With the table we can allow for the development of any branch and determine mathematically the inputs the developing branch will require from all the other branches.

Because of the unusual economic pattern of the Baltic republics, it was decided to develop input-output tables for this area first. The studies were guided by the Central Economico-Mathematical Institute of the USSR Academy of Sciences. Research teams made up of economists with a knowledge of mathematics and mathematicians with a background in economics were set up for each republic. The local computing centers did all the calculations.

Why are these calculations so complicated?

Synthesis of 240 Branches

The skeleton of an input-output table consists of "direct input coefficients." Each coefficient indicates what amount (or input) of a product is needed for the output of another product. For example, how much metal is needed to produce a ton of mineral fertilizer.

The direct input coefficients are then used to build equations describing the distribution of products. So that the interbranch input-output table is really a set of linear algebraic equations.

The coefficients in a vertical column show the inputs needed for all the outputs of a branch, while the coefficients in a horizontal line describe the inputs of products of this branch needed for the outputs of all other branches.

This set of equations is used to find the volumes of production which will meet the republic's needs. As a rule, it figures at a preliminary stage of the development of the plan. The set of equations must be solved as many times as we want variants of the plan. But this procedure is quite complicated. It is simpler to develop different variants of the plan by using total input coefficients.

Total input coefficients are calculated from direct input coefficients. They reflect both direct and indirect relations. For example, the direct input of electric power in the mining of shale indicates how much of it is spent to operate the machines that actually mine the shale. However, electric power is needed to make the mining machinery itself. Nor can the tools required for mining be produced without electric power. These and even more indirect relations make up total input coefficients.

Total input coefficients involve an enormous number of calculations. The conventional electric arithmometer would take 20 years of steady work to determine them for one republic (its input-ouput table includes 240 branches). An electronic computer does the job in a few hours.

Beginning from the End

Total input coefficients do not merely facilitate the calculation of plan variants. They are necessary for a new method of planning final outputs. Until now calculations in planning started from volumes of production, and then the indices of living standards would be calculated.

Input-output tables introduce an essentially new method of planning, starting from final outputs. Final outputs, intended primarily for meeting consumer demand, are determined at the outset. Then a transition is made from the final output via input coefficients to the volumes of production, which are then assigned to enterprises as targets.

Mathematics Checks People

Targets for some enterprises have been checked against input-output tables. In the draft plan of the Estonian Republic for the development of agriculture in 1970, essential discrepancies were found between the rate of growth of farming and the part of the national income created by this section of the economy. The rates of development were high and the rates of growth of investment yield much lower. Accordingly, recommendations have been worked out to increase the rate of growth of this portion of the national income.

If this disproportion had not been detected in time, the plan would not have been fulfilled and the republic would have lost a considerable volume of profit.

An input-output table was used to coordinate the economic development plans of all the Baltic republics for 1970. Essential discrepancies were found (as might well be expected) and the plans revised.

Input-output tables are used in more involved cases as well. Thus, they can accurately determine the capital investment needed by each republic to attain the scheduled level of progress.





(Far left) Some 10,000 instruments control this synthetic fiber plant in Daugavpils, Latvia. It is one of a considerable number of automated enterprises in the Soviet Baltic republics.

(Left) The 1.6 million-kilowatt Pribaltiiskaya Electric Power Station runs on combustible shale mined in Estonia. This is the world's largest shale-fired power station.

Input-output tables are especially effective in determining what branches can be developed to best advantage in a certain area, and in finding the branches which would best fit into the existing economic pattern. These, as a rule, are the branches whose development does not involve essential additional investment in other branches. For the Baltic republics they are electrical engineering and instrument making.

Toward the Optimum

Input-output tables take into account the unique economic pattern of each republic, and especially the differences in total population and proportion of city dwellers. The population of Lithuania is 2.9 million, with urban dwellers accounting for 41 per cent. For Latvia the figures are 2.2 million and 59 per cent, and for Estonia 1.2 million and 59 per cent.

The figures indicate that Lithuania has considerable labor resources and one of the problems is to maintain full employment. In Latvia industrial development balances available manpower. In Estonia industrial development must rely heavily on mechanization and automation.

The calculation of input-output tables for the Baltic republics is a prelude to an integral optimum mathematical model of their economies as a whole.

Computing centers are called on now to determine the most rational variants for economic growth.





The port of Tallinn in Estonia. Better than 87 per cent of the republic's border is coastline. Estonia exports its products to about 60 countries.



HE HUNTED MAMMOTHS

BY LENINA KAIBYSHEVA



A UNIQUE Stone Age burial site has been found 160 miles northeast of Moscow near the old Russian city of Vladimir and the Sunghir Ravine.

"Human skeletons dating back to the paleolithic period are rare finds, indeed," said Otto Bader, Doctor of Science (History), head of the expedition sponsored by the USSR Academy of Sciences' Institute of Archeology. "But the well-preserved paleolithic burial site found near Vladimir last August is a rarity even among big finds, including the famous grave site near Menton in southern France."

The Sunghir excavations began in 1956. Before that, archeologists had dug at Karacharovsk near the town of Murom on the Oka River, where prehistoric European man had lived. Somewhat later several small camps were found in the Northern Urals.

The rich finds made at Vladimir set it off from all other prehistoric camp sites. Before archeologists worked over the remains of these Europeans, the northernmost known to us, who lived about 35,000 years ago, they had very little information about their physical appearance.

The first relic they found added little to what they already knew. It was a skull lying face down. The glacier advancing on the Moscow-Vladimir front from the north turned upside down what had been left at the camp, scattered dwellings and the objects in them, and buried everything under a layer of permafrost. Ice wedges had filled ground fissures and had pierced one of the two skeletons unearthed. Fortunately, the other, found two feet below the first, at a depth of more than 13 feet, was intact. Undoubtedly, both date back to the same period and are older than the last glaciation.

World's Oldest Trousers

In the paleolithic period, mammoth and deer roamed the cold steppes. The scattered pine groves and the areas around them swarmed with bison, wild horses, hare, polar fox and other animals. Archeologists found the remains of many of them at the camp. Paleolithic man probably lived off them, hunted them for food and made clothes from their skins.

Painters who show ancient man clad in animal skins do not credit him with the tailoring skill he apparently had. Some present-day Northern peoples could borrow a trick or two from prehistoric man. Although the clothes themselves have been destroyed by time, the rich decorations made of mammoth tusk give us some idea of the cut of his round-necked shirt and his trousers. Yes, this is the first evidence we have that 35,000 years ago man knew how to make trousers. Well polished rectangular, oval and other shaped plates of mammoth tusk adorned not only his shirt and sleeves from top to bottom but his trouser legs as well. Well-preserved stripes can be seen on the inside of the legs.

On his arms he wore many bracelets, also of mammoth tusk. Pendants of drilled stone set off the handsome bone beads. Next to the skeleton lay a crude scraper for hides and a flint knife, indications of the respect the dead man apparently enjoyed from his tribesmen.

A Handsome Man

The skeleton at the Sunghir camp was found in an oval grave, laid on a bed of coals sprinkled with bright red powdered ochre. The skeleton was covered from above with a coating of purple ochre.



rare find of Soviet archeologists

Mikhail Gerasimov, well-known Soviet anthropologist, said: "He was a sturdy, strong man of medium height with a broad face. His skull sutures are closed and his teeth well-worn. This tells us that he was about 50 to 55 years old at the time that he died. He is the Cro-Magnon type of man—the ancient anthropological type of European."

The anthropologist, incidentally, was on vacation when news of the find reached him. He packed immediately and hurried to Vladimir at the expedition's invitation. "Vacations come every year, a find like this one comes once in decades," he told his friends.

Gerasimov is famous for his reconstruction of ancients from their skulls and skeletons. An article on his work on the head of Ivan the Terrible appeared in the March issue. He plans to reconstruct the head of this prehistoric inhabitant of the Sunghir camp.

"The skeleton deserves all the attention it is getting," said Dr. Georgi Debets of the Academy's Institute of Ethnography, who was the first to develop a method for determining an individual's height and weight by the ratio of shin to hip. When Otto Bader had the skeleton of the famous Sunghir man taken to Moscow, Debets didn't lose any time getting there to take measurements.

"He had the long shins of a runner," he said. "The man was well-proportioned and very broad-shouldered. His shoulders were four inches broader than is usual for a 5 foot 10 inch man. His head is even more interesting. Although he is a very primitive man, his skull shows none of the primitive characteristics of anthropoid apes. It has a large brain space, a high forehead and a well-developed chin. This is a well-formed type of man by our present-day standards."

A man like that could manage a deer or bison without trouble. More than that, helped by others like himself, he could trap mammoth in pitfalls.

Excavations Continue

These ancient Europeans were good at handicrafts and knew how to decorate their dwellings. Last year the archeologists found more than 10,000 artifacts near Vladimir. Among them were both stone and bone tools.

Among the works of primitive art is a figurine of a horse carved of mammoth tusk and painted with red ochre. The figure is flat—two inches long and only one-sixth of an inch thick—but it clearly disputes the general opinion that the ancients had no conception of three-dimensional sculpture.

Says Otto Bader, "Judging by the type and styling of the artifacts, the Sunghir people seem to have been related to those in the Middle Don Valley. In fact, these artifacts seem to derive from the same historical period as their paleolithic counterparts in what today are Czechoslovakia, Hungary and other Central European countries."

The finds at Sunghir precipitated any number of symposiums on paleolithic stratigraphy and periodization. Participating in the symposiums and the expeditions were both archeologists and geologists as well as historians.

Digging at the Sunghir Ravine continues. Currently the Vladimir Museum, which has contributed a great deal to the research, is building a ferroconcrete glass-walled pavilion over the grave site. It will make an interesting stop for tourists.

Novotsi Press Agency Correspondents in Latvia Report

Lutheran Church in Latvia

BY DZINTAR NEZINIS

ARCHBISHOP Dr. Turs, the primate of the Latvian Lutheran Church, will turn 80 soon, but he seems to be brimming over with vitality. When I asked about the position of his church he answered with this parable:

"A certain inn was happily located by the side of a well-used road. This inn gave refuge, food and warmth to weary and thirsty travelers, who would reward the innkeeper with their grateful thanks and whatever coin they could pay.

"Then a road was laid elsewhere and the inn found itself off the beaten track. What could the innkeeper do? Lure the traveler by stratagem and lies? Or move his inn to a new place? When this dilemma confronted our church a quarter of a century back, we chose the second solution."

"Does this mean the church has adapted itself to socialism?" I asked.

"That is too superficial a view," Dr. Turs observed. "We have not adapted ourselves. The Latvians preferred socialism to other social systems and have built a new state. We have no reason to doubt the people's good sense. They have apparently found their road. We trust them and have stood by them.

"On this new road there may be difficult hours or moments," the archbishop continued, "when some look for consolation in the bosom of the church. By shoring up their faith in everlasting good and justice, we help them meet life."

I asked the archbishop what the positive aspirations of his church were. He said:

"Like every other people, Latvians want to live in peace, enjoy material prosperity and develop the nation's potentialities. The church does not shun these problems."

The archbishop has repeatedly declared himself for peace and disarmament in the sermons he preaches to his congregation at St. Gertrude's and in the appeals he publishes in both the Soviet and foreign press.

"Our church," Dr. Turs emphasized, "subscribes from conviction to the Soviet Government's peaceful views. My conscience as a Lutheran tells me that peaceful coexistence, universal disarmament and the abolition of colonialism represent the most just solutions to present-day conflicts."

The archbishop said he regarded his membership in the Soviet Peace Committee as a noble and important mission, and that he felt very honored when the World Peace Council awarded him a silver medal.

"We, of course, have a world outlook which differs from that of Communists," he observed. "It is my profound conviction that faith, along with intellect, must serve as man's support. Communists do not acknowledge that. But they do not put any obstacle in the way of our churches, of which we have some 300 in Latvia. And," he added with a smile, "they even grant visas to our scholarship students for theological study at Oxford."





They Fish All Seas

BY DAVID TIMOFEYEV

ONE of the country's largest fishing ports has grown up in Riga in recent years around the old fishermen's settlement of Mangali, where the Daugava River meets the sea. The street leading down to the port has been named Atlantic.

On the main wharf I saw big gantry cranes loading the *Riga*, the flagship of the Latvian Fishing Flotilla. The 10,000-ton mother ship was preparing to leave for the Norwegian Sea, where scores of trawlers were awaiting her.

And nearby the refrigerator vessel *Zvaigzne*, back from the Gulf of Mexico, where Latvian trawlers were also fishing, had just dropped anchor. She carried their catch in her refrigerated holds. The catch was an excellent one, and the *Zvaigzne* had to freeze as much as 50 to 60 tons of fish per day.

At another wharf stood the *Krishyan Valdemar*, a large freezer trawler flying the farewell pennant. I climbed up the gangplank for a talk with her skipper Georgi Akhmetov.

"Today we start for the coast of South Africa. We shall be fishing in approximately the latitude of Walvis Bay."

People were gathered around three refrigerator trawlers aglow with bright new paint. Their seamen were saying good-by to friends and relatives. Many held bouquets of flowers. The trawlers were leaving, for the first time in the flotilla's history, to fish in the Indian Ocean.

Only a decade ago the first Latvian herring ships left Riga for the Jan Mayen coasts and the Faeroe Islands. Today the republic's trawlers boldly ply the seas and oceans at many latitudes. They hunt herring in the polar waters with icebergs in sight, catch silver hake near Sable Island and tropical fish off the coast of Africa. Latvian fishermen now travel as much as 7,000 nautical miles from their native coast, these long hauls made possible by a fishing fleet with scores of freezer trawlers, mother ships, and capacious and speedy tankers.

Marite— Café for Kids

BY YAKOV TIKHONOV

THE Children's World Department Store in Riga has a café for kids—the Marite. Opened only a while ago, it is already a huge favorite, with a steady daily clientele of more than 600.

The decor and furnishings are in character. The tableware was specially made by a Riga china factory after original designs created at the Latvian Trade Ministry's Design Institute.

The café has a staff of 30 superlative cooks, bakers and waitresses. The chef is Galina Bush, a graduate of a school for children's food specialists. Pastry cook Karl Kljavins has become a Riga celebrity.

Saturday is the big day at the Marite. The rooms are jampacked. Karl Kljavins walks up to one of the tables and asks:

"Tasty?"

"What does that mean—tasty?" one little voice pipes up. Kljavins is clearly at a loss.

"Well . . . tasty . . . means . . . well . . . what does it mean? Maybe you know, little girl? By the way, what's your name?"

"Eina Libert. It's when your tongue doesn't tickle."

"What do you think?" the confectioner addresses a boy sitting near her.

"Well, tasty is all sorts of sweets and pastries, kippers and a whole lot of other nice things."

"Tasty isn't porridge" Valdis Ruya interjects.

But the spotlight today is on Aelita, a blonde and charming four-year-old. The table groans under all manner of good things. They are to be sampled soon. The little girl listens to the instructions carefully. She is to taste everything and say what she likes and what she doesn't.

The first dish she samples is oatmeal porridge, specially seasoned. As she slowly brings the spoon to her lips, the uncles and aunties all around watch her closely—a silent, solemn moment.

Gulping the porridge down, the little girl delivers her judgment in one word: "Yummy!"

A general sigh of relief. One auntie hastily jots something down.

The sampling goes on for about an hour, a period regulated by both the program and the volume Aelita's tummy can absorb. She does her very best. Her evaluations are brief and merciless:

"Yum-yum. More, please. Ugh! Not nice!"

True, Aelita says that last only once, when after a row of ice creams, fruit jellies and pastries she is offered a plate of the porridge she usually has for breakfast at home.

But then, wouldn't you say the same?





Champion Waiter

BY RUDOLF HILTUNEN

PATRONS of Moscow's popular Prague Restaurant ate their way through a very unusual contest held there recently—a three-day nationwide competition for the tilte of Waiter King.

Waiting on tables with speed, courtesy and elegance was the least of the tests. Competitors also had to recommend the proper wines to accompany each dish, explain how various hors d'oeuvres are prepared and shake up a mean cocktail. Arnold Skinkes of Riga's Central Airport restaurant bested his 80 rivals to win the crown.

Arnold's restaurant is always busy, with planes taking off around the clock for Moscow, Leningrad, Tallinn, Vilnius and elsewhere. However pressed for time, the impeccably clad waiter always has a genial smile. He never gives less than perfect service. Knowing diners make a beeline for his station.

Back from the Moscow competition, Arnold often visits restaurants in Riga and elsewhere in Latvia to teach others the fine points of his craft.

Concurrent with the waiters' contest was another—for chefs and pastry cooks. The titles were awarded to Olga Belkevich and Mara Galvinya, respectively, both of Riga. Mara, as it happens, is pastry cook at Arnold's restaurant.

Many of today's arduous and thankless jobs are headed for extinction. Some say that waiters are too. But on that I agree with *Izvestia* journalist Anatoli Agranovsky who says:

"We won't need people to wash dishes, and the charwoman will be replaced by a large vacuum cleaner. Salesmen, barmen and cashiers will become nonexistent. Even inspectors will disappear. But there will always be waiters! A machine will never replace the man who welcomes guests and knows how to feed them well."

To interview Arnold, I naturally dined at his restaurant. And there is no question in my mind that the titles went to the right people. If Arnold ever takes part in another such competition, I shall certainly be rooting for him.

Grand Prix Balsam

BY KARL KRUMIN

THE DIRECTOR showed me a gold medal from the 1958 Brussels World's Fair. The accompanying citation said the Riga Distillery had been awarded a Grand Prix.

The distillery has the right to reproduce the medal on the labels of all its 70 products. It reserves the mark of distinction, however, for its most outstanding beverages. One is Riga's Black Balsam.

Legend has it that on a visit to Riga Catherine the Second of Russia developed a stomachache. A doctor, shaken awake in the middle of the night and frightened half out of his pharmacological wits, threw together some medicinal herbs and roots, boiled an infusion and served it to his patient. The concoction did the Empress good, and thereafter Riga Black Balsam was her favorite nostrum.

The director admitted that no historian would vouch for the authenticity of this tale. "But," he said, "there is a little truth in it. Our balsam does have a beneficial effect on the stomach—and not only on the royal kind."

Maiga Podrachniek, the young production engineer who heads the liqueur department, showed me a list of the ingredients: Peruvian balsam oil, gentian root, arnica blossom, wormwood, ginger, valerian root, spearmint, sweet-flag root, lime blossom, oak bark, pepper, orange peel, buck bean, muscadine nut, St. John's-wort grass, balsam bud, fresh raspberry, blackberry, honey essence, sugar and cognac. All this taken together gives the balsam what the recipe describes as a "brownish black color, bitter taste with a touch of burnt sugar, and a full-bodied flavor." The liqueur is 90 proof.

Stanislav Tarashkevich, one of the old-timers at the distillery, turned a huge ancient key and opened the door to a dark vault. At the entrance hung a picture of a medieval chevalier, cup in hand. Huge barrels lined the wall. "Some of them are older than I am," our companion smiled. He told us in detail how the various drinks—balsam, starka, brandies, punches, "Lemon Cognac" and others—were made.

From there we proceeded to the laboratory, a veritable kingdom of bottles. Brown porcelain bottles held the balsam; plain glass ones, the famous Crystal and Mocca; fancy ones, Alazha; and flat hip flasks, Hunter's Vodka. New drinks are created here and tasted for the first time. Maiga Podrachniek is a member of the country's top Tasting Commission.

The laboratory people told me that since the end of the last century Riga black balsam has won gold, silver and bronze medals in St. Petersburg, London, Vienna, Paris, Moscow, Antwerp, Caracas, Chicago, Paris and, of course, the crowning Grand Prix of the Brussels Fair.

"Should the balsam be taken straight or mixed?" I asked before I left.

"It tastes best with coffee," Stanislav Tarashkevich said, "but many people like it with vodka. The mixture has a very distinctive flavor. As for me," I prefer my coffee straight. Adding anything makes it taste like work."





TTT Team

BY ZIGURDS MEZHAVILKS

WHEN the Soviet women's team won the world title, Skaidrite Smildzinya of Riga was jubilantly proclaimed Basketball Queen. That bit of news stirred up a good deal of excitement in Riga last year.

Only eight years ago Riga players hadn't the faintest hope of making the national squad, let alone a world champion team. Eight years ago was when a new shop was being built by the local Tram and Trolley Trust (hence the abbreviation TTT), and neighborhood athletes thought it would be a good idea to make the walls higher so the shop could double as a gym.

Selling the management on the idea took no great effort, especially since Alexander Zalitis, the trust manager, is a good tennis and basketball player, and Gunars Luks, chief of the maintenance shops, played on the all-star Soviet volleyball team.

The first to join the basketball team was Inara Apse, a seamstress. Subsequently this small but very agile player was aptly dubbed "Little Needle." Other early joiners were fine basketball strategists Olgerts Altbergs and Raymonds Karnitis.

Soon the TTT team was setting competitors for USSR championships back on their heels with a defense system which was new even to the men's teams. When opponents mastered the system, the TTT's came up with a new tactical pattern—the receding center.

The girl basketball players from Riga worked out a new scheme every game they played, the reason a writer for the Moscow magazine *Physical Culture and Sport* entitled his article "The Secret of the Three T's."

The secret is educated strategy. And the players meet its requirements. They are all either through college or will be in the very near future. Skaidrite Smildzinya is a technician. She was the best mathematician in her class and is now studying engineering. Sylvia Krodera, Dzintra Grundmane and Eva Augle have also gone in for the exact sciences. And Helena Hehta, Ingrid Bluma and Iolanta Kalninya work as pharmacists, a profession which takes precision too. Well, it's as good an explanation as any for the game combinations the team works out and executes with such faultless precision.

Since 1958 the girls with three yellow T's on their black sports shirts have been walking away with every USSR championship. The veterans of the team each have as many as six gold medals in their collections.

In the six years of the European championships, the Cup was won twice by the women's basketball team of Slavia (Bulgaria) and four times by the TTT's.

"No one can become a Communist unless his mind has been enriched with all those values that mankind has created." ***Lenin***

THOMAS PAINE

We Are Their Heirs

BY VLADIMIR POZNER

HIS FATHER was a corset maker and that was to be his trade, whether he liked it or not. He left school at the age of 13 to pull, shove and stuff overflowing, rarely washed female flesh into whalebone corsets, turning his nose from the nauseating smell. The beauties of the local pubs mewled, squealed and swore freely while he pulled on the laces under the stern eyes of his father. Until once the laces broke and he lost patience. "I won't!" "Thou wilt!" roared his father, laying his behind open with 12 of his best. "Your name is Paine and my name is Paine and you will be a staymaker!"

He taught school. Sold tobacco. Traded in groceries. Worked as a tailor, a carpenter, a mason. He was an exciseman, and acquired a profound hatred of social inequality. He petitioned Parliament for higher wages for tax collectors, and was fired and left destitute. His wife died of hunger. But he did not become a staymaker, and this bore witness to one of his commanding beliefs: the right of a man to live his life as he sees fit.

He was 37 years old, and his life seemed wrecked. Then he met old Ben Franklin,who helped him begin anew in the New World.

On a sunny December morning in 1774, after nine endless days of storm and seasickness, this man set foot in the City of Brotherly Love. He had a hanging, hooked nose, a wide mouth, a sharp chin and queer, twisted eyes. His worn coat was much too narrow for his wide, sloping shoulders, and his meaty workingman's hands stuck out of the frayed cuffs.

These hands were to build the first republic in the modern world.

Later he wrote about himself: "The natural bent of my mind was to science. I had some turn, and I believed some talent, for poetry; but this I rather repressed than encouraged, as leading too much into the field of imagination. . . . I had no disposition for what is called politics. It presented to my mind no other idea than is contained in the word Jockeyship. When, therefore, I turned my thoughts to matters of government, I had to form a system for myself that accorded with the moral and philosophic principles in which I have been educated."

While editing the *Pennsylvania Magazine,* he courageously placed his beliefs on record, advocating ideas that were far ahead of his times: equal rights for women, international arbitration, freedom for Negroes—he demanded, insisted, argued, beat his head against the wall of prejudice.

On April 19, 1775, the wall cracked. On that day the farmers of Lexington fired on King George's redcoats and drove them back. Thus began the event for which Thomas Paine was born. Thus began the American Revolution.

Not everyone in America understood it. The people took up arms while gentlemen in fine silks and laces debated in Philadelphia the likelihood of reforms. Thomas Paine wrote. He left the newspaper and during 1775 wrote intensely as if his very life depended on it. On January 1, 1776, *Common Sense* was published. It was written for the people, and the people read it. Copies were passed from hand to hand until they fell apart. *Common Sense* told people what they were fighting for, gave them a taste for the most delectable word ever invented: Independence.

"Now is the seed-time of Continental union, faith and honor. The least fracture now will be like a name engraved with the point of a pin on the tender rind of a young oak; the wound will enlarge with the tree, and posterity read it in full grown characters"—these words called for action.

". . . Government, even in its best state, is but a necessary evil; in its worst state, an intolerable one"—these words called for action.

On July 4, 1776, the United States of America declared themselves an independent, sovereign country.

Paine could have became a rich man on only a small part of the royalties due him for *Common Sense,* but he gifted the copyright to the United States. He joined the Continental Army as a regular soldier and refused all pay.

It was enough for him to say "I am *Common Sense,*" and soldiers flocked to him, asking—and then listening, listening, listening. Untrained, poorly equipped, they suffered defeat after defeat from King George's Hessians. At Newark it seemed that the cause of freedom was lost. It was there, in Washington's Continental Army, that Thomas Paine wrote the first of his famous pamphlets *The Crisis.*

"These are the times that try men's souls. The summer soldier and the sunshine patriot will, in this crisis, shrink from the service of his country but he that stands it *now,* deserves the love and thanks of man and woman. Tyranny, like hell, is not easily conquered; yet we have this consolation with us, that the harder the conflict, the more glorious the triumph. . . ."

On Washington's orders these words were read to the hungry, freezing soldiers. But the orders were superfluous. They ached for Paine's words for they were addressed to them, the salt of the earth. Armed with these words, they feared neither King George, nor his redcoats, nor the Hessians. With these words they won the Revolution.

What Thomas Paine gave to the American Revolution was eloquently stated by John Quincy Adams: "Washington's sword would have been wielded in vain had it not been supported by the pen of Paine. History is to ascribe the American Revolution to Paine."

And what was Paine to the world? He was the first internationalist. Where Benjamin Franklin said "Where liberty is, there is my country," Thomas Paine proudly replied "Where liberty is not, there is mine. My country is the world, and my religion is to do good."

He returned to England where he called for the formation of a republic and escaped death by a hair's breadth. He was elected to the French Convention by Oise, Puy-de-Dôme, Somme and Pas-de-Calais and was given French citizenship. In honor of 1789 he wrote *The Rights of Man,* one of the greatest revolutionary books ever published in English. He rebelled against seemingly eternal, seemingly immovable institutions.

"Every . . . generation must be free to act for itself in all cases. . . . Every generation is, and must be, competent to all purposes which its occasions require. It is the living, not the dead, that are to be accommodated."

He branded war and plainly named its advocates and victims.

"War is the faro table of governments, and nations the dupes of the game."

The world, galvanized by the French Revolution; the people, awakened by the cry "Freedom"; the monarchs, trembling on their thrones—all listened to the burning words of the staymaker's son. For many he had become too revolutionary. The same John Quincy Adams called him that "filthy Tom Paine"; in England he was condemned to death for treason in absentia; even George Washington turned away from him.

But Paine kept on writing. He would not, could not, capitulate to those who for ages had deprived man of his dearest right: to think independently. And *Age of Reason* was born.

"I do not believe in the creed professed by the Jewish church, by the Roman church, by the Greek church, by the Turkish church, by the Protestant church, nor by any church that I know of. My own mind is my own church."

In 1802 Paine returned to America, the country most indebted to him for its victory over the tyranny of the British Crown. Only too often do those who win power as the result of a revolution exterminate those who made the revolution. As Vernon Louis Parrington wrote, "He became the victim of an edium theologicum et politicum without parallel in our history." In London clubs it became the mode for gentlemen to wear T nails in their boot heels to show how they trampled on his principles. He was regarded as worse than a common felon and outlaw, because he was more dangerous. In America gentlemen echoed the common detestation—to be a Paine-hater was a badge of respectability.

Such was the reward for a life spent in the service of mankind.

But the cruelest blow was yet to come: Thomas Paine, who lit the flame of the American Revolution, was not given the right to vote.

The year was 1809. Thomas Paine was dying. The ministers invaded his farm in New Rochelle, and day and night stood around his death bed. "Repudiate your books, deny them before it's too late," they said, "and you will inherit the Kingdom of Heaven." Paine had said "No" on the eve of his manhood; he said "No" all his life to the base, the corrupt, the false that circumscribed the very people who turned away from him; he died with the word "No" on his lips.

He was refused his last wish, to be buried in consecrated ground. Paine was buried on his farm. But even dead he was not allowed to rest in peace. In 1812 the Englishman William Cobbett unearthed his remains and took them to England to show off the bones. Later they were lost and where they lie, nobody knows.

Yet try as his enemies did, his name was not forgotten.

Thomas Paine believed in the people: "I have ever observed that the great mass of people are always just, both in their intentions and object. . . ." The people will ever remember this.

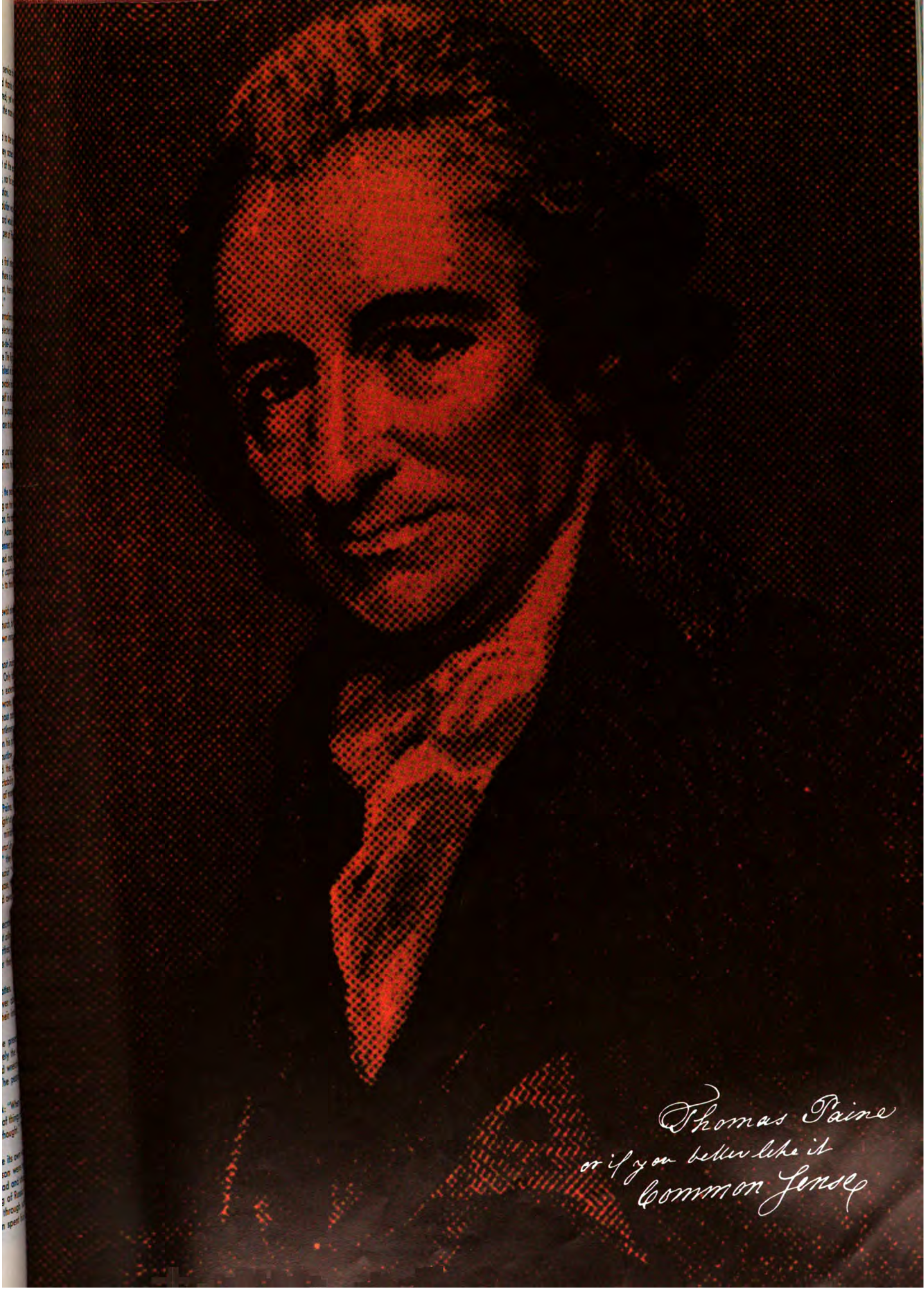
Thomas Paine demanded equality for man: "The present state of civilization is as odious as it is unjust. It is absolutely the opposite of what it should be. . . . The contrast of affluence and wretchedness . . . is like dead and living bodies chained together." The people will ever remember this.

Thomas Paine fought for the right of man to think: "When precedent fail to assist us, we must return to the first principles of things for information, and *think,* as if we were the *first man* that *thought.*" The people will ever remember this.

Thomas Paine said: "Reason, like time, will make its own way."

He was right. *Common Sense* and *Age of Reason* were read by the most progressive people in all lands. They were read and studied by the Decembrists, who suffered in Siberia for dreaming of Russia freed from czarist autocracy. Human reason leads mankind through suffering and happiness to the goal for which that fantastic man spent his life.

Today he belongs to the world.


Thomas Paine
or if you better like it
Common Sense

BALTIC NATIONAL COSTUMES



1



2



3



4



5



13



14



15



8



16

DRAWINGS BY YELIZAVETA AXELROD

Sakta



THE TRADITIONAL dress of the Baltic peoples is uncommonly varied in cut, color and ornament. In every district, every region and, of course, in each of the three republics, the national costume has a special character which reflects its own regional development and its contacts with neighboring regions and groups. At the same time, the national dress of all the Baltic peoples has elements in common which distinguish it from that of other Europeans.

Women in the Baltic republics, both in town and country, have been wearing the familiar modern styles for a long time now. But in designing them, Latvian, Lithuanian and Estonian fashion-setters borrow freely from the traditional costumes. The singers and dancers of many of the amateur and professional folk ensembles perform in national dress.

It is hard to conceive of a national holiday, of which the Baltic republics have many, without bright and colorful traditional costumes.



7







9



10



11



12

1. Latvian woman's costume

The headgear is embroidered in folk designs. The blouse is embroidered along the shoulders, neckline and sleeves and worn with a *sakta* (a brooch), the Latvian national ornament. The striped woven skirt is tied with a gaily colored sash.

2. Latvian man's costume

The coat has patterned pockets trimmed with black cloth. The collar of the shirt is embroidered.

3. Latvian woman's costume

The blouse is embroidered on the shoulders, collar and cuffs. It is worn with a vest and a woven skirt trimmed with colored stripes. The shawl is of homespun wool fastened with a *sakta* on the right shoulder.

4. Latvian national design

5. Lithuanian woman's costume

The headgear is trimmed with ribbons. Over the blouse is a vest trimmed with braid and tied with a gaily colored tasseled sash. The skirt has horizontal designs. The apron is embroidered.

6. Lithuanian man's costume

Geometrical designs trim the sleeves and the front of the jacket down to the waist. The shirt is tied at the neck with a colored cord, and a gaily colored woven sash with tassels is worn around the waist. The trousers are tucked into colorful knitted socks.

7. Lithuanian woman's costume

A kerchief is worn on the head. The blouse and apron are embroidered with a lacelike stitch. The vest has a square neckline and is worn with a tasseled woven sash.

8. Lithuanian national design

9. Estonian woman's costume

The blouse has a ruffled front and is embroidered with colored thread. The details of the embroidery are shown in drawing No. 16. A brooch is worn at the collar. The skirt is of woven material with horizontal stripes. A sash in national design is worn around the waist.

10. Estonian man's costume

A shirt with a turned-down collar is worn with a brooch under a gaily colored woven vest. The trousers are tucked into high socks of the same color.

11. Estonian woman's costume

The headgear is an embroidered cap. A printed kerchief is worn over the blouse and fastened at the neck with a brooch. Over the kerchief is a necklace.

12. Estonian national folk design

13. Latvian sash

14. Lithuanian sash

15. Estonian sash

Learning Russian

ШУТОЧКА

Антон Чехов

Я́сный зи́мний по́лдень... Моро́з кре́пок, трещи́т, и у На́деньки, кото́рая де́ржит меня́ по́д руку, покрыва́ются серебри́стым и́неем ку́дри на виска́х и пушо́к над ве́рхней губо́й. Мы стои́м на высо́кой горе́. От на́ших ног до са́мой земли́ тя́нется пока́тая пло́скость, в кото́рую со́лнце гляди́тся, как в зе́ркало. Во́зле нас ма́ленькие са́нки, оби́тые я́рко-кра́сным сукно́м.

— Съе́демте вниз, Наде́жда Петро́вна! — умоля́ю я.— Оди́н то́лько раз! Уверя́ю вас, мы оста́немся це́лы и невреди́мы.

Но На́денька бои́тся. Всё простра́нство от её ма́леньких кало́ш до конца́ ледяно́й горы́ ка́жется ей стра́шной, неизмери́мо глубо́кой про́пастью. У неё замира́ет дух и прерыва́ется дыха́ние, когда́ она́ гляди́т вниз, когда́ я то́лько предлага́ю сесть в са́нки, но что же бу́дет, е́сли она́ рискнёт полете́ть в про́пасть! Она́ умрёт, сойдёт с ума́.

— Умоля́ю вас!—говорю́ я.— Не на́до боя́ться! Поймите же, э́то малоду́шие, тру́сость!

На́денька, наконе́ц, уступа́ет, и я по лицу́ ви́жу, что она́ уступа́ет с опасностью для жи́зни. Я сажа́ю её, бле́дную, дрожа́щую, в са́нки, обхва́тываю руко́й и вме́сте с не́ю низверга́юсь в бе́здну.

Са́нки лети́т, как пу́ля. Рассека́емый во́здух бьёт в лицо́, ревёт, свисти́т в уша́х, рвёт, бо́льно щи́плет от зло́сти, хо́чет сорвать с плеч го́лову. От напо́ра ве́тра нет сил ды́шать. Ка́жется, сам дья́вол обхвати́л нас ла́пами и с рёвом та́щит в ад. Окружа́ющие предме́ты слива́ются в одну́ дли́нную, стреми́тельно бегу́щую по́лосу... Вот-во́т ещё мгнове́ние, и ка́жется,— мы поги́бнем!

— Я люблю́ вас, На́дя! — говорю́ я вполго́лоса.

Са́нки начина́ют бежа́ть всё ти́ше и ти́ше, рёв ве́тра и жужжа́ние поло́зьев не так уже́ страшны́, дыха́ние перестаёт замира́ть, и мы, наконе́ц, внизу́. На́денька ни жива́ ни мертва́.

— Ни за что в друго́й раз не пое́ду,— говори́т она́, гля́дя на меня́ широ́кими, по́лными у́жаса глаза́ми.— Ни за что на све́те! Я едва́ не умерла́!

Немно́го погоди́ она́ прихо́дит в себя́ и уже́ вопроси́тельно загля́дывает мне в глаза́.

Она́ берёт меня́ по́д руку, и мы до́лго гуля́ем о́коло горы́. Зага́дка, ви́димо, не даёт ей поко́я. Бы́ли ска́заны те слова́ и́ли нет? Да и́ли нет? Да и́ли нет? Это вопро́с самолю́бия, че́сти, жи́зни, сча́стья, вопро́с о́чень ва́жный, са́мый ва́жный на све́те. На́денька нетерпели́во, гру́стно, проника́ющим взо́ром загля́дывает мне в лицо́, отвеча́ет невпопа́д, ждёт, не заговорю́ ли я.

— Зна́ете что?— говори́т она́, не гля́дя на меня́.

— Что? — спра́шиваю я.

— Дава́йте ещё раз... прока́тим.

Мы взбира́емся по ле́стнице на́ гору. Опя́ть я́ сажа́ю бле́дную, дрожа́щую На́деньку в са́нки, опя́ть мы лети́м в стра́шную про́пасть, опя́ть ревёт ве́тер и жужжа́т поло́зья, и опя́ть при са́мом си́льном и шу́мном разлёте са́нок я говорю́ вполго́лоса:

— Я люблю́ вас, На́денька!

Когда́ са́нки остана́вливаются, На́денька оки́дывает взгля́дом го́ру, по кото́рой мы то́лько что кати́ли, пото́м до́лго всма́тривается в моё лицо́, вслу́шивается в мой го́лос, равноду́шный и бесстра́стный, и вся, вся, да́же муфта и башлы́к её, вся её фигу́рка выража́ют кра́йнее недоуме́ние. И на лице́ у неё написано: «В чём же де́ло? Кто произнёс те слова́? Он, и́ли мне то́лько послы́шалось?»

— Не пойти́ ли нам домо́й? — спра́шиваю я.

— А мне... мне нра́вится это ката́ние,— говори́т она́ красне́я. — Не прое́хаться ли нам ещё раз?

Ей «нра́вится» э́то ката́ние, а ме́жду тем, садя́сь в са́нки, е́ле ды́шит от стра́ха, дрожи́т.

Мы спуска́емся в тре́тий раз, и я ви́жу, как она́ смо́трит мне в лицо́, следи́т за мои́ми губа́ми. Но я прикла́дываю к губа́м плато́к, ка́шляю и, когда́ достига́ем середи́ны горы́, успева́ю вы́молвить:

— Я люблю́ вас, На́дя!

И зага́дка остаётся зага́дкой!

На друго́й день утром я получа́ю запи́сочку: «Е́сли пойдёте сего́дня на като́к, то заходи́те за мной. Н.». И с э́того дня я с На́денькой начина́ю ка́ждый день ходи́ть на като́к, и, слета́я вниз на са́нках, я вся́кий раз произношу́ вполго́лоса одни́ и те же слова́:

— Я люблю́ вас, На́дя!

Ско́ро На́денька привыка́ет к э́той фра́зе, как к вину́ и́ли мо́рфию. Она́ жить без неё не мо́жет. Пра́вда, лете́ть с горы по-пре́жнему стра́шно, но тепе́рь уже́ страх и опа́сность придаю́т осо́бое очарова́ние слова́м о любви́, слова́м, кото́рые по-пре́жнему составля́ют зага́дку и томя́т ду́шу. Подозрева́ются всё те же дво́е: я и ве́тер. Кто из двух признаётся ей в любви́, она́ не зна́ет, но ей, по-видимому, уже́ всё равно́; из како́го сосу́да ни пить — всё равно́, лишь бы быть пья́ным.

Ка́к-то в по́лдень, я отпра́вился на като́к оди́н; смеша́вшись с толпо́й, я ви́жу, как к горе́ подхо́дит На́денька, как и́щет глаза́ми меня́... Зате́м она́ ро́бко идёт вверх по ле́сенке... Стра́шно е́хать одно́й, о, как стра́шно! Она́ бледна́, как снег, дрожи́т, она́ идёт, то́чно на казнь, но идёт, идёт без огля́дки, реши́тельно. Она́, очеви́дно, реши́ла, наконе́ц, попро́бовать: бу́дут ли слышны́ те изуми́тельные сла́дкие слова́, когда́ меня́ нет? Я ви́жу, как она́, бле́дная, с раскры́тым от ужа́са ртом, сади́тся в са́нки, закрыва́ет глаза́ и, прости́вшись наве́ки с землёй, тро́гается с ме́ста... «Жжжж»... — жужжа́т поло́зья. Слы́шит ли На́денька те слова́, я не зна́ю... Я ви́жу то́лько, как она́ поднима́ется из сане́й изнеможённая, сла́бая. И ви́дно по её лицу, она́ и сама́ не зна́ет, слы́шала она́ что́-нибудь и́ли нет.

Но вот наступа́ет весе́нний ме́сяц март... Со́лнце стано́вится ла́сковее. На́ша ледяна́я гора́ темне́е, теря́ет свой блеск и та́ет, наконе́ц. Мы перестаём ката́ться. Бе́дной На́деньке бо́льше уж не́где слы́шать тех слов, да и не́кому произноси́ть их, так как ве́тра не слы́шно, а я собира́юсь в Петербу́рг — надо́лго, должно́ быть навсегда́.

Ка́к-то пе́ред отъе́здом, дня за два, в су́мерки сижу́ я в са́дике, а от двора́, в кото́ром живёт На́денька, са́дик э́тот отделён высо́ким забо́ром с гвозди́ями... Ещё доста́точно хо́лодно, под навозом ещё снег, дере́вья мёртвы, но уже́ па́хнет весно́й, и, укла́дываясь на ночле́г, шу́мно крича́т грачи́. Я подхожу к забо́ру и до́лго смотрю́ в щель. Я ви́жу, как На́денька выхо́дит на крыле́чко и устремля́ет печа́льный, тоску́ющий взор на не́бо... Весе́нний ве́тер ду́ет ей пря́мо в бле́дное, уны́лое лицо́... Он напомина́ет ей о том ве́тре, кото́рый рева́л нам тогда́ на горе́, когда́ она́ слы́шала те четы́ре сло́ва, и лицо́ у неё стано́вится гру́стным, гру́стным, по щеке́ ползёт слеза́... И бе́дная де́вочка протя́гивает о́бе руки́, как бы прося́ э́тот ве́тер принести́ ей ещё раз те слова́. И я, дожда́вшись ве́тра, говорю́ вполго́лоса:

— Я люблю́ вас, На́дя!

Бо́же мой, что де́лается с На́денькой! Она́ вскри́кивает, улыба́ется во всё лицо́ и протя́гивает навстре́чу ве́тру ру́ки, ра́достная, счастли́вая, така́я краси́вая.

А я иду́ укла́дываться...

Это бы́ло уже́ давно́. Тепе́рь На́денька уже́ за́мужем; её вы́дали и́ли она́ сама́ вы́шла — э́то всё равно́, за секретаря́ дворя́нской опе́ки, и тепе́рь у неё уже́ тро́е дете́й. То, как мы вме́сте когда́-то ходи́ли на като́к и как ве́тер доноси́л до неё слова́ «я вас, люблю́, На́денька», не забы́то; для неё тепе́рь э́то са́мое счастли́вое, са́мое тро́гательное и прекра́сное воспомина́ние в жизни...

А мне тепе́рь, когда́ я стал ста́рше, уже́ не поня́тно, за́чем я говори́л те слова́, для чего́ **шути́л**...

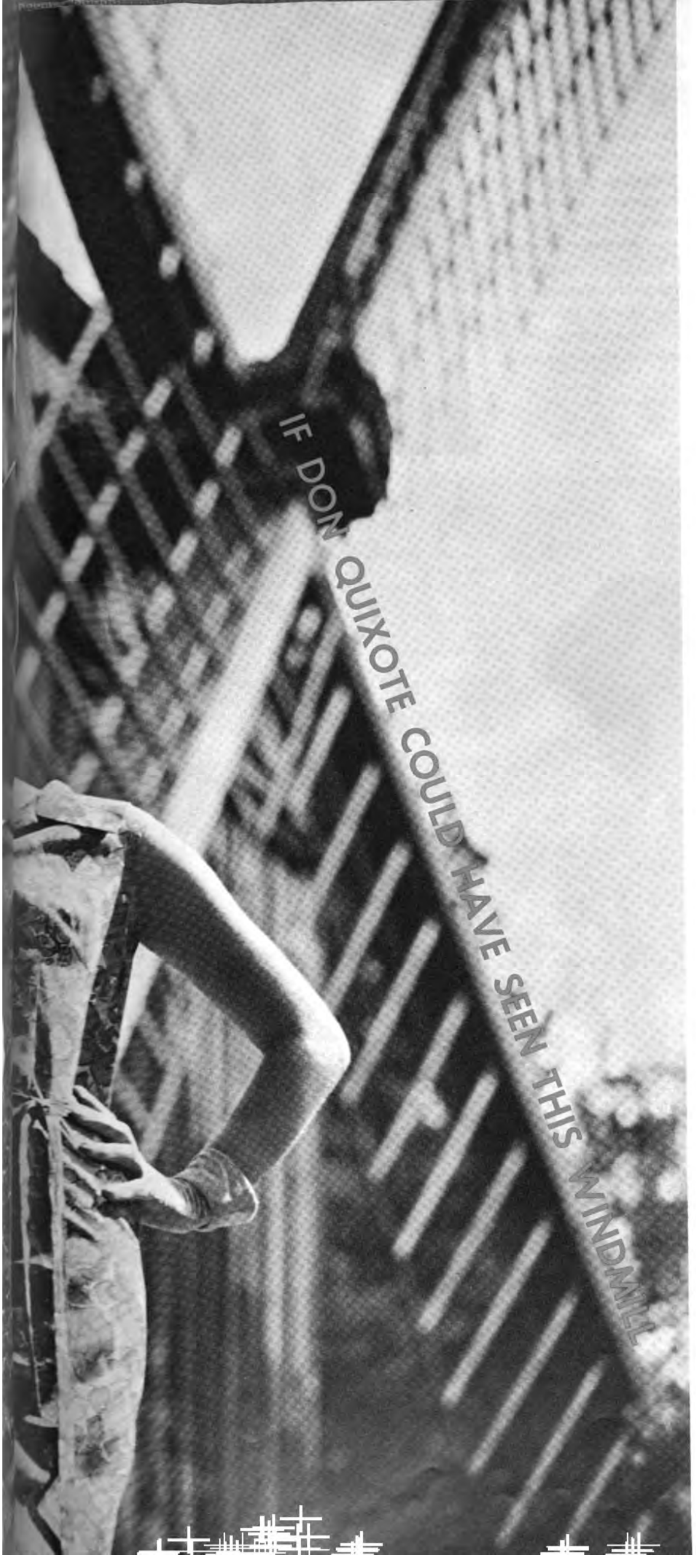
THAT BALTIC LOOK

BY NADEZHDA ZHELEZNOVA

The fashion designers of Estonia, Lithuania and Latvia have created hundreds of new summer styles. There are no radical departures this season. Last year's yardstick —simplicity and serviceability—is still the rule. But there are intriguing new silhouettes that gently accentuate the figure.







Dramatic colors and a diversity of fabrics are featured in the 1965 summer styles. Latvian fashion designers offer new textures and patterns in poplins, reps, embossed cotton fabrics and "the queen of silk," as acetate silk is now called. These modish floral prints are manufactured at the Rigas Audums Factory in Riga as well as in Moscow and Leningrad.

In vogue this year are a great variety of bright, rich and subtle shades: emerald green, a range of golden orange, hues of old bronze and ripe raspberry, soft shades of mustard and ivory, copper, ashberry and chestnut. To this list add the lovely colors of the Baltic Sea coast: natural clay, golden sand, unbleached linen, amber.

Today, when utmost simplicity is the last word, artistic trimmings have a special role. A ceramic pendant or Georgian silver brooch, an ancient Latvian ornament embroidered on a tailored outfit of unbleached linen, buttons of unpolished Lithuanian amber pointing up a silk outfit—these small, expressive touches lend individuality and originality to the garment. Ornamental silver buttons, pendants and chased bracelets are always in favor and in style. Estonian craftsmen improvize on patterns created by their forefathers. They make metal link belts with an intricate ornament that rural smiths originated a hundred years ago on the Baltic Sea islands—Saaremaa and Hiiumaa. Today they are found in Siberia, in Central Asia, in the Ukraine and everywhere else in the country.





INSIDE AND OUTSIDE

SAGA OF TWO GEORGES

BY ALEXANDER MILCHAKOV

IN SPRING Georgi Generalov started feeling the usual pain in his legs, always the promise of a bad time. He'd get up at dawn and pace the room noiselessly for fear of waking his wife. He knew that without this limbering up, he would not be able to get up in the morning at all, and that meant having to report sick. He was always worried that the damn rheumatism would put him to bed for a long stretch, and especially now, when he couldn't take the time to be sick.

He'd listen carefully for the sound of the first streetcars, and as soon as he heard their distant ringing, he would quickly slip under the blanket and after a moment announce in a thunderous voice:

"Time to get up, the streetcars are running already!"

Then he'd jump up sprightly, both feet square on the mat alongside the bed. As his big, swaying shadow moved and changed shape on the wall, his wife would smile at his slightly bent figure and strong arms and say, "I certainly have a strong man for a husband!"

"A man to be treasured," he always responded, squatting as low as he could for his setting-up exercises.

When his wife left for the kitchen, Generalov suddenly turned old, limping with difficulty to the bathroom.

Half an hour later he would start for the weaving mill. He always stopped at the shop door for a second, as though each day he was hearing the noise of the looms, smelling the acrid, sourish yarn, seeing the down flying in the air for the first time. As soon as he entered the shop he would forget the pain in his legs, even feel good enough to go to the Far East and assemble machines there.

At the mill they called him "general," because of his name, impressive looks and the fact that he had two formers officers—a major and a captain—on his team. All three of them had served at the front from the first to the last day of the war. They had won orders and medals, and more than once had stared death in the face.

The assemblers were the first to learn that American machines were to be installed in the worsted plant being built. A group of American experts were due in Kalinin to head the assembly work. Generalov's team was to set up the sorting and degreasing machine shop.

The Americans came three days later. In charge was engineer George Foresight of Intertex International, Inc., the company that was supplying the Soviet Union with American-made machines.

The Generalov team liked both the machines and their American colleagues. When they saw the confidence and precision with which Foresight made corrections in the assembly plans, they decided he knew his business.

"A real engineer," said Boris Rudnitsky.

"Yes, that one knows his business," agreed Yefim Smerdinsky.

Foresight and Generalov took to each other quickly. "What a coincidence!" said Foresight. "My name is George, too. And we were both born in 1908."

The Generalov team worked with the Americans, and when everybody took time out for a rest, Rudnitsky and Smerdinsky talked of the action they had seen in bombers, flying far in the enemy rear, and how they had met up with the Allied troops in Germany. No interpreters were needed for that kind of exchange.

George Foresight told Generalov about himself. He lived in New York, came from a well-to-do family of engineers, had a wife and a grown-up daughter, both of whom he adored. Though the war had not touched his family, he shared the grief of all who had suffered its tragedies.

"Were you wounded?" he asked Generalov.

"No," the other answered quietly.

"You were lucky," said Foresight.

"Very," agreed Generalov with a smile.

The work moved ahead quickly, and the rows of machines they installed kept growing. Foresight worked like a man inspired and had everybody's admiration. He would not put up with the slightest departure from the timetable.

One day he came to the mill so disturbed that it was plain something very serious had happened. A cable had just arrived telling him that his daughter had been killed in an automobile accident.

Foresight was sitting with his head in his hands when Generalov came in.

"How could it have happened? She was always so careful. Oh God! This is terrible!"

Generalov sat down and pulled out a pack of cigarettes.

"I lost two children during the war, a boy and a girl. They died of starvation," he said simply.

Foresight jerked his head up, and touched Generalov's hand. "I'm sorry George. I had no idea."

Generalov put his hand over Foresight's.

He saw Foresight off at the airport when he left for New York. Though they did not exchange another word about their children, they took comfort from each other's presence.

The assembly was almost done. The machines worked perfectly. Then something went wrong: the knife and the automatic stripper were not properly coordinated. A cable was sent to the company representative in New York asking that a new automatic device be developed.

Late in the evening of the next day Generalov, Rudnitsky and Smerdinsky came to the shop and studied the automatic stripper for a long time. They switched the machine on and off time and again until they had figured out an idea for something that might work. Generalov would make a new set of gears, Rudnitsky the steel spring pin, and Smerdinsky the pneumatic valves.

The team stayed long after working hours, and in a week the new device was ready. It was tested before a special commission, and it worked.

When Foresight returned to Kalinin, they told him what had happened. He looked the new automatic stripper over carefully, gave Generalov a long handshake and said, "You should have that device patented."

When the combine was put into operation, there was a farewell party for the Americans. Foresight came up to Generalov, and said: "George, I'm leaving a piece of my heart here. Thanks for everything! And this is not good-by, I hope to see you again."

The Americans left. From time to time they wrote to ask how the machines were working. Everything was going well.

When the autumn rains started, Generalov began feeling really bad. His fingers did not obey him, and his movements became sluggish and uncertain.

As they were adjusting the last machine, he suddenly stumbled and fell. His comrades made him sit down in a quiet spot.

"I'll be all right in a minute," he said guiltily.

"Never mind," said Rudnitsky patting him on the shoulder, "You sit here and give the orders, and we'll get the job done."

"No, I'll be back soon," said Generalov getting up with effort. "Let me just stretch my legs a bit."

He went out to the yard. The wind was blowing and the sky had the blue glint of ice. A vague feeling of alarm touched his heart. He went through the yard, putting right a tree branch someone had bent, and shook his head. Then he walked along the street breathing hard and limping. His chest hurt unbearably. When he opened the door of his apartment, his wife asked in surprise, "Home so early?"

"I just want to rest for a while," he told her and sat down on the bed.

He glanced around the room and saw a young man wearing a *budennovka* cavalry hat with a red star looking down at him from the photograph on the wall. The hat was sitting in a devil-may-care way on his head. Generalov passed a hand over his eyes, and the vision this photograph evoked made him forget everything else.

For a single instant he lived his youth again. His heart hurt badly, and he tried to get up to open the window.

He raised himself up, his back against the cold wall. He couldn't move. His old peaked cap fell out of his hand and rolled on the floor.

There were many times when George Foresight wanted to phone Generalov, but some urgent business always interfered.

On September 13 he finally put a call through. It took a long time to reach Kalinin Worsted Fabrics Plant.

"Who is this?" shouted Foresight into the receiver.

"This is Lidia Nikolayevna, the interpreter," he heard a woman's voice say.

"Lidia Nikolayevna! How are you? I'm glad to hear your voice! Could I please speak to George Generalov?"

Lidia Nikolayevna did not say anything.

"Could I speak to your famous Generalov?" repeated Foresight.

"Generalov is dead," replied Lidia Nikolayevna. "The funeral was yesterday."

"Did you say he's dead?" asked Foresight. "Did you say he's dead?" he repeated, refusing to believe his own ears.

"Yes, he's gone," said Lidia Nikolayevna. "When he was at the front he had to fix tanks. You know the kind of skillful hands he had! He had to work waist deep in ice cold water. He got rheumatism in a very acute form, and it affected his heart."

"Dead!" said Foresight again, still unbelieving. "He was a wonderful man. And he was a master at his job. I was very fond of him."

There was silence on the line, thousands of miles of sorrowful silence in memory of another casualty of that cursed war.

BY MIKHAIL IGITKHANYAN

MASTER OF SCIENCE (PHILOSOPHY)
RESEARCHER, INSTITUTE OF PHILOSOPHY

AS I SAT DOWN to write this article, I recalled the comment of the American sociologist Professor Marbury B. Ogle in his book *Public Opinion and Political Dynamics*. If you listen to a dozen sociologists discussing public opinion, he says, you will hear 12 people talking about 12 different things.

Professor Ogle has a point. Public opinion is so complex a structure and takes so many guises that scholars in this "jungle" sometimes do not recognize each other. Some see public opinion as the opposition to official policy, others as the mainstay of a society's morals, traditions and prejudices, and still others as group judgments based on stereotyped ideas instilled by the press, radio and television.

I shall not attempt here to argue for or against any of these views. Discussions of that kind belong in scholarly journals. I shall concern myself with facts, not definitions, and let the reader draw his own conclusions.

There is no denying the fact that public opinion is an incomparably greater force today than it has ever been. A policy that does not have public support stands little chance of success nowadays.

It is also indisputable that public opinion cannot be divorced from democracy. For the public to choose its position, it must know what is going on at home and in the world at large. It must also know the different attitudes of the various groupings of people to events and processes. Finally, and most important, the public must be free to express its views and to influence the actions of the authorities.

What then are the conditions and facilities that allow public opinion in the Soviet Union to react to important events and developments?

Information: Sources and Channels

The major source of information in the Soviet Union is the press. The degree to which the public is kept informed depends directly on the scope and reliability of press coverage.

Since news is customarily divided into home and foreign, we shall examine each separately.

Foreign news comes in through TASS and Novosti (APN), the two big Soviet news agencies. They have permanent correspondents in 80 countries and provide newspapers, radio and television services with a continuous flow of information.

TASS is the official news agency of the Soviet Government, while APN is a publicly sponsored agency. TASS, therefore, concentrates very largely on political news, diplomatic exchanges and world affairs, while APN handles news of all kinds. Contact between APN and the major press agencies abroad is steadily being extended, as is the exchange of information and specialized publications.

The Soviet public does not depend on these two agencies alone for foreign news, however. The big newspapers—*Pravda, Izvestia, Trud, Komsomolskaya Pravda, Literaturnaya Gazeta* and *Sovetskaya Kultura* among them—have their own permanent and special correspondents in many countries and periodically send journalists abroad on assignments. Besides, Soviet newspapers carry reports from the Associated Press, United Press International, Reuters Ltd., France Presse and other foreign agencies. In recent years our papers have more and more often carried the full texts of policy-making speeches by and interviews with such foreign leaders as Kennedy, Johnson, Rusk, Fulbright, Macmillan, Wilson and de Gaulle.

Za Rubezhom, a popular weekly with a large circulation, is devoted entirely to material from the foreign press. It regularly reprints Lippmann, Pearson, the Alsops, Lawrence and other columnists, as well as articles from *The New York Times*, the *New York Herald Tribune, The Washington Post, The Christian Science Monitor*, the *Baltimore Sun*, and other American newspapers.

Now for domestic news. Like the United States, the Soviet Union is a big country inhabited by people of dozens of nationalities and different languages. That, however, does not prevent the Soviet citizen, no matter what language he reads and speaks, from keeping abreast of events. There is an interchange of cultural values and of experiences in economic development among the various nationalities. The continual growth in the number of newspapers and magazines and in printed matter generally does much to keep Soviet public opinion informed.

Newspaper circulation has doubled in the past 10 years, and the annual circulation of magazines has quadrupled. There are more than 5,000 newspapers (not counting collective farm newspapers) published in the country with a total daily circulation of more than 83 million copies, and about 1,000 magazines with a total annual circulation of more than 750 million copies.

There is probably not a single organized group without its own publication. Young people, for example, share their attitudes and ideas and vigorously debate social and ethical problems in 163 youth newspapers published in the various languages spoken in the Soviet Union. Today there are 64 copies of newspapers per 100 people compared with only 2 per 100 before the 1917 Socialist Revolution.

More newspapers and magazines and greater radio and TV coverage will get the news to even larger numbers. But the question that follows is whether the press is really a mouthpiece of public opinion, a truthful reflection of popular sentiment, or whether it merely reflects the parochial interests and opinions of local groups. The answer depends on how democratic the particular social system is, to what extent it provides for popular expression, and how responsive it is to the sovereign will of the people.

Who Owns the Soviet Press? Whose Opinion Does It Reflect?

He who pays the piper calls the tune. To paraphrase: He who owns the press shapes public opinion. In the Soviet Union there are no privately owned newspapers and magazines. That disposes of the likelihood of a situation where, in the words of former British Minister Kenneth Younger, the mass press usually reflects the viewpoint of its owners and not its readers.

Regardless of ownership, however, a choice must be made of material to be published. The key questions are: What determines the choice? Who makes it? How is it checked to guarantee that the news is objective and reliable and will shape opinion along progressive lines?

We think it vitally important that the editorial policy of a

newspaper, the kind of material it chooses and how that material is planted be decided not by the interests and whims of one man—whether he is the owner or the editor in chief—but by the interests of society.

Who publishes the newspapers in the Soviet Union? Who owns them? Political, professional and other organizations and associations. The majority of our newspapers and magazines are published by the Soviets, the elected legislative and executive bodies. The rest are issued by the Party; the trade unions; youth, women's, sports and other organizations; the Union of Writers, the Union of Artists and the Union of Composers; scientific and technical societies, and other bodies. Nowhere in the Soviet Union is any medium of information in the hands of one person.

When a newspaper is owned by an individual, its policy is determined, in one way or another, by his business connections, his political views and his rivalry with other papers. That is obvious enough. The newspaper cannot help reflecting the owner's concerns and interests more than the reader's. We believe that when a newspaper is owned by an individual, that paper cannot possibly be a faithful reflection of public opinion and the public will.

Since the owners of Soviet newspapers are the democratically elected governing bodies of public organizations and associations, the choice of news and the way it is presented are determined by a collective that reflects the views of the membership.

What the reader thinks is therefore what the paper prints. The news and editorial policy of the press is not something imposed from above or the expression of the views of the editor in chief alone, but a reflection of the convictions of the general reading public.

Since Soviet papers express the viewpoint and interests of public organizations, that viewpoint and those interests determine the kind of news sent in by correspondents from various parts of the country and which of the items the editorial staff will select for publication.

Is it possible for an important piece of news to get swallowed in so much printed material and go unnoticed by the reader?

That is highly improbable. Our newspapers are small, usually four pages, sometimes six or eight, but the important news is there, and nothing important gets lost. A newspaper cannot print everything, it must inevitably be selective, but it should choose the material that concerns the greatest number of people and present it in a way that makes it readable and catches the eye. Public opinion, like sight, hearing and memory, is selective. A person who lives on a noisy street soon becomes so accustomed to the cacophony of sounds he constantly hears that he no longer distinguishes them or even notices them. If car drivers were to argue that those sounds produce a melodic symphony, people would laugh at them. To argue that the best way to mold public opinion is by dispersing its attention makes as little sense. Public opinion can only be effective when it is purposeful, when attention is focused on some problem for consideration and action.

The Reader Shapes Public Opinion

Professional newsmen, no matter how many of them there are, cannot hope to cover everything that goes on in the country. The gap is filled in by letters from readers. These letters play a vastly important role in reflecting widespread attitudes and in shaping public opinion.

There are two ways to look at letters from readers. A letter published in a paper may be looked upon as a safety valve that permits someone who is displeased about something to blow off steam. His letter printed, the reader is satisfied at the thought that he has made some fact or other public. But if the paper limits its functions to printing the letter, the writer has no assurance that his warning will be heard or his wish realized. He has no way of knowing whether public opinion supports the point he makes in the letter or whether its publication will result in any practical step.

The second view—and the one the Soviet press follows—is that publishing a letter from a reader is only the first step in molding public opinion and making that opinion effective. If a letter raises a point of general interest, by publishing it the paper may launch a discussion in its columns in which dozens or even hundreds of people take part. This leads to a thorough discussion of a problem, to solutions and concrete recommendations to the responsible bodies.

Here is an example. About three years ago a newspaper in the Ukraine published a letter from Nadezhda Zaglada, an elderly and experienced farmer. She had interesting things to say about the ennobling force of work and how much faster Soviet agriculture would move ahead if every farmer looked on his work as a matter of personal honor and civic duty.

The sense of dedication in that letter and its sincerity brought such a response from readers that it was reprinted in the country's biggest papers. Hundreds of readers wrote in, and what developed was a cross-country discussion of such far-reaching and important problems as the ethics of work, the way work is organized, the need for more public supervision, the value of moral pressure on slackers and opportunists.

Letters that raise questions of less general interest are sent to the public organizations or government agencies concerned. The newspaper follows up to find out whether action has been taken on the letter and often publishes the results. Consequently, the number of letters from readers keeps growing. The newspaper *Izvestia*, for example, receives more than 1,000 letters a day from its readers.

Whether a reader's letter or an article submitted by a reader is published depends not only on the one or two members of the editorial staff directly responsible but also on the volunteer assistants who work with them—members of the local Soviet, factory workers, engineers, doctors, agronomists, scientists. Anyone may bring an article into a newspaper office and be certain he will be welcomed and his article read. If it raises a problem of general interest, the article will be printed.

As a result, the opinion expressed by a newspaper is taken into account by the heads of government agencies, industrial establishments and collective farms, since it reflects not individual or group but really public opinion.

Public Opinion and Reforms

Is public opinion capable of formulating concrete problems, bringing them before legislative bodies, seeing that action is taken on them? Or can it only approve or take exception to bills drawn up by a narrow group of specialists and adopted by legislative bodies?

Western sociologists are inclined to the second view. They feel that public opinion has limited possibilities. After studying the findings of an opinion poll on several bills up for considera-

tion by the U.S. Senate, one sociologist declared that public opinion itself cannot advance proposals to meet its needs. It is not that public opinion is indifferent to these proposals but that it can not generalize them, this being the function of the legislators.

Soviet experience tells a different story—that public opinion can and does contribute constructively to legislation and, moreover, that it frequently formulates, through the press, proposals and recommendations on the basis of which legislative bodies pass laws.

Here are several instances.

In an article in *Literaturnaya Gazeta* the writer E. Serebrovskaya suggested that it was time to amend the laws on marriage and the family, and gave reasons. Other letters strongly supported her proposal and made others—that the law on support be clarified, that divorce procedures be overhauled, and so on. These suggestions, which were sent to the legislative proposals committees of the law-making bodies, were embodied in the draft of a new law on marriage and the family.

Another case. Several years ago the newspapers began to receive letters from irate readers citing cases of poaching and private felling of trees, and naming factories that were polluting rivers and reservoirs and killing the fish. The well-known novelist Leonid Leonov wrote a number of very impassioned letters on the subject. A general discussion ensued, as a result of which the Supreme Soviet of the Russian Federation adopted a conservation law in October 1960.

Soviet public opinion actively invades the field of law-making, often initiates legislation and provides moral support to ensure that the laws are observed.

The Government and the Communist Party are very mindful of public opinion, very much aware of Lenin's admonition: "We can govern only if we correctly reflect what the people realize."

Rights and Powers of Public Opinion

The public not only has the opportunity to speak its mind freely but also has growing legal prerogatives.

For one thing, places of employment and local authorities have public opinion to contend with in deciding such matters as job dismissal, the allocation of new and better housing, awarding bonuses, and so on.

If a man commits a crime and the collective where he works proves to the satisfaction of the court that he does not need to be isolated from society, the court may parole him in care of the collective for re-education. In the first half of 1963 the People's Courts in Kaliningrad Region of the Russian Federation considered 208 applications from public organizations pledging the good behavior of persons who had been found guilty of misdemeanors. The courts agreed to parole 164 of these people. An important role in educating for civic consciousness is played by the Comrades' Courts at factories, institutes, and so on.

People very much want the respect of their colleagues and neighbors, and the social pressure of the Comrades' Courts are often more effective than legal steps would be. Why shouldn't the Comrades' Courts be empowered to try many more of the cases presently heard by the People's Courts? The idea was first broached by residents of Leningrad in the columns of their biggest newspapers. It was supported by people all over the country. The Supreme Soviet of the Russian Federation passed a decree giving the Comrades' Courts much broader powers.

Unity Is Born in the Clash of Opinions

"Our society and state will become a mighty source of progress and a great force" said Lenin, founder of the Soviet state, "when the masses of the people know everything, can pass judgment on everything, and undertake everything with awareness."

A highly important function of the press follows from this democratic principle, namely: to keep the reader well informed, to reflect all the essential shades of public opinion, to reach the truth on vital problems through discussion.

One has only to leaf through *Pravda, Izvestia, Trud, Ekonomicheskaya Gazeta* and other newspapers to see that newspapers shape Soviet public opinion, not by imposing a certain viewpoint on the population, but by freely presenting different viewpoints for argument. For some years now a group of philologists at the Academy of Sciences has been working on a Russian spelling reform. In the fall of 1964 it published a draft of its conclusions in the leading papers. Although the philologists were guided in their research by the best of intentions—a desire to make Russian easier to learn by simplifying grammar rules, syntax and spelling, and by reducing the exceptions to the rules to a minimum—the public was not happy with their recommendations.

The discussions in the columns of newspapers and magazines argued against many of the proposed changes because they ran counter to linguistic tradition. In view of public reaction, the philologists have gone back to work on the reform.

In our country, where the public is knowledgeable even concerning problems which one might think would come within the competence of only a narrow circle of specialists, public opinion passes judgments that carry weight. Design agencies, for example, had worked out a plan to change the course of the Ob River in Siberia and build a big power station on it. But discussion of the project in *Literaturnaya Gazeta* showed that the engineers had neglected to take the economic consequences into account. People sent in facts and figures to prove that the flooding of vast tracts of land would do irreparable damage to farming. The project was dropped after public opinion made its point.

The struggle of viewpoints shapes public opinion on ethical as well as economic and technical problems. For example, the youth newspaper *Komsomolskaya Pravda* started a discussion on how scientific and technical knowledge influences an individual's emotional attitudes and ethical standards. Sharp differences of opinion were expressed in the letters sent in. The discussion as a whole showed that young people generally do not hold with those who say that scientific and technological training is a necessity today while artistic and ethical education is quite peripheral.

For some years now *Komsomolskaya Pravda* has been running an Institute of Public Opinion which polls young people on all sorts of social and ethical problems. Other newspapers and magazines, sociological centers and government departments and agencies dealing with trade, architecture, the health services, transport, communal services, etc., have been following suit and are doing more and more opinion polling through questionnaires.

Assessment of the great variety of forms and shades of group judgment and a full and objective study of public opinion are a natural trend in Soviet democracy. The more rapidly this trend develops, the more will people come to feel their civic responsibilities and the more actively will they participate in managing the country's affairs.



This new Lithuanian town is growing up around a power station. Its present population is 5,000.

A new school for a new town. These single-story units are linked together by glassed-in galleries.



ELECTRENAI, POWER WORKERS' TOWN

BY VITAUTAS POLIVANAS

FOR CENTURIES the sharp spires of the churches have been holding up the weak Lithuanian sun. Even in the smallest of towns which could afford neither a hospital nor a school, high church spires loomed over low wooden dwellings.

The village where Yurgis Plyarpa lived also had a church whose thin, narrow spire pointed heavenward,like a sharp dry finger. And Yurgis also looked to heaven for help. Without it, how could he provide for his family of nine? He had only one arm, the other had been torn off by a harvesting machine. There were not many people willing to hire a crippled farm hand.

Time, man and socialism made marked alterations in Plyarpa's life. This happened in 1940 when the people of Lithuania voted to become a Soviet republic.

The new government did not turn the village where Plyarpa lived into a land flowing with milk and honey, but it did give the landless peasants land and their children free schooling.

Unlike Plyarpa his, sons were provided with the opportunity for education, trained for a good livelihood. It is a joy for Yurgis to look at these fine men when they gather at his house! His seven sons have 13 trades and professions. Antanas is a fisherman and electrician, Pyatras a land reclamation engineer, Statis a radio operator, and Bronus . . . well, Bronus is rather special. His story is also Soviet Lithuania's.

He was working as a tractor driver in the village when he saw this announcement in the newspaper: "Men and women of all trades wanted to build the Lithuanian thermal electric power station. People without trades will be trained."

His decision to pack up and go was motivated by curiosity, his first venture outside the village. But when he made the announcement, old Yurgis interpreted it in his own way: "That's right, son, you should go," he said. "High time we had electricity in our house."

In 1960,when the republic was celebrating its twentieth Soviet anniversary, there was

nothing but a vacant lot on the spot where the power station and the town of Electrenai stand now.

The first three turbines of the station are already operating. The turbines, each with a capacity of 150,000 kilowatts, were built in Leningrad. For fuel they use gas piped in from the Ukraine.

When the station's eight turbines are working at full capacity, they will generate 25 times as much electricity as all the power stations of pre-Soviet Lithuania.

There was a time when Lithuania set some sad records. For instance, in per capita use of electricity, it held Europe's last place; its electricity was the most expensive in the world. Even in Soviet times the problem of sufficient electric power supply per industrial worker was acute. It no longer is. The Electrenai power station is finished. The republic will be among those on top of the world's list for per capita electric power production.

You can see a long way from the 820-foot smokestack topping the power station. This is the highest stack in Lithuania. And beyond the station, fringed by a belt of green hills, stands Electrenai, the new power industry city. Both the city and the station were built in an inordinately short time.

The gray, squat buildings of the station look somewhat gloomy next to the smart, bright-colored and brand-new houses of Electrenai.

You get a sense of unshadowed light and sun everywhere you walk in the city. The feeling is evoked by the large windows of the houses, by the big glass fronts that make the store windows look like aquariums, and by the wide boulevards. The city was planned ingeniously; the houses rise in terraces above each other so that they do not block the sun, even in the late afternoon.

Smack in the center of Electrenai is the school campus. It is called "Happiness." The several one-story buildings connected by glassed-in galleries house a grade school, kindergartens and nurseries. The school is attended by 455 children; 310 of them study in groups where all courses are taught in Lithuanian, and 145 in groups where all courses are taught in Russian.

The people of Electrenai like to boast that their city is first in the republic in the number of children per family. Mayor Eduard Paulauskas, a teacher by profession and the father of three children, says:

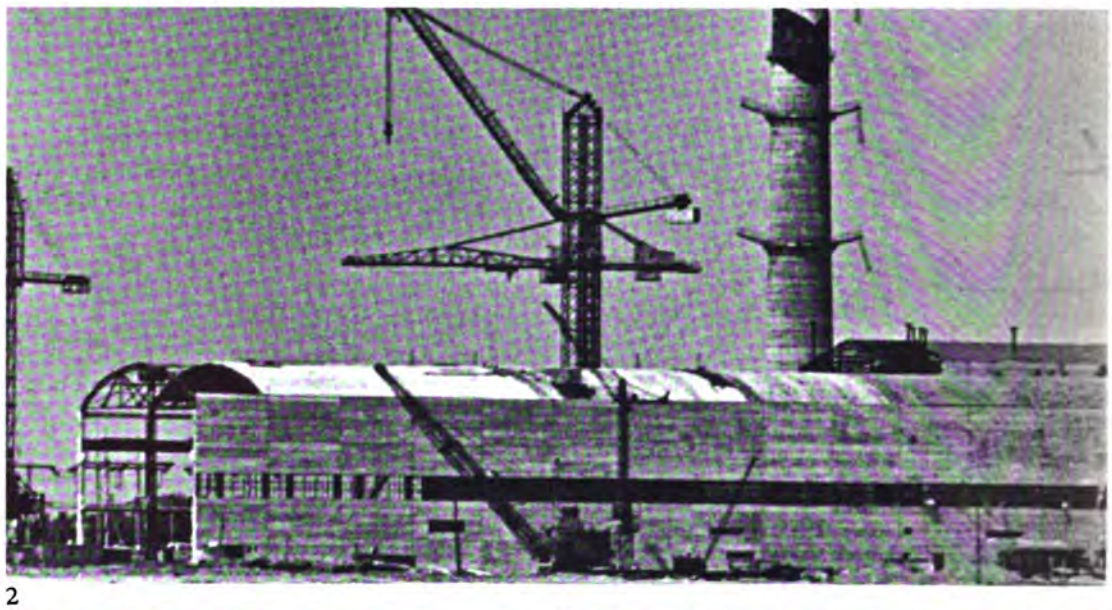
"Electrenai means 'a city of light,' or better translated, 'a city flooded with electric light.' Though our population is only 5,000, we have our hands full of problems. The city grows by the hour, just as our children do, and with the same growing pains. Small children have small problems, big ones big. We recently completed the construction of a stadium, a vocational training school, a center for public services and a movie. The wood interiors of the movie, the school and the kindergartens were done by the famous craftsmen who decorated the Palace of Congresses in Moscow. We still have plenty to build. We are now putting up a TV repair shop, a jewelry store and a bookshop."

Our Bronus Plyarpa is an excavator operator now. As he helps build the power station, he is also building the city. The common goal is to provide electricity. And electricity is already being supplied to the new chemical plant in Kedainyane, to factories and cities all over the republic. Electricity is also being supplied to Lithuania's villages, which are almost all electrified. Yurgis Plyarpa is likewise enjoying the boon of electricity. With these boons came a letter from his son which said, among other things: "As you see, I have carried out your behest to bring electricity to our village. And even earlier than you expected."

For centuries the skies of Lithuania hung on the spires of the churches. Now they are held up by TV studio masts, the steel needles of radio stations and the smokestacks of factories. At first they looked like exclamation marks on the country's smooth rolling landscape, but now they are as much a part of the view as the century-old oaks of the Anikshcheysky grove.



1



2



3

1
No streets yet and therefore no house numbers. But the letter carriers know almost everyone.

2
Three turbines of the power station are already working. This is another unit in construction.

3
Electrenai has the highest birth rate in Lithuania. The average age of its citizens is 24.

ABOUT PEOPLE WHO LEAVE GOOD MEMORIES

By Vera Kalnyn

EN ROUTE I reread the letter.

"Please excuse my handwriting and mistakes. I am not very good in grammar. I can't tell you much in a letter. That's why I want you to come to Rauna and write about a very good person, someone who has done a lot of good for others. To me she is a real mother, although she is younger than I am. Once, after a bad quarrel with my husband, I decided to get a divorce. With that in mind I went to the Village Soviet. But the chairman told me: 'Don't rush into it, my dear, don't rush. Think it over twice, maybe you're to blame too. You know, one log never burns . . .' Please, do not disclose my name. I wouldn't want my children to know that their parents almost broke up. But I do think you ought to write an article about our chairman. There are people who leave good memories of everything they do. Our Valia Pudane is that kind of person."

The forest, which seemed to be endless, suddenly opened up. The road climbed up a hill from which the ruins of a medieval castle could be seen and a church cupola with a golden cockerel on the spire. This was Rauna, a typical corner of the Latvian countryside. The building which houses the Village Soviet stood in the very center. An old man wiped his feet carefully at the threshold, then came in and hung his jacket in the anteroom.

"Well, my dear," said the old man as soon as he entered the chairman's study, "I have some notes here about Mount Tanisa. It is not an ordinary mountain. Seven or eight centuries ago farmers used their hats to carry the soil that built it."

Valia Pudane turned to me to explain,"All of us here have turned historians. We have decided to write a history of Rauna to let people know about the land of their fathers."

When Valia first came to Rauna, its only garden was overgrown with burdock. People still talk of the way she used to put on high boots, take a spade, go to the outskirts of the village and come back loaded with saplings. They remember her efforts to make the village a pleasanter place to live, one of the reasons they elected her deputy to the Village Soviet.

Now Valia is chairman of the Soviet's Executive Committee. An honor but also a great responsibility. The Soviet is accountable to the people for everything: village improvement, the school, the hospital, the local club and so on.

When she became chairman, Valia began to talk about planting saplings again. This time it was not her project alone but something the whole village became involved in.

Helena Savitskaya, a gardener, planned the landscaping—a park here, a rose garden there. Everything was taken into account—the number and kind of saplings, how many truckloads of dirt were needed and other such details. An open meeting of the Soviet was held to discuss and approve the project. Other improvement items also cropped up.

That spring the citizens of Rauna spent their free evening beautifying the village. The ruts were filled in and the streets bordered with young oaks and lime trees. Shrubs were planted in the public garden and rosebeds around the common grave of those murdered by the Nazis.

At Valia's suggestion, a young couple, the Rudzischis, planted the first trees in the "Grove of Newlyweds," and Vilma Zilvere, who heads the local club, and Aina Pirare, the librarian, did the first planting on Mount Tanisa. There are 120 apple treees in the "Grove of Newlyweds" now and more than 200 in the garden on Mount Tanisa.

The beautification project has been expanded from Rauna to the 612 farms scattered all over the area. Anna Kundzin, head doctor at the local hospital, initiated a contest for the most attractive farm. It meant visiting farms situated miles away from each other. The chairman also took part in this project.

Some time ago a kindergarten was Rauna's No. 1 problem. The farm women had no one to take care of their children. It was decided to open a kindergarten in an old mansion. But a district commission rejected the proposal because it had no running water.

The villagers decided to build a water main by themselves. Milda Saulite, a deputy to the local Soviet, got pipes, and Vladimir Zaryn organized a team of volunteer builders. The problem was finding someone to draw up the blueprints. Valia went to see local people; they said it would take time. But she decided the project couldn't wait. She went to Riga and talked specialists there into drafting blueprints for a main that would supply not only the kindergarten but the whole village with water.

The chairman showed me an ordinary-looking copybook she keeps in her desk drawer. It is a sort of diary for the village: "Today we opened a tailor shop, a barber shop and a beauty parlor. Gas piped to the first 20 houses. Inspected the restaurant. . . ."

It is not only community problems that the village Soviet concerns itself with. Yuris Gandis, a worker who lives on the hill, would have dropped out of school if not for Valia. Thanks to her encouragement, he earned his high school diploma last summer and is now studying by correspondence at a polytechnic institute.

Yuris' neighbor is Karlis Pecha, a pensioner. He lives alone and is ailing. Valia talked to teacher Mirdze Lautsin. Her pupils are now frequent visitors at Karlis'. They clean his room, keep him supplied with firewood, heat his stove and do his shopping.

As I talked to Valia, I kept thinking of this comment in the letter that had brought me to Rauna: "There are people who leave good memories of everything they do. Our Valia Pudane is that kind of person."

Courtesy of Izvestia



MOSCOW NEWS,

A MIRROR OF SOVIET LIFE

MOSCOW NEWS, an illustrated Soviet weekly, is a paper for anyone who wants firsthand information on what is going on in the Soviet Union today.

Each issue contains a review of the Soviet press, giving broad coverage to world affairs, foreign policy and the Soviet Union's cultural and economic contacts with other countries.

Free supplements carry full texts of the most important official documents as well as the speeches of prominent Soviet statesmen.

To get the news to its readers as it happens, *Moscow News* is air-mailed to the United States. It can be bought at newsstands, or by subscription through:

Victor Kamkin, Inc.
1410 Columbia Road, N.W.
Washington, D.C. 20009

Cross-World Books & Periodicals
333 South Wacker Drive
Chicago, Illinois 60606

Schoenhof's Slavic Books, Inc.
1280 Massachusetts Avenue
Cambridge, Massachusetts 02138

Four Continent Book Corporation
156 Fifth Avenue
New York, New York 10010

Imported Publications & Products
Room 812
1 Union Square
New York, New York 10003

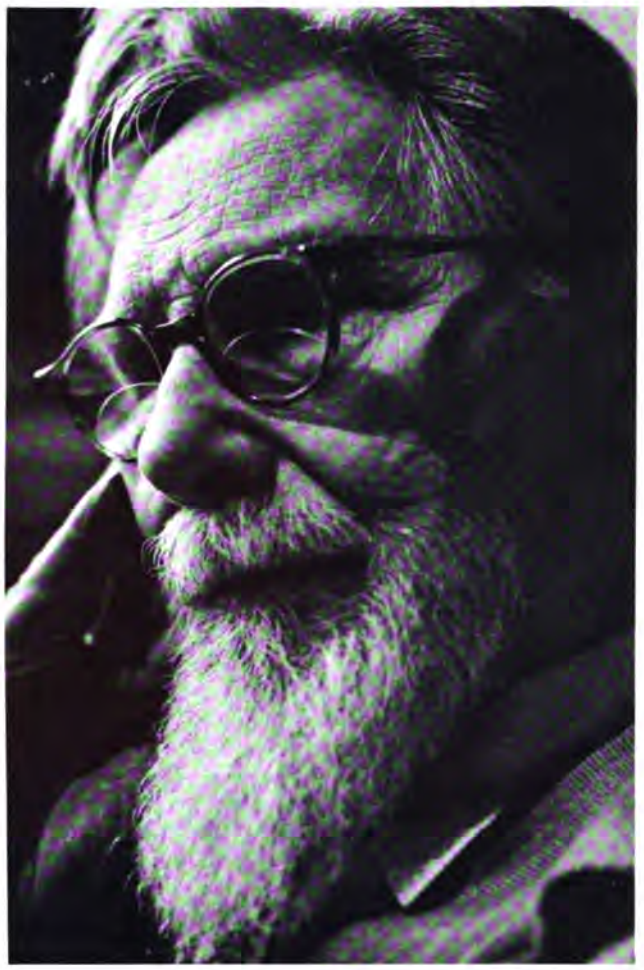
Stechert-Hafner, Inc.
31 East 10th Street
New York, New York 10003

Universal Distributors Company
54 West 13th Street
New York, New York 10011

Moore-Cottrell Subscription Agencies, Inc.
North Cohocton, New York 14868



BEAUTY ON HIS BRUSH



ART

Erich Larsen of California asked us about the Lithuanian painter Antanas Zmuidzinavicius. Our correspondent Ludmila Urazova visited the artist in Kaunas.

ART-MINDED Americans in their sixties may remember Antanas Zmuidzinavicius and the exhibitions of his work in New York, Washington and Chicago forty-odd years ago. His landscapes *The Neris River, The Nida Dunes, The Forest Pond, The Niemen Before a Storm* evoked the distant seashores of Lithuania, her sparkling rivers and lakes, her lush flood-land meadows, her majestic pine forests.

During his stay in the United States from 1922 to 1924 he depicted the American landscape in such canvases as *New York at Sunset, Indian Cave Dwellings, Grand Canyon* and *Niagara Falls.*

Antanas Zmuidzinavicius is a tall, slender man with a silvery beard and a mischievous twinkle in his eyes. He was born 88 years ago in Seiriyaj, a picturesque spot in southern Lithuania. He attended a seminary, and after graduating taught school for four years. Later, he studied at an art school in Warsaw.

In 1907 Zmuidzinavicius organized the Lithuanian Art Society. He arranged exhibitions and started some of his now famous collections—of folk sculpture, peasant fabrics, belts and aprons, musical instruments, and the like. One of his collections was the subject of the article "185 Devils" in the August 1963 issue.

The artist's first canvases also concerned peasant life. But it was evident very early that his main genre would be the landscape.

Zmuidzinavicius is a consistent realist. He cares too much for life to spend his artistic substance in hollow experimenting with form. He looks for the beautiful in man and nature and finds it—in a woman's lovely face, in a man's courageous eyes, in the wide sweep of a landscape. His landscapes and genre pictures come directly from folk life: *Threshing Flax, Children of the Niemen River, A Pasture on the Ronza Bank, An Early Fisherman.*

The walls of his studio have never isolated him. He has traveled widely in the USSR and abroad. He lectures at the Lithuanian Polytechnic Institute, is a consultant at the Art Museum and is active on several art committees. He works with the energy and vigor of a young man.

For more than 60 years his gifted hands have been busy with brush and with pen. Yet he is as unassuming as though he were just beginning his career. He has none of the solemnity of a patriarch. Talking to him, you forget that he is a People's Artist of the USSR, a professor, a corresponding member of the Academy of Arts, that his paintings have been displayed at some 200 exhibitions.

On his 85th birthday Zmuidzinavicius donated his paintings and some of his valuable collections to the republic. The artist's home, in Kaunas, has become an art museum.

His gift for poetry, kindled by the beauty of his native land, is apparent in the several books he has written. One of them, *The Palette and Life,* is now being translated into Russian.

But his sallies into literature have not distracted him. Painting is still his main work. He is presently completing a series of landscapes to be titled *The Kaunas Sea.* It will make a distinguished addition to the 2,000 paintings and the innumerable drawings and book illustrations he has produced in a long and fruitful career.



Indian Cave Dwellings, Arizona. *Oil, 1923.*

Sunrise on the Potomac. *Oil, 1922.*





Evening in Palanga. *Oil, 1942.*

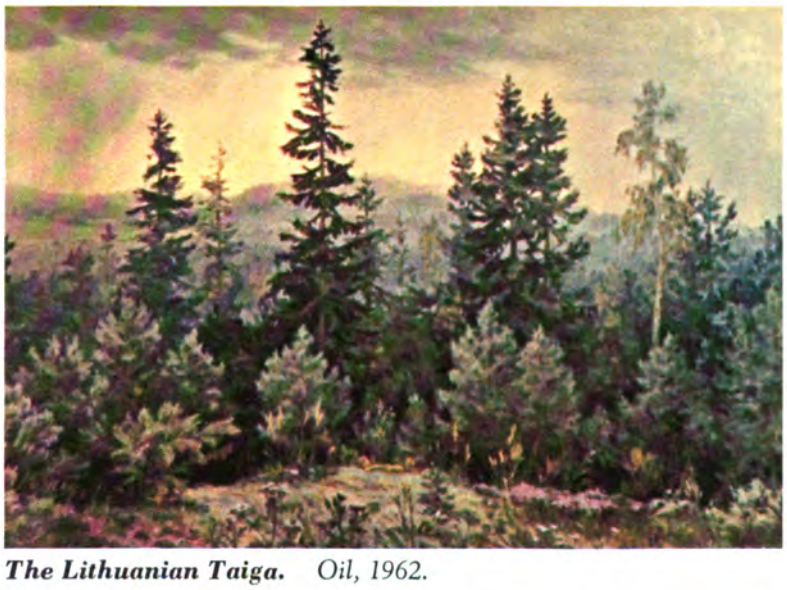




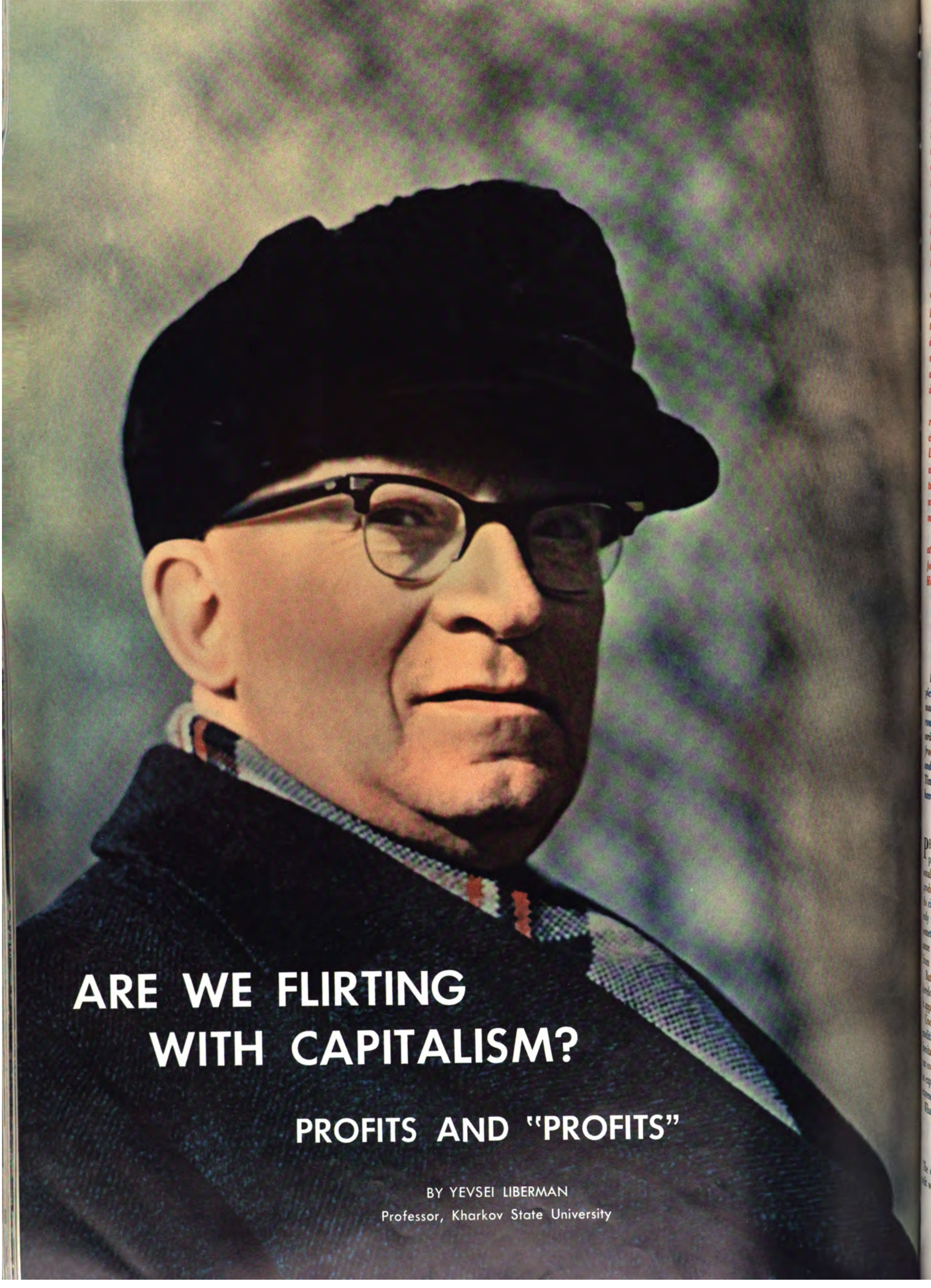
Grand Canyon, Arizona. *Oil, 1923.*



The Nida Dunes. *Oil, 1936.*



The Lithuanian Taiga. *Oil, 1962.*



ARE WE FLIRTING WITH CAPITALISM?

PROFITS AND "PROFITS"

BY YEVSEI LIBERMAN
Professor, Kharkov State University

Yevsei Liberman was past 50 when he began questioning the validity of the methods used in economic planning. That turned him to research. His doubts stemmed from his long experience as a teacher and working economist. In fact he was an orthodox economist, arguing in his lectures, articles and books that the strengthening of centralized planning meant more economic efficiency. At that time he had no doubts. The doubts appeared after the war, when the problem of qualitative economic development arose.

In 1948, at a meeting of economists in Moscow, he proposed a consideration of profit as an index which could readily be used to gauge the efficiency of an enterprise. His proposal went unnoticed. This was a period of vigorous economic development,with interest centered on quantity rather than quality.

However, the idea was too reasonable for Liberman to discard. He started collecting supporting data and a few years later presented his Doctor of Science thesis on the subject. By that time, the need for modernizing planning methods was being discussed widely in news columns and periodicals. In 1956 the magazine Kommunist, *the Party's central theoretical organ, ran an article by Liberman on the value of profit as a principal index for gauging the work of an enterprise.*

Liberman has argued his point at conferences and in survey reports for the Government. Two of his articles in Pravda *precipitated a nationwide debate. Pilot experiments made in Kiev, Lvov and Moscow factories confirm his idea. The use of profit as a measure of efficiency, supplemented by direct contact between the manufacturer and consumer, is valuable to those who produce goods and those who use them, to the worker, management and society.*

Liberman now holds the chair of the economics of engineering at Kharkov State University in the Ukraine—Kharkov accounts for seven per cent of the country's engineering industry output. He is also a consultant for the local plants.

In its February 12 issue this year* Time *magazine carried my picture on its cover, with the prominent caption, "The Communist Flirtation with Profits." The cover story, entitled "Borrowing from the Capitalists," made many references to my writings and statements, and drew conclusions vastly different from those I make. I therefore asked the editors of* Soviet Life *and* Ekonomicheskaya Gazeta *to permit me to comment on the* Time *article in their publications. To do a proper job, I shall have to go rather deeply into the essential character of profits.

PROFITS are the monetary form of the surplus product, that is, the product which working people produce over and above their personal needs. The surplus product is, therefore, an expression of the productivity of labor. Primitive man ate or used up what he produced. As civilization and technology progressed, labor began to create not only the equivalent of the working people's means of subsistence but something more. This something more was the surplus product, the very same surplus product that supports the entire nonproductive sphere, from the watchman to the banker and cabinet minister.

But the surplus product is also the source of means essential for the development of society. That applied to feudal and capitalist society, and it applies to socialism and communism.

Under socialism products and services are also produced as commodities and also sold chiefly for money. Therefore, the surplus product inevitably assumes the monetary form of profits. But since profits in our country are used in the interests of society, they become less and less an expression of surplus (unpaid) labor and come more and more to express socially necessary labor.

What is the difference between capitalist and socialist profits?

Bonus "for Risks"

The difference is not, of course, that private enterprise stands for profit while socialism "denounces" it, as economists in the West often claim. To make the difference clear, let us examine 1) how profit is formed, 2) what it signifies, and 3) for what purposes it is spent.

From the private entrepreneur's viewpoint, all profit belongs to the capitalist. To support this view, economists built the theory of the three factors that create value: capital, land and labor. In *The Theory of Economic Development* Joseph A. Schumpeter says that profit is everything above cost. But this "cost" includes "wages" for the labor of the entrepreneur, land rent, interest on capital, as well as a bonus "for risks." On top of that, the entrepreneur reaps a profit if he succeeds, by a new combination of production elements, in reducing the cost to below the existing price level.

What kind of "combination of elements" this is can be seen from the fact that the main part of the profit under the private enterprise system now comes not so much from production as from the process of exchange. For instance, high profits come most readily from advantageous buying of raw materials, the raising of retail prices, the tendency of unemployment to lower wages, nonequivalent exchange with developing countries, the export of capital to countries where wages are low, the system of preferential tariffs and customs duties, raising the prices of stocks on the stock exchange, and so-called *Grunder* (speculator's) profits.

Does Money Smell in the Soviet Union?

All those sources of profit are ruled out in the Soviet Union owing to the very nature of socialism, under which there is neither private ownership of the means of production nor stock capital and, consequently, no stock market. The level of payment for labor depends on its productivity and is regulated by law. The prices of raw and other materials are planned; market conditions that could be taken advantage of in purchasing raw materials or hiring labor do not exist. Nor can the prices of finished articles be raised by taking advantage of market conditions. Exchange with other countries is conducted on the basis of equality and long-term agreements.

Legend has it that the Roman Emperor Vespasian decided to impose a tax on public toilets when he saw that his treasury was running low. His son Titus, who later succeeded to the throne, waxed indignant at such an evil-smelling source of revenue. Vespasian then held up to his son's nose the first receipts from the toilet tax. "*Non olet!*" ("It doesn't smell!") Titus exclaimed in surprise. Ever since then the view that "money doesn't smell" has been gospel in the commodity world. Indeed, under private enterprise nobody really cares how money is made. The important thing is to make it, the important thing is how much of it you can make.

But in the Soviet Union "money does smell." That will be seen if we look into the nature of profit. In our country profit testifies, in principle, only to the level of production efficiency. Profit is the difference between the selling price of articles and their cost. But since our prices, in principle, express the norms of expenditure of socially necessary labor, the difference is an indicator of the comparative economy with which an item is produced. Behind Soviet profits there is nothing except hours of working time, tons of raw and other materials and fuel, and kilowatt-hours of electrical energy that have been saved. Our profits cannot "smell" of anything but that. We do not justify profits obtained through accidental circumstances—for example, excessive prices—and we do not consider such profit a credit to the factory or other enterprise which makes it. We look on such profits, rather, as the result of an insufficiently flexible practice of price fixing. All such profits go into the state budget, without any bonus to the enterprise concerned.

Capitalist profit is a different matter altogether. As the reader knows very well, profits in the West can indicate anything under the sun over and above purely technical and organizational efficiency. Commercial dexterity, successful advertising, profitable orders for military production—that is what the history of present-day big capital testifies to sooner than to anything else. Surely it must be clear that in essence and origin profit under socialism bears only a superficial resemblance to profit under private enterprise, while by its nature and by the factors to which it testifies it is fundamentally different from capitalist profit.

Where do profits go in the Soviet Union? First of all, neither a single individual nor a single enterprise can appropriate profits. Profits are not arbitrarily invested by any persons or groups for the sake of private income.

Profits belong to those to whom the means of production belong, that is, to all the citizens, to society. Profits go, first and foremost, for the planned expansion and improvement of production and scientific research, and to provide free social services for the people: education, health, pensions, scholarships. Part is spent on the management ap-

paratus and, unfortunately, a rather large part goes for defense needs. We would gladly give up this last expenditure if a program of general disarmament were adopted.

Indicators in Industry

There is nothing new in that use of profits in the Soviet Union. Our enterprises have been making profits in money form for more than 40 years, ever since 1921. It is with these profits that we have built up our giant industrial potential, thanks to which we have moved to a leading position in world science and technology. And we have accomplished this without major long-term credits from other countries.

Why has the question of profits been so widely discussed in the Soviet Union lately? Not because profits did not exist before and are only now being introduced. *The reason is that profit was not, and still is not, used as the major over-all indicator of the efficient operation of our enterprises.* Besides profit, we have been using a fairly large number of obligatory indicators—among others, gross output, assortment, lower costs, number of employees, size of payroll, output per employee, and average wages. The multiplicity of indicators hamstrung the initiative of the enterprises. Their main concern often was to turn out as great a volume of goods as possible since they would be rated chiefly on gross output. Furthermore, enterprises did not pay much attention to how they used their assets. Trying to meet their output quotas in the easiest way for themselves, they asked for, and received free from the state, a great deal of plant, which they did not always use efficiently or to full capacity.

How do we explain that?

Virtue Becomes Vice

For a long time the Soviet Union was the only socialist country. We stood alone, surrounded by a world in which there were many who wanted to change our social system by force. We had to build up our own industries and secure our defenses at all costs and in the shortest possible time. Such considerations as the quality and appearance of goods, or even their cost, did not count. This policy completely justified itself. The Soviet Union not only held its own in the war of 1941-1945 but played the decisive role in saving the world from fascism. That was worth any price. And that was our "profit" then.

But, as Lenin often said, our virtues, if exaggerated, can turn into vices. And that is what happened when we held to the same administrative methods of economic management after we entered the stage of peaceful economic competition with the industrial countries of the West.

We want to give every citizen, not only the well-to-do, a high standard of living, in the intellectual as well as in the material sense. In other words, we want everyone to have the fullest opportunity to develop his mental and physical capacities and his individual (I emphasize, individual, and not group) inclinations and interests. We want every person in our country to be able to do the work he wants most to do. We want to reach the point where it will not be possible to draw a hard and fast line between a person's vocation and his avocation.

Before we can bring people's intellectual capacities to full flower, we must satisfy their material needs, place goods and services of high quality within everyone's reach. These needs must be satisfied, moreover, with the lowest possible production outlays and the fullest possible utilization of all assets.

What Is the Way Out?

All that cannot be done through the old methods of administrative direction and highly centralized management. We must change over to a system whereby the enterprises themselves have a material incentive to provide the best possible service to the consumer. It is clear that to do this we must free the enterprises from the excessive number of obligatory indicators. In my opinion, the criteria for rating the work of enterprises should be: *first*, how well they carry out their plans of deliveries (in actual products); and, if these plans are fulfilled, then *second*, their level of profitability. I believe that out of their profits, enterprises should have to pay into the state budget a certain percentage of the value of their assets as "payment for use of plant." The purpose would be to spur enterprises to make the most productive use of their assets. Part of the remaining share of the profits would go into incentive pay system funds, the amount depending on the level of profitability. The rest of the profits would accrue to the state budget to finance the expansion of production and to satisfy the welfare needs of the population.



Plan, Profit and Bonus

Why do I choose profit as the indicator?

Because profit generalizes all aspects of operation, including quality of output. The prices of better articles have to be correspondingly higher than those of articles that are outmoded and not properly suited to their purpose. It is important to note, however, that profit in this case is neither the sole nor the chief aim of production. We are interested above all in products with which to meet the needs of the people and of industry. Profit is used merely as the main generalizing and stimulating indicator of efficiency, as a device for rating the operation of enterprises.

Yet Western press comments on my writings blare away about the term "profit," very often ignoring the fact that the title of my *Pravda* article of September 9, 1962, was "The Plan, Profits and Bonuses." They make a lot of noise about profit but say nothing about planning.

Actually, my point is to encourage enterprises, by means of bonuses from profits, to draw up good plans, that is, plans which are advantageous both to themselves and to society. And not only to draw them up but carry them out, with encouragement from profits. It is not a question of relaxing (or rejecting) planning but, on the contrary, of improving it by drawing the enterprises themselves, first and foremost, into the planning process, for the enterprises always know their real potentialities best and should study and know the demands of their customers.

The contractual relations with consumers or customers that we are now starting to introduce in several branches of light industry by no means signify that we are going over to regulation by the market. We have better ways of predicting consumer demand because we know the wage fund of the urban population and the incomes of the collective farmers. Therefore, we can draw up scientific patterns of the population's income and expenditure. In our country consumer demand, in terms of total volume, is a factor that lends itself to planning. However, the various elements of that volume—for instance, the colors of sweaters or the styles of suits factories should produce, or how best to organize their production—need not be the prerogatives of centralized planning but matters on which the stores and the factories concerned come to terms. Thus, the consideration of consumer demand and the planning of production are not only compatible in the Soviet Union but can strongly substantiate and supplement each other.

The Substance of Our Debates

The *Time* cover story is full of contradictions. It admits that the Soviet people now have more money and that there is a growing demand for better and more fashionable clothing and for private cars. One would think that pointed to an improving economy, yet the article claims that the switch to profits is a result of "unsettling prospects," of "waste, mismanagement, inefficiency and planning gone berserk," and so on and so forth.

There are, of course, no few instances of waste and mismanagement in the Soviet economy, just as there are in private enterprise; think of the thousands of firms that go bankrupt every year. But in the Soviet Union we focus public attention on instances of waste and mismanagement. We publicize and criticize them openly. Some Western



Three times a week Professor Yevsei Liberman lectures on industrial statistics at Kharkov State University; he is also a consultant to the Ukrainian Institute of Economics and to engineering plants. Two of his graduate assistants are introducing statistical planning methods at Kharkov plants.

commentators take advantage of that fact. What better way can there be of distorting an over-all picture than to pick haphazard details and offer them as representative of the whole? The over-all picture shows that the Soviet Union increased its output by 7.1 per cent in 1964. *Time* admits that this is a very good growth rate for a highly developed economy. It is not good enough for us, however. We are used to growth rates expressed in two digits. *Time* does not mention that the reason for this 7.1 per cent growth rate, a relatively modest one for us, was the 1963 crop failure.

We are turning to profits not because we need a "sheet anchor." We are not in any danger. The fact remains, however, that we have to improve our methods of economic management. This is the substance of our debates and our searches.

The Main Function of Profits

Under socialism, profits can be a yardstick of production efficiency to a far greater degree than in the West, for in the Soviet Union profits follow, in principle, only from technological and organizational improvement. This also means that profits here will play an important but subsidiary role, like money in general, not the main role. After providing a yardstick of production achievement and a means of encouraging such achievement, profits in the Soviet Union are used wholly for the needs of society. They are returned to the population in the form of social services and expanded production, which guarantees full employment and better and easier working conditions for everyone.

In the Soviet Union nobody accumulates profits in money form—neither the state nor enterprises. This is an important point to grasp. If, for instance, at the end of the year the state as a whole has a surplus of budget revenue over expenditure, the surplus does not stay in the form of accumulated currency but is immediately used for two purposes: 1) to increase State Bank credits for material stocks, in other words, the surplus takes the material form of expanding inventories in production or trade, while money only measures this increase, and 2) to withdraw paper money from circulation, that is, to increase the purchasing power of the ruble on the free collective farm markets, where prices are determined by supply and demand.

Consequently, profits cannot become either capital or hoarded treasure in the Soviet Union. They are not, therefore, a social goal or a motive force in production as a whole. The motive force in production under socialism is the satisfaction of the steadily growing material and cultural needs of the population. However, profit can be, and should be, an indicator (and the key indicator, moreover) of production efficiency. It should serve to encourage workers to raise their efficiency. But it should be understood that encouragement from profits is not distribution of the results of production on the basis of capital. Distribution is still on the basis of work; it is work that rules distribution under socialism.

The Goal and the Means

The significance of profit in the Soviet Union was underestimated owing to a certain disregard of the law of value. Some Soviet economists incorrectly interpreted that law as an unpleasant leftover from capitalism and said we had to get rid of it as quickly as possible. Shelving the law of value led to arbitrary fixing of planned prices and to prices that operated over too long a period. As a result, prices became divorced from the real value of goods, while profits fluctuated greatly from enterprise to enterprise, even on comparable articles. Under those conditions profits were poor reflections of the actual achievements in production. Because of this, many economists and economic managers began to consider profit as something completely independent of production and, hence, as a poor guide in matters of economic management. This is the delusion many Soviet economists, among them the present author, are now trying to expose. We do not intend to go back to private enterprise but, on the contrary, to permit the economic laws of socialism to operate. Centralized planning is wholly compatible with the initiative of enterprises. This is as far from private enterprise as private enterprise is from feudalism.

The law of value is not a law of capitalism but a law of all commodity production, including planned commodity production under socialism. The difference from capitalism is that the goal and the means have changed places. Under capitalism, profit is the goal, and the satisfaction of the needs of the population is the means. Under socialism it is just the other way around. Satisfaction of the needs of the population is the goal, and profit is the means. The difference is not one of terms but of substance.

Time and the Soviet Economy

Soviet economists can only smile when they read how *Time* interprets the socialist planning system. It says: "A knitwear plant ordered to produce 80,000 caps and sweaters naturally produced only caps: they were smaller and thus cheaper and quicker to make." In other words, the factory had freedom of choice. But elsewhere the same article says that factories are tied hand and foot by the plan, and that the plans account for each nail and electric bulb. Where is the logic?

Another example: "Taxi drivers were put on a bonus system based on mileage, and soon the Moscow suburbs were full of empty taxis barreling down the boulevards to fatten their bonuses." But every Moscow schoolboy knows that the bonus of taxi drivers is based on the amount they collect in fares. Empty runs are a disadvantage. As a matter of fact, there is a restriction on the mileage of empty runs. Taxis in Moscow and many other cities are radio dispatched, the purpose being to reduce empty runs. Such lack of knowledge on the part of the *Time* staff can hardly make for an objective appraisal of the Soviet economy.

The magazine's statements on more serious matters are just as informed. Experimental garment factories, it says, "showed such a resounding improvement in efficiency—and such 'deviationism'—that many Kremlinologists assumed they had contributed to Nikita's downfall."

In the first place, these factories did not show any "resounding" improvement in efficiency. On the contrary, their output dropped owing to a greater outlay of labor for more painstaking manufacture and finishing of the articles. The only thing they showed is that when given the right to plan their output on the basis of orders from stores, they can make good suits of wool and man-made fiber mixtures at a lower price. Customers readily buy these suits.

In the second place, what kind of "deviationism" is it if the "deviation" was made in conformity with instructions issued by the Economic Council of the USSR in March 1964—without any direct participation by Professor Liberman, whom the Western press cites, without having sufficient grounds for doing so, on every occasion when steps are taken to improve the Soviet economy. My modest role, like that of many other of our economists, is to study methods of improving economic management on the basis of the principles and economic laws of socialism.

Rivers Don't Flow Backward

Soviet economists have no intention of testing the economic methods of private enterprise. We expect to get along with our own methods, sharpening the tried and tested instrument of material incentive on the grindstone of profit. This has been one of our instruments for a long time, but it has grown dull, chiefly because we didn't use it enough. Now we are sharpening it and it will, we hope, serve socialism well. But this does not mean that we are either giving up a planned economy or turning toward the system of private enterprise. Rivers do not flow backward. And if, at high water, rivers make turns, they are simply cutting better and shorter channels for themselves. They are not looking for a way to go back.

AROUND the COUNTRY



MARTIAN OR SAVAGE?

A rock drawing dating back to the Neolithic period was discovered by Georgi Shatsky, an amateur archeologist, on a cliff not far from Fergana in the Uzbek Republic. It depicts a man with outspread arms. A horizontal line crosses the body at waist level, and there is a halo around the head with short rays spreading from it.

This halo, could it be a space helmet with antennae? And what's that behind his back? Some sort of a flight contraption? Similar drawings were discovered in the central Sahara back in 1956. There was some speculation that they depicted cosmonauts who visited our earth 3,000 years ago.

But there is a more prosaic interpretation. The hairdresser's art was at a very low level in the Neolithic period; there weren't even scissors. Yet hair kept growing. Since the animal skins that served as clothing had no pockets, small things were stuck into the hair and big things were hung on a belt. Perhaps the drawing from Fergana is a portrait of an ancient dandy? Suspended behind him from a belt may be his favorite bludgeon, and peeping out of his hair various small implements—hooks, awls, slivers, and, perhaps, decorative hairpins and feathers.

POLYMERS TO FRESHEN WATER

There are great areas of the Soviet Union which suffer from a lack of fresh water: Kazakhstan, the Central Asian republics, the regions along the middle and the lower reaches of the Volga, and the Altai Territory. What water these areas do have is too salty to drink.

To build atomic freshening units in small villages is too expensive, and the water they produce is condensed and must be made potable.

The plastics research institute has worked out a new electroionite method for freshening salt water. Ionite materials, because of their low electric resistance, can separate the salt ions according to the electric charge pattern, drawing the sodium to the left, the chlorine to the right, and leaving pure water in the middle.

The portable Barkhan freshening unit presently in use by shepherds and geological prospecting parties can produce 3,175 gallons of the purest fresh water in 24 hours. The MEOU-1 electric water-freshening unit built by a Kaliningrad factory provides drinking water on fishing vessels.

SCHOOLGIRL RESEARCHERS

At the 128th session of the section on child surgery of the Moscow Surgical Society a schoolgirl delivered a speech.

She reported on a joint research project of the students of specialized secondary school No. 428 (which trains nurses). The report "Concerning the Early Discharge of Children from Hospitals after Operations" was submitted as part of the regular proceedings of the society.

"The stay of children in a hospital is, in one way or another, injurious psychologically. What we must do is cut their hospital stay to a minimum," said the reporter Masha Meshcheryakova, a graduating student.

The members of the research group had interviewed 100 children who were discharged from the hospital early. They concluded that reducing the time of stay in the hospital had not complicated recovery and had a good psychological effect on the children.

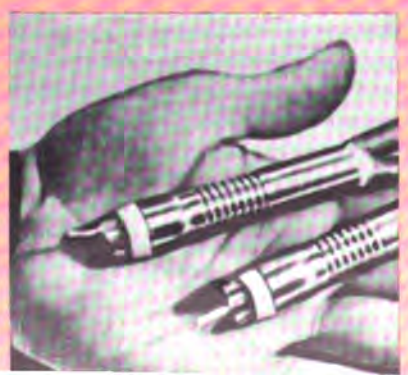
After the report one of the medical men present took the floor, and the discussion that followed was carried on as though the reporter was a dignified surgeon with several degrees rather than a high school senior. Researchers seem to be getting younger and younger.

SURGICAL FREEZER

This miniature device weighs less than two ounces and fits into the palm of a hand. It is a surgical freezer.

Cataract is an ancient disease. An opacity of the crystalline lens of the eye, it eventually leads to blindness. The best way to treat a cataract is to operate on it. But it is extremely dangerous to touch this very delicate part of the eye with a conventional surgical instrument. The operation requires exceptional skill, and not every surgeon will attempt it.

The small freezer permits this precise and delicate operation to be done in every clinic. Outwardly, the device resembles the end of a dentist's drill. When it is hooked up to a source of current, the temperature at the end of the needle drops to minus 31 degrees. The surgeon brings the microfreezer to the patient's eye; the lens is quickly congealed and can then be operated on safely and painlessly. More than a thousand successful operations have already been performed with this new device.



NEW SIBERIAN RAILROAD LINE

This year railroad builders drove a silver spike into the last tie of the last stretch of the Abakan-Taishet trunkline.

The line runs through the most inaccessible part of Siberia—the East Sayan Mountains. Construction work there got off to a tragic start back in 1942, when the first surveyors—Alexander Koshurnikov, Alexei Zhuravlev and Konstantin Stofato—all of them young men, died in the taiga. Three stations on the new line have been named after them.

There are 258 bridges, three viaducts 187 feet high, and nine tunnels carrying the track across mountains and rivers and through taiga on its 404-mile route. The longest tunnel is one and a half miles long. The line is fully electrified and equipped for centralized automatic control.

The trunkline has great economic importance. It cuts 190 miles off the route ore must now travel from the Korshunovsk deposit in Eastern Siberia to the West Siberian Iron and Steel Works, and facilitates timber transport to Kazakhstan and Central Asia. It will save the country 25 million rubles annually and will pay for its cost of construction in five years.



WATER UNDER THE DESERT

There was a time when fresh water was always in short supply in the oil towns of Nebit-Dag and Cheleken near the Caspian Sea in torrid Turkmenia. The daily supply was only six and a half gallons per person. Today these settlements have water in plenty, and it comes from the desert.

Turkmenian hydrogeologists once said that there must be water-bearing beds beneath the layer of sand. For eight years prospecting parties combed the desert, and finally last year their efforts were crowned with success. A huge lake of fresh water 230 feet deep and 780 square miles in area was discovered deep below the surface.

A 75-mile water conduit was laid across the sand hills and salt marshes to bring cool spring water to parched Nebit-Dag. Today the daily water supply of each of its inhabitants is 79 gallons. Now builders are extending the conduit to the shore of the Caspian Sea, where fresh water is also in short supply.



"CRIBS"

The first festival of films shot by amateur cameramen of Kirghizia was held recently in Frunze, capital of the republic. The theme of the contest, as conceived by its organizers, was Soviet labor, the aspiration of youth to knowledge, and the values of fellowship. Much to everyone's surprise, however, the first prize for the "best creative approach" went to a film with the significant title *Cribs*. The producer, a ninth grader by the name of Murat Djergolbayev, devoted it to the pranks of his classmates and demonstrated 12 ways of slipping someone a crib. Although 16-year-old Murat's interpretation of the theme was a little odd, to say the least, the film was so ingenious, amusing and full of life that the jury was unanimous in its decision.

AVALANCHE, STOP!

It's as though a thousand-gun salvo were rending the silence of the Tien Shan Mountains. Broken loose from the peaks, a large mass of snow is avalanching down the mountainside at express train speed, as terrible a natural calamity as an earthquake or flood.

Stations in the mountains keep an ever-vigilant eye on the snow. Scientists climb high up the peaks and, after measuring the thickness of the snow cover and studying the snowflake crystallization processes, draw up avalanche hazard charts.

The avalanche service saves lives and property. In Kirghizia it reduced work hazards on the Frunze-Osh railroad to the vanishing point.





WOMAN BREAKS AIR SPEED RECORD

A closed-circuit air speed record over a 100-kilometer route is the hardest to set. Only recognized master pilots venture it. Even a meter loss in altitude from start to finish means trouble. To make it harder, the width of the course is restricted to one kilometer. These difficulties account for the blank space in the record table opposite aircraft in the third weight category (up to 1,750 kilograms). Galina Kolchugina recently filled it in. Flying a light jet sports plane designed by Alexander Yakovlev, she developed a speed of 710 kph. The flight took eight minutes.

Galina Kolchugina is 29 years old and an engineer by profession. For the past 10 years she has been flying as a sport. She flies both conventional and jet sports planes, as well as the MIG-15 and MIG-17 jet planes, which until recently were supposed to be a "male monopoly."

This is Kolchugina's first record, but there will be more broken with this new sports plane, she says.

JUVENILE ARTIST WINS GOLD MEDAL

Seven-year-old Arvides Lekavichus lives in Vilnius and now attends the first grade. When he was in the kindergarten, he drew a picture of a blue-eyed doll in Lithuanian national dress. In the fall of 1964 the picture was sent to the International Exhibition of Children's Drawings in the Italian town of Forte dei Marmi, where it won the gold medal.

The little prize winner began to draw when he was three. He recently joined a drawing class at the Vilnius Pioneer Palace where, incidentally, he is the youngest pupil. He is partial to pictures of fast trains, planes flying and spaceships shooting to the stars.

Eventually Arvides will be able to go to the Vilnius Art School, where gifted children study.







AT PICASSO'S REQUEST

Pablo Picasso has requested Soviet geologists to prospect for wolchonskoit. This mineral is the source of a green paint of inimitably fresh hue. So far chemists have not been successful in synthesizing it, and known world resources of the mineral are dwindling.

In the past, small outcroppings of this rock were found in the Northern Urals. Last summer field parties of the Perm Geological Trust combing the Ural Mountains were instructed to search for the rare mineral along with their basic assignment. One deposit has been found with very promising reserves. A batch of the wolchonskoit sent to a factory by the prospectors produced an excellent paint. Work is now under way to tap this deposit on a large scale.

ULUGH-BEG MINARET STRAIGHTENED

The southeast minaret of the Ulugh-beg madrasah was gradually tilting. The top of its 105-foot tower had deviated 5 feet 1 inch from the vertical.

The plan for straightening the minaret was worked out by Emmanuel Gendel, a Moscow specialist. He had been in charge of moving buildings in the capital before the war and, subsequently, the straightening of bell towers and steeples of several ancient churches not far from Moscow and Yaroslavl.

The problem is that every structure settles with time. In this case he had to raise the part of the minaret that had settled 12 ½ inches. This was no simple job with the minaret weighing 970 metric tons. Ten hydraulic jacks were installed under its foundation. It took only two days to jack up the part of the building that had settled, but the preparations took more than three months.

A MILLION FOREIGN TOURISTS

Tourists come to the Soviet Union not only to see a social experiment in action but to view its cultural offerings—art, theater, ballet—its historical monuments and its endless variety of scenic beauties. The USSR had one million foreign visitors in 1964, some 70,000 more than the previous year. This increase measures up to the average annual world increment in tourist travel. All in all, more than six and a half million people from abroad toured our country between 1956, when Intourist resumed activity after the war, and the end of last year. Most of the sightseers were from Poland, Finland, the German Democratic Republic, Rumania, Great Britain, France and the United States.

About a million Soviet citizens traveled abroad last year.

Starting this year, tourists arriving on specially chartered planes and boats can stay for two days without an entrance visa.

The photo shows French tourists at the Troitse-Sergievo monastery.



THE MOST BEAUTIFUL

Although everyone agreed that Ludmila Savinkova was the most talented gymnast in the country, she had never won a national championship. Some commentators said she lacked athletic stamina, others that she was much too susceptible to impressions, overnervous. In addition she seemed to be accident-prone.

Just a year ago, when it was a question of whom to send to the first major international competition in Budapest, Ludmila suddenly developed a limp as she was performing before a packed gym.

In Budapest, though, everything went off smoothly. When she came out onto the mat, the spectators were treated to a performance that combined sportsmanship, artistry, acting and something else besides, something she alone seems to have. The judges from 10 countries gave her the highest rating—Europe's best. Also Europe's most beautiful, because there is no sport more beautiful than gymnastics.

A year later the International Gymnastics Federation, at one of its routine business meetings, departed from generally accepted canons to give the first major international gymnastics competition world championship status. That is how European champion Ludmila Savinkova became a world champion.



A NOTE ON SHOSTAKOVICH

This was back in the years of civil war. The country was in the grip of famine and frost. Typhus was mowing people down right and left. Nevertheless, new schools, libraries and clubs were being opened in town and countryside, and the Petrograd (now Leningrad) Conservatory was functioning. In the fall of 1919, young Dmitri Shostakovich came for an audition. Composer Alexander Glazunov heard him and suggested that he simultaneously study the piano and the theory of composition.

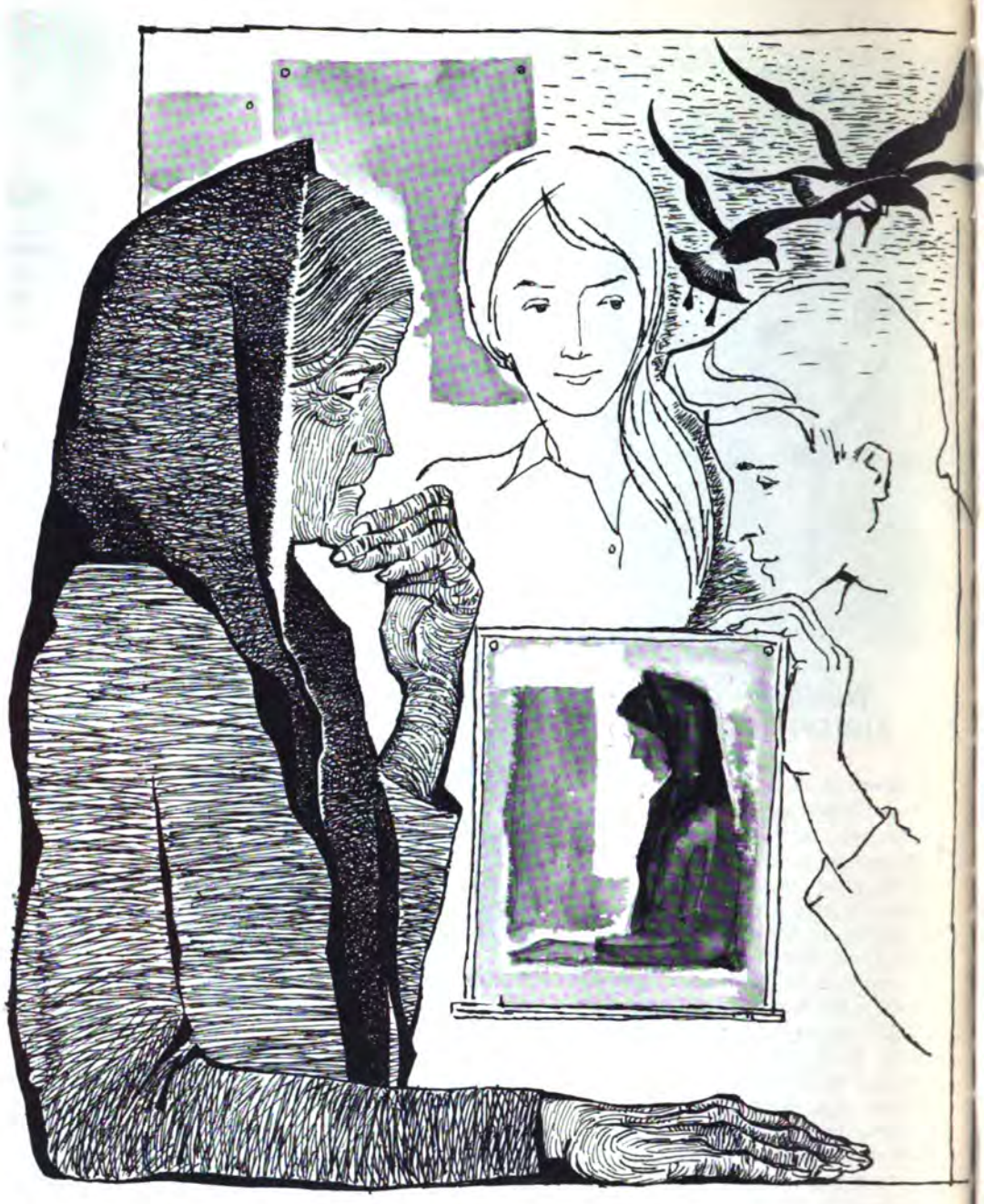
Those were difficult years for everyone, but especially for children. K. Lukashevich, a writer of children's books, sent a letter to Anatoli Lunacharsky, then People's Commissar of Education: "I take the liberty," she said, "of petitioning you to grant a ration to Dmitri Shostakovich, an unquestionably talented pianist and composer. A distressing Petersburg autumn is setting in, and he has no heavy shoes, rubbers or warm clothing. . . ."

Alexander Glazunov also wrote to Anatoli Lunacharsky: "We have an unusually gifted pupil studying at the Petrograd Conservatory. He is Dmitri Shostakovich, undoubtedly a coming composer. He is making tremendous progress, but unfortunately it is undermining his health, which has been affected by malnutrition. I beg you not to deny the petition to provide this very talented lad with sufficient nourishment to build up his strength."

These letters were brought to light recently in the Central State Archives. Shostakovich says that he never knew about them, but he did know that Glazunov himself very frequently did not have enough to eat in those years.

AROUND *the* COUNTRY

SUMMER WATER COLORS



BY LILLY PROMET

DRAWING BY NIKOLAI VOROBYOV

THE BLUE BUS vanished around the bend in a trail of dust that blotted out half the sky. Deep red sweetbriars had splashed over both banks of the ditches. Junipers grew in the fields fringed with barbed wire, and ferns fanned out luxuriantly on the seaward side.

The young man plucked a blade of grass and strode on toward the village.

Large-bellied cows were ambling home, greedy for every tuft of green. A round-headed ram emerged from a crowd of sheep, searched the stranger's palm with drooping lips and moved on.

The youth approached the shepherdess. She wore her trousers rolled up to a modish length, and her fair hair caught up in a pony tail at the back, exactly as the style demanded.

"The beggar!" she scolded, looking at the ram. "It's those fellows at the cooperative! They've spoiled him!"

"D'you know where Mathilda lives?" asked the stranger.

"Mathilda?"

"Yes."

"Ah, Mathilda!" she drawled.

Eyeing the young man, who was obviously town bred, she giggled, but suddenly lost her temper and ran, her bare feet flashing on the stony road and the fair tail at the back of her head bobbing up and down. The sheep had gotten into a potato patch. Shouting angrily, she drove them out of the furrows with her switch. Then she turned to the stranger and waved coquettishly.

"It's the blue house!"

The village nestled in a small pocket of the bay where the sea was like a lake brooding amid aged trees. This was a serene, windless inlet, and one could plainly see the opposite shore over the placid water. There were pines, birches, rowan trees and cottages on both sides of the highway. Some houses had their verandas turned to the sea, others to the road. Every garden had its apple trees, rows of potatoes, its phlox and dahlias; and behind every picket fence was a ring-tailed mongrel, vicious, cowardly and cunning.

The door of the blue house turned out to be padlocked, but the stranger sat down on the mound of earth running the length of the walls, lit a cigarette and looked out over the sea. It was very still and strangely bright, almost white. A moth fluttered over the grass, and flies hummed busily among the warm pebbles on the beach. A bit of bindweed had struggled out of the wet sand and seaweed to the nettles and woven itself into the fence. Huge pink dahlias clung to the eaves. They were so large and so vivid that they did not seem real.

Someone was coming at last.

An old woman with a rake and a watering can approached soundlessly. The young man noticed that she wore a silk shawl, that her face was thin and her mouth sad. But her eyes were friendly.

He crushed his cigarette into the ground and rose to greet her.

"I was told you have a room to rent," he said.

"The whole house is vacant," she answered.

"I'm Luigi Toomapoeg." He bowed. "A student."

"I'm Mathilda," said the old woman. "Everybody calls me Mathilda, and you may, too."

She put her rake and watering can away under a bush beside the stub of a veranda, undid a knot in her handkerchief, extracted a key and opened the door.

"I was at the cemetery," she said apologetically. "I can't bear to see graves going to seed."

Donning her apron, she grew very busy in her blue house. She asked the student to wait in the parlor for a while—until she could get the room ready and change the bed linen.

"I'll bring in your things too," she promised.

"But I haven't any," he answered smiling. "Only my briefcase and sketchbook."

"Only your briefcase?" she queried doubtfully.

"What more do I need, now that it's summer?" Luigi Toomapoeg was evidently pleased to be needing only a briefcase and nothing more.

He sat down with his hands on his knees like a well-behaved child who touches nothing without permission. But touch everything he did with his eyes: the lace tablecloths, the couch and the armchairs, the pictures—a shipwreck and roses—asparagus on a tray and a worn piano darkened with age.

"Do you play?" he asked Mathilda as she came in carrying two pillows.

"Oh no. Amora used to play."

"Did she play well?"

"How well I don't know, but she never went near the piano unless you begged her to."

The student got up. He had found something worthy of closer attention: a handsome bark with spread sails, all of it enclosed in a bottle.

"Delicate work," he commented.

Mathilda nodded.

"That's the *Blue Bird;* it belonged to Mr. Assor." She let the young man study the bark for a while and then said: "Your room is ready."

She opened the door and led the way.

The room was filled with the breath of the sea, the whitish evening waters. Luigi set a rocking chair swinging and whistled with approval.

"Splendid!"

"It's the best room in the house. It's Amora's room."

"Is that her?" he asked pointing to an enlarged colored photograph on the wall. It was the picture of a blue-eyed, thin-lipped girl with curly hair. She wore a dress with a sailor collar.

"She's dead," said Mathilda.

Mathilda had long left the room. Luigi kept standing next to the attic window looking at the sea, but the charm of his seclusion in this attic was lost, somehow. Shoving his briefcase under the bed with his foot, he decided to have a look at the village.

The evening was damp, quiet. Little boys waded in the sea. Women were returning from the woods, their lips and fingers blue. They had been picking berries. When Luigi stopped to light a cigarette, a girl whose face he knew passed him and asked coyly over her shoulder, "Find the blue house?"

"Yes," he said, looking her over.

She was wearing a dress now, and her arms and neck were bare.

"That suits you better."

"What?"

"The dress."

"Don't look at me like that!" she fretted.

"How should I look at you?" he asked wonderingly, but this only heightened her confusion.

"Going to the movie?" she asked.

"Have they got one?"

"Of course."

"I'd go if someone showed me the way."

"There's nothing much to show." She shrugged her shoulders, plucked a leaf from a shrub, and retraced her steps with the young man at her side.

Several men were on the grass in front of a village shop. They were celebrating Saturday evening. A bottle was being handed around, and the ram stood among them, waiting for its share.

"Remember him?" asked the shepherdess.

"Who?"

"That's the ram I told you about. He was brought to the state farm to improve the breed, but instead . . ."

"He's taken to drink."

"Yes, I suppose so."

They walked on, laughing and stumbling, for the rocks and stones on the way to the People's House were a road in name only. The tall pines straight enough for ships' masts kept creaking, their tops swaying under the pale moon.

"It's nice here," said the shepherdess.

"I haven't had a look yet."

"Our village has a poetic soul. Live here for a while and you'll know what I mean!"

"I came here because of the sea. That's more interesting."

"More than people?" she asked with surprise and shook her head.

They passed two chatting women leaning on opposite sides of a fence with arms folded. One seemed to have just come from the nearby cowshed, and the other had a heap of string beans caught up in her apron.

"Going to the movie already?" asked the one with the string beans. She threw a sly glance at the stranger, intensely curious, but only added, "The picture any good?"

There was quite a crowd at the People's House, but the hall was still closed and the truck with the projection machine nowhere in sight. Little boys were playing ping-pong and other games, while the girls stood about talking quietly, expectant, all dressed up, their hair carefully done.

"Where are the fishermen?" wondered the student.

"The sprats are running," explained the girl. "We haven't had so much fish around here for a long time. We've already filled our quotas, and the money keeps coming in."

"Businesslike, aren't you?" joked Luigi.

"Why shouldn't I be?" retorted the shepherdess. "Here's the People's House, and I hope you'll enjoy the picture."

"Wait a minute!" he caught her by the hand. "Don't leave me here all by myself."

"You're not a baby."

"No baby, perhaps, but I wouldn't mind clinging to your apron."

"I suppose you'd like me to see you home too?" she mocked.

"I wouldn't mind!"

She laughed and asked, "What's your name?"

"Luigi. What's yours?"

"Heidi."

"Now I know what to call you when I think about you."

"And what did you call me till now when you thought about me?"

"The girl with a flock of sheep."

"What's wrong with that?" she demanded suspiciously.

"It's too long," he answered evasively. "Heidi, h'm.It suits you better."

"What suits me better?"

"Your name."

"Grandma thought it up. She named all her grandchildren."

"How many did she have?"

"Oh, a lot!" She waved her hand. "Grandma used to say that it wasn't Mr. Assor who was the king of the coast, but that she was the queen, being the poorest and at the same time the richest woman around here. She had 14 children, and you'd need a computer to count her grandchildren."

"My, my!"

"Honest to goodness!"

The sea breathed quietly now. The gulls were invisible; only their cries could be heard. Heidi took his arm along the stony path.

"Who's that fellow with you?" demanded old Yula as she caught up with them, but then drawled a little scornfully: "Ah . . . He's from Mathilda's."

"Is Mathilda a relative of Mr.Assor's?"asked Luigi when they reached the blue house.

"She used to be his servant. Now she takes care of his empty house."

"And who's that old lady?" Luigi indicated Yula.

"My grandmother."

Luigi spent a whole week with the fishermen at sea, or just roving the shore with his sketchbook. He wanted high winds, great spaces and towering waves. The steep shore and the storm twisted pines suited him fine.

The storm lasted two days, uprooting trees and flattening hedges and fences.

"That always happens when the sea gulls cry over the woods," said Mathilda.

"You mean there's always a storm then?"

"Always."

"Do you know what this means?" he went on. "I don't remember just when, but I saw a sea gull fly across the potato field and the highway toward the forest, laughing: 'Ha-ha-ha, ha-ha-ha!' Three times like that. Exactly three. It sounded dry and ironic. It laughed again that way a few days later, flying toward the woods. What could that mean?"

Mathilda thought earnestly.

"I don't know," she admitted. "But there's precious little to laugh about these days."

Storm or not, the little boys hopped about the rocks outside Mathilda's house like mountain goats. Two dauntless border guards were tracking down a spy. They stopped only to load their guns, imitating the sound with their tongues: "Tsk, tsk!"

"Fall down, Yulo! Fall down, why don't you?" They were very angry. Why didn't he fall? "Don't you know your neck is almost bleeding?"

"Why does it have to be me?" grumbled the bandit. "It's Mati's turn."

Mathilda, who stood by the window, sighed. Her envy was almost bitter.

"The whole shore is filled with the yelling of Yula's boys!"

She turned pensively to Luigi.

"What would you like for dinner today? There's no fish. The fishermen don't go out when there's a storm." She paused here, considering her next words carefully. "In the old days they would have. You're a child and don't know how people lived then."

"How did they live?"

"Very well," she said with conviction. "Nobody minded the weather then. They'd put to sea any time, each one whenever he liked. They'd do the same now, but they have no boats, no nets, nothing."

"Did you have a boat?" asked Luigi.

"No."

"Or a net?"

"I had no net."

"Why not?"

"Why didn't I have those things?"

"Yes, why?"

"How can you ask? Don't you know I was poor!" exclaimed Mathilda, wondering why he was so obtuse.

She worked in silence for days afterward, weeding, washing, cooking last year's potatoes for the chickens, mowing the grass in the garden, pounding and ironing the linen. By evening she was listless with exhaustion.

On Saturday she scrubbed the kitchen floor, turned the hay, changed the lacy coverlets on the tables, the couch and the piano lid. She watered the flowers in the pots and sat down to embroider a large bright rug.

"That's very pretty," commented Luigi.

Mathilda was pleased: "I've had no time to work on it, really. I've been combing wool for the collective fishery all winter. Nearly 14 pounds of it. They pay for it, after all. And I've had to keep the house in order."

"Do you belong to the collective fishery?"

"It gives me my pension," she said.

When he came out for a walk that evening, Mathilda called to him from the garden, where she was covering the currant bushes with pieces of old fishing net.

"There's going to be a service in the chapel at the cemetery tomorrow." She wanted him to go with her. The chapel was an ancient one. Lots of people came to the cemetery to look at it.

Luigi promised to go with her Sunday morning.

Apples thudded to earth prematurely here and there, and there was a little worm in the heart of each. The fledglings of the swallows sat gasping on the telegraph wires after their arduous flying exercises. The quacking ducks, for their part, marched toward the sea. That was the look of the morning Mathilda got dressed to go to church.

"Splendid!" smiled Luigi. "What lovely clothes!"

"Oh, I've had this blouse for a long time. My mistress gave it to me when our young lady was confirmed."

"Generous of her!" commented the student smiling.

"Oh yes. Very!" agreed Mathilda devoutly. "Every Christmas she'd order a lot of rolls and bread baked and a lot of sausage made. She'd also have us make up lots and lots of meat jelly and then send it all to the poor in the village. She always said: 'God has been kind to me, and I've got to be kind to the poor.' "

"She was quite right! If there were no poor, who would there be to eat the bread of the rich?"

Having already dug up a basketful of pansies, she picked the most luxurious of her dahlias, put on her fringed silken shawl and locked the door behind her.

"The people in the village always keep their doors and windows open," remarked Luigi. "Don't you trust these folks?"

"That's not the reason I lock the door and windows," said Mathilda with some confusion. "No one ever steals anything here."

They walked under the hot morning sun together. The meadows, overgrown with juniper, spread away on one side, and the deep blue summery sea on the other.

They were passed by fishermen on bicycles heading home from the end of the cape, where the fishing harbor lay, after their morning's catch. The young man greeted them all as they came, and they replied by touching the peaks of their caps. He could have sworn they were laughing at him and Mathilda, a queer pair of pilgrims, though their severe weather-beaten faces bore no trace of a smile. That was just it—they were too solemn to be believed.

"Watching over someone else's property, over things you've been asked to take care of, always makes you worry more than if the things were your own," said Mathilda. The student's question evidently had vexed her.

"Isn't it your house?"

Her eyes followed the cyclists in their high rubber boots. Hesitating for an instant, she conceded.

"Yes, I suppose so."

Luigi did not pursue the matter any further. Everything was wilting in that hazy shimmering heat. The rowan trees were drooping, their leaves withering and scattering as if it were autumn.

"What a lot of lilacs!" sighed the student finally.

Like the whole Estonian coast, this shore of rocky barrier was afroth with lilac in the spring. The paths seemed luminous then. The grass was soft, but the earth poor in flowers. The spring breezes, too, were cold as yet.

"It snowed toward the end of May this year," said Mathilda, eager to change the subject. "It was so cold that there were no buds on the apple trees for a long time. As for the bird cherries, no one even noticed when they blossomed."

She paused and pointed with her free hand, "See, there's the spire of the chapel."

For a while they walked through a cool green corridor, a long alley of old shade trees. The ripened fields shone golden behind their wrinkled trunks, the gold pensively fingered here and there by a shadow from the solemn woods beyond.

"All this was an estate in the old days," explained Mathilda. "It was the estate of the Von Dals—those stone buildings, the park and everything."

"Whom do they belong to now?"

"The mansion and the park were made into a children's home."

Mathilda stopped for a while. She set her basket of flowers on the ground and straightened her kerchief, which had slipped back onto her shoulders.

"We used to come here often when we were girls; we dug potatoes and did all sorts of other jobs. I know every nook, every path and tree. In the winter Yula and I used to go sleighing down the hills, almost to the sea."

"You were friends then?"

"Oh yes."

"And now?"

Mathilda stooped for her basket and walked on.

"Life often parts people," she said finally. "I used to go to sea with the fishermen like Yula at first, but then I went to work for Mr. Assor as a servant. That's when we became estranged. . . ."

"Didn't Yula like Mr. Assor?"

Mathilda shrugged.

"She used to quarrel wherever she worked, always insisting on her rights. That's not in my nature. I can't do it. That's why Yula despises me, or so they say."

The little stone chapel was whitewashed inside and out. Someone's dog, old and half blind, sat whining beside the gate. The graves of the plain people from the shore and the tombs of the fish magnates extended in even rows beneath the big lindens and cedars. Some crosses were tiny, leaning to one side or the other. They must have marked the graves of children. Others had been carved in the shape of trefoils. The stones were askew or half sunken into the ground, the Estonian and Scandinavian names and the bits of scripture beneath them almost obliterated by moss. There were aged, weather-beaten slabs of stone as plain as boxes and expensive tombstones with ornamental urns and sorrowing statuary fenced in by heavy iron chains. Here, too, beneath the ancient trees, within earshot of the murmuring sea, stood the memorials of those who had found eternal rest in alien cities or in the depths of faraway seas.

In pinched, muted tones the tinny voice of the chapel bell called on the pious to give glory and thanks to the Lord.

Mathilda weeded a grave, replacing the withered daisies with pansies. Part of her dahlias were laid on the grave of Amora, the rest on that of Assor junior.

Junior had been buried in Switzerland. His body had decomposed so fast that he had to be interred in alien ground. But a tombstone and cross, for all that, had been erected to his memory here.

The pastor drove up in his Moskvich car. An agile man, he was out of his car in a jiffy, and Mathilda had to hurry.

The doors of the little church were wide open, and one could see about 10 old women perched on the wooden benches inside. Birch branches left from Whitsunday decorated the path to the altar. Dried by now to a deep brown, they seemed to rustle by themselves.

Luigi entered the chapel and examined the picture on the altar: a kneeling Christ amid rosemaries, wreaths and myrtle. Just above the head of Christ was the large wooden shield of the Von Dals, its gold tarnished long ago, its Prussian blue faded. Having seen his fill, the

student went out to the gates and sat down in the grass beside the old dog.

"How was the sermon?" asked Luigi when Mathilda came back.

She shrugged.

"The pastor said something about roentgen, that faith should radiate the souls of men like roentgen. Those words could not enter my heart. In the old days pastors talked about God and the women wept. It was God who searched the souls of men then, now it's roentgen. Everything has changed, everything is different."

The stone wall of the cemetery came to an end and with it the flowers of tumbleweed powdering the consecrated grounds. A solitary sea gull with pointed wings cried plaintively over the dark crowns of the trees.

"Mathilda, I wonder why the family shield of the Von Dals was set higher than the figure of Christ? Was the power of the barons superior to the power of God?"

"Could it be higher?" wondered Mathilda. "I've been going to that chapel all my life and never noticed it," she confessed.

"We often fail to notice things around us," agreed Luigi.

He had never once tried to shake her views on modern times, on people and God; but he was suddenly very sorry for this lonely old soul. It was like leaving a person to wait for death on a deserted island. But what could he do? Nothing.

"Haven't you got a family?" he asked knitting his brows. "A husband, children?"

"No. Fate was against it, or perhaps it was not pleasing to God," she said sadly. "When I entered Mr. Assor's service, I had a young man. He was not one of those flighty fellows, but offered his hand and his heart."

"A sailor?"

She nodded.

"He was a boatswain on a freighter. But my mistress bore her first child, and she didn't want me to keep company with anyone. She wanted a girl who wasn't married to take care of her baby. Yak waited for several years and then married a girl from the opposite shore. I was so heartbroken that I wanted to leave the service at once, but my mistress gave me all sorts of nice things, and I didn't want to be ungrateful. She pleaded with me so pitifully, 'Mathilda, please don't go away! I'll be having another baby soon.'

"I was like one of the family. My mistress used to tell everybody, 'Mathilda is dependable! I can leave her with the keys, the house and the children!' "

"And so you stayed?"

"Oh yes. I got used to the children, though they gave me plenty of trouble. Alexander, the oldest, is an important man now. They say he's some sort of director abroad. The younger Assor died of tuberculosis in Switzerland. He was only 16 but looked all of 20. He'd tried everything by then—wine, women and cards. He wasted himself on that sort of life."

"What about Amora?"

"Yes, Amora was left, but tuberculosis ran in the family, and Amora got it too. She was so cantankerous that she'd cough right into other people's plates at dinner. She hated everybody—me, her mother, everyone who could survive her. But I was sorry for her. Toward the end she was so frail that I carried her in my arms, just as when she was a child.

"Turning a page of the calendar on Mr. Assor's desk one day, I suddenly realized that I had been in that house for 27 years. I had hardly noticed the time pass. Life lay behind me, and there was no place I could go. There was no one waiting for me anywhere."

They walked on, side by side, each deep in thought. Behind them lay the estate, the sharp wedges of forest invading the fields, the meadows overgrown with junipers. Soon they saw the raspberry bushes at the edge of the woods and at last the village beside the sea.

The nights were clear and cold now, as in autumn, with the moon full and the potato patches white with hoarfrost. The days were hot, however; the flies still buzzed in the sunshine beside the tossing sea.

Heidi sat on a tall boulder, while Luigi drew her picture against the background of junipers and sheep. Far off on the highway one could see a speeding car with a rubber boat on its roof. It was followed by the blue, dust-exploding bus. A single plane grumbled high overhead.

"But you said you didn't care about people, that you came here only because of the sea," said the girl. Both her job and her nature made it hard for her to sit still very long.

What could Luigi say to this? The sea, he thought, was deep and full of surprises, of caprices and changing moods. It attracted him as much as ever, but people were even deeper and more mysterious.

"That was long ago. That's what I used to say!" he objected.

"And now you think there's more to me than to the sea?" she asked laughing.

"I don't know yet, but I'd like to get it clear," he answered jestingly. "I've been making real discoveries here every day."

He had made one discovery the evening before when he had visited Heidi and her family. She had been leafing through some fashion magazines looking for a new pattern for a dress. Her neighbor Maya did a lot of sewing. She had made clothes for all the women in the village, for all the Urbis, Siiris and Aanes, sewing both in the summer and winter.

Yula was also interested in styles.

"What's the fashion now?" she asked Maya.

"The trapeze!" came the answer with quiet authority.

"All right then, let it be trapeze! Make one for Heidi. She's just as good as the others!" ordered Yula.

Alma, her youngest daughter, asked them to come in for tea.

"Come on!" Heidi tugged the artist's sleeve.

All of Yula's grandchildren were seated around the table. They always gathered at their Grandma's during the summer.

"Wash your hands before you sit down at the table!" Alma admonished the smallest boy and drove him from his seat.

"But I did!"

"Don't lie!"

"I washed them. Touch them if you don't believe me!"

Alma touched his hands and found them really wet.

"I left them wet just so you'd believe me!" cried the little fellow.

Yula threw an irritated look at her daughter and turned to the child. "Sit down, you little border guarder!"

Luigi recognized the mite. It was the same Yulo who had sobbed that he didn't want to be a spy but only a border guard out on the beach in front of Mathilda's house. The other boys had paid no attention to him, but Grandma had.

Though Yula's own children trembled at an angry look from her, she didn't scare her grandchildren a bit. She was sure, moreover, that they were the very best in the world.

"Are they preparing a wedding trousseau for you? Thinking of getting married?" whispered the artist to Heidi.

Heidi only chuckled, but Grandma answered for her, "Heidi is going to Tartu."

"What for?"

"She's going to enter the university. Or didn't you know they had one there?"

Luigi took a quick swallow of tea and scorched his tongue. Meanwhile Maya had been patiently waiting for a pause to astonish everyone with the latest news.

"There's an announcement beside the grocery saying we're going to have a visit from a theater this Saturday."

"What play are they going to put on?"

Maya did not know exactly. "It's called *The True Path* or *The Right Step,* or something like that."

"I can't bear such plays!" exclaimed Yula disappointedly. "They're always the same. Somebody hangs back on the job, while the others go to work like mad. The chairman—faugh! Just a dope! And all the others are frightfully intelligent. Why don't they send us an operetta? Why doesn't Georg Ots come? We could do with the operetta *Sylvia!* That's where there's passion and songs about real love!"

Yula stopped to catch her breath and then descended on silent Luigi. "Tell me, why don't they ever send us anything decent?"

"I don't know," he answered lamely.

"You don't know!" snorted Yula. "You're from town and don't know anything!"

Like most of the women along the coast, Yula was an ardent theater fan. She sang with fervor in the chorus of her village, belonged to a drama circle and often raised a row to get the roles she wanted. And she was invariably ruffled when she was offered the role of an elderly woman.

Luigi had once heard her sing. She was sitting near the door cleaning some cranberries and looking out at the turbulent sea. Luigi had not even dared to move his hand from the latch for fear of disturbing her. When the many stanzas were finished, he was at a loss for words to tell her how pleased he was.

"That's nothing," said Yula happily. "My voice is stronger than the thunder of the sea even now. When Mathilda and I were girls, we made the forest and shore re-echo with our singing."

"Why doesn't Mathilda sing any more?" asked Luigi. Yula's pensive smile vanished at once.

"How do I know?"

The young man carefully examined the blade of grass in his fingers.

He had hoped that Yula would ask about Mathilda and perhaps say something about her. He sensed somehow that the two were fond of each other to this day.

*

It was late when he left this large, restless family, and Heidi saw him to the gate.

Fishing vessels chugged across the sea, and lights twinkled on the opposite shore.

"What are you so surly about?" she asked.

"I'm not!" he muttered, looking for the Big Cart and the Polar Nail* as though he needed both very urgently just then.

"Oh yes you are!" she insisted.

Luigi listened to the heavy sighs of the sea and finally said, "But you're not a shepherdess at all."

"I am and will be—for three days more. The regular shepherd hurt his foot. Anyway, I've been tending sheep here since I was a child. Don't you believe me?"

"You didn't tell me the whole truth. How can I ever believe you again?" he said cantankerously.

"Well, you keep looking for the Big Cart," she retorted. "I'm going to Tartu by bus."

Then came the time of rain streaming from the roofs, and nothing could be seen from the room but the gray, unbroken rain. The sea, so shallow in dry weather, now splashed to the very threshold, and the wind scourged Mathilda's pink dahlias.

The fishermen were working offshore now; they had large catches and torn nets. Several bullheads with hideous faces tumbled into their boat from a net. Mathilda got a small whitefish somewhere and salted it.

"It's such a puny thing," she complained. "The fishermen have lost many days because of the rain. What a blessing they at least coped with the plan for sprat."

Luigi wondered how he could have thought that Mathilda worried only about her dahlias.

He sat drawing in his room. Mathilda tiptoed to the door and as quietly withdrew. He knew that she came to his room to look at his water colors when he was away. It was evident that she wanted to talk to him, but whenever he looked up questioningly, she was silent.

When the wind ripped a large sheet of the roofing from the house one night, she was so unhappy that she almost wept.

"Everything is going to ruin. There's nothing I can do!"

But the young man climbed the roof and nailed the sheet back.

Down below, the sea seethed around the rocks, and Mathilda, distressed, stood holding the ladder for him.

"Why do you keep this big house? It's a lot of trouble!" he remarked as he came down and put the hammer away.

"I don't need such a house," she agreed wearily. "The collective fishery offered to buy it from me long ago. They wanted to give me a smaller house. But I can't do that. I wouldn't dare!"

She wiped up their wet foot prints, then sat down at the kitchen table and stared out of the window at the rain, her cheek on her palm.

"My mistress asked me to take care of the house when she went away. She said she wanted the house in perfect order when times changed and Mr. Assor came home. And I promised I would."

"Which means it's not your house, after all!" exclaimed Luigi.

"How do I know?" sighed Mathilda. "It's been put in my name, true enough. The papers are in the desk. I'll show them to you if you like."

But Luigi didn't want to see the papers.

"Whose house is this? Yours or Mr. Assor's?"

Confused by his question, Mathilda sadly confessed, "I can't understand a thing. I just don't know."

Though the sun returned after the long rains and dried the wet pastures, it was no longer the hot sun of summer. The sighing of the cold and now stern sea also heralded the approach of autumn. The birds were worriedly preparing for migration, and the orchards smelled of apples.

Luigi sat drawing a picture of Mathilda from memory: a pious soul with dahlias in her hands. She wore a black silk shawl and a blouse of prewar style, like the one her mistress had given her on Amora's confirmation day.

Mathilda herself went about with a suffering air and reddened eyes.

"What's the matter?" the young man asked.

"Oh, nothing," she answered evasively.

Heidi turned up toward evening and came into Luigi's room for the first time, though he had invited her more than once. Perched on the window sill and swinging her legs like a child, she looked at the water colors hung on the walls and littering the floor.

There were sketches, studies, landscapes and portraits of fishermen she had known from childhood. The young artist pushed up and back in his rocking chair, waiting for her comments.

"I suppose each of these pictures has its own hidden meaning, an idea, or a name at least?"

"What if it has?"

"Then tell me what you're going to call that drunken ram of mine on your picture over there?"

"*The Degenerated Regenerator!*"

Heidi shrieked with laughter. She liked the game.

"What would you call the portrait of my grandmother?" she demanded.

Luigi scratched his head.

"I'm not sure. *Queen of the Coast,* perhaps, or *Ever Feminine.*"

"Look, here is our Yulo!" exclaimed Heidi happily.

"Yes, that's *The Border Guard* over there!" he nodded at the picture.

"And what would you call the girl whose hair sticks out like a horse's tail?"

"*PSEUDO Shepherdess!*" he answered emphatically.

"And Mathilda?" she whispered.

*

"What did you call my portrait, young man?" asked Mathilda as she poured his milk with a trembling hand the next morning.

Luigi coughed shyly and confessed, "*The Idolater.*"

"I see," muttered Mathilda. She said nothing more.

At dinnertime he found his food ready on the table, but no trace of Mathilda.

"I've hurt her feelings!" he thought anxiously.

There was a timid knock on his door that evening, and Mathilda came in "just to say a few words," as she put it. She was agitated and flushed. She had evidently meant to talk calmly, in measured tones, but could not, and came straight to the point instead.

"That's why you drew me like that! As though I had come from the other world. Ah, my son, don't deny it! I can see it very well. You're a learned man and can paint pictures of the sea and of people, but there's precious little you know about my simple soul."

When Luigi did not answer, she wiped her eyes and went on, "You disapprove of me, Luigi, don't you?"

"I'm sure I never said so!" objected the young man.

"You didn't say so, but that's what you think. I've felt it every day, ever since you've been here. You'll be going away, and we may never meet again. But I'd like to say . . . I'd like to say that whenever I've talked to you, no matter about what, I always felt and knew that you were quarreling with me inside because of the life I should have lived."

Early on a clear, cold morning Mathilda saw Luigi off to the bus. She did not lock the door behind her as usual.

"It's autumn already," she sighed. She knew that the departure of this young fellow would deprive her of something pleasant in life. Still, something would remain with her as well.

"Luigi!" she begged. "Don't call my portrait by that name!"

"All right," he promised.

"What will you call it?"

"Simply: *Mathilda, Former Fisherwoman.*"

"Thanks!" she quavered, deeply moved. "Come back next summer, whenever you like!"

"But what if Mr. Assor comes back?" he laughed slyly.

Mathilda regarded him tenderly. She was always pleased when he joked.

Heidi was hurrying toward the bus stop with her grandmother, this time without the usual swarm of children.

The bus was about to leave. The driver was stowing the last bags and suitcases away, and Luigi and Heidi hurried to take their seats.

The blue bus vanished around the bend; and a pair of white swans paddled serenely across the quiet sea.

Mathilda was the first to speak. "It's good to have some dry weather for a change."

To which Yula replied, "Yes, I'm glad it's not raining!"

They looked at each other and flushed, as though they had said something very intimate and friendly, something not meant for the ears of a stranger.

* Estonian names for the Big Bear and the North Star.

QUERIES FROM READERS

QUESTION: "I am a farmer. I understand that your collective farmers also have their own plots of land and that they keep all the income from the sale of produce they raise on these plots. What I would like to know is this: Why do these individual plots yield more per acre than collective farm fields?" writes Mr. Steven A. Krueger of Valley Center, California.

ANSWER: This assertion is not right. The author of the question apparently has been misled by either inaccurate or deliberately distorted information.

All of the principal agricultural crops are grown entirely on the collective farm or state farm fields. On his individual plot the collective farmer raises vegetables and fruit mostly for his own use. If there is a surplus, he sells it to a state or cooperative purchasing organization or takes it to a nearby market where he sells it himself.

Individual plots owned by collective farmers, state farm workers and residents in the suburbs or workers' settlements amount to some 14,850,000 acres. This is less than three per cent of the total area of arable land of the collective farms and state farms, which amounts to some 545 million acres. Of the 14,850,000 acres, slightly more than ten million comprise the collective farmers' individual plots.

These individual plots are planted mainly to potatoes, a very popular food, particularly in the countryside. Therefore there is nothing amazing in the fact that they are grown on individual plots. Whereas 21.5 million acres are planted to potatoes in the country as a whole, about 12 million (or some 60 per cent of the total area planted to potatoes) make up the share of the individual plots. Yet the collective farms and state farms account for almost half of the marketable potato output in the country (47 per cent).

Therefore there is no basis for the assertion that the productivity of individual plots is higher than that of the collectively cultivated fields. On the contrary, the constantly growing mechanization of the collective farms plus the policy of the chemicalization and intensification of collective and state farming are undoubtedly leading to their ever increasing advantage in productivity per acre of cultivated land.

QUESTION: What difference is there between the Russian Federation and the Soviet Federation? James Lane, of Detroit, Michigan asks.

ANSWER: The Soviet Union is a federation of 15 sovereign republics. However, we don't usually use the word to describe the country as a whole since we have a republic which is in itself a federation. The Russian Federation incorporates several national autonomous republics and regions, such as the Yakut, Bashkir, Tatar, Chuvash, besides Russia proper. As you see, the Russian Federation is only a part of the Soviet federation.

QUESTION: What kind of music do people, young and adult, in the Soviet Union listen to most frequently? asks Edmond J. Hay, Jr., of Sunbury, Ohio.

ANSWER: Tastes are too varied for any definite answer. Some prefer symphonies and operas, others chamber music, others jazz. Some city boys and girls go for nothing but twist. Then we have admirers of a particular artist, say the violinist David Oistrakh or your pianist Van Cliburn. Finally—and perhaps this is particularly so for us—nearly everyone in the Soviet Union likes songs, whether folk, popular or art songs.

QUESTION: Do you have advertisements? If so what is their purpose? Mr. Hay also asks.

ANSWER: Yes, we do have advertisements. We advertise various kinds of consumer goods, films, books, newspapers, periodicals, fashions, entertainment and services. Their purpose is to tell people about something of which they would not otherwise know. Generally speaking, Soviet advertisements are informative. Of course, we also have shops and stores advertising to help meet their sales quotas.

QUESTION: What are your television programs like? is Mr. Hay's final question.

ANSWER: TV broadcasts on two channels, from noon to 11 p.m. on the first channel and from 6 p.m. to 11 p.m. on the second channel. Programs give home and foreign news and developments in many different fields. A good deal of entertainment (concerts, plays, films, and so on) is offered and very little advertising. Local TV stations cover area events.

The most popular Moscow TV programs are the news reports; The World Today, on international affairs; the Quiz and Fun Club show; the Blue Light revue; the Travel Club film showings of professional and amateur travelogues; Forgotten Films, which deals with cinema history and shows the best of the old films; and the News Relay, a kaleidoscope of news at home and abroad.

QUESTION: Judging from the height of the American politician compared to the average American, tall men have a social advantage and apparently this holds in living, promotion and even in courtship. Does this seem to be true also in Russia? Julius A. Winsberg, Opelousas, Louisiana, asks.

ANSWER: Politicians run about the same size in our country as ordinary mortals. Sometimes they're even shorter. We believe you Americans have been able to see that for yourselves. As far as employment and promotion go, height does not seem to carry any privileges.

As for courtship, that's where the shorter man may lose out. But what can you do? We have a saying which goes something like this: "You can't jump higher than the top of your head."

QUESTION: Could you give the number of gas stations you have in Moscow and of private automobiles? writes John W. Divoll, Williamstown, Massachusetts.

ANSWER: There are 98 gas stations and 72,000 private cars in Moscow.

QUESTION: Data on the availability of U.S. newspapers, etc. in the USSR is requested by Kenneth L. Wise of Arlington, Virginia.

ANSWER: There are 2,189 different American magazines and 52 different newspapers available in the USSR. In addition, most scientific institutions and educational establishments subscribe to U.S. professional publications pertaining to their particular field of interest.

QUESTION: Do you train your politicians and businessmen? asks Shaun Considine of New York, New York.

ANSWER: We have no special colleges for training politicians. That is because we don't consider politics a profession. Our statesmen, Party functionaries and public figures come from the people and are all elected. What we think important are the qualities of the people we elect to public office—their talents, educational background, experience. If these people want to learn more about political leadership, they can take spare-time or full-time courses in any of the many trade union and Party schools.

Soviet businessmen, as we understand the term, receive their training at specialized colleges of economics, which graduate economists for industry and planning, as well as at departments of economics at universities and at such technical colleges as those in engineering and in the chemical and oil industries. Their job is to organize production, supplies and marketing at factories and to do economic planning at all levels.

QUESTION: Who finances film making in the USSR? And how many films are made a year? continues Shaun Considine.

ANSWER: The state does the financing. About one hundred full-length feature films are made annually.

QUESTION: What American films are popular in the USSR? Shaun Considine's last question.

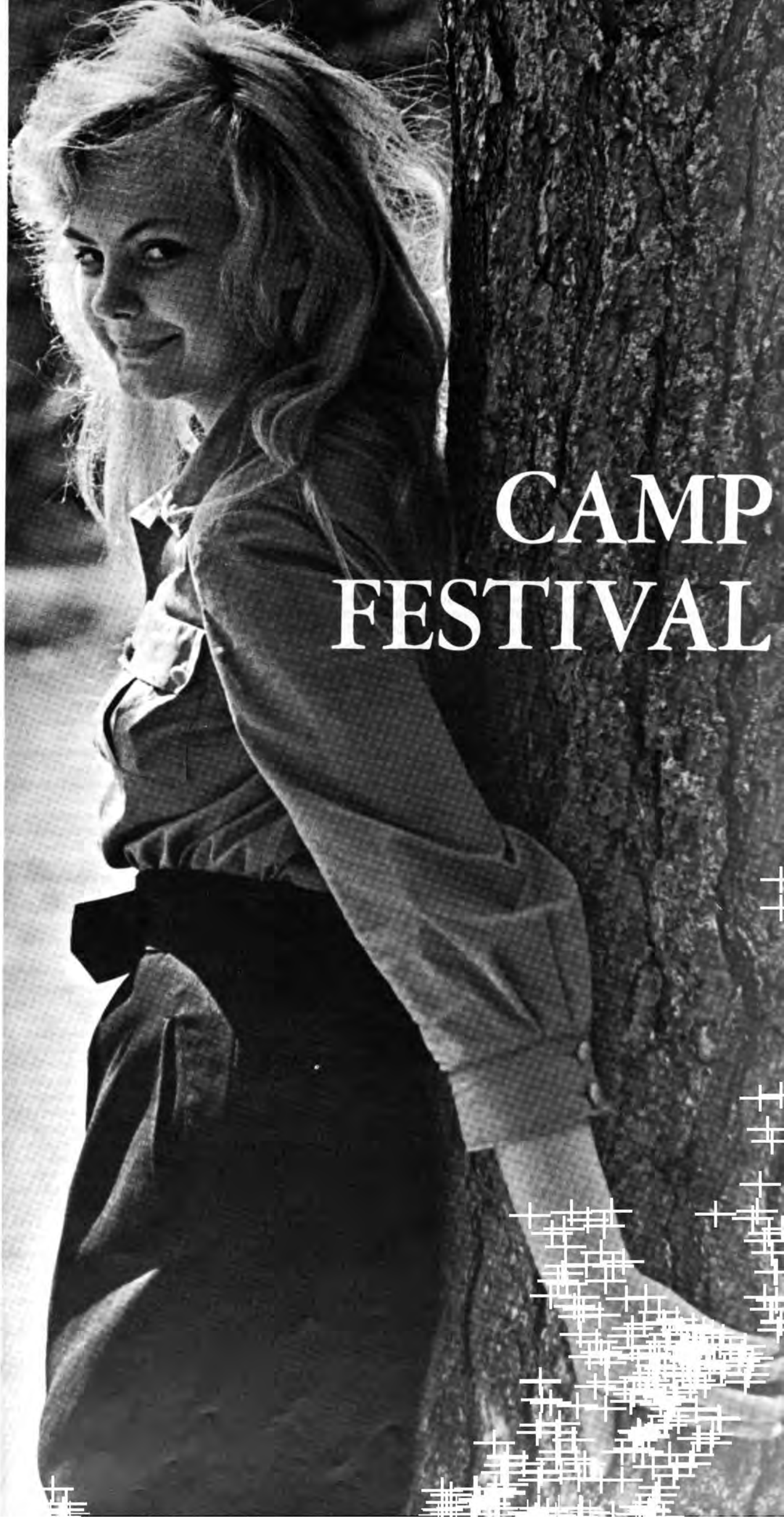
ANSWER: Among the most popular American films in recent years were *War and Peace*, *Twelve Angry Men*, *Roman Holiday*, *Inherit the Wind*, and *The Magnificent Seven*.



Lively wind and spangled water. Annual Baltic Regatta.

Photograph by Lev Borodulin

CAMP FESTIVAL



Maret Priske is 18 years old. How old is that pine? A hundred? At least that. The sea winds have tried time and again to bring it down. The rains have battered against it. Its great roots are already bared, but there it stands solid on a precipice fronting the sea.

"Pine tree, you are magnificent," Maret thinks. "If only everyone stood as firmly rooted to the earth as you do."

Maret is through school and expects to enter an institute. She hopes to become a radio physicist.
"Ma-a-ret! Come on over here. Let's dance!"

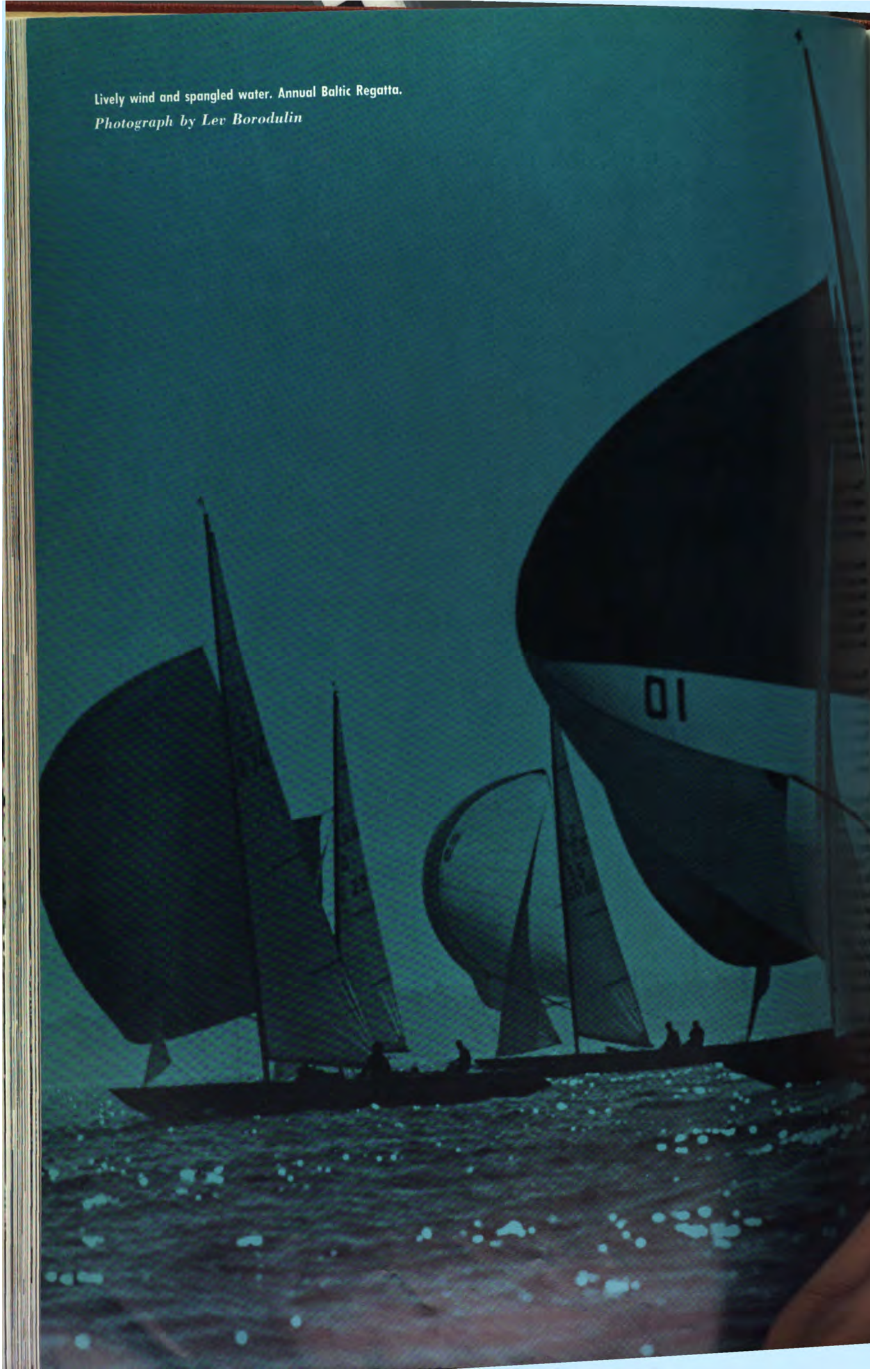
The girl turns at the shout and runs down the hill. The strains of the polka resound across the sea and woods. The young people dance merrily in the glade with Maret leading.

Every year young people gather at some scenic spot on the Estonian coast for a camp festival they call "Youth's Summer Days." This year 7,000 teen-agers were there. The festival lasts only three or four days, and so they pack every minute with sports and dancing. Sometimes a group will go to the neighboring state farm to help bring in the hay.

The meetings around the campfire are always stimulating. Helgi Muller read her verses at one and the artist Julo Teder from Tallinn spoke at another. Asked for his impressions, Teder said: "This is the first time I've been to the festival. It's great! I don't know whether I said anything to inspire these young people, but to me the evening was certainly as refreshing as the dew."

Lively wind and spangled water. Annual Baltic Regatta.

Photograph by Lev Borodulin



CAMP FESTIVAL

aret Priske is 18 years old.
w old is that pine? A
ndred? At least that. The sea
nds have tried time and
ain to bring it down. The rains
ve battered against it. Its
eat roots are already bared,
there it stands solid on
recipice fronting the sea.

ne tree, you are
gnificent," Maret thinks. "If
y everyone stood as firmly
ted to the earth as you do."

ret is through school
expects to enter an institute.
hopes to become a
io physicist.
a-a-ret! Come on over
e. Let's dance!"

girl turns at the shout and
s down the hill. The
ins of the polka resound
oss the sea and woods.
young people dance merrily
ne glade with Maret
ding.

ry year young people
her at some scenic spot on
Estonian coast for a
p festival they call
outh's Summer Days."
year 7,000 teen-agers
e there. The festival
s only three or four days,
so they pack every
ute with sports and dancing.
etimes a group will
o the neighboring state
n to help bring in the hay.

meetings around the
pfire are always stimulating.
gi Muller read her verses
ne and the artist Julo Teder
Tallinn spoke at another.
ed for his impressions, Ted
: "This is the first time
been to the festival. It's
t! I don't know
ther I said anything t
re these young
le, but to me the e
certainly as
shing as the dew

FREUD AND ESTHETICS

In recent years Freudian psychology has been under discussion in the Soviet Union. A number of articles, both informative and critical, have been published on various aspects of Freudian thought. (In our March 1964 issue we published an account of a forum on Freud and Modern Medicine held at Moscow's Second Medical Institute.) Vladimir Dneprov is one of the initiators of this discussion. He is Professor of Mathematical Logic at Leningrad University and the author of a book on the theory of the novel. He is presently working on a study of Freud and art.

THE FREUDIAN approach to esthetics is essentially very simple. The unconscious, basic to art, is intrinsically alien to man's social nature and is rooted in our egotistic animal nature. Therefore, the common belief that art has a cognitive value is a delusion. Any fact of art has three interconnected and indispensable dimensions: an unconscious and egotistic aim; its illusory transformation into a general ethical impulse to camouflage the egotistic purpose; and imagery, expressing the poetic idea but conveying the underlying egotistic motive.

Freud contends that the individual's entire psychic process is "automatically regulated by the pleasure principle. . . . We ask (Freud writes) whether we can find one main aim in the operation of our psychic apparatus, and with a certain approximation we answer . . . that the aim of this operation is the individual's experience of pleasure."

However, Freud has to limit pleasure-seeking impulses by the "reality principle" and admit that hedonism and reason are essentially inimical. Necessity makes its inevitable claims and forces the individual to give up many impulses, for this is the only way to avoid the terrible retribution of reality.

In other words, reason puts a strait jacket on pleasure-seeking instincts. "But to give up enjoyment . . . is always difficult, and involves a kind of rebellion." Here is where fantasy comes to the individual's rescue, providing the vent for frustrated or repressed desires.

Fantasy is a sphere in which egoism has free play, unconstrained by the interests of other individuals or by circumstances. All antisocial pleasure wishes are here exempt from the stern test of reality and have a make-believe existence; here "everything may grow and thrive at will, including anything useless or even harmful. It is this wild forest reserve wrested from the principle of reality that is the sphere of fantasy."

Hardly anyone would deny the existence of that very common brand of imagination which makes up for the individual's frustration, failure or unhappiness. In fact, literature has represented many varieties of this escape, compared man's actions and daydreams, and traced the morbid changes in the psychological and ethical content of fantasy. No one, however, would call this unbridled egoism of imagination the real source of art.

No one except Freud and his followers. According to Freud, art "is not far removed from neurosis. The artist is beset by strong desires; he hankers after power, wealth, glory and love, but he lacks the means to satisfy these desires. Therefore, like any dissatisfied person, he is an escapist who transfers his libido and all his interests to the desired images of his fantasy. . . ."

Imagination in art is thus proclaimed to be antirealistic: It satisfies the individual's desires outside of and despite reality. Hard objective necessity is dismissed, and subjectivity—the individual's desires—reigns unchallenged in art. Characteristically, the Freudian Otto Rank calls art the "last and strongest comforter of mankind."

Now, what makes this type of imagination esthetic? Why does the artist's imagination become important for many people? Because we are ashamed of our own unbridled egotistic imagination and hide our ego fantasies from everyone but ourselves, while the artist possesses the mysterious power of dreaming aloud and transforming his ego dreams so that "it is not easy to trace their origin to the tabooed sources."

Art flows into the ocean of personal fantasies. It magnifies them and reconciles us to our dreams, making the vile appear sublime, the irrational intelligent, the egoistic noble.

According to Freud, art is similar to dreams, both in essence and function. He regards dreams as symbols of suppressed desires. Similarly, a work of art is a "disguised (*verkleidete*) realization of a repressed and converted desire." Thus, any work of art has both legitimate and clandestine meaning. The symbolism of art stems from the need to say in indirect and devious ways what one is forbidden to say frankly and directly. It is not sufficient to understand an image, one must strip away its covering. The image is intended to conceal rather than express. The image is a cryptogram, a clue, a secret.

In addition to that, symbolism itself is interpreted in a special way. All psychology is dual, and every image in art is an image-double. Ethical impulses are registered on the surface of a work of art, while sin is at work deep within.

Though the individual's desires vary and are affected by time, two passions always predominate: ambition and erotic desires. They rule the artist, and the most sublime poetry is "egocentric self-expression."

Each of us, according to Freud, is beset by ambitious or lecherous dreams. However, we are disgusted by the opportunism or lust we see in our fellowmen. But that is because it is not our desire but someone else's. The artist's genius lies in his ability to master this disgust and so transform his ambitious-erotic fantasies as to make them enjoyable to others.

We can guess the technique used by the artist to reach this end. The poet veils the egoism of his fantasies by wrapping them in a pleasing poetic haze that gives "purely formal" esthetic enjoyment.

To distinguish esthetic from sensual enjoyment, Freud calls the former *Vorlust* or fore-enjoyment, anticipated enjoyment. It has the same quality as sensual pleasure but involves anticipating imagination. "Esthetic enjoyment for both creator and perceptor of a work of art is only anticipated enjoyment (*Vorlust*), concealing its genuine source," writes Otto Rank. Art is an imaginative concealment of actual motives. The investigator's function is not so much to explain as to expose the process of artistic creation. Why, for example, is the theme of love so universal in art? Because artists are psychologically less capable than laymen of coping with this problem in reality, replies Otto Rank. The more insipid, frustrating and momentary the artist's love, the brighter its image in art: imaginery compensation for actual frustration. The artist explains his subjective unfitness for love by objective circumstances that prevent his consummating it. Hence, for example, the Montague-Capulet feud in Shakespeare's *Romeo and Juliet*.

Thus Freud reduces Shakespeare's tragic assertion of new ethical principles of love to a sample of symbolic cryptography concealing the artist's sexual inadequacy. The iridescent spell of poetry is only a peacock's tail decorating a physiological weakness; the noblest grief conceals secret egoistic cravings behind a veil of fantasy.

Similarly, for more than 300 years critics have merely wasted their breath when they associated Hamlet's indecision with humanism. Freud explains away Hamlet's lack of resolution with prosaic bluntness: the Oedipus complex—Hamlet always subconsciously wanted his father dead so he could possess his mother. That is why he puts off his vengeance. Claudius did what Hamlet had been dreaming about secretly—what he had been hiding even from himself. Claudius is both Hamlet's foe and alter ego. They are linked by an invisible bond, the two accomplices in the crime.

But can anyone admire Hamlet if he is the alter ego of Claudius? Can any noble idea be believed in if it is only a symbolic parable for concealing ulterior ends?

The tragedy of King Lear, says Freud, is not an attempt to solve a historical or ethical problem: such problems are only art's unessential and external paraphernalia. King Lear's final preference for Cordelia actually reflects his senility. He is an old man who still craves love. This is how the subconscious symbolism of the plot and characters of Shakespeare's tragedy should be decoded. Goneril and Regan incarnate the gross sensuality of love, while Cordelia, who is too good and kind for this life, symbolizes death. The message of the tragedy is King Lear's resignation: He gives up love and accepts death—he slays the hangman and rescues Cordelia but dies of grief when he cannot restore her to life. "King Lear brings out the corpse of Cordelia on the stage. Cordelia is death. If we transpose the situation, it will become accessible (*vertraut*) and understandable. This is the goddess of death who carries a fallen hero off the battlefield like a Valkyrie in

BY VLADIMIR DNEPROV

German mythology. The eternal wisdom of the ancient myth impels the old man to give up love and choose death, to accept the inevitability of death," wrote Freud.

Freud ignores the simple fact that no art can be based on what he presumes to be the eternal instincts rooted in man's animal nature. Art is possible only because man can rise above the animal, only because his interests and desires can strike deep roots in society. Love of other men, the yearning for everyone's happiness, the dream of social justice and freedom, the hatred of social evils—this is the living pulse of beauty in art.

Shakespeare clearly indicates the ethical source of Lady Macbeth's breakdown: She cannot carry the burden of her guilt. Freud promptly finds a special psychoanalytic pattern for Lady Macbeth and all those who come to grief just when their goal is in sight. Lady Macbeth, resolute and undaunted when the crime is perpetrated, breaks down and goes mad when victory is at hand. Why? Because she sacrificed her femininity and thus condemned herself to sterility, is Freud's explanation.

Surprisingly enough, there are many who take these art studies of Freud's very seriously, and the stereotypes of Freud's psychoanalysis are worked into long "scientific" studies.

The Freudian concept of tragedy is also characteristic. "The pleasure derived from the defeat and death of the hero . . . is (as Nietzsche already understood) a sophisticated, sublimated form of the sadistic inclination for cruelty," Otto Rank writes. Freudianism true to type: As always, it represents man as a philistine enjoying the suffering of a noble man and concealing his glee under the mask of compassion.

How can one understand then the epigraph "Truth, bitter truth" of Stendhal's immortal novel, the relentless social criticism of Balzac or Gogol, Flaubert's realistic portrayals, Tolstoy's startling exposures? How can one understand Hemingway's admonition: "No illusions, either bad or good"? The Freudian can only reply that this kind of art is impossible. It contradicts the basic laws of human psychology, and the investigator's aim is to expose the self-deception on which it is based.

Apparently the artist's intelligence is only a code for suppressed unconscious desires, and Freud's psychoanalysis of art proposes to decipher this code.

Analyzing art, classical esthetics moves from the particular to the general, from the individual to the typical. To Freudians, the general in art is pure appearance. The complex hieroglyph of a general idea in art always conceals the author's psychological biography, a peculiar concurrence of his personal idiosyncrasies.

Nor does Freudianism consider the artist's biography as a historically conditioned entity influenced by his time. On the contrary, the artist's biography is regarded as a sum of accidents. True, Freud asked once whether we should ascribe "such a decisive influence on the destiny of a man to an accident of birth." However, he replied without hesitation: "In fact, everything is accidental in our life."

The social content of the individual's life is vast and varied, and it has been shown to explain the basic characteristics of works of art. For Freud social consciousness is something superficial; it cannot penetrate the depths of personality or even affect personality. Psychological influences must be traced (Freud reiterates this many times) not to the outside world, not to the social environment, but to unconscious instincts, immutable human inclinations. How then can one explain the astonishing variability and infinite variety of forms and ideas in art? To answer this question he brings the accidental into play.

The accidental variations on the eternal son-mother-father triangle theme condition the individual variations of sexuality and thus determine the uniqueness of the artist's emotions and images. "We cannot hope to find in Leonardo anything except the traces of unrealized sexual desire," Freud writes.

He attempts to disclose "with the aid of small personal peculiarities . . . the conditions of his (Leonardo's—*V.D.*) spiritual and intellectual development." Leonardo's father, a successful notary, was indifferent to his brilliant son. That is why Leonardo himself reacted similarly to his spiritual children, leaving his pictures to their fate. "The artist feels with respect to his works what a father feels with respect to his children," Freud writes. "For Leonardo's works, his identification with his father was fatal. He created them and never cared about them afterward. Just as his father had not cared about him."

To think that Leonardo would have not become a man of genius if his father had been kind and responsive! The Renaissance must have been an age of bad fathers since the most advanced people fought the idea of the personal representation of God, "the sublimated father," and clung to the bosom of their tender mother, Nature. The greatest historical turning point in human mentality is reduced by Freud to an improbable concurrence of accidents in personal biographies.

Curiously enough, not only atheism but anarchism as well is derived from the child-parent relationship. Picking out a few facts from the biographies of terrorists who happened to have been adopted children or had been neglected and humiliated in childhood, Otto Rank draws this generalization: As a result of the unloving and unjust attitude of the parents, the child accumulates a desire for vengeance, and then the subconscious inclination for murder is directed by the "law of psychological transference" from the father to the "father czar." The czar's role with respect to the nation has a formal analogy to that of the father in the family, and this analogy suggests the identification of the two and directs the vengeance against the czar.

The identification of regicide and patricide is used, for example, to psychoanalyze Dostoyevsky's biography for an insight into the innermost meaning of his art. In his book *Dostoyevsky* (approved by Freud) I. Neuefeld uses the conventional psychoanalytic stereotype to explain the great writer's participation in the radical Petrashevsky group by his unconscious hatred for his unfeeling, greedy and callous father. "Only the father complex can explain this action since father and czar are the same person in the unconscious, as we know from many dreams of healthy people and neurotics as well as from myths and tales." From this point of view Dostoyevsky's political and philosophical ideas are considered to be symbols of his Oedipus complex. *The Brothers Karamazov* is simply an extensive description of a case of patricide. Besides (and this is the most surprising revelation), the "demoniacal" Grushenka is made to play the role of the mother, on whose account the father-son struggle must be enacted in each Oedipus complex worthy of its name.

Dostoyevsky's tragic love for his country is merely a symbol of the inhibited desire for his mother. "Mother Earth!" In the unconscious, the mother—nursing, caressing and rearing—is associated with native soil. "Therefore, the country is symbolized in the fantasy of all nations as a woman . . ." The individual's love for his country is a substitute emotion for impermissible incestuous desires. "His passion for his real mother, which would be punishable, may become, without reproaches or pricks of conscience, a fiery love for his country."

Freud's theory deliberately expurgates all social content in human psychology. Man minus social influences equals animal. Freud has a serious advantage over his less consistent disciples: He did not try to evade this conclusion. "The antecedent development of man does not seem to me to require any explanation other than the development of animals," he writes. True, some people strive for self-perfection, but this is accomplished, in Freud's opinion, not by elevating animal instincts to the level of human impulses, but by forcing them into the unconscious, where they persist as the eternal tensions of inhibited desires.

Incidentally, along with his family complexes Freud smuggles in the simplest social relations, since otherwise he would have to move in the vicious circle of utterly primitive instincts, which would say nothing more than that mooing is mooing. The social relations based on private ownership and male dominance as reflected in the family are translated by Freud into his jargon of primordial sexual conflicts. He considers the family not as a social atom of mankind, but as its sexual atom. The Oedipus complex is not merely an invention easily removable from psychoanalysis, with its other elements preserved; it is a myth of human relations independent of social life. The extreme conclusions arrived at by Freud in his analysis of art depend not so much on the specific composition of psychoanalytical complexes as on the fundamental concept of Freud's theory: the sphere of purely personal psychology independent of the transforming influence of social relations and thus logically preceding these relations.

The history of esthetics has known the esthetics of the beautiful, the esthetics of the sublime, the esthetics of the comic and even the esthetics of the ugly. Freud tried to create an esthetics of the odious. Applied to the analysis of works of art, his esthetics nullifies them as works of art.

Courtesy of the magazine Voprosy Literatury







BARON VON MÜNCHHAUSEN'S CASTLE

BY TATYANA GERASIMOVA

THE DRAWBRIDGE was lowered across the deep moat, the gates squeaked open, and we entered Baron von Münchhausen's Castle. Yes, Münchhausen! His castle really exists. It stands on Saaremaa Island in the Baltic.

If Münchhausen himself were telling us about this island, he would probably begin this way: "Once, on a long voyage, our vessel was caught in a hurricane, which instantly shredded the sails and broke the masts. One of the masts fell on the compass and smashed it to pieces. We had no way of knowing where the ship was carrying us until one morning we spied a pier. . . ."

Now, however, despite the Baron's tall tales, steamships make regular trips to Saaremaa. Newcomers are affected by this austere land, its bareness accented by the windmills, juniper shrubs and an occasional fishermen's settlement. The prevailing smell is an astringent blend of water plants, conifers, fish and wet nets.

Kuressaare Castle, as though molded from lead, rises high above the brown island. The bus brought us to its peaceful walls in 20 minutes. There were no mailed guards, the moats have dried up, and the old drawbridge has been replaced by an ordinary one.

The castle was built in 1343-1345, and in 1558 its owner, Bishop Monikhausen (one of the variants of Münchhausen), sold his feudal estate to the Danish King, Frederick II.

A signboard on the castle's only gates, which lead into the courtyard of the fortress, reads: "City Museum of Local Lore."

An inner drawbridge admits the visitor to the Long Herman Tower, a deep and narrow stone pit where convicts were once thrown to the beasts. The coat of arms of the baronial owners and part of a fretted altar, created by the ancient Lubeck master Hennins von der Heide, have been preserved in the chapel, whose vault is supported by an octahedral pillar. Here we were met by the present custodian of Kuressaare Castle, the director of the museum, Temoteus Linna, who is a teacher, a great song enthusiast, and conducts Saaremaa Island's amateur choir.

He tells a romantic tale, one that suits the medieval surroundings very nicely.

"A photographer by the name of Königsfest gave me this picture. As you see, it shows a room in which a person dressed in ancient apparel is sitting at a table. There is a clay ladle and scroll of parchment in front of him, and on the wall is a black hat with ostrich feathers. The inscription says that the photograph was made from a drawing.

"Königsfest gave me this explanation of the drawing. When the castle was being restored, workmen came upon a wall that did not appear in the building plans. They broke through and behind it found a dead knight sitting at a table. A drawing teacher was called in. He carefully made his way through the break in the wall, but no sooner had he made a sketch of the scene than the skeleton tumbled down and crumbled away. . . . Königsfest came across the yellowed drawing in the library of the castle and photographed it. The incident might have been forgotten, except that recently someone going through the archives here found a parchment scroll which disclosed the tragic secret of the prisoner of Kuressaare Castle.

"A monastic order had sent one of its knight commanders to rid the island of the Lutheran heresy. But the knight met a beautiful maiden on the Saaremaa shore, forgot his solemn monastic vows and pledged eternal love to the girl. Envoys of the order demanded that the apostate recant. But he was in love and adamant. The order abducted his beloved. As the monks were carrying her through the forest to the Carmelite Monastery, the knight commander tried to rescue her. He was seized, brought to this castle and immured in the dark room of the tower."

It was this knight's skeleton that the workmen had found in the room where we stood with the museum director.

Courtesy of *(the Weekly) Nedelya*




RMEN from Saaremaa









ISLAND ON THE BALTIC

Saaremaa Island is the biggest in Estonia, with a population of several thousand. Its major industry is fish. The eels in the top photo swam all the way from Brazil to be converted into a delicacy at the Saaremaa Cannery, the republic's third largest. Kingisepp (center), the island's principal town, is 400 years old. Its peak-roofed houses and cobblestone streets epitomize the old way of life, its attractive modern bookshop the new.



"*Kivi kotti*" ("stone for your sack") is what you say to a man setting out for the open sea. Last year Estonian fishermen brought back 165,000 tons of catch. Also last year, Saaremaa Islanders packed six million cans of high-grade fish.

MAN AND HIS HEART

BY MYUDA DEREVYANKINA

MEDICINE'S PROBLEM NO. 1 the world over is heart disease. Heart Researcher No. 1 in our country is Alexander Myasnikov, a member of the USSR Academy of Medical Sciences, who was recently awarded the Gold Stethoscope prize of the International Society of Cardiology. The prize was inaugurated in 1960, and the first winner was American physician Paul D. White.

Disease crosses all frontiers. That is the reason why the book *Clues in the Diagnosis and Treatment of Heart Disease* by Dr. White, Honorary Member of the USSR Academy of Medical Sciences, is so popular with our medical men, while Professor Myasnikov's *Atherosclerosis* has been published by the National Heart Institute in Washington.

The Moscow Institute of Therapy, which Professor Myasnikov heads, concentrates on the heart. From its laboratories and clinics new methods of diagnosis and new remedies (heparin, fibrinisin, etc., which aid tired, worn-out, diseased hearts) are sent to hospitals all over the country. Here also new medical equipment is tested. The physiograph, an electronic "combine," assists the stethoscope. It simultaneously records a cardiogram and phonogram of the cardiac murmurs, measures blood pressure and temperature, and controls the oxygen content of the blood. But even with this powerful assistant, the stethoscope, that extension of the physician's sensitive ear, retains its importance. That humble instrument has been serving mankind for 150 years.

That is about as long as the Myasnikov family has been healing people.

THE MEDICAL CALENDAR OF THE MYASNIKOV FAMILY begins with the Academician's father Leonid Myasnikov, a country doctor. He practiced for 50 years in the small provincial town of Krasny Kholm.

For 20 years the Academician's mother Zinaida Myasnikova worked with her husband as a nurse. It was difficult for women to get a higher education in old Russia. But at the first opportunity she entered Moscow University. She took her entrance examination at the same time as her then 18-year-old son Alexander. In 1922 mother and son both received their diplomas.

The son continued the tradition. In the twenties he published about 30 papers, all on cardiology. By now the figure has increased fourfold: 120 printed works, 8 monographs, a textbook.

To the Myasnikov Calendar we should add 18 years of work by his wife, Inna, a laboratory assistant, and 20 years of practice by his doctor sons, Leonid and Nikolai.

Today, however, the tradition threatens to break. The Academician's 12-year-old grandson Alexander says no doctoring for him; he has every intention of becoming a forest ranger.

"I REMEMBER YOUR HEART," replied Dr. Myasnikov to a patient who had asked whether the doctor remembered him. This man took a course of treatment in the clinic of the Institute of Therapy 10 years ago. He was cured and returned to his chosen profession, never knowing that he had helped the doctor formulate a conclusion which had long been maturing.

"Pilot 'A' was a patient in our clinic. His blood pressure did not rise above 150. But one day, while it was being taken, the roar of aircraft engines reached the ward. The instrument registered 175. Why? 'A' said: 'I was suddenly struck by the thought that I would never sit at the controls again.'

"At the very thought that he would have to give up his beloved profession, the man's blood pressure rose! In this case, hypertension was the result of psychic and emotional disturbance." And Myasnikov drew this conclusion:

"If such excitment takes place regularly, with implacable persistence, stagnant foci of excitation will be formed in the cerebral cortex and in the sphere of the subcortex. They form the basis on which the disease of hypertension develops." (*Ogonyok*, 1963.)



Dr. Myasnikov (center) meets American cardiologist Paul White (far right) in Boston in 1960.

Hypertension, atherosclerosis, infarct of the myocardium. There is a reason this deadly trio has become Problem No. 1. Some American doctors call hypertension "a disease of the American way of life."

Myasnikov thinks that it is a disease of the "modern way of life."

"Our time is full of complicated nervous experiences. Industrialization, mechanization, urbanization, create new relations of the human organism to the surrounding environment. Greater self-control, psychoemotional restraint are required. The laws of the animal kingdom and even of primitive forms of human society demand direct physical reactions from the organism: either to flee from the enemy or to attack him. Even at the time of the Three Musketeers many conflicts were solved, so to speak, directly, with the sword. How does civilized man react to an offense? He has to inhibit his emotions, to control himself. As a result the sense of injury lingers on and continues to nag: the emotions do not find a way out in physical action. This is one of the causes of the 'evil.'" (*Izvestia*, 1964.)



"Anybody disagree with the chief's diagnosis?" (From the magazine *Krokodil*)

The Latin word "professor" is translated "preacher." Professor Myasnikov's articles and speeches, vital in content and pungent in style, often appear in popular magazines and newspapers. He says, writes and preaches that people should spend more time in the open air. He calls for more sanatoriums and resort hotels in scenic surroundings. They do much to relieve nervous tension. In his opinion, six million resort vacationers annually is not nearly enough for so big a country as ours; it should be several times that.

"THE HEART NEEDS WARM-HEARTEDNESS. Diseases of the heart should not be cured so much as prevented," says the scientist, in answer to questions put to him by patients and people generally.*

QUESTION: What part does nervous tension play in cardiovascular diseases?

ANSWER: Our blood vessels are controlled by the central nervous system. They react swiftly and acutely to such nervous processes as excitment, fright, joy, grief, anger.

This is related to the fact that the centers of nervous reactions, emotions, are located in the same sections of the central nervous system as the centers which control the activity of the heart and the blood vessels.

Therefore, prolonged or frequent emotions are accompanied, as a rule, by changes in the functions of the cardiovascular system.

QUESTION: Does mental over-exertion play a role in the origin of this group of cardiac diseases?

ANSWER: It certainly does. This follows from the fact that hypertension, atherosclerosis and infarct of the myocardium are most frequent in people who do intensive mental work. It has been established that after prolonged physical work blood pressure rises. A rise in blood pressure is also noted during mental exertion.

At night, when the cerebral cortex is at rest, blood pressure drops. Research has shown that reactions accompanied by a rise in blood pressure appear most frequently and easily under the influence of verbal irritants. The word is the most characteristic cause of a nervous-vascular reaction. The blood pressure may rise sharply from a thought, from a word.

QUESTION: Does upbringing, personality play a role here?

ANSWER: The answer to this question is a decided Yes. We must do more to combat such character tendencies as fear, envy, fits of rage, and to bolster up those who are unduly inhibited, introverted, reticent, reserved and easily offended. (*Sovetskaya Rossia*, 1965.)

"WORRY ABOUT OTHERS, do not be egotists," advises the doctor. "It is good for your heart!" And, unlike most people, he follows his own advice.

Laughing at himself, the professor will say that old men like to give good advice because they can no longer set bad examples. But no one ever thinks of Alexander Myasni-

---

*"Heart Disease Can Be Prevented," an article by Alexander Myasnikov, was published in the June 1964 issue.

kov as an old man. The secret of this 65-year-old scientist's youth is in his favorite word:

"Interesting, interesting," says the professor, every time he leafs through a new article.

"A very interesting diagnosis," he praises a young colleague, and an invitation to "examine an interesting patient" will always tear him away from his work.

Unlimited, youthful interest, eagerness to learn something more, to discover yet another, even the most infinitesimal, secret of nature, to help yet another patient—this is what keeps the gray-haired academician everlastingly young. Old age is another name for not caring.

His friends say about Alexander Myasnikov that he has a *restless* heart. Women think he has a *kind* heart. And for good reason—the professor cannot bear tears. At the institute where he lectures, girl students who are not well prepared for an exam will take an extra handkerchief with them. A well-shed tear, they say, will sometimes make the difference between a passing and failing grade.

CLASSIFICATION IS MY PASSION." Myasnikov says that the desire to classify helped him to become a scientist.

"There were arguments around some theories, but the delegates, almost without exception, shared the view that his classification was exceptionally useful." (Resolution of the Second All-Russian Congress of Cardiologists.)

"Alexander Myasnikov's monograph *Atherosclerosis*, which won an international prize, was the first to classify atherosclerotic lesions. Classification gives us a common language with which to study and fight diseases. Myasnikov is an excellent clinician, and in working out his classification he was guided by clinical observations and careful analysis of both the localities and the cause of the disease. His classification is the result of these observations." (*Moskovskaya Pravda*, 1965.)

"A theory cannot emerge from chaos," says Myasnikov. "It emerges from a system. A classification is the skeleton of a theory. That is why I call classification my passion."

The passion for classification is only the external expression of his passion for discovery, for the discovery of a theory by which to explain and treat all ailments of the heart. Like any passion, it fills every minute of his life, it demands complete involvement. Nevertheless he still finds time for other and related things. One is music, related, he says, because the heart "listens" to music. Another is an art collection of which he is very proud.

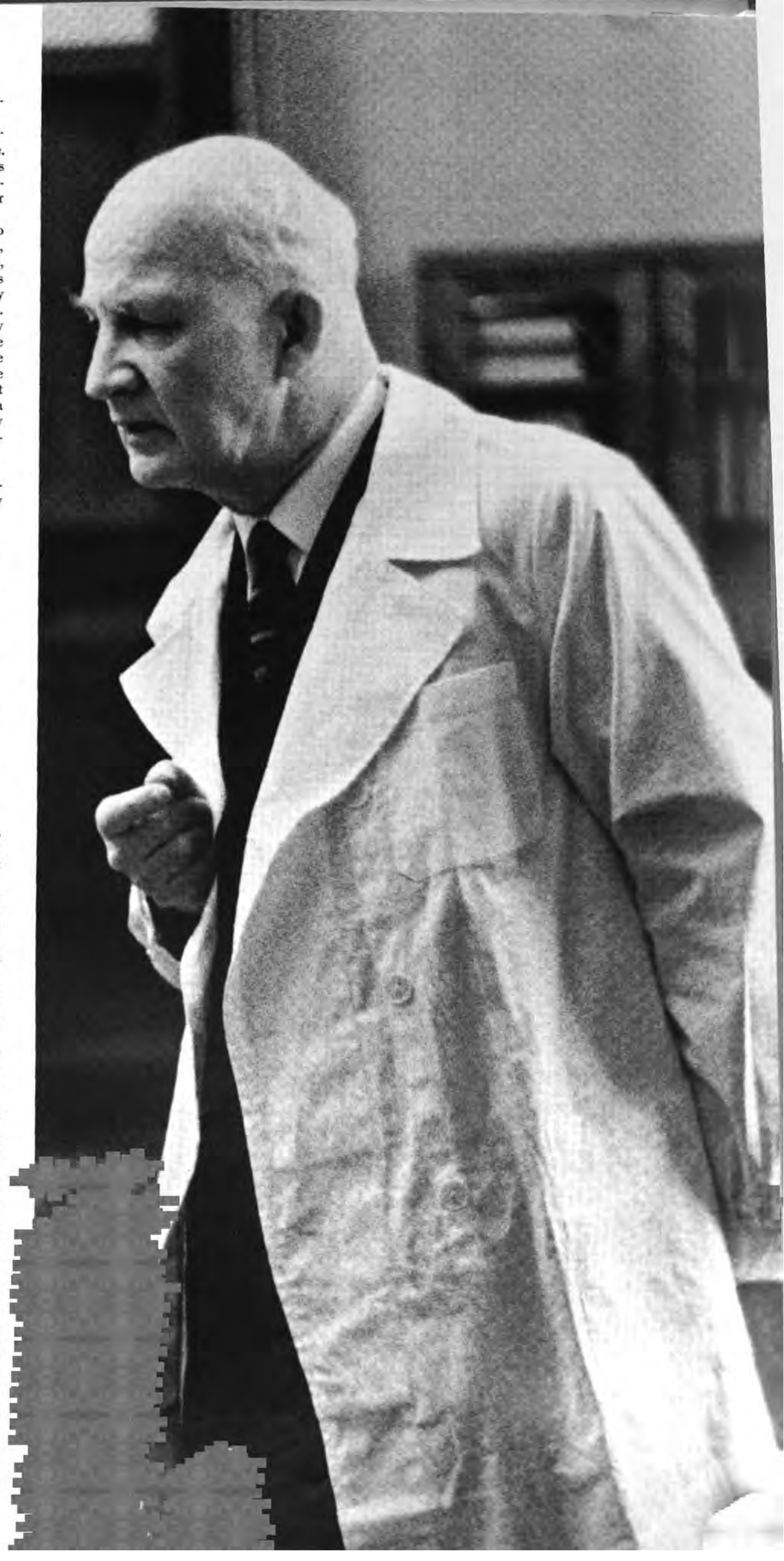
The professor has something of a reputation for his aphorisms. Students still pass along the classification of medical men he made in jest long ago.

In the first category of doctors who can do everything and know nothing are surgeons.

In the second category, those who know everything but can do nothing, are internists.

In the third category are neuropathologists, who know nothing and can do nothing.

"Since then things have happened," says Myasnikov with a smile. "We internists can do something, and surgeons do know something. Although I still think of surgery as unsuccessful therapy, a reproach to our ignorance. But with regard to medicine in general, I do not share the pessimism of philistines who say that if you want to get sick, go to a doctor. Our doctors have learned to cure diseases from which most people died 10 or 20 years ago. What gives me the greatest pleasure is to classify diseases which have disappeared. I am sure that the time will come when hypertension, infarct and atherosclerosis—the whole of 'Problem No.1'—will fall under this heading."



Brief Comments

Literary Limelight

by Lev Anninsky



Lev Anninsky, 31, is a graduate of Moscow University's Philology Department. He is a literary critic, a contributor to leading Soviet magazines, and the author of The Kernel, dealing with the present trends in Soviet literature.

New undercurrents in Soviet prose are apparent in two short stories recently published by the popular youth magazine *Yunost*.

One is by Vasili Aksyonov. This erstwhile singer of young people skipping toward a bright communist future to jazz rhythms has begun to tap deeper layers; he has plunged into philosophic meditations on how life must be lived.

Aksyonov's new hero is 65-year-old Zbaikov, who visits his native village after 45 years. With self-denying passion he had helped to make the Revolution, fought in the Civil War and then built factories, cities and a new world. In 1937, with many others, he endured the injustice of imprisonment. But the years of suffering did not rob him of his faith in communism; he went on working, making himself useful. In 1956 his freedom and his good name were restored. We meet him in the story as a pensioner who looks back on a life of hard struggle, peril and devotion to a great ideal. For all the trouble, he concludes that he would have hated to live a life that was soft, easy, meaningless.

During his stay in the village Zbaikov meets an old schoolmate. He remembers him as a weakling of a boy who avoided people and spent most of his time in a back shed building some sort of motor. No great ideas had burned into his soul. He had insulated himself from the events that had rocked his country. It occurs to Zbaikov that he, too, might have led the same kind of life, and he shrinks with horror from the thought.

If you do not want to rot, then you must burn and struggle. Such a life makes a man. This is what Aksyonov's story is saying.

The Maximalist throb is still present in Aksyonov's prose although he no longer discovers solutions to life's problems with the facility of his early works. History is not smooth sailing. You either burn or you rot. Aksyonov says: Burn!

The other short story is "The House with a Little Tower" by Friedrich Gorenstein, a newcomer. The story is set in 1942, during the war against Hitler. It tells of a little boy whose mother dies of hunger and who finds himself in a train crowded with evacuees. The writer looks at the world through the eyes of this forlorn child. The little boy cannot distinguish one face from another; what he sees is only a blur. Sometimes the features of a man or a woman obtrude themselves on his mind, only to be replaced by a picture of a house with a little tower. The boy's world is one of shadows, with all things shifted from their customary places. But in that confusion he tries to find some coherence and to fit himself into the harsh new reality.

The dramatic tension of the story, however, is far less in the child's sense of loss and loneliness than in the challenge to his moral values. No sooner does somebody help him and inspire him with trust than the topsy-turvy world puts him on his guard again. For example, the boy catches a bespectacled old man stealing somebody's bread ration, the same old man who had protected him earlier in the day. In the half dark their eyes meet. The boy says nothing despite his shock at the discovery. He shares his own bread with the hungry man. To keep the child warm, the man gives him his sweater. The homeless boy feels a new human warmth. Slowly new relationships arise between people caught in the grief and tragedy of war.

Gorenstein's story, I feel, points to a new trend. Sharply etching the world of his little hero, Gorenstein shows the power of simple human emotions to bridge an abyss of great grief. Abstract dilemmas give way to positive action. The uncompromising note struck by Aksyonov is handled in Gorenstein's story not in an abstract way but as a gradual build-up of moral values.

It is a good sign when a writer, to answer a vital question, turns from the abstract to life itself. It is good for both literature and life.

Potsdam—As Momentous As Ever

by Lev Sedin



Lev Sedin is a member of the editorial board of New Times magazine and a commentator on world affairs. He studied at Moscow's Institute of Philosophy, Literature and History, and from 1941 to 1947 was Trud's foreign editor.

In the kaleidoscope of dates and developments which the twentieth anniversary of V-E Day brings to mind, the Potsdam Conference of the Big Three, which took place between July 17 and August 2, 1945, holds a special place. During the war the leading statesmen of the anti-Hitler coalition met several times. Still the Potsdam Conference was of pre-eminent importance. And not only because the Allies met in the very heart of routed Nazi Germany, but because Potsdam was the first attempt at postwar cooperation, the first foundation stone of long-range peaceful coexistence in Europe.

The world enthusiastically acclaimed the success of the Potsdam talks. They showed that in times of peace, as on the battlefield, the Big Three—the USSR, the USA and Britain—could cooperate, find a common language, take concerted decisions and coordinate major issues of foreign policy.

The conference met to decide the urgent international issues that had arisen as a result of the collapse of the nazi Reich. It was to further elaborate and consolidate the democratic principles of a postwar arrangement for peace. The fact that by the time of the Potsdam Conference the Allies had already developed a rational approach to Germany's future made the task easier. The USSR intervened to jettison reactionary utopian designs that had cropped up in the West for Germany's deindustrialization and its transformation into a "potato plantation." At Potsdam the Allies agreed to preserve German unity as a state, to see that it developed along peaceful and democratic lines.

It goes without saying that the conference had its problems, and problems of no small magnitude, and that there were conflicts of opinions. Still, mutually acceptable formulas were found.

The decisions taken to demilitarize and disarm Germany completely were motivated by the wish to secure lasting peace for nazi-ravaged Europe. The concluding communiqué adopted said that German militarism and nazism would be eradicated and that with complete harmony of purpose the Allies, then and in the future, would take what other steps were necessary to prevent Germany from ever again becoming a threat to its neighbors and to world peace.

The Allies maintained that Germany could not escape responsibility. But no one planned either to destroy or enslave the German people.

An understanding was reached to denazify Germany and root out the Nazi Party and all its branches. Potsdam's goal was to prevent the resurgence of fascism in whatever form, and to end all nazi and militarist activity and propaganda. It resolved that all war criminals, all the culprits and accomplices of nazi atrocities in German-seized countries, be arrested and tried.

Finally, Potsdam set the territorial pattern for postwar Europe, agreeing upon Poland's new western borders and, hence, upon the new German borders. These decisions became a fact in the life of the peoples.

The decisions taken at Potsdam are as momentous as they ever were. Potsdam was an example of Great-Power constructive cooperation for the preservation of peace. And so it remains.

70 Billion Rubles for Agriculture

by Dmitri Rudy



Dmitri Rudy, 64, is a graduate of the Kiev Institute of the National Economy. A well-known journalist, he is the author of a number of books and articles on agriculture, including The Distribution of Income on Collective Farms, Hard Paths and These Years Are Worth Decades.

Major errors have been made in the past few years in guiding Soviet agriculture. As a result, the rate of growth of farm output has slowed down and a food problem was created for the country.

Farm development has been discussed by the Central Committee of the Party several times in the past 10 years. The plenary meeting of September 1953 was especially significant. As long as its decisions were carried out, agriculture made progress. Tens of thousands of new specialists—agronomists and zootechnicians—went to work on collective and state farms. The development of virgin lands made a great impact. By 1958 the sown areas had been expanded considerably, yields had increased, and gross and commodity output had risen.

Unfortunately, there was no follow-up, no continued development. The demands of the economic laws on which a planned economy rests were largely ignored, with acts of sheer spontaneity often the case in such matters as price formation, financing and providing credits. For example, the purchase prices on some products did not cover production costs. This meant big losses for collective farms.

Little was done to raise efficiency and to improve soil fertility. The stereotyped instructions issued from the center made no allowance for the natural peculiarities of the various agricultural zones and their growing conditions, or for local experience. Little attention was paid to the farmer's personal incentive in the collective effort.

All this was responsible for the slowdown. Instead of a 70 per cent growth, as was called for by the seven-year plan, there was only a 10 per cent increase for the past six years. The gross output of farm produce in the period 1955-1959 increased 38 per cent, while in the last five years the increase was only 9.5

per cent. The average yield of grain crops in 1955-1959 rose by 151.7 pounds per acre, as compared with the preceding five-year period, while in 1960-1964 the rise amounted to only 71.4 pounds. In animal husbandry the rate of growth of cattle and other animals and poultry dropped.

This was a matter of very serious concern. It is this concern that dictated the steps taken at the March Plenary Meeting of the Central Committee of the CPSU.

A more stable system of obligatory state purchases of farm products was initiated. Hitherto these procurement plans were often changed, and collective and state farms had to assume additional obligations. The grain plan for the current year, originally set at 65.6 million metric tons, has been reduced by 15 per cent, to 55.7 million metric tons. This figure will stay unaltered for six years, until 1970.

Also, beginning this year, procurement prices on wheat, rye and some other cereal crops will be raised. The prices have been fixed with due allowance for specific conditions in the different zones of the country. For the fertile areas they will be increased from 15 to 20 per cent, and for the nonchernozem zones from 50 to 100 per cent.

The fixed volume of state grain procurements for the six years will not meet all of the country's growing requirements. Therefore, along with the planned grain procurements, above-plan purchases will be made from farms with surpluses. Moreover, these purchases will be stimulated by increases over the basic price that may run as high as 50 per cent.

The easiest way to evaluate the importance of these economic measures is by a concrete example. Let us take the Lenin Collective Farm in Slavyansk District, Krasnodar Territory, for instance. Last year this farm sold the state 12,100 metric tons of wheat (instead of the planned 10,000) and 9,800 metric tons of rice (instead of the planned 7,000). It realized three million rubles for its grain.

If the new system of procurements and the new prices on grain had been in effect last year, this collective farm would have received 129 rubles for each ton of wheat grown above plan (within the plan quota—86 rubles), and 300 rubles for each ton of rice sold. Thus it would have realized a total of 4,070,900 rubles, or 1,070,900 more than it made last year.

The same measures will apply to animal husbandry. Stable figures have been set for the procurement of meat, milk, eggs and wool for a period of several years. There will be increases of 10 to 70 per cent above the current prices on cattle, and up to 100 per cent in mountainous regions.

Increases in procurement prices will not affect retail prices of bread, cereals and meat products.

Important steps have also been taken with regard to farm equipment. The equipment of collective and state farms has improved noticeably in the past few years. They employ growing numbers of tractors, trucks and other farm machines. The use of electric power on farms has increased half as much again in the past five years. However, agricultural progress requires another sharp rise in the production of farm machinery and, along with it, new capital investments in agriculture as well as in the farm machine-building industry.

The plenary meeting approved the rough draft of the national economic plan for the period 1966-1970, in which an investment of 71 billion rubles is envisaged for agriculture. This is more than the capital investments made in industry during 1959-1963, and more than double the capital investments for the same five-year period in agriculture. This is the most sweeping program for collective and state farm construction the country has ever adopted.

IN THE NEXT ISSUE



With due respect to the accompanying photo, archery is not exactly a child's pastime, if you are serious about the sport, that is. In competition, someone estimated, a bow-and-arrow man uses up enough strength to lift eight tons, more than strongman Yuri Vlasov did for the world record. This is not altogether academic in view of the fact that the sport is scheduled for the Olympics in Mexico City. See the August issue for more on USSR sports doings.

A giant water-filled elevator will lift ships more than 300 feet to the top of a dam now being built on the Yenisei. The ships will then pass into a man-made sea more than 200 miles long. **Saddled Yenisei,** in the next issue, describes this radical lock and the construction of the first power station on the big Siberian river. It will have virtually no human operators but will be run by remote control and computers.



You associate Buddhist temples with the gold pagodas of Burma and the blue mountains of Tibet, but hardly with snowbound Siberia. Our correspondent's account of his visit to a Buddhist monastery near Ulan-Ude, capital of Buryatia in Siberia, is presented in August. One of its buildings houses rare manuscripts from Mongolia, Tibet, India and China used by the lamas and by researchers in Buddhist history and thought.





They say the reason the Mongol Tatars were able to subjugate Russia in the 13th century was that all the Russians were busy picking mushrooms at the time. Apocryphal though that story may be, the fact is the Russians are as crazy about mushrooms as Italians about spaghetti. Some of the crazier types go so far as to say that vodka was invented only because such a delicacy as the mushroom required as special a beverage. For mouth-watering details read **Poetry of a Mushroom Summer** by Vladimir Soloukhin and the recipes for mushrooms sour creamed, mushrooms souped, mushrooms pickled and mushrooms salted.

Some of the other articles in the August issue are:
Leningrad Zoo—about the northernmost zoo in the USSR; **Cold Against Death**—Professor Vladimir Negovsky's account of recent work in reviving patients after clinical death; **Student City Planners**—about diploma theses with a practical function; **Abraham Lincoln**—A Soviet artist sends a portrait of Lincoln to Carl Sandburg; **The Chairman**—a review by Lev Anninsky of the very controversial film; **"American" Commune in Russia**—about a collective farm organized by emigrants who returned to Russia; **Sun-Kissed Colors**—the Turkish poet Nazym Hikmet writes about Azerbaijanian artist Shmavon Mangasarov; **Minarets and Textile Mills**—a picture story begun by Georgi Zelma in 1925 and finished 40 years later.

NOVOSTI PRESS AGENCY

SOVIET LIFE

Trade Unions Their various functions: in legislation, education, welfare, culture, recreation.

The Muses The work of several leading Russian painters is analyzed and reproduced in color.

Universities About the requirements for entrance and study, the curriculum, schedules, grading.

COMING SOON

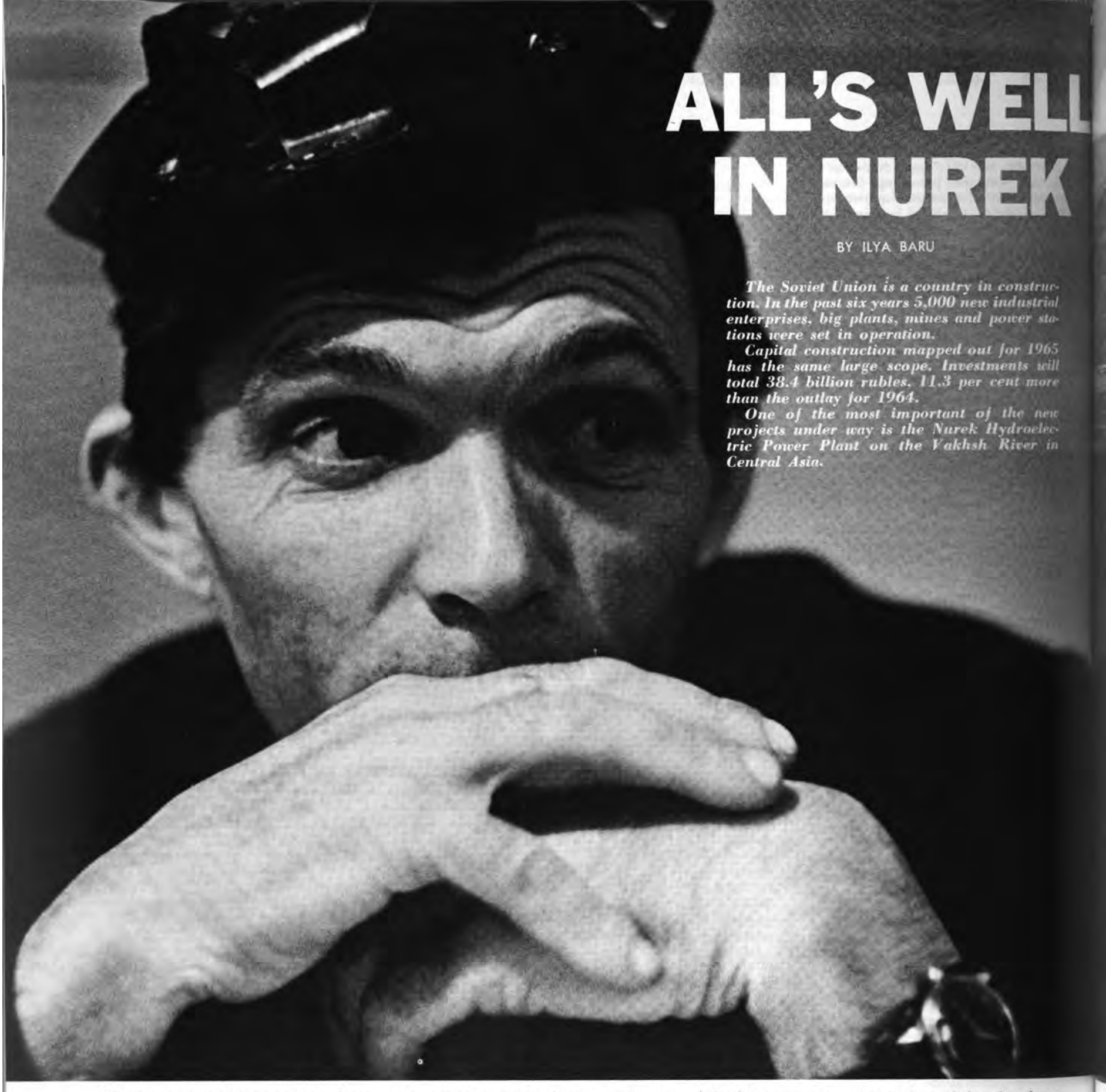
ALL'S WELL IN NUREK

BY ILYA BARU

The Soviet Union is a country in construction. In the past six years 5,000 new industrial enterprises, big plants, mines and power stations were set in operation.

Capital construction mapped out for 1965 has the same large scope. Investments will total 38.4 billion rubles, 11.3 per cent more than the outlay for 1964.

One of the most important of the new projects under way is the Nurek Hydroelectric Power Plant on the Vakhsh River in Central Asia.



Chief dispatcher Alexander Chereshnev has been working at Nurek since construction of this biggest power project in Central Asia first began.

THE CLOSEST THING I can think of to the nights at Nurek are the nights at the front during the war: There is the constant rumble of big guns in the distance and the red licks of flame flaring up in the mountains. The perpetual grumble of motors makes you think of tanks concentrating for an attack. Trucks move along the road with dimmed headlights.

Actually the scene is a peaceful one. The motors belong to tractors moving out to their early morning positions. And the rusty flames up in the mountains are not really ominous—just the undergrowth being burned on the sites where the morning's work is to begin. Even the cannonades carry a peaceful message and seem to be coming from a long way off because they are underground, under the rocks where miners are blasting tunnels. They keep blasting away in four shifts, day and night. The noise does not get much attention during the day, when it is crowded into the background by the crash and roar of construction.

"All this noise," said an old-timer when I remarked on it, "means all's well in Nurek." He hadn't even heard it, his tone said.

Towns once sprang up at the crossings of trade routes. Today they owe their origin to the birth of new industry. This accounts for Angarsk, Volzhsk, Rudny and Divnogorsk. It also accounts for Nurek, which not long ago was a *kishlak* (a little village) crowded into a nook in the mountains. Now this village is giving its name to the biggest hydroelectric power project in Central Asia.

Nurek hardly deserves to be called a town yet, for many of its builders still live in clay huts, while others sleep in tents with dozens of beds in each. Most of the streets, if you can call them streets, are narrow, crooked and nameless. Finding an address here is a feat of ingenuity.

For all that, the main street, Lenin Avenue, is acquiring a double line of tall apartment houses. The town already has its open air movie, schools, kindergartens, hospitals, shops, restaurants and, of course, its tea houses.

Nurek, in short, is looking to the future, a future full of promise, predictions to the contrary notwithstanding.



A Prediction and Our Comment

The prediction runs as follows:

"Dear friends, you are great and talented dreamers. I have worked on the biggest irrigation systems in the world. Many American firms regard me as a practical, sober-minded man. I have known gold prospectors in California, primus stove inventors who dreamed of turning into Edisons, and I even spoke to H. G. Wells, the most fascinating fantasy-weaver of our time. I like bold thinking and bold planning, but this thing you people have thought up for the Vakhsh hardly deserves serious consideration. Nobody, I assure you, has ever tried to do such a job under such conditions. You will forgive me if I tell you that your scheme is a pipe dream."

This dates back to the beginning of the thirties. Its author was an American irrigation engineer Ludwell Gordon. He was invited to help with the project as a consultant, and the above is what he said at a conference of the Tajik Council of People's Commissars.

Gordon's reference to "primus stove inventors who dreamed of turning into Edisons" is understandable. But the country needed cotton and "this thing we had thought up for the Vakhsh" was very much worth serious consideration, despite Gordon. I do not know whether he is still alive, but it would be interesting to have him visit the Vakhsh River today, particularly the area where the Nurek Hydroelectric Power Plant is being built.

"We would be glad to have Mr. Gordon visit," chief construction engineer Konstantin Sevenard told me. Sevenard is a tall, gray-haired man, so well-dressed one might think he had gotten himself up for a diplomatic reception. He came to Nurek from Latvia, where he headed the construction of the Plyavinsk Hydroelectric Power Plant. Before that he had worked in Siberia on the Krasnoyarsk hydroelectric power project.

I called on Sevenard after I had been all over the construction site to get a picture of what was happening. The first morning I visited the spot where the future dam will rise 984 feet high. The resulting Nurek

Lake will swallow even the peaks of the mountains you can now see only by throwing your head way back.

Meanwhile the Vakhsh River keeps rushing through its narrow gorge 164 feet deep. The river quiets down a bit, becomes a bit smoother, only where it emerges from the cleft. But the serenity is deceptive, for the stream is in terrific motion. The current is so treacherous that even the best swimmer would think twice before venturing in.

The miners are digging paths through the rocks beside the Vakhsh. The tunnels are delightfully cool, but there is water underfoot all the way. The farther you penetrate, the dimmer the light from the entrance becomes.

One of the first men I talked to was Victor Belousov, a section chief. Belousov is a young man, only 26, and still the proud possessor of the Komsomol card he received at school. His face is fresh, almost juvenile, and he wears his metal helmet pushed back like a cap. But he has five years of training at the Tbilisi Polytechnic Institute behind him, has been a working engineer for several years, is married and has a four-year-old daughter.

With the blueprints in front of him, Belousov sat at the desk in his boarded cubbyhole of an office at the tunnel entrance. He was explaining things to miner Alexei Korol, one of the team leaders.

"Am I right?" he kept repeating, his eyes lifting from the map to the man each time.

Belousov was in a hurry to inspect the tunnel and suggested we continue our talk at his home on Lenin Avenue. But his secretary Galya Soldatkina observed resignedly:

"You'll never catch Victor at home! Since he sent his wife and daughter to Tbilisi for a vacation, he's been here day and night."

That turned out to be true; all my visits to Belousov's apartment were in vain. The only place he could be found was the boarded office at the mouth of the tunnel. He was there for the morning shift, the day shift, the evening shift and the night shift.

Back to Konstantin Sevenard's office. He threw figures and facts at me. The power plant would pay for its cost of construction in a year. The electricity it generated would be nearly the cheapest in the world—the cheapest in the USSR, at any rate. Its surplus power would suffice not only for the chemical industry of the Tajik Republic but for all Central Asia. The most important consideration, however, was cotton. Every acre of cotton gives the country an average net profit of 1,200 rubles. Now imagine, he said, what the profit would be if at least 100,000 acres of virgin land were irrigated. And this is the minimal area; the irrigation system would actually extended over a much greater area.

Sevenard went on to explain how the dam would be built. Nurek lies in an earthquake zone (the local wits claim that quakes are more frequent here than rain). There were two quakes while I was there. They were light, however, and hardly perceptible. But eight to nine great earthquakes a year are not uncommon in the region. This, of course, makes you wonder if the prospective dam will be any more solid than a "teardrop on a lash," as the ancients used to say. The consequences are something to shudder at.

But the dam will be strong enough. I was assured it would have a guaranteed reserve of solidity.

"It's not anything I can explain in simple language," said Sevenard. "We still have many very complicated problems. But we shall solve them all, of that you may be sure!"

By the Dictates of Many Hearts

The present population of Nurek is made up of people who lived in Divnogor, Irkutsk, the Kara-Kum, Novosibirsk and in the Hungry Steppe not so long ago. Some of them are recent graduates of colleges in Moscow, Leningrad and Kuibyshev. Still others are demobilized soldiers and sailors.

What brought them to the banks of the Vakhsh? No official instructions, certainly. Nobody ordered Nikolai Ilyazov, for instance, to come here. He could easily have gotten himself sent back to the Urals town of Kizel where his parents live and where he worked as a miner before he went into the army. But no, something prompted him to try a part of the country he hadn't been to. He is not the only one. There are three young men living together: Ilyazov, who had been a tank driver, mechanic and gun layer not so long ago; Dmitri Kovalchuk, a surprisingly blue-eyed, woolly-haired fellow, who had also been a tankman; and Alexander Ledenev, who had been in the same army company. Their room looks like a gym: three pairs of boxing gloves hanging on the wall, dumbbells on the floor, a bar Ilyazov has rigged up, and other equipment.

We got to talking about what had impelled these recent tankmen to get themselves sent to Nurek. They are open-hearted chaps, all three, and not inclined to deceive anybody. "We heard about this place on the radio," said Ilyazov, "and we read about it in the newspapers. We thought it would be interesting to see a giant like this one going up." From this and similar comments I heard from construction workers in Nurek and other places, I made this following generalization. It is not simply idle curiosity nor the craving for change that prompts construction men to go to new places. Some of them, even the young ones, have been moving from place to place for 10 years and more. You might think they would want to settle down and lead a quiet existence for a while. But no, the call of the road draws them on again and again. Too many big things are happening in the Soviet Union, and they want to be part of them. If we use the word "dictate" at all, therefore, we must say "by the dictate of their hearts." The expression may seem a little old-worldish, but it fits here.

One day I met a girl at the construction site of a large apartment house. She was dressed in neatly pressed slacks and a bright, well-fitted blouse. Her hairdo was modish. She wore makeup and her nails were manicured. "Now how did she get here?" I wondered. "She's probably come with some film company. I suppose she's the assistant director or something of the sort." But then I saw her climb into the cab of a crane. Soon the boom swung into action, obedient to her well-kept hands.

Svetlana Skorokhodova was born in Blagoveshchensk. After finishing secondary school, she asked for a Komsomol pass to get a job on the construction site of the Irkutsk Hydroelectric Power Plant. "It was what my heart told me to do," she said. Her heart had evidently sensed that she was destined to meet her husband Anatoli in Irkutsk. Next the young couple came here to Tajikistan, but they ran into a complication. Sveltana had led a combined team of plasterers and painters at the Angara construction site. These trades were not needed when she came to Nurek, very few apartment houses were being built at the time. The team leader had to take a comfortable but dull job as a secretary.

A year and she was fed up with it. She applied for the crane operator training course. Something of an adjustment switching from a typewriter to a machine as big as a construction crane, but she managed it.

"She's a fine worker," remarked the section chief, "but she fights too much with the management."

"You mean she doesn't get along with people?"

"Oh no! It's just that she keeps arguing, she has her own ideas about how the work should be done and . . ."

"Maybe she's right," I interjected. "It shows that she likes her job, if nothing else."

Svetlana Skorokhodova and the three former tankmen I mentioned had to put in three months of study in Novosibirsk to acquire the trades they needed in Nurek. Their plane fare there and back was paid, and they received their regular pay during the training period.

The Nurek project is one of the most ambitious of our times. As many as nine hydroelectric power plants (including the Nurek plant) are to rise along the Vakhsh River alone. Moreover, the Vakhsh River has a twin—the Pyandzh River. The designers of the power plant have calculated that hydroelectric power cascades on both these rivers will eventually yield a power output of more than 120 billion kilowatt-hours a year. It has also been calculated that by 1980 the Amu-Darya basin, between the Pyandzh and the Vakhsh Rivers, will yield an 11-million-ton cotton crop.

Courtesy of the magazine Yunost

One of the five tunnels being drilled through the Pamir Mountains. Lined with concrete, they will funnel off the waters of the swift Vakhsh River.



REALISTS AND DREAMERS

PLAYWRIGHT VICTOR ROZOV

INTERVIEWED BY VICTOR BUKHANOV
NOVOSTI PRESS AGENCY CORRESPONDENT

Nine of Victor Rozov's plays are now in the repertory of theaters all over the Soviet Union. Three have been screened. The Cranes are Flying, *a film adaptation of one of his plays, has circled the globe. His plays have been staged in England, Sweden, Italy and Japan, and published in the United States, the Federal Republic of Germany and other countries. His heroes are always young people.*

QUESTION: What would you say are the characteristic trends of our time? How are they shaping the values of our young people?
ANSWER: One of the very significant trends, it seems to me, is the democratization that has been going on in every area of our lives since the Twentieth Party Congress in 1956. The changes are not as apparent to the young as to us older people, who have a vivid recollection of the past, but they are sufficiently obvious for even the young generation to feel the great difference.

Another characteristic trend, I feel, is the opportunities that our expanding economy offers young people. Every three days at least two big new industrial projects are put into operation somewhere in the Soviet Union. Our transportation facilities are growing by leaps and bounds. We keep building new schools and hospitals. All this means opportunity, especially for young people, and they are making the most of it. Young people are moving ahead fast. Many of them are directors of plants, factories, power stations and big construction projects by the time they are 30. It is not at all unusual to find a young man or woman of 25 in charge of a collective farm or the chief physician at a hospital. The average age of executives in all branches of the economy has dropped noticeably in the past ten years. Thirty-year-olds are definitely in style, and I think the trend is all to the good.

Our young people are book readers, and that really pleases me. The publishing houses are growing at an incredible pace. Ten years ago it was not easy to buy a novel by Balzac, Dostoyevsky, Sholokhov or Thomas Mann because the country was short of paper. Now the collected works of these authors are published in editions of hundreds of thousands. Alberto Moravia is published in larger editions in the USSR than in his native Italy, and Hemingway has long had a place of honor on the shelves of our booklovers.

Our young people read a surprising amount. I am a member of the editorial board of the magazine *Yunost (Youth)*. It used to be published in editions of 200,000, now the figure is a million, an astonishing printing for that kind of magazine. And the demand is still growing. Our monthly magazines *Novy Mir (New World)*, *Znamya (The Banner)*, *Inostrannaya Literature (Foreign Literature)* and many others also come out in very large editions.

QUESTION: How about high school graduates of 1953 and 1963? Do you think they are different?
ANSWER: Much different, and I'd say the change is for the better. Young people today get a more rounded education and better practical preparation for life.

Though we have been very critical of our schools in the debate we are having on our educational system, the fact remains that they have done a great deal. Our secondary schools today can take credit for giving their fledglings a realistic view of life and equipping them to take their first independent steps soberly and competently. These qualities were far less evident among high school graduates of the 1950's. They were more naïve, less practical. If they did not make college, they were terribly frustrated. A boy or girl who does not pass the competitive college entrance examinations today feels quite badly about it, needless to say, but he doesn't consider it an irremediable tragedy. He simply gets a job and tries again next year, or the year after.

QUESTION: I understand there are many more colleges now than there used to be and that they are accepting 50 per cent more students.
ANSWER: Yes, and the number of applicants keeps growing, too. And they are passing the entrance exams with higher and higher marks. I like the idea that young people have to work hard for the right to a higher education. I think this accounts for the growing skill of our young specialists.

I'm critical of the schools of the late forties and early fifties. I feel that they inculcated a sort of snobbery about the professions. Students could not see themselves getting through high school and working as salesclerks in a store or taking jobs on a farm. The schools today teach the elements of a trade. Students learn to work as fitters, salesmen, electricians, truck drivers, movie projector operators, computing machine operators, tailors, laboratory technicians. They are not so likely to shy away from the ordinary jobs.

A young person earns his first ruble at a much earlier age now than he used to. And that's a good thing, it seems to me. It's never too early to learn the value of labor.

Boys and girls today are more down to earth. They insist upon a realistic evaluation of the facts. They don't like flowery speeches that are not backed up by action. They despise dishonesty and the distortion or suppression of facts.

The Twentieth Party Congress, which exposed the personality cult, started people thinking. They began to see the past and present in a new light. Our young people, especially those who had only a hazy understanding of history and our times, went in for a great deal of noisy discussion. These discussions are still going on, but the important thing is that our young people are doing more than talking. They are working hard to change and improve things. They hold to the communist position that one has to act, not just talk. They are building communism. The fruits of their efforts will soon be as tangible as the plowed virgin lands, as the Bratsk Hydroelectric Power Plant and the Siberian Branch of the Academy of Sciences.

QUESTION: In the past decade we have had a sharp rise in living standards. What effect do you think this has had on the youth?
ANSWER: With rising living standards such things as motorcycles, cameras, transistor radios and tape recorders have become very common. The shops today look very different than they did in 1953. It is no problem now to buy an underwater fishing gun, an outboard motor, aqualungs, art supplies or equipment for building models. This has touched off an explosive growth of all kinds of hobby circles, art studios, and so on. These groups help young people discover their aptitudes. They channel their abilities and build character.

I'm particularly pleased that our young people do not make a fetish out of things—cars and fashions, for instance. When philistinism gets the upper hand in a human being, he becomes insatiable. Give him the whole world and he'll want the galaxy. Our young people know and believe that things must serve man,and not the other way around.

Young Soviet people are not averse to enjoying the good things of life, but they do not make them the be-all and end-all of existence. What I mean is that they blend the spiritual and the material so that they complement each other.

QUESTION: Whom do 17-year-olds consider their heroes today?
ANSWER: Every epoch seeks and finds its own heroes, though it does not consign the heroes of the past to oblivion. Young people look to historical personages, to real people, to their contemporaries for their heroes.

I know one hero who has been influencing an enormous number of young people. His name is Science. All those who are possessed by science (and I like people who are possessed by their work) find their favorite hero in science, whether it be Pavlov or Kurchatov, Einstein or Wiener. Science is charged with revolutionary spirit, and young people like thinking along unexplored lines.

I shall never forget the shocked grief of Moscow University students when they learned that Lev Landau was near death from an automobile accident. They grieved over this as though they had been personally stricken. This world-renowned physicist who has so many other accomplishments is one of their favorite heroes.

Another hero of our time is called Exploration. That's what our young people see in Gagarin's smile. Courage and honesty are wanted in today's heroes. Our young people are attracted by those who are well educated, who combine subtlety of spirit with courage. They were pleased that Gherman Titov took a book of Blok's verses with him into outer space and returned to earth to write a book.

The conscious way in which they are shaping their lives, their love of creative work, their eagerness to find their places in the social scheme and prove themselves make today's young Soviet people the worthy heirs of the socialist society their fathers built. Full of bright hope themselves, they inspire hope in everyone they meet.

SEVENTH BATTLE O

IN the summer of 1964, after the Soviet team had been larrupped by the U. S., senior trainer Gavriil Korobkov said something to American sports writers which he probably wished later he hadn't:

"We lost to you in Los Angeles, but we are going to beat you in Tokyo."

Three months later, in an atmosphere thick with gloom, the USSR contingent returned from the Olympics. Elvira Ozolina, the prettiest and most promising champion on the team, was so stricken by her failure to capture the gold medal, which had seemed such a sure thing, that she cut off all her lovely black hair, like the women of the ancient Scythian tribes used to do in somewhat analogous misfortunes.

The other athletes showed more restraint, but nobody was happy, to put it mildly. Instead of the eight to eleven gold medals in track and field the Soviet athletes figured on, judging by the pre-Olympics results, they brought home only five.

Gavriil Korobkov, now a heavy-set man of 45 wearing horn-rimmed glasses, was quite a decathlon winner in his day. In the past 10 years he has been training Soviet athletes for the big meets, and he has a good deal of oracular prestige in sports circles.

This time Korobkov proved a poor prophet. Apparently Soviet coaches were so self-persuaded about the effectiveness of their methods of preparing for the Olympics that even the cold shower they got at the Coliseum did not sober them up.

After the Olympics I interviewed Korobkov, and he gave these several reasons for the poor showing the Soviet athletes made in Tokyo.

Age and Talent

What strikes the eye at once is that the Americans, who won 14 gold medals at the Games, were considerably younger than the Soviet contenders. Here are some figures to corroborate the fact.

Of the 87 on the Soviet team, 25 were over 30, 26 ranged from 27 to 29, and 18 were 25 or 26 years old. Three had competed at the Helsinki Olympics some 12 years ago, 13 had fought it out at Melbourne, and 34 at Rome. Instead of searching for fresh talent, Soviet trainers were so fearful of temporary setbacks that they kept putting all their bets on experienced athletes who had demonstrated miracles of sports longevity.

"We staked everything on the veterans," Korobkov said. "We had faith in them because they brought us the victories of recent years. And that proved to be a mistake. As it turned out, they had enough stamina to make the Olympic team but not that extra something for victory in Tokyo. Pyotr Bolotnikov, Vasili Kuznetsov, Anatoli Vedyakov, Nina Ponomaryova, Vitold Kreyer and Galina Popova are all fine sportsmen, but all are past their prime. They didn't belong in Tokyo."

"But doesn't it seem to you that Soviet athletes usually turn in their best results at a more advanced age, with rare exceptions, of course, than their American colleagues?" I asked Korobkov. "They seem to mature later."

"That is true," the chief trainer agreed. "But the point is that the training system in American schools is better than ours. According to statistics, about 5.5 million of our people go in for track and field. However, what we need is not so much mass sports in this general way as mass coaching of the young people who do regular training and compete by a definite system. It is more important to think in terms of the possibilities of these young people than to add up the millions who participate perhaps for a first and only time in their lives, and then without training."

After the Olympics our coaches went looking not simply for young and promising athletes but for those who were really talented. For, as Tokyo demonstrated, those are the only ones who have Olympic stature. The Soviet team at the Eighteenth Olympic Games had few athletes of that kind, in any case considerably fewer than the American.

Thus, says Korobkov, it was too much age and not enough talent that defeated the Soviet team in Tokyo.

But you certainly can't deny the talent of such athletes as Tatyana Shchelkanova and Igor Ter-Ovanesyan? Why did they lose? And why didn't Janis Lusis and Elvira Ozolina capture the gold medals?

Korobkov explains these cases by miscalculations in special and psychological training. Lusis, in particular, he says, got much too involved in all-round development exercises—weightlifting and gymnastics, in winter and summer both—and did little javelin throwing. Never before had he been so physically fit, but during the entire season he didn't even come close to his personal record of 282 feet 3⅜ inches. Elvira Ozolina and Tatyana Shchelkanova, the unquestionable favorites in the javelin and the broad jump, respectively, were so thrown by the successful tries of their competitors that they stopped fighting. In the preliminary heat of the steeplechase Adolfas Alexeunas was out to beat world record holder Gaston Roelants at any price. Instead of running a reasonable race that would guarantee him a place in the finals, Alexeunas ran as if his whole sports career depended on the results of the quarter finals. He did outstrip Roelants in good time, but it did not leave him enough strength for the finals.

A Hard Winter

The Tokyo defeat did force Korobkov and his colleagues to revise the principles for mustering a national team. But they have not basically changed their training methods. This was the conclusion I came to watching our athletes train after the Olympics.

Valeri Brumel, for instance, allowed himself only a brief spell of rest after returning from the capital of Japan. By December he was back every evening at the sports hall of the Moscow Physical Culture Institute. And again, as in previous years, the bar bell held first place in his winter training program.

This slim, well-built young man, who does not appear to have the physique for it, handles with ease weights that would be more suitable for training hurlers. He easily snatches 220 pounds and squats with 386 pounds on his shoulders. He also works at the sprint and special exercises for jumpers. He raised the bar to 6 feet 9 inches in December and kept polishing up on jumping techniques at this height.

THE TITANS

BY ALEXEI SREBNITSKY



"I'm trying for a height of 7 feet 6½ inches," Brumel told me. "I have been dreaming about it for the past two years, and I won't rest until I reach it. I hope to be at top form just in time for the USSR-USA match. I consider that the major event of the season."

Igor Ter-Ovanesyan made his first jump in January. The Soviet Union does not hold major meets in the winter, so that the 27-year-old athlete appeared hors concours in a junior meet. He was satisfied with his initial result (25 feet 8⅝ inches). He hopes to win the world record back from Ralph Boston.

For Soviet athletes a victory in the match with the Americans is a matter of pride. Somewhat shaken after Los Angeles and Tokyo, they readily agreed when the coaches suggested more intensive training.

Seventh Encounter

Observers who think that the Americans have even better chances for victory in the seventh Battle of the Titans would seem to be right. But despite the most recent successes of the overseas athletes, Soviet trainers and sports writers are quite optimistic.

The USSR national team hopes at the least to break even in the jumps and the hurling events. With Brumel and Ter-Ovanesyan, that is not expecting too much. Bets in the triple jump are being placed on young Victor Kravchenko and the Tokyo silver medalist Oleg Fedoseyev. The American pole vaulters are stronger, but Gennadi Bliznetsov did manage to beat the famous John Pennel in the Olympics.

Bliznetsov is a riddle. He pays no attention to the training sessions of the national team, preferring to prepare for important meets right at home, in Kharkov, with his own trainer Victor Stepanov. In July 1963 the national pole vault record stood at 15 feet 1¾ inches. In October 1964, in Tokyo, Bliznetsov lifted it to 16 feet 2⅞ inches. This reticent, melancholy-looking athlete seems to show his best result at top meets.

The Soviet contingent will lose points in the discus and the shot-put, but they will make up the difference in the javelin and the hammer.

As far as the track events are concerned, the Americans are unquestionable favorites. They will win the contest if they run ahead in the distance races and steeplechase. However, Soviet fans are trying hard to forget the Olympic titles of Billy Mills and Bob Schul, and are pinning their hopes on the heirs of Vladimir Kuts and Pyotr Bolotnikov.

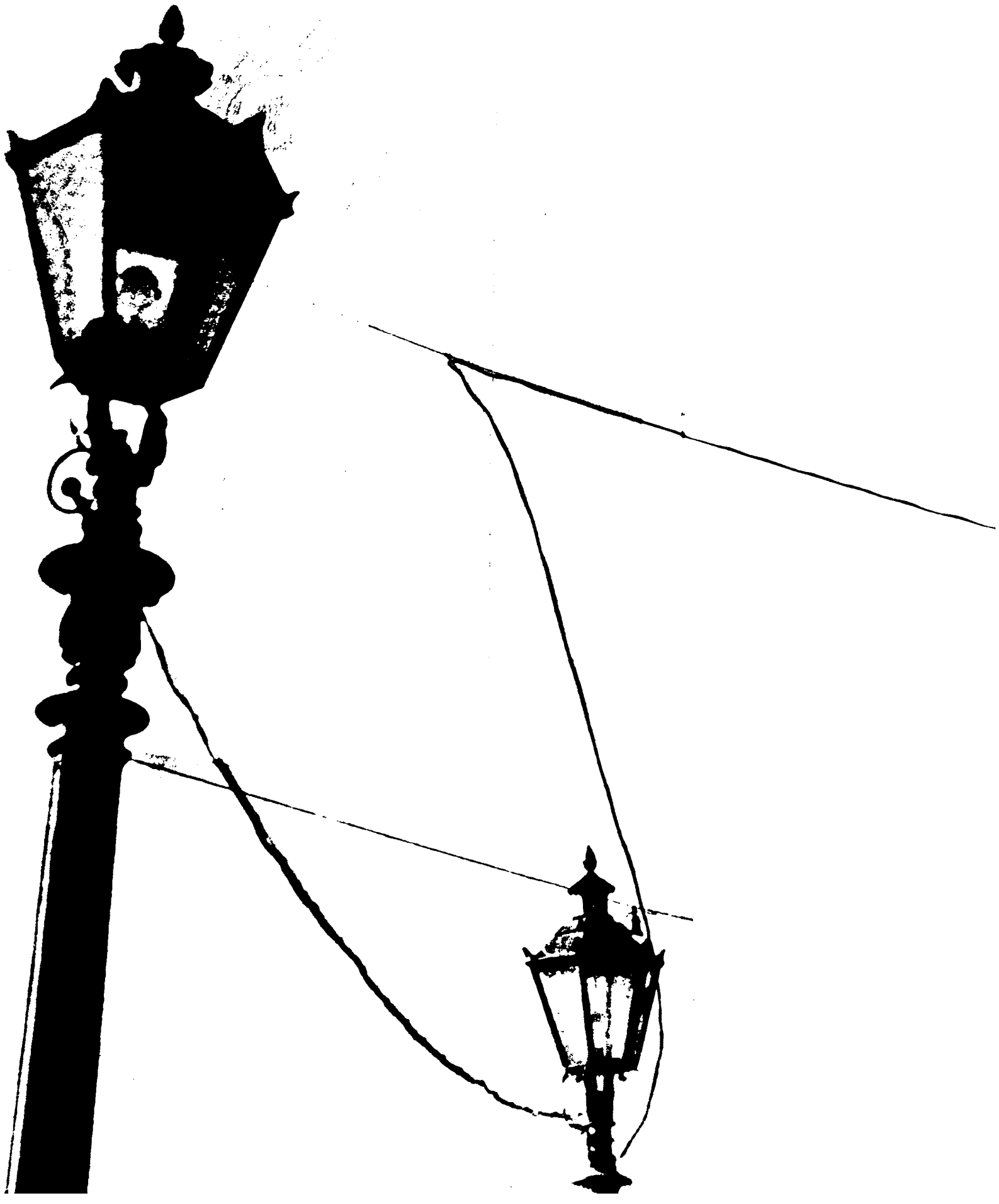
As previously, the Soviet women's team has that formidable sextet: the world-renowned Irina and Tamara Press, Tatyana Shchelkanova, Elvira Ozolina, Yelena Gorchakova and Taisia Chenchik. But by comparison with last year, almost half of the team is new. It is difficult to say what kind of fight they will put up against the American girls, who are just as young but who have already gone through the baptism of fire.

My feeling is that the Los Angeles disaster will not be repeated in Luzhniki. The battle will be keen, and the gap in the score minimal. And it is not improbable that two or three world records will be broken.



The Domkirche in Riga, noted for its stained-glass windows and one of the largest organs in Europe.

PHOTOGRAPH BY YAKOV TIKHONOV



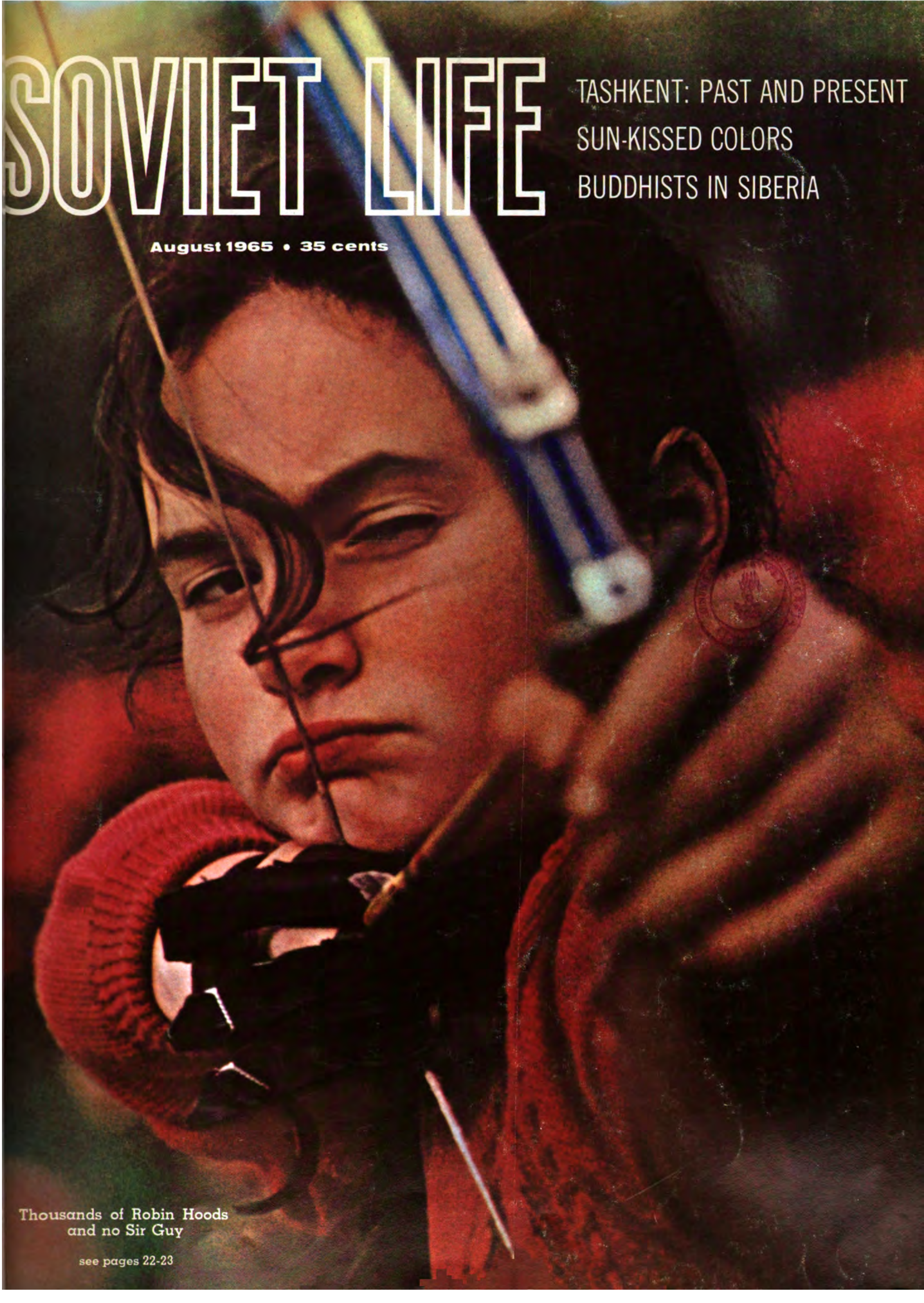
SOVIET LIFE

TASHKENT: PAST AND PRESENT

SUN-KISSED COLORS

BUDDHISTS IN SIBERIA

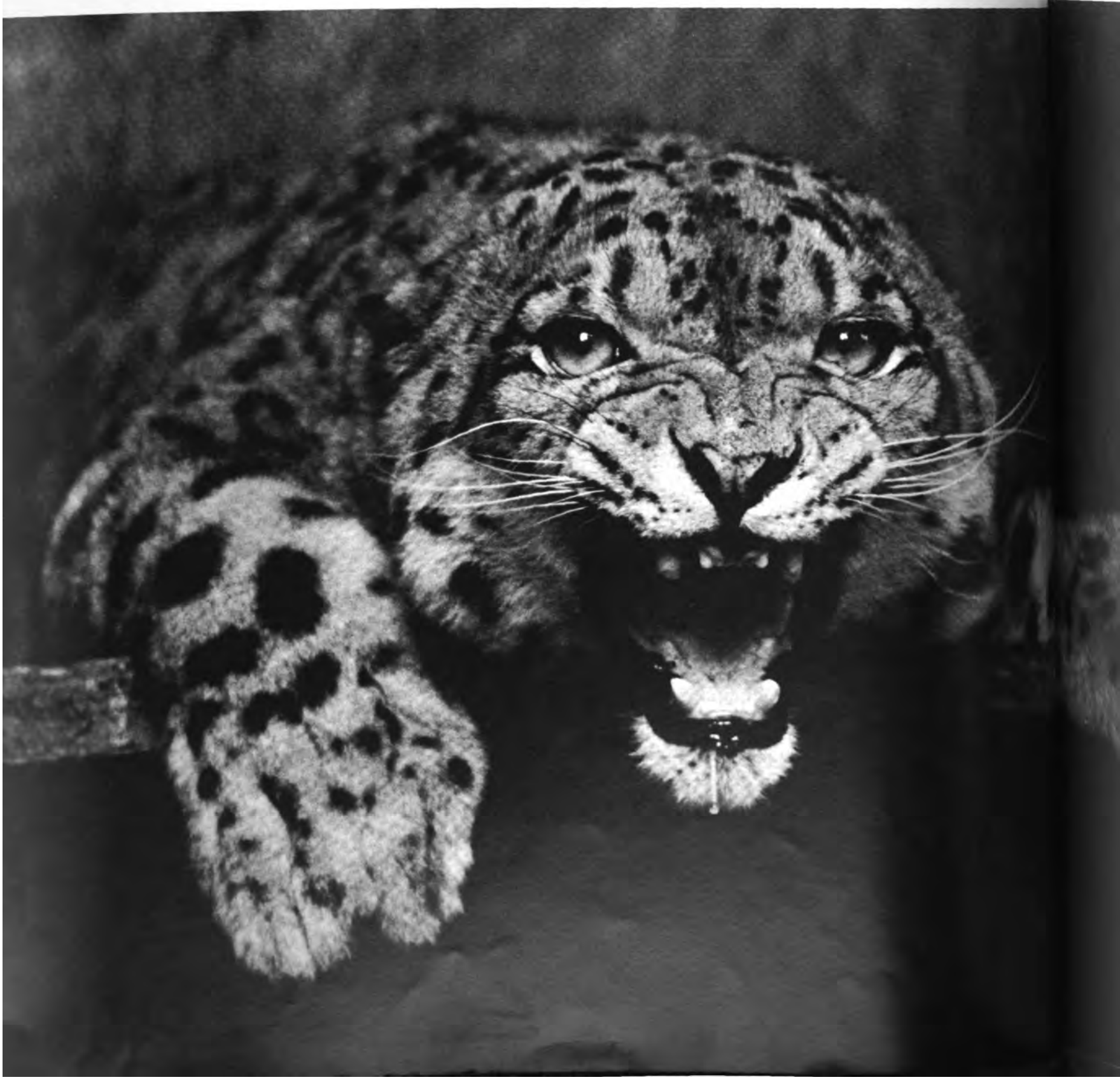
August 1965 • 35 cents



Thousands of Robin Hoods and no Sir Guy

see pages 22-23

THE LENINGRAD ZOO







(Right) In warm months the waterfowl inhabit this scenic canal, the rest live in free-flight cages with hills, waterfalls and marshes.

(Far right) By all odds the children's favorite among the 250-odd species of birds and animals in the zoo is this very staid elephant.

Below) The zoo has some rare animals, like this snow leopard. Also aurochs, reindeer that once inhabited China, a black rhino and blue fox.

Below right) Polar bears are very much at home in Leningrad's climate. Incidentally, the zoo's emblem is a polar bear on an ice floe.



PHOTOGRAPHS BY YURI LEVKOVICH

Animals' World on 20 Acres

BY YELENA DOROSHINSKAYA

WHAT CAN BE more thrilling to a child than a trip to the zoo? The animals he knows only from pictures suddenly step out of their books, real and more fascinating than he ever imagined them. Elephants lumber along, giraffes saunter about, lions roar, tigers bare their teeth, monkeys chatter, parrots shriek, and hippos splash happily in the ponds.

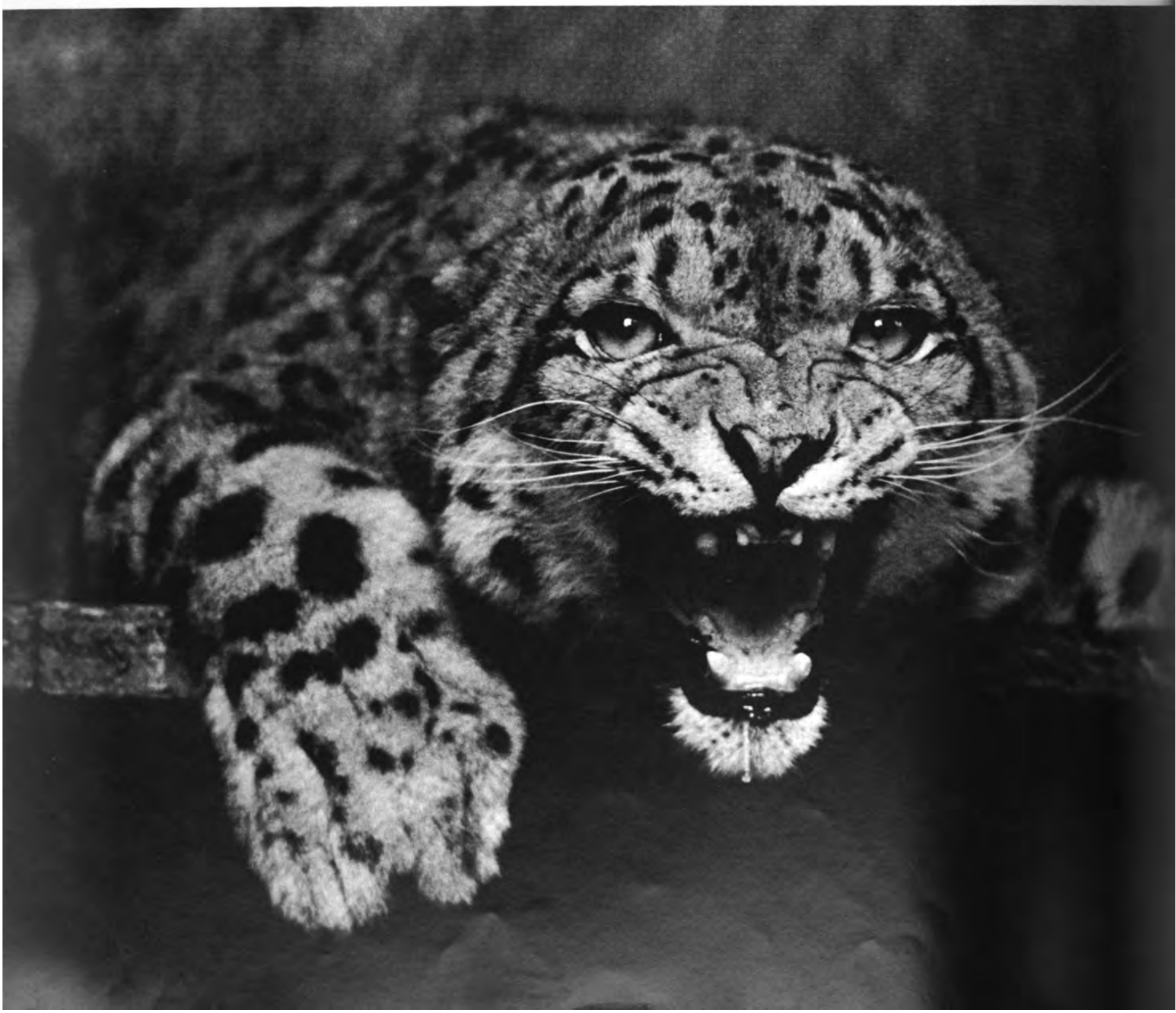
The Leningrad Zoo is located right in the heart of the city, near a large park and along a busy thoroughfare. On its 20 acres live animals from all parts of Europe, America, Africa and Asia.

The history of this 100-year-old zoo is the history of the city itself. Like Leningrad, the zoo suffered terribly during the war. Although, when Leningrad's children and works of art were being hastily evacuated, the city authorities did arrange to ship some of the zoo's rare animals east.

The zoo, for some strange reason, was shelled by the enemy as frenetically as though it were a major military objective. A German shell killed the elephant Betty, a special favorite of Leningrad's youngsters. Many other animals shared her fate. And what a problem it was to provide food for the few animals who remained alive in a city which for three years endured the untold hardships of the German blockade. Fortunately some hay, walrus fat and millet had been left over from before the war, and these stores were replenished now and then by the carcasses of horses killed at the front. Very few animals survived—the hippo Beauty, the bear Grisha, a few of the smaller beasts



THE LENINGRAD ZOO







(Right) In warm months the waterfowl inhabit this scenic canal, the rest live in free-flight cages with hills, waterfalls and marshes.

(Far right) By all odds the children's favorite among the 250-odd species of birds and animals in the zoo is this very staid elephant.

(Below) The zoo has some rare animals, like this snow leopard. Also aurochs, reindeer that once inhabited China, a black rhino and blue fox.

(Below right) Polar bears are very much at home in Leningrad's climate. Incidentally, the zoo's emblem is a polar bear on an ice floe.



PHOTOGRAPHS BY YURI LEVKOVICH

Animals' World on 20 Acres

BY YELENA DOROSHINSKAYA

WHAT CAN BE more thrilling to a child than a trip to the zoo? The animals he knows only from pictures suddenly step out of their books, real and more fascinating than he ever imagined them. Elephants lumber along, giraffes saunter about, lions roar, tigers bare their teeth, monkeys chatter, parrots shriek, and hippos splash happily in the ponds.

The Leningrad Zoo is located right in the heart of the city, near a large park and along a busy thoroughfare. On its 20 acres live animals from all parts of Europe, America, Africa and Asia.

The history of this 100-year-old zoo is the history of the city itself. Like Leningrad, the zoo suffered terribly during the war. Although, when Leningrad's children and works of art were being hastily evacuated, the city authorities did arrange to ship some of the zoo's rare animals east.

The zoo, for some strange reason, was shelled by the enemy as frenetically as though it were a major military objective. A German shell killed the elephant Betty, a special favorite of Leningrad's youngsters. Many other animals shared her fate. And what a problem it was to provide food for the few animals who remained alive in a city which for three years endured the untold hardships of the German blockade. Fortunately some hay, walrus fat and millet had been left over from before the war, and these stores were replenished now and then by the carcasses of horses killed at the front. Very few animals survived—the hippo Beauty, the bear Grisha, a few of the smaller beasts





(Left) Just shadow boxing. The Cub Section is fairly peaceful considering that it houses as many as twenty species of animals sometimes.

(Below) These penguins were presented by seamen back from the Antarctic. A recent gift was a crocodile brought from the United States.



and some of the birds. This meant that after the war the zoo had to be built up practically from scratch.

Winter Problems

In a city like Leningrad, where the average annual temperature is just a little above 39 degrees Fahrenheit, it becomes a considerable problem to acclimatize animals. Polar bears, reindeer and squirrels feel right at home in Leningrad's long winters and frost. They do not mind the sharp fluctuations in temperature. But animals brought from the tropics—and the city has one of the largest collections in the Soviet Union—are very sensitive to the cold.

Winters they have to be kept indoors. The antropoid apes, who are especially susceptible to the flu, tuberculosis and gastric disorders, live in heated glass houses all year round and in winter get quartz lamp treatment.

But few other animals in the Leningrad Zoo are as mollycoddled as the leopards. When the temperature drops to 19 degrees, they are not allowed outdoors. The pumas and lions, however, do not mind frosts of four below for they were born and bred right here in the zoo.

People and Animals

The "behind-the-scenes" life of the zoo has its thrills and excitement. Something is always happening worth a note in the observation journals. The entries are a source of great interest to the city's zoological and physiological research institutes and the Institute of Experimental Medicine.

Accidents happen. Lada, the tigress, fell and fractured her hind leg. She was given a big dose of sleeping pills and operated on. In another case, the mink began gnawing their tails down to the very spine because of some deficiency in their diet. Large doses of vitamins cured the condition.

Thanks to the resourceful and knowledgeable zoo workers, all such mishaps end happily.

Many of the animals have borne young while in the zoo—among them the polar bear, giraffe, the helical-horned goat, the antelope, the Australian dingo and the elk. To the workers at the zoo the proud, fierce-looking beasts that stare through the bars of their cages are like children they've watched grow up. They remember them when they were just small, helpless bits of fluff.

Caesar, a huge lion, comes rushing as ecstatic as a house dog when he sees zoologist Vera Andreyevskaya coming. Caesar was one of the many cubs born at the zoo. When his mother wouldn't nurse him, Vera Andreyevskaya took him to live with her, as she had done before with Lada. The little lion had to be bottle-fed every two hours and his belly massaged. Vera and her husband, also a zoologist, took turns babying him, and when he grew a little older took him for walks on a leash. He ran about in the snow, played with Vera's little son, and learned what the command "don't" means. When he grew up, they returned him to the zoo.

For Leningrad's youngsters the zoo is a favorite haunt, their visits sometimes developing into a lasting attachment. They join the zoo's club for young animal lovers and tend the animals, keep records and help with the feeding troughs. Each youngster can choose one particular animal or a group of animals as his special responsibility.

Fourteen-year-old Lyubov Ivanova picked a panther. Alla Yudina, her friend, helps with the tigers. Pyotr Sheinin, 15, inclines to birds. This zoo club is now in its thirty-fifth year. As the children grow up, others come to take their place. In quite a number of cases this very pleasant and instructive pastime has decided the choice of a lifework.

THE LENINGRAD ZOO

These giraffes, appearances to the contrary, are not reproducing by fission. They are having a look at the Leningrad variety of Homo sapiens.



LETTERS TO THE EDITOR

MORE COVERAGE OF PROBLEMS

Since I read *Soviet Life* only from time to time, I cannot say much about the style and quality of your magazine generally. However, a comporison between the recent issues I have seen and those that I read some four or five years ago, when it was called *USSR*, shows a noticeable improvement in both content and make-up. Articles are now much more varied, interesting and meatier. The pictures, photographs and diagrams are also better. It is more attractively made up and one can see that its designers now display greater ingenuity and better taste.

However, I would like to see more pictures.

Then I think some articles run too long. Also conspicuous is the fact that in your "Letters to the Editor" criticism—which most likely exists—is often lacking. This tends to make an unfavorable impression.

I would also like to see more material in your magazine that would give the reader an idea of the various scientific, economic, art and other problems now being debated in the Soviet press.

Yours sincerely,
Alexander Shveitser,
Assistant Professor
Moscow State Institute
of Foreign Languages

ARTICLES ON HISTORY

I have been subscribing to your magazine for a year now. You have had many articles on historical places of interest but never one on the Czars.

They are a great source of interest to me and I would like to see some articles, especially on Peter the Great, about them.

In a previous letter I read you to say that all our information can be found in the libraries. This isn't so. Who knows more about Russian history than the Russians?

I am sure many other readers would like to see one or two articles on Imperial Russia.

Sincerely yours,
Albion W. Land
Tangerine, Florida

The policy of our publication is to acquaint our readers with life in the Soviet Union today. Now and then we also publish articles of historical interest such as the "Lost Library of Ivan the Terrible" on page 27 or "Pskov" in our next issue.

Editor

TO CREATE PEACE

. . . I have discussed your magazine with a number of my friends, mostly professional people in engineering, medicine, the ministry, and all are eager to see it—but the world situation being what it is, and security regulations being so tight, they are fearful of having their names on a mailing list which might be unnecessarily troublesome in their professions at some later date . . .

It is unfortunate that these two great countries must have such tension between them. Each seems to have the very unkind habit of using the other as a scapegoat for whatever internal and external difficulties might arise—without really knowing what "communism" or "capitalism" actually means. Inasmuch as about 90% of the world's population do not really think in depth, they are willing to accept almost anything as truth, if stated publicly, without questioning it. And so the hostile dragon continually looms his head and tension increases. It cannot always be so. Any psychiatrist can tell you that anger and force are really the result of an inability to think through a situation and so, to strike out physically can only lead to an even more terrible situation. Retaliation follows retaliation and voilal—a full bloomed war—where a little thought, understanding and cooperation in the beginning and, of course, patience and self control, could have righted whatever was wrong.

. . . . Anything that helps to create peace and understanding among the diverse peoples of the world, such as your magazine, is a worthy step in that direction . . .

P. B.
Maryland

I like your magazine very much. My college studies in Russian history give me a better understanding of your philosophies and people. I hope our peoples will never find reason to stop publication of the two magazines. I only wish I could see how our editors acquit American philosophies in our publication in Russia.

Sincerely,
Virginia Maynihan
Wichita, Kansas

DIFFERENCES AS A CATALYST

. . . In many ways I have felt that I have a somewhat better understanding of your country than the average American due to my Latvian background. My grandporents throughout their life time spoke of the terrible injustices and privations that were endured during the czarist period.

We have enjoyed the photography and illustrations, many of which have been outstanding by any comparison. A number of the articles have been very informative such as the interviews with a panel of Russian judges and the article which pertained to all aspects of rapidly expanding Russian suburbia. All coverage of your art, architecture, and handicrafts is always appreciated. The "Around the Country" section is excellent.

We do feel, however, that a number of the articles have a strong tendency to oversimplify the subject of capitalism and communism. I am sure you as an editor are constantly amazed at some of the misunderstandings regarding your form of government. At the same time, I feel that a number of the contributors to your magazine tend to lump American capitalism and European capitalism together as being one and the same which cannot be done. As Americans we are very much aware of this difference especially since World War II when so many very ardent exponents of European capitalism have immigrated to this country. I am sure you are cognizant of their vehement displeasure with our education system, our constitution, our system of law, the presidents that have been progressive, and the lack of sharp distinction in social strata. Any attempt to place the many types of government in the world into only two classifications, capitolism and communism, is not realistic.

There is an important need for a magazine of the type you represent. You can help us understand the difference in our historical experience and the reasons for your type of solution. People who are basically working for the same goals do not have to have identical forms of government. Our differences should be acting as o catalyst to providing a better life rather than a deterrent . . .

Sincerely yours,
M. W.
Illinois

MORE ABOUT STUDENTS

Dear Editor:

We were able to get hold of several issues of your magazine at our college library. We found it interesting, giving as it does, a comprehensive picture of Soviet life. There was an interview with a celebrated Soviet writer, a story about Soviet doctors, news in the cinema world, plus many other interesting items. However, it seems to us that there is little about our student clan. We would also like to see more color pictures and more about new fashions. We also think you should widen your humor column.

Yours sincerely,
Galina Vesbland and
Tatyana Markelova
Students at Moscow
Pedagogical Institute
of Foreign Languages

RADIO MOSCOW PROGRAM

(All P.M., except Sunday PST—A.M.)

WHAT IS COMMUNISM? *Tuesday and Friday at 8:15 and 10:15 EST; 8:15 and 10:15 PST and repeated on Sunday at 10:00 PST.*

SCIENCE AND ENGINEERING: *Tuesday and Friday at 6:15 and 9:15 EST; 7:45 and 9:45 PST; Sunday at 9:30 PST.*

YOUTH PARADE: *Thursday at 8:15 and 10:15 EST; 7:45 and 9:45 PST and repeated on Sunday at 10:45 PST.*

PERSPECTIVE ON THE ARTS: *Sunday at 6:15 and 9:15 EST; 7:45 and 9:45 PST.*

HANDS ACROSS THE OCEAN: *interviews and discussions about Soviet-American relations on the person-to-person level: Wednesday at 8:15 and 10:15 EST; 8:15 and 10:15 PST.*

MOSCOW MAILBAG: *Saturday and Sunday at 8:15 and 10:15 EST; 8:15 and 10:15 PST, and on Sunday at 10:15 PST.*

NEWS, COMMENT AND MUSIC: *daily at 7:00, 9:30, 11:00 and 12:30 EST.*

MUSIC FROM MOSCOW: *daily at 12:15 EST; 9:15 and 11:15 PST; and Sunday at 9:45, 10:30 and 11:30 PST.*

SOVIET LIFE

AUGUST 1965 No. 8 (107)

The magazine SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* AMERICA *in the Soviet Union.*



Front Cover: It takes a lot more strength to be an archer than most people realize. *See story on page* 22.

PICTURE CREDITS

Lev Borodulin Cover I, 22-23; Yuri Levkovich Cover II, 2; Leonid Lazarev 7-9; Irina Pap 17; Victor Kinelovsky 18-19; Boris Timofeev 24-25; Igor Vinogradov 30-35, 44, 54-55; Gherman Cheryomushkin 39; Alexander Goryachev 42-43; Georgi Petrusov 50-51; Yuri Mogilevsky 52; Vsevolod Tarasevich 58, 61; Georgi Zelma 60, 62, Cover III; Nikolai Chmelevsky Cover IV.

Editor in Chief (Moscow Editorial Board): Yuri S. Fantalov, APN, Pushkin Sq. 2, Moscow, USSR.

Editor (Washington Editorial Board): Alexei S. Belokon, 1706 18th St., N.W., Washington, D.C., 20009.

Managing Editor (Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director (Moscow Editorial Board): Marina T. Zabolotskaya, APN, Pushkin Sq. 2, Moscow, USSR.

Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine SOVIET LIFE.

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second-class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Fawcett-Haynes Printing Corporation, Rockville, Md.

The Lenin Prize (Our Trends) by Lev Anninsky

SOVIET PEOPLE

A Canny Magician by Rostislav Plyatt
Minarets and Textile Mills by Faisulla Khojayev

INTERNATIONAL CONTACTS

Through the Visitor's Eyes by Georg Polikeit and Jean Couvreur
Abraham Lincoln—A Great American Interview with Yuri Mogilevsky
"American" Commune in Russia by Vladimir Polyakov

PROBLEMS WE DISCUSS

Poetry or Equations
Einstein and Dostoyevsky by Professor Boris Kuznetsov

ECONOMY AND SCIENCE

Artificial Cardial Valve—What Next?
Chuvashia Today by Semyon Islyukov
Student City Planners by Alexander Kozlov
Quanta... Quanta... by Irina Radunskaya
Economic Planning to Meet Consumer Demand by Felix Krutikov and Joseph Lakhman
The Saddled Yenisei by Yevgeni Fedorovsky
Automation and the Worker by Alexander Bulgakov

LITERATURE AND THE ARTS

I Meet Glazunov by Pavel Kogan
Poetry of a Mushroom Summer by Vladimir Soloukhin
The Chairman—A Controversial Film by Lev Ivanov
Palan the Guelder-Rose by Edward Shim
Sun-Kissed Colors by Nazim Hikmet

RECREATION AND SPORTS

The Leningrad Zoo by Yelena Doroshinskaya
A Whole Country at the Stadium by Andrei Batashov
Archery by Lev Borodulin

MISCELLANEOUS

Letters to the Editor
Radio Moscow
Russian Books in English
Around the Country
Could Anything Be Tastier?
The Lost Library of Ivan the Terrible by Nikolai Chernikov
At a Buddhist Monastery by Nikolai Yermoshkin
Humor
Learning Russian
Queries from Readers
Brief Comments
Next Issue

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

THE LENIN PRIZE

BY LEV ANNINSKY

How is the Lenin Prize awarded?

The candidates are nominated in December by mass organizations, scientific societies, museums, libraries, editorial boards, universities, ministries and even individuals. The list of nominees and their contributions are then published in the newspapers, followed soon after by articles, critiques from authorities in the various fields, and letters for and against from the general reader. Thousands of letters are sent directly to the State Lenin Prize Committee, which is composed of the country's leading figures in literature and the arts and in science and engineering, its two sections.

These two groups of judges sift the contenders and reach a decision at their final session in mid-April. The 108 members of the committee vote by secret ballot. Winners must receive three-quarters of the votes (81). The new laureates are announced on Lenin's birthday, April 22. The spontaneous debates continue, however. It is inevitable in a country as large as the Soviet Union for people to reach different judgments than the members of the committee.

It would be wrong to regard the yearly Lenin Prize awards as the scheme for a hierarchy of intellectual achievement. The event is more meaningful than a simple enumeration of the best. The question as to who is best can be argued endlessly.

The general spirt of the best works, their depth of content and significance—these are measurable values. The recognition accorded the winners is a gauge of our spiritual condition. It points the direction our culture is taking, and therein lies its importance. That, too, is the theme of the present article.

There is no need for me to analyze the works of the famous trio of Russian cartoonists known collectively as the Kukryniksy (Mikhail Kuprianov, Porfiri Krylov and Nikolai Sokolov). Their drawings have appeared in any number of publications, including the satirical magazine *Krokodil*.

Nor will I dwell on the virtuosity of violinist Leonid Kogan, whose worldwide acclaim tells us more than any professional analysis could. The way to judge his playing is to hear it.

But I should like to say a few words about the superb artistry of our senior film director Yuri Zavadsky, and of our senior actor Nikolai Mordvinov; also about Grigori Kozintsev's film *Hamlet*, with Innokenti Smoktunovsky in the title role, and about the documentary war volume by the journalist Sergei Smirnov.

It is not so much the collection of brilliant achievements distinguished by the Lenin Prize that fascinates me, though the constellation of great names stemming from Soviet culture speaks eloquently for itself. It is something else. What lies behind these achievements? What are the spiritual dynamics that nurture them? What is the implication of the constellation as a whole?

Let us turn back 25 years to that fateful Sunday when Hitler's tank armies pierced the line of Soviet border posts. The frontier town of Brest had a fortress ("a model piece of fortification" 100 years old) garrisoned by two regiments of Russian soldiers who decided to fight to the last man. They could not peer into the future to see that the front would reach the Volga before it was pushed back. They could not even see the present and had no idea where the front lay and how deeply they were lodged in the German hinterland. They simply held on and fought. The Hitlerites could not break their resistance for a full month. Guderian had already moved hundreds of miles beyond Brest, to the environs of Smolensk, but the fighting in the casemates of the Brest citadel was still going on.

Sergei Smirnov was a war correspondent then. There were all sorts of rumors about nameless heroes in the first months of the war, but nothing certain was known about them, for the war swiftly effaced their traces. When the fighting swept back to Germany and Russian prisoners of war began to come home from the smashed concentration camps, many found themselves behind barbed wire again. It took 10 years to reach the Twentieth Congress of the Party and to discover which of the former prisoners of war had been heroes and what exactly did happen at Brest that fateful summer of 1941. No one was very interested in finding these things out in 1946. In the intervening 10 years the former prisoners of war were sorely tried.

A journalist of the fifties could have found more than enough reasons not to dig for the truth. The only thing that could have prompted anyone to take such a course was a sincere concern for the fate of human beings.

Sergei Smirnov traveled that course from beginning to end—from the early lonesome fight to vindicate those who had fought heroically, though unrecognized, those who had been condemned without reason, to the universal recognition of these men as heroes.

His style is stark and concise. Stated, his credo would read: "The temperature of a narrative must fluctuate in inverse proportion to the temperature of the material at hand." And the temperature of that material was nothing less than white hot. His documentaries are not simply pieces of research into the human aspects of the last war, no mere recollection of amazing but forgotten episodes. The truths of Smirnov's books reach wider, encompassing lasting grief for every fallen soldier, for every human who can never be forgotten, never be discarded from the final reckoning. His books represent a great and unique instance in which humanity overflowed the framework of literature, journalism, professionalism.

Now let us go back 130 years to the St. Petersburg of Nicholas I, where 20-year-old Mikhail Lermontov, one of Russia's greatest poets, was mutilating his play *The Masquerade* by order of an irate censor. The play concerned a scandal in high society. The hero kills his wife, whose affection, he thinks, a friend had stolen. Lermontov's play waited its turn for 100 years. At first it was banned by the censor, and then the Russian theater was too preoccupied with Ostrovsky to bother with anyone else. It was only on the eve of the Revolution that *The Masquerade* was resurrected by Vsevolod Meyerhold.

Yuri Zavadsky was one of the numerous interpreters of that drama in Soviet times. For a full decade after the war Zavadsky's play, with Mordvinov in the main role, was performed at the Moscow Academic Mossovyet Theater. *The Masquerade* was also staged by other directors in other theaters. I mention this to show how difficult it must have been for Zavadsky and Mordvinov to pull themselves loose from the customary currents, to break through the inertia of convention and produce an entirely *new* version of the play.

This miracle was consummated, for the new version was duly staged and won all hearts at once.

The more obvious motifs—the St. Petersburg society scandal, the moral decay, the intrigue, the ingratitude of Zvezdich, who allegedly seduces Arbenin's wife—fell remotely into the background. The figures became generalizations, the drama grew into a tragedy, and not simply a tragedy, but a new tragedy. Arbenin, who kills his wife because he believes she has betrayed him, suffers violently in the effort to free himself of the necessity of taking vengeance, to break away from the fearful logic of the world he knew, the world in which kindliness bred only evil. Goodness is forced to be evil, and evil anathematizes the destiny that compels it to be malevolent. This is the philosophical collision that Yuri Zavadsky and Nikolai Mordvinov pulled out of the drama Lermontov wrote as a youth, a drama "on a sociomoral theme." We see the rebellion of a defenseless human being against destiny, against the almighty logic of evil and vengeance. That is where the pathos lies.

Let us turn from the Russian classics of the nineteenth century to the immortal Shakespeare.

Every epoch has seen Hamlet in a new light. The eighteenth century saw him as a weeping sentimental fellow creature, irresistible for his sheer goodness. The nineteenth century discovered Hamlet the philosopher; Hamletism indeed overshadowed Hamlet himself. At the threshold of the twentieth century the Danish prince was thoroughly psychoanalyzed and found to be suffering from a myriad of complexes. He was a sick man, as sick and frantic as the epoch itself.

Innokenti Smoktunovsky was a well-known actor when he attempted the great role in 1962. The various roles he had appeared in before that hinted at a common underlying theme: the stubborn, elusive, inexplicable force that suddenly breaks forth from the plain man. Smoktunovsky struck that chord everywhere and felt he ***had to play*** the role of Hamlet.

Hamlet's traditional monologue was left in the shade by the authors of the film. "To be or not to be?" was hardly the question. *How* to exist in this world was the question. The struggle was unfolded on a new plane. Hamlet moves serenely amid the inhabitants of Elsinor. He is forbearing and patient, for he knows the predetermined orbits along which Claudius and Rosencrantz rotate, is aware of the petty self-adulation infested with material interests. But how restless he is, for all that, how wrought-up and filled with his sense of doom! Hamlet feels how defenseless he is among them here, in *their* country and *their* world. "That world is here, and he is there, do you understand?" That was how Smoktunovsky explained his perception of the role to the critic Alexander Svobodin. *They* only *think* Hamlet is here, that he is their victim and legitimate prey.

Smoktunovsky's Hamlet represents something more than superb acting technique; it is something greater than that, something loftier. It indeed reflects the paradox in which the stubborn spring of individuality is suddenly released in a human being completely draped in lies, totally sold at the auction of petty strife, nailed to the cross of obtuse necessity.

He knows he is dying, that he will change nothing.

Then why all this: the duel, the hysterics, the thrust of his foil?

Because that is how a human being must act.

This is humanity that knows no alternative, not humanity as a rung to something else, but as an aim in itself, as the outcome, as an axiom.

That is what springs to my mind as I summarize the artistic works which were awarded the Lenin Prize for 1965. The humanity in these works is their merit, for it is this that constitutes life and reality, that attests to the unwavering currents that course through our spiritual lives.

IN 1923 I first went to Petrograd, the oldest center of Russia's musical culture and the home of Alexander Glazunov. I was eager to know more about the life of "Alexander the Great of Russian Music," as Rimsky-Korsakov had once called Glazunov. And the more I read about Glazunov's life, the more I was struck by the integrity of his character, which seemed cast in monolithic marble, like Michelangelo's statue of David. He was still in high school when he commented in his notebook on the hypocrisy and falsehood he saw all about him. Moral criteria became the touchstone and basic law of human contact for the young Glazunov.

Nor did Glazunov change in later years. He did not swerve an inch from his faith in goodness and reason. The same high-mindedness marked his conduct during the Revolution of 1905, when, with Rimsky-Korsakov and Taneyev he raised his voice against the arbitrary actions of the ruling oligarchy. His sympathies were entirely with the youth and their aspirations for truth and justice.

For the Centennial of the Birth of Alexander Glazunov

The new ideas and sentiments invaded the sphere of the arts. Music was making its way into life, no longer confining itself to personal passions and disillusionments. Glazunov undertook to arrange "Song of the Volga Boatmen" for chorus and symphony orchestra. It was his response, as it were, to the events of 1905. Glazunov did not retire to an ivory tower. His thinking, for all that may be asserted to the contrary, was by no means that of the musician who sees the complexity of life only in terms of music. The October Revolution of 1917 found him with the same attitude toward the world although, needless to say, he was never a revolutionary.

Alexander Glazunov was born in 1865. The son of a prominent book publisher, he received a good education. He had many tutors and was encouraged to tap first his gift for drawing and later his gift for music. Glazunov's mother, a talented pianist, played an important role in developing her son musically. Glazunov's first symphony was performed when he was not yet 17 years old.

With these random thoughts and a few facts about this great composer, I left Moscow together with the pianist Vladimir Horowitz and violinist Nathan Milstein.

A Call on Glazunov

I found Glazunov at home, alone in a small room. The first few minutes I could hardly get a word out, I was so overawed. I could think only that I was sitting in the company of the great musician, whom Stassov himself called an "Eagle" and Chaliapin affectionately addressed as Sasha.

However, as soon as Glazunov, looking a little embarrassed, asked me how I liked Petrograd, I lost my shyness. I realized that he felt awkward at receiving me in such commonplace surroundings. From the few words he inadvertently let drop, I gathered that his private life was badly arranged. The big apartment he occupied had an uninviting look. The dearest, most beloved woman, his mother, had died recently, leaving her superannuated child an utterly lonely man. Glazunov was completely unadjusted to practical life. In any intercourse with the outside world, if it did not concern music, he was

I MEET GLAZUNOV

An excerpt from Pavel Kogan's memoirs



Glazunov, by the famed Russian artist Ilya Repin.

lost. He still seemed somewhat bewildered by the great changes around him. He had not yet been caught up by the surge of new life, had not fitted himself into it, had not completely grasped the significance of the new events. All the same, even after this first brief meeting, I had the impression that Glazunov would not stay aloof long. And although, by his own words, he loved the peaceful discourse of the stars and their serene light, his heart was moved by passions which were certain to lead him to the new shores.

High principles and a tremendous vitality were fused in Glazunov with kind-heartedness, gentleness and shyness. A complete dedication to music, long years of sponsoring young musicians and the great courage of his convictions were set off by an almost childlike timidity and exceptional humility. He spoke up vigorously for the young Prokofiev, divining his great talent. He was one of the first to predict a brilliant future for Dmitri Shostakovich. He was always eager to spot talent and did much to help gifted musicians.

In 1923, when Glazunov reached the age of 58, he was an eminent composer, long recognized and universally loved. The plaudits accorded his delightful ballet *Raymonda*, his impressive symphonies and classical string quartets were a tribute he took for granted, but with conducting it was different. Like many artists of versatile gifts, he had a special weakness for the particular aspect of his talent in which he perhaps least excelled. One needed but touch this string for the composer to change countenance and become all ears. This is exactly what happened when I asked Glazunov to appear in a symphony concert with Horowitz and Milstein.

Looking down at the floor, he smiled shyly. "I don't mind doing that. I'd like to, as a matter of fact."

After the Concert

The symphony concert which Alexander Glazunov conducted, memorable for many long years afterward, was held on December 2, 1923, at the Grand Hall of the Petrograd Philharmonic Society. Late that night we met Glazunov at the Hotel Europe, where I was staying with Horowitz and Milstein. The four of us sat at the "banquet" table. We were all in high spirits after the concert. The talk was mostly about music and musicians, and the composer had many interesting things to say.

Horowitz told him that he was practicing Tchaikovsky's First Concerto, adding that he was greatly captivated by it.

"You ought to play it well. It is your concerto, you possess that peculiar kind of inspiration without which one must not touch Tchaikovsky." A little later Glazunov added, "Among Tchaikovsky's instrumental concertos I know none that is deeper and at the same time more radiant, completely free from any element of despondency, fatality and pessimism."

Glazunov had known Tchaikovsky well, and during the latter's stay abroad, late in life, they had carried on a friendly correspondence. Tchaikovsky was then going through a trying period. He was depressed. Somber spells of disappointment bordering on despair cast a shadow on his passionate love of life and radiant faith in the future. This anguish found expression in his tragic Sixth Symphony.

After a moment's silence, Glazunov continued: "In 1893, there was a symphony concert in the very hall where we just gave our concert—it was then the Noblemen's Club. The Sixth Symphony was being played by a full orchestra. Tchaikovsky himself was conducting."

Glazunov told us of the reverential silence which descended on the crowded hall before the concert began. The enraptured gaze of thousands of listeners was turned on Tchaikovsky. It bespoke the universal homage this peerless artist enjoyed. The packed Hall of Columns was flooded with the light of its chandeliers. The presence of the composer lent a solemn air to the occasion. Among the listeners the head of Anton Rubinstein was strikingly conspicuous. The symphony was being brought to its climax. The fateful strains carried through the hall and, involuntarily, as though sensing impending disaster, eyes filled with tears. As the last note died away, Tchaikovsky lowered his baton, the players put down their bows, and instead of applause came the weeping of the audience.

"A few days later Tchaikovsky was no more," Glazunov ended on a hardly audible note.

I was back in Leningrad* in 1925 in connection with the forthcoming performance of the Glazunov Quartet. Compared with 1923, the composer had changed markedly. He was affable, smiling and optimistic. The noble countenance of Glazunov, who for 40 years had borne the weight of fame, was beginning to mirror a perception of the new world in the making.

This was my last meeting with Glazunov. In 1928 he went abroad for a cure and spent several years there. His health deteriorated, and he died in Paris in 1936.

*On January 26, 1924, the Second Congress of Soviets of the USSR, at the request of Petrograd's workers, renamed the city Leningrad.



ARTIFICIAL CARDIAL VALVE: WHAT NEXT?

Gleb Solovyov of Moscow's Institute of Clinical and Experimental Surgery specializes in heart operations. He has performed more than 1,000, including 250 open-heart operations. He will report on his work in correcting congenital heart defects with artificial valves to the International Society of Surgery meeting in Philadelphia this fall.

PHOTOGRAPHS BY LEONID LAZAREV

ARTIFICIAL CARDIAL VALVE: WHAT NEXT?





Valeri Miansardov (above) had an interventricle heart defect. Its victims die in their early twenties. (Top right) The operation was a success. Valeri announces to the world, "I'm going home tomorrow." (Right) Many motions are relearned after surgery, which has markedly cut mortality from heart defects. (Far right) This was strictly forbidden before. But now Valeri can run and play like any normal child.





THROUGH THE VISITOR'S EYES

AS I SEE IT

BY GEORG POLIKEIT

Georg Polikeit, well-known West German journalist, wrote *Wo Moscau Weit in Westen Liegt (In Moscow Lies the Far West)*, his travel impressions of the Urals, Siberia and Central Asia. This excerpt from the book is reproduced by courtesy of *Za Rubezhom*, the Soviet weekly magazine.

IN THE FOREWORD to this book I promised the reader travel notes in which I would confine myself to the facts alone without comment or interpretation.

It may be objected that in offering my own point of view at the close of the book I am contradicting myself. I do not think this is so. A democratic shaping of opinion requires more than supplying the public with information. It requires that one draw conclusions from the facts which will stimulate discussion.

All things considered, I believe that my travel notes permit me to draw certain conclusions worth pondering.

The first is that the Soviets are very much aware of the great economic potentials of Siberia and Central Asia and are hard at work developing these rich lands. The face of Siberia is changing.

What follows is that the Soviet Union offers no threat of war to the West, either now or in the near future.

The challenge of Soviet communism to the West is economic, in terms of material and cultural standards, social welfare and mass education.

It is in these areas that the decisive battles of the second half of the twentieth century will be fought.

The second and probably the more interesting impression of my travels in Siberia concerns the people I met there.

The question is asked why so many people from the west of the Soviet Union are now moving east, to uninhabited regions, often at great cost of personal comforts. The reasons are the higher average wage set by the state for these areas and the greater opportunities for job promotion, which serve to attract young people particularly. These considerations are as important as the ideological motivation.

But the ideological factor is indubitably there and plays a part. Siberia has a younger population than the west of the USSR. The men in key economic and political positions are also young, and this affects every interest and aspect of activity.

Young people are less burdened by past problems, less conservative, more prone to pioneering and exploration. True, this sometimes has its faults, too. But on the whole, it makes for that peculiar combination of restless pioneering energy and youthful passion for adventure. Together with a confidence that all goals are within reach, a readiness to solve problems in a new way and a consuming interest in technology, there is a degree of sober realism and the conscious desire to do something for the motherland. And on top of that is the faith in the ideas of communism, so characteristic of people in this region.

It is worth noting, too, that people here are well-trained specialists and that in these eastern regions of the Soviet Union the word education is spelled in capitals.

MOSCOW AND LENINGRAD

BY JEAN COUVREUR

Jean Couvreur, special correspondent of *Le Monde*, made a short trip to the Soviet Union. His impressions appeared in *Le Monde* and the Soviet weekly *Za Rubezhom*.

EIGHT days in the Soviet Union. . . .

Let us go easy and beware of hasty conclusions, the kind that will smear the reputation of a city or a nation because a poor meal was served somewhere or a hotel desk clerk happened to be surly. There are travelers, alas, who do not see farther than their window curtains. Eight days are certainly too few to form an opinion. Still, one can glean certain impressions, even if they are subjective. Very well, let us leave behind the old prejudices with the dust we brush off our boots.

Paris-Moscow. Four hours aboard the Caravelle of Air France. No other city makes you so eager to learn about it when you first arrive as does the Soviet capital. Until now it seemed to me that even in Asia, even in the innermost part of Africa, I could see traces of Europe: almost everywhere you find cafés with or without terraces, familiar displays in store windows, and the shopkeeper behind his counter. But there is very little left of the old Western ways in Moscow. Everything is new and surprising.

You judge a city by its streets. Walking back and forth and across Moscow, I took stock of the streets, quite different from our own: streams of people and traffic, quieter than in Paris, most likely because the streets are twice as wide; neighborhoods of seven-story, eight-story and ten-story apartment buildings. Moscow is expanding, spilling into the suburbs, growing double its size as though tomorrow the population will multiply from six and a half to twelve million.

It takes you just about two days to realize that Moscow has more than one face. It has several, as a matter of fact, all of them different. But there is a common feature that gives the city a family likeness—the Metro. I went or rather dived, as do three million Muscovites every day, down the escalator with its mahogany banisters into that subterranean realm.

And what were the passengers doing? Many of them were working here also. They were reading to improve them-

selves, actually working. On all sides heavy volumes and textbooks met my eye—*Course on Botany*, my guide said, peeping over a shoulder, *Sociological Research, Treatise on the Electromagnetism of Light*. Also a book of short stories by Yuri Kazakov and a translation of *Nana*.

United Nations reports cannot hope to show you the streets of Bombay and Calcutta, with their gaunt beggars, naked children and the sprawling bodies of the homeless asleep at night on the sunbaked pavements like scattered corpses. The Russians that I met and observed in the street or passed in the Metro, the restaurants and the crowded squares most certainly looked well-fed. Are they happy? They seem to be, if appearances tell the truth.

Leningrad is not a bit like Moscow. Moscow is not one city but eight, even ten, cities rolled into one. Some of them are very old, others were born yesterday. Leningrad is all of a piece. And the Soviet architects building the new districts had to work hard to preserve that integrity. In our age of iron and concrete, Leningrad, with streets twice as wide and three times longer than they were, with tall, harmonious edifices, continues the tradition of St. Petersburg.

As I leave the hotel together with other Frenchmen, my floor or table neighbors, I find myself swallowed up by the human stream moving toward its various destinations. This is like the hours of High Mass in Paris. These people, however, are not going to hear Mass. Having come from all corners of the city and its suburbs, from more or less remote districts of their vast country, workers and farmers, making the most of their vacations and impelled by a thirst for knowledge —to read, see and hear is a passion with present-day Russia—move in dense throngs to storm the city's museums and historical monuments.

The Hermitage, the Soviet Union's leading museum, is one of the finest in the world. "Three hundred halls," says the guide, "two and a half million exhibits: paintings, sculptures, engravings, drawings and coins. And two and a half million visitors a year! Some come here every day for three months running. They come when the museum opens and leave when the doorman calls "Closing time!"

To this museum flock family parties, student groups, collective farmers, factory workers, teachers with book in hand or pressed to the chest, and people merely driven by curiosity who, knowing nothing, will try to see everything. Until evening the human stream passes through the halls in a ripple of controlled emotion.

I admire—as anyone would—the care Soviet people give their monuments. It is no secret that they have no use whatever for the hated regime which crumbled or, to be more exact, was overthrown in 1917. But, prompted by the simple thought that these buildings were designed by great architects, Russian or foreign, the most famous of their time, that every stone is associated with the history of the nation, that they are now everyone's property and that it would be unforgivable to tear them down or let them crumble away for lack of care, the Soviet people find millions of rubles every year to rejuvenate these buildings with fresh gold leaf and copper, with black or red lacquer.

Our revolutions were iconoclastic and incendiary. They ransacked Versailles, set fire to the Tuileries and the Town Hall. "Apart from the regime, flag, social system and the names of cities, the Bolshevik revolution changed nothing," an Englishman was able to write about Leningrad without any exaggeration in 1925. Hardly had power been seized than Lenin admonished the people to care for the princely mansions. "From now on they are ours," he said.

I saw the third ballet of my visit at the Kirov Theater. It was *Swan Lake*. I found that the doors open at 6:15 p.m. Each ticket has the tier, row and seat marked on it, and people find their seats quickly. There is no commotion, no tipping.

To one accustomed to Parisian theaters, the audience seems quite remarkable. In the boxes you see open-collar shirts, print blouses and striped pullovers. And you wonder if it is really necessary to get into a tuxedo or hang three strands of pearls around your neck to listen to Tchaikovsky. Here is a new society in which a Frenchman brought up on the Russian classics will look in vain for characters from their novels.

. . . After eight days in the USSR, eight days with only his eyes to guide him, the visitor can carry away only the most general impression. But his recollections are dramatic, impressive and lasting. And he cannot lightly dismiss what he has seen despite the endless din of the radio, television and press.

RUSSIAN BOOKS IN ENGLISH

Among the recent translations in English issued by Soviet publishing houses are:



NATURE'S DIARY. By Mikhail Prishvin. Cloth cover, 364 pp.

Mikhail Prishvin (1873-1954) painted word pictures of Russian nature. Konstantin Paustovsky said of him, "We quickly forget the succession of day, blue and transparent as sky, or silent beneath a canopy of gray cloud, or misty and warm, or filled with the first snowfall. We forget about the dawn, and Jupiter, the lord of the night, shining above the woods. We forget many things we should not forget. In his books Prishvin turns nature's calendar back, as it were, to show us once again pictures of forgotten days."

THE BLIND MUSICIAN. By Vladimir Korolenko. Paper cover, 227 pp.

An engrossing novel by Vladimir Korolenko (1853-1921) of the spiritual growth to maturity of a blind boy beset by the consciousness of his unalterable affliction. He finds his inner resources in music and a fulfillment in giving expression to the joys and sorrows of others.



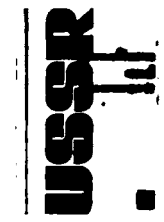
CHILDHOOD. By Maxim Gorky. Cloth cover, 384 pp.



This is the first volume of Gorky's autobiographic trilogy, the other two being *My Apprenticeship* and *My Universities*. The trilogy was dedicated to his son. *Childhood* describes the early years of Alyosha Peshkov in Nizhny-Novgorod (now the city of Gorky), where he lives with his strict grandfather, Kashirin the dyer, and a loving grandmother who opens a magic world of fairy tales for him.

USSR: QUESTIONS AND ANSWERS. Paper cover, 267 pp.

This book contains some 700 of the questions most frequently put by foreigners on various aspects of Soviet life. The factual and statistical answers are provided by authorities in many fields.





THE MATCH OF DEATH. By Alexander Borshchagovsky. Paper cover, 221 pp.

On June 22, 1942, the Nazis in occupied Kiev decide to celebrate the first anniversary of the invasion of the Soviet Union with a soccer game. The scratch German team was matched against a team of concentration camp prisoners, among them some of the best Ukrainian soccer players. The stakes—freedom or death. This very original short novel was written in 1958.

These and a large selection of Russian and Soviet classics, textbooks and publications in science, economics, history and philosophy are available in translation at:

New York:	Four Continent Book Corporation 156 Fifth Avenue New York, New York 10010
Washington:	Victor Kamkin, Inc. 1410 Columbia Road, N.W. Washington, D. C. 20009
Chicago:	Cross-World Books & Periodicals 333 South Wacker Drive Chicago, Illinois 60606
San Francisco:	Znanie Book Shop 5237 Geary Boulevard San Francisco, California 94118





Cheboksary, a Volga port and the capital of Chuvashia.



New housing in Cheboksary. The Chuvash Republic has built 100,000 apartments in the past 10 years.



A pastoral scene in Shorshely village where Andrian Nikolayev, pilot of Vostok III, was born.

CHUVASHIA

AMONG the exhibits at the museum of local lore in our republic is a wooden plow with the handles polished smooth by use. The peasant father of Andrian Nikolayev used such a plow; his son circumnavigated the earth in the spaceship *Vostok III*.

In less than 50 years Chuvashia, which had no industry at all, has matured industrially and agriculturally. It now produces as much in two and a half days as it did in a whole year before the Revolution.

Our republic makes complex electrical equipment, spare parts for tractors and automobiles, cable, pianos, washing machines, railroad cars, textiles and knitwear—more than 500 different items that are exported to 47 countries.

Engineering and Chemistry

In 1958 our manufacture of electrical apparatus and instruments made up eight per cent of the republic's gross industrial output. By 1963 the figure had grown to 14.5 per cent. New buildings have increased the production capacity of an electrical equipment plant in Cheboksary, the capital. The electrical measuring instruments manufactured by another plant in the capital and the relay devices made by a plant in the town of Alatyr are used in many parts of the Soviet Union and in a number of countries in the West and in the East.

Cheboksary has an electrical engineering research institute and several design centers that develop new types of electrical equipment and instruments. In cooperation with their Moscow colleagues, our engineers designed, for the first time in world practice, a 500-kilovolt power line protection relay device which won them the Lenin Prize.

In the past six years (1959-1964) a total of 78 million rubles was invested to develop the republic's chemical industry. In 1965 another 50 million rubles will be invested, 80 per cent of all capital investments for the year. Presently a large chemical plant is being built in Cheboksary. It has already turned out its first products, dyes for artificial fiber.

Rising Cultural Standards

Large sums are being spent for housing and cultural facilities. In the past decade state housing facilities in towns and workers settlements have quadrupled. In the same period more than a third of our farm families moved to new living quarters.

We have been educating our own specialists. Yesterday's peasants have mastered many complicated trades and professions. We have twice as many college-educated people per 1,000 as France, seven times as many as Turkey, and 28 times as many as Iran.

We have 860 general schools, 21 specialized secondary schools and three colleges. In the past decade our student body has more than doubled.

Chuvashia has 1,250 physicians and 7,000 junior medical personnel. Before the Revolution there were only 34 physicians servicing the area that now constitutes our republic, and only one of these was a Chuvash.

The republic has a widespread network of cultural facilities—professional theater companies, philharmonic societies, song and dance ensembles, and libraries.

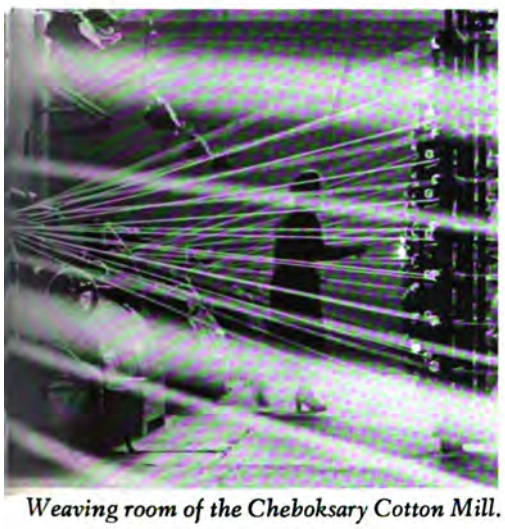
August Alkwist, the Finnish scholar who made a study of the way of life of the people of Chuvashia in the middle of the past century, drew the following conclusions:

"We cannot predict a happy future for the Chuvash language—it is doomed to extinction. As for the Chuvash literature, one cannot even hope for a future."

This prophecy, happily, did not come true. The Chuvash language and literature are both flourishing. The works of our national prose writers and poets—Peder Khuzangai, Yakov Ukhsai, Konstantin Ivanov, Nikolai Ilbekov, Alexei Talvir and others—have been translated into many languages. In the past decade the publishing houses in Cheboksary have issued 3,500 different titles in printings totaling 18 million copies. The working people of Chuvashia can read both Russian and foreign literature in their own language.

Our small autonomous republic, situated on the green banks of the Volga, looks hopefully to the future. We have ambitious plans. In 1965, only one year, we will be investing 100 million rubles to develop Chuvashia's economy and culture. This is as much as was invested during all of 1951-1956.

Cosmonaut Andrian Nikolayev took the call signal "Falcon," to signify mighty wings. It could also serve as the symbol of progress for Chuvashia, where he was born and raised.



Weaving room of the Cheboksary Cotton Mill.



Research laboratory for electrical equipment.



Anita Lotseva is an upcoming young Cheboksary composer.

Operating room of the republic's blood bank.



The Chuvash branch, Moscow Power Institute.



TODAY

BY SEMYON ISLYUKOV
FIRST SECRETARY, CHUVASH REGIONAL COMMITTEE OF THE CPSU

AROUND the COUNTRY



110 AGILE YEARS

Chokka Zalikhanov, a Balkar, lives in the Baksan Gorge in the Caucasus. In March he celebrated his 110th birthday. This tireless centenarian knows every peak and gorge in the mountains that surround Elbrus, the highest European peak. Late in 1963 Zalikhanov, with a group of other mountaineers, climbed Mt. Elbrus for his 208th ascent.

Zalikhanov has spent all his life in the mountains. Before the Revolution he herded sheep for the Uruzbiyev princes, who owned the Baksan Gorge, and hunted big game. He has lost count of the number of aurochs, bears and wild boars that he bagged in his lifetime, but well remembers the 20 snow leopards he shot, the most cunning and ferocious denizens of the mountains.

Zalikhanov is often asked to what he attributes his long life and strength. He has no ready formula.

"My sons keep telling me to spare myself," he smiles, "but while I have the strength, I can't sit around doing nothing."



A GIRL AT LAST!

A girl was born recently in Matern Home No. 12 in Moscow. S weighed 8 pounds 11 ounces and doing fine. Not an unusual occurrenc except for the parents. This newbo girl has 11 brothers!

Maria Kozel, a Moscow factory worke and her husband Orest, a house repai man, long dreamed of having a daug ter. But their first child, born 20 yea ago, was a boy, Vladimir, and he w followed by another ten. The younge Nikolai, took his first look at the wo in the same maternity home as his si When Maria Kozel was discharged t time, she told the doctors: "I'll be bac And she kept her word.

Maria is now 41 and in perfect healt without a single gray hair. She is a Mother-Heroine, a title conferred t mothers of seven and more children. financial grant comes with the title.

Years ago the family council decid to call any future daughter Masha, af mother. The ten brothers (the eldest serving in the army) are crazy abo their long-awaited sister.



ROBOT DRIVER

An electric train on the Moscow-Klin line has an automatic motorman. Almost all of the driving operations are done by a computing device. Using information pickups of the track, speed, and time, the machine solves differential equations of the train's movement and runs it strictly on schedule. It chooses the best conditions for accelerating, running and braking, and the most economic regimen for electric power consumption. The robot driver can differentiate between light signals and obey their orders. All the man in the cabin does is supervise the automatic driver.

IN TURKMENIA'S DESERTS

The Kara-Kum Canal is one of the largest irrigation projects in the world, bringing the waters of the Amu-Darya River, via sand dunes, to Ashkhabad, capital of Turkmenia.

The project for the third section of the canal, which will widen it and extend it westward to Kizil Arvat, has been approved. This will make it possible to irrigate another 123,550 acres of desert land in the foothills of the Kopet Dag mountain range and provide the industrial areas of western Turkmenia with water. Some time in the future the canal will be extended to the Caspian Sea. (The photo shows a section of the canal.)



MOSCOW'S NEW AIRPORT

The capital has a new airport, the country's largest, in Domodedovo, in the picturesque birch forest area south of Moscow. Until recently people picked mushrooms and hunted hares here.

In an hour the airport can handle as many as 3,000 incoming and outgoing passengers. The airport building has two 740-foot galleries to which airliners taxi. Either can provide simultaneous berthing for seven liners. From the gallery passengers reach the plane through a covered ramp. The airport has been servicing eastern routes—to the Far East, Siberia and Central Asia—for more than a year now.





NEW LOW-FRICTION PLASTI

Bearings that require no lubricatio have been produced from a polym material called "aman." They were d veloped by a team of researchers at th Engineering Institute of the Academy Sciences.

The team, headed by Professors Vas Korshak and Igor Kragelsky, reporte that aman can withstand temperatur of 572 degrees Fahrenheit and loads more than 1,200 pounds per square inc With a nonstop operating life of on year, aman is superior in performanc to the comparable American and Bri ish low-friction plastics.

Ball bearings and wheel suspension are already being made from the ne material.

MAGMA-OPERATED POWER STATION

country's first geothermal power tion will soon be placed in service e Kamchatka Peninsula. Deep in the , 3 to 20 miles below the surface, nolten magma gives off hot gases. up through cracks in the earth's these gases heat the ground water. ese spots hot springs and spouting rs give off the steam which turns urbines.

The capacity of the station is to be 5,000 kilowatts, the steam temperature 338 degrees Fahrenheit. One kilowatt-hour of electricity will cost 0.17 kopecks to generate, one-third or one-fourth the conventional thermal station cost.

There are geothermal sources in many parts of the Soviet Union—in the Caucasus, in Central Asia, in the Transbaikal area. If only those with a water temperature of 390 degrees and more were harnessed, they would produce an annual equivalent of 100 to 150 million tons of coal.



MOSCOW BUILDS

ne population of Moscow hit a high of 6.4 million in 1964. In the past two rs the city has built 225,000 new artments. Construction was centered inly in the capital's new peripheral as. Building in the two years included new schools, kindergartens and nurses for 52,000 children, 600 lunchrooms d restaurants, 39 new polyclinics that handle 21,000 patients in one shift, d eight movie theaters seating 7,600.



WORLD WEATHER SERVICE

The Moscow International Meteorological Center receives weather information from all over the world. Around the clock, humming instruments link the center with zonal hydrometeorological services inside the country and in Prague, Warsaw, Potsdam, Helsinki, Washington and New Delhi. Facsimile receivers and transmitters receive and transmit isobaric maps, and electronic computers process the information.

The Moscow and Washington centers have regular exchanges of information. Each has its own "zone of responsibility" —the Eastern and Western hemispheres. When a third center covering the southern latitudes is set up, probably in Australia, the world weather service will be even more comprehensive.



TILL BEAR HUNTING AT 73

While other women go out shopping, 73-year-old Anna Tskina, from a rest village in the Urals, shoulders her un and goes bear hunting.

She has shot 39 bears in her lifetime, nd has bagged thousands of squirrels, arten and foxes, and dozens of wolves, nxes and wolverines as well.

Anna's father and brother were both amous bear hunters with a total score f 125. Her husband, a railwayman, ever took to guns.

Her eldest son Kronid is a foreman at he local lumberyard, but he does some unting in his spare time.

ARCTIC VOLCANOS

Soviet Polar explorers have established that there is a chain of volcanos at the bottom of the deep-water area of the Arctic Ocean. This was learned from studies of the topography and composition of underwater rocks.

Vitali Dibner, chief of the marine geology section at the Institute of Arctic Geology, says that this range, which begins in the Atlantic Ocean, crosses Iceland and can be traced far to the north, along the center line of the so-called Atlantic-Arctic deep-water province of the Arctic Ocean.

The chain of submarine volcanos separates the Norwegian Sea from the Sea of Greenland, divides the Nansen and Amundsen troughs, just as the central underwater Atlantic range cuts the ocean to the south of Iceland in two.

The presence of an Arctic chain of volcanos was forecast six years ago on the basis of geophysical data by the Soviet Polar explorer Professor Yakov Gakkel.

In the opinion of Dibner, fresh traits of the chain's volcanic topography and the adjoining earthquake zone suggests that the volcanos are now dormant in the Arctic, but they may become active at any time.

The scientist said that the volcano range of the Arctic Ocean has been plotted for the first time almost completely on the geomorphological and tectonic charts compiled at the institute. They will be published in 1966.

ATOMIC POWER PROSPECTS

The future of atomic power belongs to fast neutron reactors, said Georgi Khruzhilin, corresponding member of the USSR Academy of Sciences, addressing scientists at their club in Moscow.

Fast neutron reactors, which reproduce nuclear fuel, make it possible to increase nuclear power resources 100-fold by using not only uranium-235 and plutonium, but also uranium-238 and thorium, which only recently were regarded useless as atomic fuel.

The scientist recalled that a thousand tons of uranium is enough to operate for a year atomic stations with such reactors with a total capacity of 100 million kilowatts.

The Soviet Union is already building a pilot fast-neutron reactor of 300,000 to 350,000 kilowatts. Specialists expect that later on such reactors could be built serially. Presumably such serial-built fast-neutron reactors will have a capacity of 600,000 to 1,000,000 kilowatts each.

Turning to the general trend of development of the Soviet power industry, Khruzhilin noted that by every indication the share of atomic stations in the nation's power balance would reach 10 per cent in the near future.

He said that Soviet scientists were now working on increasing the temperature of the coolant of atomic reactors since that would increase the efficiency of thermal atomic power stations.



DIFFUSION WELDING IN VACUUM

This brand new method of joining materials promises to be a major contribution to technology. It can join almost anything to anything: steel to aluminum, copper to ceramics, titanium to tungsten, metal alloys to glass, bronze to cast iron and some 250 other combinations established so far. The welding is done without electrodes, solders or fluxes. The components are heated and pressed together in a high vacuum. Tests show that the resultant zone of joining is stronger than the parent materials. The inventor of the new method is Professor Nikolai Kazakov of the Moscow Technological Institute of the Meat and Dairy Industry.

LILLIPUTS OF THE WORLD OF STARS

Pick up a cube of sugar. Imagine it weighs several hundred million tons. Now visualize this hefty little chunk not as a solid but as a fluid.

Got that? Now go a step further and imagine it in a state of "superfluidity."

Superfluidity means that the normal "stickiness" of liquids is completely absent. So far it has been seen only in liquid hydrogen at temperatures very close to absolute zero.

But this is precisely how two Soviet scientists see conditions in the tiny neutron stars which have become a center of interest for radio astronomers recently.

These stars are thought to be linked with unexplained sources of X-ray emissions from outer space.

Now theories about conditions inside these Lilliputian stars, only about 12 miles in diameter, were advanced recently by two astrophysicists—Vitali Ginsberg of the USSR Academy of Sciences and David Kirzhnits of the academy's Institute of Physics.

How can "superfluidity" exist in stars at temperatures of billions of degrees?

These stars consist only of neutrons packed tightly together. Since neutrons attract one another, Ginsberg and Kirzhnits claim that the tremendously compact matter would be in a superfluid state.

This, they say, would be the condition in the center of the stars. Then would come a region of normal fluidity and finally a crust of plasma as an outer layer.

A great deal of research is now being devoted to these dwarf stars, because many authorities believe that they represent the final state of all stars, including our own sun.

AROUND *the* COUNTRY

STUDENT CITY PLANNERS

By Alexander Kozlov

THEY are almost engineers. All these graduating students have to do is defend their theses, the final test of their knowledge and their ability to use that knowledge in practice. They have completed the course requirements of the municipal engineering faculty of the Kiev Civil Engineering Institute and are submitting their diploma theses to the state examiners board. Almost all of them center on Vinnitsa. This old Ukranian city is due for a face-lifting. Forty-one diploma theses and each one a unit in a serious collective project—a master plan for the city's development and reconstruction.

In May 1964 Rector Yuri Vetrov, Doctor of Science (Engineering), received a letter from the chairman of the Vinnitsa City Soviet asking whether the Kiev Civil Engineering Institute would be interested in having its students work on a practical project—drafting an urban development plan, on a voluntary basis, of course.

The idea fell on fertile soil. The institute's reaction was decidedly favorable: "It helps the city and it helps us through the final stage of student training. It gives our graduating students a chance to do collective, creative work on problems which are ordinarily tackled by certified engineers."

The invitation was especially welcome since the institute already had a certain amount of experience in this respect. Twenty graduating students had worked on an urban improvement project for Kustanai, a town in Kazakhstan. Their drafts had been commended by the examination commission and approved by the Kustanai municipal organizations. A similar job was done by 33 students for the town of Belaya Tserkov, in the Ukraine.

Soon the walls of two adjoining lecture rooms were plastered with drawings, cartograms, projects, estimates and diagrams. On the top of every sheet was "Vinnitsa."

Husband and wife Konstantin and Tamara Yusumbeli, Nikolai Dashkiev, Alexander Ocetrin and Natalya Vorzheva were the first to defend their theses. Each thesis was confined to a specific part of the master plan, complete with original drawings and estimates. But each author could have given a comprehensive lecture on the Vinnitsa of the future built around the voluminous data they had gathered on its industry, population, housing, transport, cultural facilities and every other aspect of a developing municipal economy.

What will Vinnitsa be like in 1980? Although none of the members of the examining board asked this question, the graduates answered it with any number of comparisons. The population will more than double. Whole districts will be rebuilt from the ground up. One-story houses will be replaced by large apartment buildings with all the modern conveniences. The student draft incorporated everything that would create a healthy, happy environment for work, study and leisure. Construction, municipal transport and volume of freight traffic, rest areas, public service facilities, green belts—all this was down in the draft plan.

The defense of diploma theses went on for two days. The state board marked 16 Excellent, 25 Good and 4 Satisfactory.

All the graduates won their engineer's status. Two of the students, Nikolai Osetrin and Boris Scorobogatov, were recommended for post-graduate study in municipal construction.

The young engineers will soon take up jobs at construction sites, at design offices and in municipal agencies. Their collective work, the master plan, will be presented to the Vinnitsa City Executive Committee.

"We have no doubt that the draft plan drawn up by our graduates is practical," says Georgi Bogatsky who heads the institute's department of municipal engineering.

Courtesy of the weekly Nedelya





GRADUATION THESIS— —FUTURE CITY'S BLUEPRINT

PHOTOGRAPHS BY IRINA PAP




ТАБЛИЦА ТЕХНИКО-ЭКОНОМИЧЕСКИХ ПОКАЗАТЕЛЕЙ ТРАНСПОРТА





Brown cap boletus



Boletus elegans



Chanterelle



Honey agaric



POETRY OF A

Boletus edulis (Borovik)



Russula



Saffron milk cap



Orange cap boletus









MUSHROOM SUMMER

In one of his letters Anton Chekhov wrote: "I am crazy about mushroom picking. I roam the woods all day long like a fool, with my eyes fixed on the ground." The great writer was not an exception—every Russian is crazy about mushroom picking. It's like fishing. What you catch is important, of course, but the fishing is really the thing.

From July to October thousands of people journey to the woods every weekend by car, bus, suburban train, bicycle or scooter. Some even spend their vacations in the mushroom-packed northern forests, preferring them to the southern sun and the sea.

POETRY OF A MUSHROOM SUMMER

(Excerpt from the feature story "The Blackthorn")

BY VLADIMIR SOLOUKHIN



Vladimir Soloukhin, the son of peasants, was born in 1924 in the village of Alenino. In 1942 he graduated from a mechanical engineering school in Vladimir, and from 1942 to 1945 fought in the war. After the war he enrolled at the Institute of Literature and was a correspondent for the magazine *Ogonyok*.

He is the author of many volumes of verse: *Rain in the Steppe, Saxifrage, Brooks on the Asphalt, The Well, She-Crane, How to Drink Out the Sun, He Who Has Flowers in His Hands* and several books of sketches. He has also written two lyrical stories, "Vladimir Country Roads" and "A Dewdrop." His first book of short stories, *A Loaf of Bread*, appeared in 1963.

THE SUMMER, fruitlessly spent in the bustle and stuffy crowdiness of the city, drew to an end. It was past mid-August when I suddenly realized that I had done no proper bathing, or rambling, or work for that matter. Within three hours I made arrangements for my vacation, and the next day left for the village and home.

It was a mushroom year, so it would have been preposterous to take my usual three-hour walk instead of going to Samoilov Woods with a large basket and a fine kitchen knife. The first day, on the way from the river, I picked a whole capful of sturdy, youthfully round and pink-bottomed champignons. But my finicky mother would not touch any of the "toadstools." Luckily, I had brought along B. P. Vasilkov's book in a USSR Academy of Sciences edition. It bore the long title: *Edible and Poisonous Mushrooms of the Central Zone of the European Part of the USSR,* below which was the subtitle: *Classification*.

Mother took some time studying the terse informative phrases to the effect that "the cap is at first semicircular and finally flat-convex, dry-white, with soft and thin perforated fibrous scales (sometimes barely noticeable).The gills are at first pink and finally black-brown. The stem is usually short, thick and white, with a non-splitting ring. The meat is white, and slightly pink at the break. Spores—7-8 x 4-5 . . . Grows in humus, manure, on rubbish piles in vegetable patches, near dwellings, in meadows and pastures, generally in groups, densely and sometimes rather plentifully from June to September. Edible, second category. Eaten fresh or pickled."

"There you are. Didn't I say it was a toadstool?" was the conclusion drawn from all this information. "See where it grows—in manure and rubbish. Sure it's a toadstool!"

"But it says here that it's edible, and second category besides. That means it comes after the white mushroom and the saffron milk cap for quality."

"And what about the spores*? Doesn't that mean that people argue about whether they ought to eat it or not? No, son, there's a better mushroom in the woods than this."

However, the champignons were fried, in sour cream moreover, as they should be. Just as the aromatic frying pan was set on the table, blacksmith Nikita Vasilyevich dropped in. We treated him to the mushrooms. After a few mouthfuls, eaten in wonder, he voiced his incredulity:

"What kind of mushroom is this? It's neither saffron milk cap nor white, but I've never tasted anything as good!"

"They grow in manure, you know. White on top and black at the bottom. . . ."

Saying that, I expected the blacksmith to rush to a basin with his hand pressed over his mouth, as happens in village stories about somebody who inadvertently swallowed a frog. But Nikita Vasilyevich did not rush anywhere.

"Oho, so this is what they taste like! For 75 years I've been walking past them and kicking them around. And they taste so good! I'll be sure to pick 'em now, only I'm afraid my Darya'll turn her nose up at them. I'll have to fry them myself."

I knew very well that if I wanted to do some decent picking, I would have to set out for the woods very early, at daybreak. But it so happened that I could never get away from the house before noon. On my way to the forest at that hour I would meet three or four women carrying full pails of white mushrooms and bands of village urchins following behind. I greeted the latter with one and the same question: where had they picked the mushrooms?

"This is our third trip back," they'd say. "We've been to Vasilyevskaya Side, Deryaba and Mikolavka."

"What part of Mikolavka—the upper or lower?"

"Both. There are lots of us, and we combed the whole place."

* In Russian *spore* also means argument.

You can imagine what I felt at this information. I could not stand looking at the firm light brown caps tightly packed in the boys' baskets and pails. You can also imagine that as soon as I entered the woods I came across traces of mushrooms and not the mushrooms themselves. Here lay a sliced-off root, there the peel—they had cleared the roots of dirt—here a cut-up, wormy cap, and there, in the moss, neat white rings where the mushrooms had been deftly nipped off by practiced hands. The needle floor under the firs had been all turned over and dug up by the youngsters' searching fingers.

However, during my first sally into the woods I immediately came upon so great a number of butter mushrooms, which are shunned by the local inhabitants, that I had a whole basketful in no time. They grew in long rows, winding along the green forest fringes, or stood five or ten paces apart from each other, or were in a mass so dense that you could not help walking on them.

"Oh well, these are also mushrooms," my mother said consolingly after seeing the piles of white mushrooms our neighbors had picked. "These can be dried or pickled too. Go ahead and bring more in, son. Who knows, you might find a white one while you're at it."

The next day I noticed that the butter mushrooms were not the only species left behind in the woods after the pickers had been there in the early morning. Nobody touched any Russulas either. They had firm edges (usually the edges are frayed), and were crimson, or deep gray, or flecked with green, or entirely blue. Dark pink with pale rings, the oyster mushrooms looked very pretty in the green grass, nor did they look any less pretty in the dark shade of the firs. Young aspen mushrooms, nestling in last year's gray foliage, simply screamed, as an artist would say, and dazzled you with their bright red caps. As you picked one mushroom, you caught sight of another standing a little way off. When you picked that, your eyes fell on a third. . . . Huge toadstools at the foot of the venerable firs, where there was neither grass nor last year's leaves, formed such mysterious fairy scenes that they simply begged to be filmed as the background for a story about Tom Thumb or the Witch and Her Hut on Chicken's Legs. Once I came to a place where there was nothing but black, bare soil. The darkness was rendered intense by the thick rows of firs with their mossy branches closely intertwined. In this semigloom, pale mushrooms on tall, thin stems weaved a ring dance, forming large circles, each of which was no less than ten paces in diameter. "Witches' rounds" are what these mushroom assemblages are called by the village folk. And rightly so.

There were so many different kinds of mushrooms that at the beginning I did not have to venture far into the woods before my basket was full. On the third day, however, I decided to follow the boys' example and ignore the sundry mushroom riffraff. I knew all the "white mushroom spots" from my childhood days. But, as was to be expected, I found nothing but a few isolated specimens which had survived only because they were well concealed by a fir branch, a dry tree stump, or thick grass. This made each find all the more precious.

But there was a spot, I still dared hope, which the village boys, not to speak of the fearful women, had not yet explored. For some 30 minutes I picked my way through such a dense, almost impenetrable, walnut grove, generously interspersed with small aspens, that I simply could not hold to my direction. Only by tearing the tangled branches apart, bending back the flexible, stinging walnut vines and diving under the low roof of green foliage could I make my way ahead.

Finally I came upon the first broad and deep gully. Wilting willow-weeds, raspberry bushes shedding their berries and yellowing nettles covered the slopes and bottom. And on the very bottom, where, in spring and during the rainy season, a little brook flowed along the narrow bed, there was a zone of wind-fallen wood. The trees lay across the brook, forming layers of different height, their dried branches touching the water or hanging in the air above the gully's bottom. Having

'ercome all this, I climbed the slope and turned to the right, making 'r the glades, green with the large leaves of lily-of-the-valley. This was really wild spot. In some village tales the gully was associated with ıngs of robbers and bandits, who had actually not been heard of for ıes. But there was a grain of truth in the stories—two deserters had dden in a dugout here during the war.

At the point where the lilies-of-the-valley ended, in the sparse under-ush out of which thick firs emerged, I came upon a white mushroom. was of an age when it could no longer be called young, but neither ıs it marked by worm-eaten senility. That mushroom alone was worth the trouble I had taken to find it. But when I bent to pick it, I spotted other two, then another three, and more and more. . . . Somebody uckled happily. I looked around, but then realized it was I myself who ıd laughed.

The sprawling roots of the venerable firs had formed veins in the ound from which you could trace their subterranean paths. It was ıainly near these roots that the white mushrooms grew. To me it emed both strange and unjust that such beauty, such perfection, was rought by Nature for no more than a day or two. . . . Afterward, the ıps would grow dark and sodden, tilt and topple over. They would ɛgin to melt into a jelly and finally disappear, having partly dried and ıartly soaked into the ground. I often found capless mushrooms bearing e traces of a squirrel's sharp teeth. That meant that the cap had been ırried away and stuck onto a high branch to dry for the hungry inter months.

Now, methodically, I brought home a basket of mushrooms every day. other sorted them out for pickling, soaking, salting or frying. Our big ıssian stove was completely littered with griddles upon which the mush-ɔoms dried, and pots and pans in which mushrooms cooked. We called the State Mushroom Trust.

By now schooltime had begun for my chief competitors, and I could ather as many white mushrooms as I wanted from the nearby woods ithout venturing into its depths. But my heart yearned for that favorite ' mine, the saffron milk cap, which had not as yet appeared. Those that stumbled upon in Mikolavka seemed to have sprouted out of the earth ɔmpletely rotten and worm-eaten.

There were plenty of greenish fir saffron milk caps, but they could not ɛ compared to those growing under the pines.

'hat year I decided to check a story about saffron milk caps. One winter in Moscow, a woman of 65 or thereabouts had knocked at my oor. From her I received some very valuable mushroom lore.

"Of course, if you want to eat saffron milk caps in winter, you have ı salt them. But when you want to eat them at once, what do you do ith them then?"

"We cook them. They're not bad fried, either."

"But that's barbarous! The saffron milk cap is the only mushroom born ı be eaten fresh, raw, and right on the spot. At home I salt its gills, nd after an hour or two, when the salt has melted, eat it with potatoes. lothing better or tastier. In the woods you stick the mushroom on a 'hittled twig, gills up, salt it and hold it over a fire or coals until the ılt melts and begins to simmer. Who would dare to compare a toasted ıffron milk cap even with a steak broiled rare?"

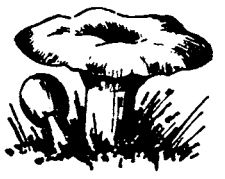
That had been in winter, as I've noted. Since then I had wanted to at mushrooms prepared that way. Now was the time.

The raw and well-washed saffron milk cap, salted on the gills and ɛft like that for two hours, crackled in the most appetizing way. It had either the smell nor the taste of a raw mushroom, but gave off an aroma f freshness, pine needles and, I should even say, light frost. But if left ıll morning, it turned dark, had a strong mushroomy smell and tasted ıltogether different.

As for toasting saffron milk caps over a fire in the woods, that is not ɔnly a matter of taste. The days are damp and windy, and the winds ılow in chiefly from the north. While hiking across a field for a mile ɔr so, the world seems chilly and unfriendly indeed. But the moment the rees of the forest edge spread their shaggy branches apart to admit ʏou to the shade of the wooded realm, you find yourself in warm and ɛven cozy stillness. If it begins to rain, you take shelter under the crowns ɔf several old intertwined firs, where you are safe from the strongest of lownpours. Overhead you hear the patter of raindrops, and nearby, in ı space between branches, see streams of rain come pouring down. But where you are, the floor of needles, piled up by the years, is completely dry and so springy you could sleep on it if you liked.

After sitting a while listening to the rain, you want to make a fire. The smoke fills your abode under the firs and seeps through the branches o where the wind tosses it this way and that and the streams of water ousle and comb it. The fire finally burns bright, and the smoke under the irs leaves its fragrance behind.

The smell of autumn smoke can never be confused with that of spring ɔr winter. If you have any saffron milk caps in your basket, you must mmediately whittle a twig, stick a mushroom on stem up, salt the gills ınd toast it. You will always find an opening in the flames through which you can stick the twig. When the salt begins to melt and simmer, he mushroom is ready. After eating one prepared this way, you will go ɔn toasting and swallowing them until there are no more in your basket —even if the rain has stopped long ago and it is time to go on to new nushroom spots. . . .



Lactarius



Mossiness mushroom (Boletus variegatus)



Milk agaric



Fairy ring mushroom (Champignon)

COULD ANYTHING BE TASTIER?

MUSHROOMS are a delicacy. They can be baked, fried, stewed in butter and sour cream, used for puddings, pies or soups. As for salted and pickled mushrooms, they are indispensable tidbits for alcoholic beverages.

Mushrooms should be prepared within three or four hours of picking. To preserve them for a day or two, sprinkle with salt and keep in a cool place. There are dozens of different mushroom dishes. These are only a few of the most popular.

Mushrooms in Sour Cream

Boil fresh young mushrooms of the white variety (Boletus edulis), the orange cap boletus or the brown cap boletus for 10 minutes and then strain. Slice and fry in butter with a pinch of salt. Before you fry, add some flour. Stir and bake with sour cream added. Before serving, sprinkle with chopped parsley or fennel. For a pound of mushrooms use 1 teaspoon flour, 2 tablespoons butter and ½ cup sour cream.

Mushroom Soup with Barley

Mushroom soup is usually made with dried mushrooms. All mushrooms except the lamella—the honey agaric, chanterelle, and milk agaric—can be dried. They can be preserved for several years without loss of flavor.

To prepare barley-mushroom soup, first make a mushroom broth using dried mushrooms which have been soaked for two hours, halved onions, carrots and parsley. Cover with water and bring to a boil. Simmer for one hour and remove the onions, carrots and parsley. Cook the broth for another hour. For 3 quarts of water use 2 ounces of dried mushrooms, 1 onion and 1 carrot. Solt to taste. Strain the broth and add 1 cup of barley which has been soaked in water for two hours. Season with bay leaf, pepper and salt and cook until barley is soft. Before you serve the soup, add 2 teaspoonfuls of butter and sprinkle with chopped parsley.

Pickled Mushrooms

Young mushrooms, the brown cap boletus and the orange cap are wonderful for pickling. The mushrooms are put in a saucepan and covered with diluted vinegar. For 2 ¼ pounds of mushrooms use ¾ of a cup of 6 per cent vinegar diluted with ¾ of a cup of water. To this add a teaspoon and a half of salt. Stir the mushrooms while cooking. When the marinade has boiled, skim it and cook until it becomes transparent. Then add bay leaves, green pepper, cinnamon, cloves and parsley. The mushrooms should be cooked for about 10 minutes. They are ready when they sink to the bottom and the brine is clear. The mushrooms are then cooled as quickly as possible and sealed in jars (not metal containers). The pickled mushrooms are kept for three to four weeks before serving.

Salted Mushrooms

The milk agaric and saffron milk cap are especially good for salting. Before salting, the mushrooms are steeped in boiling water for 5 to 6 minutes and then washed thoroughly in cold water.

Pour off the water and cool the mushrooms. Place in a barrel, an enamel or clay pot—heads down in layers of 2 to 3 inches—and sprinkled with salt (an ounce of salt per pound of mushrooms). The same spices used for pickling are then added, and the whole is covered with cold water. Cover the pot with a wooden lid held down firmly with some heavy object.

The quantity of brine must not exceed 20 per cent of the weight of the mushrooms.

The mushrooms will be ready to serve in about a month.



On the firing line of the USSR championships. In the foreground is the all-round national champion Nonna Kozina. Next to her is Wanda Kapachinskaya, a dressmaker, who won a Master of Sports rating in archery at an age when most people are content to exchange fond memories of an athletic youth.

A Whole Country at the St

PHYSICAL CULTURE DAY, an annual and much looked-forward-to event for Soviet sportsmen, falls this year on August 14. It is an occasion everybody enjoys, not only the practiced athlete. Look through the record of any sports match, and among the contestants you are likely to find a mechanic or an engineer, a junior researcher at the Academy of Sciences, a girl who has just entered college, a geologist, a tractor operator —people from a hundred other walks of life. They challenge each other on the cinder track, on volleyball and basketball courts, in swimming pools and gyms.

Sports become family affairs in odd ways. A little boy takes his first kick at the ball his father rolls toward him. Thereafter papa gets no rest; willy-nilly he plays soccer. Or a mother brings her daughter to the pool for swimming practice and finds herself joining a swimming class for adults. So we have a new tradition beginning, parents walking in their children's footsteps.

In honor of Physical Culture Day we asked several people of assorted ages and occupations these three questions:

1. What do you like about sports?
2. What don't you like about sports?
3. Which American athletes do you like most?

We gave the floor first to ***Lydia Skoblikova,*** six-time winner of the White Olympiad, star speed skater in the Ninth Winter Games in Innsbruck, a teacher at the Chelyabinsk Teacher Training College when she is not practicing or competing in her favorite sport:

1. I like to be first in a hard-fought contest. I like sports for the happiness victory brings.

2. You have to work hard and deny yourself many things to make the grade in sports. It would be more fun if one didn't have to sweat it out, but then victory would not be so precious.

3. I've always been deeply impressed by the sociability and friendliness of American athletes I meet. If I were to single out any one person, it would be Rudolph Disney.

Here are the answers of ***Yuri Mashin,*** Chairman of the Central Council of Voluntary Sports Organizations of the USSR:

1. I believe that the spirit of genuine friendship and comradeship is the most attrac-

ARCHERY

By Lev Borodulin

SOMEBODY once said that from early childhood every man has a bow and arrow in his blood. This somebody was probably a man. It was ascertained later that the other half of mankind is also seized by the same passion.

And so these bowmen—and women—joined their efforts and set up archery clubs in their various countries at various times, and with various rules and regulations. In 1931 international rules were worked out and endorsed, an international federation created, and the first world archery championships held.

There are otherwise sensible people who think that archery is child's play and question its legitimacy as a sport. Let such individuals consider these facts. Fact one, it takes a 53-pound force to pull back a standard match bowstring. Fact two, in the course of competition, the archers, men and women both, shoot 288 arrows. Fact three, they negotiate a total distance of five and a half miles, trudging 100 to 300 feet each time to retrieve their arrows and get back to the firing line. Fact four, each competitor uses up enough energy to lift a weight of eight tons, more than strongman Yuri Vlasov did to win his world record.

Of course, you don't have to be an Iron Man to be an archer, but a couple of muscles are helpful, also a good eye and a strong mind.

Academic, all this? Not so. Archery achieves Olympic status in the next Games, the Nineteenth.



lium

By Andrei Batashov

tive thing about sports. It was strikingly evident at the last Olympic Games in Tokyo. I—and a good many other people, too—will never forget that scene when the victor and the vanquished at the boxing finals walked up to the dais and embraced each other.

And another thing. Speaking about sports in our country, I would like to underline their mass character. Our sports societies today have an aggregate membership of 40 million. You can really call the Soviet Union a country of health, strength, youth and beauty.

2. What I don't like is any violation of the basic principles of the Olympic Charter. Unfriendliness and partiality are incompatible with real sportsmanship.

3. I was greatly impressed by the U.S. Olympic team in Tokyo, and especially by the track-and-field performers and swimmers.

The next person to answer our questions was 8-year-old ***Lena Kryuchkova.*** She is in the second grade of a Moscow school. I met Lena in the children's section of the Luzhniki sports center in the Soviet capital.

1. Most of all I like to see dances on ice. I dance on ice, and I think it's beautiful.

2. I don't like soccer because nobody wears pretty clothes and there's nothing to watch like in figure skating. It's no fun to watch soccer.

3. I'm crazy about ice shows. I liked the ice show from America. Oh, I wish I could learn to dance on ice like that!

I met ***Alexander Leontovich,*** a veteran underwater athlete, at the Central Documentary Film Studios. His answers:

1. Skin diving always attracted me. It gives you that unusual sense of soaring experienced only in dreams. I'm an underwater film cameraman by profession. I'm 60, but I feel much younger than my age.

2 The time to ask a skin diver this question is in October or November. That's when you're cold and tired, and you feel as though you never want to go underwater again.

3. As a skin diver and cameraman, I liked the film Holiday on Water *very much. I was thrilled by the motorboat race. Americans are really experts at aquatics. I admire their precision, daring and technique.*

The following from ***Valeri Popenchenko,*** who won the Tokyo Olympic crown for the middleweight division as well as the Barker Cup for the best boxer in the tournament. Popenchenko graduated from a military engineering school with a *cum laude* diploma, and is now doing graduate work.

1. Since I'm a boxer, that sport, naturally, interests me most. It's a masculine sport, a duel between two men that shows what they are made of.

The beauty of boxing lies in its precise, polished action, in fighting to win.

2. What I do not like are those who rob the sport of its honesty—biased judges and fighters who resort to dirty punching. I also don't like athletes who try to exploit their success for aims that have nothing to do with sports, like getting into college without having to take entrance exams and making a career for themselves.

3. The U.S. sportsmen I most admire are Hayes, the sprinter, and Schollander, the swimmer. Their spirit and generosity impressed me. Fine athletes like that are also fine patriots, because they add to their country's fame.

The next to answer was ***Alexander Myasnikov*** (about whom you can read more on page 56 of the July issue—*Ed.*), a corresponding member of the USSR Academy of Medical Sciences and winner of the Gold Stethoscope, an award of the International Society of Cardiology.

1. I saw the Holiday on Ice show in Moscow. It was a remarkable spectacle.

I think figure skating is a splendid sport. It combines beauty, grace and healthful exercise.

2. I dislike boxing because it is bad for the health. Nothing good can come from punches to the head or solar plexus. I don't even like boxing as a spectacle. It evokes harmful and destructive emotions in the onlookers as well as in the men battling inside the ropes.

3. I particularly like the soloists in the American ice show company. I wouldn't want to take away any of the glory from the men, whose technique was fantastic, but from an esthetic point of view, the women, I thought, were far superior.

And from ***Nikolai Cherkasov,*** the noted Soviet stage and screen actor, known to American filmgoers for his starring roles in *Ivan the Terrible* and *The Baltic Deputy:*

1. I'm not much of an athlete myself, but I like watching gymnastics, especially the floor exercises. I very much admire the form and grace our leading gymnasts display.

2. I don't like what I call the sport-records clinic. What I mean is a competitor dropping from exhaustion at the end of a record-breaking race and doctors rushing up to revive him. I think athletics ought to be a pleasure from beginning to end.

3. I followed the Olympic Games in Tokyo on TV with great interest. I still remember the performance of the American woman diver Lesley Bush, the graceful way she came up for her dive, the way she took off and entered the water. It was an esthetic experience.

The last person interviewed was ***Oleg Popov,*** the "Sunny Clown."

1. Sports make people feel good. People are cheerful by nature, and my job is to make them feel more cheerful. I suppose I'm not the first one to say this—that you really can't be a good circus performer without thorough athletic training.

2. What I object to is when a man sacrifices all his other human qualities for cups and medals, when all his other interests are crowded out by athletics, when he turns into a combination of muscles, sinews and records.

3. Most of all I like the American figure skater Carol Hayes. Achieving perfection, of course, is impossible, but I almost believe it is possible after watching her performance. She has artistry, technique and something else that can't be put into words.



Check your score.



The setting of this much debated film is a nazi-devastated collective farm. The hero is a disabled veteran, Yegor Trubnikov, played by Mikhail Ulyanov.



Yegor is elected chairman of the farm board. Only Semyon, his brother (Ivan Lapikov), and Semyon's wife Donya (Nonna Mordyukova) vote against him.

THE CHAIRMAN--

A CONTROVERSIAL FILM

BY LEV IVANOV

Not much to laugh about in those incredibly hard postwar years, unless you were incorruptibly young. A rare interlude for the hard-driven chairman.



Board members of the neighboring collective farms gathered at the District Party Committee headquarters, each with his own problems and grievances.





This powerful, moving scene shows how ground was broken the first spring after the war. Milk cows and people were the only draft animals left.



A brutal clash between the chairman and his brother. Semyon believes in no one but himself. He hates the collective farm and everything it stands for.

THIS PICTURE was much talked about and hotly debated even before it was released.

Its setting—a nazi-devastated Russian village, its hero—a war veteran elected chairman of a collective farm, and the tough road from poverty to prosperity it portrays are not new. The subject and setting are familiar to us from recent books and from films as well. What is new and striking about *The Chairman* is neither the point it makes nor the subject matter, but the commanding use of the film medium to bring home to the audience the truth of life.

To shoot scenes of the war-ravaged Russian village in 1947 these days, it is simple enough to build a set of isbas with their thatched roofs caved in and to dress in threadbare army coats actors playing farmers back from the war. *The Chairman,* however, is a film whose powerful scenes dispense with such "props." What more dramatic and understated depiction of a destitute postwar village than cows harnessed to the plow? The scene showing these hard-driven beasts has tremendous impact. As I watched it, I began feverishly searching my memory. What had I been doing in that postwar spring of 1947? I had been at school then, perhaps in a class on economic geography or the USSR Constitution, while these farmers were harnessing up their cows to plow the land.

The director of the film, Alexei Saltykov, went to the village. He read the script to collective farmers and recruited many of them for his cast. There were so many nonprofessional actors in the picture that they set the tone and feeling for the professionals. Even the credit lines make no distinction between the leading actors (the characters they played are not noted) and the ordinary people who acted in many of the scenes. That did more than give the picture authenticity of costume and interior; it achieved the kind of reality that no amount of on-the-lot rehearsing will do.

Actors usually focus on character types in mass and incidental scenes. The mass scenes in this film are remarkably free of any such studied efforts, but they do have a certain constraint. The types are there, too. The effect on the audience, however, is quite new, for this very constraint will suddenly give a scene the ring of certain truth. This may be why the wedding scene, with its postwar frugality and the drunken merriment of the guests, does not strike a note of joy. And it may account, too, for the lack of any sense of despair in the scene where the collective farmers watch the grain which had been portioned out to them for their work sent away by order of local authorities who think only of getting credit for exceeding their quota figures. Something about the faces of these people watching their bread sent off tells you that nothing can break them. No obtrusive close-ups play up the nature scenes. And for this reason, perhaps, the people's attachment to the land and the chairman's efforts to reclaim it are all the more powerfully conveyed.

Mikhail Ulyanov plays Yegor Trubnikov, the chairman of the collective farm. It is his best role, I think, but the character he creates has given rise to much argument. Some people accept it with admiration; others raise the objection that Trubnikov is a poor example of a farm executive, that he is too curt and domineering.

Yegor Trubnikov is not suave and patient. He is inclined to fly off the handle, but he cools off quickly. He lays down the law, but he is also friendly and warmhearted. It is one of the film's merits, to my mind, that its hero is not a model chairman, not a man who fits neatly into a pigeonhole. Trubnikov is unpredictable. The one constant about him is the speed and efficiency with which he takes hold of a difficult situation.

There are all sorts of people, Trubnikov knows. He can understand a man who is resentful, bitter or desperate, one who is spiteful, tricky and vicious. One of the strongest scenes in the film is the clash between Yegor Trubnikov and his brother Semyon (actor Lapikov), who has lost faith and grows to hate the collective farm. He and his brother are at daggers' ends. Semyon fights him, slanders him, uses every means—fair or foul—to trip him up, because Yegor insists that he stay on the farm. And when, boiling with rage, he yells, "Let me leave the farm or I'll set fire to it," Yegor lets him go. After a struggle with himself, he tears him out of his heart. But his grief is great for he sees in this man who tried to destroy him, and nearly succeeded, a man who wrecked his own life in the process.

The kind of people that Yegor Trubnikov cannot understand are those who do not have the capacity for either love or hate. They joke or threaten, but their jokes have no gaiety and their threats no anger. About such people they say that "their eyes have no soul, and they react for a consideration." It is no use explaining things to them. To them grain is not grain but "shows possibilities," and human beings are not people but "figures in quota pledges."

"A collective farmer can't work on an empty stomach!" Yegor Trubnikov shouts at Klyagin, secretary of the Party District Committee.

That is as clear as two and two make four.

But according to Klyagin two and two do not make four. Two and two make a slogan . . . "A collective farmer can't work on an empty stomach, you say? What kind of attitude is that!" Klyagin throws back from behind his desk.

Some critics say Klyagin is not true to life. But that is really beside the point. There have been mistakes in the administration of our agriculture, and Klyagin merely personifies some of these mistakes.

As for Yegor Trubnikov, a collective farm chairman and disabled war veteran, he portrays the great effort to reclaim the war-ravaged land.

The film is not without its weakness. It slows down in the second half, and the end is too rosy. The collective farm becomes prosperous much too quickly.

There is also perhaps too much emphasis on Yegor Trubnikov; he is not the only one who puts the farm back on its feet.

But we can hardly expect one film to answer all the vital questions of the countryside. The big question it does ask and answer is how to stay human under trying and complicated circumstances. And it is this that gives the picture its lasting distinction.

The film has an extraordinary verisimilitude. The director Alexei Saltykov read the script to collective farmers and recruited many of them as actors.



One of the closing shots. The Chairman *has been criticized for its too rosy ending, among other things, but even critics call it a landmark film.*



"What's the use of a newborn child?"

Benjamin Franklin



QUANTA...QUANTA...

BY IRINA RADUNSKAYA

HAVE another try?" Alexander Prokhorov asked his former graduate assistant. Nikolai Basov nodded. He moved his hand, and the pointer of the voltmeter jumped up several thousand volts. Yesterday this would have meant a breakdown. Now everything seemed all right.

The researchers kept turning the controls for nobody knew how long. And again the curve leveled off and began climbing. Suddenly a narrow strip appeared at the crest of the wave. The two men looked at each other. Was this, at last, what they had been hunting for?

The hand on the knob kept moving. The strip slowly broadened and grew longer. Finally it clearly showed a belt at its middle.

"Looks like a bow tie," one of them said.

"The damn thing is running at last," remarked the other.

This was how, a decade ago, a quantum mechanical oscillator was born in the Oscillation Studies Laboratory of the USSR Academy of Sciences' Physics Institute. For its operation it depended on molecules of ammonia gas which were made to generate radio frequency oscillations, or waves. The long-anticipated moment was ushered in by the bow tie on the whimsical curve.

The most intricate calculations and the most delicate experiments. Hopes and disappointments. But confidence too. Confidence that was at first intuitive but soon had the granite foundation of equations to rest upon. Confidence which in 1953 withstood the fire of critics at the USSR Conference of Physicists and which made it possible to escape the temptation of easier, more spectacular, more fashionable answers.

Like any newborn baby, the quantum mechanical oscillator promised much or nothing. Everything depended on what the situation would be in the future and what its "parents" would teach it.

Everyone was eager to have a look at the bow tie and to turn the knob, but very few were granted the honor. The privilege had to be deserved.

The first to put his hand on the controls of the oscillator was Bardin, a talented mechanic, who had made "all the hardware," as the physicists put it. Next was Nikitin, who had hooked up the oscillator's radio circuit. At the time, he was working as a radio technician and was a correspondence school student; today he is an engineer with a Master of Science degree. Only then came the turn of the eminent theoretician who had unexpectedly closed the valve of the cylinder supplying ammonia gas. The bow tie vanished, and to everyone's delight appeared again when the valve was opened.

The physicists celebrated their victory talking about what needed testing, measuring, redoing. And the festivity gave way to routine work.

The cleaning woman, as usual, swept out pieces of wire and bits of tin every morning, sighing "Quanta, quanta" to herself, and then boasted to her fellow cleaners on other floors, "We've started up a quantum oscillator."

What is an oscillator? It is a sort of generator of alternating current at some desired frequency. Electrical generators are now built in capacities of 300 and even 500 megawatts. A quantum mechanical oscillator has a power output of the order of a millimicrowatt (one billionth of one watt). It takes much more power for a mosquito to hum.

The thing about the quantum mechanical oscillator that had attracted the young experimenters was accuracy rather than power. Their brain child used no radio tubes, familiar condensors or resistors. The molecules oscillating in the new device gave it the stability and accuracy of frequency determined by their nature. Therefore the major application of the ammonia-beam quantum mechanical oscillator was to be as a "clock." Calculations showed that it would lose less than one second in a thousand years—more accurate time than man has ever been able to keep. Of course such a clock is useless in everyday life, but it is extremely important in space flights, sea and air navigation, and in a host of engineering applications.

It often happens that discoveries come in twos. In 1954 the American physicists C. H. Townes, J. P. Gordon and H. J. Zeiger constructed a device for which they coined the term "maser," which stands for "microwave amplification by stimulated emission of radiation." Soon it became clear that work done independently at the Physics Institute in Moscow and at Columbia University in New York had produced identical results.

Before long masers appeared at the USSR Academy of Sciences' Institute of Radio Engineering and Electronics, the Metrology Institute in Kharkov and elsewhere. Electronics manufacturers were quick to follow suit. And everywhere researchers turned for guidance and inspiration to the pioneer work of Basov and Prokhorov, for which they were awarded a Lenin Prize in 1959.

The maser has many applications besides its use as a superprecise clock. For example, it was found that molecules can do the job of both an ideal transmitter and a noise-free receiver. There is always a faint noise from the tubes in an ordinary radio receiver even if there is no interference. Molecules are the most "noise-free" devices in nature, the reason a maser amplifier can pick up signals which would be hopelessly drowned in the noise of ordinary radio tubes.

One day, when Academician Vladimir Kotelnikov had completed his report on radiolocation of the planets, he was asked why the signal which was bounced off from the planet Mercury was so much clearer than the signal from Venus. A pertinent question, since Venus is four times as big as Mercury and comes much closer to the earth than Mercury. It would be logical for the signal from Mercury to be weaker

Kotelnikov gave a simple answer. Yes, the signal was weaker, but it had been picked up by a radar equipped with a maser amplifier. The device had been made under the guidance of Professor Mikhail Zhabotinsky at the Institute of Radio Engineering and Electronics.

But if Prokhorov and his colleagues had not studied the properties of the ruby, which is not only a precious stone but also, it turns out, the most suitable material for the new amplifiers, if Prokhorov had not drawn the finest specialists into the preparation of artificial rubies that possessed previously determined properties, if . . . In a word, if Prokhorov had not caught all three whales in one net and, with his associates, had not created the first amplifiers with the ruby, the progress of science in this field would not have been so rapid.

Now all the largest radio telescopes in our country are equipped with quantum amplifiers. Visibility is ten times greater, and radio astronomers can make their observations quicker and with greater accuracy. For instance, with one amplifier, radio emission of excited atoms of cosmic hydrogen was discovered on a five-centimeter wave, which carried within itself valuable information, not only about the hydrogen but also about the stars under whose influence this radiation takes place.

A maser amplifier was also used to establish radio contact via the planet Venus when the radio telegraph transmitted the words "Lenin," "USSR" and "Peace."

Masers embody the latest advances in science. They rest on three "whales": paramagnetic resonance, discovered by Academician Yevgeni Zavoisky; the technique of induced emission in quantum mechanical systems, suggested by Basov and Prokhorov, who are now corresponding members of the Soviet Academy; and cryogenics, or work at the lowest possible temperatures, pioneered by Academician Pytor Kapitsa.

It is important to note that radio waves and light waves are identical except in frequency. Therefore, the rules of induced emission apply equally to both types of waves. And so Basov, Prokhorov and Townes were busy trying to apply the maser principle to light.

Success with visible light frequencies, however, first came to another researcher. The first operating optical maser must be credited to T. H. Maiman. He made a cylindrical rod of ruby, whose properties had



King Gustav VI Adolf of Sweden presents the Nobel Prize to Soviet physicists Alexander Prokhorov (left photo) and Nikolai Basov.

been studied in detail by Prokhorov, thoroughly polished and silver-plated its end faces, and placed it coaxially in a helical flash lamp. What happened then might well be called a miracle. The ruby rod absorbed the green light of the lamp to emit a bright beam of red light. The new device was christened the laser, an acronym for light amplification by stimulated emission of radiation.

The laser looks disappointingly simple. It consists of a rod of synthetic ruby (chromium-doped aluminum oxide) and a flash lamp that differs from a photographic lamp only in size. But when a researcher happened to be in the way of the laser beam, a mile from the source, his eyes were badly injured, for the brightness of the laser beam is a million times that of the sun.

The laser beam can instantaneously burn holes in steel. It is already being used to machine diamonds and superhard alloys. Experiments are under way to see if it can be used to accelerate charged particles and control chemical reactions.

Most recently Prokhorov has been working on the use of the laser beam to obtain concentrated hot plasma, a necessary element in controlled thermonuclear reactions.

Soon after his success with the maser Basov became interested in the idea of a laser that used semiconductors as the active material. This held out the promise of direct conversion of electricity into light waves. A theoretical foundation for such systems was laid down by his first joint work with Bentsion Vul and Yuri Popov. But the difficulties on the road from theory to practice were so formidable that nobody, except the three investigators, believed in the idea.

Yet Nikolai Basov, Oleg Krokhin and Yuri Popov found a way to convert electric current almost completely into a beam of light by passing it through a semiconductor. Work went on in Basov's and Vul's laboratories in Moscow and in Nasledov's and Ryvkin's laboratories in Leningrad. The Leningrad team was the first to obtain encouraging results. Soon semiconductor lasers were made in the United States and in the Soviet Union. The Soviet scientists who had worked on semiconductor lasers were awarded the Lenin Prize for 1964. Recently Basov and his coworkers scored another success; their semiconductor laser is triggered by a stream of electrons.

Thousands of scientists at hundreds of laboratories are working on masers and lasers today. But the ground was broken for them by Basov, Prokhorov and Townes. Their contribution has been acknowledged in scientific circles the world over. The Swedish Academy of Sciences awarded them the Nobel Prize in physics for 1964.

Quite recently we were amazed by the atom harnessed to work for man. Now the photon, a quantum of light, has been placed in harness. The scope of masers and lasers can already be divined.

Imagine an engineering plant where laser beams machine the hardest materials to extremely close tolerances, giving them any shape, however complex. The plant is run by a computer operating on light beams carried by quartz-fiber light pipes. The speed and memory of the computer is a thousand times greater than those of existing computers, despite its small size.

Or imagine automatic telephone exchanges without a single relay. Light beams supplant the heavy cables. Such stations are integrated into a global communications system using a family of orbital satellites, radio waves and light pipes. This kind of system will be able to take care of all communications on our planet and with space crews on other planets. And these are only a few of the possible applications for quantum mechanical oscillators and amplifiers.

Soviet scientists are gratified that their American counterparts interpret the word "maser" as "Military Applications Seem Extremely Remote." It is their hope that the use of masers and lasers will be confined to science, industry and communications on the earth and in outer space.

AN ANCIENT CHRONICLE about the monk Maximus the Greek, a famous booklover and scholar who lived in the late fifteenth and early sixteenth centuries, tells us that "the illustrious sovereign Vasili Ioannovich called the monk into his presence, led him to the royal library and showed him a multitude of books in Greek." These words, recorded no less than 400 years ago, have long been puzzling scholars.

The chronicles note, too, that Czar Vasili III, the father of Ivan the Terrible, invited Maximus the Greek to translate books from Greek into Russian. We also know that Ivan the Terrible showed visitors from abroad a library kept in two or three basement rooms of his palace. A scroll on "the number of the Czar's manuscripts from the East" was discovered in the nineteenth century. Its compiler claimed there were 800 such manuscripts. He listed only a few by name, among them the historical writings of Livy and Tacitus and the comedies of Aristophanes.

Scholars all agree that this library, which seems to have vanished without a trace, is hidden somewhere on the Kremlin grounds, and every effort is being made to unearth it.

"Some time ago several chambers were discovered under the foundation of the Grand Kremlin Palace," said Vladimir Fedorov, chief restoration architect of the Kremlin museum buildings. "They date back to the sixteenth century when a palace of the Grand Duke of Muscovy was built on this site. One of the chambers is in a good state of preservation. An underground passage laid in stone was found underneath the chambers, and several yards of it have been searched. It may be the very same corridor the court official Makarius walked along. He is said to have been the last person to see cases of books piled in a subterranean vault of the Kremlin."

Many secrets lie buried beneath the foundations of the Kremlin buildings. An underground passage between the Arkhangelsky (Archangel) and Blagoveshchensky (Annunciation) Cathedrals has not yet been thoroughly explored. Here, where the state archives were housed, a whole library may easily have been hidden.

The foundation of the Blagoveshchensky Cathedral also needs looking into. The masonry of such foundations often served as caches for the valuable documents of the grand dukes of Muscovy. A very thick wall at the northern end of this foundation may have been built to contain a depository capacious enough to hold the library.

Two vaults, erected six or seven hundred years ago, were dug up by archeologists beneath the apartments built for Queen Natalia Kirillovna.

The area of the court once occupied by the Patriarch is now being excavated. The framework and corner of a mansion surrounded with a paling which archeologists attribute to the period preceding the Mongol invasion have been dug up here. Underneath were the remnants of an even earlier structure that was burned down in 1177 during the first Moscow fire mentioned in the chronicles.

Beneath the chamber set apart for the brewing of myrrh, traces have been found of underground passages which may also have served as caches for this elusive library.

THE LOST LIBRARY OF IVAN THE TERRIBLE

BY NIKOLAI CHERNIKOV

Searching out hidden passages and vaults under a Kremlin structure.



POETRY OF

Two world-famous mathematicians participated in a forum at the Moscow University Student Club. The gist of the discussion: How can the engineer or scientist meet the pressing demands of his specialty and still find time for the arts and humanities? To put it more generally, what constitutes a really cultured man today? Below are some thoughts of professors Pavel Alexandrov and Andrei Kolmogorov on the subject.

PAVEL ALEXANDROV:

In the prologue to Goethe's *Faust*, after the paean of the three archangels to the beauty and perfection of the universe, Mephistopheles announces that his theme will be not the perfection of the universe but man's trials and tribulations on this earth.

I do not propose to speak of the development of civilization or other such world-embracing problems. My concern is more with our students and their relation to science and culture.

It seems to me that science today requires a very high degree of professionalism. I do not like this word myself, but we must face the ugly truth: The field in which a scientist is working absorbs him completely. . . . If there are scholars whose work embraces the whole of mathematics, there are so few of them that they do not affect the case. Except for these few, each mathematician, even the very capable mathematician, works in one narrow field. In this sense those who argue that scientific pursuits are culturally limiting are quite right. And yet none of us would like to forego culture in the broad meaning of the word.

Now, what makes a cultured man?

Your impressions on a Sunday stroll can be a cultural experience on a high level. I don't mean to say that one must be looking at ancient architecture or something of that kind on the way. Simply walking in the suburban woods and listening to the birds sing can be an esthetic experience.

On the other hand, you can have an outing with no cultural experiences whatsoever. Imagine two skiers. One will get esthetic pleasure from everything around him while the other will see nothing but his ski tracks. His skiing will involve no cultural experiences.

ANDREI KOLMOGOROV:

This does not sound quite right to me. Once, when I was already a professor, I went with my students on a six-mile race. The scenery was familiar to me and so I did not notice what was around. You could say that I saw nothing but the ski tracks. I am not sure, however, that I did not have some emotional experience, somehow related to the esthetic. I think there are genuine elements of the esthetic even in a purely sports experience.

PAVEL ALEXANDROV:

Perhaps, you are right. Remember Alexander Blok's line: "For a heart a'singing the world is infinite delight." Isn't culture one's ability to participate in this infinite delight, to take the world as a possibility for delight, not merely as a possibility for some reasoned purpose?

Of course, art is a great source of such delight. Music appeals to me more than any other art, and so I'd like to give an example from music.

You hear people arguing about low-brow and high-brow music. I think they mix up two things here. It seems to me that music exists as art and as entertainment. I don't mean to say that entertainment is necessarily low. Certainly, there is nothing low about enjoying a good dinner. But hardly anyone would claim that this enjoyment involves higher cultural values. The same applies to music. Saint-Saens' *Rondo Capriccioso* is generally regarded as high-brow music. But it can be entertaining dinner music and still be real music. I can easily see how people might enjoy low-brow music without caring whether it is art or whether it isn't. Is this setting-off of high-brow against low-brow music always valid? Are Brahms' *Hungarian Dances* high-brow or low-brow? I don't think Brahms himself could answer the question. But it is clear that it is good music. Certainly most of today's low-brow music cannot be called music at all. I don't think I am saying this just because of my advanced age. I am not too old, for example, to appreciate Stravinsky and other moderns.

And here is one perhaps irrelevant impression. I met students of the mechanicomathematics faculty at a performance of Beethoven's Ninth, and the expression on their faces struck me. The expression was somehow part of the music, I mean Beethoven would have liked to see that expression on the faces of people listening to his music.

Esthetic perception vitalizes any culture. We can be stirred by a Beethoven symphony or a sunrise. I can imagine a person reading the last chapter of *Eugene Onegin* for the twentieth time. This is what real books, pictures and music are created for.

This applies to science as well. Each of us, whether we work in a wide or narrow field, may have similar experiences. They can arise from a stroll in suburban woods or from a mathematical theorem. This is what makes a not merely educated but a cultured man.

If culture is interpreted in this way, there need be no fear that science will destroy culture because the problem of culture is the problem of man himself, his attitude not only to science but to everything around him every day.

Unfortunately youth does not last long enough, and, characteristically, the Greek ideal of divinity implied eternal youth! Alas, no mortal is blessed with this gift. Hence one faces the problem of how to preserve the passion of youth throughout one's life. This problem confronts each of us. Personally I think it can be solved if one is willing to face it squarely. To wind up, I wish that every one of you will always get pleasure out of what you are working at, otherwise what's the point of working at it? And besides, I wish that every one of you will be thrilled by something else—music or painting or poetry or whatever. This is what makes for rounded development.

QUESTIONS TO PAVEL ALEXANDROV

QUESTION: Did you mean that a scientist or a student of science must always go outside his field and be interested in poetry, music, philosophy, sociology, nature and so on?
ANSWER: I wouldn't bet much on a person who is interested in nothing except his field. Tchaikovsky was a great composer, but he also was interested in poetry, was a great reader of prose and knew the philosophy of his day. I think this is quite natural. A person working in some specific field wants to communicate with other fields, especially with those that have a universal appeal. Take nature, for example. Surely no one can be absolutely indifferent to nature unless there is something wrong with him!

QUESTION: Do you like George Gershwin?
ANSWER: Gershwin is a great composer, and if I were 20 years old, I would listen to his music until my ear could discriminate and appreciate every bar of it. It takes time to cultivate a taste for a certain kind of music. Some time had to pass before I educated myself up to Stravinsky.

QUESTION: Do you believe that a real appreciation of art requires not only knowledge but also innate esthetic intuition?
ANSWER: Esthetic intuition can and must be developed by hard work. I do not believe that it is innate.

QUESTION: Do you think that the aim of art is cognition of man by man and that in this sense art is also a science?
ANSWER: Of course. I always feel that I have learned something very

EQUATIONS

important when I hear a great work of music. I feel this even more keenly when I come on good poetry. The poet may be describing something quite familiar, but it strikes me with the force of some brand-new experience. With me the process of cognition is something like the raising of a curtain on a new and stirring experience. In this sense art is cognition.

QUESTION: Can an uncultured man be a real scientist or a genius?
ANSWER: Hardly. He might be a competent specialist, though. Still, I would be sorry for him.

QUESTION: How do you explain the current interest in old music?
ANSWER: I wouldn't like to accuse anyone of affectation, but I think fashion does play a large part in these things. Just as it has been fashionable lately to look exclusively at old icons in museums. They are superb, of course, but there are also other things to look at!

QUESTION: Many people believe that all this talk about the meaning of human life is idealist drivel. Would you regard anyone as a cultured man if he never speculated about such things?
ANSWER: I would say that a person for whom such problems do not even come up is in a deplorable spiritual state. I don't mean to say that you have to think about the meaning of life every day between, say, 11 and 12 p.m. But these problems are worth thinking about from time to time. They are worth serious thought in both personal and social terms. However, we should keep in mind that the kind of thinking people do will vary widely.

QUESTION: Can such problems be the study object of science?
ANSWER: EVERYTHING can be the study object of science, but the question is IN WHAT WAY and IN WHICH science?

ANDREI KOLMOGOROV:

I have been asked how one can comprehend human culture as a whole and whether a person can be regarded as intellectually developed if he fails to appreciate, say, poetry. I am very glad that there have been signs of revival in our poetry, and many encouraging developments are in evidence. However, I am bothered by the speed with which tastes change. Almost like the taste for the color of socks or the shape of a collar. First of all, in poetry there must be lines that a person values, not because they are read at public recitals but because they have meaning for himself. There are occasions in life when one falls back on the lines of his favorite poet. It is true that the individual coordinates his personal life with that of society at large. But the individual must also have inner mottos, to put it crudely. This is the job of poetry: to provide the tools with which to organize one's inner life.

One peripheral observation. When I go to a foreign country, I like to take long walks, to stay at provincial hotels or sit in railway stations waiting for a suburban train and listen to the local people speaking. That is how I gathered my impressions of France or Italy. Now, for some young poets there are only airports or cafés in foreign countries.

It is true that poetry or painting or music may be evil, even destructive. I mean poetry, painting and music which tries to break down real cultural values, which absolves man of responsibility and makes him despair of reaching his ideals. Both science and art must enrich and ennoble man and open new prospects for his growth, otherwise they are useless.

QUESTIONS TO ANDREI KOLMOGOROV:

QUESTION: It takes much more time nowadays to become a specialist. Do you anticipate a time when it will be simply impossible to be a specialist in some fields?
ANSWER: So far there is no danger of that. Under favorable conditions a flair for mathematics, for example, begins to show up when one is 14 or 15. Of course, it may take shape later. The mathematician's full development comes when he is about 20. His vision and ability to surmount difficulties keep enlarging, and when he is 55 or thereabouts probably begin to decline, as happens with chess players.

Speaking generally, we have not yet found a way of developing human abilities by short cuts. I believe that in time man will have personal auxiliary devices to help him assimilate more and better. Our consciousness, which directs and makes all choices, relies on a vast reservoir of subconscious information. What each of us is doing constantly is producing new combinations, ideas and images. Part, but by no means all, of this work can be taken over by machines. Israel Gelfand, corresponding member of our Academy of Sciences, believes that the intellectual but subconscious work needed to jump into a bus, take hold of the hand rail and pull up the legs, exceeds the operation of a huge cybernetic machine.

QUESTION: Some philosophers and biologists believe that knowledge and experience will be inherited sometime just like instincts. What is your opinion?
ANSWER: I don't think that is true. There will be a radical transition in mankind's development, but it will take different forms.

QUESTION: If Aristotle strayed into our century, he would probably be helpless both in our streets and in our structural analysis. Do you believe that we have a big lead on Aristotle?
ANSWER: It is not commonly known that even the mathematicians of his time had a lead on Aristotle as far as mathematical analysis in depth is concerned. Was his brain less developed than ours? I don't think so. I think that Aristotle would make a good modern mathematician if he were sent to a modern mathematics school.

QUESTION: Do you believe that cybernetics will give mankind trouble?
ANSWER: No, I don't think we should blame cybernetics for our problems. Quite the contrary, we will be solving many vital problems with cybernetics.

QUESTION: Do you believe that art can contribute to mathematical development?
ANSWER: I don't think that mathematicians must be made to go in for art if they do not want to. Mathematics has its own esthetic values. We make many discoveries just because the newly discovered phenomenon seems beautiful to us, and only afterward do we demonstrate that it is useful. Unfortunately, not everything that looks beautiful proves to be true.

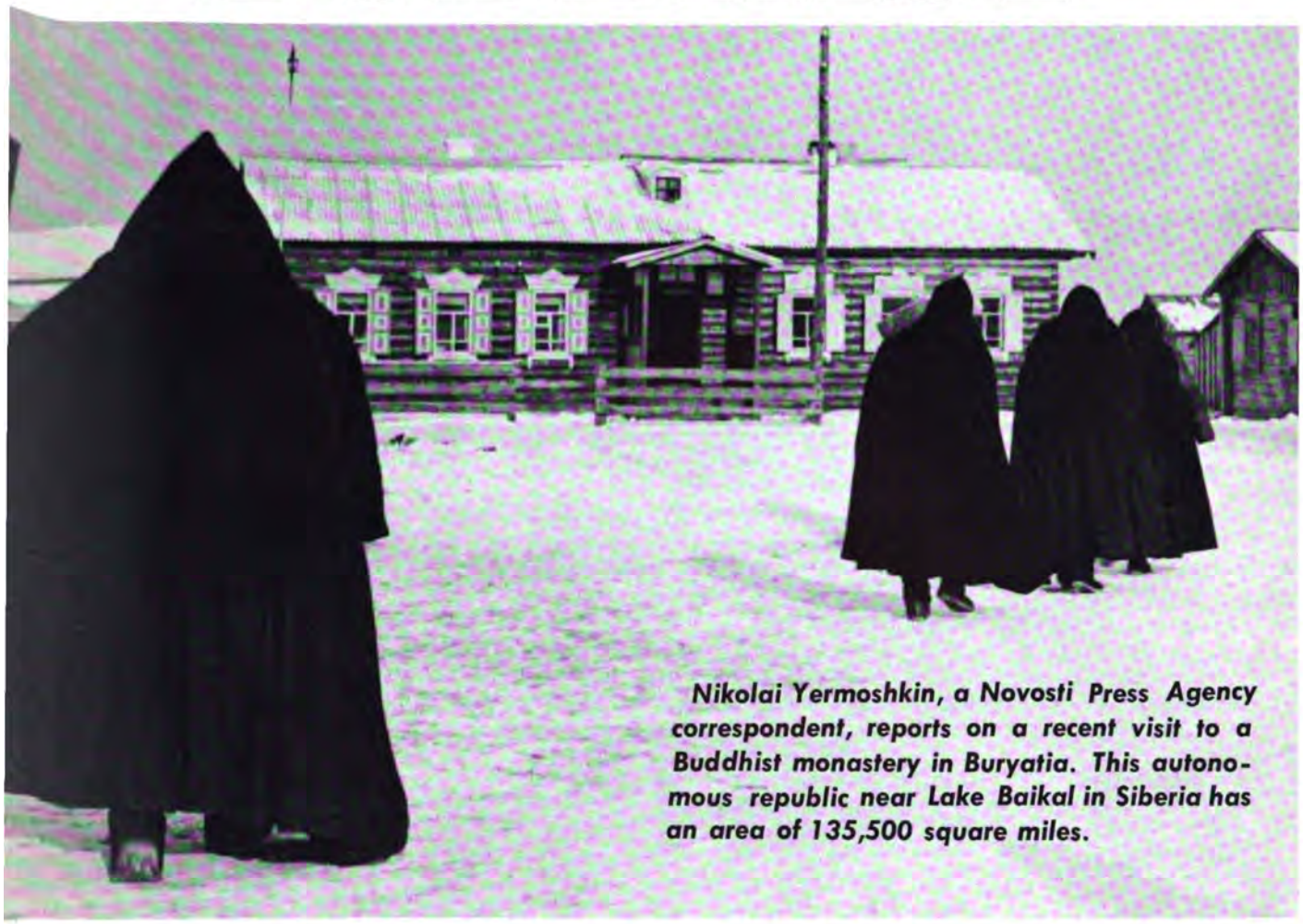
QUESTION: Will methods be found for developing anyone's mathematical ability? Is mathematical ability innate?
ANSWER: Combinations of innate gifts that favor scientific activity are extremely complex. Speaking in the biological vernacular, these are combinations of a great many genes. Thus far the country's total fund of genes, in other words, its available stock of ability, is not used to the best advantage. Statistically, for example, we know that mathematicians enrolling at our faculty come from the same secondary schools. This means that not their personal abilities but rather their school, comrades and teachers determine their future.

QUESTION: What is the relation, in your opinion, between the ability to assimilate and the ability to create?
ANSWER: It depends. Don't be afraid if you feel at the beginning that your ability to assimilate predominates. Go ahead and develop it. If you insist that the ability to create must come to you immediately, it may not come at all. My advice, therefore, is to go on studying and assimilating knowledge.

Some points made by the two noted mathematicians are open to question and discussion. Philosophers or scholars of art will probably have their differences. But the problem itself—what a specialist's range of interest should include and what is universal and continuous in human culture—that is certainly everyone's.

Courtesy of the weekly *Nedelya*

AT A BUDDHIST MONASTERY



Nikolai Yermoshkin, a Novosti Press Agency correspondent, reports on a recent visit to a Buddhist monastery in Buryatia. This autonomous republic near Lake Baikal in Siberia has an area of 135,500 square miles.



THE IVOLGA MONASTERY, or *datsan*, as Buddhist temples are called here, is about 25 miles from Ulan-Ude, capital of Buryatia.

The monastery is composed of some 30 to 35 structures grouped around two brightly colored temples. Although it was early morning, there were already a considerable number of worshippers who had come to celebrate the Buddhist New Year, which follows the lunar calendar. Divine services last several days, beginning early in the morning and ending late at night.

A large collection of rare ancient manuscripts and xylographs from Tibet, Mongolia, India and China, used by the lamas and Buryat scholars for research in Buddhism, is housed in one of the larger buildings. It includes 108 volumes of the Kanjur with commentaries and 225 volumes of the Tenjur. The library, with its manuscripts wrapped in bright yellow and brown silk, is an unaccustomed sight to an eye habituated to the rather colorless bindings of modern books. In a separate section are more recent books. The monks collect everything published in the Soviet Union on Buddhism.

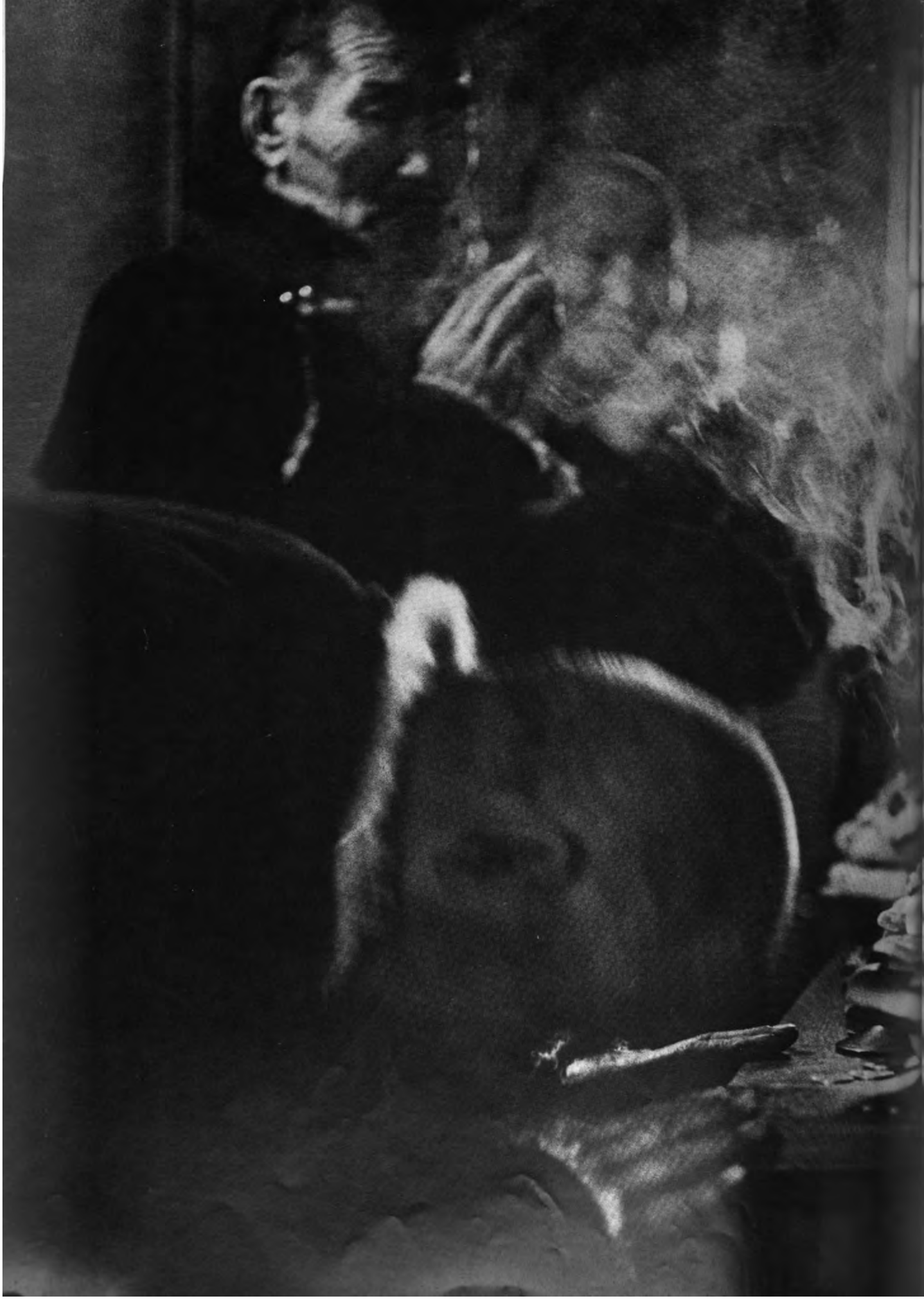
Services were being held in both temples, with all 30 monks at worship. I asked to have the words of the prayer translated: "Visible and invisible beings, those who are close to me and those who are far away, let all be happy, let there be real joy. Do not harm one another, do not despise anyone anywhere. Do not bear one another malice. Like a mother sacrificing her life to save her child, you too should boundlessly love everything that exists. Whether you are in a forest in the shade of a tree or in a desert, O Brothers, think of the Words of the Great Lord Buddha and you will never know fear or doubt."

The temples are decorated with pictures and statues of Buddha, Bodhisattvas, and other Buddhist deities. *Sansaren Hurde* (wheels of life), colorful ribbons, and scenes from the life of Buddha painted on silk by Buryat artists hang from the ceiling.

After the services I asked the esteemed Bandido-Hambo Lama about the Buddhist community in the USSR: how it is maintained and how it is organized. "We are supported by the donations of believers," He said. "And we are not short of funds. The Central Buddhist Council leads all Buddhists in our country. It is elected at a general meeting of the monks and believers. Each monastery is headed by a lama and council of believers, who are also elected at general meetings."

Photographs by Igor Vinogradov

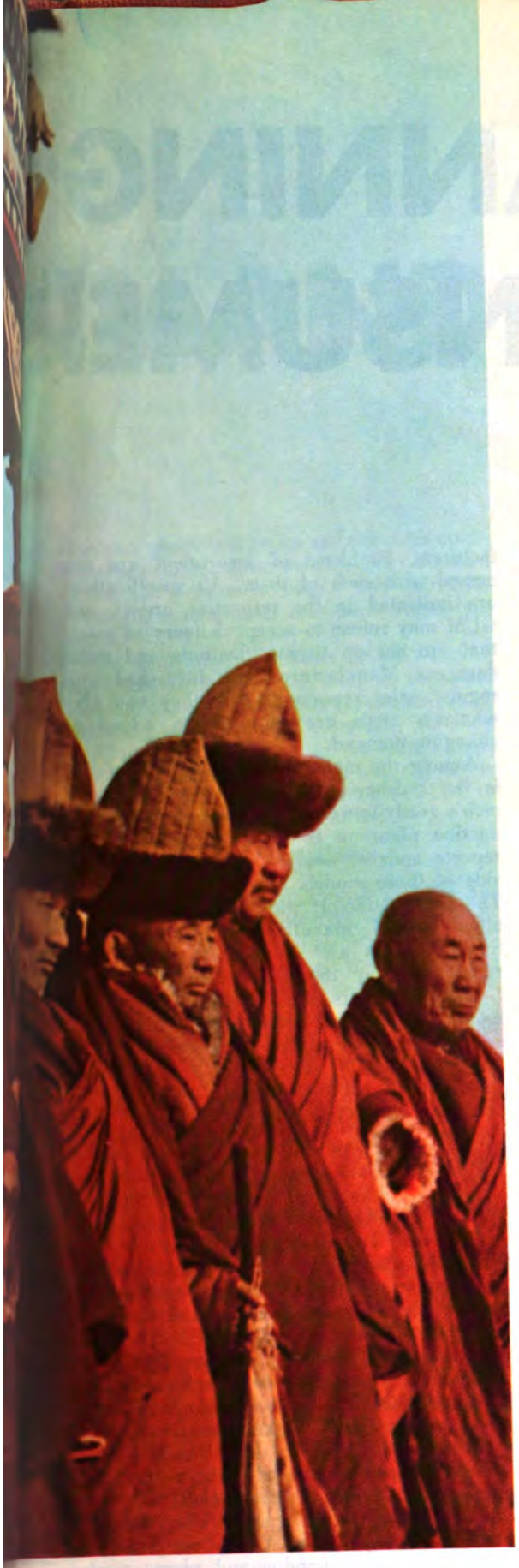




Prayer. The plate holds cakes brought by worshippers. The smoke curling from the censer symbolizes communication with the deity. To the right is Lama Tolsan Shimba Gonchikov of the Aginsk Monastery.



(Above) After prayers the monks pose for a picture outside the temple. The lamas with round, fur-trimmed hats are a rank higher than the others. (Left) Lama Barma Dorzhi Zhembalov and a monk go through a religious text from the monastery's large collection of rare Buddhist manuscripts. (Above right) With the first rays of the Siberian sun, monks and worshippers stream to the temple. On the balcony a lama calls the faithful to prayer. (Right) The center photo shows a wood statue of a Buddhist deity carved by a Buryat craftsman. The masks are worn in specific religious dances.











ECONOMIC PLANNING TO MEET CONSUMER

BY FELIX KRUTIKOV AND JOSEPH LAKHMAN
MASTERS OF SCIENCE (ECONOMICS)

The authors are staff members of the Moscow Trade and Catering Institute specializing in market research.

IN THE SOVIET UNION every phase of economic activity is planned—the kinds and quantities of goods to be produced, the pattern of distribution and the methods of marketing. This is true for both consumer and producer goods.

These reasonable questions could be asked: Does not planning place limitations on consumer needs? Can we accurately forecast the multiple and changing requirements of 220 million consumers?

Let us point out at the very beginning that an economic plan is not an instrument that dictates production or consumption. It is not drafted somewhere at the topmost level without reference to the whole chain of links below. An economic plan is the joint product of thousands of economists, social scientists, experts in various branches of industry and sales organizations.

Its point of origin is the plan drawn up by the individual factory, construction project, collective farm or retail shop. The national plan is the sum of all these individual plans analyzed and digested by many and various research bodies. The national economic plan sets the *main* lines and directions of development following on *major* changes in the economic structure. The individual enterprises have the opportunity of introducing such proposals and amendments with reference to detail as their own practical experience suggests.

Income and Consumption

The national economic plan makes it possible to balance the money income of the population and the volume of output of consumer goods.

From available figures on the size of the labor force and its volume of output, we can determine the wage bill and other income (pensions, scholarships, grants, etc.).

Planning bodies compile from this data an annual *balance of consumers' cash income and outlay*, from which we can estimate with sufficient accuracy the *consumers' purchasing fund*, that is, the money available to workers and collective farmers for the purchase of commodities. The purchasing fund is a useful criterion for gauging the total volume of output required to meet effective demand. Its reliability is evident from the fact that the total goods turnover estimated for planning purposes on the basis of this figure has not deviated from the actual turnover year after year by more than 1 or 2 per cent.

Judging Consumer Demand

More than just the size of the purchasing fund must be established, however, to make certain consumer demand will be completely satisfied. We must also analyze the commodity structure of consumer outlay, the relative importance of the various goods purchased, no simple task, considering that each consumer's demands are conditioned by his income.

Family budgets are studied continuously by the USSR Council of Ministers' Central Statistical Board and its branches. The data collected are grouped into nine classes according to per capita income. Over 50,000 budgets are under constant study to forecast demand two to three years ahead.

These demand forecasts are derived from the data collected through budget inquiries by the use of statistical techniques and analytic methods. Extensive use is made of the coefficient of elasticity of demand in response to wage changes, which is calculated by finding the relationship between changes in expenditures and changes in income over a given period. With this elasticity coefficient it is possible to evaluate the probable changes in demand for any particular item of goods as the result of a 1 per cent deviation in wages in a given economic group. Numerous research bodies, including the Moscow Trade and Catering Research Institute, work in this field.

In long-range demand forecasting (*i.e.*, covering ten years and more) Soviet economists make use of standard indicators, such as a standard basket of goods chosen by economists, sociologists, dietitians and technical experts. These consumption standards are tentative, of course, but they do provide conclusions arrived at scientifically that planning bodies can use to set production and consumption levels.

Problems of Assortment

The next step in coordinating the economic plan and consumer demand is to find out what assortment of commodities will be required to satisfy the various needs of the consumer.

These problems of assortment are worked out by manufacturers and dealers. The resulting orders from dealers provide a basis for drafting production plans for consumer goods. Since these dealers' orders have been arrived at by analyzing consumer demand, it is consumer demand that is reflected in the economic plan. It should be noted that the retailer can make changes in the manufacturer's production plan to allow for possible changes in consumer demand.

We might use the department store GUM in Moscow for illustration. This store places orders for goods with more than 500 manufacturers. Problems of assortment are discussed with each of them. All specifications are indicated in the respective orders, and GUM may refuse to accept delivery of goods that are not up to specifications and claim damages. Manufacturers are furnished with regular sales reports so that they can take whatever steps are required to adjust to changing demand.

Among the manufacturers supplying GUM is the Bolshevichka, the largest makers of men's ready-to-wear in the country. Its production planning is based on regular sales reports and, of course, is weighted on the side of those models favored by purchasers. The same principle guides the planning of other Soviet manufacturers and dealers. Smaller shops are supplied by wholesalers rather than by the manufacturers directly.

Industrial fairs are organized every few months to acquaint retailers with new lines, and contracts are signed then and there. To illustrate, 28,000 samples of textiles were shown at the 1964 spring fair, and problems of assortment were worked out jointly by the dealers, textile mills and the garment manufacturers.

Market Research

We find market research very valuable. We pointed out previously that the relationship between the volume of output and the cash consumer income is fairly constant, though the values of both indicators are increasing. The market does, however, reflect certain imbalances in distribution, and it is these disproportions that make market analysis necessary.

Retail shops are required to submit monthly market-research reports on sales and consumer demand in their area. They are the first to benefit from these compilations. Take the case of hand-wound phonographs, for example. More than half a million were sold in 1952. However, increased production of electric phonographs in the following years sharply reduced this figure until in 1958 only 200,000 were sold as against 400,000 electric phonographs. Consumer preference then began to turn to radio-phonograph combinations. As a result, only 125,000 electric phonographs were sold in 1963, while the hand-wound models dropped completely out of the picture. Sales of radios and radio-phonograph combinations increased by leaps and bounds—from 1,247,000 in 1952 to 4,529,000 in 1963. Currently, transistor radios are in increasing demand, and tube receivers are losing favor. Data of this kind help market-research people to adjust production to meet consumer demand.

Retail sales analysis helps to determine

NING
SUMP EMAND

roblems of assortment
each of them. All
d in the respective
efuse to accept deliver
t up to specifications
anufacturers are fur
s reports so that they
eps are required to
mand.
ıe manufacturers sup
hevichka, the larges
-to-wear in the coun
nning is based on re
l, of course, is weigh
se models favored by
principle guides the
iet manufacturers
ops are supplied by
ı by the manufacture
l fairs are organized
acquaint retailers wit
cts are signed then
28,000 samples of
he 1964 spring fair,
ent were worked out
extile mills and
ers.

Market Research

market research very
it previously that the
e volume of output
income is fairly
of both indicators
et does, however,
in distribution,
ions that make

ops are required to
earch reports on
and in their area.
enefit from these
case of hand-wound
e. More than half
52. However, increase
phonographs in the
luced this figure until
re sold as against
ns. Consumer
urn to radio-phonograph
a result, only
ns were sold in
d models dropped
ture. Sales of
h combinations
ds—from 1,247,000
n 1963. Currently,
easing demand,
favor. Data of
earch people to
nsumer demand.
ales analysis

optimum assortment ratios and provides up-to-the-minute information on consumer demand so that the volume of output and deliveries of various commodities may be brought into line.

Sales data analysis is done on all distribution levels, from the retail shop to the State Committee on Trade. Delivery, sales and stock movement statistics are compiled. A shop handling several makes of an item keeps a record of their movement in and out of the stock room and over the counter in order to compare their relative popularity.

Consumer Relations

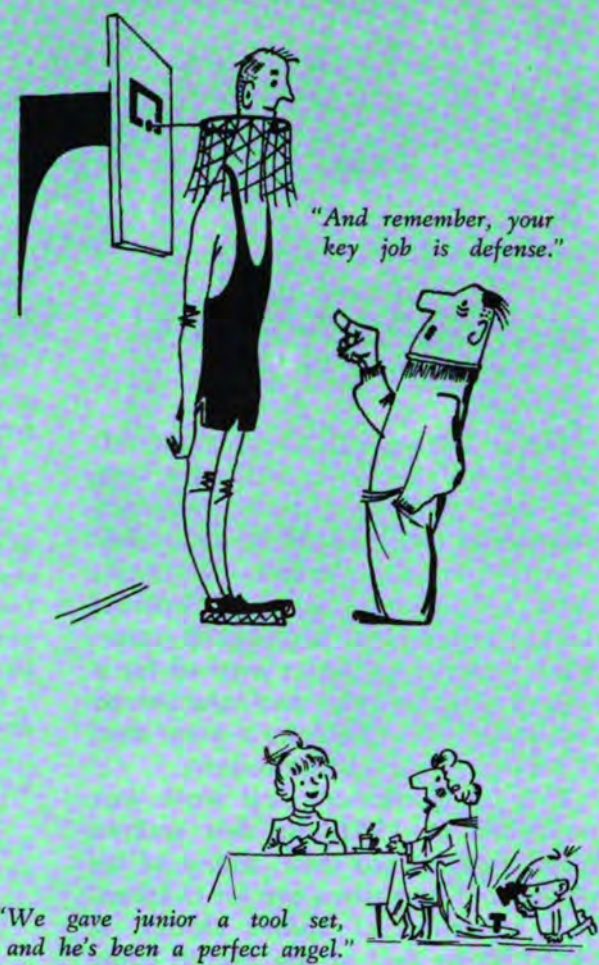
Certain of the larger specialty shops are singled out for closer contact with the consumer. These shops arrange periodic conferences at which consumers air their complaints and offer suggestions about quality and assortment. So-called "exhibition sales" are also held where the attitude of the consumer toward a large variety of designs is studied. Questionnaires are distributed to get consumer reaction to new lines of goods, and suggestions for improvements are solicited.

Consumer polls are very useful for demand analysis. The Trade and Catering Research Institute has recently conducted polls in some of the larger towns. It was found that 72 per cent of the customers who did not make a purchase had been dissatisfied with the quality of the articles of clothing offered. They had been unable to find the required size, model, color, etc. The polls revealed certain defects in the selection of ready-made garments for sale, and adjustments have now been made to bring the assortment more into line with consumer demand.

Of course there is still much to be desired in our analysis of consumer demand and in satisfying that demand. Retailers tend to make mistakes in assessing future demand, which leads them to overstock or understock. At present the country is much better off for stocks than before the war or in the immediate post-war period. At the close of 1940, for instance, retail stores had only a 34-day supply on hand, which was entirely inadequate. Stocks have substantially increased since those days and a wider selection is available.

Some lines of unpopular consumer goods still continue to be manufactured, but this situation is being carefully studied. Problems of planning have recently been given considerable publicity in the press. The proposal is that economic plans should stress product design (*i.e.*, efficiency, reliability, appearance, etc.). Production planning in terms of money or volume should be confined exclusively to items of standard quality. This rational principle will very likely be introduced throughout the whole planning setup.

HUMOR



"And remember, your key job is defense."

"We gave junior a tool set, and he's been a perfect angel."



"He'd be a great driver if he didn't get his feet mixed up."



"No, that lady won't adjust to me properly . . . Next!"

PALAN THE GUELDER-ROSE

BY EDWARD SHIM



The childhood of 33-year-old Edward Shim coincided with the war. He was evacuated from besieged Leningrad and brought up in a children's home. On returning to Leningrad, he attended a vocational school while working as a lathe operator. After graduating, Shim worked for a time in a design office and later served in the army. He has done a great deal of traveling around the country.

The young author's first work was published in 1951. He has written seven books since then. Many of his stories and narratives are for children.

A collection of Shim's stories,* A Night at the End of the Month *came out in 1958. We offer our readers one of these stories, "Palan the Guelder-Rose," about an Altai herdsman. For many centuries the people of the Altai engaged in hunting and cattle-raising. Many of them continue with these occupations today.

ON A FLAT STONE in front of the fire she laid out the oven-dried curd patties, fresh cheese and a bar of green Chu tea. Then she waited for her husband to speak. She had come just as Palan was settling down beside his fire after gathering the sheep for the night.

"What's new?" he asked.

"The team leader said winter herding would begin in a week. The herdsmen are coming home. Father got the money and wants to buy a calf. That's about all."

She stretched out her legs and watched the wet soles of her high boots steaming reddish in the fire.

"Take them off," said Palan. He hung the boots on a pronged branch over the fire to let the warm smoke coil inside them.

She reached out for the kettle, but Palan anticipated her and went to get the water for tea himself.

The turbid stream rasped along and played with the pebbles. A tiny spring from a crevice in the rocks trembled in the air like a wind-blown thread and broke into tiny pearls even before it touched the granite.

As the kettle tinkled gently filling up, Palan took the fishing rod leaning against the tree, made sure that the horsehair bait was fastened, and cast beyond the stones.

The current had washed out a basin there. The water, greenish-white and glittering, whirled in a tight wreath at one spot. Occasionally there would be a splash as a grayling played in the cold stream.

The bait danced in the spray, barely touching the water. A strong pull nearly snapped the line. Palan hooked the fish. Thick-scaled and speckled, it was so cold that his fingers grew numb. He banged it against the ground to stop the fluttering and cast again.

He caught three more large graylings and one small one. That would do. The kettle was full by now.

He wiped the hook dry, leaned the rod against the tree and went back.

While he was away the sheep had gathered in a semicircle near the cave below the rock, their round, unblinking eyes staring at the fire. They did not want to lie down on the wet ground and only tossed their heads each time his wife made a threatening gesture.

Palan gave a short whistle, and the sheep dashed back, wagging their shaggy tails.

"They don't understand anyone's language but mine," he smiled.

The water was soon boiling. As he threw in a pinch of green tea, it became dark and tiny twigs floated to the surface. Palan spooned them out and poured the tea.

He could see she was eager to hear his news, but he did not want to make her worry sooner than he had to. It was only when she had put the fish into her bag and was about to go that he said casually: "Ask them to send the vet. I have to draw up a statement about one of the sheep."

"Disease?"

"No."

"What then?"

"The bear."

She stopped tying up the bag and turned her face away.

Palan knew what she was thinking about. She was seeing that bleak day last fall when he had been brought in from the taiga with his belly ripped. Last year, too, a bear had killed a sheep and Palan had tracked him down, but the bear had come out ahead.

His face was as white as birch bark when he was brought home.

"What a bear," he had smiled wanly. "Very fond of guelder-rose." Palan is the Altaian for guelder-rose. That was a little joke of his, though his face had been as white as birch bark and his wet eyes had twitched with pain.

She was silent recalling all this. She was silent because she was afraid to ask. But he knew she would ask all the same.

"Have them send the vet right away," Palan repeated.

"Yes, and what about you?"

"About me?"

"Will you go again?"

"Yeah."

"You're mad, Palan!" she yelled and flung the bag down.

He laughed.

"Am I not the guelder-rose?" he said pulling at his reddish hair. "Swayed back and





Drawing by German Cheryomushkin

forth by the wind, thinking about nothing. How can I be different?"

She smiled at him through her tears. He saw her to the river and helped her across a row of stones.

She stepped gingerly, clutching at his hand, biting her lip. She was expecting their first child that fall.

Palan had been herding the sheep all alone. Chief herdsman Abagai Tartys had left for a farm show the month before, not sure if he could trust Palan with the sheep. A good, steady man, married, and a hard worker. But crazy just the same. Singing from morning till night, happy about God knows what, and then suddenly moody and talking to the flowers like a little girl to her doll. Abagai Tartys would look into Palan's face and sigh. How can you trust a man whose eyes glow as though he had just had a swig of *araka*?

But there was no one else he could spare on the ranch, and Palan had been left with the flock.

For a long time things went smoothly. The frail crescent over the hills became a round moon and wasted again. Yellow leaves fluttered down, and the first frosts withered the grass. He had herded the flock from pasture to pasture and had not lost a single sheep until this kill. The worst of it was that the bear might come again. Sheep meat tastes good; the hunting is easy and the track to the flock is known. That was why Palan had told his wife he would try to get the bear.

In the morning he drove the sheep into a narrow valley hemmed in by cliffs on three sides. At the entry he felled several young larches to fence them in.

Now he could leave them there unguarded.

He returned to the cave, ate his breakfast and took his gun and home-made leather cartridge case. His confidence returned as soon as the gun strap touched his shoulder. There were no more unwanted thoughts. He felt no anxiety either. The vast changing world of forest and water opened and let him in.

He sang softly as he trudged through the underbrush along the river bank, and as he saw the waterfall in the dark gorge, he sang of the white fire of the waterfall; and as he touched the pines climbing uphill, he sang of the trees standing on the shoulders of other trees; and as he watched the golden wagtails soar off, he sang of the wagtails looking like sunbeams.

And then a guelder-rose bush sprang into view right in front of him. The bush clung to the edge of the cliff. Its serrated leaves, sprinkled with yellow, turned from the wind, showing their fluffy underside. And the berries were drops of blood.

"Why?" asked Palan. "Just to spite me?"

He hardly finished the words when everything he had been pushing out of his mind came back in a flash. The ponderous paw coming down with its long, dirty, yellow claws, the reeling sky, and the guelder-rose's rusty leaves on which he had been lying.

Now the leaves were green except for several dry, brown blotches here and there. He tore off some of the berries and tossed them into his mouth.

"The bear was wrong then," he said defiantly. "You don't taste good, guelder-rose!"

The bush swayed and muttered something, but Palan was already walking away.

If he wanted to think about the bear, then he would think about it. He would even sing the song of the bear, of the bear's tracks left near the dead sheep, of the three tracks—one big track with a thick bare heel and two little fussy tracks.

By these tracks Palan knew who had killed the sheep. By now all good bears where high in the hills, where the nuts were ripe on the cedars. This was some stupid, greedy bear that had stayed behind, teaching her cubs to kill sheep, and Palan would track her down.

So he strode on tirelessly from slope to slope and hummed his song. But now the taiga let him in reluctantly, hiding the animal tracks.

The leaves of small bushes straightened behind him and rustled something about the singing hunter tracking the bear. The grizzled acacia pricked its neighbors with its dry barbs and tittle-tattled too. And the grass whispered behind, "The red-haired hunter is singing a song and tracking one large bear and two cubs."

But Palan would not listen and pressed on. An apprehensive silence lay ahead, and sunbeams smoldered between the black larches. Birds flashed as they raced through these beams and, blinded, brushed thin strings of moss hanging from the branches.

There the taiga kept silent, hiding the beast.

At last Palan saw in the underbrush below something dark and slow, and then this something was a bear in full view in a forest clearing, leaning its head on a thin long neck.

Palan clung to the earth. The beast was far away, but it could get the scent and run off.

He parted the grass and watched.

Two year-old cubs rolled about the clearing. "Just as I thought," said Palan to himself.

The cubs were running races, slapping each other and butting. The she-bear turned her head, waiting for them.

Palan pulled the gun off his shoulder and fired into the air.

A clear echo rolled to the bottom of the gorge as though descending step by step. The she-bear ran away. Dazed and sniffing, the cubs squatted and then rushed to the nearest cedar and up, paddling away with their hind paws. In an instant the branches were as still as before.

"A good job," Palan admired. He crouched again, waiting. The cubs were too small to understand that they could not hid from man in a tree. They would cling to the branches, and the she-bear would not leave them. She would come back and climb the cedar too.

Palan unhurriedly opened his gun, took out the warm cartridge case and put a new one in.

The she-bear returned noiselessly. At the edge of the clearing she stopped for a while with her paw raised, listening. She went to the cedar, crouched gracefully and climbed up.

Then Palan jumped up and darted to the clearing. The she-bear heard him and pushed the cubs higher. He could clearly see her hind paws, the claws sunk deep into the bark. A dozen steps or so from the tree he stopped.

"Well," he said loudly, "Haven't I found you?"

His voice shook. That was bad. He mustn't hurry.

He lowered the gun, sat down and rolled a cigarette. The she-bear would never attack first. She would stay there until he went away.

He would not go away. He waited for his hands ta calm down, rolling his cigarette slowly. The familiar whisper in his ears—leaves and blades talking in timid undertones: "The red-haired hunter is waiting, and the bears in the cedar are waiting." And the taiga was listening.

He smoked the cigarette to the end and spat out the butt.

"It's all right," he said. "Now my hands are nearly calm. They will soon become bold. Last year I hurried, but now I won't."

Deliberately, he took out the cartridge and touched the round bullet wedged in by a slip of cardboard. The bullet sat tight enough.

It's time now.

He rose and walked around the cedar, choosing the best spot from which to shoot.

He aimed at the neck. The reddish dapple between throat and chest, splashed with shadows from the needles, showed through the branches.

Perhaps his hand was not steady enough or perhaps the she-bear moved as he fired. At any rate the bullet did not hit the backbone he had aimed for but passed through a little lower.

The she-bear came crashing down through the branches but bounced the instant she hit the ground and lunged forward. As Palan ducked, he saw her paws spread in mid-air, and heard her sobbing roar roll over him.

There was no time to reload his single-barreled gun, and down the slope he ran.

It was exactly like last year. The wounded brute was gaining fast. Gasping for air, he flew through the underbrush on shaking legs. The roaring avalanche behind would hit him now, toppling the sky and extinguishing the light.

Last year there had been another hunter with Palan. Abagai Tartys had rushed at the bear with his knife, and his knife had struck better than a bullet. It had saved Palan.

Now there was no one at his side. He was running, and the bear was catching up. He seemed to feel her breath on the back of his neck.

Yet something had changed since last year. Last year Palan was running blindly, seeing nothing around him. Now his eye caught glimpses of the ground, bushes and trees. And then a bank of loose rock straight ahead. Heaps of loose rock over a steep slope, like a gray frozen river.

Now he knew. He rushed towards the slope and then jumped aside.

"Aha!"

The she-bear at his heels could not veer one way or the other. Bouncing onto the loose rocks, she tumbled them with her weight and slid down. She was wrestling free of this river of stone, spinning this way and that, but the avalanche was growing.

Palan reloaded and took aim. The echo cracked through the hills like a whiplash. When it died down, the river of rocks was still again, and the dead paws lay on the dead stone waves.

"I'm glad it's all over," said Palan as he went back up to the clearing, rolling a cigarette and smiling his carefree smile.

The cubs were still up in the cedar. "I won't touch you, sillies" he shouted. "But don't you go after my flock to eat guelder-rose. It doesn't taste good at all."

He laughed, and the taiga, with its rasping streams, skeins of mist in dank, craggy valleys, and dark, heavy grass wound by blackberry vines, listened in awe.

Learning Russian

Константин Паустовский

НЕСКОЛЬКО СЛОВ ОБ УЖЕНИИ РЫБЫ

Говоря́т, что Че́хов никогда́ не серди́лся, е́сли его́ упрека́ли за литерату́рные оши́бки, но всерьёз обижа́лся, когда́ кто́-нибудь не ве́рил в его́ рыболо́вные спосо́бности.

Приме́рно то же происхо́дит со мно́гими из нас. Мой знако́мый, режиссёр одного́ из моско́вских теа́тров, споко́йно выслу́шивает са́мую ядови́тую оце́нку свои́х театра́льных постано́вок, но прихо́дит в я́рость, е́сли ему́ ска́жут, что он не уме́ет подсека́ть и́ли привя́зывать крючки́ к ле́ске из сату́рна.

Мо́жет быть, в э́том ска́зывается то не́сколько де́тское и непосре́дственное отноше́ние к действи́тельности, кото́рое не покида́ет нас незави́симо от во́зраста.

Мне довело́сь написа́ть мно́го ра́зных книг, но в глубине́ души́ я никогда́ не расста́юсь с заве́тной мы́слью написа́ть руково́дство к уже́нию ры́бы. Это должна́ быть своего́ ро́да энциклопе́дия уже́ния, по́весть, напо́лненная чисте́йшей поэ́зией уже́ния и всем, что с ним свя́зано. Ка́ждая глава́ должна́ быть зако́нченным расска́зом о поплавка́х, клёве, рыболо́вах (от акса́ковских созерца́телей и поэ́тов до зави́стников и неуда́чников), ре́ках, жерли́цах, о́мутах и рассве́тах. Поми́мо практи́ческих зна́ний, в э́той кни́ге должна́ быть вы́ражена пре́лесть ру́сской приро́ды. Кни́ги ещё нет, но она́, очеви́дно, бу́дет. А пока́ я хочу́ рассказа́ть о са́мом обыкнове́нном уже́нии в оди́н из са́мых обыкнове́нных сенти́брьских дней...

Одна́жды по́здней но́чью отча́янно зазвони́л надтре́снутый колоко́льчик о́коло кали́тки. Я встал, оде́лся, зажёг фона́рь. Я жил оди́н в э́том пусто́м до́ме, в дере́вне, в трехста́х киломе́трах от Москвы́. Никто́ но́чью не мог прийти́ ко мне,— вся дере́вня спала́ непробу́дным сном.

Я откры́л кали́тку;— за ней стоя́л мой знако́мый рыболо́в, тот режиссёр моско́вского теа́тра, о кото́ром я упомина́л в нача́ле э́того расска́за.

— Удра́л всё-таки на два дня из Москвы́! — сказа́л он ра́достно.— Полови́ть. Осень. Ночь кака́я, го́споди! А во́здух!

— Как вы дое́хали?

— Замеча́тельно! — отве́тил режиссёр.— На парохо́де до Новосёлок из Москвы́. На па́лубе. Кают, коне́чно, не́ было. В Новосёлках ба́кенщик перевёз меня́ на э́тот бе́рег Оки и чуть не утопи́л. Како́й-то ша́лый стари́к! А че́рез луга́ я шёл пешко́м. Заблуди́лся, зашёл в Глухо́й Угол,— доро́ги ведь совсе́м заросли́. Пу́сто в луга́х. А на парохо́де совсе́м не спал. Все волнова́лся. Чуть закро́ю глаза́ и ви́жу: тёмная вода́ на Про́рве, и́вы, о́стрый тако́й, зна́ете, за́пах от и́вовых ли́стьев, се́рое ти́хое не́бо, и перяно́й поплаво́к ме́дленно ухо́дит в глубо́кую во́ду. Всю ночь ви́дел э́тот поплаво́к, пря́мо до сердцебие́ния! Нет, что вы,— спать я совсе́м не хочу́. Вы́пьем ча́ю, соберёмся и че́рез час дви́нем на Про́рву. Хорошо́?

— Коне́чно, дви́нем.

В пусто́м ста́ром до́ме сра́зу ста́ло шу́мно. Я зажёг ла́мпы. Мы умы́лись жгу́чей колоде́зной водо́й. Затреща́л в пе́чке ого́нь, зашуме́л ча́йник. А на столе́ вперемёшку с хле́бом, колбасо́й и сы́ром уже́ лежа́ли вы́валенные режиссёром из чемода́на поплавки́, грузи́ла, зелёный сату́рн, золоты́е блёсны и алюми́ниевые коро́бочки с крючка́ми.

Вы́шли мы из до́му ещё в темноте́. Глуха́я рассве́тная синева́ чуть проступа́ла на восто́ке. Иней лежа́л в луга́х. Дождева́я вода́ в колея́х покры́лась прозра́чным ледко́м. Он то́нко звене́л, разбива́ясь под на́шими нога́ми. Па́хло вя́лой трово́й, и́вовым листо́м. В тума́нном не́бе ни́зко висе́л му́тный ме́сяц.

Че́рез час мы вы́шли к Про́рве — глубо́кому, уходя́щему в леса́ ста́рому ру́слу Оки́ с крути́ми высо́кими берега́ми. Чёрные и́вы стоя́ли над водо́й. Над ней разгора́лся бле́дный рассве́т.

Вода́! Сейча́с она́ была́ се́ро-зелёная, осе́нняя, зати́шливая, и че́м-то напомина́ла морску́ю — не то о́стрым за́пахом умира́ющих во́дорослей, не то свои́м цве́том. Река́ каза́лась соверше́нно безжи́зненной: ни одного́ ры́бьего всплёска, ни ря́би, ни лёгких, расходя́щихся к берега́м, круго́в. На о́тмелях бы́ло ви́дно тёмное и чи́стое дно.

Мы вы́брали ме́сто под крутоя́ром, закры́тое от за́падного ве́тра. Этот ве́тер всегда́ начина́л дуть с утра́ и дул до полу́дня. То́ненькие оси́ны трепета́ли и сбра́сывали в во́ду ли́стья. Вода́ у берего́в была́ так гу́сто покры́та па́лыми ли́стьями, что поплавки́, как ма́ленькие кра́сные цветы́, едва́ бы́ли видны́ среди́ них. И тут же на берегу́ стоя́ли увя́дшие цветы́ кипре́я. Пунцо́вые их лепестки́ покры́лись ржа́вчиной от е́дкой росы́.

А над водо́й уже́ сте́лется горькова́тый дымо́к костра́, и я слы́шу, как в ча́йнике бу́лькает и перелива́ется пе́нистыми бугра́ми вода́.

Снача́ла клёва нет. Но нам не ску́чно. Места́ ве́рные, и ещё не быва́ло ни ра́зу, что́бы Про́рва нам измени́ла.

Но вот поплаво́к вздро́гнул, пусти́л круги́, пото́м наклони́лся немно́го и ме́дленно попли́л в сто́рону. Он плыл всё быстре́е и на ходу́ погружа́лся в во́ду. Окунь!

Я подсёк. Уди́лище согну́лось в дугу́, и ле́ска со сви́стом разре́зала во́ду. Тяжёлая и си́льная ры́ба бро́силась в кугу́, под бе́рег. Я на́чал выводи́ть её на чи́стую во́ду и кри́кнул режиссёру:

— Подса́к!

Но подса́ка, коне́чно, не́ было. Режиссёр наро́чно забы́л его́ до́ма, так как у него́ была́ своя́ приме́та: е́сли взять подса́к, то ни за что не попадётся кру́пная ры́ба.

Бе́рег был круто́й, и бы́ло соверше́нно я́сно, что вы́тащить ры́бу на то́ненькой жи́лке нельзя́. Что же де́лать? Я води́л её на круга́х, я ви́дел под водо́й её серебряный блеск и догада́лся, что э́то не о́кунь.

— Где подса́к, чёрт вас дери́!— сказа́л я ти́хо, но я́ростно.— Опя́ть не взя́ли!

— Лещ!— кри́кнул в отве́т режиссёр и на́чал торопли́во снима́ть бу́тсы.— Води́те его́! Води́те! Мы его́ и так возьмём, без подса́ка.

Режиссёр бы́стро разде́лся и поле́з в во́ду. Вода́ была́ холо́дная, но он не чу́вствовал ни хо́лода, ни жары́.

Наконе́ц я вы́вел на пове́рхность огро́много леща́ и подвёл к режиссёру. Лещ испуга́лся и сно́ва с необыча́йной си́лой повёл в глубину́. Так повторя́лось не́сколько раз, пока́ наконе́ц режиссёр не подхвати́л леща́ рука́ми и не вы́бросил на бе́рег.

Лещ лежа́л в сыро́й траве́ ме́жду плете́й ежеви́ки — то́лстый, ро́зовый, и с чёрных его́ плавнико́в стека́ла вода́.

Режиссёр растёрся мохна́тым полоте́нцем, оде́лся и закрича́л от восто́рга,— ему́ бы́ло жа́рко и ве́село.

А ча́йник всё кипе́л на костре́, выкипа́л, и мы ника́к не могли́ оторва́ться, что́бы напи́ться ча́ю — осо́бенно вку́сного в тако́й вот прохла́дный осе́нний день.

День к полу́дню посветле́л. Густо́е и чи́стое не́бо сверка́ло над голово́й. Нежа́ркое со́лнце шло уже́ ни́зко, не достига́я зени́та, и берега́ Про́рвы запыла́ли пе́ред на́ми та́ким нестерпи́мым багро́вым пожа́ром, что мы почти́ потеря́ли ощуще́ние реа́льности всего́ окружа́ющего. И я поду́мал, что вот тако́й коро́ткий, как про́блеск, день сто́ит це́лого го́да жи́зни в асфа́льтовой духоте́ городо́в.

День был ко́роток (и́ли так нам, мо́жет быть, показа́лось, потому́ что на ры́бной ло́вле вре́мя идёт стреми́тельно). Очень ско́ро по берега́м лёг су́мрачный свет зака́та, всё зати́хло, и в сире́невой воде́ заблесте́ла пе́рвая далёкая звезда́. Домо́й мы возвраща́лись уже́ в темноте́.

PHOTOGRAPH BY ALEXANDER GORYACHIEV





THE SADDLED YENISEI

By Yevgeni Fedorovsky

Three great rivers cross Siberia from south to north—the Ob, the Yenisei and the Lena. The Yenisei takes its source in the spurs of the East Sayan Mountains, tears through rapids and gorges, swallows thousands of large and small rivers, plows through mountains and, after crossing taiga, forest-tundra and tundra, disgorges into the Arctic Ocean. Its total length is 2,566 miles.

Its mountainous banks converge in places. Siberians call these narrow passages "funnels" or "gates." Nature itself recommends them as the most suitable sites for hydroelectric projects.

Power experts have explored all the "gates" and the river's regimen. They estimate that the Yenisei's upper and middle reaches alone can feed 20 or more power plants with an aggregate capacity of 22 million kilowatts.

The discovery of such valuable mineral resources as bauxite and nepheline—raw materials for aluminum—and iron ore, coupled with the birth of new cities in the taiga, created a sufficient demand for heat and light to build a dam on the Yenisei. The site selected was at the Shumikhin "gates," 25 miles south of Krasnoyarsk.

The drone of engines and the roar of heavy-duty scrapers, bulldozers and trucks signal the beginning of an automobile highway and railroad to the site of the future dam. Where giant pines and firs once reached to heaven and an out-of-the-way monastery stood, a town of bright and spacious five-story buildings painted red, blue and orange is beginning to appear. From the outset it has been called Divnogorsk, Russian for Wondertown, because it was built in one mighty swoop.

The dam began to go up at the same time. At dusk, when the working day came to a close and the people started for home, the blasters sounded their warning whistles. Explosions rent the air and shook the mountains, preparing the ground for tomorrow's job. The two banks closed in on each other. Finally they met, and for the first time in its ageless history the Yenisei was bridged by a dam.

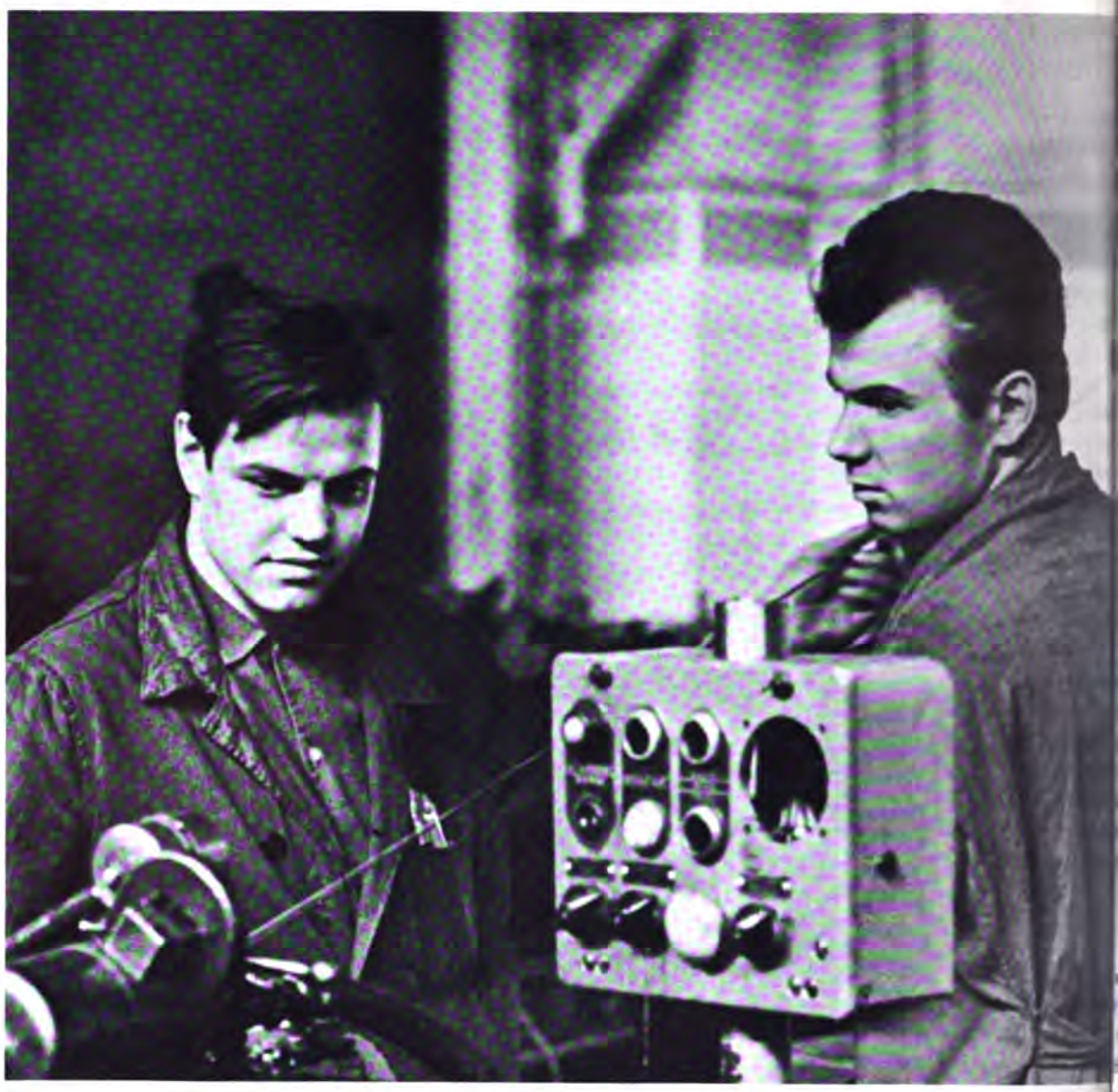
But this was only the beginning of the big job. The machine room of the Krasnoyarsk hydropower plant began to go up. It is nearly a third of a mile long, 100 feet wide and the height of a ten-story building. It will house ten generators, 500,000 kilowatts each. The plant will have virtually no human operators. Remote control and computing devices will watch the river's behavior, sense its moods and tempers, and automatically maintain the set program.

How will shipping pass through the dam? The dam builders have devised an original solution. It takes the form of a giant elevator filled with water. The vessel enters the elevator, the gate closes, the ship is lifted more than 300 feet and sails out into the man-made Krasnoyarsk Sea.

This sea will not be very wide—only about 10 miles—but it will be 220 miles long. Many changes will be wrought by this sea in the lives of the people who live near it. Collective farms and fisheries will spring up on its banks. It will change the local climate, make it milder. There are even plans for health and vacation resorts.

On completion of the Krasnoyarsk hydropower plant, the world's largest, work will begin on the construction of five new power stations on the Yenisei—the Sayan-Shushenskoye, Verkhne-Yeniseisk, Tuva, Yeniseisk and Osinovka.

AUTOMATION AND THE WORKER



WHEN HE WAS in the ninth grade, Oleg Sukhorukov developed a passion for soccer. At first he played with the children in the backyard of the apartment house where he lived, then he moved over to the school playground, and finally he landed at the stadium of the bearing plant not far from his home. After a while the coach of the plant's soccer team noticed the youngster's fast playing and the way he handled the ball, and invited him to join the plant's junior squad. Oleg grabbed at the chance.

The following year he graduated from high school and was faced with the problem of what to do next. That was in 1956. The same coach asked whether he would like a job at the bearing plant and a spot on the adult team, which was getting so good that it was in line for the Moscow championship. Oleg thought it over a while and said yes. That was how he started at the plant.

But it really was not all that accidental. His father was a fitter at the ZIL automobile plant, a foreman. And his grandfather had also worked in a shop before the Revolution. So Oleg was what you might call a hereditary factory worker. There was nothing to prevent him from taking a try at the college entrance exams but, for whatever reason, he did not. He became an adjuster of forging-press equipment. For three months he worked as helper to a foreman, who taught him the trade. During that time he got 50 per cent of an adjuster's wage. And, of course, he went on playing soccer. He liked the plant and his job and liked them even better when he started working on his own as an adjuster with a fifth category rating.

In 1958 he was called up for service. He was 19 then. Three years in the army changed Oleg a good deal, matured him. He was a squad commander when he was discharged.

In 1961 he had another decision to make—what to do after the army. His job was waiting for him if he wanted it. He decided that he did. There was the chance to work himself up to foreman, and a good deal sooner than his father had.

At the time many of the processes in the plant were being automated, with important effects on the shop where he worked. An automated shop was being set up for the manufacture of roller bearings that would make Oleg's shop superfluous and the jobs of some 450 men with it. However, the plant was also being enlarged, so that there were enough job openings in other shops to absorb them all. The new automated shop was to take on 150 men who qualified for a higher rating by completing a refresher course. One of the neighboring shops needed forging press adjusters, and Oleg could have made more money immediately. But he decided he'd rather take the refresher course for the automated shop.

The vocational-technical school at the plant trained the youngsters just out of high school and gave evening refresher courses to the older men. However, this school was of no help to those who wanted to qualify for the automated shop. The equipment in that shop was brand-new, and the only people who knew how to handle it and teach others were the ones who had assembled the automatic transfer lines, the engineers from the plant that had produced it.

When Oleg went to work in the automated shop, he was taken on

BY ALEXANDER BULGAKOV

Chairman, State Committee for Professional and Technical Education
State Planning Committee of the USSR

THE TRADES that people have worked at for centuries are either disappearing or changing radically. The working staffs of shops and whole plants keep diminishing as machines take over the jobs human hands and even brains used to do. In the offing we see the social problems of automation facing us, and in a very acute form.

Automation is a comparatively recent development for us. In this respect we are behind the leading Western countries. Yet, vocational reorientation becomes a more serious problem with every year, calling for the retraining of hundreds of thousands of workers.

This is especially true of construction and mining. At the Degtyarsky copper mine high frequency communication—a new system of signals and centralized control and interlocking—was installed, and six dispatchers replaced 46 signal operators and switchmen. The remote-controlled electric locomotives and the automated ventilating system made 149 unskilled workers superfluous; 16 adjusters-electricians took their place.

Automated lifting and draining units relieved 42 workers. All told, the number of people employed dropped by 1,182 in five years. Much the ame thing has happened in hundreds of mines.

At the same time the country's army of professional and clerical workers has grown by 18.6 illion. The increase is due to planned and continuous expansion of production and to constitutional uarantees: Every citizen has the right to a job at ages determined by the quantity and quality of his ork, and the right to a free education, including ollege. What this means is that the state has bligated itself to give every industrial, professional nd clerical worker displaced by automation, or ven by the improvement of a machine or a process, nother job in his field or to retrain him for a new ne.

How is this done practically?

In every city, district and region the planning odies know the labor resources available, their ctual employment and additional manpower equirements. This information is used to work out eneral balances of labor power. In addition, specic balances are compiled which tell, for example, e balance of skilled workers in various trades, e balance of college-educated specialists, the alance of women and young people.

Such balances make it possible to amend plans nd to make forecasts and provisions for training nd retraining. Demographic calculations for Chita egion, Siberia, showed, for instance, that in two r three years the area will have an excess of abor. To forestall unemployment, two large enterrises—an automobile assembly plant and a textile lant—are to be built.

Retraining and Jobs

The management and the trade union of every lant know what changes in machinery, technology nd the organization of production are scheduled r the next year or two. As these changes are lanned, provision is made to retrain or relocate orkers whose jobs will be eliminated.

In most cases retrained workers get jobs at the me enterprise. On the country's railroads, for stance, where steam locomotives were replaced a large scale by diesel and electric locomotives, e engine drivers and their assistants were trained run the new types of locomotives and remained n the same lines.

Another example: There are three automatic ops at the First Bearing Plant in Moscow. By the d of this year there will be five. The 5,000 disaced workers are being taught new trades and ven jobs in other shops in the plant, which is panding throughout. As a result of automation e plant will double its output while employing the me number of people.

If there are no jobs for displaced workers in any her section of an automated plant, the responsility for relocating or retraining them is assumed the state agency in charge of that plant as well plants short of help, generally the economic uncil of the economic area concerned.

Most workers prefer to stay on at the same plant, nd the economic council tries to meet that prefernce wherever possible. The trade union sees to it at the plant management and the state agency lfill their responsibilities to the worker.

The worker displaced by automation can, if he ooses, learn a trade in another field. In the onbas, for instance, some of the miners changed er to jobs in the chemical industry.

Training Schools

Evening professional and vocational schools throughout the country give refresher courses, train for hundreds of trades and also provide workers with a general cultural background.

The plants also give refresher and retraining courses for their staff people after working hours or on a work-study arrangement. In some cases individual and group training for new trades is given directly in the shops.

What makes retraining easier now is that so many of the workers have a good technical background. In 1939 we had 123 people with college or secondary school education per 1,000; by 1964 the figure had grown to 501. Last year more than 68 million people, a third of the population, were studying. General education schools were attended by 46.7 million people, colleges and specialized secondary schools by more than 6.9 million (including those who work and study). In the past year vocational and technical schools trained 900,000 workers. And as many as 11 million people were taught trades and took refresher training courses directly at industrial plants.

Retraining, like all schooling in the Soviet Union, is free. While the worker is training, whether for days or weeks, he gets either his average pay or a stipend. If his new job requires moving, maintenance and travel expenses for himself and his family to and from his new place of work are paid and an apartment is provided.

Employment and the Great Migration

What we have said about retraining and re-employment is not confined to any one industry or region; it applies generally throughout the country. We have a labor shortage and will have for some time to come. There are job openings almost everywhere for industrial, clerical and professional workers.

This is particularly the case in Siberia, where industry is booming and whole cities are being built. There are agencies with the specific function of recruiting labor for Siberia and other fast developing parts of the country. These agencies tell the applicant where his trade is in special demand or where he can learn a new one. Hiring is done by individual contract, as a rule, for periods of one to three years. The contract is renewable at the worker's option.

The vocational and technical schools also train specialists for the newly developing areas. People enrolling at these schools are told beforehand about the location of their new job. Hundreds of thousands of tractor drivers and combine operators for the virgin land areas were trained by the vocational schools of the country's "old" areas.

The economic development program for 1960-1980 calls for a sixfold increase in industrial output. That will require a 40 per cent increase in the present work force. However, the growth in output will come mostly from an increase in labor productivity.

A concomitant of this growth will be a redistribution of workers in the various industries. More automatic machinery will displace millions of workers, especially those in auxiliary jobs. Farms will need fewer people. Administrative personnel will be reduced. On the other hand the number of workers in public health and education, in cultural and other nonproductive spheres will multiply almost threefold.

as a forging press equipment adjuster with the same fifth category rating. Actually, the transfer line was not working yet; there were sections that still needed assembling. He did all sorts of odd jobs, worked on a pneumatic drill and a lathe, and puzzled out the operating principles of some very intricate equipment. He took the retraining course three evenings a week. The instructors were engineers and foremen. Courses like it were being given in all the shops, and there were about 5,000 of the plant people attending them.

In a year Oleg got his sixth category rating, and it was then that he transferred his passion for soccer to the job. There was something very special about working on transfer lines that he himself had helped to assemble. He had gotten to know every screw in every machine and could adjust any unit and any tool.

In 1963 Oleg won his seventh category rating, and a few months later he was made foreman. Besides the wage boost, he felt good about catching up with his father. But it also presented him with new problems. In addition to looking after machines, he had to look after people, guide them, be responsible for the work they did. It was not enough to know how to do things yourself, you also had to know how to explain them to others; you had to integrate the work of the people and the machines. He needed more theory as well as practice. That decided, he joined the evening department of the technical school at the plant. Nine-tenths of the students were plant workers like Oleg, people with a high school education.

It was rough going. His wife also held down a full-time job as a design technician, and they had a newborn daughter. The course of study was three years, with classes four nights a week. From work Oleg rushed to school, took four hours of classes and rushed home. It was 10 o'clock by then, and he was so tired that he would eat supper and fall asleep immediately after. Things eased up somewhat during the exam periods, when he got time off with pay to prepare for them.

But in spite of the grind, he had a sense of movement, a feeling that he was going somewhere. He has now completed all his diploma requirements and will be graduating in the fall.

Last year he was appointed senior foreman. That means more work and responsibility. The 44 people under him service 40 forging presses and auxiliary units, which make up four automatic forging press transfer lines. They work in two shifts.

And what about soccer? "I see it only on TV," says Oleg with a laugh. In winter he manages a little skiing, and in summer swimming and volleyball. He spends his vacation—24 working days—with his family at his aunt's cottage in the countryside near Moscow.

With three tough years behind him, you'd think Oleg would relax, but he has larger plans; he wants to go on to college. He hasn't decided yet whether to go to a metallurgy college or to the branch of the automotive engineering institute set up by the bearing plant, the minicar plant and the ZIL plant. He is thinking of specializing in the cold processing of metals. This is actually what he is working at now, cold forging press processing, the most progressive technique in the field.



Mejnun Weeps Over Leila. *Oil.*

SUN-KISSED COLORS



This article about painter Shmavon Mangasarov was written by the eminent Turkish poet Nazim Hikmet (1902-1963).

OF ALL ARTS painting is the most difficult to grasp and understand, and yet many of us think it is the most comprehensible. Some of us use this criterion for judgment: An artist has drawn an apple. If it is the exact replica of a real apple, we think him a master. Or an artist does a figure painting. If the figure piques our interest, gladdens or saddens us, or gives us food for reflection, we say, "Well done, a good artist!" But an apple or a figure may seem almost real on canvas or the painting may quicken the pulses, and yet the artist may be a man of little talent.

I like painting, and therefore when I was told that the Azerbaijanian painter Shmavon Mangasarov wanted to show me his work, I was interested. I looked forward to seeing it, especially since I knew that Azerbaijanian painting had a fascinating quality of its own. Nor did Mangasarov's works disappoint me. I tried to understand the pictures he showed me, and I did, and liked them too. Before I explain why I liked them and what I saw in them, I should like to tell you a little about the artist.

He is an Azerbaijanian Armenian. If it is culture rather than blood that determines an artist's personality, then Mangasarov should be regarded as belonging to Soviet Azerbaijan rather than Soviet Armenia. After graduating from the Azerbaijanian Higher School of Arts in 1917, he tramped the length and breadth of the republic, roamed its fields and mountains, grew to know its people, its past, its present and future. He took it all in with his mind and even more with his heart. Out of this meeting and love came several paintings, one of them *Picking Cotton*, displayed in 1932 at the Soviet exhibition of revolu-

in Philadelphia. At his Baku ex-
painter showed 110 pictures,
the various trees of his art, which
growing for 30 years now.
ov is a painter of the Soviet
oviet Azerbaijan, in other words
f art which is real to the last
.
g, as in all other spheres of art,
e real, the concrete. Mangasarov
the immortal traditions of both
the East. Without surrendering
itanism, he has enriched his
and his art. Instead of pursuing
nd easy path of imitation, copy-
ating works that the philistine
nderstand, he turned seeker and
ing new elements into Soviet
painting. In pursuing this
id not escape charges of for-

has opened his heart to the
worker and collective farmer.
of today's Azerbaijan that he
icularly the women, are true.
lse note about them. He knows
e of rhythm and tempo in his
her quality which makes him
oday.



Portrait of the Poet Fizuli. *Oil.*

n. Oil.





Collective Farmers. *Oil.*



The Road. *Oil.*

EINSTEIN AND DOSTOYEVSKY

BY PROFESSOR BORIS KUZNETSOV
CHAIRMAN, INTERNATIONAL EINSTEIN COMMITTEE

WHAT did Einstein mean when he said in the twenties: "Dostoyevsky gives me more than any thinker, more than Gauss."

"There is a great and unresolved thought in him," Alyosha Karamazov said of his brother Ivan. "He is one of those who do not care for a fortune, but only to resolve their idea to the end."

Regardless of the problem tormenting them—religious, ethical or philosophical—regardless of their education, environment, traditions or morals, Dostoyevsky's characters crave to know, and this motivates all their actions, noble or mean. Dostoyevsky's works are full of action, but the action is always experiment, often horrible and inhuman. "There was something else I wanted to learn, and that something else prompted me," Raskolnikov tells Sonya as he describes his crime. "I wanted to know, and to know immediately, whether I was a louse like everyone else or a human being. Would I dare to trespass or would I not? Would I stoop to conquer or would I not? Am I but trembling flesh or have I the right? . . ."

Raskolnikov did not avail himself of his victim's property. What he wanted was the answer to his question "Would I dare to trespass?"

Other of Dostoyevsky's characters are similar in this respect. Some of them display superhuman perseverance, others perform miracles of self-sacrifice. But they are always doing something superhuman, something on the brink of death, insanity, crime or even beyond it. And they are doing it to know, to dare, to resolve.

The author compresses the life of his character into one critical experience and cuts out all humdrum accidentals. It is under these experimental conditions of an ethical supervacuum, of superhigh voltages, velocities or pressures, in the moments barely separating them from suicide, murder or insanity, in fantastic realities and much too real hallucinations that his characters, personifying the most general ethical and human problems, reveal themselves and the solutions they seek.

"He always describes the most exceptional reality, he puts his character into the most exceptional external or psychological situation and reveals psychological states with great penetration, with astonishing authenticity," Dostoyevsky wrote of Edgar Allen Poe. And to a great extent this applies to Dostoyevsky himself. The most fantastic situations in fiction seem trivial compared with those moments—in a common, dingy room somewhere in St. Petersburg or in a provincial tavern—when an agonizing mind probes into the ultimate truths of life, its meaning, its harmony and dissonances, and hovers on the innermost resolution of these truths to the clicking of billiard balls or the popping of corks. The trivial hyperrealistic situation is streaked with cosmic collisions. It is these collisions, these searchings, that account for the sudden vicissitudes, agonies, vacillations in his novels.

Dostoyevsky sought harmony. The harmony of the universe cannot be simple, argues Ivan Karamazov, it cannot be "Euclidian." Ivan tells Alyosha of the universal harmony of "non-Euclidian being." "Like a child (he says), I am convinced that suffering will abate and pass, that all the humiliating absurdity of human antinomies will vanish like a flimsy mirage, like a wretched figment of a puny, atomically infinitesimal Euclidian human mind; and in the world finale, at the moment of supreme harmony, something so valuable will emerge that it will suffice for all hearts, will suffice to sooth all frustrations, to atone for all of man's crimes, for all the blood he has shed."

At this point the discord sets in. Ivan Karamazov would not accept the non-Euclidian harmony: "Were parallel lines to meet so that I could see it for myself, I'd say that they had met and yet would not accept it." Dostoyevsky the thinker wants to escape the doubts "absolutely alien to the human mind created to conceive of three dimensions only." Dostoyevsky the artist yearns for a non-Euclidian harmony; and the artist's yearning lures the reader along the infinite road of an ever more complex world, where each turn seems a paradox and a "non-Euclidian" reality when compared with the path behind.

However, each new picture of the world is rational. Each new scene is paradoxical, unexpected, yet rational. The great rationalist Einstein, disciple of Descartes and Spinoza, was attuned to Dostoyevsky because Dostoyevsky the thinker was an antirationalist, while Dostoyevsky the artist was a rationalist.

For Dostoyevsky the thinker, the non-Euclidian harmony of the universe was a dangerous temptation to stray from the Euclidian orthodoxy. For Dostoyevsky the artist, the non-Euclidian harmony of the universe pervaded *The Brothers Karamazov, Crime and Punishment* and *The Idiot.*

For Einstein the world was not chaos but a cosmos subject to immanent laws. At the same time Einstein was painfully sensitive to the most destructive social dissonances of his time. We can well imagine how important it was for him to come upon Dostoyevsky's apologia of the search of harmony.

Einstein mentioned *The Brothers Karamazov* in a letter he wrote in Berlin in 1920. Here Einstein referred to his inchoate yet agonizing quest for a single universal theory. He mentioned the nationalistic reaction in Germany. At that time it was difficult to visualize the magnitude of the chaos to which it later led, but the trend was clear. It was between these two references that Einstein mentioned *The Brothers Karamazov.*

The novel gave Einstein the strength to search for a paradoxical "non-Euclidian" representation of the universe and for social harmony. It was this search for the dual harmony that shaped and motivated his life.



A seventieth birthday for the 1965 Lenin Prize winner, actor Yuri Zavadsky. His hobby is collecting pencils, the reason for this ceremonial march by his fellow artists.

A CANNY MAGICIAN

BY ROSTISLAV PLYATT

PEOPLE'S ARTIST OF THE USSR

ONE DANK and gloomy day in October 1926 I stood in the lobby of a theater every bit as dispirited as the autumnal scene outside. What could I hope for? I was much too young and even more inexperienced.

"Yura, let me show you a fellow who's taller even than you!" soothed the voice of my guardian angel, the man who had brought me there. Turning, I saw the celebrated theatrical hero Prince Kalaf embodied by Yuri Zavadsky.

One cannot talk about Zavadsky without recalling his role as Kalaf in *Turandot*, just as you cannot talk about him without mentioning his enormous collection of pencils. Kalaf and pencils, these are inevitably found in the writings of all who have turned their pens loose on Zavadsky—and not because they lacked imagination, but simply because that is what he is like!

Before he was cast as Kalaf, he had played Anthony in *The Miracle of Saint Anthony* for the Vakhtangov Theater studio. After that he appeared as Chatsky in *Wit Works Woe* and as Trubetskoi in *Nicholas I and the Decembrists* at the Art Theater. He was seen in other roles as well, but his triumph in *Turandot* was still fresh in the memories of the theater fans of Moscow and had eclipsed everything else in my youthful mind.

He cut an extraordinary figure even o stage, what with his somewhat old-fashione attire, exceptional grace and chestnut cu (yes indeed, curls!) touched with gra Zavadsky was setting up his own studio a that time. He looked me over casually, sa a word or two more and withdrew. Watch ing his tall, indescribably artistic figure re ceding, I suddenly found my melancholy mo on the wane. I was gay and hopeful instea There was a promise in that figure, a pledg of some special theatrical treat!

What has kept us so closely bound t Zavadsky for so many years? Pupils rarel appreciate their teacher only for the num ber of years they spend with him. The prize him for what he is able to give them Zavadsky, the builder of actors, has a qua ity not often found even among illustrio directors. It seems to me he was born to b a power among directors. That is evidenc by his innate sense of staging, his impec cable taste, his sensitivity to form, his tenc ing feeling for rhythm and tempo, his im petuous imagination in molding *mise en scène*, and finally by his splendid showma ship. Yet all these are subordinated to a other, perhaps his main, gift—the ability t anticipate the hidden potentialities of ac tor, to discover and develop them. Zavadsk



:r permits his fantasy to stray from the viduality of the performer. Watching in- ely and having glimpsed something in an r, he steers him toward the results he ts by almost imperceptible, accidental, as ere, hints and prompting. If he takes the ble to show how the role should be ed, something he does very rarely, he show how it should be rendered by that cular actor and no other.

owe a lot to Zavadsky, among other s my life-long love of the theater and unyielding faith that the stage will en- forever, no matter how its competitors ie arts may flourish.

riting about Zavadsky, the playwright r Shtok called him a canny magician. ipt definition, for it is incumbent on cians to astonish people, and Zavadsky iever ceased to do so. Four years ago tonished audiences with his production *Women's Mutiny,* a sparkling, youthful of seemingly incompatible elements: cal rhetoric and heroism, lyrical re- on and mischievous farce. His audiences similarly surprised by his production of ontov's *Masquerade,* delivered with truly ontov passion. I love to look on when *Merry Wives of Windsor* is on stage, hat is when Zavadsky's theatrical gifts rise to full stature. It is a joy to watch Shakespeare's jolly comedy romp across the stage—the *mise en scènes,* each one more amusing than the one before; the ingenious makeup and costumes, a true feast of color, light and orchestration. Then even the stage is too small for him, and the action splashes over into the hall, the cheerful players whirling through the audience with their rattles and baubles, laughing and whistling as they beckon the spectators on to the fair in the lobby. This is theater in its most contagious form.

In his most recent work, *Declaration of Hatred* by Isidor Shtok, Zavadsky stripped the stage of all make-believe. There is only a path of light on the empty boards. The Soviet soldier Vasili Vorobyov, donning his tunic and strumming a guitar, emerges from the wings. Coming very close to the spectators, he enters into a confidential talk with them about things as vital to them as to himself. This, too, is in Zavadsky's theatrical range—a pensive lyricism, his way of appealing to the minds and hearts of people.

There is nothing I want more than to have our canny magician carry on for a long time to come, thrilling and astonishing us with his art, the popularity of motion pictures and television notwithstanding.





A seventieth birthday for the 1965 Lenin Prize winner, actor Yuri Zavadsky. His hobby is collecting pencils, the reason for this ceremonial march by his fellow artists.

A CANNY MAGICIAN

BY ROSTISLAV PLYATT

PEOPLE'S ARTIST OF THE USSR

ONE DANK and gloomy day in October 1926 I stood in the lobby of a theater every bit as dispirited as the autumnal scene outside. What could I hope for? I was much too young and even more inexperienced.

"Yura, let me show you a fellow who's taller even than you!" soothed the voice of my guardian angel, the man who had brought me there. Turning, I saw the celebrated theatrical hero Prince Kalaf embodied by Yuri Zavadsky.

One cannot talk about Zavadsky without recalling his role as Kalaf in *Turandot*, just as you cannot talk about him without mentioning his enormous collection of pencils. Kalaf and pencils, these are inevitably found in the writings of all who have turned their pens loose on Zavadsky—and not because they lacked imagination, but simply because that is what he is like!

Before he was cast as Kalaf, he had played Anthony in *The Miracle of Saint Anthony* for the Vakhtangov Theater studio. After that he appeared as Chatsky in *Wit Works Woe* and as Trubetskoi in *Nicholas I and the Decembrists* at the Art Theater. He was seen in other roles as well, but his triumph in *Turandot* was still fresh in the memories of the theater fans of Moscow and had eclipsed everything else in my youthful mind.

He cut an extraordinary figure even off stage, what with his somewhat old-fashioned attire, exceptional grace and chestnut curls (yes indeed, curls!) touched with gray. Zavadsky was setting up his own studio at that time. He looked me over casually, said a word or two more and withdrew. Watching his tall, indescribably artistic figure receding, I suddenly found my melancholy mood on the wane. I was gay and hopeful instead. There was a promise in that figure, a pledge of some special theatrical treat!

What has kept us so closely bound to Zavadsky for so many years? Pupils rarely appreciate their teacher only for the number of years they spend with him. They prize him for what he is able to give them. Zavadsky, the builder of actors, has a quality not often found even among illustrious directors. It seems to me he was born to be a power among directors. That is evidenced by his innate sense of staging, his impeccable taste, his sensitivity to form, his unerring feeling for rhythm and tempo, his impetuous imagination in molding *mise en scène*, and finally by his splendid showmanship. Yet all these are subordinated to another, perhaps his main, gift—the ability to anticipate the hidden potentialities of an actor, to discover and develop them. Zavadsky

never permits his fantasy to stray from the individuality of the performer. Watching intensely and having glimpsed something in an actor, he steers him toward the results he wants by almost imperceptible, accidental, as it were, hints and prompting. If he takes the trouble to show how the role should be played, something he does very rarely, he will show how it should be rendered by that particular actor and no other.

I owe a lot to Zavadsky, among other things my life-long love of the theater and my unyielding faith that the stage will endure forever, no matter how its competitors in the arts may flourish.

Writing about Zavadsky, the playwright Isidor Shtok called him a canny magician. An apt definition, for it is incumbent on magicians to astonish people, and Zavadsky has never ceased to do so. Four years ago he astonished audiences with his production of *Women's Mutiny*, a sparkling, youthful blend of seemingly incompatible elements: political rhetoric and heroism, lyrical reflection and mischievous farce. His audiences were similarly surprised by his production of Lermontov's *Masquerade*, delivered with truly Lermontov passion. I love to look on when *The Merry Wives of Windsor* is on stage, for that is when Zavadsky's theatrical gifts rise to full stature. It is a joy to watch Shakespeare's jolly comedy romp across the stage—the *mise en scènes*, each one more amusing than the one before; the ingenious makeup and costumes, a true feast of color, light and orchestration. Then even the stage is too small for him, and the action splashes over into the hall, the cheerful players whirling through the audience with their rattles and baubles, laughing and whistling as they beckon the spectators on to the fair in the lobby. This is theater in its most contagious form.

In his most recent work, *Declaration of Hatred* by Isidor Shtok, Zavadsky stripped the stage of all make-believe. There is only a path of light on the empty boards. The Soviet soldier Vasili Vorobyov, donning his tunic and strumming a guitar, emerges from the wings. Coming very close to the spectators, he enters into a confidential talk with them about things as vital to them as to himself. This, too, is in Zavadsky's theatrical range—a pensive lyricism, his way of appealing to the minds and hearts of people.

There is nothing I want more than to have our canny magician carry on for a long time to come, thrilling and astonishing us with his art, the popularity of motion pictures and television notwithstanding.



ABRAHAM LINCOLN
A GREAT AMERICAN

Interview with artist Yuri Mogilevsky

WHY did I choose Lincoln? I first heard his name when I was a small boy, and his lifetime of struggle for great issues has interested me ever since.

An artist gets many ideas, but sometimes they are not translated into life until many years later. Each of these ideas waits for something or someone to give it form. My active interest in history helped to give body to one of my ideas. I recently read a Russian translation of Carl Sandburg's *Abraham Lincoln* in the collection *The Life of Outstanding People*.

Sandburg's vivid image of Lincoln helped me picture him as both a man and a leader of his country. He was a man of simple feeling without any flourishes or pretense. Unsparing of himself, Lincoln fought for the unity of the nation, for the equality of all the people of his country. Sandburg's book sparked my imagination.

The Institute of Soviet-American Relations, of which I am a board member, helped me get more background material. As for what I wanted my work to say, it should speak for itself.

About myself, I am a graduate of the Institute of Decorative Art in Moscow. I regard the famous film director Sergei Eisenstein and the noted painter Vladimir Favorsky as my teachers even though I never studied in their classes.

Most of my portraits are of people in the sciences and arts. I have done portraits of Albert Einstein and Charlie Chaplin. The portrait of Lincoln is my first of an American statesman.

My works have been shown at many exhibitions in the Soviet Union and abroad, in Poland, Brazil, Yugoslavia and other countries. Three of my portraits, of Mayakovsky, Shostakovich and Landau, were displayed at the Soviet Graphic Arts Exhibition in the United States.

This year marks the centennial of Lincoln's death, and I am happy to have finished his portrait in time. I want to present my engraving to Carl Sandburg, whose book gave me a much better understanding of the great and many-sided life of a national hero and outstanding statesman.



QUERIES FROM READERS

Mrs. Elizabeth Perkins of Decatur, Georgia, sent us several questions on the status of doctors in our country and the organization of medical services. We asked Vladimir Kondratyev, Master of Medical Sciences, Assistant Minister of Public Health, for the answers.

QUESTION: "I understand that 70 per cent of the doctors in the Soviet Union are women. Why? Is training in your country easier and shorter than, say, in the United States (approximately seven years after college here)?"
ANSWER: The program of our medical institutes is not much different from that in American medical schools. The course of training is six years. The large number of women who go in for medicine is probably due to the fact that we now have so many more women with a higher education. The number of women in all professions has increased. For instance, women account for more than 37 per cent of all research workers.

QUESTION: "How long is a doctor's working day?"
ANSWER: About six hours, on the average.

QUESTION: "Is medicine considered a good vocation for women whose chief interest, after all, lies in the home?"
ANSWER: We consider medicine an altogether suitable vocation for a woman. It is true that in many cases she also has to take care of a home. But we try not to make housework a woman's sole occupation. Such labor savers as washing machines and vacuum cleaners, the large number of public service establishments and especially the kindergartens and nurseries make it easier for women to have a career, medicine included.

Work does not interfere with motherhood. A woman gets a paid maternity leave of 56 days before and 56 days after confinement. If she wishes to discontinue work for one year to look after her baby, her job is kept open.

QUESTION: "How do doctors rate on the social ladder?"
ANSWER: Judge for yourself: 31 doctors are deputies to our parliament—the Supreme Soviet of the USSR. A large number of medical workers have been awarded the honored title Hero of Socialist Labor; thousands have been decorated with orders and medals. Many doctors are Lenin Prize winners.

QUESTION: "I understand that medical students receive less government money in aid than students of nuclear physics, for instance, and that the average pay scale of a doctor is comparable to that of teachers, minor civil service employees and factory workers, but not to the pay of an engineer. Why?"
ANSWER: Education is free at all higher educational institutions in the Soviet Union. And students receive stipends besides. Since 1963 these stipends have been identical for all humanities students. For majors in other fields, physics for example, they are seven rubles higher. This difference dates back to the time when technology had to be intensively developed and young people encouraged to go in for the technical sciences. It is probable that the differential will be eliminated before long.

All students who make excellent grades get a 25 per cent addition to their stipend.

As for wages, since the adoption of the law on higher wages for medical workers in 1964, doctors are paid no less than engineers. The exact amount depends on the individual's qualifications, working record and the amount of work.

QUESTION: "I don't seem to be able to get any information on the history of the Soviet medical service. Who was its founder? When and how?"
ANSWER: In July 1918 the Soviet Government issued a decree organizing the People's Commissariat of Public Health. The first Commissar was a doctor by education and a revolutionary, Nikolai Semashko, one of Lenin's comrades-in-arms. He headed the public health services for the first 12 years (until 1930), and did much to develop and expand them. In his speeches and writings, Semashko laid down the basic principles of the Soviet public health system—free medical aid available to everyone and a truly scientific approach to all aspects of this aid.

Soviet medicine was featured in the February issue of *Soviet Life*. For further details we recommend the following: *History of Medicine in the USSR*, edited by Professor Boris D. Petrov; *The Organization of the Public Health Services in the USSR*, edited by Nikolai A. Vinogradov; and the articles on "Public Health Services," and "Medicine" in volumes 10 and 17 of the *Soviet Big Medical Encyclopedia*. All are issued by the Meditsina Publishing House in Moscow.

QUESTION: "How are the medical services organized? Who is the present head?"
ANSWER: All medical services are financed from the state budget. The wages of all doctors and other medical personnel and the hospitalization and treatment costs of patients are paid by the state.

At the head of the system is the USSR Ministry of Public Health. Directly responsible for the health of the citizen are the Ministries of Public Health of the union and autonomous republics and the public health departments of the regional, city and district Soviets, that is, the local government agencies. They are also in charge of the hospitals and polyclinics.

The present Minister of Public Health is Professor Sergei V. Kurashov, Doctor of Medical Sciences.

QUESTION: "What services does public health cover?"
ANSWER: We have a whole network of medical institutions working to prevent and cure disease. The most universal is the polyclinic, an institution that services outpatients and arranges for doctors to visit sick patients at home. The polyclinic is available to everyone and provides both general and specialized free treatment, including dentistry. A polyclinic, as a rule, is staffed by 30 to 50 and perhaps more doctors in all the specialties.

Each polyclinic works with a district hospital to which it sends patients who need hospitalization. If the diagnosis or treatment of a patient requires more highly qualified specialists or special equipment, he is sent to a regional hospital or central medical research institute. Specialists from these establishments give consultations at the local medical institutions. In all cases the expenses are borne by the state.

In our country, patients may take treatment both at the local polyclinic in their residential area or at medical units attached to their places of work.

Maternal and child consultation centers, maternity homes and children's polyclinics offer special services to expectant mothers and infants.

Our sanitation-epidemiological service works to prevent pollution of the water, soil and atmosphere with industrial and other noxious wastes; to enforce hygienic working and living conditions; and to eliminate infectious diseases.

QUESTION: "Do doctors in general show concern for the individual patient? Do they have the time for it?"
ANSWER: No matter where a patient lives, the doctor is always required and ready to respond to his call for aid. This is facilitated by special first-aid and ambulance units and an aviation first-aid service.

Each of the polyclinics we mentioned takes care of a district with a population of approximately 4,000 people. Such a district is usually served by six specialists. The internist is responsible for the prevention of disease and the treatment of patients residing in his district. He sees them at the polyclinic, visits them at home, or sends them to other specialists for consultation or laboratory tests. As a rule, the internist spends 15 to 20 minutes with each patient after all tests and X-rays have been made. Obviously the amount of time a doctor devotes to each patient depends upon his specialty and the patient's needs.



This collective farm was founded 40 years ago by Russian emigrants who returned from the U.S.

"AMERICAN" COMMUNE IN RUSSIA

By VLADIMIR POLYAKOV

THE 1917 Socialist Revolution stirred Russian emigrants in all parts of the world. The Bolsheviks were building socialism, and many Russians abroad wanted to be part of this unprecedented social experiment. The borders were closed by the Civil War, but as soon as the fighting ended, emigrants began to return home. Lenin's appeal in 1921 to workers of all countries to support the Russian Revolution, help rebuild the war-ravaged country and make a new life, lent a strong impulse to this return movement.

Russian immigrants in America responded by forming a Technical Aid Society and collecting money. A number of them, including 14 from Steubenville, Ohio, 16 from Seattle and 120 from Kirkland, Washington, decided to go back and set up a farm commune. Trofim Malich and several other members of the society were responsible for the purchase of farm implements. They bought seven tractors, a number of plows, reapers, harrows, mowers and carpenter's and machine-shop tools. In 1922 the Russian-Americans returned to their native land with the equipment.

At that time farmers were just beginning to form cooperatives, and the new arrivals decided to follow suit. They asked for a plot of land in the south of Russia and were assigned 14,800 acres of virgin land in the Salsk Steppe, not far from Rostov-on-Don. There they set up a commune they called Seyatel (Sower). Today it is a large collective farm. Of the original founders, 29 are still alive, including Trofim Malich, who told me how the original cooperative was organized.

First Steps

I found the 77-year-old veteran working in his garden. "We were in a better position, of course, than our neighbors," he said. "We had machines, and they did not. Most of our neighbors worked by themselves, while we worked together. The first year we took in a 50 per cent bigger harvest than our neighbors did. So the advantages of collective farming were plain right away.

"But even this wasn't all," Malich continued. "We were able to use part of our joint income to buy pedigreed cows and pigs and to start building barns and houses.

"Seven years later the cooperative had 14 tractors, two combines, six trucks, and various grain-loading and processing machines. Every family had its own house. The farm had more than 1,500 cows and harvested an average of 2,140 pounds of grain per acre.

"The cooperative grew," Malich went on. "Many of the local farmers joined up. So we started on a big project—growing tree belts around our fields to protect them from the dry winds that blow here. We did all right with that, and today our collective farm has 890 acres of tree belt. Altogether we have 11 strips, 1,640 feet apart. These forest strips have been helping us produce stable harvests even in bad years.

"Now we are a big and solid farm. The experience we picked up in America we put into the collective. And although it has been a long time since we came back from the United States and only a few of us are still alive, the young people who run the farm now still listen to the advice we former "Americans" give them. Each of us gets a pension from the farm, so that we can really say our efforts paid off."

How the Farm Is Run

The daily routine is fixed at a *planerka*, a brief conference held every morning by the heads of field teams, livestock sections, building teams and machine operators. These conferences are essential, since the farm has a large fleet of machines and their work must be properly coordinated not to waste time and energy.

I attended one of these conferences. After the jobs had been assigned and the machines distributed, Mikhail Mamonov, the collective farm chairman, gave the floor to chief engineer Yevgeni Filippovich.

Yevgeni is still a young man, the grandson of one of those who emigrated to America half a century ago. When he graduated from the secondary school on the collective farm, he entered the Kuban Agricultural College and came back home with an engineer's diploma.

"Nobody has to be convinced that it is more profitable for us to do our own processing of the fruit, grain, vegetable, milk and meat surpluses we raise than to sell them as is to outside factories," Yevgeni began. "Our winery, flour mill, creamery, sausage and other shops bring us a good return. But we still do not make full use of our vegetable and fruit crops. Shipping them to other parts of the country makes no sense. We would do much better to build our own plant for canning fruit and vegetables, juices and syrups."

The estimates and drawings prepared by the young engineer passed from hand to hand until they reached the engineer's father, Grigori Filippovich. The senior Filippovich was three years old when his parents took him to America, and he was still a boy when he returned to Russia. He went to school and subsequently began to work on the collective farm. For many years now he has been chief accountant.

He is not a man who spends the farm's money irresponsibly.

He laid down his glasses and declared, "I say that not a single kopeck should be spent on such a project."

"What do you mean!" exclaimed the young Filippovich. "You've always been in favor of this kind of construction, Father. Why are you suddenly against it?"

"I said not a kopeck for *such* an undertaking," repeated the old bookkeeper. "What are you planning? Frame shops, frame raw material sheds and frame warehouses for the finished products. It's no good. Don't be in such a hurry. If we build, let's build it solid, permanent, with brick."

Keeping Track of Money

After the *planerka* I accompanied Grigori Filippovich to his office. Opening his ledgers, he told me:

"Ours is a diversified farm, but we give preference to those crops that bring in the highest return. Sunflowers, for instance, give us 17 rubles for each ruble invested. Stock-raising and fruit-growing also bring good returns. We plan to improve our wheat varieties and hope to harvest over 2,700 pounds of wheat per acre regularly. We expect to build up our herd of cattle to more than 11,000 head and the number of laying hens to 20,000.

"In 1963 the farm's income was 1,257,000 rubles. After taxes and paying our members, we had 560,000 rubles to spend for capital construction and new machinery. We also took a loan from the bank to do more building. Now we are completing a new school and a palace of culture. We have built a dressmaking and tailor shop and an automatic laundry and have laid an asphalt road to link us with the Rostov-on-Don—Salsk highway.

"Don't think that it's all been smooth sailing. We've had our problems and difficulties. In 1962, for instance, our livestock was a headache; the herd was growing but we were running short of fodder. So we planted 3,200 acres to corn. We had a good harvest and were able to lay in as much silage as we needed.

"The year 1963 was rough for farmers all over the country. Our farm was not hit so badly by the drought because of the protection our tree belt gave us. We harvested an average of 2,100 pounds of grain per acre. To make up for shortages on other farms, we sold the state 4,000 tons of grain instead of the 1,600 tons we had planned, and helped our neighbors out with seed.

"But we ourselves needed help last year when we had too little snow and our winter crops froze. We had to resow almost half of our crop area in the spring, and we got a lot of help in the way of labor and machinery from our neighbors."

"How did you do in 1964?"

"Preliminary estimates put our earnings at 1.5 million rubles. At least 700,000 or 800,000 rubles of this will go for expansion. We want to build a fairly big, mechanized canning plant."

"And how are your members making out?"

"Cattle-tenders earn between 100 and 120 rubles a month and more, depending on how much they produce. These are individual earnings, of course. As a rule, there are several members of each family working."

Other Benefits

But collective farmers get more than their direct earnings. Older members are retired on pension. A school and several kindergartens, all free, are run by the farm.

The farm dining room charges very modest prices: eggs are three kopecks each; coffee, five kopecks; potato soup, four kopecks; entrées, four to eleven kopecks; pancakes, four kopecks; dumplings, five kopecks. Bread is four kopecks a pound, milk ten kopecks a quart. (A kopeck is approximately one cent—Ed.)

I was struck by the fact that all the streets in the village have brick cottages. They were all built from standard designs and cost between 500 and 600 rubles. A member who wants to build a house applies to the collective farm for a loan, repayable in two to three years.

I spent my last evening on the farm at Grigori Filippovich's house. He was giving a party for his nephew Valentin Timofeyev, who had just graduated from the Rostov Medical Institute. He was leaving for Daghestan, on the Caspian Sea, to work as a doctor.

It was getting late, and Grigori Filippovich came out to see me off. The windows of the Malich cottage across the road were aglow with light. The old man himself was sitting on a bench outside, enjoying the fresh air.

"How are things, neighbor?" Grigori called to him.

"Okay," replied the old "American."



Grigori Filippovich (left), the farm's bookkeeper, was still a boy when he returned. The party is for his nephew Valentin, just out of medical school.





(Left) Grigori grows grapes in his back yard. He owns his own cottage. (Right) The farm raises livestock, poultry, fruit and various field crops.



Anna Timofeyeva, Grigori's sister, teaches in the farm's secondary school. His brother is a combine operator. Another sister lives in the Ukraine.

Brief Comments

Lithuanian Poetry

by Gennadi Gritsai



Gennadi Gritsai, 28, is completing his graduate work in the literature of the peoples of the USSR at the Institute of World Literature. His poems have appeared in Russian, Lithuanian, Ukrainian and Byelorussian magazines.

Everything in Lithuania is permeated with history. The past stalks you at every turn. It is part and parcel of the people's character and the republic's profile. It is to be found in everything — painting, architecture, dramaturgy, sculpture and, of course, poetry.

The present blossoming of Lithuanian poetry, a fact which even our critics acknowledge, is owed primarily to Eduardas Miezelaitis. In 1961 his *Man,* a selection from three of his books published between 1957 and 1961, appeared in Russian translation. The poems are a harmonious entity cemented by a broad and enveloping idea, the idea of Man and his purpose.

Miezelaitis' man is organically bound to nature, the earth, the sun. He is an extension of nature, one of the stages of its unceasing evolution. The poet writes: "Birds evolve into planes, and lightning into rockets." Man in his poems says: "I grow from the earth to the very sun," "I grow from the flower of the field." Man is not a helpless drop carried along the eternal flood of life and death but an active historical force. This concept of man is basic to Eduardas Miezelaitis' thought.

The emphasis on the human is a reaction against the provincial tight-mouthed reserve of old Lithuania. Miezelaitis and the younger generation of poets following his lead have revolutionized Lithuanian poetry, revealing the potentialities of a "contemplative literature," as it were. For a long time nature was the important, if not only, source of imagery in Lithuanian lyrics. However, descriptions of nature that gave the poet a stage for the finest nuances of feeling were not suitable for expressing large ideas, universal concepts. What had to be done, therefore, was to free the image from its traditional dependence on nature and dip it into the deep currents of life, steep it in the contemporary. A growing stress on the intellectual element is the trend most characteristic of Lithuanian poetry in recent years.

In his "Publicist's Poem," Justinas Marcinkjavicius moves out of the orbit of autobiographic fact and personal experience. This is not a confession but the poet's credo, his declaration of principle, his world of feelings born of reason.

"Blood and Ashes" is his most complete expression thus far of this intellectual trend, this search for universals, so characteristic of today's Lithuanian poetry. It tells the story of a Lithuanian village razed by the Hitlerites. In the poem Marcinkjavicius condemns those who follow the third path, who rationalize their self-preoccupation with the tired formula, "Charity begins at home."

The poet Algimantas Baltakis resolves the same problem in his own way in his finest book, *The Devil's Bridge,* which is virtually a lyrical diary. From poem to poem one can trace the gradual development of the book's inner theme: the clash between two concepts of life—partisanship and philistinism. Baltakis tells his hero's love story against a background of the burning problems of our time.

However, it must be noted that in some of Miezelaitis' verses, in Marcinkjavicius' "The Publicist's Poem" and the later poems of Baltakis, the generalized image of man is often too far removed from reality. The eternal problems of life are posed instead of today's, and we have man generalized instead of man concretized, man who makes history.

Lithuania occupies a small space on the map of the USSR, but on the map of Soviet poetry it looms very large indeed.

Films: Debuts and Debutants

by Boris Galanov



Boris Galanov, born in 1914, is a graduate of the Institute of Philosophy, Literature and Language. A leading critic, he is the author of numerous articles on literature and art. He now heads the art department of Literaturnaya Gazeta.

Soviet cinematography this past year was prolific in debuts. There were so many film directors, script writers, cameramen and actors making first appearances that a special creative conference on films done by newcomers was held in Moscow.

When Eisenstein's *Potemkin* had its first showing, he wrote: "I could repeat Byron's words: 'I became famous overnight.' " It was through this film that many people in the West learned about Eisenstein. Yet his debut actually took place much earlier. He was already well known in Russia as a stage director and producer of the film *Stachka (The Strike).* If not for this film, *Potemkin* would perhaps have had harder going.

A debut of talent is interesting, not only for itself but also as a promise for the future. Not every debutant can present his audience with a *Bicycle Thief,* a *West Side Story,* a *Judgment at Nuremberg* or a *Chapayev,* but who knows, a few years later the inconspicuous debutant may also become "famous overnight."

However, let us return to the new Soviet film makers. *Welcome,* a satirical comedy produced by director Elem Klimov, was a decided hit. The press called it the merriest and the angriest comedy of the season. Certainly an auspicious debut. Another comedy film to enjoy success was *There Is Such a Lad,* produced by Vasili Shukshin.

Why did these films make it? Was it because they had so many of the qualities of genuine comedy? Yes, but it is not only the genre. The fact is that these young producers and directors tackled real problems and they tackled them with boldness, ingenuity and the skillful—and poignant—use of satire and allegory.

Our State Institute of Cinematography has been operating for a number of years. This very unique educational institution has reared almost all the major figures in Soviet cinematography. Before producing films for the country's audiences, they tried their wings in student productions, and the triumphs of the future were already apparent in these short-reel experimental films. While a student there, director Elem Klimov produced a very witty picture called *The Bridegroom,* and from it his subsequent satirical comedy developed like a plant from seed. Then there is director Andrei Tarkovsky, whose debut in *Ivan's Childhood* was crowned with the Golden Lion of St. Mark at the Venice Film Festival. As a student, he produced a very discerning short-reel film called *The Skating Rink and the Violin.*

A successful debut is hardly a simple coincidence of happy circumstances or a talent suddenly "budding out." As a rule it has been fathered for a long time by experienced master cinematographers. As for the common features in the debuts of our young people, I would say they all have a serious creative approach to their craft. The good films of the young directors reach for high literary standards. I do not mean the outward affinity achieved by copying story-writing methods. That is artificial. I have in mind films that assimilate the expressive values of related arts with their own methods, films whose content has an affinity with literature because it is so much more versatile, more convolute, more complex psychologically. Just as a good book can be read many times, a good film can be viewed with interest again and again, with the audience discovering something new in it each time.

One more thing. Looking at the best debuts, we know unmistakably—even without information about his background—that the director is young, for invariably the film presents a young and fresh portrait of the surrounding world.

Religion and Atheism

by Georgi Ulyanov



Georgi Ulyanov was born in 1918. He saw action at the front in the early years of World War II and later became a war correspondent. He is presently on the staff of the monthly magazine Nauka i Religia (Science and Religion).

Conrad Gutermuth, a reader from Ohio, writes: "Though you do allow freedom of faith in the Soviet Union, you nevertheless follow a special educational program to inculcate atheistic convictions in your people, or at least these convictions are a component part of your educational program." Several questions follow, among them: "What is the attitude of socialism and communism to religion?" "Why doesn't the Soviet Government take a neutral stand on religion and atheism? What is the difference between a government that misuses religion to subjugate people to obedience to a reactionary economic and political regime, and one that uses its economic and political system to propagate atheism?"

Article 124 of the Soviet Constitution says: "In order to ensure to citizens freedom of conscience, the church in the USSR is separated from the state, and the school from the church. Freedom of religious worship and freedom of antireligious propaganda are recognized for all citizens." Please note that the article says freedom of religious worship is recognized for all citizens, and not merely *allowed*.

Believers in the Soviet Union are free to profess the Russian Orthodox faith, Catholicism, Islamism, Judaism, Lutheranism, Buddhism, or any other religion. The Soviet law prohibits any kind of interference (especially administrative) in the activities of religious groups. Moreover, one of the articles of the criminal code stipulates penalties for "interfering with the performance of religious rites."

The Truth about Religion in Russia, published by the Moscow Patriarchate, the directing authority of the Russian Orthodox Church says: "The decree on freedom of conscience, issued by the Soviet power as far back as January 1918, guarantees every religious community, including our Russian Orthodox Church, the right and opportunity to practice its faith."

Religion in the Soviet Union is strictly a private affair of the believer and has nothing to do with the state. This means that under no condition is the Soviet Government or its agencies permitted to inquire into a citizen's religious conviction. It is noteworthy that the Soviet Government keeps no records that bear on a citizen's religious beliefs. However, the Communist Party, a voluntary organization of the most conscious section of the working class, collective farmers and intellectuals, cannot be neutral to religion since its ideology is fundamentally opposed to the scientific materialist world outlook of communism.

The Party's *only* weapon in its struggle against religion is ideas. The Party strives to have all Soviet people acquire a scientific materialist and, consequently, an atheistic world outlook, and to free the minds of believers from the millennium-old residues of religious dogma that fetter their creative capacities.

The events of everyday life—enormous advances made in the cognition of the world, the progress of science and technology, the flowering of culture—testify to the might of the human intellect and make the concept of God superfluous. The growth of atheism is an inevitable process of our time.

The thinkers of ancient India and China had freethinking ideas millenniums before our era. In ancient Egypt *The Song of the Harp Player* expressed disbelief in the other world. Since then every historical epoch has, in one form or another, made its contribution to freethinking and atheism.

This logically led to the formation in 1880 of the World Union of Freethinkers, whose charter declares: "Free thought opposes the sway of any kind of religion. It fights for freedom, democracy and for the intellectual, cultural and moral progress of mankind, for the good of human society and peace." The World Union of Freethinkers has an American section.

Atheism is not an invention of godless Communists. It is a historic inevitability, the product of the development of human society.

IN THE NEXT ISSUE



This is a very special cover. The artist is cosmonaut Alexei Leonov. When he left his ship for that memorable walk in space, he carried no palette and brushes with him, but the cosmic colors were unforgettable. Later he tried to convey them with terrestrial paints. Ivan Yefremov's fantastic story, "Five Pictures," comments on these cosmic paintings. Also in this issue, a Novosti Press Agency correspondent interviews Alexei Leonov and Pavel Belyayev on recent developments in the Soviet space program and the race to the moon.

The Nikitin children run barefoot in the snow, wearing shorts and not much else. At three they begin to read and at six to solve problems in algebra. The Nikitin book *Are We Right?* has caused something of a furor. Doctors, educators and parents are asking themselves and each other, "Are they?" The Nikitins reply with a firm Yes for their child-rearing methods.





There have been any number of *wunderkinder* in musical history—Mozart, Paganini, Heifitz and dozens of others. But there have been comparatively few who drew and painted like professionals in childhood. A 12-year-old, Nadya Rusheva of Moscow, critics think, may be one of these rare artists. See her drawings reproduced and read how teachers are developing her natural gifts in the September issue.



In what ways are American and Soviet colleges alike and different? What are the entrance requirements? How good do you have to be to get in? What about costs—tuition, lab fees, library fees, etc.? Any scholarships? Is class attendance compulsory? Are tests oral or written? The grading system? Proportion of humanities and science courses required for graduation? How long does it take to become a doctor, an engineer, a teacher, a musician? What are the opportunities for graduate study? What about job placement? For the answers to these questions, see Our Universities.

Some of the other articles in the September issue are:
A Heart in My Hand—excerpt from the autobiography of a famous surgeon, Nikolai Amosov; Pskov—a description of this ancient city, another Rus masterpiece; Socialism and the Countryside—notes by economist Dmitri Rudy; Dedicated to Hemingway—a war story by Victor Nekrasov; Scaling the High Peaks—about Soviet alpinists; What We Liked in America—the impressions of two Soviet educators on the teaching of music; Communication with Extraterrestrial Civilizations—by Professor Iosif Shklovsky.

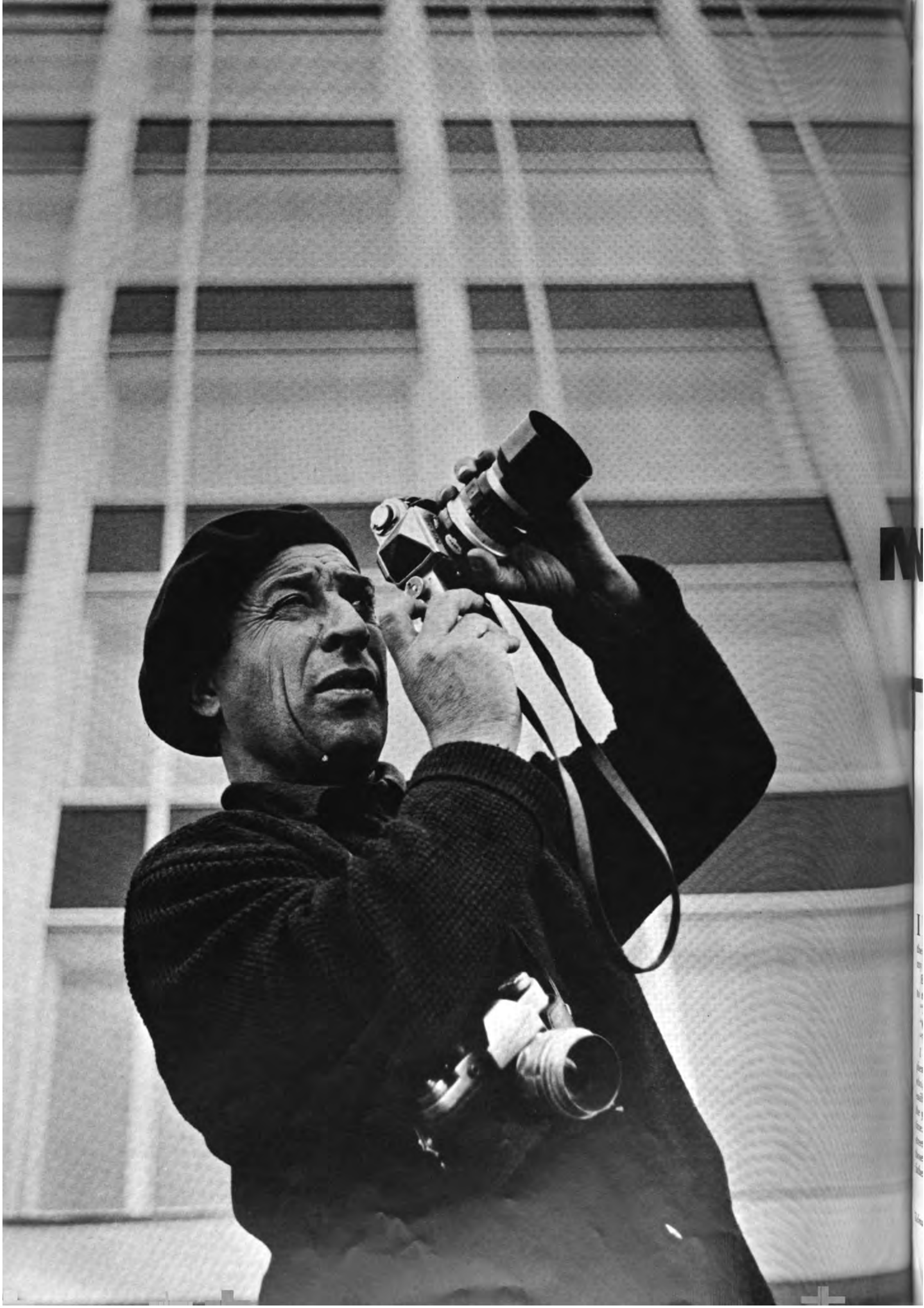
NOVOSTI PRESS AGENCY

SOVIET LIFE

Miscarriage of Justice Public discussion of a prosecutor's gross misinterpretation of the law.

Russian Way of Birth How Expectant Mothers Receive Instruction in Natural Childbirth

COMING SOON





Zelma in Tashkent 40 years ago.

NARETS AND TEXTILE MILLS

By Faisulla Khojayev

I WAS surprised, to tell the truth, when the editors asked me to trace the transformation of Tashkent, the capital of Uzbekistan, over the past 40 years. I am 32 and could hardly be expected to have seen my native town four decades ago.

But Georgi Zelma, who took the accompanying photographs, came to my aid, being an old Tashkentite like myself.

"Do you know what district you were born in?" he asked.

"Of course! In Sheikhantaur."

"Well, look at this picture. Don't you recognize the place?"

I did, immediately. Though I am an ordinary mortal, without the phenomenal memory of my great compatriot, the philosopher Avicenna, who, as legend has it, remembered himself in his swaddling clothes, I easily recognized the haunts of my childhood. I identified Zelma as the youth standing on top of the minaret I myself had climbed many a time. I also saw the flat roofs of the familiar section and the crooked streets hemmed in by clay walls. I had been carried—no, led—along those streets time and again by my mother, grandmother and grandfather.

Zelma photographs Tashkent today.

"Well, write about yourself, about your memories. You must have a lot of them at 32!"

My grandfather, a pious Moslem, had been to Mecca, and people called him a khoja, or learned man. That is how we got our surname Khojayev. He knew the Koran well and had studied the teachings of Mohammed. But my grandfather's erudition, may he rest in peace, did nothing at all to bring plenty to our house.

My father was a student at the Polytechnic Institute, and my mother took special classes for young workers. The family lived on their student stipends, earning a bit of extra money whenever possible. Frequently, however, Father had to take his slide rule—a rare thing in those days—and go off to the pawnshop. He came back without it, but there was food for a while.

Those were hard times. It was only eight years since Uzbekistan had become a socialist republic—only eight years separated us from feudalism.

In time the slide rule stopped making the trip to the pawnshop and back. It is safely in my desk now, and I am keeping it to show my son when he grows up. New things made their appearance in our house: a radio, beds, a mirror, a clothes closet. By now, too, we were living in a new house in a new district.

Everything seemed very stange to me here. I had been used to a wooden cradle painted all the colors of the rainbow. My parents and forefathers had slept on mattresses on the floor. We had kept warm by shoving our feet into a primitive oven. Called a sandal, it was a clay pit in the floor. The fuel was charcoal, and we were often very nearly asphyxiated. Our windows had faced a small courtyard. The outside walls had been windowless to keep the women from looking at the men who passed.

That is how our neighbors and everyone in our *makhall* (section) lived. That is how things had been in the East as far back as anyone could remember.

We had a real European stove in our new home, but we were envious because the neighboring house had steam heat. Our new house had many windows, however, and when these were thrown open in spring, our rooms were filled with the fragrance of acacia. We could hear the whisper of the rain and see the stars at night.

There was a faucet in our house, and—like every person in the East where water has always been prized more than gold—I loved to turn it on. It was a joy to watch the water come gushing out.

Nor were we the only ones to leave the old section of Sheikhantaur. Tashkent was growing. The city limits were spreading, and new people came to live in the capital from all parts of the country.

We got an apartment in the southern district, a new section that had grown up around the construction site of a textile mill.

The foundations of the townlet, for it was nothing more than that, had been laid long before we came there. The ceremony of laying the first stones took place a month before I was born, but I have heard a lot about that great event.

The city woke up at dawn, and the crowds—young people and graybeards, men and women—poured toward the construction site. The women kept to themselves. The custom, still in force those days, forbade them to bare their faces in public, and they kept carefully hidden behind their *chachvan* veils. But veiled though they were, the women hurried not to be late. Everyone wanted to be there.

There were many speeches (people in the East are fond of talking) and a noisy orchestra, but the silence that followed was broken only by the slap of the cement and the swish of the trowel with which Yuldash Akhunbabayev, the first president of Uzbekistan, laid the first brick for the foundation of the first large plant in the republic. He placed a silver coin under the brick in deference to the tradition of the Russians with whom the Uzbeks were building this "first-born" mill of their textile industry.

We were doing many things for the first time then. We were competing with God in the creation of the world!

Thinking of that textile mill today, I take a good deal of pride in the fact that we were born and grew up together.

My parents were welcome workers at the new mill; my father soon became its chief engineer, though he had just graduated from college

Paving a Tashkent street. And in the 40-year-old photo below . . .

and was younger then than I am now, very young to be entrusted with a mill that today employs thousands.

Somewhat later my father went to study in Leningrad, and that was where he was when the war began.

The war . . .

My mother and many other mothers sat on a worn carpet spread on the dusty grass at the entrance to the mill. They were holding tins of soup and bits of bread—the rations of those war years—and giving them to us, the children.

Life grew harder and harder. The war was in its third year. That was when a few other boys and I got jobs in the woodworking section of a plant. Known as the Tashkent Agricultural Machinery Plant today, it produces cotton combines.

It was hard working and studying at the same time. There was barely time to do my homework. I brought my books to work, and during the

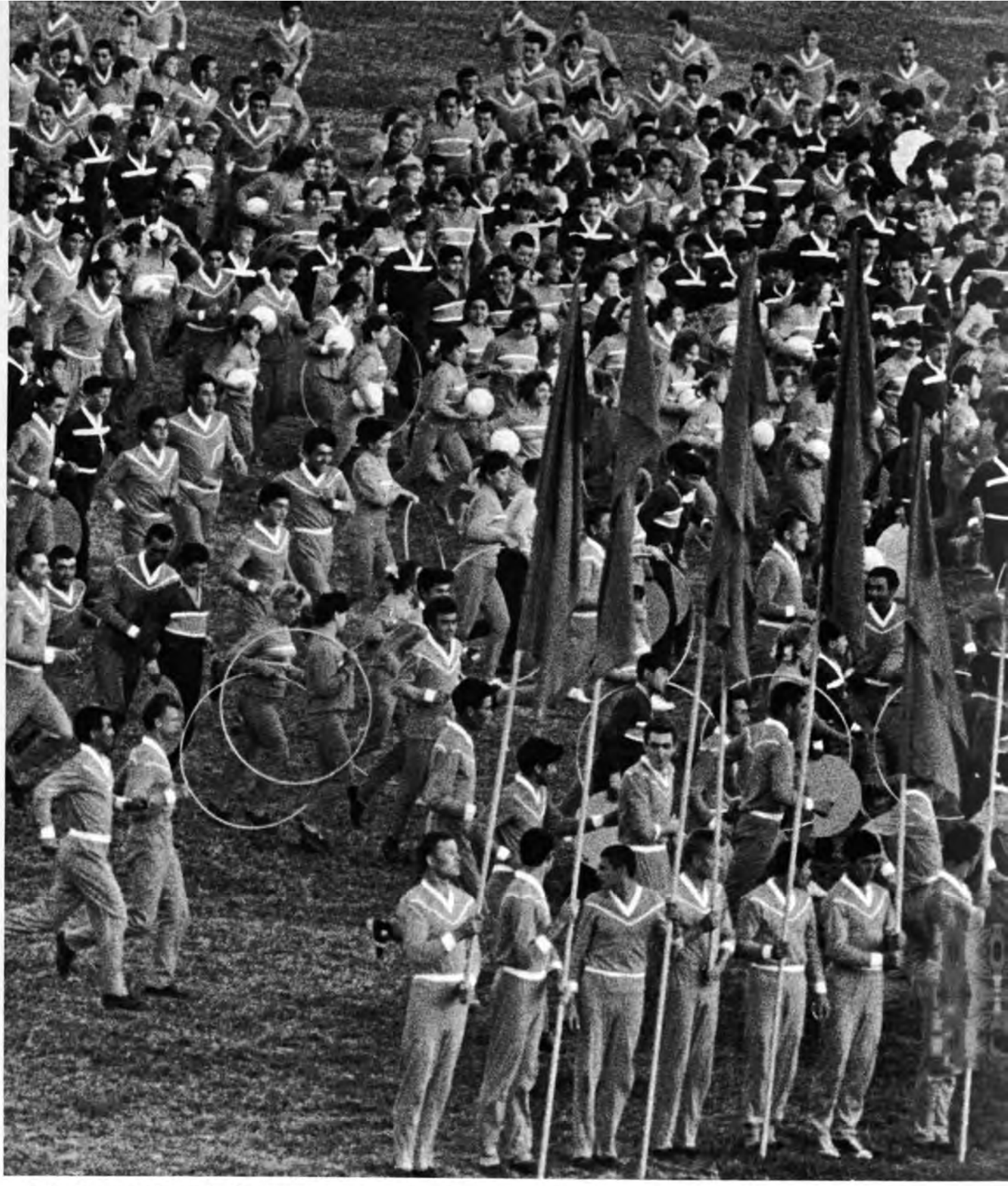
. . . how dust was kept down.



Old city gymnast. And above . . .







. . . in Tashkent's Pakhtakor Stadium.

intervals between loading cars, I would perch on a pile of boards fragrant of the woods and do my assignments.
ter the war I studied at the Cinematography Institute in Moscow. now taking a film director's course there.
fe gave us ample opportunity to study. My father graduated from colleges, while I went through one and a half.
ke a crane flying back to its old nest, I hurried home during the lays. I found the new streets, the new bus, trolleybus and streetcar very confusing. Each time I returned, I barely recognized the city s born in.
ere was a fortress once on a hill along the Ankher River, which les the old section of Tashkent from the new. That citadel was during the czar's time. It was meant to intimidate the people of kent and to stand forever. But it is gone now. In its place is an e building, a large public institution seven flights high. Nor is this

MINARETS AND TEXTILE MILLS



In the chachvan *veil of old Tashkent and (right) how women dress today.*

the only tall building in town; our once squat one-story city has been pushing up, reaching for the stars.

I live in a new house with my family. Our old apartment near the textile mill got too crowded.

Half of the new building I live in houses the Wedding Palace, or *Bakht Uii*, which means House of Happiness in the Uzbek language.

This grandiloquent name made me laugh at first. All sorts of unpredictable things happen in a marriage. My family, too, has had its ups and downs. Later I came to appreciate the naive, somewhat poetic mood of the person who thought up that name.

Led by the grooms, and carrying bouquets of roses, the brides sedately enter the House of Happiness, trembling with excitement and quite overwhelmed by the solemnity of the moment.

In the old days girls were simply given in marriage without their consent. The rites followed tradition and the Koran. When a girl was 14 years old, she was struck across the back with a quilted Uzbek gown—a *chapan*. If she was knocked off her feet, she was too young to marry. If she stood up to the blow, she was fit to be a wife.

Far be it from me, however, to say that everything was bad in the old days. "Trampling" on the past is no philosophy of mine, for we have risen from the past like a tree from its roots.

I can't help feeling a little sad when I see the street-washing machines and the steam rollers smoothing the pavement. Asphalt has been encroaching on the "living" soil, on the grass. Heartless saws, too, have wrought havoc here and there among the orchards and the vineyards for which Tashkent always was and always should be famous.

Anton Chekhov once observed that "The woods make man comprehend the beautiful." And the Koran says: "The man who plants a thousand trees will go to heaven." What a pity that our architects and builders have been inclined of late to forget these words. They will be remembered if we say them often enough. Meanwhile we do have many more of the good things of life than we had before.

Enough of this writing, the pictures tell the story far better than I can.

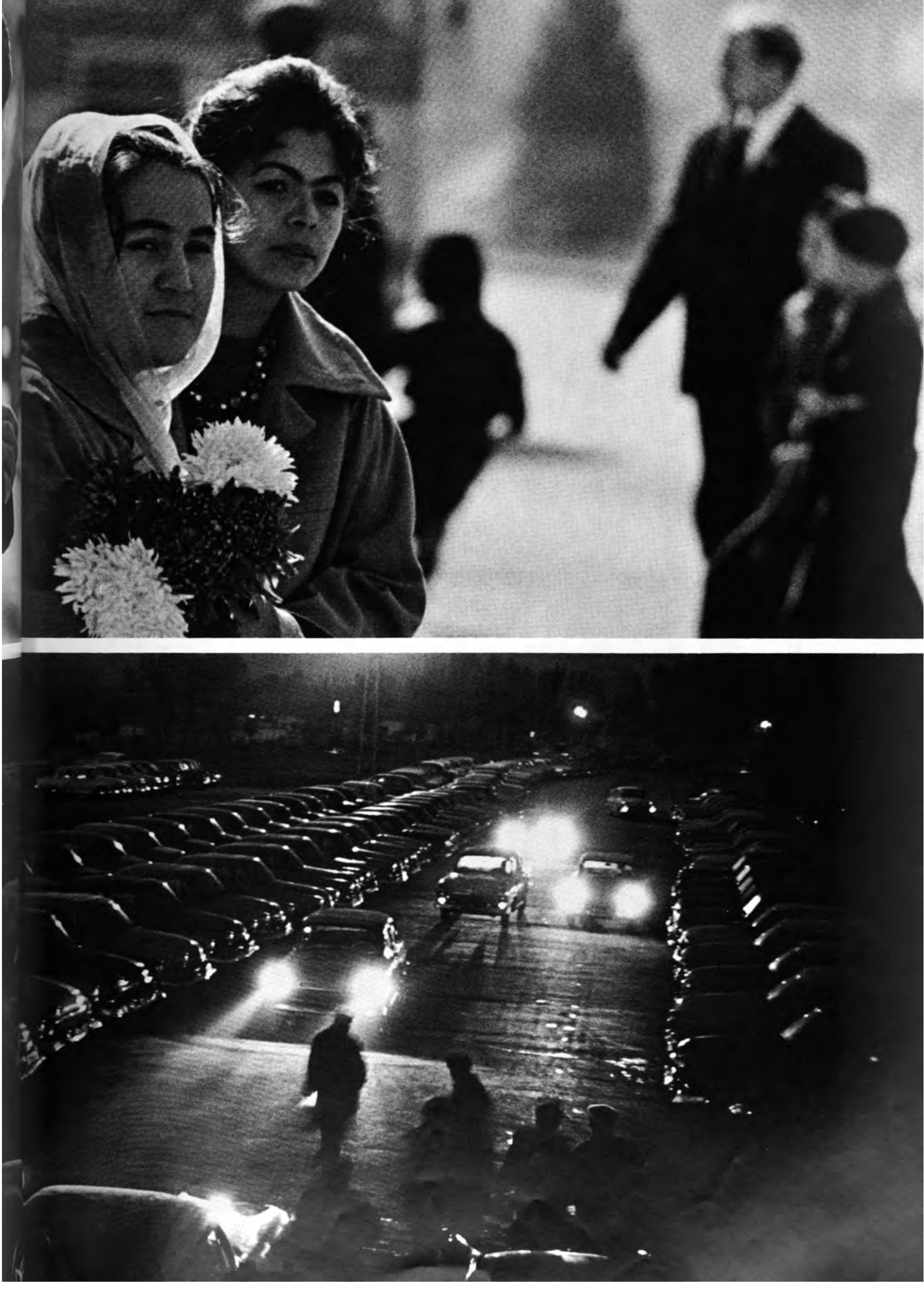
I want to add only this. Those who find that I have written too little are cordially invited to visit me when they come to Tashkent, and I'll make sure they see everything for themselves.

Stabling a donkey caravan in the old days and (to the right) one of the modern city's taxi pools.



MINARETS AND TEXTILE MILLS



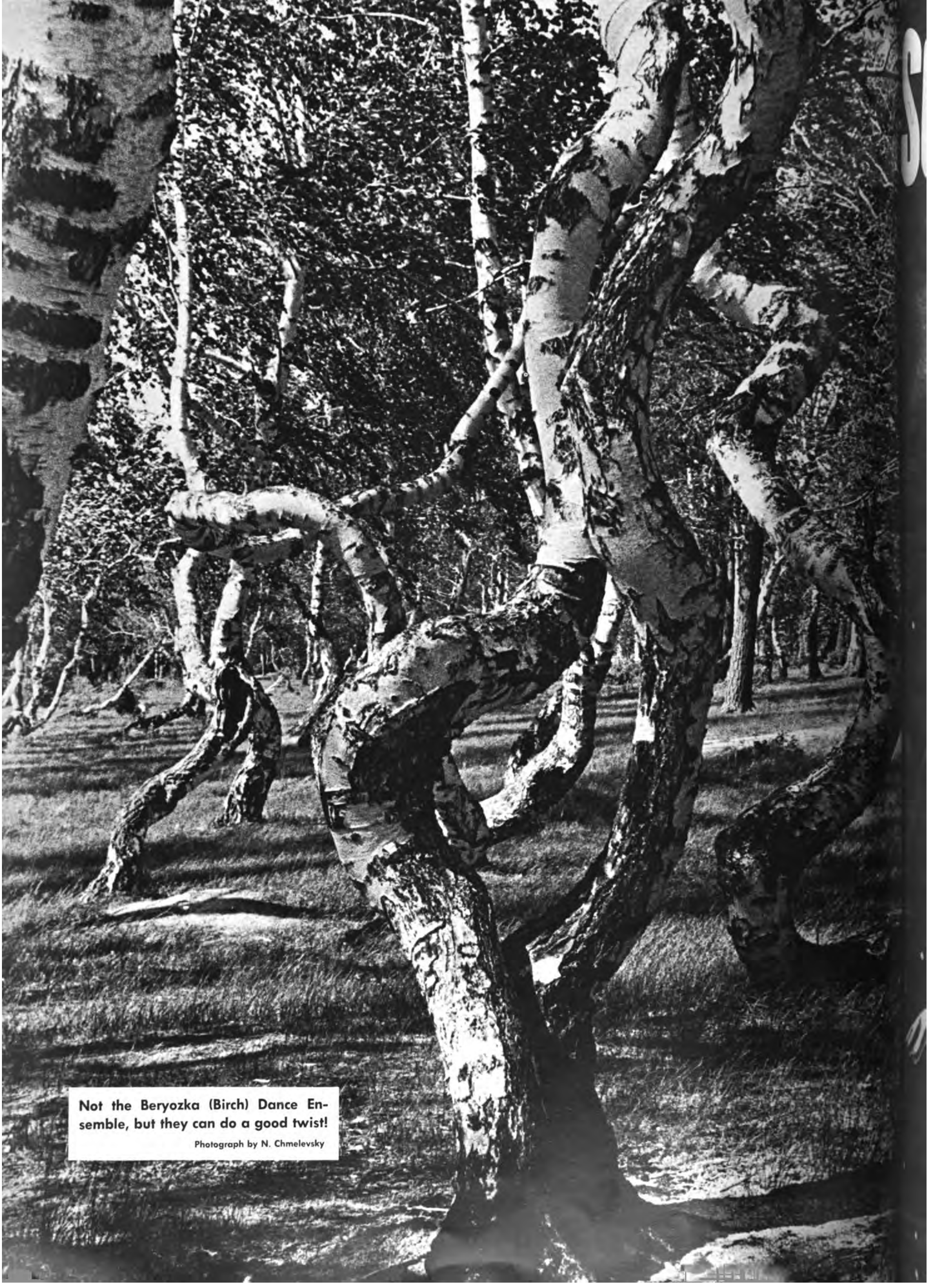


MINARETS AND TEXTILE MILLS



Municipal transportation 40 years ago and (below) traffic in Tashkent streets today





Not the Beryozka (Birch) Dance Ensemble, but they can do a good twist!

Photograph by N. Chmelevsky

SOVIET LIFE

WORKERS FIRE BOSS

CALLING OTHER GALAXIES

OUR UNIVERSITIES

September 1965 • 35 cents



UNIVERSITY OF MINNESOTA
RECEIVED
AUG
16
1965
LIBRARY

SPACEMAN'S GIFT

Я посылаю этот рисунок журналу "Совьет лайф" с пожеланием читателям журнала и американским космическим кораблям. До встречи на орбите!

(see page-3)





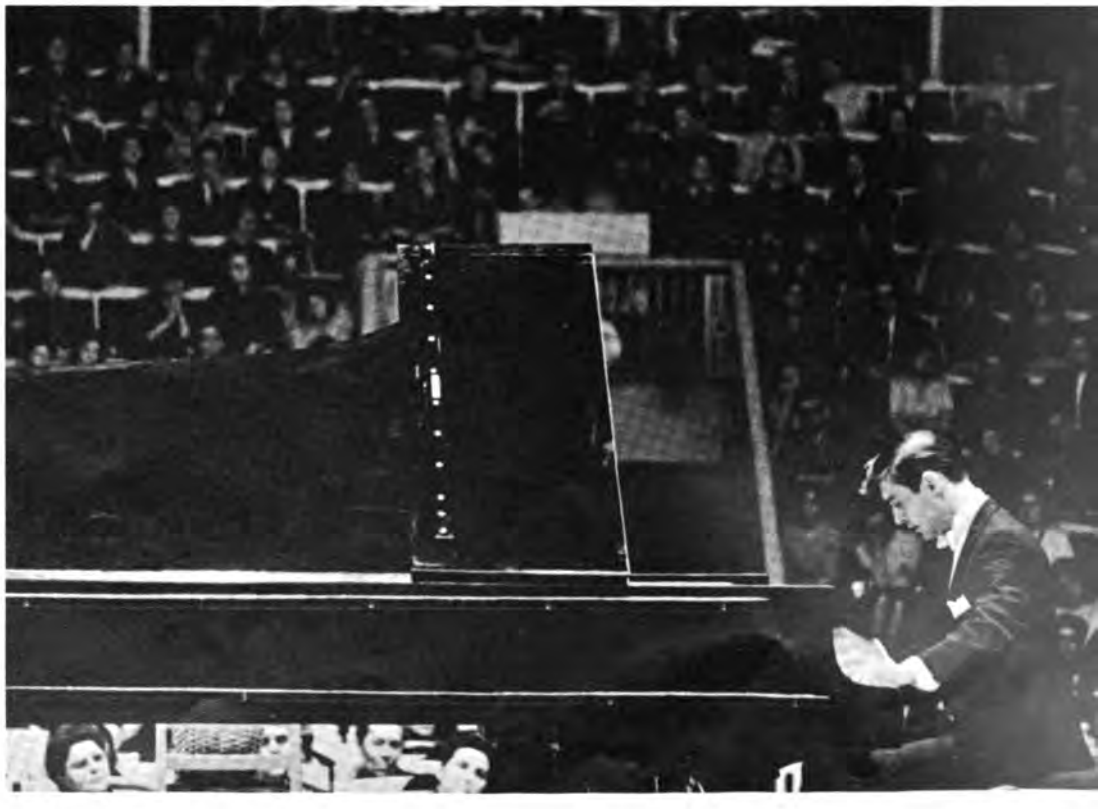


A lone muscian plays for a critical gallery of great classical composers in Conservatory Hall.

reflections on the cleveland orchestra's soviet tour

BY VLADIMIR POZNER

John Browning plays to a full and overflowing house in the capital's famed Tchaikovsky Hall.





Louis Lane rehearses with Grant Johannesen and the Cleveland Orchestra in Moscow's Conservatory Hall. Poetic, decisive, brilliant—were the words critics and laymen alike used to describe Lane's conducting of scores that ranged the catalogue of music from Gershwin to Hindemith.





MUSICAL DICTIONARIES tell us that double counterpoint is when two themes are transposed so the treble can be used as the bass and the bass as the treble. Put more simply, it is when two voices ring out in meaningful unison.

The Cleveland Orchestra did indeed play in double counterpoint on its Soviet tour last April and May. The first counterpoint, in the language of music, was heard evenings in the concert halls of Moscow, Kiev, Tbilisi, Yerevan, Sochi and Leningrad. The other counterpoint, in spoken language, was heard the rest of the time in talks with the musicians and their conductors.

The first was faultless. Muscovites and Leningraders, who in recent years have listened to the world's best symphony orchestras, including those of Philadelphia and Boston, snapped up the tickets long before the orchestra arrived, definitely with no regrets. Except for occasional criticism of the too academic interpretation of a few compositions, professionals, whether composers, conductors or musicologists, were unanimous in their praise of the Cleveland Orchestra's virtuosity.

The first counterpoint was superb, a real treat for music lovers and a testimony to the high standards of American musicianship.

The members of the orchestra availed themselves of their free time to see and hear everything of musical interest. For instance, George Szell, the conductor, went to the Central School of Music where he sat in on classes conducted by cellist Mstislav Rostropovich and violinist Igor Bezrodny. He and members of his orchestra went to the Composers Union, concert halls, the Bolshoi, and to places just to see people. Moscow's jazzmen invited some of Mr. Szell's charges to a jam session for two nights running at the Yunost Cafe.

And now we come to the second of our counterpoints, the one expressed in plain ordinary human language. What did the American musicians say about the USSR? What did they "dig"? And how much did they think the visit contributed to mutual understanding?

"The audiences received us very warmly indeed, and I enjoyed playing for them. As for Conservatory Hall, it is magnificent. I went to the Bolshoi and found it to be absolutely beautiful. Probably it is the only hall of its kind in the world. Finally, I was amazed by the Bolshoi orchestra. I've never heard anything like it in any other opera in the world." That was pianist John Browning's comment.

Louis Lane, the associate conductor, remarked, "When conducting, I felt behind me an atmosphere of intense concentration and attention—something you usually don't get in New York."

"The welcome we are getting goes beyond plain hospitality. We feel our hosts very much want to do all they can to make us feel good. I would like to thank the Moscow Philharmonic Society for all that, and I hope we shall be able to give its orchestra as much attention in Cleveland," A. Beverly Barksdale, the orchestra's general manager, said.

"I was extremely impressed with the Central School of Music. I wish we in America had such a system of secondary schools of music linked up with the conservatories," Conductor George Szell told me.

But there were also remarks of another order, made in particular by the orchestra's leaders.

For instance, while expressing admiration for the Soviet system of musical education, Mr. Szell said that though it was desirable for noted musicians to teach, it was harder to do that in the United States, where a musician could not be forced to teach, either by direct or indirect pressure, if he didn't want to. This remark, in my opinion, shows that Mr. Szell has rather hazy notions of this whole aspect of Russian life. It has always been considered a point of honor among Russian musicians, even a moral obligation, to give younger musicians the chance to benefit from their experience. Besides that, teaching at the conservatory, while it does not take up an excessive amount of the musician's time, pays well enough so that he needs to give concerts only when he wants to, not because of financial considerations. As for forcing somebody to teach, what would be the point? No teacher could be worse than one who is forced to teach.

While they appreciated and were pleased with the audience response on the whole, they thought Soviet audiences were not as musically sophisticated as in New York. Mr. Szell did emphasize that the New York listener was the exception, that he was usually a professional musician or a person with a European education.

By contrast, the audience at the Moscow Conservatory is made up of men and women from all walks of life, from the intellectual to the ordinary factory worker. And the reasons. First, because Soviet people—all kinds—have a real love for good music and, second, because tickets are fabulously cheap. In such circumstances the general cultural background, musical background especially, will not be up to the level of the professional or the musical sophisticate, of course. However, go to any one of the series arranged especially for the connoisseur and you find that Russia has a very large proportion of sophisticated concert-goers.

This was the double counterpoint I heard from the Cleveland Orchestra concerts in Moscow and in the conversations with its musicians.

But then I may be doing them an injustice. It was at the beginning of the tour that I spoke to them. Their reactions may have changed after they saw other parts of the country. But whether they did or not is by the by. The point I want to wind up with is that today we need such contacts between our two countries more than ever before. Artists, musicians and writers who visit the USA or the USSR show the stuff their country and people are made of and pave the way for better understanding.

We both could use more of such double counterpoint!

Members of the Cleveland Orchestra listen in on a class taught by Mstislav Rostropovich.



Conductor George Szell and others at Moscow's Central School of Music for Gifted Children.



Some members from the percussion section jazz it up at the popular Yunost Café in Moscow.



SOVIET LIFE

SEPTEMBER 1965 No. 9 (108)



Front Cover: This painting was made by the first man to walk in space especially for the magazine. With it he sent this message:

I present this drawing to SOVIET LIFE with my very best wishes to the readers of the magazine and to my cosmic colleagues. Until we meet in orbit,

Sincerely,
Alexei Leonov

PICTURE CREDITS

Alexei Leonov Cover I; Anatoli Garanin Cover II-2; Dmitri Donskoy 4; TASS 6-7; Nadya Rusheva 9-11; Yevgeni Tikhanov 11; Gari Reingold 12-13; Vladimir Vdovin 18-19; Yuri Korolyov 24-25; Alexander Krylov 26; Andrei Sokolov 30-35; Lev Sherstennikov 38-39, 49.51; Gherman Cheryomushkin 40; Mikhail Anufrikov 43-45, Cover IV; Alexander Makarov 50; Alexei Alexandrov 50; Fridrikh Grinberg, Gennadi Shcherbakov 54-57; Lev Polikashin 57; Anatoli Yar-Kravchenko 60; Vsevolod Tarasevich 62-Cover III.

Editor in Chief
(Moscow Editorial Board): Yuri S. Fantalov, APN, Pushkin Sq. 2, Moscow, USSR.

Editor
(Washington Editorial Board): Alexei S. Belokon, 1706 18th St., N.W., Washington, D.C., 20009.

Managing Editor
(Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director
(Moscow Editorial Board): Marina T. Zabolotskaya, APN, Pushkin Sq. 2, Moscow, USSR.

Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine SOVIET LIFE.

Subscription Rates:
ths—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second-class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Fawcett-Haynes Printing Corporation, Rockville, Md.

Page

School of Administration (Our Trends) Interview with Ivan Vladychenko 22

SOVIET PEOPLE

Making Creative Children by Yevgenia Kameneva 6
Drawn from Imagination by Lev Kassil 9
Pluses and Minuses by Nina Alexandrova 52
The Nikitin Approach by Yelena Knorre 54

SOVIET DEMOCRACY

Working Teenagers by Nina Nadezhdina 23
Workers Fire "Boss" by Mikhail Shutkov 24
Trade Union Dues and Benefits by Vasili Barakov 26

INTERNATIONAL CONTACTS

Reflections on the Cleveland Orchestra's Soviet Tour by Vladimir Pozner 1
International Socialist Bank by Victor Veselovsky and Edward Tserkover 12
What We Liked in the USA Interview with Yelena Orlova and Yuri Muromtsev 16
America Sees Cosmonauts "Leoning" by Georgi Bolshakov 27
Siberia Applauds Van Cliburn 58

PHILOSOPHICAL PROBLEMS

Jean Jacques Rousseau by Albert Manfred 20

ECONOMY AND SCIENCE

A Heart in My Hand by Nikolai Amosov 17
What Is Space Made Of? by Konstantin Portsevsky 28
The Latest on Space Interview with Cosmonauts Pavel Belyayev and Alexei Leonov and Lieutenant General Nikolai Kamanin 28
Socialism and the Countryside by Dmitri Rudy 36
Bashkiria by Ziya Nuriev 38
Communication with Extraterrestrial Civilizations by Iosif Shklovsky 46
Our Universities by Mikhail Prokofiev 62

LITERATURE AND THE ARTS

Five Pictures by Ivan Yefremov 30
Dedicated to Hemingway by Victor Nekrasov 40
Pskov by Yuri Ovsyannikov 49
Mikhail Svetlov by Natalya Lagina 60

RECREATION AND SPORTS

Valeri Brumel at Home by Alexei Srebnitsky 4
Scaling the High Peaks by Ari Polyakov 43
The Case of the Venomous Pretzel by Vladimir Lutin 46

MISCELLANEOUS

Letters to the Editor 5
Learning Russian 8
Around the Country 14
Queries from Readers 42
A New Space Series 45
Russian Books in English 53
Brief Comments 58
Next Issue 59

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY





International cooperation on a small but effective scale.

Olympic medal winner John Thomas gives little Sasha an American-style haircut.

A workout in Moscow before the competitions in Kiev.



VALERI BRUMEL AT HOME

By ALEXEI SREBNITSKY

IF A RAMBLER is parked among the Moskvich, Zaporozhets and Volga cars in front of the biggest new apartment house on Michurin Avenue, you can be sure to find the Brumel family at home.

Valeri is always glad to welcome visitors at any time of the day or evening if he is not hurrying off to the institute or for practice. He usually wears a white shirt with rolled-up sleeves and blue track trousers around the house, and if you're not too well acquainted, he will soon ask whether you play chess.

The Brumels get along very well, and it is a pleasure to call on them. Both of them are Muscovites, although they first met down south, in Krasnodar, three years ago. Valeri arrived there for a track meet, while Marina Larionova, a student at the Moscow Teacher Training Institute, was spending her vacation with her parents, who still live in Krasnodar.

Because of their contrasting characters, I won't risk claiming that they quickly found common grounds. Valeri is calm and sober-minded. It is not without reason that he is called "a man without nerves." Marina, on the other hand, has an expansive nature. Nevertheless, a year later, Brumel sent wedding invitations to his friends.

Needless to say, Marina is the most passionate of high jump fans. Whenever possible, she goes along with her husband to track meets in other cities and for hours sits patiently in the stands (the high jump is a drawn-out affair). When Valeri drove his car to Minsk for the annual spring match last year, Marina accompanied him on that 430-mile trip.

Speaking of Marina as a rooter, she knows quite a bit about sports, having done some jumping and running herself. She also engaged in acrobatics and passed an exam in ice hockey at the end of her third year at the institute. A diploma is given to a physical training instructor graduate who is able to do everything in sports. Marina has such a diploma now. Besides this, she has qualified for the Master of Sports rating in calisthenics. There was a time when she made a strong bid for a place on the national team. She probably would have made the team were it not for the birth of their son, which forced her out of sports for an indefinite time.

Sasha was born on January 9, 1964, which means he is still too young to know whether he'll follow in his parents' footsteps. Valeri and Marina don't know themselves what career he should pursue, but there is no harm in teaching Sasha to do setting-up exercises daily.

Marina took a teaching job in a Moscow school, but gave it up to devote more time to Sasha's upbringing. Valeri also does his share in taking care of his son. A timetable has been drawn up to allow Marina some time to practice calisthenics.

The couple, of course, have hobbies not linked with sports. Besides chess, Valeri is interested in foreign languages, while Marina likes to experiment with new recipes.

Valeri is at this moment getting ready for his final exams at the Moscow Physical Culture Institute. He hopes to take a post-graduate course, while Marina hopes to make the national team for the world calisthenics championship. As regards the world record in the high jump, Valeri believes that he can clear 7 feet 6 inches and possibly 7 feet 6½ inches. I'm almost sure that the hopes of the Brumels in sports will come true, because they both are highly gifted athletes and still young.

LETTERS TO THE EDITOR

NAZIS MUST BE WATCHED

Dear Sir.

I subscribe to SOVIET LIFE. I must say the photographs and articles are most interesting and provocative.

Your latest issue for April 1965 features a special and very frightening article on nazi cruelty during World War II titled "I Must Tell About This," page 36. This is what you should repeat, this is what should be read by every free person in this world. This is a tragedy which cannot happen again—as long as the rotten nazi is watched and stopped from repeoting his beastly crimes.

I suggest that you continue to feature such articles to remind the complacent and indifferent people of today that perhaps TOMORROW it will be their fate to fall under the lash and the extermination of the still alive nazi, who is planning again his next great campaign.

Yours truly
M. Labrie
Oregon

PROFESSOR LIBERMAN'S ARTICLE

Dear Editor:

In the July 1965 issue the article "Are We Flirting With Capitalism?" was very informative. This is the type of message I like to read.

Was happy to get picture of Tom Paine. I cut it out and framed it. And I put the story on Paine on back of the frame.

For what it's worth: I went to public school in Philadelphia from 1938-1949 and never once did I hear or read of this great man.

I don't know how Paine's writing translates into Russian, but in English it is as refreshing as a fine spring day!

Yours truly,
R. Holler
Philadelphia, Pennsylvania

Dear Sir:

My compliments on the article by Professor Liberman on "Profits" in the July 1965 SOVIET LIFE. Having had the opportunity of being a graduate student in the London School of Economics, reading economics and of visiting Leningrad and Moscow in 1964, I felt that I had an advantage in appreciating and interpreting Prof. Liberman's remarks.

Since I am deeply convinced of the value and validity of profits in both capitalist and socialist societies, I will not comment on their role; however, I would like to comment on his statement: "I believe that out of their profits, enterprises should have to pay into the state budget a certain percentage of the value of their assets as payment for the use of plant." I am in complete agreement being of the opinion that this would curb effectively the practice of some socialist enterprise managers to add capital investments and then not use them efficiently. For all practical purposes this concept is equivalent to the *interest* that capitalist enterprises poy when they add capital assets by means of borrowing from financial institutions instead of from retained earnings. The discipline of interest payments stimulates capitalist enterprise managers to borrow for capital investment when such additions will add profits or maintain a competitive position and at the same time this puts a brake on excessive, unnecessary or premature investment.

The use of an interest rate structure in a socialist economy could have a marvelous stabilizing and stimulating effect, and once the central planners grasp this point they would be the chief advocates of this splendid tool and not its chief detractors. Central planners can carry out their necessary function far more efficiently using interest rates than they can trying to decide where every nail is to driven and every brick is to be laid. Much of the central planning in recent years has been characterized by excessive detail, internal inconsistency, and frequent revisions, but this would not be the case if interest rates were the primary tool of central planners and profits were the primary tool of enterprise managers.

It was my privilege to visit the Bolshevik men's clothing factory in Moscow, and I am able to vouch for the accuracy of Prof. Liberman's statement that a shift to the socialist profits system has in some cases caused a decline in output. Quite true... this enterprise seems to be producing (initially) fewer mens suits that are of much higher quality. Obviously mens suits made in previous years in Moscow were made rapidly and with too little attention to style and wearing qualities, but now they are producing suits comporable in quality to those available in the middle price range in the U.S.A.

Sincerely,
Thomas B. Caldwell III
Miami, Florida

Speaking about profits in capitalist and socialist societies we, in our opinion, must always bear in mind the sources of profits and the ends they are used for. To quote Professor Liberman:
"Under socialism, profits can be a yardstick of production efficiency to a far greater degree than in the West, for in the Soviet Union profits follow, in principle, only from technological and organizational improvement. This also means that profits here will play an important but subsidiary role, like money in general, not the main role. After providing a yardstick of production achievement and a means of encouraging such achievement, profits in the Soviet Union are used wholly for the needs of society. They are returned to the population in the form of social services and expanded production, which guarantees full employment and better and easier working conditions for everyone. . . .

"Consequently, profits cannot become either capital or hoarded treasure in the Soviet Union. They are not, therefore, a social goal or a motive force in production as a whole. The motive force in production under socialism is the satisfaction of the steadily growing material and cultural needs of the population."

Editor

PEACEFUL COEXISTENCE

Dears Sirs:

...I have only seen a few issues but have enjoyed them very much. I certainly hope SOVIET LIFE continues in spite of the current world tension. I think through SOVIET LIFE many people will reolize for the first time the very close similarities between the Soviet and the American people. In order to feed hate you must teach fear, and to encourage fear the object must be kept unknown and mysterious I think your magazine will help to eliminate this.

I also think SOVIET LIFE has become more diversified since the title was changed from USSR.

Best wishes for continued success,

Reb Schroeder
Riverside, California

I DISAGREE

Dear Editor:

In your issue of July 1965 I read carefully the article by Rudolf Hiltunen: "Champion Waiter." Certainly I would not be surprised if this writing was in a capitalist magazine, but as it is in yours and the matter interests me a lot, I'd like to make some comment on it, emphasizing those points that have most astonished me.

I will start with the title that the good man Arnold Skinkes has received: "Waiter King." Don't you agree that the word king should be wiped out or at least ignored in a Socialist dictionary? Or have you already forgotten all the tyrant kings, oppressors of the proletariat, including your own czars? I don't think it is an honor for Arnold to be called king, even if this title is an informality.

Then I disagree with *Izvestia* journalist Anatoli Agranovsky and I would like to ask him if it is true that one of the aims of Socialism is the elimination of those jobs that make people direct servants of other people, and if he thinks so, why he insists on the eternal existence of waiters.

I understand that many people like to be greeted, served, fed and have the feeling of being important; but as humanists we ought to look at the other side of the coin and to consider the person that has to greet, serve, feed and have all kinds of humiliatian while the other part feels great.

Maybe Anatoli is not fully aware of the etymology of the word waiter. On this a man with 15 years of international waiter experience can give him the exact definition:

Waiter is the modern product of the ancient slave.

I would like to write more about it, but I am afraid to annoy you and before I close I would like to suggest that Rudolf Hiltunen and Anatoli Agranovsky reconsider their opinion about the waiter's job. They can visit and study the automatic restaurants, the cafeterias and self-service restaurants, and if they are for progress, they will agree with me that with the good will of the people the waiter's job can be eliminated, and that day will be a blessing and justice for many human beings.

R. Alpi
New York

BEST ARTICLE

Dear Sirs:

I have been receiving your magazine for the past nine months and so far the articles have been very good and interesting. But finally in your March 1965 issue I have read the best article, in my opinion, that you have published. It deals with "The Face of Ivan the Terrible" by Mikhail Gerasimov and the mystery of his tomb (article on tomb by Wanda Beletskay). These two topics were very informative and interesting. The articles showed me many things about Ivan and czars in general that I never knew.

I hope in a later issue you will publish what Mr. Gerasimov has found further; and I hope you will have more articles dealing with the past history of Russia.

Thank you,

Sincerely,
Gary Perasso
San Mateo, Calif.





International cooperation on a small but effective scale.

Olympic medal winner John Thomas gives little Sasha an American-style haircut.

A workout in Moscow before the competitions in Kiev.



VALERI BRUMEL AT HOME

By ALEXEI SREBNITSKY

IF A RAMBLER is parked among the Moskvich, Zaporozhets and Volga cars in front of the biggest new apartment house on Michurin Avenue, you can be sure to find the Brumel family at home.

Valeri is always glad to welcome visitors at any time of the day or evening if he is not hurrying off to the institute or for practice. He usually wears a white shirt with rolled-up sleeves and blue track trousers around the house, and if you're not too well acquainted, he will soon ask whether you play chess.

The Brumels get along very well, and it is a pleasure to call on them. Both of them are Muscovites, although they first met down south, in Krasnodar, three years ago. Valeri arrived there for a track meet, while Marina Larionova, a student at the Moscow Teacher Training Institute, was spending her vacation with her parents, who still live in Krasnodar.

Because of their contrasting characters, I won't risk claiming that they quickly found common grounds. Valeri is calm and sober-minded. It is not without reason that he is called "a man without nerves." Marina, on the other hand, has an expansive nature. Nevertheless, a year later, Brumel sent wedding invitations to his friends.

Needless to say, Marina is the most passionate of high jump fans. Whenever possible, she goes along with her husband to track meets in other cities and for hours sits patiently in the stands (the high jump is a drawn-out affair). When Valeri drove his car to Minsk for the annual spring match last year, Marina accompanied him on that 430-mile trip.

Speaking of Marina as a rooter, she knows quite a bit about sports, having done some jumping and running herself. She also engaged in acrobatics and passed an exam in ice hockey at the end of her third year at the institute. A diploma is given to a physical training instructor graduate who is able to do everything in sports. Marina has such a diploma now. Besides this, she has qualified for the Master of Sports rating in calisthenics. There was a time when she made a strong bid for a place on the national team. She probably would have made the team were it not for the birth of their son, which forced her out of sports for an indefinite time.

Sasha was born on January 9, 1964, which means he is still too young to know whether he'll follow in his parents' footsteps. Valeri and Marina don't know themselves what career he should pursue, but there is no harm in teaching Sasha to do setting-up exercises daily.

Marina took a teaching job in a Moscow school, but gave it up to devote more time to Sasha's upbringing. Valeri also does his share in taking care of his son. A timetable has been drawn up to allow Marina some time to practice calisthenics.

The couple, of course, have hobbies not linked with sports. Besides chess, Valeri is interested in foreign languages, while Marina likes to experiment with new recipes.

Valeri is at this moment getting ready for his final exams at the Moscow Physical Culture Institute. He hopes to take a post-graduate course, while Marina hopes to make the national team for the world calisthenics championship. As regards the world record in the high jump, Valeri believes that he can clear 7 feet 6 inches and possibly 7 feet 6½ inches. I'm almost sure that the hopes of the Brumels in sports will come true, because they both are highly gifted athletes and still young.

LETTERS TO THE EDITOR

NAZIS MUST BE WATCHED

Dear Sir.

I subscribe to SOVIET LIFE. I must say the photographs and articles are most interesting and provocative.

Your latest issue for April 1965 features a special and very frightening article on nazi cruelty during World War II titled "I Must Tell About This," page 36. This is what you should repeot, this is whot should be read by every free person in this world. This is a tragedy which cannot happen ogain—as long as the rotten nazi is watched and stopped from repeating his beastly crimes.

I suggest that you continue to feature such articles to remind the complacent and indifferent people of today that perhops TOMORROW it will be their fate to fall under the lash and the extermination of the still alive nazi, who is planning again his next great campaign.

Yours truly
M. Labrie
Oregon

PROFESSOR LIBERMAN'S ARTICLE

Dear Editor:

In the July 1965 issue the article "Are We Flirting With Capitolism?" was very informative. This is the type of message I like to read.

Was happy to get picture of Tom Paine. I cut it out and framed it. And I put the story on Paine on back of the frame.

For what it's worth: I went to public school in Philadelphia from 1938-1949 and never once did I hear or read of this greot man.

I don't know how Paine's writing translates into Russian, but in English it is as refreshing as a fine spring day!

Yours truly,
R. Holler
Philadelphia, Pennsylvonia

Dear Sir:

My compliments on the article by Professor Liberman on "Profits" in the July 1965 SOVIET LIFE. Having had the opportunity of being a graduate student in the London School of Economics, reading economics and of visiting Leningrad and Moscow in 1964, I felt that I had an advantage in appreciating ond interpreting Prof. Liberman's remarks.

Since I am deeply convinced of the value and validity of profits in both capitalist and socialist societies, I will not comment on their role; however, I would like to comment on his statement: "I believe that out of their profits, enterprises should have to pay into the state budget a certain percentage of the value of their assets as payment for the use of plant." I am in complete agreement being of the opinion that this would curb effectively the practice of some socialist enterprise managers to add capital investments and then not use them efficiently. For all practical purposes this concept is equivalent to the *interest* that capitalist enterprises pay when they add capital assets by means of borrowing from finoncial institutions instead of from retained earnings. The discipline of interest payments stimulates capitalist enterprise managers to borrow for capital investment when such additions will add profits or maintain a competitive position and at the same time this puts a brake on excessive, unnecessary or premature investment.

The use of an interest rate structure in a socialist economy could have a marvelous stabilizing and stimulating effect, and once the central planners grasp this point they would be the chief advocates of this splendid tool and not its chief detractors. Central planners can carry out their necessary function far more efficiently using interest rates than they can trying to decide where every nail is to driven and every brick is to be laid. Much of the central planning in recent years has been characterized by excessive detail, internal inconsistency, and frequent revisions, but this would not be the case if interest rates were the primary tool of central planners and profits were the primary tool of enterprise managers.

It was my privilege to visit the Bolshevik men's clothing factory in Moscow, and I am able to vouch for the accuracy of Prof. Liberman's statement that a shift to the socialist profits system has in some cases caused a decline in output. Quite true... this enterprise seems to be producing (initiolly) fewer mens suits that are of much higher quality. Obviously mens suits made in previous years in Moscow were made rapidly and with too little attention to style and wearing qualities, but now they are producing suits comparable in quality to those available in the middle price range in the U.S.A.

Sincerely,
Thomas B. Caldwell III
Miami, Florida

Speaking about profits in capitalist and socialist societies we, in our opinion, must always bear in mind the sources of profits and the ends they are used for. To quote Professor Liberman:

"Under socialism, profits can be a yardstick of production efficiency to a far greater degree than in the West, for in the Soviet Union profits follow, in principle, only from technological and organizational improvement. This also means that profits here will play an important but subsidiary role, like money in general, not the main role. After providing a yardstick of production achievement and a means of encouraging such achievement, profits in the Soviet Union are used wholly for the needs of society. They are returned to the population in the form of social services and expanded production, which guarantees full employment and better and easier working conditions for everyone. . . .

"Consequently, profits cannot become either capital or hoarded treasure in the Soviet Union. They are not, therefore, a social goal or a motive force in production as a whole. The motive force in production under socialism is the satisfaction of the steadily growing material and cultural needs of the population."

Editor

PEACEFUL COEXISTENCE

Dears Sirs:

...I have only seen a few issues but have enjoyed them very much. I certainly hope SOVIET LIFE continues in spite of the current world tension. I think through SOVIET LIFE many people will realize for the first time the very close similarities between the Soviet and the American people. In order to feed hate you must teach fear, and to encourage fear the object must be kept unknown and mysterious I think your magazine will help to eliminate this.

I also think SOVIET LIFE has become more diversified since the title was changed from USSR.

Best wishes for continued success,

Reb Schroeder
Riverside, California

I DISAGREE

Dear Editor:

In your issue of July 1965 I read carefully the article by Rudolf Hiltunen: "Champion Waiter." Certainly I would not be surprised if this writing was in a capitalist magazine, but as it is in yours and the matter interests me a lot, I'd like to make some comment on it, emphasizing those points that have most astonished me.

I will start with the title that the good man Arnold Skinkes has received: "Waiter King." Don't you agree that the word king should be wiped out or at least ignored in a Socialist dictionary? Or have you already forgotten all the tyrant kings, oppressors of the proletariat, including your own czars? I don't think it is an honor for Arnold to be called king, even if this title is an informality.

Then I disagree with *Izvestio* journalist Anatoli Agranovsky and I would like to ask him if it is true that one of the aims of Socialism is the elimination of those jobs that make people direct servants of other people, and if he thinks so, why he insists on the eternal existence of waiters.

I understand that many people like to be greeted, served, fed and have the feeling of being important; but as humanists we ought to look at the other side of the coin and to consider the person that has to greet, serve, feed and have all kinds of humiliation while the other part feels great.

Maybe Anotoli is not fully aware of the etymology of the word waiter. On this a man with 15 years of international waiter experience can give him the exact definition:

Waiter is the modern product of the ancient slave.

I would like to write more about it, but I am afraid to annoy you and before I close I would like to suggest that Rudolf Hiltunen and Anatoli Agranovsky reconsider their opinion about the waiter's job. They can visit and study the automatic restaurants, the cafeterias and self-service restaurants, and if they are for progress, they will agree with me that with the good will of the people the waiter's job can be eliminated, and that day will be a blessing and justice for many human beings.

R. Alpi
New York

BEST ARTICLE

Dear Sirs:

I have been receiving your magazine for the past nine months and so far the articles have been very good and interesting. But finally in your March 1965 issue I have read the best article, in my opinion, that you have published. It deals with "The Face of Ivan the Terrible" by Mikhail Gerasimov and the mystery of his tomb (article on tomb by Wanda Beletskay). These two topics were very informative and interesting. The articles showed me many things about Ivan and czars in general that I never knew.

I hope in a later issue you will publish what Mr. Gerasimov has found further; and I hope you will have more articles dealing with the past history of Russia.

Thank you,

Sincerely,
Gary Perasso
San Mateo, Calif.

A **LENINGRAD** Cosmonaut Youth Club members Katya Yesaulova, Misha Gorny and Andrei Golubeyev.

B **NIKOLAYEV** Young Pioneer cameramen on location. The picture will be called "Pioneer Summer."

C **KHARKOV** This hot rod is the creation of a Young Technician Group. Her name is "Baby."











MOSCOW After-school artist at the Palace of Culture, junior section, of the Likhachov Auto Plant.

ULAN-UDE The art gallery of Secondary School No. 1 in the Buryat Autonomous Republic in Siberia

MAKING CREATIVE CHILDREN

BY YEVGENIA KAMENEVA

SOVIET CITIES and villages all have Young Pioneer palaces with facilities and equipment for every possible interest and hobby. At these large recreation centers children paint, draw and sculpture, do arts and crafts, make plane models, study mechanics and astronomy, and learn to sail, dance, sing and play instruments. They attend hobby groups for young naturalists, geographers, physicists and space scientists.

There are additional technical juvenile centers, clubs and hobby groups of all kinds in the neighborhoods, at schools and in adult clubs. Usually a factory or a theater company will become the patron for a children's club and will provide all the equipment and instruction needed.

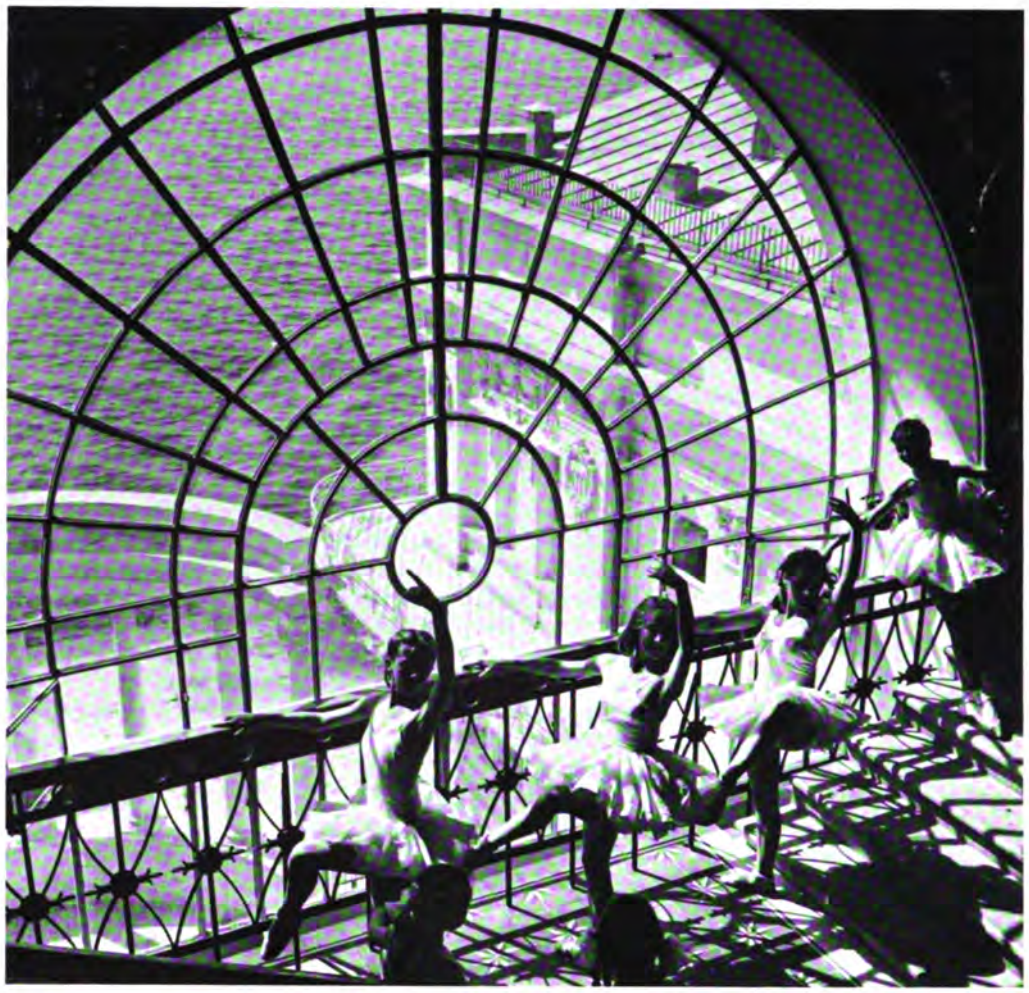
Most of our outstanding people in science and art, including our cosmonauts, developed their early aptitudes at Pioneer palaces or other juvenile centers. All the instruction is free and therefore within every child's reach.

One of our primary concerns today is the esthetic education of the



UNZE Model planes are old stuff. Air-minded Soviet kids these days are heading for space.

SEVASTOPOL This Young Pioneer Palace offers 37 different activities for 3,000 children at no charge.





BUYNAKSK These teenage Daghestanian archeologists found a rare sample of prehistoric rock drawings.

young. In 1918 the statement of aims of the first Soviet schools declared:

"Esthetic education does not mean teaching a kind of simplified art, but systematically developing sense perceptions and potentialities so the child can delight in beauty and create beauty."

Our museums have an important teaching function. The Pushkin Fine Arts Museum in Moscow, the Museum of Russian Art in Leningrad and similar museums in other cities have junior art appreciation clubs. The members study art, give talks and act as guides in the museum halls to boys and girls their own age.

Many of the museums arrange displays of children's drawings, the best of which are selected for countrywide exhibitions in Moscow.

The Museum of Russian Art in Leningrad regularly saves space in several of its halls for children's showings. Some of the museum staff thought it irreverent at first to have the efforts of children hung in this shrine of the great masters of Russian art. But today visitors are accustomed to seeing the gay, bold, sunny, often very comic pictures by Leningrad youngsters in halls adjoining those graced by the works of Bryullov, Aivazovsky and Serov. Children are great dreamers and also great realists. Their drawings provide an insight into the state of the country as well as their own interests and hobbies. It is their honesty that is so attractive to adults. The members of the museum staff involved have become so enthusiastic that they are considering a permanent exhibition and are collecting the best examples.

Children respond eagerly to drawing competitions sponsored frequently by *Pionerskaya Pravda*, the leading Soviet children's newspaper, with a circulation of 7,500,000. When this paper held a contest for postage stamp drawings, 15,000 drawings were sent in by readers. A jury selected four which were later reproduced on postage stamps. The issue was very quickly bought up by stamp collectors. A year ago a picture postcard contest for children was held and the prize winners printed.

The Soviet Union's "Public Education" pavilion at the International Exhibition in Genoa last year was adorned with several murals made by children in the painting class of the Moscow Young Pioneer Palace.

Learning Russian

АЛЬ-ИССА

Александр Куприн

За не́сколько веко́в до рождества́ Христо́ва в са́мом це́нтре Индоста́на существова́л си́льный, хотя́ и немногочи́сленный наро́д. Имя его́ изгла́дилось в исто́рии, да́же свяще́нные Ве́ды не упомина́ют о нём ни одно́й стро́чкой. Нс ста́рые факи́ры, ре́вностные храни́тели преда́ний, говоря́т, что родона́чальники этого наро́да, суро́вые и бесстра́шные лю́ди, пришли́ с далёкого За́пада и в коро́ткое вре́мя покори́ли свое́й вла́сти весь Индоста́н. Все раджи́ и князья́ Индоста́на плати́ли им дань, а пле́нные рабы́ обраба́тывали их зе́млю. Они́ не зна́ли ни ро́скоши, ни стра́ха сме́рти, и э́то де́лало их непобеди́мыми.

Этот могу́щественный наро́д поклоня́лся живо́му существу́ — же́нщине, кото́рая называ́лась боги́ней сме́рти. Боги́ню сме́рти никто́ никогда́ не вида́л, кро́ме двух старе́йших жрецо́в. Они́ же выбира́ли её тайно́ изо все́х краси́вейших де́вочек, не дости́гших ещё четырёхлетнего во́зраста, воспи́тывали её и чуде́сными, одни́м им откры́тыми спо́собами доводи́ли её красо́ту до сверхъесте́ственного соверше́нства. Когда́ умира́ла одна́ боги́ня сме́рти, на ме́сто её дво́е жрецо́в взводи́ли то́тчас же другу́ю, но об э́том зна́ли то́лько они́. Наро́д ве́рил, что боги́ня — бессме́ртна и красота́ её неувяда́ема.

Раз в пять лет, но́чью, она́ выезжа́ла из своего́ хра́ма на гига́нтской колесни́це, закры́той со всех сторо́н и запряжённой десятью́ бе́лыми слона́ми. Её встреча́л весь наро́д с пе́нием свяще́нных ги́мнов, с зажжёнными фа́келами в рука́х. Восто́рг толпы́ доходи́л до бе́шенства. Руби́ли го́ловы со́тням рабо́в, мно́гие истяза́ли себя́ бича́ми и криво́ми кинжа́лами, в исступле́нии броса́лись под колесни́цу боги́ни, что́бы быть разда́вленными слона́ми и колёсами...

В одну́ из таки́х ноче́й жреца́ми и наро́дом избира́лся для боги́ни сме́рти муж. То́лько двена́дцать часо́в бы́л он её му́жем. Утром его́ на костре́ торже́ственно приноси́ли в же́ртву, потому́ что вся́кий, кто хоть раз уви́дел лицо́ боги́ни, по зако́нам подлежа́л неме́дленной сме́рти. И несмотря́ на э́то, ка́ждые пять лет двена́дцать славне́йших ю́ношей обрека́ли себя́ на служе́ние стра́шной боги́не. Их ожида́ли таки́е тяжёлые испыта́ния, что преда́ние насчи́тывает то́лько четырёх геро́ев, удосто́енных велича́йшей че́сти — умере́ть му́жем боги́ни сме́рти.

Аль-Исса был сы́ном зна́тного раджи́. Пятна́дцати лет он уже́ превосходи́л всех молоды́х люде́й сме́лостью, си́лой и красото́й. Са́мая зна́тная и го́рдая краса́вица Индии сочла́ бы сча́стьем назва́ться его́ жено́й. Но Аль-Исса посвяти́л себя́ боги́не сме́рти.

Он до́лжен был отказа́ться от семьи́. Прикоснове́ние к же́нщине счита́лось для него́ преступле́нием. Во всю жизнь он не смел ни улыбну́ться, ни запе́ть пе́сни... Война́ и атлети́ческие упражне́ния бы́ли его́ еди́нственными заня́тиями.

И Аль-Исса вы́держал тяжёлый иску́с. Слёзы ма́тери и сестёр не тро́нули его́, когда́ он уходи́л из своего́ роско́шного дворца́. При встре́чах с же́нщинами он опуска́л глаза́ и далеко́ обходи́л лу́чших краса́виц... Никто́ никогда́ не вида́л его́ смею́щимся и́ли пре́данным пра́здному разгово́ру...

Зато́ ско́ро и́мя его́ ста́ло приводи́ть в у́жас са́мых вои́нственных сосе́дей. Без па́нциря, в одно́й лёгкой белосне́жной оде́жде, он кида́лся в са́мую густу́ю толпу́ неприя́телей. Ту́ловища, рассечённые от плеча́ к бедру́, отру́бленные го́ловы, ру́ки и но́ги ука́зывали его́ путь. Встре́ча с ним была́ неминуе́мой сме́ртью, и закалённые враги́ бежа́ли пе́ред ним, как стада́ ове́ц, с кри́ками: «Аль-Исса! Аль-Исса!..»

Если не́ было войны́, он проводи́л вре́мя на охо́те за ди́кими кабана́ми и ти́грами. Вода́ из лесно́го ручья́ и кусо́к хле́ба служи́ли ему́ пи́щей, седло́ — изголо́вьем.

Наконе́ц, че́рез три пятиле́тия, в оди́н из тех дней, когда́ выезжа́ла на колесни́це боги́ня сме́рти, глаша́таи объяви́ли наро́ду и́мя Аль-Исса.

Несме́тная толпа́ ещё с утра́ стека́лась на огоро́женную стено́ю пло́щадь пе́ред хра́мом, где Аль-Исса ожида́ли после́дние испыта́ния. Его́ и́мя бы́ло у всех на уста́х. Все зна́ли, что сама́ боги́ня сме́рти, не ви́димая никем, смо́трит тепе́рь из та́йной амбразу́ры хра́ма на пло́щадь.

Отме́рили расстоя́ние в две́сти локте́й, вби́ли в зе́млю щит с пятью́ во́ткнутыми в него́ стре́лами и да́ли Аль-Исса грома́дный лук... И Аль-Исса при гро́мких кри́ках восто́рга расщепи́л свои́ми пятью́ стре́лами пять стрел на щите́.

Пото́м вооружи́ли Аль-Исса криво́м кинжа́лом и на пло́щадь вы́пустили голо́дного, разъярённого бенга́льского ти́гра.

Аль-Исса на глаза́х всего́ наро́да, исте́рзанный стра́шными когтя́ми, облива́ясь кро́вью, перере́зал го́рло свире́пому хи́щнику и наступи́л ного́й на его́ труп...

Наконе́ц толпа́ расступи́лась, и Аль-Исса подвели́ зло́го варвари́йского жеребца́. Ди́кий, чёрный, с пла́менными ноздря́ми, он ещё никогда́ не носи́л на свое́й спине́ оскорби́тельного бре́мени. Ше́стеро ко́нюхов едва́ уде́рживали его́. Он зло́бно визжа́л, води́л вокру́г о́гненными глаза́ми и дрожа́л свое́й атла́сной ко́жей.

Аль-Исса споко́йно подошёл к нему́ и взя́лся за хо́лку. Ко́нюхи разбежа́лись. Наро́д в у́жасе и смяте́нии бро́сился в сто́роны... В оди́н миг Аль-Исса уже́ сиде́л на коне́. Снача́ла го́рдое живо́тное то́лько тряслось от зло́бы и оскорбле́ния... Че́рез мину́ту конь и вса́дник скры́лись из глаз наро́да.

Прошёл це́лый час томи́тельного ожида́ния, когда́, наконе́ц, вдали́ показа́лся Аль-Исса на взмы́ленном и по́крытом пы́лью коне́. Варвари́йский жеребе́ц шата́лся от уста́лости, но был послу́шен Аль-Исса, как ручна́я ове́чка.

Испыта́ния Аль-Исса ко́нчились.

В по́лночь его́, оде́того в драгоце́нные оде́жды, умащённого арома́тами Восто́ка, отвели́ в храм и оста́вили одного́. Он слы́шал на у́лицах рёв наро́да, всё бо́лее и бо́лее приближа́ющийся к хра́му. Это боги́ня объезжа́ла го́род на свое́й колесни́це, запряжённой бе́лыми слона́ми.

Пото́м в храм вошли́ два верхо́вных жреца́ — столе́тние ста́рцы с волоса́ми бе́лыми, как снег. Жрецы́ опусти́лись пе́ред Аль-Исса на коле́ни, облобыза́ли его́ но́ги и пото́м, взя́вши за́ руки, повели́ в свяги́лище. Там среди́ фантасти́ческой восто́чной ро́скоши возвыша́лось золото́е ло́же... Кури́льницы благоуха́ли арома́тами Ара́вии и Пе́рсии... причу́дливые фонари́ ли́ли волше́бный свет... в золоты́х кле́тках кача́лись пёстрые свяще́нные пти́цы, шёлковые тка́ни тяжёлыми скла́дками одева́ли сте́ны...

Жрецы́ безмо́лвно удали́лись, закры́в ли́ца рука́ми. Аль-Исса ожида́ло блаже́нство и че́рез двена́дцать часо́в — мучи́тельная смерть.

Где́-то далеко́ за стено́й раздало́сь не́жное и сла́достное пе́ние же́нского хо́ра. Масси́вные две́ри слоно́вой ко́сти распахну́лись... и ме́дленно вошла́ сама́ боги́ня сме́рти в дли́нных бе́лых оде́ждах, оку́танная покрыва́лом.

Аль-Исса ки́нулся к ней, дрожа́щими рука́ми распахну́л лёгкую ткань, закрыва́вшую лицо́, и окамене́л от у́жаса и изумле́ния... Пе́ред ним стояла дря́хлая стару́ха, смо́рщенная, беззу́бая, со слезя́щимися глаза́ми и поту́хшим взо́ром.

DRAWN FROM IMAGINATION



Self-portrait—age 8. Ink.

BY LEV KASSIL

SOVIET WRITER

I FIRST HEARD of Nadya Rusheva from other children in the art studio of the Moscow Palace of Young Pioneers in Lenin Hills.

"She draws wonderfully!" they told me. "You ought to see her working! And she's only 11! She draws everything from imagination!"—the last two words heavily underlined.

Somewhat later I had a phone call from the editors of the magazine *Yunost (Youth)*. "We thought you might like to see the drawings of a little girl we know. They're really remarkable."

And so I went to see this impromptu and very extraordinary one-man show of drawings. They covered the walls and filled the chairs and couch of the editorial office. The artist was a frail, dark little girl with lovely, surprisingly long eyelashes. She stood listening, detached and dispassionate, to the delighted exclamations of the writers, editors and journalists who were leafing through her drawings.

When I visited Nadya at home soon afterward, her parents showed me scores of other drawings that filled the walls and overflowed the cupboards.

Nadya was drawing when I came. She draws continually. And the imagination she draws from is astonishing for its breadth and depth.



The boy and the golden antelope. Water color.



Dog meets dog. Flowmaster.

She began drawing a long time ago. I was shown a photograph of Nadya drawing when she was five years old. Under this candid shot the photographer had noted down what she was saying to herself at the time: "This looks like a plum . . . No, I think it's a ship . . . No, no, it's a stove . . . Yemelka* put two pillows down and went away. . . ." This game of imagination went on and on. Her drawings were part of it.

When Nadya was eight, her father Nikolai Rushev, also an artist, concluded that these drawings were more than a game, that they were expressions of a talented child. The parents began to treat Nadya's drawing differently, cautiously encouraging her, but never too insistent.

The little girl drew the heroes of the fairy tales and Greek myths her father read to her. Her version of the story of the Trojan horse and the labors of Hercules are beautifully comic. Her drawings of people, animals and genre scenes with many characters are uncommonly accurate in detail, the sign of a fine visual memory.

Since December 1962 Nadya Rusheva has been studying at the studio of the Young Pioneer Palace. Her teacher Ludmila Magnitskaya allows the little girl's imagination free rein, simply allotting her the constructive tasks that will best develop her fantasy. Nadya's zeal for drawing is insatiable. She has been inventing endless masquerade costumes for the Young Pioneer carnivals on Lenin Hills.

I am no artist and my judgment may be questionable, but her work demonstrates to me an almost magical sense for composition. Her drawings are constructed with so faultless an eye that a better arrangement of form and pattern seems impossible. To me Nadya is the closest thing to a finished artist I have ever seen in an 11-year-old.

Like myself, you will probably be captivated by the variety of themes in the drawings reproduced here, the vivid portraiture, the delicacy of composition, the conviction borne in the gestures caught on the wing by the little artist, the free and at the same time realistic grace of each figure. Every picture, done at home as studio homework, bears the legend, "Drawn from imagination." Drawing from nature is something Nadya has not yet learned. The formal drawings she does at school are no different from those of the other children in her grade. In creative imagination, however, she shows exceptional promise.

You may notice the curious fact that Nadya has left the ears off her characters. She tries to find angles so her figures can manage without them. As an artist, she is definitely opposed to ears.

"And her future?" I can almost hear my readers ask. "Will Nadya turn into a real artist? Shouldn't she study? And won't that block her imagination?"

The rest, I would say, is up to Nadya and those who nurture her talent. They work with her solicitously, thoughtfully, without going into premature raptures but at the same time making demands on this exceptionally gifted little girl that are suited to her surprising capabilities.

One of our veteran artists, the famous animal painter Vasili Vatagin, who has seen Nadya's drawings several times, wrote this cautionary note on one of them: "Very good, but try to make it better."

Courtesy of the magazine Yunost

*A fairy tale character who did many marvelous things, including riding on a stove.



Sister gymnasts. Flowmaster.



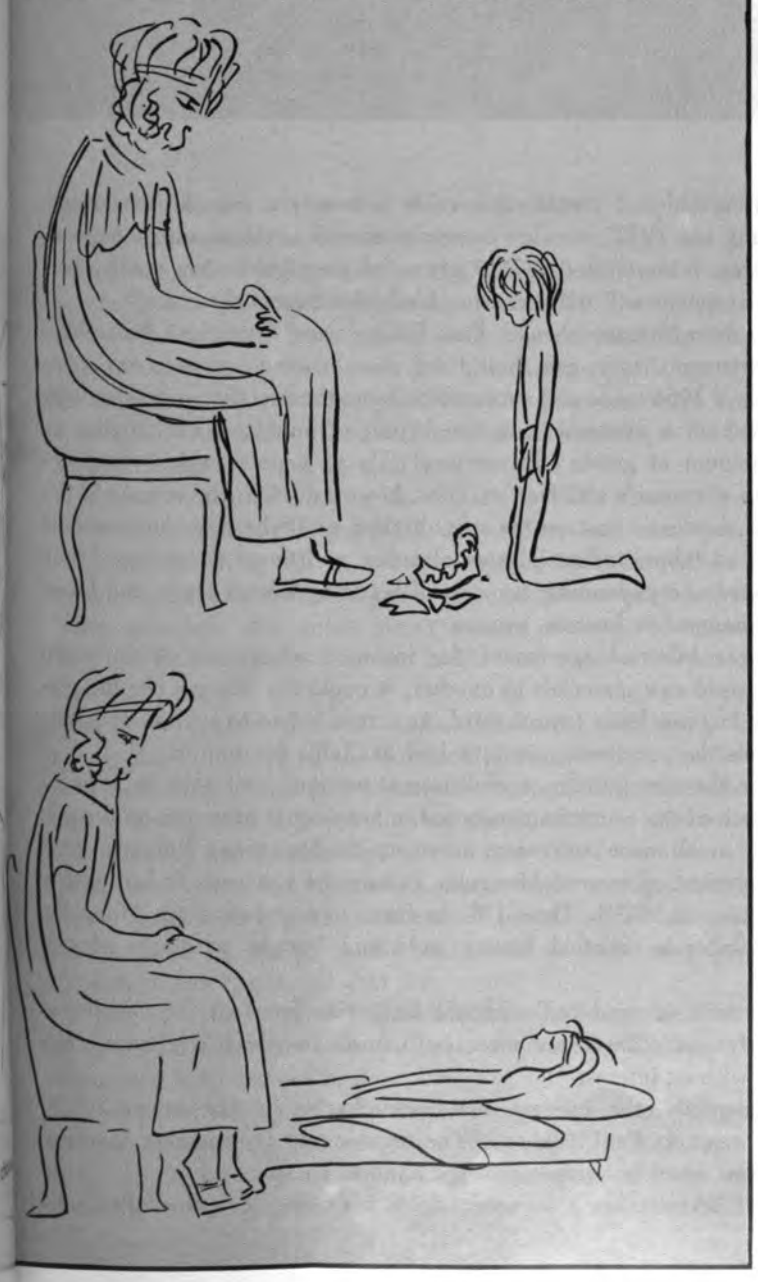
Fear. Ink.



Girl chorus. Ink.

Nadya noticed this fragment of an old bas-relief in the editorial office of the magazine Yunost *where her work was being shown. The old man in the relief is obviously grieving, about what we can only speculate. While people were looking at her work, Nadya, left to herself for a few minutes, made these two drawings to complete the fragment. They catch the mood of the ancient relief beautifully.*







INTERNATIONAL SOCIALIST BANK



BY VICTOR VESELOVSKY
AND EDWARD TSERKOVER

WE ARE on international territory enjoying exterritorial rights when we enter the premises of the International Bank for Economic Cooperation (IBEC) on Kuznetsky Most, a busy Moscow street. In the sedate calm of the office with an old-fashioned fireplace the IBEC board is meeting. Around the table sit eight men, one from each of the member countries: Georgi Tarziev of Bulgaria, Andras Fodor of Hungary, Georg Kulessa of the German Democratic Republic, Tsendiin Molom of Mongolia, Roman Males of Poland, Nikolae Angel of Rumania, Josef Malat of Czechoslovakia, and Konstantin Nazarkin of the USSR, who is in the chair. The meeting to review the bank's first year of operation is about to begin. Meantime we shall make an excursion through the bank. Our guide is Rauf Serazhetdinov, an economist and the bank's vice chairman.

This is the bank's biography in brief. The governments of eight of the socialist countries agreed to settle all their trading, contract and other accounts as of January 1, 1964, through the International Bank of Economic Cooperation. The rules of the bank were approved, and its capital was fixed at 300 million transferable rubles, with the following quotas: Bulgaria, 17 million rubles; Hungary, 21 million; the GDR, 55 million; Mongolia, 3 million; Poland, 27 million; Rumania, 16 million; the USSR, 116 million; Czechoslovakia, 45 million; quotas being based on the volume of reciprocal exports.

Though the members' share of capital is not the same, their rights are. This is the first difference between the IBEC and all other international banks. In the International Exchange Fund, for instance, the number of votes depends on the amount of capital contributed. Here, on the contrary, each country has one vote in the highest council. The decision must be unanimous.

"Rauf," we ask our guide, "could you let us have a look at a transferable ruble. We just want to see what it's like."

Rauf grins. "Sorry, but there really isn't anything to see. A transferable ruble is neither a coin nor a note; it's not Soviet or any other kind of currency. A transferable ruble is merely a means of payment, something the IBEC member countries use to settle accounts between themselves. It contains 0.987412 grams of pure gold. Our credit planning department will tell you what kind of accounts they are."

Konstantin Miroshnichenko, Paul Rükkert and Eugeniush Pastushka, the department heads, put their brief cases aside to answer our questions. Until 1964 trade and accounts between the socialist countries were conducted on a bilateral basis (each pair of countries exchanging an equal amount of goods and services). Up to a point, this system operated to everyone's satisfaction. Now, however, when the economic ties between member countries have multiplied and when an international division of labor, industrial specialization and cooperation are firmly established and expanding, a new and better system of trade and financial exchange has become necessary.

Under a bilateral agreement, for instance, when one of the countries shipped raw materials to another, it could not always use the proceeds to buy machines from a third. As a rule, it had to take in exchange the goods the purchasing country had available for export.

Under the new system of multilateral accounts, all that is required is for each of the countries concerned to have equal amounts on deposit. This is a much more convenient arrangement. Supposing Bulgaria sends a consignment of wine to Mongolia. It uses the proceeds to buy instruments from the GDR. The GDR, in turn, buys wood from Mongolia. Each country is satisfied, having sold and bought precisely what it wanted.

"On credit, if need be," adds the Bulgarian head of the department Georgi Ivanov. "There are several situations in which we grant credit with or without interest."

"Incidentally, the interest our bank charges is the lowest in the world," remarks Paul Rükkert. "The regular rate for member countries is one and a half to two per cent per annum."

Paul Rükkert takes a document from his case. "See this? Banks all



over the world now charge five, six or seven per cent for credit. We charge only one and a half to two per cent."

Continuing their lesson on the ABC's of international banking, our hosts lead us to the telex, which links up the IBEC with banks throughout the world. Telex language is more laconic than the telegraphic, correspondents being quick to catch the meaning of a message. The apparatus raps out the text: "Offering 15 million at three and a half per cent. . . ." Assessing the offer, Paul Rükkert dictates to the teletypist: "Yes Sir, Rükkert." And the deal is clinched.

The telex continues winking its signal eye. Calls come in from Scandinavia, France, Austria, the FRG, Italy. More and more people want to do business with IBEC, and very rich people, too, like the bank magnate—one of the world's biggest—who addressed an offer to the IBEC.

Here qualified economists study finance methods practiced in the IBEC member countries and the credit and economic systems of all countries.

Yan Servan, assistant head of the department, explained, "Some of us study the economies of the Common Market countries; others, those of the American, Asian and African countries. We go through about a hundred newspapers a day, following the fluctuation in currencies and changes in the rate of interest."

"Our job," says the Hungarian director of the department Gaspar Gaspar, "is to keep in touch with present practices and anticipate future developments. To be up to the mark you have to keep an eye on monetary policy trends all over the world."

Gaspar has just returned from Melbourne, where he and bankers from 36 other countries took part in a seminar arranged by the International Banking School in Australia.

As we paced through the IBEC corridors and rooms, our guide now and then dropped the phrase: "You will see this in the operating department." So now we are in the large high-ceilinged room where current accounts are handled.

Chief accountant Ivan Skobelkin showed us a folder with sheets full of columns of figures. "This is the Soviet Union's current account," he explained, "its operations with its partners enumerated. Every day a new sheet is added."

From Karl Nowak, head of the accounts department, we learn that the documents he receives from member countries tell him what country delivered goods to what other country and their value. On the basis of this information summary documents are drawn up and turned over to the bookkeeping department, which is headed by Rozalin Chubriyev of Bulgaria. Here the fresh data are added to the current accounts of the member countries.

About 500 different operations are performed here daily. The number does not sound particularly impressive. There are probably savings banks which are just as active. But a savings bank operates, at most, in hundreds of millions of rubles. The bank in its first year of operation "digested" 33 billion.

But it is time for us to go back to the board meeting. This is one of the last weekly meetings preceding a more detailed discussion by the Council. The Council, consisting of three representatives from each member country, is the bank's supreme authority. The Soviet Union is represented by Alexei Poskonov, Chairman of the Board of the USSR State Bank; Pavel Maletin, Deputy Finance Minister of the USSR; and Leonid Zorin, Deputy Foreign Trade Minister of the USSR. The other representatives hold more or less the same posts in their respective countries.

A bank must have some source of income or face bankruptcy. The first year of operation of IBEC saw its capital replenished by more than half a million transferable rubles. The IBEC profit is small, of course, but then its aim is not profit; it is not out to fleece its partners.

The world socialist market is very young as yet, but it is growing fast. The IBEC is one of the stages of this growth.

Courtesy of the weekly Nedelya

AROUND *the* COUNTRY



RUSSIAN ENCYCLOPEDIST

Mikhail Lomonosov (1711-65) is called the Russian Encyclopedist. He earned the title by his breadth of erudition. A poet in science and a thoughtful scientist in poetry, Lomonosov contributed much to physics and chemistry, geology and mineralogy, astronomy and geography, optics and mechanics, history and literature.

In power and depth of thought his works bear comparison with those of the Roman poet and nature scholar Titus Lucretius Carus. In breadth of view, scope of interest and encyclopedic knowledge he stands alongside Leonardo da Vinci, Benjamin Franklin and Wilhelm Leibnitz.

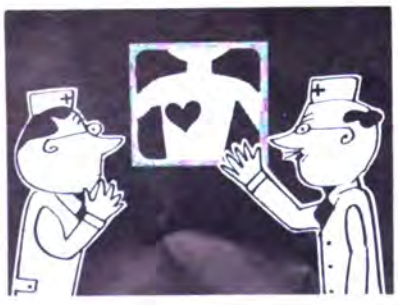
He founded the first Russian university in 1755 in Moscow.

Among his many discoveries, he established, independently of Lavoisier, one of the most important of natural laws—the law of the conservation of matter.

RIGHT-SIDED HEART

The heart of Birjan Bezeyev, a 10-year-old Uzbek schoolboy, is on the right side, and his liver on the left. This was discovered during a medical examination in the rural school he attends. Neither Birjan nor his parents had suspected anything of the kind.

Birjan is a cheerful, active youngster. He is in perfect health and very athletic.



FOUNDED FIRST SOVIET JAZZ COMBO

Leonid Utyosov has been the most popular Soviet jazz singer and band leader for more than 30 years now and is still going strong in spite of a seventieth birthday he celebrated this year. Once upon a time he was a satire theater and variety stage actor. But he earned his fame as the founder of the Soviet Union's first jazz combo and for his pop song interpretations with jazz accompaniment. Jointly with composer Isaac Dunayevsky, film director Grigori Alexandrov and movie star Lyubov Orlova he produced the first Soviet musical screen comedy, *Jolly Fellows*, in which he starred.

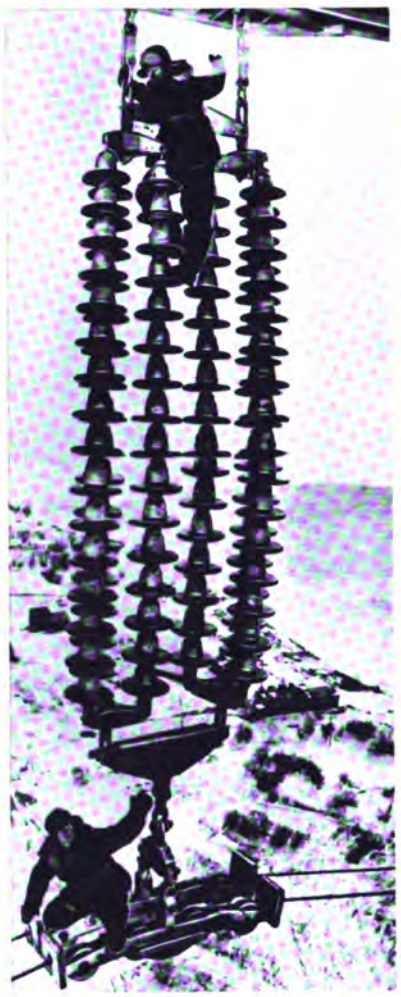


CRIMEAN CAVES EXPLORED

Cave exploring has become a popular Soviet sport. Many cities have spelunkers' clubs. In the past several years they have explored 1,000 caves in the Crimea, the Caucasus, the Urals and the Altai. Two amateur speleologists discovered the remarkable Akakopiisk Cave in the Georgian Republic, which is to be transformed into an underground museum.

A group of scientists and spelunkers found and explored the Krasniye Caves in the Crimea, near Simferopol. They had to creep through dirty, tight openings, walk along narrow ledges over an abyss and ride in a rubber boat along a subterranean river. The Krasniye Caves proved to be a very intricate labyrinth with more than seven miles of six-story passageways and chambers, some 40 lakes, a subterranean river and waterfalls. The work of the Crimean speleologists may have practical importance. The cave labyrinths of mountainous Crimea are a natural underground reservoir, very important for keeping the health resorts supplied with water and for irrigating farms.





210-TON TRANSMISSION LINE

Across the Amur River in the Far East is an electric transmission line supported by two masts on opposite banks and a third on an island. The longest distance between supports is 5,640 feet, an unprecedented span in power transmission. The supports are 490 feet high. Gigantic garlands of insulators hang from traverses 395 feet high. Two one-inch cables are attached to the insulators. There are six such pairs in all, and above them, on the uppermost traverse, are lighting cables. The over-all weight of the wire and insulators is 210 metric tons.

RUSSIAN MASTERS

The Tretyakov Art Gallery in Moscow houses one of the largest collection of paintings in the USSR. It is visited daily by 4,000 people who come singly and in excursion groups from all over the country.

For tourists to the capital, particularly from other countries, the Tretyakov collection of Russian masters is a must. Young artists sit for hours at their easels near the canvases trying to learn the secrets of the art.

During school hours most of the visitors are children, who come in classes. These museum visits are a regular part of the school curriculum, to give children an understanding of art and an appreciation of the beauties of the world around them.

CHILDREN'S WORLD

A relatively new development in Soviet retail trade is the combination of several factories with their own retail outlets under one management. One is Detsky Mir (Children's World), which makes and sells clothes for the young generation. Twice a week truckloads of dresses are delivered from its factories to its store on Dzerzhinsky Square in Moscow. The photo shows two of the dresses on sale.







ROAST MAMMOTH

hat hit the spot!" exclaimed scientist Lev Michurin, who lives and works the city of Norilsk, beyond the tic Circle. He is probably the first n in the Soviet Union, if not the rld, to taste the roasted meat of a mmoth several thousand years old. Part of the carcass of the animal was nd by a fisherman in a permafrost er on the shore of the Siberian river asin near Norilsk. Michurin could not ist the temptation to cut off a piece the very well-preserved carcass and ast it. "Mammoth meat is excellent," scientist said. "It tastes like beef." he mammoth carcass has been sent the zoological museum in Leningrad.

SKIN DIVERS HUNT TREASURE

The aquatic club of the Moscow Aviation Institute was set up some five years ago. Its members, institute undergraduates, are interested in the various water sports and in designing equipment for marine exploration. They have their own camp on the Black Sea, where novices practice water skiing and skin diving while the "sea wolves" test the machines they have designed, one of them an underwater glider.

In recent years the club's skin divers have been exploring subterranean lakes. This year they searched for Kremlin treasures which, so historical testimony claims, Napoleon ordered sunk in Lake Stoyachi near Smolensk (250 miles west of Moscow) on his retreat from Russia.





SUBURBAN MONKEY

Monkeys are being acclimatized in the Moscow suburban woods for large-scale use in experimental medicine. The Soviet Institute of Poliomyelitis is doing the job. A group of rhesus monkeys and green marmosets were left to winter in a cage. The monkeys were able to adapt themselves to a much more rigorous climate than they were accustomed to. With the arrival of frosts they gained weight and their fur grew thicker. They moved around less, and the composition of their blood and the interchange of gases changed.

The monkeys were set free in the woods in 1964. They spent the day on the branches of birch and aspen trees and came down often to look for berries and insects. They always returned to the cage for the night. Throughout the whole period of the experiment, they ventured no further than 1,000 feet from the cage.

The experiment has shown that the lower species of monkeys are hardly the "hothouse" animals they were thought to be.



SOVIET AIRLINES

e Soviet Union has air links with 38 countries in Europe, Asia, Africa and erica. Its lines carry 4,000 passengers ry hour.

he most popular planes are those designed by Tupolev, Ilyushin and Antonov. And the most favored of the Ilyushin aircraft is the IL-18, a turboprop liner which is imported by Hungary, Czechoslovakia, Bulgaria, Poland, Ghana, Guinea, Mali, Rumania and other countries. The photo shows the assembly of an IL-18.



EUREKA TRACTOR

The Kharkov and Minsk Tractor Plants are the joint makers of the new Eureka tractor model. The "eureka" in this case is its rubber caterpillars. Made of inflated rubber cushions, they last several times longer than the ordinary metal ones. The rubber cuts down the tractor's weight and its pressure on the soil, very important for preserving the soil structure. This model, which has a 30 horsepower motor, is designed for orchard, vineyard, field and peat work.

STUDENTS "SEE" BEETHOVEN

The Electronics Engineering Institute in Moscow boasts its own student café—the Selen. The students designed, built and decorated it themselves. The murals consist of engineering ornaments: oscillograms, impulse curves and equations.

What the students are most proud of is their installation for color videomusic developed by Anatoli Gezovich. It took a long time to adjust the instrument before the customers could "see" as well as hear the music of Beethoven, Tchaikovsky and Shostakovich.

Does the color accompaniment heighten the impression created by the music? Opinions of listeners (and viewers) differ. Everybody understands that this is an experimental effort, not up to the quality of the famous machine created by engineer Leontiev. In any case, interest in color videomusic at the institute is now general.





AIRSHIPS AGAIN

Two years ago dirigibles again came into the Soviet limelight. They had been built in the thirties, but were later shelved. However, they have certain advantages over other types of air transport. They can lift as much as 80 metric tons of freight, spend fuel only on horizontal motion, fly at any time and in any weather. They do not need airports and are easy to service.

Quite recently a new dirigible appeared which was designed by Dmitri Bimbat. It was put to use immediately, shooting the film version of Alexei Tolstoy's science-fiction novel *Engineer Garin's Hyperboloid*. The photo shows the film in the making.

AROUND *the* COUNTRY

WHAT WE LIKED IN THE USA

YELENA ORLOVA,
PRORECTOR OF THE LENINGRAD CONSERVATORY.
AND YURI MUROMTSEV,
RECTOR OF THE GNESIN MUSIC TEACHER TRAINING INSTITUTE OF MOSCOW.
INTERVIEWED BY GALINA SILINA
AFTER THEIR TOUR OF MUSIC SCHOOLS IN THE UNITED STATES

TWO EDUCATORS LOOK AT MUSIC TRAINING

WE WERE TALKING in Yelena Orlova's office. She showed me several books that American music educators had presented to her. They reminded her once again of the schools she had visited, and the illustrations helped me visualize the people she had met and talked to.

"With what feelings did you go to America?"

"I was very much interested. And I must say that our American hosts were very cordial. The Department of Health, Education and Welfare, on whose invitation we came, planned our trips to northern cities. We stopped at Juilliard, Eastman (at Rochester University) and the Interlochen Academy of Fine Arts, among other schools."

"What, in your opinion, is the most interesting aspect of music education in the United States?"

"The Americans have some very worthwhile experience in public school music training. We were impressed by the fact that children study music for 12 years. They sing in choruses, learn to play an instrument and perform in orchestras. One day a week is devoted to music. That is splendid.

"It seems to us that as far as bringing out talent is concerned, the American schools are on the right road. With one exception. For a child with a real feeling for music, the public school program is insufficient. He needs more time for music. And that means his parents have to pay for private lessons.

"Right now the esthetic education of our own schoolchildren is very much to the fore. We are thinking of applying the American system of music training in our public schools, but we will tie it into the system of free music schools we already have. We have a sufficient number of these schools throughout the country. Besides that, many of our children get music training in their palaces of culture and Young Pioneer houses. Since the Americans have no special music schools of this type, they could probably learn from our experience in this regard."

"What other differences did you find?"

"We have an organized system of music correspondence courses that the United States lacks. We have special textbooks and recordings of solfeggio, piano, etc. for correspondence students so they can study without teachers."

"Did you go to any concerts during your visit?"

"Of course. We heard the famous Philadelphia Orchestra conducted by Eugene Ormandy and went to Carnegie Hall and Metropolitan Opera performances. We also heard a recital by Van Cliburn. It was gratifying to find so many of the concert programs featuring Russian composers. We were especially interested in the works of the American composers.

"Of the Soviet composers, Shostakovich, Prokofiev, Khachaturyan and Kabalevsky are well known and often played in the United States. Sviridov, Shchedrin, Galynin and Slonimsky are much less well known. Obviously, some of our music does not reach across the ocean.

"Personal contact and exchange visits will do much to acquaint us with each other's music. It would be a good thing to exchange sheet music and books on music systematically."

From Leningrad we moved to Moscow and continued our interview in Yuri Muromtsev's office.

"What differences are there between our methods of teaching music and those of the Americans?"

"The Americans do more group teaching. In the early stages, until we find whether a pupil has the makings of a musician, it is good sense to teach in groups of six to eight children.

"The group method is also used in colleges where music teachers are trained. I think this approach is worth following. As for the professional music schools, I saw no special difference between theirs and ours. They also have individual instruction."

"How do the courses of study in the two countries compare in terms of time?"

"In our country a musician spends 16 years studying: seven years in elementary school, four years in a specialized secondary school and five years at the conservatory. This system justifies itself. The music student in the United States goes to a four-year professional music school straight from high school. The level of the high school graduates' musical knowledge is obviously not the same."

"Where is the training more specialized, in our country or in the United States?"

"In our country we train professionals from the very outset. Our student learns to play one instrument. To my mind, the merit of American musical education is that the beneficent soil from which the professional later grows is prepared by the public school. Those who study in college can often play two instruments. They sing in choruses and learn to conduct. In short, the United States trains a more versatile musician.

"We may have more outstanding musicians, as our victories at international contests show. But in the United States more people learn to play instruments."

"Anything else you would add?"

"Only that their schools are very well equipped from the technical viewpoint. For instance, for lessons in harmony each student has a miniature piano at his disposal, and student work is filmed for the conductor to criticize."

In conclusion Yuri Muromtsev said:

"It is my hope that the friendly relations we established with our counterparts in the United States will continue to grow."

A HEART IN MY HAND

BY NIKOLAI AMOSOV



The following is an excerpt from the book My Thoughts and the Heart *by the distinguished surgeon Professor Nikolai Amosov. His first literary effort, it was published recently in Kiev.*

A KNOCK at the door.

"Come in."

"Time to start scrubbing up, Professor."

Well, there it is. Now everything stops short. All feelings vanish. They slide off to the edge of consciousness.

I change my clothes. I wipe my glasses.

Today we work in the small operating theater. This is where we use the heart-lung machine. The theater has a glass window in the ceiling through which spectators can observe the operation. They don't get in your way—that is a good thing—but it is all too exposed. An operation is not a spectacle.

I look in through the open door. He is lying on his side, covered with a sheet. This is no longer Sasha; it's just a patient's body. There is nothing familiar about it. I won't look under the sheet, at the face. It would probably look like the face of a stranger.

Everything seems to be all right. The anesthetists, Dima and his assistant Lenya, stand there looking relaxed. Lenya rhythmically squeezes the respiratory bag of the anesthetic equipment. Blood drips slowly into the vein. Peaceful blood. Maria Vasilyevna prepares the surgical field. Now she is simply Maria, or Masha, depending on the circumstances. The assistants stand at their places. Marina's face is flushed. She's the operating nurse. There must have been an argument about something. I won't ask questions. They can straighten it out themselves.

Everything is white. The basins are still empty. The only blood is the blood in the ampule of the dropper. What a pleasant picture it makes! If only it could stay like that all the way through. . . .

As usual, I scrub without talking. I don't think about anything. I simply scrub my hands with the brush. It has all been figured out. There is nothing I can add. That special calm steals over me.

I enter the theater. The incision has already been made. Diathermy has stopped the flow from the blood vessels.

A gown is held out for me to slip into. My mask is tied. I take my place at the table. It is crowded, what with four surgeons and a nurse all standing beside the chest.

"Valves?"

A nod. Why use words?

We cut the muscles and open up the pleural cavity. This is where the surprises begin. We find the lung adhered to the chest wall. That's irritating. Pulling away the adhesions takes time—and we have no time to spare. On top of it all, the adhesions may bleed. But that's the way it is. Keep calm.

We open the pericardium, the sac which encloses the heart. Now the heart is bared. It gives me a jolt. I knew from the picture that it was big. But now, when it's open! The left atrium is like a sack; the ventricle is huge, and it pulsates strongly. When it contracts, only half the blood goes into the aorta, while the other half goes back to the atrium, through a bad valve.

Checkup. That means I put my finger into the heart through a slit in the atrium. I feel the flaps of the valve; they are coarse and hard, rough with little calcified spots. A strong stream of blood beats against my fingertips every time the ventricle contracts.

Well, just what I expected.

I stop to think for a minute. Should I put a valve right in, or try to mend that one? Putting one in is quicker, and the patient will not die on the table. That is, he shouldn't. But what about afterward? Would it take? This heart is greatly changed, the conditions for knitting poor. Besides, how long would a new valve last? But if we don't succeed in mending it, we will have to sew in a valve anyway. It means an extra hour of work for the machine. It means hemolysis, the liver, the kidneys.

No. Like any other surgeon, I don't want him to die right here, now, or shortly after the operation. If it's months or years later, well, that's something else again.

But no. That won't do. Keep cool. Think it over.

I insert my finger into the heart again. A split-second thought: How simple it is now—right into the heart. But the first time I was nervous. I was ten years younger. I wouldn't want to start now.

I don't think about Sasha. I don't see his smile or hear his voice. As usual, I do not have the feeling that a living person is lying on the table. It is all in my subconscious. On the surface there is only deep concentration on how best to do the job.

A valve. But I'll make up my mind definitely when I see.

From the corner of my eye I glance up at the window in the ceiling. Mostly our own doctors and nurses up there. And a few strangers. I don't like it. We're like gladiators, we and death. I tell myself not to look. It's of no importance.

Let's join up.

That means joining up the heart-lung machine. One tube goes into the right ventricle: through it blood flows from the heart into the oxygenator, the artificial lungs. Then it is pumped out (by the artificial heart) and sent along a second tube into the femoral artery. On the way it passes through another system which cools the blood to cause hypothermia, and then later, at the end of the operation, warms it.

We're expert at joining up, but it takes time. Everything goes smoothly. The tube is inserted into the heart without a drop of blood. That makes me feel fine. I'm pretty good. But don't count your chickens. Come off it now, Professor. What would Sasha say if he heard you boasting like that?

"Are you ready there at the machine?"

"Yes."

"Switch it on."

The motor starts up. It's still too noisy. Now we have a respite. It will take another ten minutes or so to cool the patient's blood down to the 71.6°F. we need. We all wash our hands in sublimate.

Marina is busy at her table getting ready for the main stage. Those at the machine take samples for tests. Dima checks the drugs on his table and asks for something to be brought.



We're the only ones with nothing to do. A short lull before we come to grips with it. No thoughts in my head.

"Did you check the needles and thread, Marina? Are the valves here?"

"Yes. It's all here."

"Let's have a look."

Here it is, the valve. A stainless wire frame with a plastic tissue ingeniously stretched over it and carefully sewn on so that flaps are formed, like a real valve. Nothing more to do now. We wait. It's down to 77°. The tissue is cold. It's unpleasant—like touching a corpse. The heart is beating 40 times a minute. We want it merely to fibrillate, that is, to flutter. At a low temperature it means, practically, that the heart has stopped. This lets us do our job of fitting and sewing without interference.

Now it's 73.4°. Fibrillation.

"Let's get going."

The atrium is slit wide open. The powerful pump draws off the blood in a few seconds. And here's the valve. The holy of holies. The heart is dry and motionless. Dead? No, the barely perceptible flutter shows there's life.

Everything is confirmed: the flaps are shortened and tough and are covered with calcified spots ranging in size from a pinhead to some that are a centimeter in diameter. There is a wide crack between the flaps. They do not touch—and that is where the insufficiency lies. Restoration of the valve is impossible. Or at any rate very risky.

"We'll cut."

I put clamps on the flaps and cut them out along the circumference of the valvular opening. It's a bit frightening; I'm not used to it yet. It's like when I did my first amputation—the leg would no longer be there. In place of the valve there is a shapeless opening into which a new valve has to be sewn.

Now the hard part of it begins. The sewing is very awkward. It is deep, and there is no room to turn the instrument. The damned needleholders turn like devils.

I sew on, cursing all the time. Into space, at Marina for misplacing the needleholders I had chosen myself, and at Maria for not holding the threads properly and for not catching the ends. I curse the whole world. Nobody talks back.

But there's an end to everything. The valve is in place now. Fastened in with 30 stitches. Reliably. I feel better. I can take a look around.

"What's the hemolysis?"

It was 20 on the thirtieth minute.

So far so good. All I have left to do, actually, is to sew up the heart. No much of a job. And with good instruments, sewing in valves is not difficult. No reason for patients to die. I'm sure we'll solve that problem. I'll have to hurry up and write an article for the journal and demonstrate the patient to the Society.

Bah! What nonsense! Thinking about an article and the Society when this patient is lying here with his heart open! And the woman patient who died! And in general!

I feel ashamed of myself. That was ambition gnawing. You thought you had crushed it with noble words and with noble thoughts on top of that, but it lives on. Is that what drives me on to do these agonizing operations? I don't know. There are times you start doubting yourself. Success and power are always pitfalls.

Anyway, we're putting in the sutures.

There's no point rushing. It will take at least 20 or 30 minutes to warm up the blood. So I do everything calmly and painstakingly. It's peaceful and quiet once again. There is only the noise the attendants in the sterilization room are making. They hold nothing sacred; to them the operating theater is the same as a kitchen. Devils!

The sutures are in.

"What's the temperature?"

"It's 93.2°. Now it's rising slowly."

"Get the defibrillator ready."

That is an apparatus which gives the heart an electric shock of several thousand volts for a minute fraction of a second. It starts the heart beating steadily again.

Then suddenly—wonderful! The heart has started up by itself. Something happened inside, and out of disorder order is born.

"The rhythm is normal!"

The exclamation comes from Oksana, the doctor seated in front of the electrocardiograph screen.

"You're late. We can see it for ourselves."

Everybody is pleased. The defibrillator is a good thing, but still there are cases when it fails to get the heart beating. This time the heart started by itself. It's beating well, too. We'll continue warming it up with the machine on and then let it go by itself. We did it! I feel like shouting for joy.

This lifeless body will become Sasha again—charming, clever Sasha!

"Let's remove the drain from the ventricle."

Yes, it's time to. No doubt about it. There won't be an embolism.

"Well, let's go. You remove the tube, Masha, and I'll put in the suture.

"Oh God! Hold it! Pump! Quick, damn you!"

I don't know what went wrong. Whether the thread broke or the muscle underneath it tore, but now the tube is out and there is a gaping hole in the heart. When it contracted, a three-foot stream shot out. Only once, of course. By the next time my finger had closed the hole. Ah, that's a little better.

Now we have to sew it up. That's not easy when the heart is beating strongly; the upper part is jumping in my hands, and I need one hand to keep the hole closed. But it can be done. I've done it before. And since the heart-lung machine is still working, there is no danger of death from a heart stoppage.

It all turns out to be much harder than I thought, however. Without taking my finger away I put new sutures in. But as soon as I finish, the muscle tears under the threads and the hole opens up. Damn! It's larger than before. Much larger. Blood streams out. I put



Even though cardiac surgery is a medical commonplace today with refined procedures, it is still complicated and risky, especially in cases like the one shown here, a heart with a triple disease.

two fingers into the hole, but blood trickles past them anyway.

The peace and quiet have gone in a flash, replaced by irritation and anger.

It's like a man walking across a frozen pond on a calm winter day and suddenly falling through. The black water pulls him down; he flounders and shouts, but the ice cracks under the weight of his arms, and the black water keeps spreading. Red blood—lots of it.

"A patch, Marina, give me a teflon patch! Quick! And get good thread ready on a big needle. Pump! Pump! It's not pulling. Hey, you. . . ."

A stream of invective.

We have to put on a patch—like the patch you put on a hole in a ship's bottom. But it's hard, because the heart is beating in your hands and the needles turn in the needle-holder.

I don't know how long it all takes. At first a small patch goes on. It doesn't hold—blood oozes out from under the edges. On top of it goes a larger patch, almost as big as a man's palm. I put many stitches in around the edges. The blood is pumped out of the wound and sent into the machine. But the pump doesn't always manage to keep up, and blood flows from the edges of the wound onto my gown and the floor. I almost feel like cooling down the patient and stopping the heart again. But that would mean death.

Now the flow has practically stopped. Only tricklets ooze out from under the patch. A few more stitches and it's all dry.

All dry. We switch off the pump. The heart is beating, but it is much weaker. We haven't had time yet to make up for the loss of blood. We do a transfusion. The heart picks up.

I look around. Everyone is tired and unhappy. No more joy. They are all still gripped by what has just happened, they can't believe it's straightened out. They're right. Now we can look forward to more trouble.

"How're tricks, Oksana?"

"Not so hot, but passable. The peaks are low—weak myocardium."

Of course it's weak. That's why the threads went through it. But it's time we finished.

"How long has the machine been going?"

"One hundred and sixty minutes."

"So long? What's the hemolysis?"

"The latest count isn't ready yet, but before the complication it was 80."

Much higher now, of course. Pumping blood out of a wound plays havoc with the red blood corpuscles, and we must have pumped out some 40 pints.

"Stop the machine."

I glance upward. There is a gaping expression on all the faces. A surge of irritation. They're staring the way people do at the circus. Will he slip? Horrifying, and at the same time. . . . But no, I'm not being fair. Most of them are honestly worried. Don't think you're the only one. People are decent. Yes, decent. You have to say that over and over again. Otherwise living is impossible.

Dima is working on the patient. A difficult period has set in. Regulation of respiration, the blood vessels and the heart is in his hands.

The machine makes less and less noise and then comes to a stop. Dima has his eyes glued to the heart. He keeps checking the pupils of the patient's eyes. He tries to take the blood pressure and finally succeeds.

"Pressure is 70. The pupils are narrow. Both alike."

That's in reference to an embolism. I am sure there will be none. But then, can you be sure about anything in medicine? Only about probability. I insert my finger into the opening left in the wall of the atrium and temporarily held together by a clamp to test the new valve. I do not feel any stream of blood.

"No backward flow."

I measure the pressure in the atrium. It is 10. It was 30 before. Now we can remove the tube from the heart and disconnect it from the machine. It seems to be beating satisfactorily.

That is just about all. We still have to put a few stitches in the pericardium, insert a drainage tube into the pleural cavity, and sew up the wound. But the main thing is to see that the minute vessels have stopped bleeding. Coagulation is poor now; hemorrhage is the most frequent complication after this operation.

This takes nearly an hour. It can't be rushed. Anxiety and weariness have slowed our reactions, and it takes us a while to revive. The heartbeat is good! If only he would wake up now, we would be happy. For the time. Afterward, of course, perhaps new complications, new worries.

We sew up the skin.

"His eyes are open," Dima suddenly says. His voice is calm, as though it always happens this way.

We all look at the patient's face. Yes, he's alive. His eyes are open. They are totally uncomprehending—but a man with a brain embolism does not open his eyes. Another load off our shoulders. And our hearts. True, there is still the danger of hemorrhage and kidney failure. Hemolysis after the machine was switched off was 150.

"See that there's plenty of blood in reserve, Dima, so you don't have to go hunting in the middle of the night. You'll need at least four pints."

The operation is over. The wound has been dressed, and Sasha has been turned over on his back. His eyes are closed again. But that is postoperative sleep. When his arms and legs are pinched, they move. No paralysis.

The whole thing, from the incision to the the last stitch, has taken five and a half hours —six hours counting the preparations.

We sit back and take it easy in the next room. I plump into an armchair, and now I'm so tired I can't lift a finger. I have had many pleasant and unpleasant moments in this armchair after operations. I can't stop yawning, oxygen starvation, as though I were the one who had undergone surgery.

"No one can become a Communist unless his mind has been enriched with all those values that mankind has created." ***Lenin***

JEAN JACQUES ROUSSEAU

We Are Their Heirs

BY PROFESSOR ALBERT MANFRED
Doctor of Science (History)

NEAR Saint Paul's Church and Francs-Bourgeois Street with its ponderous dark old buildings there is a little street called Sevigne, one of the quietest and narrowest in Paris. Two cars or carriages could hardly pass each other here, and it is rare that a vehicle comes this way. Not many people walk along Sevigne. The footsteps of only an occasional passer-by echo on its sidewalks. Little girls playing hopscotch in the middle of the street shrill and giggle when they see you and stare until you turn the corner.

Walking down Sevigne from Francs-Bourgeois, look for a large old mansion on the left. This is the Carnavalet Museum. Cross its threshold and you find yourself in the remote past, in the dimly familiar eighteenth century. Eyeing you sternly from the wall are Mirabeau, Robespierre, Danton, Desmoulins—friends and foes. Among these frozen figures in chipped and darkening oil paintings there is a small, faded portrait of a handsome young man in a tall white wig—a pastel of Jean Jacques Rousseau done by La Tour. He appears serene and confident at first glance. Look closer, however, and the latent emotion, perhaps unrest, of those features will grow upon you.

This was the Rousseau seen in his youth by the artist. The portrait sets you wondering to what this man owed the great influence he had on his contemporaries. What was it in him that focused the attention of succeeding generations for two centuries, indeed to this day?

The heated polemics over the character, significance and value of the ideological and literary legacy of the great "citizen of Geneva," controversies that have been going on for decades in the enormous and ever growing literature about Rousseau, have never abated. Despite the varying opinions, one thing is clear: Researchers studying the legacy of Rousseau have all noted the paradoxical nature of everything he created.

Everything, indeed, is paradoxical about Rousseau. This writer who won world fame in his own lifetime, who came to dominate the minds of the young, remained a homeless wanderer to the end, a chronic failure who had tried his hand at all professions, a pauper who led a precarious, uncomfortable and disordered life. This man of unique and enormous talent would have been hard put himself to say exactly what he had created or indeed who he was. A novelist? A poet? A writer of comedies? A composer? A music theoretician? A music critic? A philosopher? An economist? A political thinker? A learned botanist? He was a little of all of these and other things besides. There were other outstanding figures then who dimmed his fame, and perhaps his talent also, in every sphere of art, science, and knowledge to which he turned his hand, but that was hardly surprising in the brilliant Age of Enlightenment, which produced so many stars of the first magnitude: Voltaire, Diderot, d'Alembert, Holbach, Buffon and Lavoisier.

To this one should add that the author of *Discours sur l'Origine de l'Inégalité des Hommes,* a man whose concern was the welfare of the people and who always wrote about the people, remained an ascetic himself, withdrawing from others, and preferring "the promenades of a solitary thinker" to communion with his fellows.

All this is true, yet in spite of the glaring contradictions in Rousseau, one thing is undeniable: This man who seemed so queer to his contemporaries, who never made the slightest effort to win popularity, nonetheless acquired greater influence than was wielded by any of the illustrious writers of the eighteenth century in their time.

"Rousseau was a genius," say many of his admirers. That can hardly be denied, but how did his genius manifest itself? What was it, exactly, in Rousseau's work that so firmly possessed the minds and hearts of young people?

Rousseau was often called "the apostle of equality." That definition acquired an almost official character during the French Revolution, when his authority loomed greater than that of any other prerevolutionary thinker. But let us examine the meaning given the term.

Let us recall, first of all, that Rousseau was by no means the only champion or interpreter of equality. The essay "Egalité" in Diderot's and d'Alembert's *Encyclopédie* that influenced contemporaries so strongly was not written by Rousseau but by the popular writer Jaucourt. Nearly every political figure of those days held forth on equality, liberty and fraternity, on each of the components of the triune formula of the French Revolution. Nor was Rousseau the most radical, or to use the terminology of our own day, the most extreme leftist in his interpretation of equality.

He understood it not only as the equalization of the rights of all citizens (for that was self-evident), not only as the diminution of judicial inequality, but chiefly as social equality. Though Rousseau so forcefully depicted the baneful consequences of private property, he never called for its abolition. He was never a Communist, for he was unsympathetic to the ideas of Utopian communism harbored in his day, for instance, by Morelli, and with somewhat different shadings by Abbé Gabriel Bonnot de Mably.

Does this imply that Mably was further left (keeping to our own terminology) than Rousseau? I hardly think so.

Rousseau was undoubtedly an equalitarian, but one who felt that private property could not be eliminated under the then existing system. Seeking for a way out of this dilemma, he found it, or at least thought he did, in the elimination of great inequality of fortunes, in the leveling of property.

A determined and implacable opponent of wealth, he sought to discredit it largely by attacking its ethics. "Wealth is evil," he said. "It is unjust, immoral, and brings misfortune to the poor." But one can easily perceive the political motif behind these ethical precepts. Evil had to be eradicated. Translated into political language under the conditions of prerevolutionary eighteenth century France, this was an appeal for the abolition of large property holdings (whether feudal or bourgeois) and for redistribution, reallotment of land.

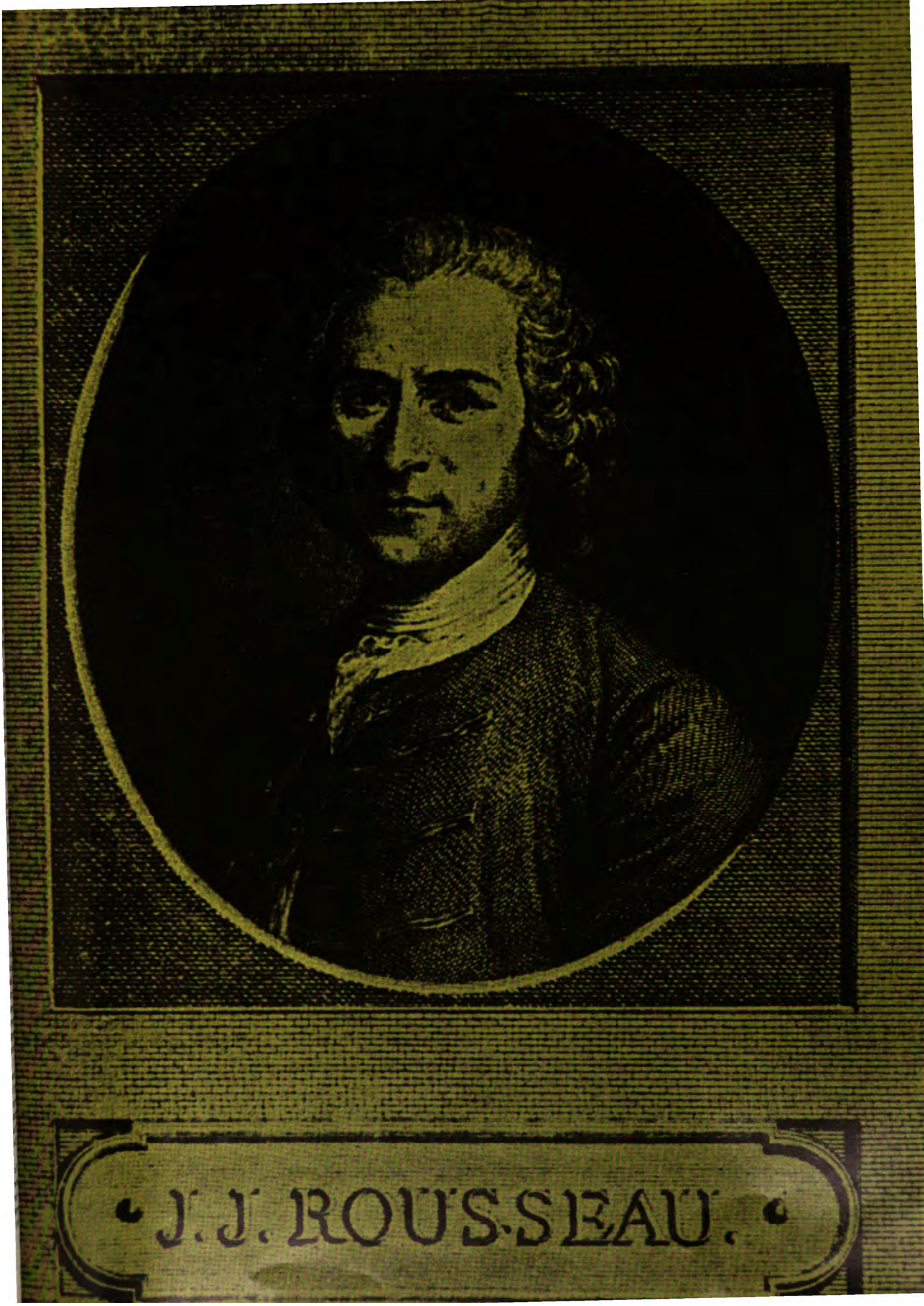
Needless to say, this social ideal envisaged by Rousseau—the equalization of fortunes, a republic of petty private owners and producers—was utopian too. This equalitarian program of Rousseau's, for all that, was fraught with revolutionary significance in a country declining under oppression, where feudal land rights and privileges were strictly preserved. Rousseau was actually speaking for the millions of peasants rising against the unbearable yoke of feudalism. This seemingly naive and incomplete demand for equality put forth by Rousseau proved for those days to be the most revolutionary and hence the greatest driving force.

Speaking of the revolutionary nature of the sociopolitical ideas of Rousseau and their enormous influence on the minds and hearts of the people, we must remember that he, of all the writers of the Age of Enlightenment, most fully understood the interests of the people and so unreservedly and unhesitatingly rose to their defense. This unsociable recluse and solitary thinker, as his contemporaries imagined him to be, was moved by an exalted concept of the destiny, welfare, and future of the people. "The human race consists of the people. . . . What does not spring from the people is so insignificant as to merit no consideration at all." Such things only Rousseau could have said in the eighteenth century.

Some may object, however, that Rousseau's fame did not rest on his sociophilosophical treatises but on his novel *Julie,* oula *nouvelle Héloïse.* That is true. *La nouvelle Héloïse* was published 70 times from its first appearance in 1761 to the end of the century. How can one explain the astonishing success of that book? The clue lies, it seems to me, in the bewilderment of all the main characters of the novel, the bafflement with which it is filled. This reflects not only the tragedy of Julie and St.Prieux, but the spirit of the age, the rebellious sentiments of young Frenchmen heading for the storms of the revolution.

Much has been made of Rousseau's sentimentality, and there is a grain of truth in the charge. Rousseau was a writer not only of reason but of emotion as well. What are the emotions, however, that move the heroes of his novels? Are they prompted by introverted contemplation? Are they the ripples of a shallow subjectivity? Nothing of the sort. They spring from social consciousness, from condemnation of social evil, from love of man.

Rousseau's greatness and unfading importance in the history of social progress stem from the fact that his works, whether political treatise or fiction, are leavened with humanism, with the resolution to combat social injustice, with the uncompromising indictment of reaction, of oppression, of violence, and with the revolutionary spirit of struggle for just and lofty goals.



J. J. ROUSSEAU.



Ivan Vladychenko, born in 1925, worked in the Donbas mining region for many years. In 1961 he was elected chairman of the Central Committee of the Miners Union and since November 1964 has been secretary of the USSR Central Council of Trade Unions.

SCHOOL OF ADMINISTRATION

Ivan Vladychenko is interviewed by *Soviet Life* correspondent Pavel Antonov.

Public organizations are coming to play an increasingly large role in all aspects of Soviet life. What part do the trade unions, the biggest of these organizations, play?

The trade unions are indeed the biggest mass organization in the country, with nearly 75 million members. Lenin defined their role. The trade unions, he said, must become schools of administration, schools of management. The working class must learn itself and teach all other working people how to manage the politics and economics of the state.

It is more than 40 years since Lenin died. Have these principles undergone any changes in the period?

No, except that they have taken on growing importance. The more progress we make toward our goal—the time when the state will have withered away and been replaced by self-government through voluntary mass organizations of various kinds—the greater will be the role of the trade unions.

The new Party Program adopted in 1961 notes that in the period of full-scale communist construction the trade unions have a particularly large part to play in political life, economic management and cultural development. And the fact is that our trade unions have become much more active in recent years. Here are some examples.

The trade unions participate in production planning at all levels, beginning with the factory plan, which is discussed at a general meeting of all the workers, and ending with the national economic plan, which is reported to the Presidium of the USSR Central Council of Trade Unions by the chairman of the state planning organization. All proposals and amendments submitted in the discussion are carefully considered, and many of them are incorporated in the final draft of the economic plan.

Government and economic bodies decide matters pertaining to production and cultural and welfare services for working people only with the participation of the trade unions.

One important type of workers' participation in industrial management is the permanent production conference. All told, there are about 125,000 of these workers' bodies on which nearly five million factory and office workers, technicians and engineers now serve. These production conferences annually review millions of ideas intended to improve production.

The trade unions subsidize 18,000 workers' clubs, 25,000 film projector installations and 33,000 public libraries, and spend millions of rubles to support amateur music, art, dance and drama groups.

As for the influence trade unions exert on the country's political life, deputies to the USSR Supreme Soviet (let alone to the local Soviets) are nominated at Soviet enterprises and institutions with the participation of the trade union organizations. No candidate stands a chance of being elected without the support of the trade unions.

How about the protection of the rights and interests of workers? What part does the union play there?

Not so long ago the country went over to a six-hour and seven-hour workday without cuts in pay. In the fall of 1964 and early this year legislation initiated by the trade unions gave some 18 million people, including teachers, doctors and municipal, public service, trade and public catering personnel, a very considerable wage increase.

The trade unions participate in setting wage scales and see to it that the scales are followed. Management cannot revise wage scales or introduce new production quotas without the consent of the trade union committee. The committee also draws up the list of workers entitled to bonuses.

The state social insurance funds are dispensed by the trade unions. Out of these funds the trade union committees pay sick benefits and grants to expectant mothers and make other such disbursements.

The trade unions run over 1,100 sanatoriums and vacation resorts accommodating more than five million people annually, most of them free of charge or at 30 per cent of the actual cost.

Many people in the West believe that since workers in the Soviet Union do not strike, they are deprived of their only really effective weapon. What comment do you have on that?

I want to tell your readers about a strike we had in March 1963, when the Longshoremen's Union in Klaipeda decided to down tools as a token of solidarity with French miners who were striking for higher pay. The Klaipeda longshoremen refused to coal French vessels.

Strikes are not prohibited in the Soviet Union, and all assertions to the contrary in the Western press are unfounded. However, the Klaipeda walkout is an exception. As a rule, we do not have strikes in our country, and for the following reason.

The Socialist Revolution placed state power in the hands of the working class of Russia in 1917. When the workers nationalized industry, they became the sole owners of the factories and mills. And factory and mill owners do not go on strike against themselves.

Labor legislation passed since the Revolution is designed to protect the interests of the working class. Consequently the only thing required is to see that these laws are observed and improved. This is the job of the trade unions. Our trade unions have become so powerful and influential that they do not have to call a strike to win their demands.

You can have very good laws on the books and still have antilabor practices. A law is only as good as the people who enforce it. When labor conflicts do arise in Soviet plants, how are they settled?

If the dispute is between management and an individual worker, the worker presents his case to the grievance committee—a joint body composed of an equal number of permanent representatives of the trade union and management.

The committee must settle the dispute within five days, with the worker concerned present.

The committee's decisions are adopted not by a formal vote but by agreement between representatives of the trade union and management. The decisions are binding, are not subject to review by any other body and must be carried out within 10 days.

If the committee can reach no agreement, the dispute is referred to the trade union committee, whose decision is binding on management. Management cannot fire a worker unless the trade union agrees. On the other hand, a higher economic body must dismiss a factory director on the insistence of the trade union.

A dispute between management and the whole staff gets the immediate attention of the higher administrative agency and trade union body. What usually happens is that the management is replaced since these disputes result, as a rule, from violations of labor legislation or infringements of workers' rights.

Western commentators say that the Soviet trade unions are controlled by the Communist Party. What is your comment?

Our trade unions are run exclusively by the rules adopted at our trade union congresses. These rules are not submitted to any government or Party bodies for approval. All amendments to the rules are introduced by trade union members at our congresses. The trade union bodies are not accountable to anyone, and no one has the right to interfere in our internal affairs. Nor are the trade unions financially dependent since our funds come from monthly membership dues.

It is no secret that our trade unions follow the general guidance of the Communist Party. We say so explicitly in our rules. But this does not mean that we are subjected to any pressure by the Party. Our decisions are made independently. Confirmation is the fact that on more than one occasion the trade unions have insisted on the dismissal of highly placed government officials regardless of whether or not they were Communist Party members.

WORKING TEENAGERS

By NINA NADEZHDINA

"Father and mother are ailing. They don't make enough to get along. So I decided to switch over to evening school and go to work. I applied for a job at the Nikanor mine and the local radio relay center. Both places need help, but neither would take me. I was told to go to school until I'm 18 and then come back."

V. S., Zorinsk

"There are five children in our family. The eldest finished junior high school. We thought he was old enough to help out and we wanted to send him to work. But they told him at the factory he went to that they were not allowed to hire workers that young."

V. I., Furmanov

"My son won't go to school, he says he's not interested. He doesn't behave himself at home—he's rude and has begun to smoke. We wanted to get him into some job, but they won't hire him anywhere because he's a minor."

K. F., Makeyevka

TWO YEARS AGO, letters like these began to arrive at the offices of newspapers and trade union organizations. They stimulated a study of the juvenile placement problem on a nationwide scale. The study showed that in most cases such organizations as the Young Communist League and the trade unions that assume responsibility for juvenile placement demand that industry executives give young people special consideration and systematic training.

But the study also brought to light that at some enterprises teenagers do not get the special attention stipulated in the labor laws. There are a number of laws in force that make it easier for working youngsters. They put in a shorter day and have a longer summer vacation. Management is forbidden to ask them to work overtime, on night shifts or on heavy or dangerous jobs. It is also required to see that their juvenile workers have regular medical checkups.

Instead of making it easier, however, all these special considerations, paradoxically enough, appear to be making it more difficult for youngsters to get jobs and keep them. The reason?

Management has to make "special" arrangements for juvenile apprentices, it has to "fuss around" with them. They work only four to six hours a day, while the rest of the shift works seven. That means machine tools stand idle, equipment is not used to capacity, and productivity drops.

Reasonably enough from their point of view, the plants want people who already have skills. One of the chief sources for skilled help are the three-year technical vocational schools that youngsters enter at the age of 14. Fully provided for by the state during the three years, they are no longer a financial burden on the family though they themselves are not earning any money and so do not contribute to the family budget.

However, the teenagers we are speaking about are those who for one reason or another cannot study at such schools, either because the family needs their additional earnings, as evidenced by the first two letters, or because the youngster has gotten out of hand and needs to be educated by work. How are such young people who have no skills to be placed?

The USSR Council of Ministers in December 1963 adopted certain procedures aimed at improving juvenile placement. Enterprises are now required to reserve three to five per cent of their jobs for teenagers. The output of workers under 17 is not to be considered in estimating the productivity of an enterprise. This provision disposed of the main objection of industrial executives, namely, that the low productivity of the youngsters brought down their production indices.

But production figures aside, all the bother of educating them and teaching them skills still remains. And this is a complicated problem. How is it being solved? Here is one way.

Clothing Factory No. 5 in Tiraspol, Moldavia, set up a special shop for its juvenile workers. For two weeks the youngsters studied the technology of garment production and were shown how to handle the equipment. Only then were they permitted to take their places at the machines. Of course, things did not go smoothly at first. The stitches looped, the thread snapped, the needles broke. The experienced workers dubbed the new shop the "kindergarten." Work at the factory starts at seven in the morning, but the youngsters do not begin until eight. One conveyor is manned only by 15-year-olds in three four-hour shifts; another, by 16-year-olds in two six-hour shifts.

Not every enterprise can set up a separate shop or section for young workers. But every enterprise can give thought to their jobs, study and recreation. And there are some that do not.

The trade union newspaper *Trud* received the following letter from the city of Kadievka in the Donets coal basin:

"My son graduated from junior high school and went to work at a garage as a mechanic's apprentice. He attended evening school and worked well, so that he was given a rating. And then, for no reason, he was shifted to the filling station. He was put to work there clearing away rubbish and digging ditches, but most of the time he just hangs around doing nothing. How is he going to learn anything?"

It is not hard to imagine what happened at this garage. They had to take on the youngster, so they did. But no one apparently bothered to find out what the boy was doing and what he was interested in. Only after his mother's letter to *Trud* and the newspaper's active interest in the matter was he transferred back to the team of mechanics where he could learn a trade.

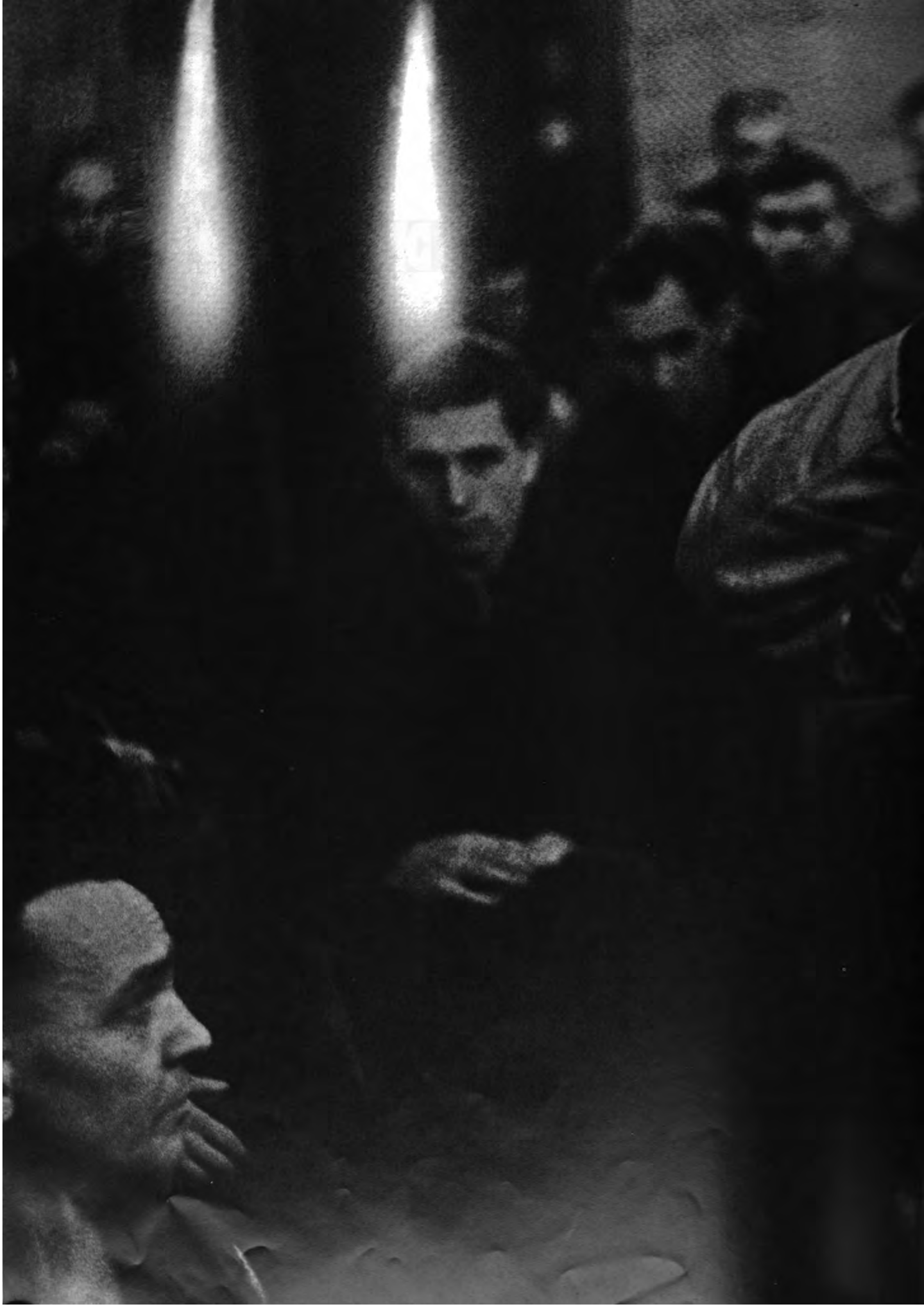
Youngsters are sometimes given tedious, dull jobs to do, as though to make sure they acquire a dislike for work as early as possible. Evidently legislation is needed here too. The Soviet press and public organizations are now discussing a proposal to make it obligatory for enterprises to hire a minimum number of workers under 18. This would compel management not only to take on as many juveniles as their quota called for but also to provide the facilities and create the conditions that would help them learn trades.

Among the 15- and 16-year-olds who go to work, we have a number of what we usually call "difficult cases." These are youngsters who were not diligent enough to go on with their schooling, who were never taught to develop any serious interests, youngsters for whom trouble-making, sometimes of a very vicious kind, has acquired a halo of romanticism. Boys like these especially need labor discipline, absorbing work. During the formative years, when character is being molded, work is the teenager's best teacher, and the workers' collective is his prop and mentor.

At the Svoboda Factory in Moscow minors work in the same shop with grownups but on a separate conveyor. The older, experienced women workers are always ready to help out. The factory holds parents' meetings at which the managers and foremen discuss the novices with their parents. Parents' Days have also become the custom at the Ilyich Plant in Leningrad. And at another Leningrad enterprise, the Svetlana Plant, a permanent public commission under the trade union committee keeps an eye on the youngsters, gets to know them when they first come to the personnel department, decides which of the experienced workers to send them to for training, and sees to it that they are provided with good machine tools and the right kind of work.

First Pay Day is a tradition at many enterprises. On that day the young people are invited to the club, where veterans workers take the floor to extend them a cordial welcome. Then the boys and girls themselves mount the rostrum, very much excited, for they are being accepted into the ranks of working adults. And right then and there the novices are ceremoniously handed their first pay envelopes.

These are some of the directions we are exploring for placing and training our young people.





WORKERS FIRE "BOSS"

BY MIKHAIL SHUTKOV
CHAIRMAN, NOVOKUZNETSK CITY COMMITTEE,
COAL WORKERS UNION

PEOPLE who worked under Grigori Danilenko called this powerfully built, rather stand-offish man "boss"—at first respectfully, and then with a touch of sarcasm. He was assistant manager of Kuibyshevugol, the largest coal trust in Western Siberia, employing 26,000 miners, engineers and office workers. The management had done a good deal in the past few years to improve living conditions: thousands of new apartments had been constructed along with 13 community centers and four recreation parks; summer camp facilities had been provided for 6,000 children; kindergartens and cafeterias had been built; and medical stations had been set up at the mines.

Grigori Danilenko was appointed assistant manager in 1960. One of his jobs was welfare, to see to the needs of the miners and their families.

Our vocabulary still includes the term "good boss." By this we mean that the man in charge is just as responsive to the requirements of the collective, of the workers under him, as he is to those of his own family.

However, Danilenko turned out to be a bad "boss." And we on the trade union committee were the first to see the symptoms of his objectionable methods of management.

By now we can tell almost to a "T" how the welfare service for the men working in this or that mine is going. If everything is all right, we get no complaints. But this time our committee got one letter after another from the men and their wives. Some said that repairs on their apartment were not done when they were supposed to be, that they had come back from their vacations to rooms knee-deep in cement dust and wood shavings. Others asked: "When will the showers at the mine work properly?" Still others complained that the medical station at the mine was not open and that the night sanatorium where the miners got ultraviolet ray treatment shut down every other day.

It was even worse when a young woman came to the city committee in tears and said:

"I'm enrolled at an evening college and have nobody to leave my child with. I've missed several classes already, and they want to expel me."

"What about the kindergarten?"

"It's closed for repairs. It's almost October already and they're still repairing."

I called up Danilenko.

"So what?" barked the "boss" into the receiver. "Too many things to do. Let them wait."

"But couldn't you repair the kindergarten during the summer when the kids were in camp for three months?"

"No, I couldn't."

"Why? Didn't you have enough money, men or building materials?"

"I had enough of everything, but I had more important things to attend to!"

And he hung up.

That was how my "close" acquaintance with Grigori Danilenko, assistant manager of the Trust, began. As he "bossed around," complaints came in a stream to the city trade union committee. Among them: that the air was not heated before it was circulated through the mine; that the issuing of working kits was held up for two days; that the bus on duty at the Redakovo mine stayed in the garage for three days running, though it was supposed to carry the men on the night shift; that there were no chess sets, newspapers or sports facilities in the hostel of the Abashevskaya mine; that the TV set at the Dmitrov mine hostel had been out of order for a whole year now. The committee executive looked into the matter. There did not seem to be what you might call objective reasons for all these inadequacies in welfare. The management of the trust had enough funds, equipment and whatever else was required. We went to see Danilenko, but he paid no attention to us, no more than he did to the workers who were always lined up in his outer office.

Danilenko had been all right before he was appointed to a leading post in the Trust. But he had changed, let the job go to his head, got to thinking himself a big shot. Well, you could understand it in a way, how a man could change, given control of great sums of money and a small army of workers. Also, he had a lot of responsibilities.

But his attitude could not be condoned. An executive had no right to look down on the people who worked under him, people who kept the country supplied with fuel, heat, light, electricity and chemical raw materials.

We decided to call Danilenko to a trade union committee meeting and hear what he had to say.

The "boss" came in with a frown that said: "Why don't you let a busy man get on with his work?" Then he muttered sarcastically:

"Your meetings won't help us to do our job!"

"Listen here, Comrade Danilenko," I said without any sarcasm, "I would like to tell you that a competent capitalist has more respect for his workers than you do. Not to speak of the fact that you are a union member yourself . . ."

"All right, you don't have to read me a sermon," he said with an offensive grin.

We did not read him any sermons, we just pinned him down with facts, plain and simple facts. We gave him quite a going over and set him a time limit in which to adjust the complaints and change his attitude toward the men.

A month went by without any changes for the better. It looked as though the man's conceit and pigheadedness had petrified.

We called a plenary meeting of our committee to discuss Danilenko. The participants were almost unanimous in their censure:

"Danilenko has no heart. He's not the man for a job like that. We need a man who has some feeling for people."

One man said outright:

"Article 49 of the Labor Code gives the union the right to a vote of no confidence with regard to an executive. We ought to demand that he be fired."

His proposal was supported by many of those present, but we voted that the test period for Danilenko be extended.

In this connection I would like to say that we are much more careful than we used to be about making the kind of decisions that affect a man's whole life. We try friendly persuasion first, we try to educate the man—make him understand what harm he's doing. It's only when we see that none of this helps that we take the next drastic step. It is this tendency, a very sound one, that was reflected in the decision of our committee to give him another chance.

But he turned out to be a man who was absolutely incapable of taking criticism. After the plenary meeting he went on just as he had before, and the complaints kept coming in.

Another meeting was called, this one of the Presidium of the City Committee of the Coal Workers Union. Among those present were the chairmen of the mine trade union committees, hostel managers, physicians, construction department workers and the chairman of the District Soviet. In a word, the meeting was a large and representative one.

Danilenko was given the floor again, but everyone could tell from what he said that he had only been playing for time when had made his promises at the last meeting.

The decision adopted was that the welfare work of the administration of the Kuibyshevugol Coal Trust was unsatisfactory. The meeting formally asked the economic council of the economic area to censure Andrei Miroshnichenko, the manager of the Trust, and discharge Grigori Danilenko, his assistant.

The economic council approved our recommendations. That was all there was to it. The "boss" was fired. However, he fought back, immediately filed an appeal with the regional council of the union in the city of Kemerovo. His appeal was turned down.

They say that Danilenko is beginning to think over his mistakes. If the experience has anything to teach him, it's this: you have to respect the people who work under you and also earn their respect. That's the secret of good management.



TRADE UNION DUES AND BENEFITS

William Jackson, a reader from Maryland, asks what a Russian worker pays in trade union dues and what he gets in return.

Vasili Barakov, deputy chairman of the trade union committee at the Volgograd Tractor Plant, answers his question.

ANATOLI GRISHATOV has been working in our hot metal shop for several years. He pays one per cent of his wages in trade union dues—a little more than 20 rubles a year. This is what he got in return:

Last summer Grishatov became ill. He stayed at the plant's hospital under the collective agreement management signed with our trade union. He paid nothing for his bed, food, treatment and medicine—it was all paid for by the state. Moreover, he drew 90 per cent of his average wage all the time he was hospitalized. If he were not a trade union member, he would have been entitled to only 50 per cent of his wage.

After Grishatov was discharged from the hospital—that was in late August—the trade union arranged a 24-day stay for him at the Pady Rest Home some 300 miles from Volgograd. The union paid his entire bill from the state social insurance fund, to which incidentally, the workers contribute nothing. The fund is comprised wholly of money specially allocated by the enterprises.

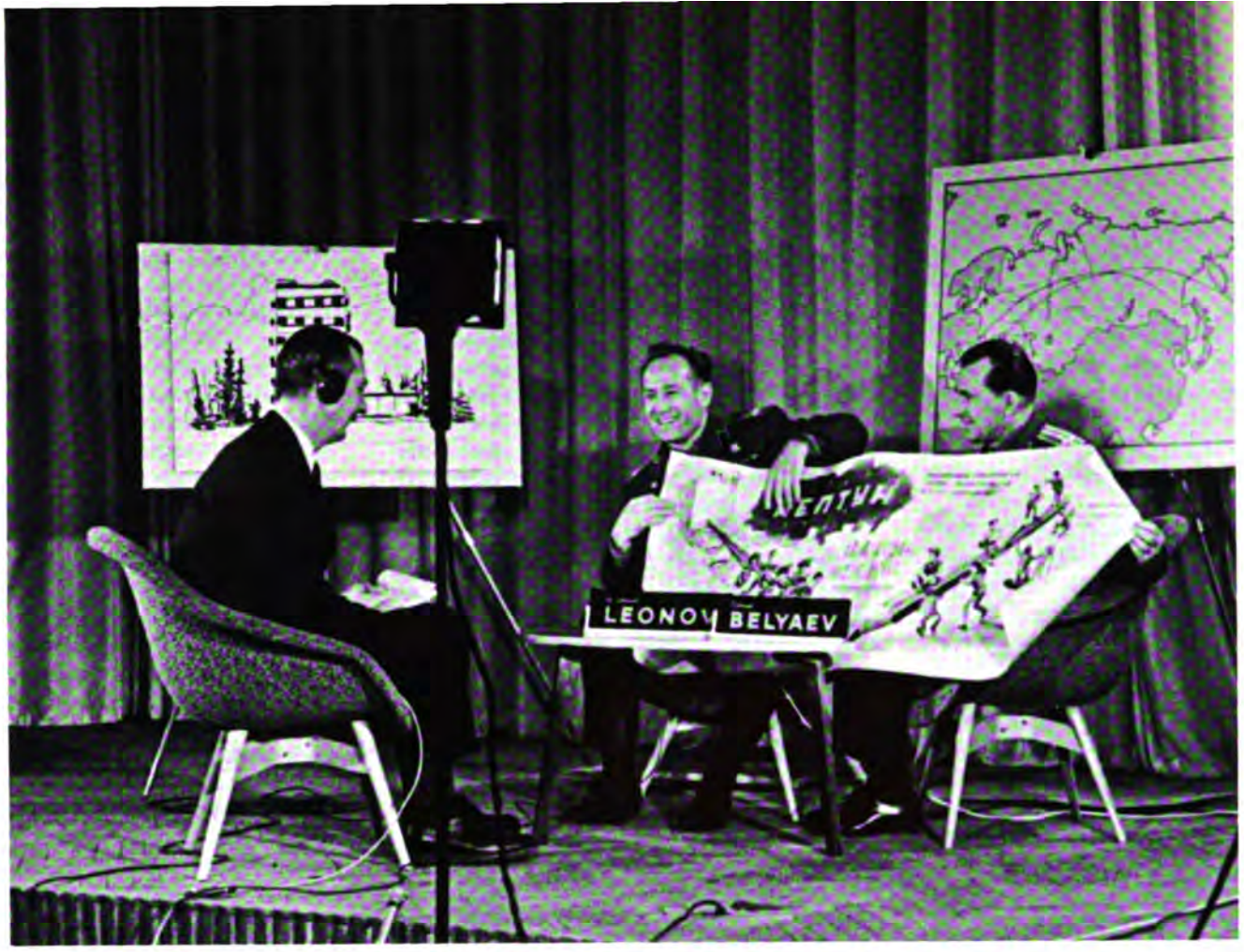
A month before that, while Grishatov was still undergoing medical treatment, his 10-year-old daughter went to a Pioneer summer camp. Her keep there cost 38 rubles a month; Grishatov paid only nine.

Grishatov's case is not the usual one, of course. Not all the trade union members at our plant get sick. But the fact is that every member who does can call on the union for the same assistance.

Here are some figures. Trade union dues in 1964 at our plant came to a little over 270,000 rubles. Of this sum, 70 per cent was deposited in the bank account of the plant's trade union committee. In addition the management allocated some 70,000 rubles for the purchase of sports equipment and for cultural and other services; this was also stipulated in the collective agreement. Our committee, therefore, had 256,000 rubles at its disposal for 1964, which was spent on cultural activities, sports and grants-in-aid to workers.

Last year we accommodated 2,480 of our staff people at sanatoriums and vacation resorts. The total cost of their accommodations exceeded a quarter of a million rubles. The workers themselves paid only 30 per cent of that sum; the rest of the bill was paid by the union from the state social insurance fund mentioned before. More than 100 workers received their accommodations from the trade union free of charge.

A part of the dues, of course, goes for administration and for regional and national trade union projects and facilities—palaces of culture, libraries and educational institutions.



AMERICA SEES COSMONAUTS "LEONING"

BY GEORGI BOLSHAKOV

"TO LEON" is a new space term. It means to walk, or swim if you prefer, in space at 5,000 miles a second. Several months ago, on March 18, Americans saw the first space swim of an earthman on their TV screens—and a lucky few saw it in color. It is from the name of this Soviet cosmonaut, Alexei Leonov, that the verb "to leon" is derived.

Americans also heard reserved Pavel Belyayev and cheerful Alexei Leonov give a detailed interview. But most of them do not know how the interview was filmed. So let us put in a few kind words for the teamwork of the NBC group headed by photographers Harry Thoese and Detlef Brandt and directed by producer Gerald Green at the Novosti offices here in Moscow.

Harry Thoese said they had tried to shoot clear pictures as fast as possible and at the same time not get in the way of the interview which NBC's Moscow correspondent Frank Bourgholtzer so ably conducted.

Present were the wives and children of the cosmonauts. Even fidgety three-year-old Vica Leonova sat quietly in her chair.

During one of the breaks Frank Bourgholtzer asked the little girl whether she knew her father was a spaceman.

"Of course I do," she said. "He flies in a bus."

Everyone had a good laugh when Alexei Leonov explained that each morning Vica saw him off to the bus that picked up the cosmonauts.

Then Green clapped his hands, yelled out in Russian the spacemen's now traditional "*Poyekhali!*"—which means "Let's go"—and shooting began again. Frank asked Alexei what their quarters were like, and the cosmonaut quickly sketched the house the spacemen lived in on his map case. Then the NBC correspondent asked the two cosmonauts whether they could find room in their house for the NBC office, which only recently reopened in Moscow.

"Unfortunately we haven't any room now," Belyayev said with a grin. "The builders did not provide for that."

"But," Leonov added, "don't get discouraged. We promise to reserve a place for your office on the moon."

The two spacemen autographed the sketch and presented it to the NBC correspondent as a memento.

The filming over, the studio lights dimmed and a unique color strip showing man's first emergence into outer space appeared on the screen. Meanwhile, the man who did the emerging sat next to us, calmly describing how he had hovered, swum, or rather "leoned" there. All of us in the hall were thrilled by what we were seeing on the screen. But the way Alexei told it, you might have thought he had gone for nothing more exciting than an evening stroll.

The lights went on and the cosmonauts parted with the NBC group after giving them souvenir color photographs autographed "Pavel Belyayev, Alexei Leonov. Novosti Press Agency, Moscow, April 14, 1965."

WHAT IS SPACE MADE OF?

IN ANY POPULAR-SCIENCE book on astronomy published a few years ago one read that outer space—the space between the earth and the moon—is void. Now we know that there is no absolute void. After the flight of *Voskhod II* we are in a better position to judge what future space explorers will encounter in flight.

Gravitational Fields

Matter exists as particles and fields. Gravitational fields fill all the "void" between planets. The earth, as well as the moon, travels within the sun's gravitational field. The earth's gravitational field, as well as the sun's gravitational field, extends into infinity and decreases in force in inverse proportion to the square of the distance. The moon also sets up its own gravitational field which decreases in force by virtue of the same law of gravity. In estimating lunar flight trajectories it has been found useful to introduce the concept of the "moon's activity sphere." With a radius of approximately 41,000 miles from the moon's center, this sphere is the portion of space in which the earth's disturbing acceleration accounts for a smaller fraction of the acceleration of the moon's gravitational field.

Micrometeorites and Dust

Thousands of millions of scattered micrometeorites enter the earth's atmosphere every day. These meteorite particles from interplanetary space disintegrate at altitudes of 50 to 95 miles from the earth's surface.

The number of meteorite particles in a flux has been measured directly. The Soviet automatic space vehicle *Mars I* intersected the meteoritic flux Taurid at a distance of 3,700 to 25,000 miles from the earth and registered approximately one meteorite impact per minute. Some 10 to 25 million miles farther the *Mars I* intersected another meteoritic flux. The density was very much the same.

With data from the space vehicles, we have been able to estimate the average density of dust in interplanetary space. It was found that the spatial density of dust particles in the immediate vicinity of the earth is a thousand times greater than in interplanetary space. The micrometeorites coming from interplanetary space must be replenished by microdust continuously rotating about the earth. The mass of particles in the vicinity of the earth ranges from 10^{-13} gram to 10^{-6} gram. The earth seems to be enveloped in a cloud of dust amidst a relatively "clean" outer space.

Radiation

Solar radiation permeates all space around the earth. Visible light is only a portion of the solar spectrum ranging from infrared to ultraviolet rays that reaches the earth's surface. Astronomers have already discarded the view that the sun emits only steady, uniform radiation. At infrequent intervals, very intense outbursts of charged particles have been observed. This became evident when it was possible to study radiation with wave lengths shorter than violet, ultraviolet and X-rays. Sunspots are the most prominent of the varied manifestations of solar activity. Sunspots, it has been found, are associated with variations in the sun's magnetic field. Increased activity of a group of sunspots is responsible for flares in the sun's chromosphere, the short-lived heating of a relatively small amount of solar gas to a temperature of several million degrees. Essentially a solar flare is the conversion of the energy of the sun's magnetic field into thermal energy. This rapid heating of the sun's chromosphere, it was discovered, results in the emission of X-rays and ultraviolet radiation.

The portion of cislunar space which the *Voskhod II* traversed is permeated with radiation from other stars, including short-wave radiation. Thus, a powerful source of X-ray radiation was detected at the center of the Milky Way. This source proved to be 10,000 times more intense than had been supposed from the study of the sun's X-ray radiation.

The sun is far from constant in its radio wave radiation as well. The radio background noise emitted by the sun is greatly intensified when there are solar flares in the chromosphere. The excessive radiation, both wave and corpuscular, emitted by the sun during solar flares seem to have a direct bearing on the disturbance in the earth's ionosphere and

THE LATEST ON SPACE

YOUR FLIGHT showed that the space suit our scientists and designers had made was reliable enough to protect the cosmonauts from radiation hazards. Why, then, was the complicated variant of exiting the cosmonaut through a lock chamber chosen instead of the simpler method of complete dehermetization of the vehicle?"

Alexei Leonov answered, "Cosmonautics has been developing rapidly. In less than four years we have come from a spaceship which orbited for 108 minutes to the multiseater ships we are launching today. Crews will get bigger as time goes on, and ships will venture into space in groups and not singly. Nor will voyages be confined to terrestrial orbits, because eventually man will want to reach other planets too. In all such flights the cosmonauts will have to leave the ship. To use the principle of total dehermetization is to expose crews to unnecessary dangers. Also it does not provide normal conditions for activity in long flights; a space suit is hardly the best working outfit."

"If dehermetization and exit by simply opening the hatch was the best variant, we would be the first to adopt it," General Kamanin agreed. "However, experience showed that it is not.

"The idea is not simply to open the hatch and jump out into free space. You need to exit for some specific purpose, to move from one ship to another perhaps, or to make repairs or to couple ships. It is unlikely that it will be necessary for all the members of the crew to be out in free space at the same time. There is no point, therefore, in keeping the whole crew in space suits in a dehermetized vehicle. It makes more sense for one or two cosmonauts in space suits to walk into the lock chamber and close the hatch, while the remaining members stay in the cabin and work in comfort and without constraint."

"Were you sure, as the ship's commander, that the lock chamber process would not accidentally dehermetize your space vehicle?" I asked Belyayev.

"Yes, absolutely sure. I could have left my space suit off and worn regular sports clothes instead, like Vladimir Komarov, commander of the *Voskhod I*, and his comrades did five months before.

"I needed my space suit for Alexei Leonov's safety. He was the first man to exit from a spaceship. While we had worked out the theoretical problems involved, his reactions to weightlessness in free space needed more checking. We were taking no chances. Therefore, our program provided for a variant which would have made it possible for me to leave the ship and help Leonov if necessary."

No Race to the Moon

Foreign press comments that call on the United States to beat the USSR to the moon drew adverse reactions from the cosmonauts.

"I simply don't understand such appeals. As far as I know, we have no intention of competing in this area," said Belyayev.

"In a space research program, haste is out of place," General Kamanin seconded him. "Each space flight, especially with a cosmonaut aboard, must be the product of a sustained effort that may take months. Improvisation is impermissible in space research, we don't believe in crash programing."

"I also think that all this talk of getting to the moon first is nonsense," said Leonov. "What we must do is work toward that goal calmly and thoroughly and without any rush. I think that those who work that way will be first on the moon."

"It is about time we considered establishing some sort of control over the objects which man keeps launching into space," General Kamanin said. "I think that controls are vital. We must introduce some order into the movement of spaceships or artificial satellites and automatic research stations if we want to avoid accidents."

Leonov supported him. "I think that international organizations and the countries launching satellites must work out a kind of space dispatcher service to prescribe the orbits of satellite ships or even manned spaceships. This is a present necessity."

"Isn't your call for 'order in space' prompted to a degree by the fact that you met a certain satellite near your ship?"

BY KONSTANTIN PORTSEVSKY

MEMBER OF THE ASTRONOMY AND GEODESY SOCIETY OF THE USSR ACADEMY OF SCIENCES

magnetic field as well as on the intensity level of cosmic rays in the vicinity of the earth.

Solar Wind

The sun's supercorona extends for millions of miles from the sun's surface, and there is a good chance that the earth is immersed in this supercorona. The supercorona is extremely rarefied, and has a nonhomogeneous "tufty" structure, something like fibers stretching along the lines of the magnetic field. The supercorona is constantly replenished by particles emitted from the sun's active regions. These fluxes of corpuscular particles are known as "solar wind." During solar flares, clouds of ions "drag" the lines of the magnetic field of sunspots off into interplanetary space. In this way the solar plasma with the "frozen-in" magnetic field enters the space between the earth and the moon.

The sun's activity shows a cyclic variation at intervals of approximately 11 years if the activity of sunspots and flares is taken into account. However, if the magnetism of sunspots is considered, the complete cycle takes 22 years. The next two years will be the years of a quiet sun, and the period of peak solar activity will be in 1968-69.

Cosmic Rays

Solar flares are outbursts of highly energized corpuscular radiation of 1 to 20 Bev.

As cosmic rays penetrate the earth's atmosphere, they lose their energy as a result of the interaction between them and the atoms and molecules of the gases composing the atmosphere. The atom fragments that reach the earth's surface are called secondary cosmic radiation.

The bulk of cosmic radiation are protons (which are nuclei of hydrogen atoms), the remaining six per cent being alpha particles (nuclei of helium atoms) with one per cent the nuclei of heavier elements and one per cent electrons and positrons.

The primary cosmic rays observed in the neighborhood of the earth largely originate from the galaxy. Some of them have an energy of up to 100 Bev. Cosmic rays emitted by the sun can be better observed in polar regions and immediately after solar flares.

When the sun's activity is at a low ebb, low-energy cosmic particles of galactic origin are able to reach the earth's surface, thereby increasing the over-all volume of cosmic radiation. Thus data obtained from the *Mars I* shows that the intensity of cosmic radiation in terrestrial space has doubled as compared with the 1959 level.

Earth's Radiation Belts

We know from satellite and rocket research that belts of high-energy radiation encircle the earth. The inner radiation belt nearer the earth in the equatorial region extends to a distance of 300 to 3,700 miles from the earth's surface. It consists of protons with an energy of up to 10 Bev. The outer radiation belt which envelopes the inner belt ranges from 8,000 to 37,000 miles from the earth's surface, and consists of electrons with an energy of up to 100,000 eV. The outermost belt seems to consist largely of electrons of more than 50 eV. The altitude and asymmetry of the radiation belts are strongly influenced by the solar plasma wind.

The radiation belts seem to have originated by reason of the fact that the earth's magnetic field acts as a trap for charged particles. The envelope formed under the influence of the magnetic field is now termed the magnetosphere; its boundaries tend to shift during magnetic storms.

The origin of the inner radiation belt is well known: it is supplied with particles from the earth's atmosphere when cosmic rays disintegrate. Neutrons resulting from nuclear decay are short-lived and disintegrate into protons and electrons. If this process occurs far from the earth, the particles are trapped in the earth's magnetic field.

The origin of the outer radiation belt is an open question. Presumably, a "cosmic" particle accelerator is at work somewhere several thousands of miles from the earth's surface.

The outermost radiation belt seems to have some connection with protons of the solar plasma, but it is not yet clear whether it is closed or extends only toward the sun.

COSMONAUTS PAVEL BELYAYEV AND ALEXEI LEONOV AND LIEUTENANT GENERAL NIKOLAI KAMANIN

INTERVIEWED BY
NOVOSTI CORRESPONDENT VALENTIN MIKHAILOV

"To a degree, yes, though there was no possibility of collision in that case," answered the commander. "To begin with, the satellite was in a somewhat higher orbit than our ship. Secondly, we were ahead of the satellite, it lagged behind and there could have been no collision. But that does not rule out the possibility of collisions in space when several ships are involved, even though the practical probability is very small."

Training Space Pilots

My next question was addressed to General Kamanin. "Our cosmonauts apparently meet no situations in space for which they have not been prepared in their ground training. How do you account for that?"

"The explanation lies in the thoroughness of our training," the general replied. Our scientists acquaint the cosmonauts in advance with all the conditions they are likely to meet in orbit. Their colleagues who have already been in space take part in the discussion of the program and goals of the projected flight.

"A specific feature of the training, for example, of the *Voskhod II* crew was that Leonov, Belyayev and their stand-ins were trained to leave the ship under weightlessness, as well as under deep vacuum conditions. Each cosmonaut had several training runs of this kind.

"Our training program is not static. Each flight introduces new modifications so that the length of training and its technological aspects change with each new assignment.

"Take, for example, Yuri Gagarin's flight or even Gherman Titov's day-long flight. These flights cannot be compared, either in their targets or volume of research with the day-long flights of the *Voskhod I* and *Voskhod II* crews. As a matter of fact, the training program was different even for these two crews. The *Voskhod I* crew was not trained to leave the ship; the entire program was to be carried out inside the cabin without space suits. The *Voskhod II* crew was put through a considerably larger flight and parachute training program and more training was done in the high-altitude-and-temperature chamber.

"Naturally, the designers and engineers building the ship influence the training program. As new equipment is developed, it is incorporated into the training program."

"We should mention another characteristic feature," Leonov added, "the participation of the cosmonauts in the development and testing of all new systems and equipment. Before we leave the ground we know how the systems will perform in outer space. This is certainly one of our guarantees for success.

"For example, Pavel Belyayev and I participated in the development of the draft project of our variant of the ship, lock chamber and all its new systems. We were present at all tests and suggested changes we thought should be made. The designers considered every one of our suggestions very carefully.

"The tester went over everything, of course," Leonov continued. "But in spite of that, we checked out all the new units ourselves. We looked over the lock chamber and space suits with special care."

"All this and a countless number of other details make up the answer to your question," said General Kamanin. "What it amounts to is that everything a cosmonaut may encounter in space and everything he actually encounters there is predicted ahead of time, and he is trained accordingly."

Ready to Fly Again

I asked Belyayev and Leonov what they thought about another cosmic journey.

"We would board a ship and start off again with great pleasure," answered Leonov. "We feel fine. We've had the benefit of hearing specialists analyze our flight and work in space. I am sure we would do a better job now with many elements of the program."

"I share Leonov's opinion," said Belyayev. "Each space flight is a new step which brings the day nearer when man will be able to see close up planets which he can now only admire from afar. Whether it will be us or somebody else who has that look is not decisive, of course, but we would certainly like to be there when it happens."



Ivan Yefremov, professor at Moscow University, is a prize-winning research scientist and widely read science-fiction writer. He wrote this story for first publication in Soviet Life. *Extracts from his science-fiction novel* The Andromeda Nebula *were in our June 1963 and December 1964 issues.*



Andrei Sokolov's science-fiction drawings are no less fantastic than the story, but they all have a solid science foundation.



KRES, operator of the Central PPV Antarctic station, was bent over a work chart when he heard a familiar voice from the depth of the screen calling him. Delighted by this unexpected call, he peered into the face of his old school chum. The same face, yet somehow different. Indeed, there was always some inexplicable change in a cosmonaut who had returned from the voids of space. This was not the imprint Father Time inevitably stamped on the faces of stay-at-home earthmen. It was something that touched a man deep inside, that imparted a difference to a smile and a changed glint to the eyes.

"I wasn't expecting you so soon. They televised your arrival only two days ago. Why did you touch down at the old Baikonur Cosmodrome instead of El-Homry?"

"I'll tell you all about it later. I've been given only four minutes to get the code number of your visiting channel."

Kres gave him the code number and added: "We'll be able to see each other tonight at twenty hundred hours planetary mean time for the Eastern Hemisphere. It's my turn to see the Five Pictures. I know you haven't seen them either. By the way, you'll meet two other old friends. I've invited Alk—he's still an artist—and Ta will be there too."

"Ta back already from the Five Dark Stars! And you still use the nickname we gave her at school. How about Ne Ta, where is she?"

"You'll see her too. It was her team that found the Five Pictures. She'll be commenting on them at the Astronautics Council showing."

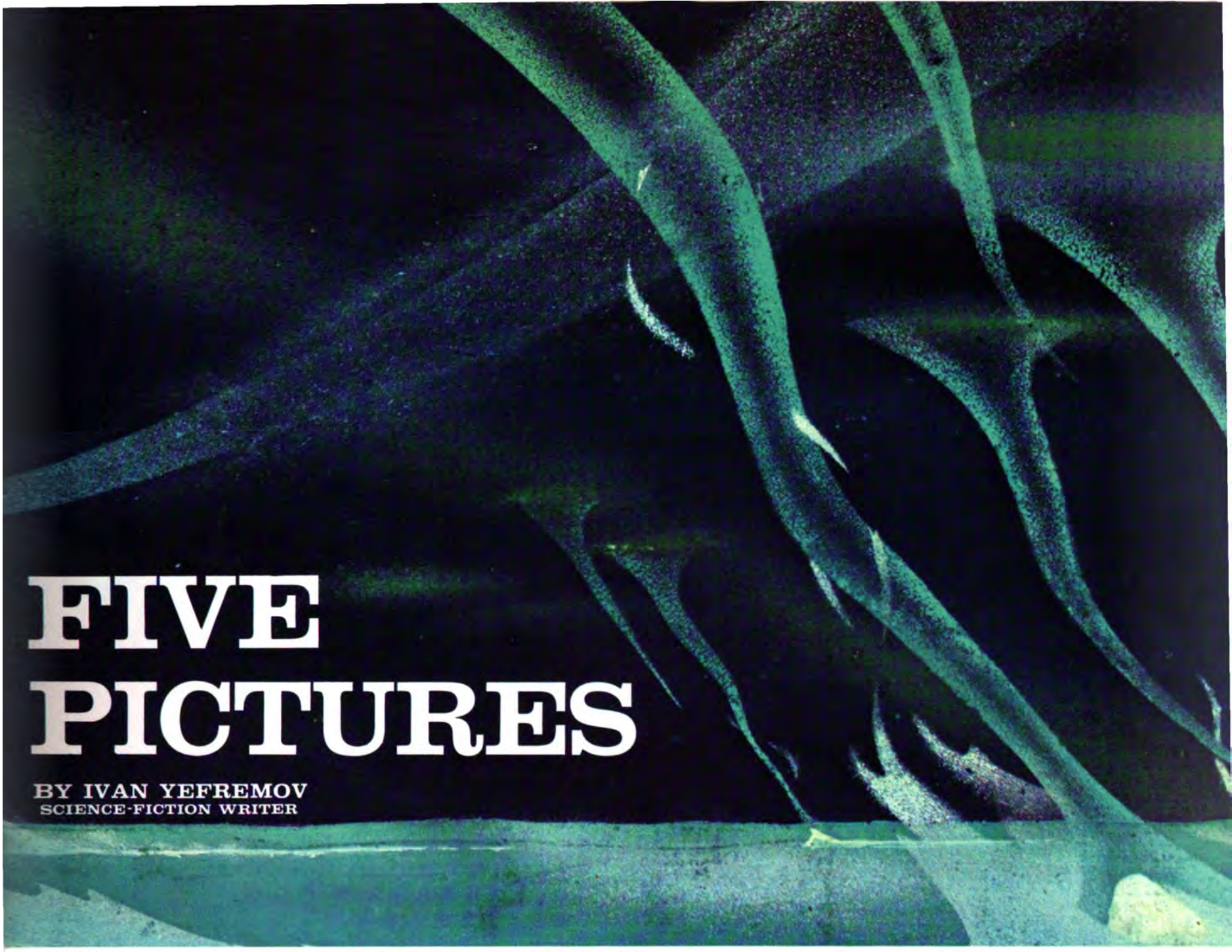
As the face of his friend faded, Kres went back to his chart. He was not disturbed about the tremendous task before him, not after he had had a hand in flooding the Kalahari and Namib deserts in South Africa. Now his mission was to transport a whole fresh-water sea to Australia, where hundreds of years ago a badly planned project for desert irrigation by subterranean waters had resulted in wholesale soil salination. Artesian wells had been supplying only heavily mineralized hot water.

The desalting of sea water was no problem. But the poisonous distilled water had to undergo complex chemical treatment. Only recently scientists had learned how many substances, though in minute quantities, were dissolved in the intricate pattern of water, which had once been thought such a simple substance. Indeed, without these substances water could do nothing for life. However, the vast quantities required to irrigate a whole continent would take too great an effort to make it worthwhile. Australia's agriculture would not justify the cost.

As usual, the way out was found sooner than expected. Indeed it was an altogether unanticipated solution, this method of transporting water molecules in streams of charged particles. Something like a tornado was created, a huge arc shot up into the stratosphere that carried any amount of water. Meanwhile the small thermonuclear station on Antarctica's ice cap produced billions of gallons of fresh water, stored up from the humid atmosphere of a recent geological age.

The planet's economic council was inordinately pleased with itself because some time previous it had turned down a project to melt the Antarctic ice and raise the ocean levels. There was no point in mixing fresh water with salt water now that any amount of it could be rained down at any point. After the salt had been washed out of Australia's soil, the Sahara had to be flooded, Iran's Great Salt Desert washed and artificial fresh-water lakes the size of seas created in Central Asia.

Kres put a call through to the station deep down in the ice cap. Everything was set to shoot out a charged stream. The low hum of the emitters made conversation difficult even in the well soundproofed central control room. Kres switched on a warning signal announcing that in 15 minutes a 1200-mile-wide strip of atmosphere between Antarctica and Australia would become a danger zone for craft flying



FIVE PICTURES

BY IVAN YEFREMOV
SCIENCE-FICTION WRITER

higher than nine miles. Meanwhile, Western Australia, still very sparsely populated, had been evacuated several days ago.

Kres checked the tuning once again and then entered the observation tower. A tiny capsule lifted him to a height of 2,000 feet almost instantaneously. There had been a time when people hid all nerve centers below ground; they could not forget the epoch of accidents and wars. Now most observation and executive posts were on top of tall towers high above the earth where, it had been found, people felt better and could concentrate more intensively.

The tower room swung to and fro. But despite the endless Antarctic gale, it did not vibrate. Shock absorbers protected both man and his instruments. Kres seated himself comfortably, his eye moving across the four large screens. In the two side ones he could see the directing towers on Macquarie and Prince Edward Islands 2500 miles away swaying like flowers in the breeze. The system of relay satellites spinning around the earth in synchronized adjustment with its motion made telecasting possible over any distance.

There was a long vibrating signal, and this time the tower shook. In his every fiber Kres felt the tornado rush across the blue lake of melted ice, pluck up the water and dart upward with gathering speed. Minutes later this life-giving deluge would rain down on the deserts of Western Australia. Tower after tower reported its passing. First Macquerie, then Tasmania, Ballarat, and Musgrave. Finally, the last tower in the chain at Boulder reported the streams discharging. An incessant cascade rained down over half the continent. Only at the end of his watch would he need to cut the intensity by half. Less wouldn't do. Kres shot an eye at the chart strips slowly creeping across the instrument windows. The automatic protectors gave off a melodious beat. Everything under control. He switched the side screens to his own personal channel.

At twenty hundred hours sharp his friends appeared on the screens to greet him. There was Niokan, the astronaut who had come back only a few days ago, and Alk, the artist with the kind, helpless look of a lost child. The smile furtively hovering at the corners of round-faced Ta's mouth contrasted with the anxious look in her eyes. Hardly had they exchanged the first few words of greeting than Ne Ta appeared on the fourth screen. She stood in a round room under the scintillating millihedron of a multiple-channel TVF receiver. This was a video tape recorded some two months before so, of course, Ne Ta could not see her friends. They agreed that she had not changed except for an even more pronounced asceticism in her features and a still brighter light in her burning eyes, so reminiscent of a biblical prophetess. A student of ancient art, she was happy and made no bones about it. Indeed, to find these much wished-for paintings among the thousands of millions accumulated during the century of universal peace was a real stroke of luck. These were Five Pictures done at the beginning of the Space Era in Russia.

In the past the arts had lagged badly behind life. It was astonishing with what obstinacy the artists of the early Space Age continued to paint their landscapes and still lifes or to amuse themselves with trifling discoveries in chiaroscuro and color play, which at times reached the point of complete negation of content and form. Years of searching through the many paintings of the time failed to disclose even one dealing with space. Finally, poring over microfilms of old magazines, researchers found several reproductions of the works of an artist who had devoted himself wholly to the subject. Experts differed about his name. Some thought it was Sokol, the Russian for falcon. Others based the name on another Russian word *sok*, meaning juice.

Ne Ta stubbornly kept searching and at long last found what she was

looking for. The first Five Pictures were discovered, and there was reason to hope that works by the same artist, evidently the only one in his day, would turn up.

The find evoked the liveliest interest. A Russian space artist of the beginning of the Space Era had finally been found. He was given the affectionate sobriquet "Sokol Russky," and the millions who wanted to see video-tape reproductions of the Five Pictures made up a very long waiting list.

Following Ne Ta's comments the Five Pictures appeared on the screen in all their undimmed color.

The first depicted the planet Venus. The white trail of a fast whizzing spacecraft cut across the menacing violet, purplish-striped sky and the greenish pale blue of the electric storms raging over a violet ocean.

The second and third paintings pictured a planet of the system of a binary star, a red giant and blue dwarf. Though the sharp fluctuations of temperature and radiation had made a terrestrial type of life impossible on this planet, life had nevertheless germinated in the form of silicon crystals. The first of the two pictures showed a reddish sun, the other a pale blue one, and both depicted a spaceship from the earth that had penetrated to this world of two suns and crystals.

The fourth picture showed the first rendezvous of earthmen and intelligent beings of another planet. The artist had not ventured to depict the actual representatives of his extraterrestrial civilization. Probably because of the then prevailing view of the multiplicity of forms of thinking matter, he had pictured a meeting with a creation of theirs, an enormous electronic brain governing the operations performed by robots on their planet.

The fifth and last picture depicted an automatic station dropping a probe to research the atmosphere of Saturn. The spacecraft was shown in the planet's ring amid a steady hail of rocky splinters, the remnants



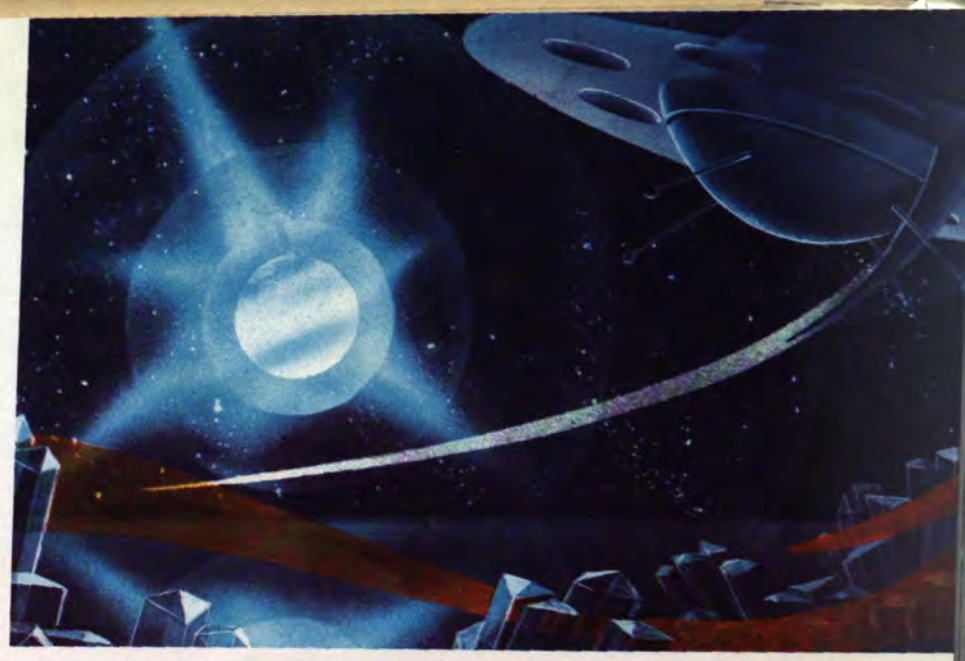
of one of the satellites torn apart by the planet's gravitational pull.

The ancient pictures followed one another on the screen again. Then details were shown, after which the screen faded to give the viewer the opportunity of reliving his meeting with the work of a Russian painter.

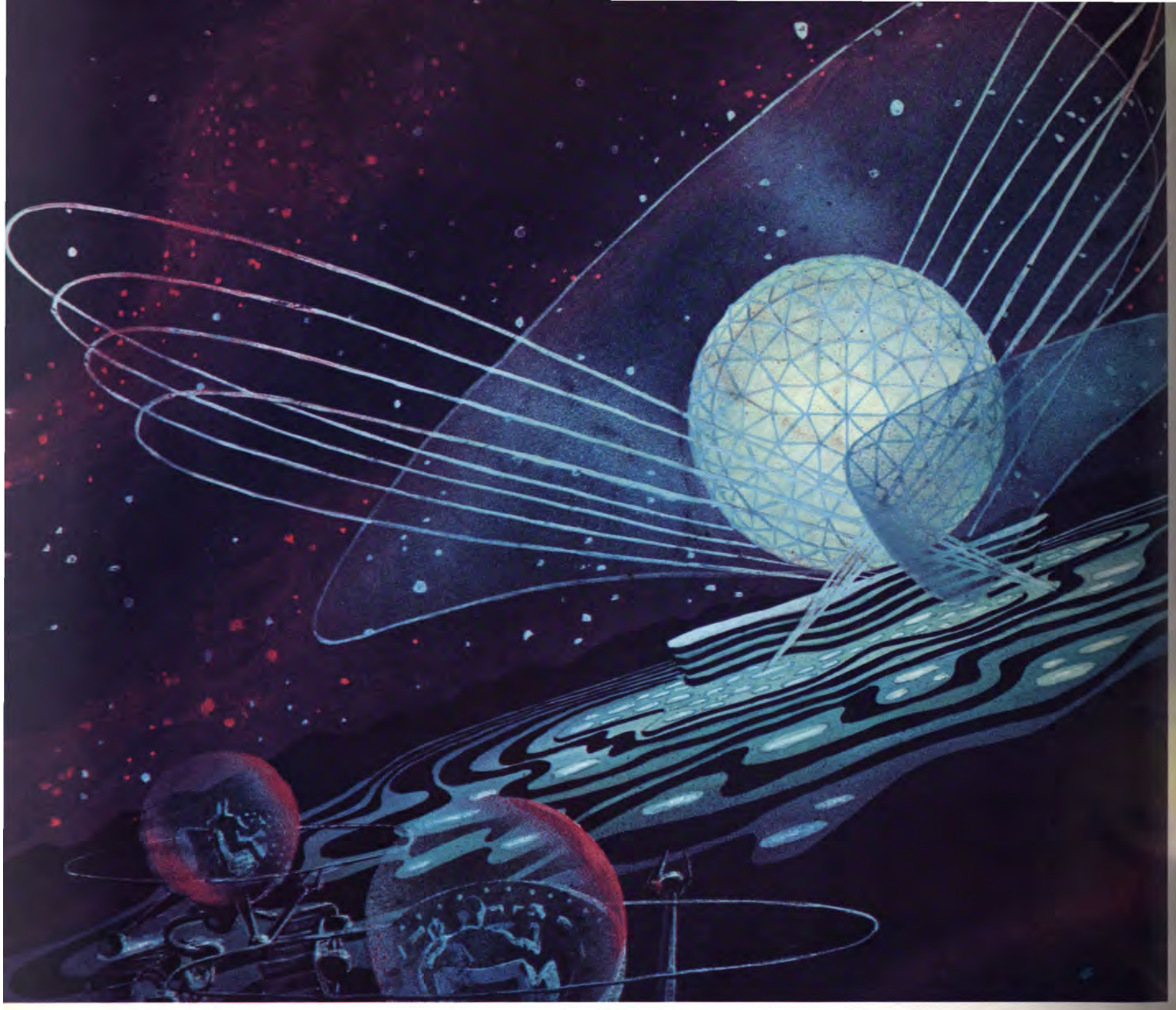
"What strikes me most is the riot of imagination," Ta exclaimed. "After all, they hadn't seen anything yet, except their own planet, of course, and the moon. Still, look how much of it is right. What inspiration could this earthman, who had never been to other planets, have drawn upon to picture what people actually saw only hundreds of years later?"

"I'm also amazed," Alk rejoined. "Especially since I understand that by then man had already lost his primordial capacity of perception. He had not yet reached the point of synthesizing emotion with intellect."

"But I can understand it," Kres objected. "The human brain, reflecting the incredible remoteness of space, intuitively grasped its laws and







reproduced them in imaginative art. That is why the artist guessed accurately the emerald hue of the dispersed glow in the icy vastnesses of Neptune, as well as Venus's purple sky and its electric storms."

"The science fiction of the time showed an even more striking ability to see what could not be seen then," Niokan observed thoughtfully. "Still none of the five pictures conveys any of the feelings one has when first landing on an unknown planet. I mean that throb of expectation plus the threat, perhaps, of danger or perhaps of a terrible letdown."

"Especially if there might be life on the planet," Ta interposed.

"Oh yes, when you seem to see more and more structures or bridges on mountains and ravines, or fields and canals in the plains. And the closer you get, the more clearly you realize that these tokens of human activity are illusory, the play of your overwrought imagination."

"Or take those queer, strange planets where even the clouds are poised to strike like so many menacing spearheads. The dense fog curls like an enormous dragon and stares at you blankly and stubbornly, hiding the gloomy, wicked-looking mountains below," and Ta let her head droop as she recollected the dark planets, the impression they had made still not attenuated by the radiant, wonderful earth.

"The main thing, though," Niokan observed, "is that universal feeling of our era, of the infinite nature of the cosmos on whose threshold we stand."

"There is, indeed, no end to our desire to explore the cosmos, nor any boundaries on the way. The diversity of worlds is truly inexhaustible," Kres quietly remarked.

His three friends responded with gestures of agreement.

"Apparently our forebears of the early Space Age had not yet developed that very tangible perception of the incredible which stretches everywhere in the endless voids of the world," Niokan began. "Why, only recently, even with us, it oppressed the weak-willed, gave them agoraphobia."

"I don't think so," Ta objected. "Remember our cavemen ancestors, who from the mouths of their dwellings faced the endless unknown of the planet, in which individual lives dissolved and vanished. Were there any boundaries to the world for them? It was millenia later that the ancient Greeks invented them to confine their world and make certain it was cognizable."

Ta's last words were drowned out in the rolling echo of a sharp blow.

"Good-by, friends," Kres cried, switching off the visiting channel. The tower quivered and the worried faces of the Tasmanian and Kerguelen operators shot into view on the screen.

"A sudden storm again, I suppose?" Kres hazarded the guess.

"Yes, at 16,400 feet," the Tasmanian returned.

"That's fine! It won't interfere with our operation," Kres said, pleased.

"But take rigidity off," and the Tasmanian fastened his guard straps.

Kres repeated the Tasmanian's motions and pulled at the long red lever. The vibrations stopped. Like a ripe ear of corn, the tower heeled over to crouch, resilient above the ice, whose white splotch was barely perceptible in the stormy gloom. The operator adjusted his seat for greater comfort. On Antarctica's untamed ice cap such sudden raging storms were of short duration. Kres fed in more directing current and patiently waited for the storm to subside, trying meanwhile to imagine the earthmen of the past who had blazed the first trails into space and who had been first to master a hitherto erratic fate.





Dmitri Rudy, 64, is a graduate of the Kiev Institute of the National Economy. A well-known journalist, he is the author of a number of books and articles on agriculture, including The Distribution of Income on Collective Farms, Hard Paths *and* These Years Are Worth Decades.

SOCIALISM A

BY DMITRI RUDY

RESHAPING LIFE in the rural areas along socialist lines was, as Lenin noted, the most complicated and most difficult problem of the Russian Revolution (and, incidentally, not only of the Russian Revolution). First of all, the peasants made up 82 per cent of Russia's population. Furthermore, the peasant combined the mentality of the worker with that of the property owner. As one who labored, the peasant was close to the industrial worker in spirit and was ready to pool his efforts with others in a similar position. As a property owner, however, he was pulled the other way. He trusted no one and was afraid of losing the little he had. The reorganization of his life on collective principles was therefore a painful psychological change. Such psychological regearing, Lenin wrote, would take generations.

Early Soviet Years

Small peasant farms with primitive implements were the rule in prerevolutionary Russia. Horse traction was the only kind in use. The system of strip farming and the long distances the peasants had to walk from their homes to their land added to the hardships. The social composition of the rural population was heterogeneous. Every year two million poor peasants left for the towns in search of odd jobs or worked as laborers on the estates of big landed proprietors or on the farms of the kulaks.

An idea of the changed condition of the peasant a decade after the Revolution can be gathered from this table, which was compiled from data in the *Statistical Handbook of the USSR*, 1928; *Socialist Agriculture of the USSR*, 1939; and *Agriculture of the USSR*, 1960.

	Before Revolution	*Before Collectivization (1927)*
Total peasant farms (in millions)	over 20	25
of which (in per cent):		
poor	65	35
middle	20	60
kulak	15	5
without crops	15	6
without draft animals	30	33
without implements	34	35
average acreage of toiling peasant's farm (hectares*)	7	13
average grain production of toiling peasant's farm (in tons**)	2.3	2.8
of which:		
marketed	0.35	0.3
consumed on the farm	1.95	2.5

It can be seen from the above that the nationalization of the land, the transfer of the estates of the czar and the big landowners to the peasants, and the allotment of land to the peasants according to the size of their families gave land to those who did not have it before. The number of farms increased markedly. Many farm laborers and poor peasants rose to the level of middle peasants. The distribution of property among the peasantry evened out somewhat.

The rural areas were still very backward, however. Six per cent of the farms did not plant crops, 33 per cent had no draft animals, and 35 per cent lacked farm implements. Although their acreage had almost doubled, the peasants had neither the strength nor the resources to put all the land to use. They were therefore unable to raise and sell more grain.

While gross peasant grain production grew by more than 50 per cent —from 41 million to 66.4 million tons—the average output per farm went up only 22 per cent. Moreover, peasant grain production for the market dropped, while the amount kept for seed, fodder and food increased. The living standard of the peasants improved. Now they had enough grain to carry them over from one harvest to the next, which had not been the case in old Russia. However, the small peasant farm was economically primitive, marginal, consuming almost all it produced. Its low output of marketable grain was completely inconsistent with expanding industrialization. New industrial centers were springing up, with fast-growing populations. The cities needed more and more grain that the small farms could not hope to supply.

How had old Russia solved the problem of feeding the towns? The big landowners and kulaks produced 70 per cent of the marketable grain, 14 million tons. The big estates and farms no longer existed. The dwarf farms of the peasants, which had produced a scant 28 per cent of the marketable grain before the Revolution, had brought their marketable output up by only 26 per cent by 1927. A serious grain shortage threatened. The backwardness of the countryside had to be ended. It was imperative to amalgamate the small farms into larger units and supply them with modern machines in order to make it possible for them to raise their productivity and increase their output of marketable grain.

There were two ways of meeting the problem. One was to take the land away from the overwhelming majority of the peasants and turn it over to a class of large-scale farmers; the other was to encourage the small, hand-worked peasant farms to unite voluntarily into large producers' cooperatives equipped with farm machines.

The second way, the socialist reorganization of agriculture, was chosen. And, in addition, large state farms were set up on lands not held by peasants.

Town and countryside were thus now both moving toward socialism. Today there are more than 9,000 state farms and about 39,000 collective farms in the Soviet Union.

Grain

When Western commentators write about agricultural difficulties in the Soviet Union, they do not see the cause in gross miscalculations and administrative mistakes, or in the country's complex and harsh geographical and climatic characteristics. They lay all the blame on the collective farm system.

Is that justified? Let us turn to the facts.

Russia's average annual grain harvest in the period 1909-1913 was 72 million tons. The average in 1959-1963 was close to 125 million, an increase of 72 per cent.

Quantitative growth is only one side of the picture, however. Prerevolutionary Russia produced and consumed mostly rye and oats. These crops are considerably inferior to wheat in protein content and nutritional value but, on the other hand, are hardier and therefore easier to grow.

Rye and oats kept their lead in the early Soviet years. The collective farm system brought qualitative changes in the crop structure, as can be seen from the following table from *The Soviet Economy in 1963*.

	1928	*1963*
Total crop area (in million hectares)	113.0	218.5
of which:		
state farms	1.7	97.8
collective farms	1.4	113.9
grain area	92.2	129.9
of which:		
rye and oats	42.6	20.7
wheat	27.7	64.6
marketed grain raised by state farms, collective farms and peasants who later joined collective farms (in million tons)	7.9	48.4
urban population (in millions)	26.3	115.1
marketed grain per head of urban population (in tons)	0.3	0.4

Our rye-and-oats country became a wheat country. And since the yields of wheat are higher than those of rye and oats, the change in the crop structure added about 30 million tons to the country's grain supply.

The year 1963 was not typical. As a result of crop failure from drought and other natural causes, the amount of grain marketed that year was 13.7 million tons less than in 1962. But it was more than six times as much as was marketed in 1928, and more than twice as much as in 1913. From 1928 to 1963 the urban population increased by 4.5 times; nevertheless, in 1963 there was 33 per cent more grain per urban dweller than before collectivization. This change in the marketable grain situation is traceable wholly to the collective and state farms.

* One hectare equals 2.471 acres.
** All tons in this article are metric tons—2,204 pounds.

THE COUNTRYSIDE

Then why, the reader may ask, did the Soviet Union buy grain abroad in 1963 and 1964?

This is why. In 1962 the weather was good, and a record grain crop of 148.2 million tons was harvested. It was also a record year for marketed grain. The grain and fodder picture, in broad outline, was this: marketed grain, 62.1 million tons; seed, 26 million tons; fodder grain, 40 million tons; food grain for the rural population, 20 million tons.

The 1963 grain harvest dropped to 110.7 million tons, and the amount marketed to 48.4 million tons. Seed and rural food requirements were the same as the previous year—46 million tons. That left only about 17 million tons for fodder. To ease the situation the number of hogs were reduced and more than nine million tons of grain imported.

There is also another important item to take into account—grain exports, which, incidentally, continued in 1963. To meet foreign trade commitments 6.2 million tons of grain were exported.

Errors in farm administration made in recent years affected grain production. Stereotyped instructions on soil cultivation and crop structures were issued from the center with little regard for the local climatic, economic or production factors and experience. More specifically, considerable harm was done when collective and state farms were pressured into expanding their corn acreage in regions much more suitable for wheat. As a result, some of those districts raised neither corn nor wheat.

The upshot was that the growth rate of grain production slowed down in recent years, lagging behind the growth in population and the country's grain requirements. From 121 million tons in 1956-1958, the average annual grain crop increased to 126 million tons in 1961-1963—only 4 per cent—while the population increased by 15 per cent.

The gap between the growth rates of the urban population and marketable grain production was even larger. The average annual volume of marketed grain increased from 49 million tons in 1954-1958 to 55.1 million tons in 1959-1963—13 per cent. But from 1954 to 1963 the urban population grew by 42 per cent.

Although the grain harvests are considerably larger than before collectivization, they are not large enough. Starting this year, a new grain procurement procedure has been instituted to encourage collective and state farms to step up grain production. A fixed planned quota of grain deliveries to the state has been set for each farm and will remain unchanged until 1970. The state will pay more for the quota grain it buys. In some zones the price increase ranges from 15 to 20 per cent; in others they go as high as 50 to 100 per cent.

The planned quota will not meet all the country's grain requirements, however. In addition to quota procurements, the state will purchase more grain from farms that have surpluses at bonus prices 50 per cent higher. Production and sale of grain above and beyond the quota will therefore benefit both the farmer and the state.

Livestock

The early stages of farm reorganization had a crippling effect on stockbreeding. The individual peasants slaughtered their livestock, and in four years—from 1929 to 1932—the country's livestock dropped by 100 million head, more than 50 per cent.

Stockbreeding also suffered heavy losses (more than 50 million head) during World War II. It was not until the beginning of the fifties that the precollectivization level was regained. That is one of the reasons the country's milk and, more particularly, meat requirements still cannot be satisfied.

Definite progress has been made in the past 10 to 12 years. The number of beef and dairy cattle and sheep in 1963 rose by more than 40 per cent above the 1928 figure, and the number of hogs doubled. As for cows—and the ownership of a cow has always been considered a sign of the peasant's well-being—the collective farms now have about 14 million and the state farms close to nine million. Another 16 million cows are owned individually by collective farmers and state farm workers.

The situation would have been far more favorable if the growth rates in grain production had not slowed down. The slowdown had a bad effect on stockbreeding. Capricious decisions in planning grain purchases was the primary and most general factor responsible for inadequate fodder supplies. This, in turn, affected the feeding and productivity of the stock.

Totally unjustified restrictions forced a drop in the head of livestock owned by collective farmers and state farm workers; the total fell by nine million between 1959 and 1964. In the long run, the growth rates in stockbreeding also slowed down. The increase in the head of livestock fell from 30 per cent in the five years from 1955 to 1959 to as little as 3 per cent in the period from 1960 to 1964. In 1960-1964 the average milk yield per cow on the collective and state farms dropped by 19 per cent.

All the restrictions have now been done away with. As in grain farming, planned quotas that are fixed for several years have been set for deliveries of meat, milk, eggs and wool. The state purchase prices for quota and above-quota livestock have been raised from 10 to 100 per cent, depending on the zone. State retail prices of foodstuffs, however, have not been raised.

Labor Productivity

The collective farm system made the position of all the peasants equal insofar as land and the means of production are concerned. The farm machines are their collective property. Farm mechanization has made impressive strides, as these figures from *The Soviet Economy in 1963* demonstrate:

	1928	*1963*	*Growth*
Total farm power (in million horsepower)	21.3	205.6	9.5 times
of which: mechanical engines	1.1	201.6	183 times
including: engine power of combines, tractors and trucks	0.52	180.4	347 times
electric motors	0.6	21.2	35 times
draft animals	20.2	4.0	80% drop

The mechanical energy available per peasant increased from 0.5 to 6.8 horsepower, by 13.5 times.

Farm mechanization raised labor productivity and released people for other work. The rural areas accounted for 87 per cent of the able-bodied population in 1926 and for only 34 per cent in 1963. Grain production per farm worker increased from 1.09 tons in 1926 to 4.3 tons in 1963. The number of people in agricultural production dropped from 71.5 million to 24.9 million. Millions of farm people have moved into industry and the professions.

In 1950 there were 595,000 farm tractors in the country. This has been augmented by another 150 per cent since, while crop acreage has expanded by 50 per cent. However, there are still far from enough tractors, combines, trucks and other farm machines. In this respect the country is still much behind the United States. That is why sowing, harvesting and other field jobs drag out too long. The reduced efficiency affects crop yields.

With that in mind, a program is in the works to step up farm mechanization. Capital investments in agriculture in the next five years (to 1970) will total 71 billion rubles, more than the amount invested in industry from 1959 to 1963. In the next six years about two million tractors will be supplied to the farms. Deliveries of farm trucks will nearly triple. The number of combines will also increase. Rural electrification and the use of chemical fertilizers and weed and pest killers will be expanded.

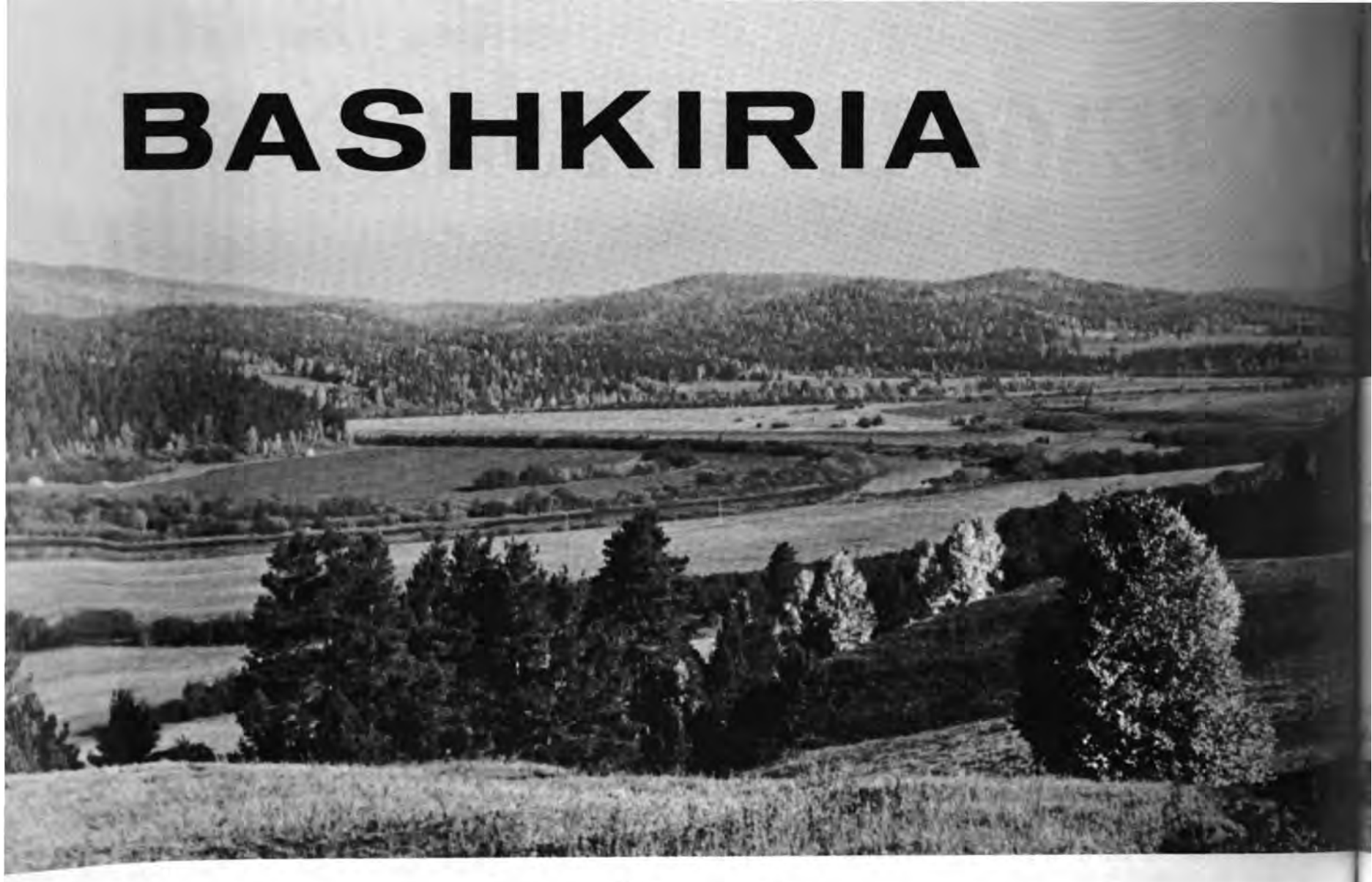
Cultural Progress

On the eve of collectivization only 50.6 per cent of Russia's rural population between the ages of 9 and 49 could read and write. The 1959 census showed that 98.2 per cent of the rural population is literate. In 1939 only two out of every 1,000 rural inhabitants of the Soviet Union had a college education and 37 a secondary school diploma. In the 20 years that followed the proportion of college graduates tripled and that of high school graduates quintupled.

The cultural revolution in the countryside has had a profound effect on farm production and rural life. The number of agronomists, livestock experts and veterinaries grew from 35,000 on the eve of large-scale collectivization to 600,000. We now have three million farm machine operators. There are more than 10 trained specialists per farm.

As the first country to attempt the socialist reorganization of the countryside, the Soviet Union had to grapple with a host of problems. There were no models to follow in collective farming. In the years before World War II and in the early postwar years there wasn't a collective farm anywhere else in the world. We had to rely wholly on ourselves, gather experience step by step, draw generalizations, find solutions to complex and pressing problems. That is why our collective farm development has been so patchy and groping. But progress is slowly but surely being made.

BASHKIRIA







BY ZIYA NURIEV

FIRST SECRETARY OF THE BASHKIR REGIONAL COMMITTEE OF THE COMMUNIST PARTY OF THE SOVIET UNION

BASHKIRIA lies in the smooth, low-lying foothills of the Urals. Its steppelands are hot and far-flung. Its fields are spotted with occasional patches of forest, above whose trees oil derricks tower. Its lakes are blue and deep.

This is the place of my birth. It was here that I spent my childhood and youth. And it was here that I taught school.

I remember once reading in a book by the Russian writer Gleb Uspensky: "These places are for the most part unpopulated and hardly touched by either plow or ax"; and further on, "The Bashkir will die, he is sure to die!"

Which proves that even a good writer may be mistaken. The Revolution ushered in a new life. The Bashkir Autonomous Republic was created, and we began the development of our economy. Geologists came to test out Academician Gubkin's theory that there were oil deposits on the territory of Bashkiria. Their 10 years of prospecting were crowned with success in May 1932 when they struck oil near the present town of Ishimbayevo. Roads were laid and cities built. Today Bashkiria extracts several times more oil than all of czarist Russia did. Its refineries lead the country in volume of oil processed.

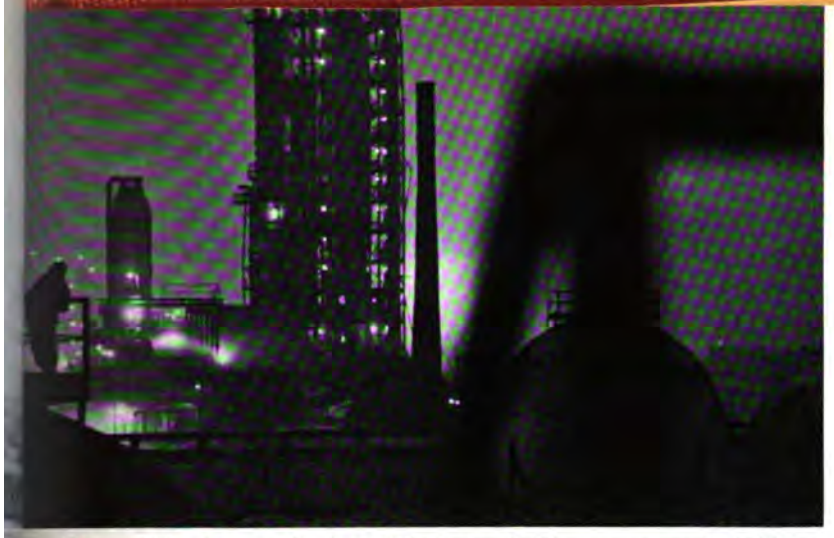
Problems

In recent years we have been faced with many technical and economic problems. We are soon to start refining rich deposits of high sulphur oil discovered only recently. This requires fast retooling, a knotty job technically that has delayed us. In the meantime we have increasing volumes of new grades of petroleum flowing. We feel the effects of the delay—equipment is rusting and quality is falling off.

We are even further behind starting up new capacities. We are millions of rubles short of the production totals expected from the new equipment installed over the past two years.

But all this, we know, is part of our growing pains, difficulties to be overcome. We already have some successful experience in handling such problems, notably at our chemical plants.

The many chemical plants built in Bashkiria over the past



(Above) The Novo-Ufimski Oil Refinery. Oil has transmuted Bashkiria. Today the republic extracts several times more oil than all of czarist Russia produced. In 1964-65 alone 47 petrochemical plants were built. (Below) Harvesting on the Zilair State Farm. As elsewhere in the Soviet Union, mechanized farming is a must here, where the shift is cityward. Since the Revolution urban population has grown from 5 to 43 per cent.





A Russian writer once predicted certain death for Bashkir culture. However, its many song and dance groups, its seven theaters and 4,000 clubs and libraries testify that the republic is still very much alive, physically and culturally. (Below left) Engineers Vyacheslav Pudikov and Marat Akchurin work in the isotope laboratory of the Ufa Oil Research Institute. Ufa's ultramodern synthetic alcohol distilleries have made it a Mecca for chemists from many parts of the country.

six years include the Salavat plant, the synthetic rubber, soda-ash and cement plants in Sterlitamak and the herbicide plant and synthetic alcohol distillery in Ufa.

Last year the personnel of the Ufa synthetic alcohol distillery set themselves the goal of beating leading foreign firms in performance and economies. And Ufa has now become a veritable Mecca for chemists. They come from all parts of the country to study the intricate equipment and to learn how to set up other distilleries like it.

Our Own Trained People

We would, of course, find it impossible to tackle all these many problems if we did not have our own Bashkirian specialists, whom we are training as we go along. We now have 127,000 college-trained specialists. In 1929 we had only 76. The republic's 30 institutes and laboratories employ more than 2,000 researchers.

Bashkiria has seven institutions of higher learning, including the university in Ufa. Our technical schools have a student body of nearly 50,000, and our general schools an attendance of more than 800,000.

We are proud of what we have already achieved but far from satisfied. Take our schools, for instance. Though more are being built all the time, facilities are lagging behind the growing enrollment. We are forced to conduct classes in two, even three, shifts. We estimate that to cut out the several shifts and to replace substandard buildings we must build enough school space every year for at least 30,000 pupils. But planners have allocated funds for only 13,500. We have argued the case and hope to get the additional funds we need.

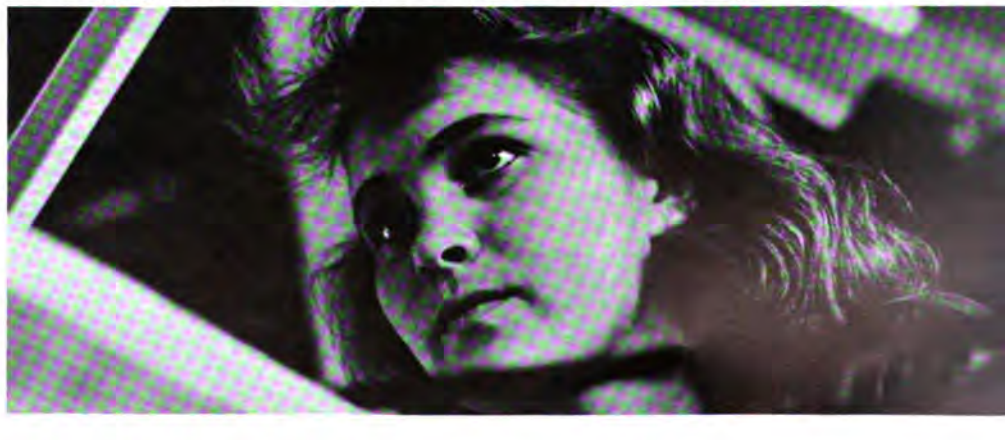
We also feel that such cities as Salavat and Sterlitamak are not being developed in a sufficiently comprehensive way. More consideration must be given to transportation, cultural facilities and general city improvement.

We have no lack of problems or of activity. Ours is the busy life of a Soviet republic.





(Above right) The isoprene experimental shop of the Sterlitamak Synthetic Rubber Plant. New chemical installations producing such things as mineral fertilizer, weed killer, soda ash and cement have been built at Salavat, Ushimbai and Ufa. (Below) Faina Matveyeva is a student at the Ufa Aviation Institute, one of the republic's seven institutions of higher learning. Bashkiria has 53 students per 10,000 of population, twice as many as Britain and three times as many as Turkey.





DEDICATED T

THERE WAS a famous communications man in the first battalion of our company in Stalingrad. I can't remember, or rather I never knew, his surname, but everyone called him Lyoshka—of that I'm sure! He was a little fellow, very thin, his skinny child's neck protruding awkwardly from the wide collar of his army coat. He looked like a small boy, though he must have been 18 or 19, at least. An especially childish quality was imparted by his tender, rosy, I'd almost say girlish, complexion which, strangely enough, he never lost though he sat underground for days on end. Nor were his lively, expressive eyes at all grownup.

Lyoshka was famous for all the reading he did. At the command post of the battalion you would always find him sitting in his corner beside his apparatus and phone, his eyes fixed on a book. While pandemonium reigned above, what with all the shooting and explosions, he sat reading (the command post was in the cellar of a meat-packing plant), a leg under him, pausing now and then to yell into the phone: "Comrade Sixteen! Number Four calling."

We did not get acquainted at once, only after my third or fourth visit to the meat-packing plant. That night he sat there as usual, small and round-shouldered, yelling to someone, threatening that if the requisite amount of "nuts" and "cucumbers" were not forthcoming immediately, Number Fourteen would go to Number Two himself and see that both Numbers Six and Eleven got hell. When he was finished with his threats, I asked him to connect me with one of the companies. This he did, but buried his nose in his book the moment after he handed me the receiver.

When I was through talking, he asked for a smoke and rolled a cigarette slowly, squinting at the burning lighter improvised from an empty cartridge.

"He was just a little boy," he said suddenly. "Just a youngster, but he went with the grownups."

"What do you mean?" I asked. "Whom are you talking about?"

"Why, about Petka."

"Which Petka?"

"Petka Rostov," he said, indicating his book with his eyes. "You haven't read it? *War and Peace* by L. Tolstoy." (That was what he called him—"L. Tolstoy.")

That was how we got acquainted.

An avid reader at the very front of the front line was a rare individual, as anybody could see. That alone was enough to draw general attention to him.

At first I thought he was only reading to kill time during the lulls, but I was wrong. He had the astonishing faculty of losing himself completely in a book, of switching his mind promptly from "nuts" and "cucumbers" to the death of Petya Rostov or something equally remote. Everything he read set his thoughts racing, prodding him to discuss things and to ask questions that often cornered me, so to speak.

After he had read Kuprin's "Emerald," I spent a long time trying to convince him that a writer was justified in writing not only about people, but also about horses, even in writing in the first person on their behalf. But he could not agree:

"You've got to believe what a man writes. How can you believe him when you know he's thought it all up. That's impossible, Comrade Lieutenant!"

EMINGWAY

BY VICTOR NEKRASOV



Victor Nekrasov (born in 1911) graduated from the department of architecture of the Kiev Civil Engineering Institute and after that from a drama studio. He became famous with the appearance of his novel *In the Trenches of Stalingrad* published in 1946 on the basis of author's personal experience (he was an officer in the Engineer Corps in the Second World War).

This short story is from Nekrasov's book *Second Night*.

I did my best to show him that it was possible, even imperative, but he only shrugged and began to call someone on the phone to end the argument. He did not want to argue, evidently thinking he would offend me by disagreeing.

You could not help liking Lyoshka for his independence, his insistence on having and defending his own views, his own doubts, which not even such authorities as Kuprin or Tolstoy could dispel, let alone I. He always insisted on knowing, too, just why this or the other story had been written, for he was a bit of a moralist. At the same time he reacted very emotionally and directly, much like a child, to everything he found in his books. After reading "The Scamperer" by Chekhov, he could not regain his composure for a long time. I daresay he even wept a little. But this did not prevent him from falling on Chekhov. Why had he given so much space to "the scamperer" and so little to such a good, smart and fine fellow as Dymov. He should at least have said what he was working on.

To think that this was happening less than half a mile from the German positions, in the cellar of a meat-packing plant crowded with tired, angry men sorely in need of sleep, where wounded soldiers lay moaning and dying.

Now, 17 years later, I recall Lyoshka with envy for the ease with which he abstracted himself right out of his surroundings. "Have you read this or that?" I am asked sometimes. "How could I . . . No time . . . I've been wanting to, but. . . ." But he had sat there with his leg under him, reading away. When there was a break in the line outside, he'd dog-ear the page, run off to make the necessary repairs, and come back to fix his eyes on his book again. In our gray, lonely,. front line existence Lyoshka came to shine like a welcome light, a bright spot I was always glad to be near.

One day, I think it was in December, we were moved to a new sector, to the northern slopes of Mamayev Hill. We all grumbled, of course, for this meant parting with by now familiar stretches, with dugouts we had gotten used to. Lyoshka, moreover, had to part with his "library." He really had such a thing! Those books must have belonged to a clubhouse bombed into heaps of rubble. No one but Lyoshka needed them now. Those blessings lay quite near, fortunately on a side the enemy was not shelling just then, and he kept running to the spot.

There was no particular system to his reading. He devoured anything that came to hand: Tolstoy, Chekhov (of whom he unfortunately found but one volume), Alexander Belyayev, *The First Blow* by Shpanov, some old magazines with ragged covers, and whatever else. Once I found him reading Maeterlinck. He read him through but did not approve of him very much since he did not care for plays. Was he able to differentiate between the books he read? He certainly was, preferring those that were moving and compassionate, "that pinched the heart." He liked to read about children and animals (he was quite shaken by Turgenev's "Mumu") but didn't care for love or war. I was amazed to find that Jules Verne, whom we had adored in our childhood, left him cold, even contemptuous. Before the war, or rather before Stalingrad, he had read practically nothing. He was born and raised in a village near Saratov and had had six years of schooling.

When we were relocated, the command post of the first battalion was moved to a concrete tube beneath a railway embankment, at the very foot of Mamayev Hill. How lonely Lyoshka grew there!

"Haven't you anything to read, Comrade Lieutenant?" he pleaded on the second or third day after we had moved, as he sat beside his apparatus, listlessly leafing through *The Rifleman's Manual*.

In the days when Lyoshka had his own "library," I too had had something of the sort in our quarters, a score or two of books the men had brought me from various ruins. When we were relocated, I left most of them for those who came after us, taking only four with me: *Fortifications* by Ushakov, *Fortified Terrain* by Gerbanovsky, Pushkin's *The Bronze Horseman* with illustrations by Alexander Benois, and a book by Hemingway in a dark red cover, *The Fifth Column and the First Forty-nine Stories*.

I loaned Hemingway's book to Lyoshka, wondering whether he would understand such a writer. Hemingway is not everyone's cup of tea. And Lyoshka, I learned, had not even the faintest idea about bull fighting, without which more than half of Hemingway's stories are meaningless.

There was something grotesque about the two of us sitting in that tiny dugout, the battalion's observation post, a few paces away from the Germans (Lyoshka was not on duty at the command post as usual, but here for the night), smoking cigarettes we had rolled of makhorka tobacco and talking about matadors, *banderillas* and *verónicas*, about all of which one of us knew nothing and the other only a trifle more. I had read a little about bullfighting and had seen Rudolph Valentino in *Blood and Sand* when I was a little boy.

I left at two in the morning. It was an exceptionally quiet, frosty and very starry night. The Germans were hardly shooting at all, just lighting up the front lines with their rockets, and I reached home, that is, the riverbank, walking at a natural gait, never once having to duck. As I made my way across the shell- and bomb-cratered earth of Stalingrad, listening to the monotonous drone of the night bombers—wondering whether they were ours or the enemy's—and while falling asleep in my well-heated dugout, I kept thinking that tomorrow, at seven sharp, I would have to make a diagram of the regiment's engineering defenses, a job I had been unable to finish for one reason or another. I also thought of how strangely the horrible and the amusing, the cheerful and the tragic were interwoven by war. I thought of Lyoshka, who at that moment was probably reading about the Madrid chauffeur Ipolito, who did not wake up even when a shell exploded beside him. It also occurred to me that if not for Lyoshka, that Hemingway story would have remained nothing but a brilliantly written piece of work to me. Thanks to him, it loomed as something very big and necessary.

Titkov, my liaison man, woke me at six to tell me I had to finish the diagram.

"That boy was wounded," he added handing me a tin of gruel. He said this calmly, he used the same tone to tell me that a buddy had been killed or that he had received two bars of chocolate from the supply dump.

"What boy?"

"The one in the first battalion who's always reading books. They brought him to the first-aid station about half an hour ago."

At the station, only a 10 minutes' walk away, I found that Lyoshka had already been prepared for evacuation to the left bank. He was not badly wounded—an arm and leg lacerated by splinters—but he had lost a lot of blood crawling to the command post (he had been on his way back from duty). He needed a blood transfusion, perhaps under hospital conditions.

They had laid him on the ground, a cape under him. He was very pale and his rosy girlish complexion was gone. But his eyes were as lively as ever.

"Where did it happen?" I asked.

"Near the embankment, where the little bridge is. It's nothing much," he said with a forced smile. "I'll be back soon. And your book's here!" He rolled his eyes to show that it lay under his head. "It's spoiled a little, but please don't get mad."

Some 30 of the pages had been stained at the edges with his blood.

"The book will be all the better for it!" I answered. "Did you get to read much of it?"

"Very little. Everything interfered. Captain Korobkov was on duty, and he kept calling every minute: 'Hullo, hullo! What's the situation?' I only read three stories, the one about the chauffeurs of Madrid, the one about the old man who had only two goats and a cat left, and the third about Paco. Remember the boys who played at bullfighting and how Paco ran into a knife?"

" 'The Horns of the Bull'?"

"Yes, that's the one." He fretted. "How stupidly things turn out! Terrible . . . Only two inches . . . How long is an inch?"

"Two and a half centimeters."

"Which means that knife would never have hit him in the belly if he had lunged just five centimeters to one side. The strangest things can happen." Silent for a while, he added with a faraway look, "I'm sorry for Paco! He was a good fellow!"

They would not let us talk any more. A doctor and two medical orderlies lifted him onto a stretcher. Saying good-by, I handed him the book, "This will keep you from getting too lonely at the base hospital."

He smiled as cheerfully as he could. "I'll be back in a week, you'll see! And I'll return your book, honest to goodness! You know I keep my word."

I never saw Lyoshka again. It was the usual story. From the hospital he was sent to another unit, and that was all. That was war.

Could Lyoshka be alive today? I like to think that he might be, that he is reading as much as ever, that he read the little book I gave him—in the hospital, or later, after the war. I don't think Hemingway could have become his favorite writer. He has too many hidden thoughts, too many things he leaves unsaid, and Lyoshka liked everything spelled out. But strange as it may seem, I found that these two so different people, the old and famous writer of an altogether different world and the soldier boy from Saratov Region, had something in common. The way he said, "I'm sorry for Paco. He was a good fellow," just half an hour after a German shell fragment hit him in the arm, sounded such a courageous note, probably the very same that prompted Hemingway's affection for his Madrid chauffeur Ipolito of whom he said: "Let them bet on Franco, Mussolini, or Hitler if they want to. I'm placing my money on Ipolito."

"And on Lyoshka!" I would like to add.

QUERIES FROM READERS

QUESTION: "I would like to know why the Soviet Union, which has 460,000 doctors, has only 30,000 dentists (if I am not mistaken), while the United States has 90,000 dentists," Harry Feldstein of Brooklyn, New York, writes.

ANSWER: According to data from the Statistical Department of the USSR Ministry of Public Health, there are more than 500,000 doctors in the country today, including 57,500 dentists. The training of specialists in the various fields of medicine is planned on the basis of the medical standards for the number of doctors needed per 10,000 of the population. According to these standards we should have 5.2 dentists per 10,000 of the population. The present ratio is 3.5. The standard of 5.2 will probably be reached by 1970. This is provided for by the present annual graduation of 7,500 dentists, and the number is steadily increasing.

This relative shortage of dentists arose during the war and the postwar period, when surgeons and internists were badly needed for the thousands of seriously wounded. Less attention was paid to training dentists.

QUESTION: "Why does not the Soviet Government make some provision, constitutionally or by some other means, for an order of succession or transfer of political power among its leaders, like we in the United States have? And does the Soviet Government still adhere to the Stalin Constitution of 1936?" asks Donald Acuff of Moline, Illinois.

ANSWER: In the USSR the functions of head of state and head of the executive branch are divided between the Presidium of the Supreme Soviet of the USSR, consisting of 32 people, and the Chairman of the Council of Ministers of the USSR. The Presidium of the Supreme Soviet is a collective president, much like the Federal Council of the Swiss Republic.

The deputies to the Supreme Soviet of the USSR, who are elected for a term of four years, in their turn elect the Presidium of the Supreme Soviet of the USSR. Thus, the Presidium of the Supreme Soviet of the USSR is elected every four years, and its membership, as a practical matter, is substantially renewed.

The Council of Ministers is accountable to our Congress, the Supreme Soviet of the USSR, and can be recalled at any time.

Consequently there would be no purpose in limiting the term of office of the 32 members of the Presidium of the Supreme Soviet of the USSR and the Chairman of the Council of Ministers of the USSR.

On the other hand, the Constitution of the USSR does rule out the possibility of anyone being appointed to an office for life. For instance, unlike Supreme Court justices in the United States, who are appointed for life, members of the Supreme Court of the USSR are elected by the Supreme Soviet for five-year terms.

As for the Constitution now in force, it was adopted in 1936, and the chairman of the Constitutional Commission was Joseph V. Stalin. Since then several amendments have been made by the USSR Supreme Soviet, the latest in 1962. A new Constitution is now being drafted by a commission under the chairmanship of Leonid Brezhnev set up by the Supreme Soviet.

QUESTION: "The practice of law in the U.S. is a private business. For a fee a lawyer will defend anybody. He may also take a case without fee if he chooses to. The point is that he is independent. What is the situation in the USSR? What inducement does a lawyer paid by the state have to defend his client when his fee is the same whether he wins his case or loses it?" a reader asks. His question is answered by Deputy Chairman of the USSR Supreme Court Vladimir A. Terebilov.

ANSWER: Lawyers in the Soviet Union are not government employees. They are voluntary members of collegiums headed by a presidium elected by the lawyers themselves.

Citizens choose their own lawyers at legal consultation offices existing in all districts and pay the collegium for their services. The more complicated the case and the more work the lawyer must do to prepare the defense, the higher the charge to the client, although in general the fees are fairly modest.

The lawyer gets by far the largest part of the fee, from 7 rubles 57 kopecks to 500 rubles. The remainder (about 10 per cent) goes to the collegium and is used to defray its expenses in accordance with the decisions of the lawyers' general meeting. Part of the money is used to compensate lawyers who defend persons unable to pay for their defense. If the defendant requires the services of a lawyer free of charge, the court may ask the collegium to appoint one of its members, and he is paid out of collegium funds. The defendant may also refuse any lawyer's services and conduct his own defense.

Such a system gives the lawyer a certain material inducement to win his case. But we are opposed to the size of the fee determining the lawyer's actions in court. A lawyer must certainly be independent of the court, the investigating authorities and other officials, but he must also be sufficiently independent of his client not to sell his conscience and abilities. The defense counsel has no right to join the prosecution, but he also should not be forced to act against his concept of morality and law for the sake of money. The law makes it the duty of the lawyer to use all legal means and methods of defense, to disclose circumstances acquitting the defendant or mitigating his guilt and to give him the necessary legal aid, without being dependent on anyone. Therein, in my opinion, lies the freedom and independence of a lawyer, rather than in his right to defend anybody and anything so long as he is well paid for it.

QUESTION: "Do Soviet biologists accept the DNA theory of heredity?" asks Edmond J. Hay, Jr. of Sunbury, Ohio.

ANSWER: Yes, they do.

QUESTION: "What would happen to a Soviet citizen if he started speaking and writing procapitalist propaganda?" another question from Edmond J. Hay, Jr.

ANSWER: It would depend on what he was actually preaching. We distinguish between the personal convictions of a citizen and his civic activities. Propaganda advocating the overthrow of the existing system by violence is prohibited by law in the Soviet Union, as it is in the United States. However, no citizen is prosecuted or punished for his personal convictions. A citizen can, for instance, advocate the reintroduction of private property without fear of reprisal. However, such propaganda would certainly meet with a summary rebuff from the public.

QUESTION: "Do you believe that Soviet educational methods are proving as fruitful for invention (apart from space voyages) as is essential to the progress of socialism?" writes Dan Molony of Santa Barbara, California.

ANSWER: Yes, we do. We have approximately the same number of students as the United States. Education is completely free, and college and professional school courses of study incorporate the latest findings of world science and engineering. Our educational system is organized to give the individual every opportunity to develop his capacities. Also state planning makes it possible to concentrate the efforts of students and researchers on problems society needs to have solved at a given time. All this has borne fruit in the shape of internationally acknowledged discoveries by Soviet scientists in physics, chemistry, mathematics, geology and biology. As for the temporary lag in certain fields of engineering, this is due to both objective reasons (destruction resulting from the wars) and subjective reasons (incompetent work in the field).

QUESTION: "What is the attitude of your government to fluoridation? Do you artificially fluoridate drinking water in your country?" E. H. Livingston of Dothan, Alabama, wants to know.

ANSWER: We have been studying the fluorine content of water in rivers, lakes, etc., in various districts. The data received confirm the connection between the fluorine content of water and such diseases as caries (from a shortage of fluorine) and fluorosis (from excessive fluorine). The optimal concentration of fluorine in drinking water is considered to be 0.8-1.0 milligrams per liter.

Therefore our medical specialists approve preventive fluoridation and defluoridation of drinking water, as the case may be.

Further research is being done on the effect of fluorine on ossification processes of the growing organism, on the functioning of the central nervous system and on certain biochemical factors.

We have flouridation installations operating. A number of them use sodium silicofluoride as a reagent which increases the concentration of fluorine to 0.7-1.0 milligram per liter. It was noted that when these installations had been operating for several years the incidence of dental caries among children dropped sharply. The intention is to extend fluoridation considerably in the next few years.

Simultaneously, defluoridation installations are being set up in areas where drinking water has a high fluorine content, including certain Moscow districts, to reduce the concentration to 1.0 milligram per liter.

SCALING THE HIGH PEAKS

BY ARI POLYAKOV
MASTER OF SPORTS
IN MOUNTAINEERING

THE HIGHEST PEAK in the Soviet Union was scaled for the first time on September 3, 1933. Yevgeni Abalakov, a 25-year-old Siberian sculptor, made the ascent.

It was only in 1928 that topographers spotted the peak and established its altitude, 7,495 meters (24,590 feet). The next five years saw mountaineers looking for that pinnacle among the others that towered in the vicinity. They frequently confused it with Garmo Peak, rising 10 miles farther south. A route to the top of this giant was found at last, in 1932, and a year later, as I said at the outset, the peak was subdued on the thirteenth day of the assault. Abalakov was the only one in the nine-man party who got to the top.

The way via the eastern crest was blocked by six rock "gendarme" prominences. It was impossible to bypass them, and in order to climb up and later descend the sheer and crumbly cliffs, the scalers had to hang suspended over a half-mile-deep abyss while driving in hooks and hanging up rope ladders. In the assault on the second prominence, one member of the party, Nikolai Nikolayev, lost his footing and fell to his death.

Another accident occurred on the way to the sixth and last prominence, where Abalakov and Daniel Gushchin were climbing. A loose rock cut Gushchin's arm to the bone. Racked with pain and dripping with blood, he hung to the edge of the precipice. Abalakov came down, with no one holding the safety rope, and bandaged his companion's arm. Then the pair went on to scale the eastern ridge.

The last assault camp was pitched on August 29 on a névé patch at an altitude of 7,000 meters (22,966 feet). The mountaineers brought an automatic weather recorder up with them. Most of the men were too worn out to climb higher. They all turned back but three: leader of the party Nikolai Gorbunov, Yevgeni Abalakov and Alexander Getie. Two days later the mountains were shrouded in fog. A blizzard blew up, and the temperature dropped to minus 40° Fahrenheit. Getie got sick. His heart could not stand the inhuman load.

The weather cleared on the morning of September 3. Gorbunov and Getie were buried when the props of their tent gave way under the weight of the snow. Abalakov dug a passage through the drift, crawled out of his tent and dug his companions out. Getie could not continue the climb and insisted the others leave him until evening while they went on.

When the sun rose and it grew a bit warmer, Gorbunov and Abalakov, weakened by hunger and the rarefied air, put on their frozen assault suits and moved up toward the summit. It was a slow and painful climb. They dropped, as though mowed down, every eight or ten steps. They suffered from lack of oxygen. Their lungs heaved like bellows, and black spots swam before their eyes. Gorbunov began to fall behind. Abalakov freed himself of the rope binding the two men and proceeded alone. He reached the last sharp edge before the top. The sun would be setting very soon. In his hurry to get to the top, Abalakov fell out of the rhythm of his movement and slumped in the snow, dead-tired. But he did not lose his will or courage. His breath recovered, the Siberian sculptor crept ahead on all fours up the last few yards to the summit. He reached it at last. At his feet lay the Pamirs.

The ascent was repeated four years later, with five men reaching the summit this time.

Up a sheer wall of Mt. Ushba, Central Caucasus.



Colonnade of an ice palace on a slope of Mt. Lenin in the Pamirs.



Scaling a ridge on the way to the top of Chanchakhi, Caucasus.

One man lost his life when he slipped on the last ridge before the top.

Named Communism Peak, it has been subdued by **86 scalers, including four** British **mountaineers who made the attempt** in 1962. **They all followed the trail blazed by** the 1933 **expedition but proceeded upward** by new **and more complicated routes. In** 1959 alone **30 Soviet mountaineers got to the** top via **three different routes.**

Mountaineering is a popular sport in the **Soviet Union. We have many** ranges with **very high peaks that attract legions** of devotees.

A colossal mountain system, the Tien Shan, **is located in the southern part of the** country, **in Central Asia. The giant ridges of** the Pamirs, **interlaced with the summits of the** Tien Shan, **rise to the clouds. Nearer to the west**, between **the Black and Caspian Seas, the** mountain **chains of the Caucasus stretch on** for nearly **750 miles. The Caucasus is in the** European **part of the Soviet Union and has** many big **inhabited centers which make it more** accessible **to large numbers of mountaineers**. Of the **20 alpine bases in the Soviet Union**, 14 are **in the Caucasus. In contrast to the** Pamirs and **Tien Shan, all the Caucasian peaks** have already **been scaled.**

Three of ten climbers who started the ascent **of an unnamed peak in the upper** part of the **southern Inylchek glacier in the Tien** Shan in **1938 got to the top on the eleven**th day of the assault in a dense fog. The trio was Leonid Gutman, Yevgeni Ivanov and Alexander Sidorenko. They had no way of telling whether it was the highest point or not, but the altimeter showed 6,930 meters (22,736 feet). The climbers named it the Twentieth Anniversary of the Komsomol Peak (this Soviet youth organization was celebrating its anniversary at the time).

Topographers and geodesists working in the Tien Shan in 1943 were astonished when they discovered a peak towering 7,439 meters (24,406 feet) above sea level in the middle of the eastern Kokshaal-Tau range. Until then Khan-Tengri, 6,995 meters (22,949 feet), had been mapped as the highest peak in the Tien Shan. Shortly afterward, the newly discovered, northernmost 7,000-meter summit in the world, named Pobeda (Victory) Peak, appeared on the geographical maps of the world. A comparison of all available information showed that it was this summit the three mountaineers had conquered in 1938.

The high-altitude reaches of the Tien Shan are grim and inaccessible, with their snow- and ice-covered sides often shrouded in thick fog. Blizzards rage there almost all the time, and avalanches are frequent.

Many attempts have been made to climb Pobeda Peak. The members of the 1949 expedition got in the way of an avalanche and escaped with their lives by a miracle. The two 1955 expeditions also failed, with one of them ending in a tragedy. Eleven members of the assault group led by Vladimir Shepilov perished at an altitude of 6,700 meters (21,982 feet) during a blinding three-day blizzard. Only one member of this party, Ural Usenov, was left alive. He fell down an ice crevasse, where he was found 26 hours later.

A year later Soviet mountaineers, at long last, reached the top of Pobeda Peak. The 11 successful men were led by an outstanding mountaineer, Honored Master of Sports Vitali Abalakov, an engineer and brother of Yevgeni Abalakov. Soviet climbers have since subdued Pobeda Peak twice, in 1958 and 1961. All in all, 25 men reached the summit of that giant.

Lenin Peak, 7,134 meters (23,405 feet), in the Pamirs has in recent years become a sort of "altitude stadium" for our climbers. Technically this peak presents no great difficulties, but many mountaineers, even experienced men, have a hard time withstanding the frosts and lengthy stay at high altitudes.

The first ascent of Lenin Peak was made by Vitali Abalakov, Kasyan Chernukha and Ivan Lukin in 1934. Since then it has been climbed 28 times. Over the years Lenin Peak has been conquered by 368 mountaineers from many republics and cities of the country. No other 7,000-meter peak on the planet has had so many climbers on its top. Among them were 10 Soviet women, including Abalakov's wife, Honored Master of Sports Valentina Cheredova, Master of Science (Pedagogy), who reached the summit in 1960, when she was 55 years old.

Korzhenevskaya Peak, 7,105 meters high



Scaling a [illegible] top of Ca[illegible]

[illegible]3,310 feet) and the fourth Soviet 7,000-[illegible]eter giant, is in the northwestern part of [illegible]e Pamirs. It was discovered in 1961 by [illegible]kolai Korzhenevsky, a noted geographer [illegible]d explorer, who named it after his wife. [illegible]oviet mountaineers blazed the way to the [illegible]eak in 1937, missing the summit by only 100 [illegible]rds. The highest point was conquered by [illegible] eight-member group of Soviet climbers in [illegible]953, and eight years later two parties with [illegible] total of 27 climbers got to the top in one [illegible]ot.

[illegible] No fewer than 515 ascents have been made [illegible] the four Soviet 7,000-meter peaks.

[illegible] The record in altitude climbing is held by [illegible]nored Master of Sports Kirill Kuzmin, a hy-[illegible]opower engineer, who has been up 7,000-[illegible]eter peaks seven times: twice up Commu-[illegible]sm Peak, twice up Lenin Peak, and once up [illegible]obeda, Mustag-Ata and Kongur-II. Last year [illegible]e ascended Khan-Tengri.

[illegible] Honored Master of Sports Yevgeni Ivanov, [illegible] war veteran, has one high-altitude climb less [illegible]an Kuzmin to his credit, but he is the only [illegible]e in the Soviet Union who has conquered [illegible]l four 7,000-meter giants as well as Mustag-[illegible]a and Kongur-II. Ivanov overcame the fourth, [illegible]rzhenevskaya Peak, in 1961, when he was [illegible]) years old.

[illegible]nly experienced athletes who can reach [illegible] the high standards of climbing skill re-[illegible]uired and who have been checked out by the [illegible]octors are permitted to make high-altitude [illegible]cents. For safe climbing, the USSR Moun-taineering Federation has a set of rules which have done much to reduce casualties. Briefly, the Federation rules say:

1. Mountaineering is a collective sport, and tackling a mountain singlehanded is asking for trouble.

2. Look before you leap. Before starting an ascent, all the members of a party must study the route to be followed, chart the route, and leave a copy with the safety patrol, giving the date of return. If the party fails to return on that date, the alarm goes out and rescue parties leave at once.

3. If you haven't the strength to climb a giant mountain, don't do it. Try only a peak which you are prepared for by previous ascents.

Mountaineers from many countries climb the Caucasus every year. They choose their own targets and ascent routes but are also required to inform the safety patrol of their routes and times of return.

Nine British climbers headed by Sir John Hunt visited the Caucasus in 1958, and four years later British mountaineers made several successful ascents of peaks in the northwestern Pamirs.

Sir John Hunt said of his visit to the Soviet Union: "We thought the friendships we made with many Soviet mountaineers the most important part of this trip. I would like our contacts to be continued. Herein lies the best hope of achieving genuine fraternity among nations."

A NEW SPACE SERIES

A series of six stamps has been issued to commemorate the achievements of the Soviet Union's scientists and cosmonauts. All of 10-kopeck denomination, the stamps are dedicated to (top to bottom) the first Sputnik, the first man-made object—a Soviet emblem—carried to the moon, the first photo of the dark side of the moon, the first manned flight, the first group flight, and the first woman cosmonaut.





Colonnade of an ice palace on a slope of Mt. Lenin in the Pamirs.



Scaling a ridge on the way to the top of Chanchakhi, Caucasus

One man lost his life when he slipped on the last ridge before the top.

Named Communism Peak, it has been subdued by 86 scalers, including four British mountaineers who made the attempt in 1962. They all followed the trail blazed by the 1933 expedition but proceeded upward by new and more complicated routes. In 1959 alone 30 Soviet mountaineers got to the top via three different routes.

Mountaineering is a popular sport in the Soviet Union. We have many ranges with very high peaks that attract legions of devotees.

A colossal mountain system, the Tien Shan, is located in the southern part of the country, in Central Asia. The giant ridges of the Pamirs, interlaced with the summits of the Tien Shan, rise to the clouds. Nearer to the west, between the Black and Caspian Seas, the mountain chains of the Caucasus stretch on for nearly 750 miles. The Caucasus is in the European part of the Soviet Union and has many big inhabited centers which make it more accessible to large numbers of mountaineers. Of the 20 alpine bases in the Soviet Union, 14 are in the Caucasus. In contrast to the Pamirs and Tien Shan, all the Caucasian peaks have already been scaled.

Three of ten climbers who started the ascent of an unnamed peak in the upper part of the southern Inylchek glacier in the Tien Shan in 1938 got to the top on the eleventh day of the assault in a dense fog. The trio was Leonid Gutman, Yevgeni Ivanov and Alexander Sidorenko. They had no way of telling whether it was the highest point or not, but the altimeter showed 6,930 meters (22,736 feet). The climbers named it the Twentieth Anniversary of the Komsomol Peak (this Soviet youth organization was celebrating its anniversary at the time).

Topographers and geodesists working in the Tien Shan in 1943 were astonished when they discovered a peak towering 7,439 meters (24,406 feet) above sea level in the middle of the eastern Kokshaal-Tau range. Until then Khan-Tengri, 6,995 meters (22,949 feet), had been mapped as the highest peak in the Tien Shan. Shortly afterward, the newly discovered, northernmost 7,000-meter summit in the world, named Pobeda (Victory) Peak, appeared on the geographical maps of the world. A comparison of all available information showed that it was this summit the three mountaineers had conquered in 1938.

The high-altitude reaches of the Tien Shan are grim and inaccessible, with their snow- and ice-covered sides often shrouded in thick fog. Blizzards rage there almost all the time, and avalanches are frequent.

Many attempts have been made to climb Pobeda Peak. The members of the 1949 expedition got in the way of an avalanche and escaped with their lives by a miracle. The two 1955 expeditions also failed, with one of them ending in a tragedy. Eleven members of the assault group led by Vladimir Shepilov perished at an altitude of 6,700 meters (21,982 feet) during a blinding three-day blizzard. Only one member of this party, Ural Usenbayev, was left alive. He fell down an ice crevasse where he was found 26 hours later.

A year later Soviet mountaineers, at long last, reached the top of Pobeda Peak. The 11 successful men were led by an outstanding mountaineer, Honored Master of Sports Vitali Abalakov, an engineer and brother of Yevgeni Abalakov. Soviet climbers have since subdued Pobeda Peak twice, in 1958 and 1961. All in all, 25 men reached the summit of that giant.

Lenin Peak, 7,134 meters (23,405 feet), in the Pamirs has in recent years become a sort of "altitude stadium" for our climbers. Technically this peak presents no great difficulties, but many mountaineers, even experienced ones, have a hard time withstanding the frosts and lengthy stay at high altitudes.

The first ascent of Lenin Peak was made by Vitali Abalakov, Kasyan Chernukha and Pyotr Lukin in 1934. Since then it has been climbed 28 times. Over the years Lenin Peak has been conquered by 368 mountaineers from many republics and cities of the country. No other 7,000-meter peak on the planet has had so many climbers on its top. Among them were 10 Soviet women, including Abalakov's wife, Honored Master of Sports Valentina Chernodova, Master of Science (Pedagogy), who reached the summit in 1960, when she was 51 years old.

Korzhenevskaya Peak, 7,105 meters (23,



(23,310 feet) and the fourth Soviet 7,000-meter giant, is in the northwestern part of the Pamirs. It was discovered in 1961 by Nikolai Korzhenevsky, a noted geographer and explorer, who named it after his wife. Soviet mountaineers blazed the way to the peak in 1937, missing the summit by only 100 yards. The highest point was conquered by an eight-member group of Soviet climbers in 1953, and eight years later two parties with a total of 27 climbers got to the top in one shot.

No fewer than 515 ascents have been made of the four Soviet 7,000-meter peaks.

The record in altitude climbing is held by Honored Master of Sports Kirill Kuzmin, a hydropower engineer, who has been up 7,000-meter peaks seven times: twice up Communism Peak, twice up Lenin Peak, and once up Pobeda, Mustag-Ata and Kongur-II. Last year he ascended Khan-Tengri.

Honored Master of Sports Yevgeni Ivanov, a war veteran, has one high-altitude climb less than Kuzmin to his credit, but he is the only one in the Soviet Union who has conquered all four 7,000-meter giants as well as Mustag-Ata and Kongur-II. Ivanov overcame the fourth, Korzhenevskaya Peak, in 1961, when he was 50 years old.

Only experienced athletes who can reach the high standards of climbing skill required and who have been checked out by the doctors are permitted to make high-altitude ascents. For safe climbing, the USSR Mountaineering Federation has a set of rules which have done much to reduce casualties. Briefly, the Federation rules say:

1. Mountaineering is a collective sport, and tackling a mountain singlehanded is asking for trouble.

2. Look before you leap. Before starting an ascent, all the members of a party must study the route to be followed, chart the route, and leave a copy with the safety patrol, giving the date of return. If the party fails to return on that date, the alarm goes out and rescue parties leave at once.

3. If you haven't the strength to climb a giant mountain, don't do it. Try only a peak which you are prepared for by previous ascents.

Mountaineers from many countries climb the Caucasus every year. They choose their own targets and ascent routes but are also required to inform the safety patrol of their routes and times of return.

Nine British climbers headed by Sir John Hunt visited the Caucasus in 1958, and four years later British mountaineers made several successful ascents of peaks in the northwestern Pamirs.

Sir John Hunt said of his visit to the Soviet Union: "We thought the friendships we made with many Soviet mountaineers the most important part of this trip. I would like our contacts to be continued. Herein lies the best hope of achieving genuine fraternity among nations."

A NEW SPACE SERIES

A series of six stamps has been issued to commemorate the achievements of the Soviet Union's scientists and cosmonauts. All of 10-kopeck denomination, the stamps are dedicated to (top to bottom) the first Sputnik, the first man-made object—a Soviet emblem—carried to the moon, the first photo of the dark side of the moon, the first manned flight, the first group flight, and the first woman cosmonaut.





The cobra fills its mouth with venom
And walks upon its duodenum.
He who attempts to tease the cobra
Is soon a sadder he and sobra.
Ogden Nash

THE CASE OF THE VENOMOUS PRETZEL

By Vladimir Lutin

WHETHER or not Alexander Ryumin recalled Ogden Nash's somber warning on that freezing winter afternoon in Tajikistan is open to speculation. As he wandered across the snow crust of the foothills of the Pamirs, he would have looked more like a gold prospector, a Rip Van Winkle coming in from the wilderness, or even a whirling dervish—in short, anything—than what he was: a biologist hunting for snakes.

After several hours of fruitless rummaging in abandoned snake holes, Ryumin finally hit pay dirt in the form of a cobra that was literally frozen stiff and, to all appearances, dead as a doornail. Ryumin picked up the snake, which had frozen in a curled up position, brought it home and absent-mindedly tossed it under the stove to thaw out and later be stuffed.

That evening Ryumin put on a pot of coffee to boil and, remembering "the stiff under the stove," as he called it, decided to fish it out. But the snake was gone! Now personally, I can think of pleasanter living conditions than sharing a makeshift hut in the foothills of far-off Tajikistan with a cobra. Ryumin, however, took it in stride. He searched the place thoroughly and finally found the serpent taking a snooze in his bed. It was curled up like a pretzel—hence its name.

Thanks to Pretzel, Ryumin was able to carry out some interesting biological experiments concerning artificial death and revival, subzero freezing of separate organs, and heightened or slowed-down metabolic processes.

This is what I had heard about Ryumin before meeting him. Now, as I stood in the living room of his Moscow apartment, I felt a little uneasy. I was to meet Pretzel. I looked around, wondering where the snake would appear from, but at that moment Ryumin gave a low whistle and said: "Come on, Pretzel, wake up."

In the corner of the room a huge jar, reminiscent of Ali Baba and the Forty Thieves, trembled slightly and out oozed six feet of splendid Central Asian cobra. Ryumin had warned me not to move, but his concern was unnecessary—I couldn't have budged at that moment for love or money.

Pretzel, however, didn't even look at me. He was swaying about three feet off the floor following Ryumin, who had put a remote-controlled mouse, covered on one side by a transparent plastic shield, on the carpet. Ryumin sent the mouse scurrying off, and then I witnessed one of the strangest things: Pretzel gave an ironic smile, made an abrupt about-face on his deodenum and slid back into the jar. Of course, you'll probably say I was overexcited, that a reptile cannot smile at all, let alone smile ironically. Well, I looked this reptile in the face and saw what I saw. If you don't believe me, try an eyeball to eyeball confrontation with a cobra yourself.

"You see," said Ryumin, "Pretzel is trained; he just won't bite at toys. Now watch what an untrained cobra will do."

The new cobra, called Bow Tie, struck at the mouse the minute it ran off, but was foiled by the plastic shield. Ryumin repeated the experiment, and this time Bow Tie slithered around the shield and grabbed the mouse, only to disgorge it instantly. The cobra obviously did not enjoy the taste of metal. The third time the mouse was set off, Bow Tie gave Ryumin a venomous look and went for him. Ryumin calmly pinned him to the floor with a pronged stick, then stuffed him into another jar.

"He's insulted," quipped the biologist. "Snakes don't like to be taken for idiots. Seriously speaking, what I'm trying to show is that reptiles, particularly cobras, have a high degree of intelligence. Like mammals, they can amass experience and then put it to use. Although I specialize in the biology of invertibrates in general, snakes are my hobby. They've taught me quite a lot."

Among the things that Ryumin has observed:

Item: Cobras hunt their prey in definite places; theirs is a planned hunt, a search based on experience, not chance encounter.

Item: Cobras do not attack animals they cannot swallow.

Item: If not compelled to defend themselves, cobras prefer flight to battle with a questionable outcome.

Item: Cobras never make the same mistake twice.

Ryumin did admit that the cobra's "intelligence" is limited. Only one person can feed or experiment with the cobra. All strangers are regarded as dangerous and as such are to be attacked or run away from.

Incidentally, that is exactly my attitude toward cobras.

COMMUNICATIO



BY PROFESSOR IOSIF SHKLOVSKY

Iosif Shklovsky, born in the Ukraine in 1916, is a graduate of Moscow University. A leading specialist in radio astronomy, he is the author of The Physics of Solar Corona *(1951),* Cosmic Radio Emission *(1956) and more than 100 other works. He is now a professor at Moscow University and head of the radio astronomy section of the Sternberg Astronomical Institute.*

"Some of those who most passionately argue the possibility that there is—or has been—life on Mars are men who enjoy being provocative, who like to needle scientific pomposity. Only a few of them, however, have scientific reputations sufficiently impregnable to get away with it. Among these is Iosif Samuilovich Shklovsky."

Iosif Shklovsky is "one of the most brilliant theoretical radio astronomers alive."

Walter Sullivan

***Science Editor,* The New York Times**
***in his book* We Are Not Alone**

ITH EXTRATERRESTRIAL CIVILIZATIONS

THE PROBLEM formulated in the title of this paper goes back many centuries, but only now can it be looked into scientifically.

By reason of these scientific findings we can now explore the problem of the multiplicity of inhabited worlds in the universe and the possibilities for interstellar communication.

1. The profusion of planetary systems in the galaxy has been established. Van de Kamp, a noted American specialist in photoastrometry, found last year that one of the stars closest to the earth, known as Barnard's star, has an invisible satellite with an unprecedentedly small mass. Measurements of infinitesimal vibrations in the proper motion of this star have shown that the mass of the invisible satellite responsible for these oscillations is only one and a half times the mass of Jupiter. Such an object cannot be a luminescent body. The temperature of its depths is too low. In this case, therefore, we must rule out thermonuclear reaction, which furnishes the energy of most stars we know. A cosmic body of this kind is most probably a giant planet similar to our Jupiter.

The fact that a planet has been found near one of the stars closest to us points to an abundance of planetary systems in our galaxy. This is why van de Kamp's discovery is so crucial.

2. Very important for the problem under discussion is current progress in molecular biology, biophysics and biochemistry, which have begun to unveil the mystery of the origin and development of life.

3. Spectacular advances in radio astronomy in recent years make communication with extraterrestrial civilizations a real rather than a hypothetical problem.

4. Advances in cybernetics will be an important factor in establishing communication. Cybernetic concepts and methods are indispensable for the analysis of such problems as the search for optimum signal characteristics or automation. Even today, cybernetics suggests the possibility of new artificial forms of life (including intelligent life). In the future it will assume very large importance.

5. Man's exploration of outer space stimulates research in communication with other inhabited worlds. The irresistible expansion of man's transforming activity in near-solar space is bound to lead to the creation of an artificial biosphere which will be by 10 to 15 orders larger than the natural biosphere.

* * *

The quite realistic possibility of determining whether there is life on the planets nearest us has a direct bearing on the problem in question. Should experimental evidence indicate the existence of even the most primitive forms of life on Mars with its rigorous environment, that will actually confirm the concept that life on planets, as the highest form of the existence of matter, originates by intrinsic laws.

This important question follows: If life has originated on a planet and has undergone a long and complicated evolution, must it of necessity become intelligent at some stage? I do not think this must necessarily be so. On the contrary, it should be remembered that the chances for the emergence of intelligent life are very small indeed.

* * *

If the assumption that we are not alone in the universe is adequately proved, then we have the problem of communication between planetary civilizations.

Two types of communications are possible: (a) interstellar flight, in particular the launching of automatic cybernetic probes, and (b) the transmission and reception of electromagnetic signals.

The first method seems to be hopeless. Apart from the fact that it is not feasible with the technological means we have at our command today, it also has no future.

Von Hoerner recently made an elaborate analysis of this problem and comes to rather discouraging conclusions. To be used for communication, interstellar rockets must have velocities close to that of light. It is only under this condition that the well-known effects of the general theory of relativity make it possible for cosmonauts to cover within comparatively short times, as clocked in their *own* system, interstellar and even intergalactic distances that run into thousands of millions of light years. If, for example, we assume that the cosmonauts move for the first half of the journey with an equal acceleration b and for the second half with the same uniform deceleration, and if $b = g$ (the acceleration of terrestrial gravitation), it will take the cosmonauts 21 years (in the travelers' own system) to make a flight to the nucleus of our galaxy and back, 28 years to the Andromeda nebula and 38 years to reach a remote accumulation of galaxies in the constellation Coma Berenices.

However, a rocket's acceleration and deceleration require vast energy reserves. Von Hoerner rules out refueling the rocket en route by pumping in interstellar gas, a project which has been discussed in the literature. It must, therefore, carry all the fuel it will need. Hence it follows that only a photon rocket (if one is ever built) can fly at speeds close enough to that of light. But then new difficulties arise. If the 15-megawatt engine of a photon rocket necessary for interstellar flight were ever built, it would have to weigh no more than five grams (note that 15 megawatts will meet the power needs of a moderate-sized town). And the five grams must include the weight of the fuel, the giant reflectors the photon rocket needs to function, and all its other equipment.

Thus, contrary to the notion of science-fiction writers, interstellar photon rockets moving at relativistic speeds are unlikely ever to be built. We obviously overestimate the possibilities of rocket engines. They will do for interplanetary flights to explore and then utilize near-solar space. They may be powerful vehicles for the gradual expansion of civilization from one planetary system to another. But they will move at nonrelativistic speeds.

Since photon rockets are unsuitable for establishing communication between civilizations separated by interstellar spaces, other possibilities should be sought.

* * *

The idea of communication via electromagnetic channels was put forward by Cocconi and Morrison in 1960. Their research stimulated all further study in this field. Analysis shows that radio waves provide the most promising and economical media. Within this range it appears most desirable to use centimeter, short and decimeter waves. Cocconi and Morrison proceeded from the possibility of communication on the 21-centimeter wave band. Shortly thereafter Drake tried to detect artificial signals from the nearest suitable stars, Epsilon Eridani and Tau Ceti (the Ozma project). It seems to us, however, that the Ozma project invalidates itself for the following reasons.

First, it assumes that civilizations may be discovered in the vicinity of the nearest stars, a highly improbable assumption.

The second and major defect of the project is its point of departure. The level of technological development of extraterrestrial civilizations is assumed to be approximately the same as on earth. Therefore, it

goes on to assume that the capacity of receivers and transmitters used by extraterrestrial civilizations is approximately the same as ours. The assumption is arbitrary.

The time scale for the technological development of a civilization is extremely short. Therefore, if there are other civilizations in the universe, the levels of their development must vary widely. Most civilizations must have levels of technological development incomparably higher than ours. We are still babes in science and technology. Our discovery of radio communication is not yet 70 years old. Our discovery of nuclear power is not yet 20 years old. We have not yet harnessed thermonuclear synthesis.

Therefore, when analyzing the problem of communication, it is necessary to take into account a possibly higher level of technological development on other planets.

The only method we have of estimating the technological level of extraterrestrial civilizations is to analyze the possibilities of our own. Our period of technological development has been very short. Science and technology in the modern sense of the word originated only some 10 generations ago. Galileo Galilei laid the foundation of mechanics and from there we took off. In the 350 years since, technology has become a cosmic factor, and its possibilities have already transcended the modest scale of the globe. Two examples will illustrate the point.

Example 1. Owing to television, the earth radiates into outer space approximately 1 watt/cycle in the frequency band—there are several thousand teletransmitters each averaging 20 kilowatts. The earth's frequency band radiation temperature is about 10^8 degrees. In power of frequency band radio emission in the solar system, the earth is second only to the sun. The capacity of its radiation is a million times larger than that of Venus and Mars.

Example 2. High-altitude nuclear explosions have distorted an important cosmic characteristic of the earth, its radiation belts. This change is probably here to stay.

Man is by no means always aware of the consequences of his activity. Another aspect of man's activity may be of decisive importance for the problem we are discussing. I refer to the generation of energy and explosive rate of its growth. At present mankind is producing approximately 3×10^{19} ergs/second. The output of energy now doubles each 20 years, and this trend seems to be stable. We can expect that in 200 years the generation of energy will reach 3×10^{22} ergs/second of one per cent of the flux of solar energy reaching the earth. But this may happen even earlier if we take into account the growth in the rate of power generation.

The continued increase in energy generation will change the earth's thermal regime. Of course, the extensive utilization of solar energy will begin earlier. But there is a limit; most probably only 10 per cent of the entire solar flux will be used. In any event, in less than 300 years the problem will be acute. Some foreign writers believe that a ban will have to be placed on the further development of power generation. This will hardly be possible, however. More likely, powerful energy-generating systems will be installed in outer space and there mankind will have vast (though also limited) possibilities for development of power generation.

The transfer to outer space of high-capacity power generators will most likely begin much earlier than the time limit set by the need for conservation of the thermal regime. Reasons will be the radiation hazards of such installations on earth and the need for experimenting with and setting up new types of power producers requiring a great deal of room. Bold yet quite realistic projects for important experiments using outer space facilities have already been suggested. A case in point is the project proposed by Nikolai Kardashev and Vyacheslav Slysh of the Sternberg Astronomical Institute to establish a radio interferometer on the moon's artificial satellite.

As soon as mankind begins to reclaim and transform the solar system, its resources of power and materials will increase beyond comparison. The quantity 10^{33} ergs/second is no limit since part of the mass of planets can be used as fuel for thermonuclear synthesis. We can assume from various estimates that the time it takes to reclaim and transform the solar system will be of the order of several thousand years (at any rate less than 10,000 years), which is insignificant compared with the cosmic scale. Therefore, if there are other civilizations in the galaxy, many, if not most of them, have already reached the level of technological development characterized by the generation of 10^{33} ergs/second and transformation of their planetary systems. An artificial biosphere with a linear dimension of about 10^{13} to 10^{15} centimeters is quite possible.

Is it likely that the development and diffusion of intelligent life is confined to the planetary system? I think not. There is nothing to limit the possibilities of so highly organized a form of matter as life.

This situation, for example, is theoretically possible. Having reclaimed its planetary system, a highly developed civilization will begin to spread to adjacent stars. It is not even necessary for these stars to have their own planetary systems. Intelligent beings will have mastered the technique of creating an artificial biosphere. The transformation of the environs of an adjacent star may take some thousands of years. Transporting materials there will take several hundred years. Colonized in this fashion, the neighbor star will become another center of diffusion. We can expect that this process, regulated by one comprehensive several dozen million year plan, will eventually embrace the entire galaxy. The growth will probably be even more rapid since such a supercivilization will develop not only quantitatively but qualitatively.

A supercivilization of that sort will be able to reach a power generation level as high as 10^{43} ergs/second or more. We have no reason to think that in some galaxies the development of civilization will not assume just this form. Hence another conclusion: There are possibly civilizations which are already generating 10^{43} ergs/second and have created an artificial biosphere on the scale of the astral system, *i.e.*, within the range of approximately 10^{22} to 10^{23} centimeters.

All this does not imply that any civilization inevitably develops as described above. Profound crises lie in wait for a developing civilization and one of them may well prove fatal. We are already familiar with several such critical contradictions:

(a) Self-destruction as a result of a thermonuclear catastrophe or some other discovery which may have unpredictable and uncontrollable consequences.

(b) Genetic danger.

(c) Overproduction of information.

(d) Restricted capacity of the individual's brain which can lead to excessive specialization, with consequent dangers of degeneration.

(e) A crisis precipitated by the creation of artificial intelligent beings.

* * *

The problems discussed above are not as academic as might appear at first glance. The possibility of existence of supercivilizations with an energy level of about 10^{33} or even some 10^{43} ergs/second is a critically important premise for radio communication.

Nikolai Kardashev recently suggested this very bold idea: that some sources of cosmic radio emission already detected may be artificial. Two such sources are possible: supercivilizations generating about 10^{33} ergs/second and with sizes on the order of those of planetary systems, or even more developed civilizations which have transformed their astral systems.

Our calculations show that signals from supercivilizations of the first type can be received by modern radio-physical equipment even when the supercivilization sending them lies in some adjacent astral system (the Andromeda nebula, the nebula in the Triangulum constellation, etc.). As for the signals from civilizations of the second type (with a power generating level of about 10^{43} ergs/second), they can be detected even when sent from distances greater than those to the most remote objects of the universe.

How do we prove that a given source of cosmic radio emission is artificial? To begin with, the angular size of such a source must be very small. This criterion is insufficient, of course. One thing is beyond question, however: the need for thorough and all-round observation and investigation of even the best-known sources of radiation.

Obviously, such systematically organized observations must be carried out with radio telescopes and radio interferometers of the largest sizes and highest sensitivities possible.

Signals from a supercivilization may carry a vast amount of information. It is obvious enough that the detection and decoding of such radio signals would stimulate the development of man's culture enormously. To gauge the amount of information that can be conveyed by this method, the following example may be helpful.

About 100 million books and manuscripts are known to have been written by mankind. Let us assume that the average book is 250 typewritten pages or 400,000 signs. Thus the total volume of man's cultural activity is 4×10^{13} signs. Coding it in the binary system, we obtain approximately the same number of binary units of information. Now suppose we want to radio this information in the 1,000 megacycle band (centimeter wave length). This band permits the transmission of 10^9 binary signs a second. Therefore everything mankind has written can be transmitted in 40,000 seconds or about 12 hours.

Coding and decoding optimum signals for interstellar communication and many other related problems involve mathematical logic and cybernetics directly. We are already dealing with them. Quite recently mathematician Freudental of the Netherlands tried to create a special language for interstellar transmission called Lincos.

But will a supercivilization send radio signals to establish communication? In my opinion, the question is academic. Our civilization and civilizations like ours still in the embryonic stage of development are of great interest to a supercivilization, just as we are interested in primitive societies or even in societies of ants or bees. Nor are the structure and organization of primitive microorganisms any the less interesting and important to us, for that matter.

* * *

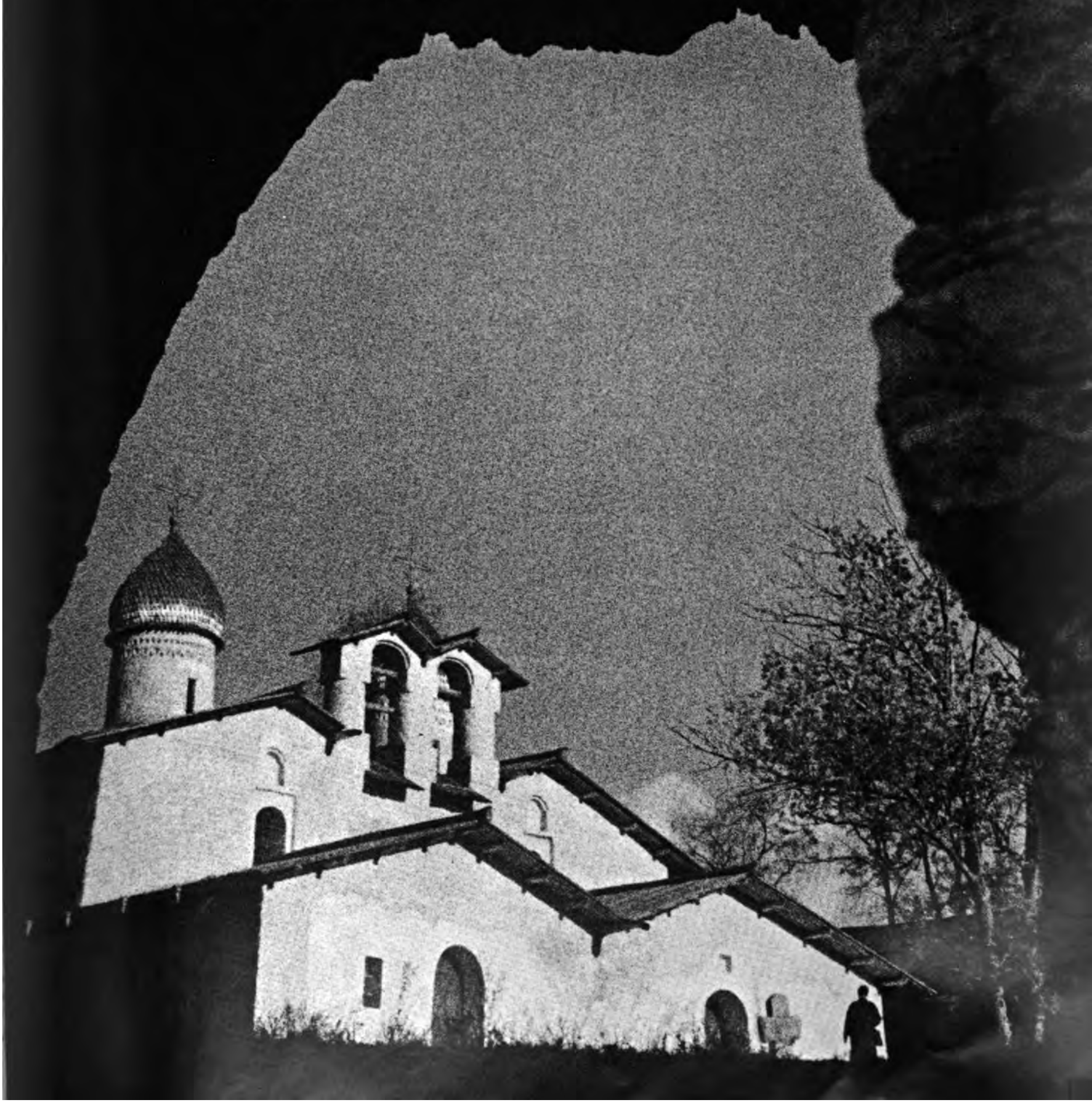
Radio communication originated quite recently. Will it play the decisive role in the future? Most likely it will, if our understanding of nature and its major laws is correct. It has been proved that of all conceivable types of communication, radio communication is the most economical and informative.

This then is how we see the problem of extraterrestrial civilizations and the possibilities for communication with them. Experiment and observation, thorough and systematic, are the decisive factors for the solution.

Courtesy of the magazine Nauka i Zhizn

PSKOV

In the fifteenth century the city had a population of 50,000 and about 1,000 churches and convents. The Church of the Virgin and the Church of the Nativity were built in the style of wood structures and look like two houses sharing the same roof.





Pskov's ancient wall stretches for six miles. Some parts are 40 feet high and 13 feet thick. Boris Skobeltsyn (below) supervises the restoration work on the city's many antiquities.





This curious belfry, built in 1521, resembles a piece of fortress wall.

Recently restored, this 13th-century cathedral was a wartime casualty.



BY YURI OVSYANNIKOV

LEARNED MEN still disagree on the age of this city. Some say it is a thousand years old; others claim it is older. Of one thing they are all sure, however, that by the middle of the tenth century Pskov was a full-fledged town within a fortress wall. Historical chronicles and archeological data say as much. In the mid-thirteenth century the oak wall was replaced by one of stone that has come down to our day.

Pskov did honorable duty as a frontier post on the western boundaries of the Russian state for many centuries. In the intervals between wars, the town carried on a lively trade with the whole north of Europe, amassed wealth, built new structures, and sheltered its expanding estates behind semicircular fortress walls.

Pskov's foes had to acknowledge the town's power. In the thirteenth century a German chronicler wrote:

"This city is so large that its circumference covers the area of many towns, and in Germany there is no town equal to Pskov."

In 1581 Piotrovski, a Polish noble who took part in the siege of the town, wrote in his diary:

"We are admiring the town of Pskov! Good God, what a big town it is! Just like Paris."

Pskov's architecture reflects its frontier status. Its short, squat pillars, galleries and porches, massive churches with narrow slits for windows, huge and slightly flattened cupolas and bell towers resembling fortress towers, with battlements and loopholes for the bells, are all characteristically and peculiarly Pskovian.

One almost thinks of its old churches (20 have come down to us) as animate. Study any of them for a few hours and you feel as though the ancient silhouette is changing. It seems to breathe. And the curious thing is that the churches do breathe, or practically so.

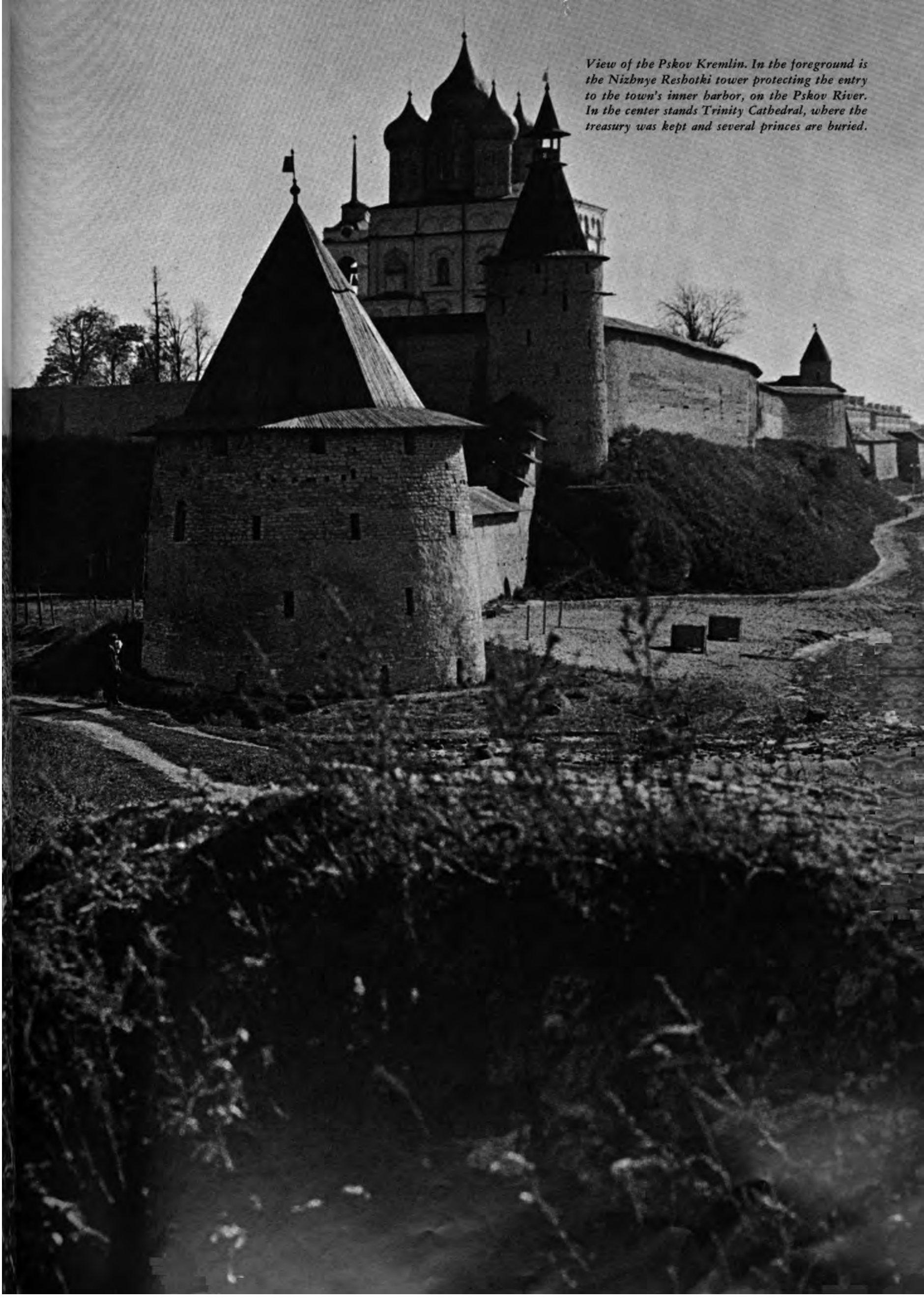
The point is that they are built not of brick but of unpolished limestone. The walls are coated with pale yellow or off-white plaster applied unevenly, so that the stuccoed light-colored surface has almost imperceptible folds. In the changing light of day, the endless play of light and shade along these folds creates the illusion of a changing silhouette.

The Pskov builders were famous throughout Russia. They erected many interesting buildings in the Moscow Kremlin, the Troitse-Sergiyevo Monastery and other sites. St. Basil's Cathedral in Moscow's Red Square was built by the Pskovites.

One is first surprised, then delighted and finally overwhelmed by the beauty and number of ancient monuments that have survived. These centuries-old buildings are to be met with at every step. They are all around, and once seen are not soon forgotten.

Pskov was also famous for its jewelers, potters and painters. The Pskov icons and frescoes still lure experts today.

Some 300 years ago, on their night watch, the sentinels of the Moscow Kremlin cried out the names of the best towns of Russia from tower to tower. One of their cries was: "Glory be to the town of Pskov!"



View of the Pskov Kremlin. In the foreground is the Nizhnye Reshotki tower protecting the entry to the town's inner harbor, on the Pskov River. In the center stands Trinity Cathedral, where the treasury was kept and several princes are buried.

PLUSES AND MINUSES

By NINA ALEXANDROVA

In the April and May issues we published a study, "Love, Sex, the Young Family," about the problems that face young people who recently married or are preparing to. As befits a sociological essay, those articles gave figures and facts, and drew conclusions from them. But in marriage there are small values which the eye of the sociologist does not always see. And yet it is these small values which, as this article by Nina Alexandrova shows, very often decide whether two people are happy or miserable together.

THIS STORY WAS TOLD by a person whom I saw for the first and, most likely, the last time. He was frank the way people traveling often are with strangers, perhaps because their paths, on the morrow, will separate and they will never set eyes on one another again. It was almost as though he were talking to himself about himself, unburdening his heart with no one around to hear him. This is his story as I remember it.

"How and why does a family break up?" he asked. "You give the obvious reasons, those you can see and hear. I want to tell you that in relations between two people there are more than the facts about which you can say: Here is what he did, or this is the way she acted. Those are visible signs! But more often, I think, the changes that take place are not so clear, they cannot even be dated. They are simply a mysterious dying away of love which we cannot understand, just as we cannot see its first awakening or blossoming. It is an emotional, subjective thing. And since we are materialists, we do not like indulging ourselves with self-analysis. We are extremely deaf and blind when it comes to that. And I, too, was deaf and blind, although I have been married for 12 years.

"From the viewpoint of some people I suppose I am almost an ideal husband. I don't drink and I smoke very little. I turn my money over to my wife. A real family man, you might say. Right? And I thought so too for a long time. . . .

"Have you noticed how the love with which we begin family life gradually turns into just living? We become absent-minded, are always in a hurry, always running off somewhere. There seems to be no time left for emotions. It is only when something happens—sickness, trouble, fear of being left alone—that we recover our vision and remember that we once loved and still love.

"Some days ago a perfectly insignificant thing started me going over the years we've been married. I summed up things, and I was very much disturbed by what I found."

"You separated?" someone asked.

"Oh no! Nothing like that. My family is intact. I simply visited some friends, went to a housewarming party and saw some really happy people there. I envied what I saw. I envied them their happiness. I can't describe it, that happiness, how the husband turned to his wife, how she said something to him in passing and both of them began to laugh. . . .

"You know, there are these small values which you can't even measure, infinitesimal fractions, a hundred-thousandth part, with nine noughts after the decimal point. But they add up, and each of these values is a minus or a plus. I watched those two people that evening and saw only plus, plus, plus.

"All right, I know what you are going to say: In company, in front of others, we know how to look more or less happy. Smiles, shining eyes and the like. Even the worst drunkards look respectable until they get drunk. That's all for show. But what I saw was something different, not like that.

"Their furniture was the same they had had in their old apartment. I recognized it immediately—a lilac couch, some chairs with faded upholstery, a round table with a high cross-piece against which I kept bumping my knee. The only new thing was a desk.

"The hostess glanced at it and said to me, 'I'm so pleased with that, Kolya. Sergei now has his own room, some place where he can do his writing, a place to work.'

"I noticed how uneasy he was when his wife brought in a heavy serving plate loaded with roast meat. Crowded into a far corner with his guests, he could not get out fast enough, so he hurriedly said, 'Kolya, help her please.

"I know that was a little thing, they were all little things, small values, but you couldn't help feeling the closeness of these two people.

"I want you to understand me rightly. I'm not envious. I was not fascinated by the beauty of my hostess, nor did I envy my friend his happy disposition. What I did envy was that bond of love between them, between those two people. They have had it for years. I felt like a hungry person looking in at someone's door, seeing and smelling tasty food.

"I was feeling very tender from the sight of someone else's love, like a cat enjoying the warmth, when suddenly I felt a sharp, disapproving glance. I didn't have to meet that person's eyes. I knew that only my wife would look at me like that.

"What had I done? I looked around quickly. I had dropped some cigarette ash on my plate. There isn't another person in the world who can catch up my mistakes and slips the way my wife can. After that glance, she turned back to her neighbor, and I heard her ask, 'You have a built-in closet in the hall, haven't you?'

"They were talking about new apartments.

"I expected another glance from her, and this time I wanted her to meet mine. And so I purposely shook the ashes of my cigarette onto the plate to spite her. She turned around as if in answer to a call.

"No one noticed our duel. There was lots of noise around the table, the glasses clinked, and someone made a toast. But my mood was spoiled. I felt like blurting out something hurtful, something stupid. Yet nothing had happened; she had merely looked at me.

" 'Don't you like crabs?' my host asked, bending toward me. He looked uneasy.

" 'I do. Please pass them to me.'

"Nothing had happened, I kept saying to myself. When a convenient moment presented itself, I went into the next room. The window there was open. I picked up the nearest book and kept staring at it without reading a word. You probably know that state of irritation and depression when you begin to cross out everything that has even a slight glow. My life now seemed to me to be one solid dark spot. It was all minus, minus, minus. There was nothing left to be subtracted, and yet I kept recalling the old hurts, the old quarrels. I never even suspected that I had all that venom saved up.

"Gradually, however, I calmed down, the mood passed, and to the accompaniment of the gay talk in the next room I began, more composed, to think about what had happened to us, why it was that we so irritated one another. Who was to blame, she or I? Or was it the way we lived? But there are husbands and wives who keep on loving and taking joy in each other.

"I mentally kept going over our past, the way a person who has lost something goes back to the places he stopped at. But as happens with our childhood impressions, everything had changed with the years, both the scope and the pattern. I thought of our married life as divided into two periods, the way we were before and the way we were now. And I simply could not relate the two. I was surprised at how much I had been able to take, and how easily and with what laughter she had put up with the difficulties of our first years together. What merry goldfinches we were! What fabulous dreams we had! But I could not trace the changes that had taken place. (My wife, noticing I was not at the table, was uneasy and looked in on me once or twice. That, too, confused my thinking.)

"At last, realizing that nothing would come of this self-analysis, I dropped it. About all we could do was live and let live, I decided. Just then I recalled something that always came up in our quarrels.

"Once, on the eve of May First, our bell rang. I opened the door and saw an errand boy. He held a basket of flowers wrapped up in paper. It was for my wife. The accompanying card had her name and nothing else, not another word, not even a signature.

"I called my wife. She came skipping into the hall—at that time she still skipped, she did not just walk. 'Who's it from? Who can it be from?'

"There was an embarrassed look on her face, but I attached no significance to it.

"My wife arranged the flowers and admired them, 'What do you



ssues we published a story
about the problems that
ried or are preparing to
articles gave figures and
em. But in marriage there
he sociologist does not
alues which, as this article
often decide whether
ogether.

as that bond of love between
have had it for years. I fell
ne's door, seeing and

rom the sight of someone
hen suddenly I felt a sharp
that person's eyes. I knew
at.
ed around quickly. I had
ere isn't another person in the
d slips the way my wife can.
er neighbor, and I heard her
hall, haven't you?'
ew apartments.
e from her, and this time I
y shook the ashes of my
around as if in answer to a
There was lots of noise
neone made a toast. But
t something hurtful, something
ad merely looked at me.
my host asked, bending

lo me.'
kept saying to myself. When
ent into the next room. The
arest book and kept staring
y know that state of irritation
ss out everything that has
me to be one solid dark
as nothing left to be
the old quarrels. I never
ed up.
lmed down, the mood passed
alk in the next room I began
had happened to us, why it
was to blame, she or I? Or
ands and wives who keep

r our past, the way a person
places he stopped at. But as
erything had changed with
thought of our married life as
e before and the way we were
o. I was surprised at how much
and with what laughter she
st years together. What merry
eams we had! But I could
. (My wife, noticing I was
me once or twice. That, too,

othing would come of this
ld do was live and let live. I
at always came up in our
First, our bell rang. I opened
a basket of flowers wrapped
mpanying card had her name
even a signature.
me skipping into the hall—
walk. 'Who's it from? Who
ssed look on her face, but I

flowers and admired them,

think? Who could have sent them? And right before May Day! How nice!'

"I am not inclined to be jealous. Besides which I knew that my wife was not a frivolous, giddy woman. Perhaps there was some mistake.

"I can't imagine what prompted me to lie, 'You really can't guess? I sent them.'

"She turned very pale and shouted, 'That's a lie! Why, why are you lying?'

"What annoyed me most of all was that she had caught me in a lie. Sobbing, she admitted that she had sent the flowers herself.

" 'It was such a lovely day, the sun was shining and the smell of spring was in the air. Everyone had flowers, and I wanted so much to have them in our house, too.'

"At the time I thought it was an unnecessary expenditure, considering our modest income, and a silly whim of my wife's. I was insensitive to anyone's feelings but my own.

"And it was only that evening, so many years later, and with those happy people that I realized, in my reminiscences, how very, very lonely a person had to be to send herself flowers. Nothing and no one to look forward to. How much she must have wanted the joy of a gift that did not come from the world of practical things.

"Now I recalled a great deal, how our dreams had vanished, how lonely she was even when she was with me. I had involuntarily and slowly killed in her what I had loved. It was as if I had crossed out all the wonderful things from a fairy tale and left only what was commonplace. I was the one who had taught her the prudence of selfishness, who gave her the first lessons in callous worldly wisdom. And it was not because I am a cheerless, soured person. It just seemed to me that life demanded that. But she stayed young for a long time, a young girl who on the spur of the moment could throw away money on flowers or, as she liked to do, go strolling in a snowstorm.

"I cannot understand my own coldness, the way I seemed to be afraid to react to her joy, to give her joy, although I loved her. When she prepared some favorite dish of mine and stood there near the table, eagerly waiting to hear what I would say, I just frowned and said sourly that it was either underdone or overdone, or that it needed onions. Once, with an air of triumph that no shirt in the world is worth, I pointed to a wrinkled collar as though it were a terrible crime and said, 'And you call that ironing?'

"She beat down her own feelings and adapted herself to me and the kind of family life I apparently wanted. Women are sensitive people. She finally developed a sense of sober calculation and practicality. She would no longer let her neighbor have her last kopeck, as she once did. Perhaps her kindness went with that.

"Sometimes, even now, the old impulses of hers flash up. Something like that happened only recently. She wanted to go skiing with our son, and she sewed a pair of slacks for herself. All I said was, 'You? In trousers?' and the impulse and the skiing vanished. Why did I say that?

"Remember the myth about Pygmalion? I am not especially well-read, that doesn't happen to be my line of work. But I do remember some things. Pygmalion created a statue of Galatea, and fell passionately in love with it. What a happy man he was! I also created a woman, but I created her in my own image and likeness and then proceeded to break her down.

"No one disturbed me in my solitude. I was able to think my dull thoughts through to the end. Hearing the sound of chairs moved about, I hurried into the front hall. It may sound funny, but I suddenly had an almost overpowering desire to bring back immediately, at once, those days that had passed, everything that we had lost and forgotten. As I handed my wife her coat I drew her to me, as I used to do in those distant years. But my wife dryly, coldly pulled away.

"I had made her like that."

Courtesy of Izvestia

RUSSIAN BOOKS IN ENGLISH

Among the recent translations in English issued by Soviet publishing houses are:

ORDEAL. By Alexei Tolstoy. Cloth cover, 3 volumes, 1,000 pp.



Alexei Tolstoy (1883-1945) was one of the most eminent of Soviet writers. His novels *Peter I*, *Ordeal*, *Aelita* and *The Garin Death Ray* are familiar reading in many countries. The trilogy *Ordeal* (*The Sisters*, *1918*, *Black Morning*) is the writer's major work. It sketches the dramatic changes in early twentieth century Russian life brought on by the First World War, the October Revolution and the Civil War. His major characters—the sisters Katya and Dasha Sulavin, the officer Roshchin and the engineer Telegin—are developed against the complex historical background of the period. Tolstoy shows that the road to the Revolution followed by the best of the Russian intelligentsia was often tortuous and far from easy.

ONE STEP FORWARD, TWO STEPS BACK. By V. I. Lenin. Paper cover, 100 pp.



This is the book in which Lenin worked out the organizational principles of a Marxist party. He defined it as the Party of the working class, its politically conscious, advanced contingent, equipped with a knowledge of the laws of social development.

"The Party of the proletariat leads the struggle for the common interests of the working class. It is the highest form of working-class organization."

THE LAST SHOTS. By Yuri Bondarev. Paper cover, 306 pp.



"Look how the sun shines. How beautiful everything is! How quiet—I can hardly believe it's true!"

This is Yuri Bondarev's relentlessly harsh story of the last echoes of the Second World War. Scarcely out of school, he found himself at the front. He fought all the way to Czechoslovakia. The ordeals he came through left a deep imprint on his heart as well as his mind. Perhaps that is the reason his story of the heroism and bitter loss of young soldiers who were cheated in battle but who did not—could not—balance calloused, rings as true and is so moving.

SHADOWED PATHS. By Ivan Bunin. Cloth cover, 454 pp.



A collection of nine stories by Ivan Bunin (1870-1953) written at different times.

It contains the best of his early stories ("Sukhodol," "The Last Rendezvous," "Apple Fragrance," "The Gentleman from San Francisco") and others written in his later years ("Leka," "Sunstroke," "Shadowed Paths"). They might be called stories of love and the unforgettable Russian countryside. "For here," Bunin writes, "in the hushed stillness of the meadows . . . amidst cornfields that grew to our very thresholds, amidst the wilder watersdrifts, my childhood, full of wistful and rare poetry, was spent."

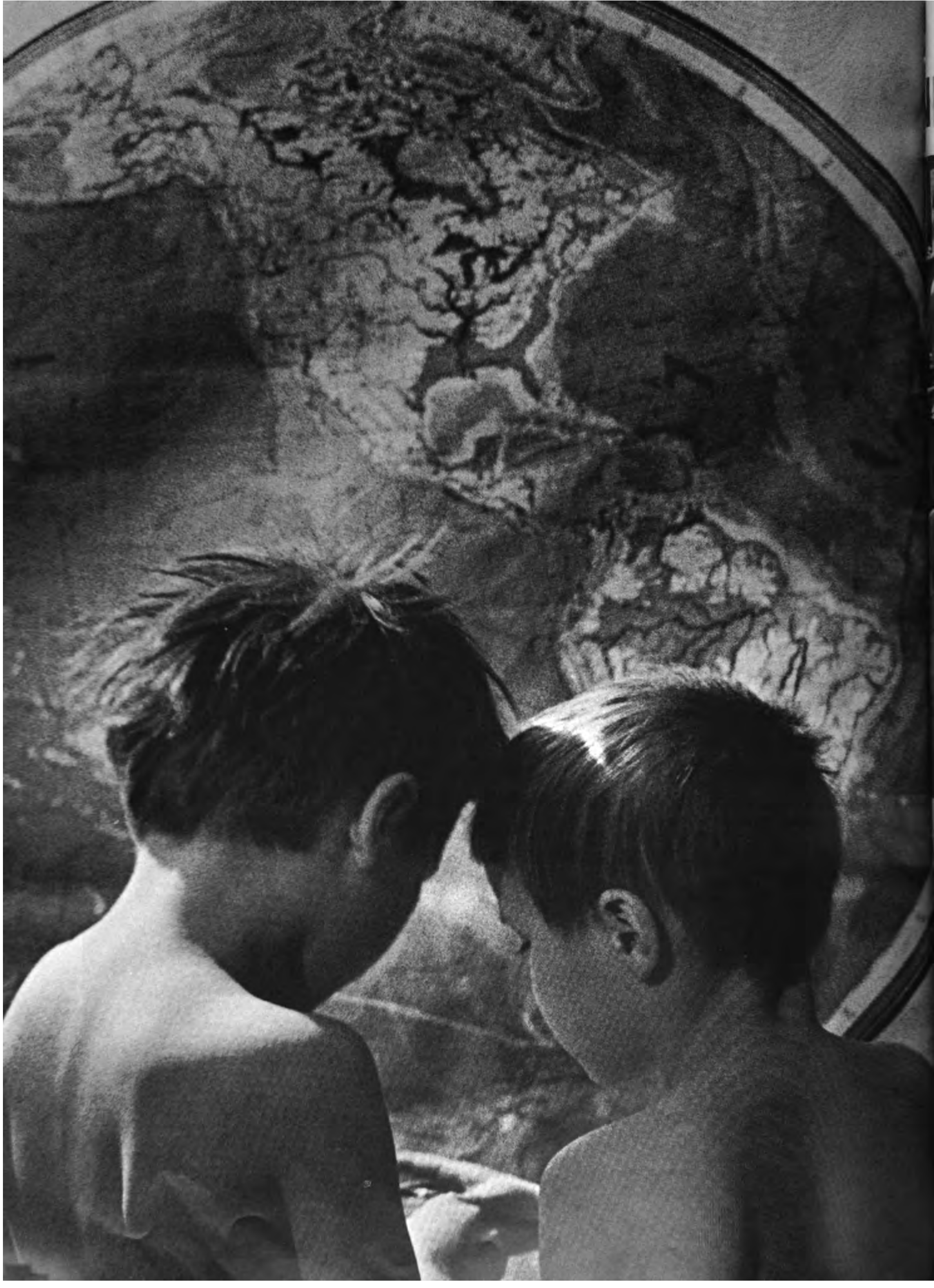
These and a large selection of Russian and Soviet classics, textbooks and publications in science, economics, history and philosophy are available in translation at:

New York: Four Continent Book Corporation
156 Fifth Avenue
New York, New York 10010

Washington: Victor Kamkin, Inc.
1410 Columbia Road, N.W.
Washington, D. C. 20009

Chicago: Cross-World Books & Periodicals
333 South Wacker Drive
Chicago, Illinois 60606

San Francisco: Znanie Book Shop
5237 Geary Boulevard
San Francisco, California 94118



THE IIKITIN APPROACH





The Nikitin children's "toys" include a globe, carpenter's tools, weights and other gym equipment. (Above) The boys like books, and little Olya does too, even though she isn't able to read them yet. A cowboy in top hat and tails probably feels much the way Antosha (below) does in a shirt and shoes.

BY YELENA KNORRE



The Nikitin home in a Moscow suburb.

THE STOCK REMARK about people having as many opinions as they have minds must have been coined about parents and their conflicting ideas on how to bring up children. But clash as their ideas may, practically all of them agree that children "must be protected," that childhood should be "sunny."

This common notion, however, is not shared by the Nikitins, a couple living in Bolshevo, a suburban townlet near Moscow. The Nikitins have evolved their own child-raising system. Very Spartan, it goes back to even earlier stages of human history, with additions borrowed from Jean Jacques Rousseau and Leo Tolstoy.

Boris Pavlovich Nikitin, who is 50, is a scholar. He works at the Psychology Institute of the Academy of Pedagogical Sciences. His wife Lena Alexeyevna, 35, is in charge of a small library.

The current ideas on child-rearing accepted by most parents, they say, hamper the child's normal development. According to them, the advice of doctors and teachers is often not only useless but harmful. And they think even less of solicitous nannies, grannies, and kindergarten and nursery school staffs.

The Nikitins are bringing up their four children—two girls and two boys—by a theory of their own, which they have expounded in their book *Are We Right?* published by the Academy of Pedagogical Sciences in 1963 and in articles that appeared in January of this year in the newspaper *Komsomolskaya Pravda.*

The father writes: "We are all too often advised by doctors and teachers to protect the child from exposure to cold and from too great a physical strain. We are told not to overtax his brain. This is wrong. The child must not be protected but be allowed to come face to face with hazards which will develop his strength and resourcefulness. Children do not need to be mollycoddled. Boiled water, sunshades and mittens are unnecessary. The child's organism should adapt itself to heat, cold and to all kinds of food.

"We do not introduce any special hardening procedures," he continues, "and do not follow any special system of feeding. We let them eat as much as they feel they need. We dress them simply—shorts all year around—and encourage them to go around barefoot."

Alyosha, the eldest boy, who is six, has been sleeping since early infancy on a glassed-in porch, where in winter the temperature never goes above 50° Fahrenheit. His mother hardened him to cold by leaving him

naked, first for three or five minutes, then for ten or more, so that he would be able to sleep on the porch in the coldest weather.

The other children have been raised the same way. Antosha is now five years old. Olya is two and a half, and Anechka is ten months.

All winter the children sleep on the porch with the window open, covered only by a sheet. They play out of doors in the snow and frost barefoot and with only shorts on, often diving into the snowdrifts.

In their playroom toys are less in evidence than such things as a globe of the world, boxes of carpenter's and other kinds of tools, exercise rings, crossbars, ladders, small weights and other miniature gym apparatus. The children are neither urged nor forced to exercise. They exercise as much and as long as they like.

The Nikitins believe that falling and getting hurt are good experiences for children that help them to grow up not to be fearful. They also think that children ought not to be stopped from putting soap, sand and other such things into their mouth, that they have to learn from the unpleasant taste just as they have to learn from experience that a pin sticks and a stove burns. The experiences build up protective habits, the Nikitins claim, and make it easier for them in later life to react intelligently and without panic to dangers. They cite Mahatma Gandhi, who said that wise parents permit their children to make mistakes and that it does them good if they burn their fingers from time to time.

The Nikitin children learn at an early age to eat and dress by themselves and to tidy up their things. Their parents begin teaching them the alphabet and the rudiments of arithmetic earlier than is usually done. The result is that Alyosha and Antosha learned to read at the age of three. When Olya was two, she knew 12 letters of the alphabet. The boys can make up and solve arithmetic problems and count to 10,000.

In spite of all that, they behave like any other children. When 6-year-old Alyosha, with tongue sticking out and brows knitted, writes a simple algebra problem on the blackboard, little Olya tries to copy him. The task being far beyond her powers, she takes a wet rag and erases the blackboard. Alyosha pushes his sister out of the way, and a loud wailing ensues.

What about nursery rhymes and fairy tales, the wicked witch Baba Yaga and so on?

The Nikitins say that the world we live in, the world of electricity and machines, the beauties of nature and human relationships, are far more stimulating to the child's imagination than any fairy tale world can be. The wonders of this real world must be revealed to the child. And the earlier he grasps them, the earlier he will reach true maturity.

It is a principle with the Nikitins never to order their children about or to coax them to do things. They teach their children not by precept but by example and contact.

The children are sports champions in a way. They can jump twice as far as others their age, lift heavier weights and do other such feats.

Are the Nikitins doing the right thing? Have they achieved at this particular stage in their children's growth the aims they set for them?

Many people would like to have these questions answered. The Nikitins' book and their articles in the Soviet Union's most popular newspaper reached several million readers,







Future Tarzans or Newtons? The doctors who examined the children at the Institute of Pediatrics (above) are opposed to the Spartan regimen. The parents say it is too soon to draw conclusions. Six-year-old Alyosha (below) is not up to car assembly, but he can do simple algebra problems.

and the reaction has been a stream of very contradictory letters.

"Dear friends, it was with the greatest interest and gratification that I read your articles," writes Professor Rannan, a biochemist, of Tartu, Estonia. "I am completely convinced of the validity of your views on bringing up children, and I think your experience ought to be widely publicized in our country and others."

"I think what you are doing is outrageous," runs another letter. "I have a daughter of three and a half. In our town we mothers follow the doctor's advice. We also do our best to have our children grow up hardy, but we do not overdo it.

"My little daughter has never been sick although I listen to doctors and do not make her run barefoot in the snow and lift weights."

"Children should not be robbed of their childhood and forced to grow up before their years," writes Polichenova, a future teacher from Petrozavodsk.

"Have the Nikitins ever been to a kindergarten?" Afonina, a kindergarten teacher from Yaroslavl wants to know. "Our job is far from dull. We kindergarten teachers find our work very absorbing. In kindergarten children play games, draw and model, tell stories from pictures, sing and dance to music. They, too, 'work' but rationally, without straining themselves. They enjoy kindergarten so much that sometimes they do not want to go home. What the Nikitins propose is certainly too taxing for small children."

"I should like to know how you actually put your system into practice," asks teacher Varakina from Kostroma Region. ". . . I think you ought to write another book describing your system in greater detail. I admire your courage and thank you for your articles. I wish you and your children every success."

These are samples of the wide interest the Nikitins' experiment has aroused. Should their example be recommended to others?

The Institute of Pediatrics, one of the Soviet Union's major institutions for child health research, undertook to study the effects of the system on the four Nikitin children. They spent a month at the inpatient department of the institute and then were under medical observation at home. They were examined by Academician Speransky, an eminent Soviet pediatrician. Professor Zinaida Kalyarova and the staff of the department engaged in the study of the healthy child's development have since been observing the growth of these four children. Their conclusions thus far do not favor the Nikitins' experiment.

"These children can indeed lift heavier weights, jump higher and run faster than other children their age," the physicians say. "They are hardened to walking barefoot in the snow. But their height is below average although both parents are quite tall. Their weight, too, is less than average, and their chests are underdeveloped. Because of the strenuous exercise, the girl has stretched her stomach muscles and all four children have high blood pressure."

Far from recommending that others follow suit, the doctors urge the Nikitins to give it up before they do serious damage to their children.

The Nikitins, however, argue that it is too early to draw conclusions. When the children are a little older, there will be a basis for discussing the merits or demerits of their system, they say.

Brief Comments

Centralization or Decentralization?

by Genrikh Emdin



Genrikh Emdin, 51, is a graduate of the Odessa Institute of Finance and Economics. He is an editor of the Ekonomicheskaya Gazeta, *specializing in national planning. He has also written articles on economic policy and finance.*

The Soviet Government recently adopted a new system of planning for the food, garment, footwear and other branches of light industry. From now on plans will be built mostly around orders from retailers, wholesalers and trading organizations. What this means in effect is that production is being brought more and more in line with the demands of the market.

The new planning system sets up better incentives. Workers in these industries now have a direct interest in the sales of the goods they produce, in improved quality and greater variety. Far-reaching steps have also been taken to expand the network of retail outlets, to improve advertising, merchandising and catering methods and to make sure that manufacturers keep a watchful eye on market conditions.

More attention is being paid to management efficiency, worker incentives, profitability and price setting. The prime goals are quality and quantity satisfaction of consumer demand. One of the built-in virtues of the new system is that it encourages resourcefulness, initiative and independent thinking by staff and management.

The fact that the new planning system relates to supply and demand more directly and recognizes profit as an important economic factor in no way signifies that our system of centralized planning is being "reconsidered," that the market is becoming spontaneous or is growing to be a supergovernmental regulator of production.

We do not set our single nationwide plan against local economic initiative. We hold that success is possible only when the national plan is coupled with local independence and flexibility.

The point, therefore, is not less "centralization" in favor of "decentralization," or vice versa. We want to encourage local initiative by giving enterprises more independence and at the same time provide better centralized guidance, which expresses the interests of the whole country. This is the reason we have central ministries to which enterprises are subordinated in many branches of industry, for instance, in shipbuilding and radio engineering.

Our centralized planned economic guidance has its own functions, and they do not include petty patronage or meddling with production and financial problems that a plant itself should solve. These functions do include drafting economically substantiated projects to develop particular sectors of industry and geographic areas, fixing proper ratios for the various industries and parts of the country, selecting critical industrial branches and giving them priority development. These functions also include developing regional industrial complexes, seeing to the optimum use of all available resources and capacities, and shaping a single comprehensive policy with regard to capital investments, material incentive, technical development, manpower resources and statistics.

This year, for instance, the total volume of capital investments is almost 40 billion rubles, with the largest allocations going to agriculture, the chemical industry and allied branches, the light, food and fish industries and for the construction of service enterprises. It is not necessary for us to regulate production and commodity circulation from the top when we have such an important regulating instrument as investment at our disposal.

Efficient and consistent use of market relations, prices, profits, material incentives, direct economic relations and proper accounting will contribute immeasurably to the goals of our centralized state plan.

Another Three Million

by Alexander Vasilenko



Alexander Vasilenko, born in 1919, is a graduate of one of the country's schools of journalism. He has been on the staff of the newspaper Trud *(Labor) since 1962, and is at present assistant editor of its Trade Union Affairs Department.*

Soviet trade union membership has grown by nearly three million farmers in the past six months. Trade union locals have been set up at all 38,000 collective farms.

Over the years the Soviet trade unions have gathered a wealth of experience in management participation, training workers to take a direct part in running their factories and their government. This is experience that the collective farms will find valuable in the drive to boost agricultural production.

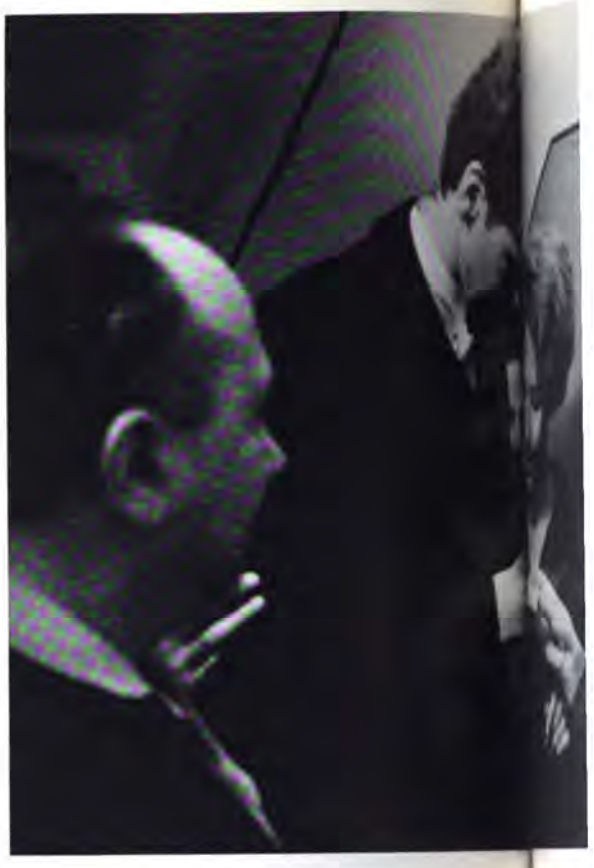
That is the long-range reason for the move. A more immediate reason is that until recently only factory and office workers were entitled to state pensions and disability benefits. For the 18 million people working on collective farms that meant a certain degree of economic inequality, since as a rule, the pensions and disability benefits the collective farms paid to their members were less than those the state paid out to factory and office workers. Furthermore, these payments were not and could not be stable, because they depended on the income netted by the farm, which in turn depended on sundry chance elements.

As national income grew, the government took steps to establish a uniform state pension system. In 1956 larger state pensions were granted to war invalids and the widows and orphans of servicemen on collective farms. Last January a law was passed to pay collective farmers pensions and benefits from a special fund made up of deductions from collective farm income and state budgetary appropriations. So far these pensions and benefits are somewhat smaller than those urban workers get. But they are stable and independent of the ups and downs of farm income.

In October 1964 the government equated agronomists, zootechnicians and other farm specialists as well as farm machine operators and maintenance men with factory and office workers insofar as state pension and disability rights were concerned.

But what do the trade unions have to do with all this?

They have a very direct relation. The trade unions are the sole administrators of the country's social insurance fund for one thing. For another, trade union members are guaranteed double the disability benefits an unaffiliated worker gets. And for a third, the unions serve as the collective bargainer with management. Three very good reasons why everyone concerned is pleased to see this biggest mass organization of the working people increase its membership.





SIBERIA APPLAUDS VAN CLIBURN





SIBERIA gave Van Cliburn an especially warm welcome when he played there during his recent Soviet tour. The Opera House in the industrial and cultural center of Novosibirsk was stormed for tickets, but of the thousands who tried, only 2500 were able to get in.

The concert was televised and included works by Beethoven, Prokofiev, Schumann, Scriabin and Liszt. At the end of the formal program Van Cliburn received long and enthusiastic applause from the audience. He played several encores, and when he finished, the pianist and his mother were showered with flowers.

Van Cliburn told a Novosti Press Agency correspondent that he had taken a fancy to Novosibirsk and its science townlet and also to the man-made Ob Sea near the city. He said the Siberian audience was "wonderful and enthusiastic."

The tour (from June 3 to June 27) included nine recitals: two in Kiev, four in Moscow, one in Novosibirsk and two in Leningrad.

IN THE NEXT ISSUE



Is Soviet art purely traditional? Unaffected by modern trends? Straight-jacketed? Dormant? These are the loaded questions some foreign critics ask and answer at the same time. Four thousand artists supplied their own answer and on a large scale at simultaneous exhibits in nine cities of the Russian Federation. Their 12,000 works of art showed an astonishing diversity of styles and tendencies that testify to the very good health, vigor and originality of Soviet art. The 3,000 best were displayed in Moscow early this year. See the October issue for more about this unusual exhibition.

"It looks more like a flying train than an airliner." "Something like a steamship with wings." These were typical of the press comments on the surprise debut of the *Antaeus* at Le Bourget Air Show in Paris. This mammoth plane can carry 720 passengers or 80 tons of freight at one time. Read about it in the next issue.



Moscow's oldest and youngest theater was founded in 1756 and, like the phoenix, is perpetually rejuvenated—its actors are Moscow University students. Its performances are sold out months in advance. A story in the next issue tells why.





In the mountain country where Kurban Kurbanov lives everyone under a hundred years old is considered a youngster. A ripe and unbelievable 160 himself, Kurbanov is a contemporary of Alexander Pushkin, Abraham Lincoln and Napoleon Bonaparte. He was chopping firewood when our correspondent dropped in for a visit. He has no special formula for longevity. He eats pretty much what he feels like, takes a drop now and then, started smoking at 110 (most smokers have knocked off for good long before then). Kurbanov keeps doctors and statisticians scratching their heads. For his biography see the article Trip to the Nineteenth Century.

Some of the other articles in the October issue are:
Miscarriage of Justice—press debate on a prosecuting attorney's interpretation of the law; Teenage Inventors—about the creations they displayed at the USSR Exhibition of Economic Achievement; Why All the Talk About Standards?—shifting emphasis from quantity to quality; Nose for News—a behind the scenes look at a big newspaper and its writers; Painless Childbirth—about a system of prenatal preparation of expectant mothers; How Diamonds Are Formed—a bold hypothesis.

NOVOSTI PRESS AGENCY

SOVIET LIFE

Transatlantic Debate Soviet young people give their answers to a Gallup Poll of young Americans.

One Per Cent, What It Means About local elections, those who vote No and those who do not vote at all.

COMING SOON



MIKHAIL SVETLOV

A GREATHEARTED POET

BY NATALYA LAGINA

HE CLAIMED to be a very happy man. Asked for supporting evidence, he would say, "I know when I'm gone, people will miss me." And this, he added, meant that he had not been just a passer-by on this earth of ours, but a person who had tried to share a little of the truth he had learned with his fellow men. "I was not a microbe but a man, with every fiber of my being reaching to be part of humanity."

This was the declaration of Mikhail Svetlov, a greatly loved Soviet poet who died last September.

He was born in 1903 in the Ukraine, a land of heartfelt songs. He heard these songs in his home, in his father's small shop and at the photographer's studio where he was apprenticed after finishing school. In October 1917 his first poem was published in an army paper, and to the strains of revolutionary songs he went off to the Civil War to defend the young republic. On the battlefield he realized that song was as important to man as the air he breathes. The soldier's campaigns, love, a philosophy of life, the press of youth, the rhythm of the times, the spirit of the nation could all be conveyed in song. Song and poetry became his world.

Svetlov's first book of verse was published in 1922, his last in 1965. These years spanned a long and active career. After contributing to a youth newspaper, he joined the *rabfak*, one of the early Soviet schools for adults, then went on to study at the Brusov Literary Institute. As a war correspondent he marched as far as Berlin with the Soviet Army. His friends said he cut the most hopeless-looking civilian figure in the army. But the men he was with found him a good and trustworthy comrade.

There is a story about Svetlov reading his poems to the soldiers in a dugout near Moscow. The enemy, bombing fiercely, was pressing toward the Soviet capital. One of the poems was about an Italian lad who wonders why he is fighting on foreign soil. Lost in the reading, the men paid no attention to the enemy air raid. The poet called them back to reality. "I just realized that my poem is a little longish," he said, with a twinkle in his eye.

Svetlov also wrote several plays, among them *The Fairy Tale, Twenty Years After, Brandenburg Gate, Happy Wishes.* His plays, too, were in a way songs, songs of hard-lived but romantic youth, of the first YCLers and the youth of the sixties, of young heroes and those who never lost the enthusiasm and fighting spirit of their youth. His "Song of Kakhovka," about a young girl in an army coat marching through blazing Kakhovka, has been a general favorite for 30 years. "We are peace-loving people, but when danger comes we stand ready to fight," runs the song.

The poet was proud to be a champion of justice and the dignity of labor ("Life of a Poet"), to keep pace with his age, march across his far-flung land, with happiness tied to him by a magic chain ("This Is How I Live").

His ever recurring thought was that people must be made happy. The poet wrote his last volume, *The Hunter's Lodge,* when he knew his days were numbered. But even then this extraordinarily honest person, who never indulged himself in depression, never permitted himself the smallest lie or the least compromise, looked to the future, his hopes pinned on the youth of the sixties, who now inherited the world his generation had built. He told youth he was ready to follow its bidding, that there were still many days ahead of him.

One of his friends, the poet Mark Sobol, recalls that even when he was close to death, Svetlov was ready to take on his frail shoulders all the grievances and ills of his "millions of friends." He was fond of saying that nobility does not need to announce itself and lived by these words himself. No one seemed more surprised than he when he had "tiptoed his way to immortality." And the embarrassment of that realization did not spring from an affected humility but from true wisdom. Poetry is never genuine unless man is woven into its every fiber, he said, and admitted that it is hard to be a poet in the true sense.

He bent his every effort to replenish the ranks of such genuine poets. He called helping young poets his civic duty.

He had a deep affection and regard for young people, talked to them as a friend and colleague, with warmth, humor and consideration, with never the least trace of condescension.

He could be sharply critical too, but his criticism was always well-wishing and constructive, and young poets lent him an attentive ear.

He was a poet who heard the world with a sensitive ear, looked at it with a loving eye. He could therefore coin striking, almost tangible, images. To him the wind could be "as ludicrous as an old man cutting capers at a birthday party." He spoke of a weeping young girl perched on the brink of a poem, of the "disconcerted face of love," of the love and youth of a poet like "two angels on two bicycles." The dawn "knocking away on typewriters" told him of the approach of an ordinary or a special day. A little star "perched on its hind legs" in the open window was his harbinger of night. To protect his beloved from the gritty dust of the road, he put her gently on a dainty cloud, promising her the sky today and all the earth tomorrow.

His generosity had no limits. Lavishly he gave all the joys he had to his readers, kept the griefs to himself. Melancholy notes rarely crept into his verse even when he knew his life was coming to an end.

Mikhail Svetlov's deep-felt, highly personal verse won him a great audience. People listened because he told them the stirring and inspiring story of the builders of a new world.

IMMORTALITY

BY MIKHAIL SVETLOV

Romantic youngsters, drunk with dreams of triumph,
They've pedaled off to continents unknown,
Two angels on two bicycles fast-flying—
My love and youth, and left me all alone.

I start to recapitulate their route
With here a punctured tire and there a fall . . .
But steady! Here's a steep ascent—the date
That made me member of the Komsomol.

Nay, when I sally forth toward the future
I won't discard the past as a thing outworn.
What? Life's a river? No, it's all aquiver
With contradictions, whose main purpose is to warn:

For the generation—not for numeration
Hoard up your minutes as you'd hoard up gold.
But don't convert the sterling of your talent
To jingling coin that soon grows stale and cold.

Don't pay your country back with petty pence,
Don't be a nuisance to her on her course.
And then, when you are past life's barbed wire fence,
A poet's immortality is yours.

Don't fear old age. What's graying hair? Mere trifles.
Plunge headlong in, cut straight across the whirl,
And death will come to you, no grisly idol,
But just a blushing sixteen-year-old girl.

What have you lived for? What have you created?
You can't recall? And yet you haven't lived in vain,
For he who buries you will call you to the rescue—
You and your poetry — again and yet again.

Although no kinsmen, your two spirits are akin.
Such bonds as these survive the grimmest death.
And therefore you must go through thick and thin
And live, live on while able to draw breath.

Yes, greeting the new day with kindly eye,
Cast off your numbness and, discarding fear,
Come out to meet your poetry, your time
Full speed,
Full steam ahead,
In full career!

So reassured once more, dispelling doubt,
I leave the dismal office of old man,
And once again the sweet wench Youth holds out
Her rosy cheek, which if I want to kiss, I can.

ENCOUNTER

BY MIKHAIL SVETLOV

And where are such as you begotten?
Where are you born, Where are you bred?
Your slightest wishes unforgotten,
By nature you were surfeited.

Two eyes much deeper than the ocean,
Of flaming, maiden cheeks a pair,
And deeply stirring the emotion,
Upon your brow a lock of hair.

Of lovely vision you remind me,
But surely you must understand;
Like strings of women queued behind me,
The seasons and the decades stand.

What have they brought? What have they mattered?
What seeds of mem'ry have they sown?
A skin by time extremely tattered,
That's by the name of "comfort" known?

Too many wonders in the world!
I have a dream that will not fade:
To sail with you with sails unfurled,
As if no motors have been made.

To turn back time I'll not aspire,
And not to backwardness I call,
To meet with love is my desire,
To feel its living breath—that's all!

I've met with love before—but only
To me it still remains unknown.
Why love itself should be so lonely
Just love alone, so all alone?

Have done, have done. This subject matter
All sense of sequence seems to scatter,
As if in me somewhere, somehow,
A physicist and heathen row.

But I should have a different feeling,
And speak of other things today,
To you I'm earnestly appealing:
Put on your coat and let's away.

To land of story let us hurry,
Where poets dwell and sing of love,
Where tenderness and kindness tarry,
Which all could use a bit more of.

MAXIMS OF MIKHAIL SVETLOV

The poet would have the reader drink from the clear spring of poetry but, alas, the editor must first wade through it.

* * *

One of Svetlov's admirers, enthralled at meeting him, exclaimed: "My God! A living classic standing before me!" "Look again," smiled Svetlov. "You'll see *rigor mortis* has set in."

* * *

Even gold teeth fall out.

* * *

The dawn looked like a Russian stove in which buns for angels were baking.

* * *

The beginning poet's princess, rhyme, is the mature poet's servant.

* * *

Why don't I like to borrow money? Because you take someone else's for a short time and give back your own for good.

* * *

"You're the teacher's pet," said Svetlov to a colleague who, for the nth time, was roundly criticized in the local newspapers.

* * *

I can live without the necessities of life, but not without its excesses.

* * *

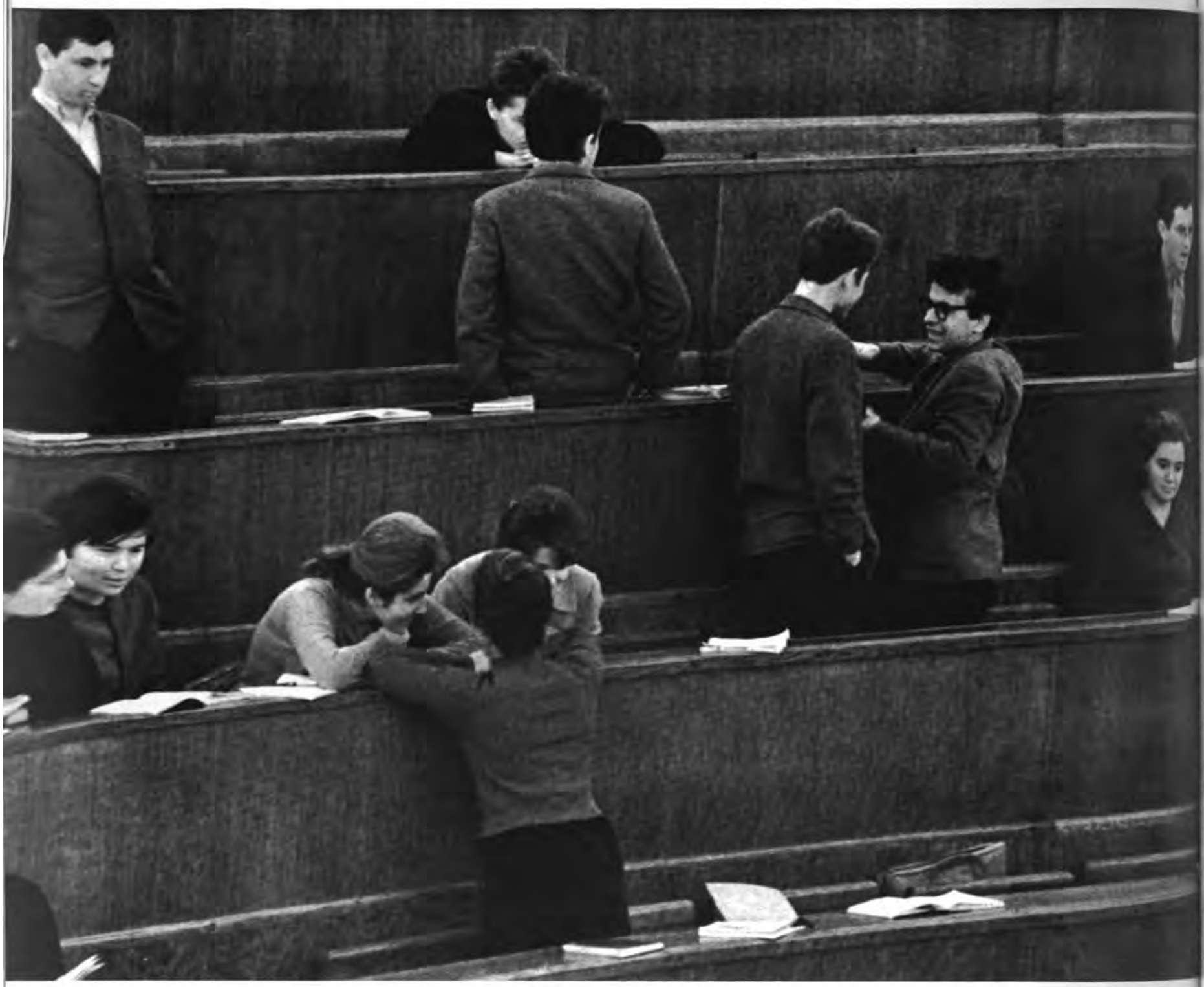
When I cannot write, life seems to me a densely overpopulated desert.

* * *

Toast: Here's to writing in a way that will make us like each other!

* * *

When I see a girl whose appeal is make-up-deep and on whose eyes more paint is caked than Rembrandt used in a lifetime, I feel like saying: "Little girl, go wash your face!" This also applies to the appeal of certain poets.



OUR UNIVERSITIES

BY MIKHAIL PROKOFIEV

DEPUTY MINISTER OF HIGHER AND SPECIALIZED SECONDARY EDUCATION OF THE USSR

THE SOVIET UNION has more than 750 schools of higher education, 40 of them universities. Though small in number, the universities are a most important part of our system of higher education and a vital factor in the country's scientific and cultural growth. The need for training an ever growing number of specialists has enhanced, not diminished, the part played by the universities.

Success in modern research is decided by the caliber of the laboratory staffs. They must be composed of investigators with a solid background in theory and experts who can transmute scientific ideas into instruments and machines. The theorists are trained mostly by the universities in an academic environment which has ties not only with the research laboratory but with industry and agriculture as well.

Typical of the Soviet university is the fine blend of teaching and research. Practice keeps reaffirming the observation Dmitri Mendeleyev made years ago that a specialist can be trained best in a multifaculty higher educational institution. But it is also true that a university where the living flame of scientific creative effort does not burn brightly is not a university worth the name.

The close contact of the different disciplines in the universities gives birth to scientific speculation, generates new approaches and trends. This is a continuing process. It is too early to speak of the application of the forces of gravitation to technology, but the theoretical aspects of the problem are being probed by university investigators in many different disciplines. We have seen the cooperation between mathematicians and economic theorists develop into economic cybernetics, and that between biologists, physicists and mechanics into bionics.

The ties between the universities and the lower schools are direct and traditional. The university sends its graduates to the schools to teach. It helps the teacher by organizing

courses, symposiums and contests. Some universities have schools of their own for children inclined toward one or another field of science. An experiment of great practical importance has been started to improve the work of schools. For this purpose Academicians Andrei Kolmogorov, Isaak Kikoin and Mikhail Lavrentyev have become schoolteachers again.

ENTRANCE EXAMS TO GRADUATION

TO ENTER any school on the college level in the Soviet Union, you must take competitive entrance examinations. Preference is given to men who have completed their term of service in the army, and men and women who have worked for at least two years at a job related to the field in which they wish to specialize, such as work in a hospital before entering a school of medicine. A major reason for this preference is that these applicants are older and more mature. With two years of work behind them, they have some idea of the demands of the profession they are choosing.

Entrance examinations vary in kind and number. But each college is required to examine entering students in at least four subjects and in no more than eight. Except for mathematics and literature, the examinations are oral.

In oral examinations the applicant draws a card with two or three questions. He is usually given half an hour to prepare his answers. After hearing the answers, the examiner may ask additional questions based on material studied in secondary school or material studied especially in preparation for admission to the given college or department. The math exam for admission to the department of mechanico-mathematics at Moscow University, for example, requires math beyond the secondary school course of study.

The written examination in literature consists of a composition on one of three topics, and the applicant is given six hours to complete it. The written math exam usually consists of one difficult problem calling for a knowledge of both geometry and trigonometry. The applicant has six hours to solve it.

Oral examinations in subjects like physics and chemistry consist of two questions and one problem. The solution of the problem must be presented in written form.

The marking system in all Soviet schools, including college, runs from 1 to 5, with 5 standing for Excellent, 4 for Good, 3 for Satisfactory and 2 for Unsatisfactory. The 1 is used only in grade school as a penalty for misbehaving. Zero is not used.

Admission depends on the total number of points the applicant makes in his examination. After the administrators of a given college or department know how many applicants are seeking admission, they determine the passing total of points depending on the number of vacancies. Anyone with less than the passing total is not accepted.

Here is an example. In 1964 the total number of points needed for admission to the biology department of Moscow University was 24. This meant that to be accepted, an applicant could afford only one 4 in his five exams; the rest of his marks had to be 5.

Examinations in Russian language and Russian literature are obligatory, regardless of the college. The other examinations differ with the type of college.

The course of study is four to six years, depending on the college. Teacher training colleges have a four-year course, schools of medicine a six-year course. Classes are held six days a week. There are two vacations a year, a winter vacation of two weeks, beginning the last week in January and ending on February 7, and a summer vacation of from six to ten weeks. Some colleges have a period of summer practical work in the field until July 15. Colleges reopen on September 1 for first-year, second-year and third-year students, and on October 1 for fourth-year and fifth-year students.

Undergraduates take term examinations twice a year, in winter and late spring. The period is about a month long. Before his exams the student takes course credit tests, which are marked "Passed" or "Failed." A student may not take the examinations until he passes his course credit tests. As a rule, a student who gets a 2 in more than one examination is expelled. He may have two to five examinations during an exam period, preceded by a similar number of course credit tests.

In the first year the student's time is about equally divided between theoretical work (lectures, seminars) and practical work (laboratory, field trips, and so on). Later, as he digs deeper into his specialty, he devotes more time to practical work.

The student must turn in a term paper at the end of each half-year of study. The paper is usually related to his specialty. His term papers are stepping stones to a graduation thesis, to which he devotes the major part of his last year of study. Both term papers and the graduation thesis are written under the guidance of a research adviser, whom the student himself chooses. Term papers are marked.

With the successful presentation of his graduation thesis, the student completes his studies and is graduated. The college is required to find him a job in the field for which he has been trained, and the graduate, on his part, is required to work at least two years in this field.

Especially capable or gifted students may, upon graduation, be permitted to do graduate work. Admission to the graduate school is also by examination in a foreign language, a social science and the field of specialization. During his three years of graduate study, the student prepares to write his thesis and takes three examinations, the so-called "minimum for the master's degree": in philosophy, a foreign language and his specialty. Upon the successful defense of his thesis the graduate student is awarded the degree of Master of Science.

This marks the end of formal schooling. The degree of doctor, the highest academic degree, is conferred on the presentation of a thesis that is usually the result of many years of research.

WHAT ARE YOU MOST PROUD OF?

The question was addressed to universities in six Soviet cities in a recent poll conducted by the weekly Nedelya.

The first to answer was Professor Mikhail Nuzhin for the University of Kazan:

Vladimir Lenin studied at Kazan University. A student demonstration was held in our auditorium on December 4, 1887, with Lenin participating. His name has been conferred on the university.

We are also proud of our scholars in the sciences. The eminent mathematician Nikolai Lobachevsky, the chemist Alexander Butlerov, the anatomist and educator Peter Lesgaft, and the psychophysiologist Vladimir Bekhterev were all Kazan graduates as were the astronomer Ivan Simonov, who discovered the Antarctic with Faddei Bellingshausen and Mikhail Lazarev, and the physicist Yevgeni Zavoisky, who discovered paramagnetic resonance.

How many students do we have now? We have 9,000 undergraduates and 300 graduate students. We have a faculty of 1,000 scientists and teachers. Our graduates work all over the country. We train specialists for such modern fields of science and engineering as quantum radiophysics, radio astronomy and bionics.

Professor Fyodor Klement spoke for the University of Tartu:

Our university is quite old. It grew out of the Academia Gustaviana founded in 1632. Attached to the university in the last century was the Professorial Institute that produced a number of great Russian scientists: the surgeon Nikolai Pirogov, the founder of the science of embryology Karl Baer and the historian Gustav Evers. The work of our professors and students take them far beyond the confines of Tartu. Our geological field parties have explored the Crimea, the Urals and the Caucasus, and our botanists compiled the first systematic review of the flora of Russia.

The present scope of our activities is incomparably greater than it ever was. The Estonian Academy of Agriculture grew out of three of our faculties. Our university scientists have coped with more than a thousand weighty scientific problems since 1946.

Academician Ivan Shvets answered the phone in Kiev:

Our university was founded 130 years ago and has grown into an important scientific, educational and cultural center of the Ukraine. The poet Taras Shevchenko carried on revolutionary activity within our walls. It would be difficult to enumerate all the student demonstrations, meetings and revolutionary rallies

which have been held on our campus.

Of which graduates and teachers is our university most proud? There are so many—Academician Otto Shmidt, the illustrious Soviet biochemist Alexei Bakh, the geologist Pavel Tutkovsky, the physiologist and microbiologist Daniel Zabolotny, the composer Nikolai Lysenko, and the writer Maxim Rylsky.

Our university has trained 35,000 specialists during the Soviet period. At present we have 16 departments and 109 chairs offering instruction in 30 specialties. Our faculty includes 14 members and corresponding members of the Academy of Sciences of the Ukrainian Soviet Socialist Republic, 103 professors and Doctors of Science, and 442 assistant professors and Masters of Science.

Professor Valentin Meleshko reported from Voronezh:

Our university will soon be 50 years old. It is now one of the largest in the country. A series of monographs on the theory of operative equations written by our Professors Mark Krasnoselsky and Vladimir Sobolev has been translated into many European languages and has won world recognition. Our physicists have designed unique instruments for microelectronics and nuclear physics. Our chemists jointly with our biologists, physicists and medical men have produced effective preparations for treating cardiovascular diseases.

Professor Kirill Kondratyev spoke from Leningrad:

You do not have the room to list all the alumni we are proud of. Our school was the alma mater of the poet Nikolai Nekrasov, the critic and scholar Nikolai Chernyshevsky, the critic and publicist Dmitri Pisarev, the pioneering psysiologist Ivan Pavlov, the inventor of the radio Alexander Popov, and of the revolutionary Alexander Ulyanov, Lenin's elder brother. Vladimir Ilych Lenin took a course at our law faculty as an extension student in 1891.

Eminent scientists have always lectured at our university. Its name is associated with a number of scientific schools and trends: the mathematics school founded by Pafnuti Chebyshev and the school of theoretical astrophysics created by Academician Victor Ambartsumyan, among others.

Professor Rem Soloukhin, rector of the university in Novosibirsk, our youngest university, laughed when he heard our question:

What can we boast of? Nothing so far. We're too young for that—only five years old.

Our university is located in Novosibirsk, the scientific center of the Siberian Branch of the Academy of Sciences of the USSR. As a matter of fact, we owe our origin to that center. Nearly all of its leading scientists have been teaching our students. Our faculty is comprised of 35 academicians and corresponding members of the Academy of Sciences of the USSR, 40 professors and Doctors of Science and about 200 assistant professors and Masters of Science.

In their third year our students begin working in the laboratories and departments of the Siberian Branch of the USSR Academy of Sciences. It is no accident that more and more of our students are publishing scientific papers.

What are we proud of? Our future, mostly!

HERE COMES THE PROFESSOR

BY ANATOLI MAKAROV

IF LIFE, generally, is jam-packed with those eternal problems, student life is even more so. How vital and all-consuming these problems are, and how contradictory! Every new student generation goes through them, just as all teenagers go through the stage of moonsick puppy love. And there is no forestalling them any more than you can that teenage puppy love.

Should a student have to attend lectures nowadays? Certainly a problem, at least for Soviet students. The young partisans of radical reform vociferously argue the advantages of working "on your own" and lambast their orthodox-minded fellow students, who hold to the traditional and, of course, "obsolete" teaching methods. But as the months pass, the problem vanishes of its own accord, without even filling any heart with that vainglorious glow of discovering a truth supreme. The categoric radicals and timid conservatives are no longer there. This all means that those unforgettable lectures, which so often spark like bundles of firecrackers, which form the prime content of student life, which are so eagerly looked forward to, and which subsequently spring into such bold relief in the mind at the very mention of the word "university," have begun. They are the quintessence of the great meaning contained in campus life. They spell culture, a broad outlook, the ability to think aloud, as it were. And what a magnetic appeal they have for young minds.

What's more, what we have here is a "show." Muscovites have called the Maly Theater a "second university." But with equal right the university could be called a "second Maly."

There have been university lectures, chroniclers say, to which all of Moscow flocked. And today Moscow continues to flock—to this my colleagues will bear witness—although ours are much different times and these vaulted university halls are not the only precincts from which the word of enlightenment rings out.

I will not tell you who this is lecturing today, because hundreds of graduates and undergraduates will immediately cite their own favorite lecturers, past and present. All I will says is: Here comes the professor. Those who have heard him will know whom I mean, and those who haven't may substitute their own choice. This is the memorable lecturer of everyone's university years.

Pushkin is the topic. Though this is far from the first year that our professor has lectured on Pushkin, it might just as easily be. Not that he is unsure of himself. Not at all. He radiates that sheer delight of a person who is introducing others for the first time to Pushkin's *Eugene Onegin* and *Boris Godunov*. He talks with enormous affection about Pushkin, with the wonderment of one who has drawn first prize in a lottery. He presents Pushkin as a living personality whose every quirk and foible are familiar to him. This is no iconoclastic blast. Pushkin himself seems to speak. Neither anecdote nor sidelight will topple him off the pedestal he stands on by right. On the contrary, they show him as a man of flesh and blood. There is no relation to that pedantry which so glibly desiccates everything in the world, Pushkin included.

This is avid, thought-provoking, ironic, sarcastic, even downright angry, scrutiny. The professor does not roll out an address in sonorous tones from his pulpit. He seems to be searching for the answers to the hundreds of problems that trouble reader and student and that perhaps troubled Pushkin himself.

The students hardly jot anything down. This is a lecture that cannot be taken down in shorthand. It has to be understood in full, to be listened to with every sense. It is a "show" that will be remembered, that will leave its imprint on both mind and heart.

What were we told today? That Pushkin, for instance, had started a second poem of the same length as *Eugene Onegin*, that he had shelved it and returned to it later to create *The Bronze Horesman?* Or that in Pushkin's lifetime critics had acclaimed Benediktov Russia's sovereign poet? There are facts like that by the bushelful that the student will have to know for his exams. But is that all? What really counts is that at this lecture the students glimpsed Pushkin's genius and probed into the very substance of poetry. This lecture will help the young man or woman through more than one of life's examinations.

Such lectures as these have their continuation, at times unaccountable. I remember how during the war in the brief breaks for a smoke that were as short as the flash of a cigarette lighter, we recited Pushkin to one another. We felt we couldn't dispense with him, with that same Pushkin to whom we had been introduced first in childhood and again at the university.

The professor takes up a volume with numerous bookmarks. He has no use for truncated quotations. He reads poems *in toto*. And his reading is itself a magnificent interpretation of Pushkin as a poet. The professor really needs the volume only as a prompter. He knows Pushkin by heart.

This is poetry for the commonweal. And at lectures like these it is—no, not studied—imbibed with every nerve ending. This is a lecture at which one learns to be a citizen in the full meaning of the word, at which one acquires a sense of all the good the world contains.

When the bell rings, there is no great sigh of relief, no stamping of feet to get rid of those "pins and needles." There is opening night applause, a first night that happens every week.

KALEIDOSCOPE OF STUDENT LIFE















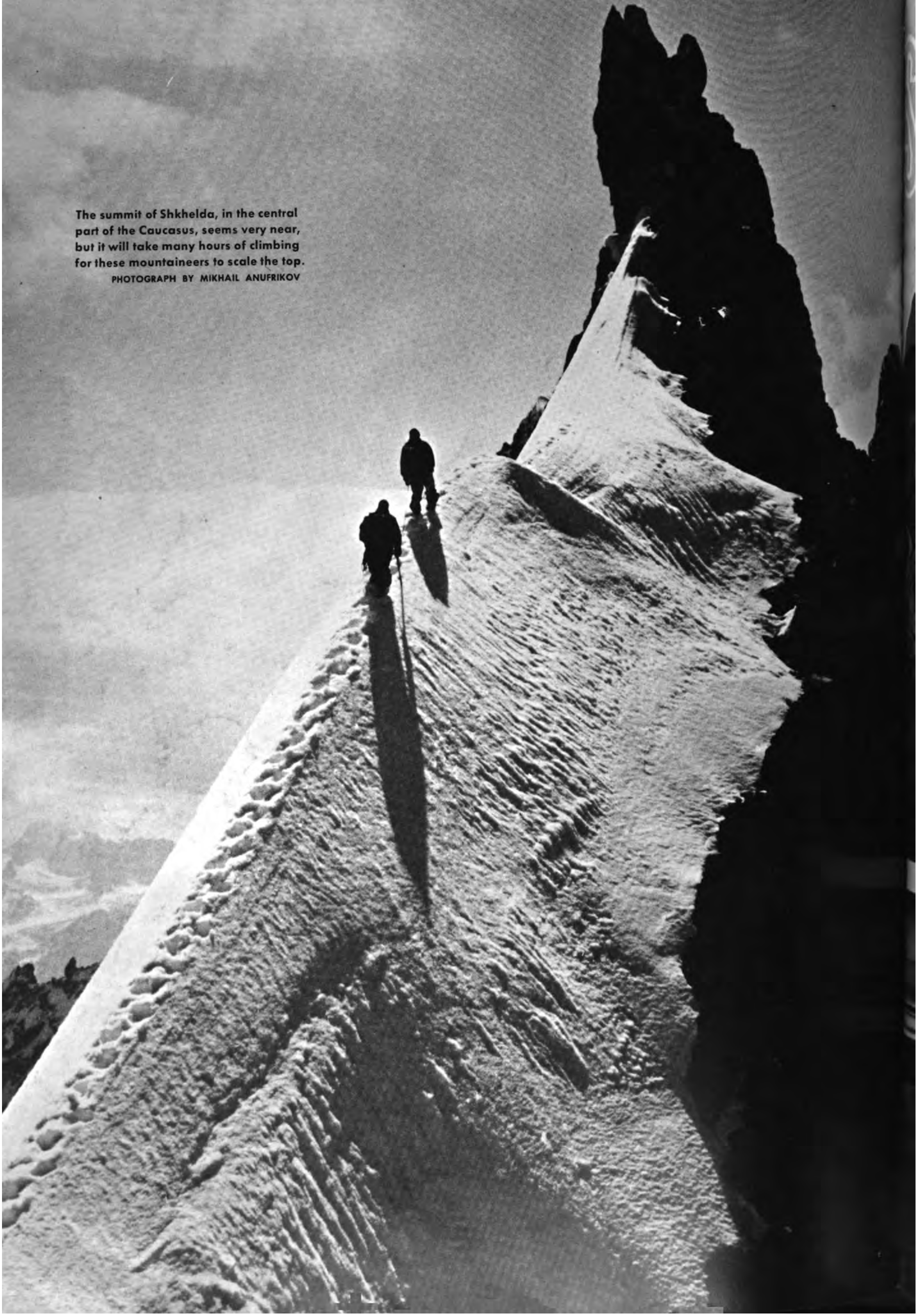












The summit of Shkhelda, in the central part of the Caucasus, seems very near, but it will take many hours of climbing for these mountaineers to scale the top.

PHOTOGRAPH BY MIKHAIL ANUFRIKOV

SOVIET LIFE

DOCTOR'S DISCOVERY

MISCARRIAGE OF JUSTICE

UNIVERSITY OF MINNESOTA
SEP 23 1965
LIBRARY

October 1965 • 35 cents

NEW TRENDS IN ART

PAGES 28-35

KIRILL KONDRASHIN ON CONDUCTING















BY VICTOR BUKHANOV



)N DUCTING is an enigmatic business," Rimsky-Korsakov once said. And so it ıed to me.

ıt it is the sweet curse of the journalist ut every truth to the test. Like the child, ıust convince himself that fire really burns that water is wet.

very day for a whole week I attended the arsals of the Moscow Philharmonic Sym- ıy Orchestra, trying to penetrate the mys- of the conductor's art.

took a seat behind Kirill Kondrashin, ated his gestures in my head and listened is comments without understanding. The essional feels at home in this sea of tech- lities; the layman gets lost in it.

gain and again I had the feeling that the violins were not following the conduc- that the orchestra could do just as well out him, and that the whole procedure cked of black magic.

was then that I walked over to Kondra- and, aware that I was committing sacri- , asked him to let me take his place on conductor's stand.

nticipating some fun, the musicians took time than usual settling into their chairs. ıler's Ninth Symphony was being re- sed. I waved the baton and . . . the music owed my hands. Not only that, it stuck to n. I began to flounder. The tempo was ng, like a record played at shifting speeds. as too much for me. I let my hands drop. ıd discovered that fire burned.

Conducting is not really an obscure busi- ," Kondrashin assured me. "It's just that oesn't have the solid technical foundation other musical specialties. Books on con- ting deal mostly with techniques of the t, the bare essentials of the art. And yet know outstanding conductors with 'poor ds.'

This is no revelation of the mysteries of ducting," he continued, "but I do feel that conductor must be a very well-organized vidual with larger than average powers ssociation. There also needs to be a cer- hypnotic affinity between the orchestra the conductor, perfect teamwork, an un- standing between them, and between them the public, if the rendition is to have lity."

he conductor is 51 years old. His grand- er was a serf musician, and his father and her played in Koussevitsky's orchestra. mother was the first woman to meet the h standards required to play in the or- stra of the Bolshoi Theater.

Kondrashin began taking piano lessons at He accompanied his parents to rehearsals e there was no one to look after him at ıe. so that his childhood brimmed over ı music.

After graduating from the conservatory, he le his debut 30 years ago conducting *dame Butterfly*, an opera he later directed Leningrad, Moscow and Chicago.

le received honorable mention at the first SR Conductors' Contest; that earned him y a modest distinction. But since then his r has been steadily rising. Before 1955 he ıducted chiefly at the opera, then worked a touring orchestra conductor, invigorat- several of the regional symphony or- stras, among them the Gorky Philharmonic. Kondrashin was conducting the Moscow ilharmonic when Van Cliburn scored his sational success at the Tchaikovsky Com- ition in 1958. The million-disc release of haikovsky's First Piano Concerto, as well his tour of the United States—the first viet guest conductor to appear in that coun- —brought Kondrashin into the interna- nal limelight. *(Continued on page 2)*

PHOTOGRAPHS BY 'SEVOLOD TARASEVICH

SOLOISTS TO COME WITH THE MOSCOW PHILHARMONIC

Violinists David and Igor Oistrakh, cellist Mstislav Rostropovich and soprano Galina Vishnevskaya will be touring the United States with the Moscow Philharmonic Orchestra.

DAVID OISTRAKH's name is associated with a whole epoch of violin virtuosity. When he won first prize at the Ysaÿe Contest in Brussels in 1937, the noted Jacques Tibet predicted that the young violinist would one day be acclaimed internationally. The prediction was accurate. Since then Oistrakh has played everything written for the violin, and in almost every country.

At the height of his fame, he still works as hard as ever. Renoir's aphorism: "If you have a hundred thousand franc's worth of skill, then buy an additional five sous' worth," might well have been said of Oistrakh.

He also teaches at the conservatory and has for the past 30 years. "My teaching," he says "did much to mature my playing."

IGOR OISTRAKH will play at several of the American concerts with his famous father. These duo performances always amaze and delight audiences, the two violins blend so perfectly.

Igor has not only inherited his father's name but his superb musical talent as well. His repertory is wide, ranging from Bach, Mozart, Brahms and Tchaikovsky to Ravel, Debussy, Prokofiev and Khachaturyan.

The younger Oistrakh is an artist of the first magnitude. Though the critics may have stretched a point in calling him another Paganini, he is a violinist of stature who has by no means reached his peak.





GALINA VISHNEVSKAYA, a soprano, sings with the Bolshoi Opera. She was a Leningrad operetta star for some years and subsequently appeared on the vaudeville stage. In 1949 she met the noted voice teacher Vera Garina, who perceived immediately that her new pupil showed great operatic promise. After three years of study, Vishnevskaya was asked to join the Bolshoi company, where she has won larger audiences with each new role: as Leonora in Fidelio, *Cio-Cio-San in* Madame Butterfly, *Tatyana in* Eugene Onegin, *Cherubino in* The Marriage of Figaro, *Aida and finally as Natasha Rostova in Prokofiev's operatic version of* War and Peace.

She is married to the cellist Mstislav Rostropovich.

Galina Vishnevskaya has sung in Czechoslovakia, Yugoslavia, England and Canada. Howard Taubman of The New York Times *called her voice the best propaganda that the Soviet Union could export. American critics unanimously applauded her gifts. An extraordinary voice, they said, that combined great feeling and power.*

MSTISLAV ROSTROPOVICH, 38, was born in Baku into a family of musicians. He made unbelievable progress as a student, graduating from the Moscow Conservatory in three years, and at 19 had his name chiseled on the school's marble board of honor.

The cellist's career got off to an auspicious start playing sonatas with Svyatoslav Rikhter and trios with the pianist Emil Gilels and the violinist Leonid Kogan.

Rostropovich competed in four international contests in the five years following the war, winning first place each time. He has proved himself a versatile and superbly gifted musician. He also plays the piano and has demonstrated his talent for composing.

His repertory embraces everything written for the cello. He plays the concertos of Bach, Tartini, Haydn, Dvořák, Saint-Saëns and his own difficult pieces with equal brilliance.

Writing about Rostropovich, Dmitri Shostakovich said: "He is a rarely gifted musician. His performances are always probing, a reaching for the highest artistic goals. One is gripped by his command. He plays with such fervent conviction that he persuades you his is the only possible interpretation."

Mstislav Rostropovich last year won the Lenin Prize, the highest award conferred on Soviet artists.

TO TOUR THE U. S.



MARINA MDIVANI's forthcoming tour will give American music lovers another opportunity to hear this gifted pianist. She was the first Soviet woman pianist to tour the United States.

Her virtuosity drew superlatives from critics. Miles Kastendieck wrote that Mdivani could challenge any of the world's women pianists and predicted greatness for her. Louis Biancolli of the New York World Telegram *said she demonstrated a maturity, force and breadth of musical vision remarkable for a person her age and added that her performance was distinguished for its clarity, feeling and beauty.*

Marina Mdivani was born in Tbilisi, the capital of Georgia, in 1936. At 19 she graduated from the Central Music School attached to the Tbilisi Conservatory and then entered the Moscow Conservatory, where she studied with Professor Yakov Milstein and then with Emil Gilels.

In 1961 Marina won first prize at the Marguerite Long and Jacques Thibaud contest in Paris and a year later fourth prize at the Second International Tchaikovsky Contest in Moscow.

American listeners will find that Mdivani's playing has been nearing the greatness which critic Kastendieck predicted for her.

NIKOLAI PETROV knew fame early, at 19, when he won second prize in the piano contest held at Fort Worth, Texas, in the fall of 1962. A year and a half later he won second prize at the Queen Elizabeth Contest in Brussels.

A graduate of the Central Music School of the Moscow Conservatory, Petrov is now in his third year at the conservatory, studying with the famous pianist Professor Yakov Zak.

He shows an extraordinary artistic maturity. His unquestionable talent is developing not simply in breadth but in depth, his earlier preoccupation with technical mastery having given way to thoughtful assimilation of the music he plays, to a searching for individual interpretation.

Petrov is at his best in the compositions of Sergei Prokofiev, the sonatas of Samuel Barber, and the preludes, chorals and fugues of the young Soviet composer Vyacheslav Ovchinnikov.



(Continued from page 1)

He has also conducted in Czechoslovakia, Yugoslavia, Hungary, Italy, France, Chile, Uruguay and Rumania.

"You seem to have had unusually smooth sailing," I remarked. "You've had no setbacks, no crises?"

"No artist can develop without groping, stumbling and breaking through barriers," Kondrashin replied. "Ten years ago I went through something of a crisis when I broke with the opera. The singer worship of the opera was having a bad effect on me; it was putting a brake on my creative efforts. I knew that I was not reaching the company, and their resistance aggravated my own failure. I did much better when I began working with symphony orchestras."

Five years ago Kirill Kondrashin took over the orchestra of the Moscow Philharmonic Society; it had been organized just after the Second World War. The partnership proved a felicitous one. Kondrashin gave the orchestra a creative lift. He had come to the orchestra a mature artist and conductor with a carefully thought-out program of work and his own ideas.

Critics praise him for his crisp, modern interpretations and the ease and brilliance of his readings of notoriously difficult scores.

Kondrashin is drawn to the dramatic, to music which portrays social upheavals and has an undercurrent of strong emotion and conflict. He likes Shostakovich's symphonies. Opinion has it that Kondrashin reached the apex of his career at the première of the Soviet composer's Fourth Symphony. His reading, although faithful, conjured up a scintillating host of connotations and moods.

"Many people in the arts attribute their choice of vocation to some early drive," I remarked. "Was there anything like that in your life?"

"My parents pioneered an unusual project —an orchestra without a conductor. It was in 1922 that this orchestra, the Persymfans, was organized, with some fine musicians from other orchestras. They wanted to play without a 'dictator' imposing his will, trying in this way to adapt themselves to the new communist relationships.

"My parents took me with them to the morning rehearsals. They were long and chaotic, and there was a good deal of bickering. This orchestra was at its best when it played modern music that had no solidly established canons—works by Bartok, Stravinsky and Hindemith—but it fared badly with the classics. Every bar became a point for argument. An eight-day week would not have been long enough to settle the differences.

"Later I thought back to that orchestra. Obviously the whole thing was doomed to failure. Communism did not mean that each individual asserts himself at the expense of the group or of his neighbor.

"That whole affair may, as you say, have awakened my urge to become a conductor. I realized very early that an orchestra must be welded together by a single will focused in the conductor."

"What role do you then assign to the individual player?"

"A good musician must be capable of quickly grasping the conductor's idea and highlighting it by his own personality. To a certain extent the orchestra player should be a chameleon, but he should change his color creatively rather than mechanically. When the conductor's interpretation lacks conviction, discord is the result, for each of the hundred players of an orchestra has his own understanding of the score.

"An orchestra's flexibility is its asset. I am satisfied with my orchestra. Each time it plays under our distinguished guest conductors, it sounds different. This speaks well for its broadness of range. When it comes to symphony orchestras, I am for polygamy."

"Following David Oistrakh's example, leading concert artists now ask to play with you. What is your feeling about that?" I asked.

"At first being praised for an accompaniment annoyed me. Accompanying others is, after all, not the highest expression of an artist's own individuality. Now I take it more coolly, knowing perhaps that nobody thinks that accompaniment is my sole province."

"Do you remain yourself regardless of whom you accompany?"

"If I did, I would be rendering the soloist a very poor service. The will of the soloist prompts my conducting, especially if he is as brilliant an artist as Rikhter, Gilels or Oistrakh."

I continued my conversation with Kirill Kondrashin in the dressing room of the Moscow Conservatory. His orchestra was giving its last concert before leaving for the United States. He was not wearing the gray wool shirt he had worn at rehearsals; now he was in formal dress.

"What do you think about when you conduct the orchestra?" I asked. "Can the conductor wander away from the score to wherever his thoughts take him?"

"That would be murdering the music. Every conductor has his own associations he brings to the study of a score, and the kaleidoscope of these associations shapes his interpretation. What he must do is grasp why the composer wrote his score just the way he did and no other.

"I like listening to tape recordings of my conducting. Wherever I sense a lack of depth, I know that it was my own emotional inadequacy that failed the orchestra. What I try to do then is revise my associations, look for different images."

"What composers especially appeal to you?"

"That depends on the tasks I set myself and my orchestra at a given moment. A few years ago I wanted to get to the heart of Ravel, Mahler, Brahms and Mozart. Now I am trying to find the essence of Beethoven's Ninth.

"It is my belief that a conductor should not cling to one special style or devote a lifetime to a single composer."

My last question: "What sort of audience do you like?"

"Varied and responsive. Paradoxical as it may seem, Moscow is where I find it hardest to conduct. Moscow audiences have been spoiled by celebrities, they want sensations. I like playing to audiences of workers and students. We have given any number of concerts at big factories, at Moscow University and at the Power Institute."

His audience was waiting for him, so I said good-by and wished Kondrashin and his orchestra every success in the United States.

Yevgeni Mravinsky, one of our leading conductors, wrote that with the international situation so tense and uncertain, it is doubly important that science and culture speak for peace. Kondrashin and his orchestra will be our cultural envoys to the United States. It is our hope that their music for peace will find an answering echo in American hearts.

ONE OF THE GREAT BORIS GODUNOVS



BY NATALYA LAGINA

TEN YEARS AGO Ivan Petrov made his first appearance at the Paris Opera in Modeste Mussorgsky's *Boris Godunov*. Writing about him in the newspaper *Le Monde*, the well-known critic René Dumesnil said: "I have heard well over 20 singers in the role of Boris, but I remember only six or so. None of them surpassed Ivan Petrov. He is that uncommon artist—not only a singer, but a tragedian. No one has ever played the role with greater simplicity, greater naturalness."

The Grand Opera Artists' Association elected the then 34-year-old singer an honorary member.

It was not his only distinction. He took first prize for his singing at the World Youth Festivals in Prague and Budapest in 1947 and 1949, made a triumphant debut at the "Paris Spring" in 1950 and has been applauded in Denmark, Sweden, Norway, the Federal Republic of Germany, Britain, Japan, Rumania and many other countries. This celebrated Soviet basso will now be heard in the United States.

Even the most exacting critics have paid tribute to Petrov's talent. "With a faultless command of his voice he can realize all his artistic intentions, convey every shade of feeling and disclose the content of the subtlest phrases," said *Paese Sera* about Petrov's guest performances in Italy last fall. Benjamin Britten remarked that the singer had drawn his heroes on spare, restrained lines without the slightest affectation, that the images he conjured up on the stage of the Bolshoi Theater had great plasticity and depth, and his every role was memorable for its drama, originality and rich psychological nuances.

The same could be said of his rendition of Prince Galitsky *(Prince Igor)*, Basilio *(The Barber of Seville)*, Dosifei *(Khovantchina)*, Bestuzhev *(The Decembrists)*, and of the whole gallery of opera portraits he has created in his long years at the Bolshoi.

How did his career begin?

From Volleyball to Opera

"Nothing interesting about that," said Petrov. "My story is not at all exciting. There were no extraordinary events, really."

He had never thought of becoming a singer. He was born in the Siberian town of Irkutsk in 1920. His father worked for the railroad. In 1936 the family moved to Moscow. As a youth his major interest was sports. When he finished school he joined the volleyball team of the Locomotive Sports Society and won a measure of fame.

Singing interested him hardly at all. But chance took a hand when his fellow students learned that he sang Russian songs fairly well. Men were needed for the chorus, and Ivan could not argue himself out of joining. He began to sing at amateur concerts and gradually came to like it.

The well-known tenor Sergei Yudin heard him on one occasion and advised him to study music seriously. Petrov entered the Moscow Alexander Glazunov Theater and Music School in 1938. After graduation he took part in concerts for the soldiers at the front in the first months of the Second World War. It was then, too, that he made his first long tour of Central Asia with the USSR State Symphony Orchestra.

In the spring of 1943 Petrov was accepted by the Bolshoi Theater after a competitive examination. Though he made his debut in small roles (in *The Demon* and *Tosca*), the talented singer soon attracted notice. His rich voice, his rare musicianship and gifted acting, as well as his singleness of purpose and inability to rest content with what he had achieved soon won him all the major bass roles of the Russian and West European classical operas.

From King René to Czar Boris

Petrov has the rare ability to infuse fresh life into arias and roles which seem to have been worn out. It is this quality that distinguishes the creator from the mere performer. His work is always creative, always a quest prompted by the best traditions of the Russian school of music. The stern, tragic characters suit Petrov best. It is in these roles that he achieves the greatest conviction, strength and polish. His first full-length operatic portrait of that kind was King René in Tchaikovsky's *Iolanthe*. Then came Nilakantha *(Lakmé)*, Dosifei and Ivan Susanin. The singer coped brilliantly, too, with the difficult role of Russlan in Mikhail Glinka's *Russlan and Ludmila*. Finally came Boris Godunov, which requires a gift like Petrov's for creating a tragic and contradictory character, both in the singing and the acting. The solicitous and tender father, the very wise and cunning czar, the murderer of the innocent czarevich Dmitri, a man tormented by doubt and conscience—this is Petrov's Boris. We see him striding with crown and scepter, solemn and magnificent, from the Cathedral of the Assumption. But even then, amid these festive crowds, he is plagued by forebodings.

Petrov's version is unique for its disclosure of so many aspects of the czar's character. This singer is both more lyrical and more philosophical than many of his predecessors in the role. It is his personal charm, perhaps, that emphasizes the tragedy.

We see Boris in the Kremlin Palace. The singer allows his voice to rise evenly and serenely in the famous aria where the czar reflects on his reign and the destiny of his country. The preparation for the tragic culmination—Boris driven mad by the memory of the murdered child—is complete. As always, the artist is moved by the single desire to convey the composer's idea as fully as possible, and this he does magnificently. To the last feeble motion of his hand, to the last moan, this is the tragedy of a strong man from whom the people have turned away.

Ivan Petrov has appeared in about 30 operatic roles at the Bolshoi Theater. Aside from this, he gives frequent recitals. His repertory includes Russian and foreign classics, folk songs, old Russian romances and the works of Soviet composers. He also sings with the USSR State Symphony Orchestra and the Radio and TV Symphony Orchestra. He has sung the bass parts in the "Hymn to Joy" from Beethoven's Ninth Symphony, in the requiems of Mozart and Verdi, in the cantatas and oratorios of Sergei Prokofiev, Dmitri Shostakovich and Yuri Shaporin.

Personally Petrov is a modest man of great charm, a good father and good friend. "The four of us" he is fond of saying when he talks of his family. "The four" includes his daughters Alyona and Galina, and his wife Lyalya, a Bolshoi Theater ballerina. "The four" may be seen at the art galleries where Ivan Petrov, an art lover, so often takes them. "The four" also go fishing together, for Petrov is an ardent angler.

At 45 the singer has achieved a distinction of which he may justly be proud. But he is never satisfied with himself, and that too is in character. Many great things may still be expected of Ivan Petrov.

SOVIET LIFE

OCTOBER 1965 No. 10 (109)

The magazine SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* AMERICA *in the Soviet Union.*



Front Cover: Two visitors to the Soviet Russia Exhibition which opened in Moscow early this year. *See the story on page 28.*

PICTURE CREDITS

Vsevolod Tarasevich Cover I-1; Leon Dubelt 3; Dmitri Ukhtomsky 8-11; Igor Vinogradov 14-17; 63 - Cover III; Igor Sychov 17; Yuri Shalamov 21; Yuri Somov 22-23; Nadezhda Peida 28-30, 34; Alexei Bushkin 30-33, 35; Valeri Rozhdestvensky 45; Alexander Mokletsov 48-49; Victor Akhlomov 52-53; Fyodor Zimbel 54-55; Valeri Shustov and Yuri Abramochkin 58-59; Nikolai Rakhmanov Cover IV.

Editor in Chief
(Moscow Editorial Board): Yuri S. Fantalov, APN, Pushkin Sq. 2, Moscow, USSR.

Editor
(Washington Editorial Board): Alexei S. Belokon, 1706 18th St., N.W., Washington, D.C., 20009.

Managing Editor
(Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director
(Moscow Editorial Board): Marina T. Zabolotskaya, APN, Pushkin Sq. 2, Moscow, USSR.

NOVOSTI PRESS AGENCY — MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

Statement required by Public Law 87-865 (39 U.S. Code 4369, Section 132.6 of the Postal Manual) showing the ownership, management and circulation of USSR Illustrated Monthly, published in Washington, D. C., for October 1965.

1. The names and addresses of the publisher, editor, managing editor and business manager are:

Publisher: The Embassy of the Union of Soviet Socialist Republics in the USA, 1125 16th St., N.W., Washington, D. C. 20036.

Editor in Chief (Moscow Editorial Board): Yuri S. Fantalov, APN Pushkins Sq. 2, Moscow, USSR.

Editor (Washington Editorial Board): Alexei S. Belokon, 1706 18th St., N.W., Washington, D. C. 20009.

2. The owner is: The Embassy of the Union of Soviet Socialist Republics in the USA, 1125 16th St., N.W., Washington, D. C. 20036.

3. The known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages or other securities are: None.

4. The average number of copies of each issue of this publication sold or distributed, through the mail or otherwise, during the 12 months preceding the date shown above was 62,000.

Page

The Young Soviet Poets (Our Trends) by Lev Anninsky 5

SOVIET PEOPLE

Dr. Fyodorov's Discovery by Anatoli Agranovsky 25
Cosmonaut, Cosmonette, Cosmotot 48
A Visit to the Nineteenth Century by Vyacheslav Sterin 54
Teenage Inventors by Yuri Dokuchayev 63

SOVIET DEMOCRACY

Miscarriage of Justice 40
The Soviet of Nationalities by Levon Grigoryan 46

INTERNATIONAL CONTACTS

Kirill Kondrashin on Conducting by Victor Bukhanov 1
Soloists to Come with the Moscow Philharmonic 1
To Tour the U.S. 2
The USSR, the UN and Social and Economic Cooperation by Vladimir Shkunayev 6
Water Desalting: A Field for Cooperation by Vasili Yemelyanov 57

ECONOMY AND SCIENCE

Minsk Reborn 8
Why All the Talk About Standards? by Vasili Boitsov 12
New Foods from the Ocean Interview with Lev Zenkevich 24
Painless Childbirth by Yuri Zmanovsky 36
Adzhin-Tepe Treasures 37
How Diamonds Are Formed by Nikolai Chersky 43
Economic Planning and Management: Methods and Approaches by Victor Belkin 50
AN-22, Antaeus 52

LITERATURE AND THE ARTS

One of the Great Boris Godunovs by Natalya Lagina 3
Moscow's Youngest Oldest Theater by Konstantin Telyatnikov 14
New Trends in Art by Alexander Baigushev 28
Sergei Yesenin by Nikolai Bannikov 38
Meyerhold's Offhand Comments by Alexander Gladkov 44

RECREATION AND SPORTS

Tennis' Growing Pains by Vladimir Tseitlin 22
Unusual Things Around Us by Nikolai Rakhmanov Cover IV

MISCELLANEOUS

Russian Books in English 12
Humor 17
Around the Country 18
A Nose for News by Valentin Lyashchenko 20
Children's Corner 20
Letters to the Editor 49
Queries from Readers 56
Photo of the Month 58
Brief Comments 60
Next Issue 61
Learning Russian 62

Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine SOVIET LIFE.

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second-class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Fawcett-Haynes Printing Corporation, Rockville, Md.

THE YOUNG SOVIET POETS

BY LEV ANNINSKY

We talk about our young poets not because the time has again come to lavish concern on them. Budding writers and literary debuts are recorded monthly by publishers with the same imperturbable accuracy that our local Soviets register newborn babies. Statisticswise, the population's natural growth spaces out evenly. And the growth in literary output is just as evenly spaced. Young people write poems and short stories, contribute to magazines, publish books, catch the eye of critics and join the Writers Union. So, again statisticswise, the proportion of young poets is the same as always.

The young Soviet poets tackle new themes and express new moods. This is no prep class for a writers' school. What it marks in concrete historical, not pedagogical, terms is the entrance of a new generation.

Father-son conflict again? Not at all. To oppose 30-year-olds to 50-year-olds is as abstract and absurd as to paint different generations in monochrome. I do not envy my elders, nor do I recognize the right of other generations to envy us. Each generation populates the time ordained for it. And every person must be a decent human being in the conditions of his own time. Man's history is millions of years old, and generation has always followed generation. Continuity is society's cement. We use the word "generation" not to place ourselves in opposition to our elders but because we want them to understand what the young people of today are really like.

New Generations

In 1941 everyone past 16 went off to the front to defend the country. They make up another generation. Boris Slutsky, Yuri Bondarev, Alexander Mazhirov, Yevgeni Vinokurov, Yuri Levitansky and Bulat Okudzhava are only a few of the writers of that generation which came to manhood in the crucible of war. An abrupt, harsh coming of age. The front gave no quarter. And whatever else the writers of that generation talked about, the war was always uppermost. Their characters were deeply etched by this acid test.

Our generation was fashioned by the Twentieth Party Congress and the epoch it initiated. Psychologically, our coming of age was thornier than that of our elder brothers who fought in the war. The poets of the new generation had to grope through a maze of sophistry, generalities and rhetoric before they produced their best lines. Developments reflect their 10 years of searching. They want things spelled out, no generalizations.

Outwardly everything is simple. Yevgeni Yevtushenko, Robert Rozhdestvensky, Vladimir Sokolov and Leonid Zavalnyuk are only four of the many who sprang to the fore in the early fifties. This was the elementary school, so to speak, one that learned directly from Vladimir Mayakovsky, a time of high romanticism and journalistic fervor.

At the close of the fifties came Andrei Voznesensky with his dynamic association-packed poetry, and Vladimir Tsybin who, with his brother-poets, wrote in vivid imagery of "rustic" themes.

By the early sixties the young poets had earned wide recognition. It became the fashion for critics to write about them. Many new names appeared in the poetry anthologies. That "unbound" manner of lyrical fragility pervaded by deep word-root rhyme, considered the hallmark of the young poets in the fifties, was gone and lost, dissolved in a plethora of new manners and styles.

Outwardly, as I said before, everything seemed to be going along smoothly. But this was actually a time of anguished searching.

Work, Social Conscience, Communism

These words are inscribed on the standard of all our poets. An abiding faith in the communist ideal is natural for us. Our problem was how to escape getting bogged down in abstractions. And indeed, the moment the young poets forsook the theme of their hard wartime and postwar childhood—things actually experienced—they became bookish. Train wheels rumbled, the wind whistled in the ear, words thundered forth—and the hero went straight to the future, his feet completely off the ground of reality. Meanwhile the villain appeared as the traditional stereotype, a man who gorged himself on three dinners a day and hoarded all manner of costly goodies.

Voznesenky tried to break out of this unreal element with fanciful, dynamic associations that pulsed with life. So did Tsybin with his dazzling polychrome. They sought a directness and plasticity of expression, the truth and nothing but the truth.

However, didactics, shown the door, sneaked back through the window. "You're philistines," Yevtushenko stigmatized his opponents. The label was back, turned the other way around now. "Me, I am a peasant!" was Tsybin's battle cry. Social purpose again supplanted personal expression. Bookishness reappeared. It had the nine lives of a cat. And a logic.

Reaction to the personality cult was often childishly naïve and misaddressed. It seemed enough to narrow bell-bottomed trousers, go in for reportage instead of the ode and change classical meter for a modern beat. To introduce a true yet abstract slogan in place of a wrong one, also abstract, seemed sufficient.

To help root out survivals of the personality cult, the young poets wrote rhymed editorials they called poetry. They exposed the Stalinists and thereby did their bit, like everybody else. Bookishness came to grips with bookishness. Necessary, but it was only the first step. Poetry had yet to take its next and biggest step to evolve a moral equivalent for the new rung in Soviet society's development.

Searchings

Self-searching is intrinsic to the modern verse of young Soviet poets. "Be yourself!" they cry.

Stanislav Kunyayev depicts the dynamics of the time in rigid, deliberately humdrum prosified verse. Rimma Kazakova arraigns herself before the court of her own taut introspection. Anatoli Peredreyev probes the iron rhythm of the day and age to characterize his hero. Novella Matveyeva strikes the spark of verisimilitude from the collision of abstract notions in witty paradox. Bella Akhmadulina portrays her proud heroine in finely etched, resilient verse. The Kazakh Olzhas Suleimenov is concerned for Asia and the direction of its movement. Naum Korzhavin sermonizes on the roads world history takes. Dmitri Sukharev seeks harmony in nature and man in lovely, lilting verse. Andrei Voznesensky writes discordant poetry in his effort to bridge a cleft world. Yunna Morits speaks in passionate truth-loving verse. Vladimir Kirillov paints in down-to-earth, severe lines the dramatic coming of age of personality. Leonid Ageyev is unruffled and serene in his depiction, done somewhat aloofly, of the daily tenor of life. Alexander Kushner demonstrates a pensive self-sarcasm, while Nikolai Antsiferov bubbles with prankish humor.

The list of names and talents could go on and on. All serve the same deity—man, self-dependent, free and proud, in thought and in action, the builder of a communist society.

We seek truth not in abstract doctrine but in man himself, in his personality, in his morality, in his self-judgments. Otherwise there is no poetry, no art.

Finally, the Future

Another dozen or two names. Quite possible. Another couple of hundred volumes of verse. Fine.

But that is not the point, as I see it. A poet does not write to enable someone else to learn from him and write still better verse. Poetry is not written for poetry's sake, it is written for people. Our young poets have accomplished their main aim. From bookish and abstract heights they have descended to man himself, to a concern with his real inner life, his awareness of self.

Our poetry's calling is to awaken the man in man, to awaken his pride, dignity and honor. There is its value and its meaning for the future.

THE USSR, THE UN AND SOCIAL AND ECONOMIC COOPERATION

BY VLADIMIR SHKUNAYEV
MASTER OF SCIENCE (LAW)
SENIOR SCIENTIFIC WORKER, INSTITUTE OF WORLD ECONOMY AND INTERNATIONAL RELATIONS

WHEN THE UNITED NATIONS emerged from the crucible of the Second World War, the people of every country in the world had reason to look forward to an era of wide-ranging international cooperation. Indeed, the Great Powers agreed not only to preserve peace and security but also to cooperate in economic, social and cultural areas and to work for human rights everywhere.

The Charter of the United Nations is a formal statement of this covenant.

To make that statement a reality did not prove easy, as everyone knows. The road to true international cooperation was not carpeted; it was strewn with the thorns of distrust and suspicion. The results fell far short of the hopes.

We are not going to analyze here the reasons for past failures. It will probably be more useful to look into the future. But to do that we must proceed from the actual current facts.

Today, 20 years after the founding of the UN, can we foresee favorable prospects for international cooperation through the UN on economic and social problems, say?

We are inclined to answer this affirmatively, but with reservations that are legitimate in today's changing world.

Justified Optimism

One very good reason for our optimism is that the general public and sober-minded statesmen all over the world recognize the necessity for peaceful coexistence. This is no far-fetched abstraction, it is literally a matter of life and death in our contemporary nuclear world.

The Soviet Union has been gratified to note the numerical growth in recent years of the advocates of cooperation in international organizations. It is due to the deeper roots taken by the idea of peaceful coexistence and to the liberation of colonial and dependent peoples, which has led to the appearance in the world arena of many young sovereign states. These countries are devoted adherents to the principle of peaceful coexistence. They want to see their own peoples and the peoples of the whole world make economic and social progress. They see international cooperation in these areas as a vital factor in consolidating their own independence.

This growth in the ranks of those who support mutually helpful international relations is good reason for an optimistic answer to the question we posed.

The Soviet Union, consistent champion of peaceful coexistence of states with differing social systems, has been just as insistent that all countries cooperate in solving pressing international problems through the United Nations. We believe that cooperation has to be built on these principles: equality and mutual advantage, no interference in the internal affairs of other countries, no political advantage sought from economic and humanitarian actions.

That is not a new position for the Soviet Union. It is a long-standing element of its foreign policy. The basic principles of the UN Charter for cooperation on social and economic problems were adopted on the initiative of the Soviet Union. Active participation in the UN and its specialized agencies, such as UNESCO, ILO and WHO; financing the technical assistance program of the developing countries and the UN Special Fund for economic development; the promotion of foreign trade —these are the forms Soviet cooperation has taken. The same principles underlie our bilateral economic and cultural relations with foreign countries.

The Criterion: World Progress

When the Soviet Union takes part in the deliberations of any of the UN agencies, its sole criterion is the contribution it can make to the world's economic and social progress. That is why the USSR deemed it its duty to actively help in formulating the principles of assistance to the developing countries, to defend free international trade with due regard to the needs of the countries exporting raw materials, and to participate in investigating the economic consequences of the arms race and the prospects for disarmament.

The USSR helped to formulate UN policy for social emancipation and equal rights for women, to combat discrimination against minority groups, and to work out standards for safeguarding the rights and liberties of the individual and of working people and their organizations.

Everyone will agree that these measures are in the vital interests of all peoples.

An example of the Soviet Union's approach to the UN and its agencies is the ratification of and strict adherence to the conventions the UN, ILO and UNESCO have adopted. They define important aspects of human rights and of working and living conditions, and go on record against discrimination of various kinds. Examples are the conventions prohibiting genocide and forced labor, those defining the political rights of women and the rights of trade unions, those calling for equal pay for equal work, and many others. Unfortunately, these important international conventions have not yet been subscribed to by all countries.

It is sometimes asserted in the West that the Soviet Union cooperates only in those UN agencies, activities and declarations which bring it

political advantage. Such assertions are not true and are contradicted by the facts.

Indeed, does the policy of peaceful coexistence advocated by the Soviet Union bring only the Soviet Union "political advantage"? Does not peaceful coexistence and the principle of participation by states in international organizations, including the UN, on an equal footing bring "political advantage" to all other member countries?

And if these assertions have reference to international cooperation in economic matters, the Soviet Union's record of participation does not show any striving for one-sided "political advantage" there either.

Hardly anyone will seriously suggest that the Soviet Union's assistance in building the Bhilai iron and steel works has influenced the Indian Government's policy in any way. Nor can one seriously suggest that the Soviet Union is deriving any "political advantage" from contributing to the agencies assisting the developing countries under UN auspices. Besides, these agencies are not managed by representatives of the USSR, and moreover, there are fewer representatives of the socialist countries than of the Western Powers on their governing bodies.

The Aim: Equal and Mutually Profitable Cooperation

The Soviet Union does not participate in international organizations whose activity is directed to help exporters of private capital rather than the developing countries as, for instance, the International Bank for Reconstruction and Development, the International Finance Corporation, the International Development Association and the International Monetary Fund.

But the USSR does work actively in such UN agencies as ECOSOC and its regional commissions, the organizations for assisting developing countries, the International Trade and Development Board, the World Postal Union. It believes these organizations do help to promote equal and mutually advantageous international cooperation and are in the interests of the developing countries.

The USSR attaches great importance to how UN funds are used. The Expanded Program of Technical Assistance and the Special Fund are both designated for assistance to developing countries. The UN General Assembly and ECOSOC have repeatedly stated that the chief purpose of the funds is to help develop a national industry in these countries. That policy has the Soviet Union's vigorous support. But less than 10 per cent of the funds for the Expanded Program of Technical Assistance was spent directly for that purpose in recent years, and the Special Fund concentrated on so-called preinvestment activity, in other words, it spent money on investigations and on building roads, ports and electric stations to meet everyday needs.

In our opinion this is mistaken management of the funds and will only harm the interests of the developing countries.

We often read in the Western press and hear from the platforms of international organizations that the reason the funds have so little effect is that they are not nearly large enough. It would, of course, be hard to disagree.

Suffice it to say that in 1964 the resources of both programs came to some 120 million dollars all told—no more than a thousandth part of the money the world spends on armaments. If we had general and complete disarmament and only one per cent of the money saved were turned over to finance the two UN programs, their budgets would jump 10-fold. That is why the true advocates of economic progress for the developing countries are inevitably advocates of general and total disarmament as well.

For the present however—and this should be frankly recognized—the UN agencies with their limited funds have proved powerless to bridge the widening gap between the national per capita incomes of the developing countries and those of the industrially developed countries.

Hopeful Signs

If we turn to international cooperation in the social areas through the UN, we cannot, unfortunately, record any considerable achievements.

Let us take, by way of illustration, one of the more important social questions, the defense of human rights. The Universal Declaration of Human Rights, which the Soviet Union took a most active part in working out, was adopted by the UN General Assembly 17 years ago. But to make the declaration effective, the obligations of the UN member countries to guarantee these human rights and basic freedoms should also have been worked out. This question was placed before the UN in the very first year of its existence. It received the support of the Soviet Union; the solution it proposed accorded with the interests of the peoples. In the debate on the draft pacts covering human rights—there are two: a draft of an international pact covering political and civil rights, and another covering economic, social and cultural rights—the USSR actively participated in formulating the right of peoples to self-determination, the right to work, to social security and other such rights.

Unfortunately these draft pacts have not yet been approved. And this is 1965, 20 years after the founding of the United Nations.

It was only in 1962 that a group of experts, invited by decision of the UN General Assembly, published its long overdue report on the economic and social consequences—in point of fact, the advantages—of disarmament. It is hardly necessary to show that this useful and important step could have been taken much earlier. The report had the closest attention of the world public. Many statesmen and businessmen in the West cannot fail to heed the conclusions drawn.

The very fact that recommendations arrived at by the joint labors of experts from various countries shows that possibilities do exist for beneficial cooperation between countries with different political systems, the USA and the USSR among them.

Other examples too may be cited to show that effective cooperation on social questions is possible. The declaration on the abolition of racial discrimination, unanimously passed by the General Assembly in December 1963; the preparation of a draft international convention on that question; UNESCO's elaboration of a convention to combat discrimination in education and the ILO's convention against discrimination in the domain of labor—both adopted with the support of the USSR, the USA, Britain, France and a vast majority of the other countries—are all promising signs, giving us reason to hope for more in the future.

Good Will Is Needed

Assessing the latter half of the nineteenth session of the UN General Assembly, Foreign Minister Andrei Gromyko said in January of this year that "the positive trend of the majority of the UN member states will determine the main direction of the session's further work. This international political line on the whole approximates the spirit and purport of our foreign policy and the foreign policy of the other socialist countries, since the Soviet Union and the other socialist countries undeviatingly follow the line of strengthening peace and peaceful coexistence and speak for the freedom and independence of peoples and against colonialism. . . ."

American readers probably know that so acute a social problem as the rights and freedoms of trade unions was and still is a topic of vehement discussion in agencies of the UN. What occasioned the discussion was the need to work out international guarantees that would permit working people to organize freely into unions. This right has been denied and is denied even today in many Western countries. Discussion of this subject began in the UN and the International Labor Organization as far back as 1947, with representatives of some Western countries contending that there were no genuine trade unions in the USSR and that those in the West enjoyed broad rights.

To determine the actual state of affairs, the ILO decided to send a special mission to the affiliated countries. The first countries to declare their willingness to cooperate with the mission were the United States and the USSR. The USSR believed that the study would help pave the way for constructive measures to guarantee trade union rights all over the world.

The mission visited both countries and went to various regions, towns and plants to acquaint itself with the practical work of the trade unions. Following is one of the conclusions the mission published in its special report: ". . . the Soviet trade unions enjoy considerable power and influence. While continuing to be organizations which represent and speak for the workers, the unions are participating to an ever greater extent in running and strengthening the Soviet state. In their defense of the workers' interests and welfare the unions continue to urge the workers to make the greatest possible contribution toward strengthening the economy and raising the general standard of living."

That was an example of cooperation for the purpose of arriving at the truth.

Unfortunately the ILO's efforts to study trade union conditions and take appropriate steps to ensure trade union freedom in all countries was discontinued three years after its start. It studied only six of the 112 countries affiliated with the ILO. Why should that have happened? Was it not because its very first efforts did not coincide with the political interest of the representatives of some Western countries in the ILO?

At any rate, the Soviet Union proved in that case, as in many others, that it was ready to cooperate with other countries through the ILO.

A wide field of activity is open to the UN and its agencies. Protecting the rights of working people, promoting general and vocational education, improving working conditions, fighting disease, poverty and injustice—all this lies within the competence of the UN and its agencies. The Soviet Union is prepared in the future as it was in the past to exert every effort to help the UN work toward these ends.



A typical springtime scene in Minsk. The children from one of the city's numerous kindergartens set out on a bus trip.







MINSK REBORN

PHOTOGRAPHS BY DIMITRI UKHTOMSKY

In the summer of 1944, when Soviet Army troops drove the Nazis out of Minsk, they found the city in ruins. During the nazi occupation 332 industrial enterprises, 78 schools, and whole districts of apartment houses had been leveled to the ground. The capital of Byelorussia had been reduced to a shapeless mass of rubble. Today, 20 years after the victory over fascist Germany, Minsk is pulsating with life. It is a clean, modern city with new roads and a very efficient municipal transportation system. But what is most striking about Minsk is its aura of youth. A visitor gets the impression that the average age of the city's 700,000 inhabitants is 20. There are children everywhere, and most of the people in the factories, on the buses and at construction sites seem to be young.

MINSK REBORN







Many of the city's new kindergartens and restaurants were designed by students. They consider postwar architecture and planning (above left) outmoded and have offered their own ideas.





Minsk students who spent their summer building settlements in Kazakhstan. About 100 of them were awarded medals for their work.

Minsk is a city of youth. Young poets read their verses to young audiences, and on sunny days the parks are full of young artists.



RUSSIAN BOOKS IN ENGLISH

Among the recent translations in English issued by Soviet publishing houses are:

ON RELIGION. By V. I. Lenin. Paper cover, 90 pp.



In which Lenin reveals the social roots of religion and its incompatibility with a scientific world outlook and points the way to end religious prejudice. Included in this collection are the articles *Socialism and Religion* and *Leo Tolstoy, Mirror of the Russian Revolution* and two letters to Maxim Gorky.

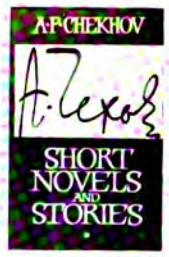


A PRACTICAL HANDBOOK ON STRESS IN RUSSIAN. By V. Klepko. Paper cover, 136 pp.

For English-speaking students who have acquired an elementary knowledge of Russian phonetics and grammar, and have mastered a small vocabulary. It consists of explanations and exercises. The main types of Russian stress are covered by a large number of examples, and words are grouped according to the type of stress.

A Russian-English vocabulary and a key to the exercises are appended.

SHORT NOVELS AND STORIES. By Anton Chekhov. Cloth cover, 400 pp.



Seventeen angry, gay and scornful stories about people scrambling up the long ladder of bureaucracy ("Chameleon" and "The Mask"), about true love bitterly deceived ("The Grasshopper"), about a grim hospital that is more like a prison and its patients who dream of escape ("Ward No. 6").

THE ENCHANTED WANDERER. By Nikolai Leskov. Cloth cover, 346 pp.



Nikolai Leskov (1831-1895), the "wizard of writing," who traveled the length and breadth of Russia, is the enchanted wanderer of Russian literature. "As an artist, Leskov is worthy of a place beside such giants of Russian literature as Leo Tolstoy, Gogol, Turgenev and Goncharov. The strength and beauty of Leskov's talent fall but little short of any of these authors of the holy scripture of the Russian soil," wrote Maxim Gorky, whose own life somewhat parallels that of the wanderer Leskov.

This collection includes "The Enchanted Wanderer," "Lady Macbeth of Mtsensk," "Lefty" and "The Make-up Artist."

MOTHER. By Maxim Gorky. Cloth cover, 383 pp.



This novel, which paints a broad picture of Russia before the 1905 Revolution, is based on events which actually occurred at an engineering works in the Volga town of Sormovo.

Nilovna is the wife of an old worker. Her son Pavel Vlasov and his friends and comrades are revolutionaries. She begins to live a meaningful life only when she adopts the people's cause as her own. The prototypes of Pavel Vlasov and Nilovna were Pyotr Zalomov, a Sormovo worker, who died in 1955 at the age of 78, and his mother Anna Kirillovna. This edition is illustrated by the Kukryniksy trio.

These and a large selection of Russian and Soviet classics, textbooks and publications in science, economics, history and philosophy are available in translation at:

New York: Four Continent Book Corporation
156 Fifth Avenue
New York, New York 10010

Washington: Victor Kamkin, Inc.
1410 Columbia Road, N.W.
Washington, D. C. 20009

Chicago: Cross-World Books & Periodicals
333 South Wacker Drive
Chicago, Illinois 60606

San Francisco: Znanie Book Shop
5237 Geary Boulevard
San Francisco, California 94118



Lately the Soviet press has taken to using the word "standard" in various connections: "The Standard—A Tool for Technical Progress," "Standard and Quality," "To Reach the World Standard."

Why? Is something the matter with Soviet standards? We asked Vasili Boitsov, Chairman of the USSR State Committee for Standards, Measures and Measuring Instruments, that question. Here is his answer:

IN A STANDARD we have concentrated the best that human thought and skill has been able to devise. Therefore, one of the earliest decrees of our government made the metric system standard throughout Russia. In 1925 the first USSR Committee for Standardization was set up; our present state committee inherited its functions. It sets national standards for weights and measures, oversees measuring equipment and, in general, is the country's authority on metrology.

At this stage of our economic development the problem of standards and standardization assumes special importance for us. For a long time we were concerned almost exclusively with the volume of goods we produced. We needed quantity and were somewhat indulgent about quality. But now our concentration is on quality. Hence, the increasing attention to standards, the comparison with foreign samples and the emphasis on developing our own standards.

International Levels

Our committee approves 600 to 700 standards for equipment, machines, production processes, instruments and consumer items every year. We have some 10,000 approved state standards altogether. We consider that insufficient and hope to double the total in the next few years.

What is a state standard as we define it? It is a document which establishes norms for various types and kinds of items—their dimensions, test requirements, quality, performance, service life, and so on.

Soviet standards (at least most of them) are good. The items manufactured by these standards are in large demand both in the Soviet Union and abroad. This was confirmed once again at the Leipzig Fair. Many items we manufacture are up to, and in some cases better than, world standard.

Soviet cutting tools are invariably judged

WHY ALL THE TALK ABOUT STANDARDS?

superior at international fairs and exhibitions. Soviet-made hobs for gear-cutting machines are a case in point. The standard for the three types of hobs we make guarantees high-precision gear cutting.

The story behind this standard is interesting. It was developed by a group of young scientists at the Tool Research Institute. They did a thorough research job, checking all available gear-cutting tools and drawing on the experience of Soviet and foreign tool plants as well as on the data of the International Organization for Standardization (ISO). Before their standard was adopted by our committee, it was tested at dozens of enterprises and a variety of laboratories.

Doesn't the standard get in the way when the customer wants you to meet his own specifications? No, it does not. Our standards fix only the basic requirements for high quality. For instance, with reference to fabrics they fix the width, strength, etc. The standard for buttons does not affect their pattern and color. What it does is see to it that the holes fit the needles we manufacture.

A Unified System

Standards play an important part in our socialist economy. The fact that our economy is planned makes it possible for us to apply standards universally. But we still take small advantage of this fact. Aside from the state standards, there are some 100,000 technical requirements set by branch state committees and economic councils and even by individual factories. There are also a number of so-called provisional and preliminary technical requirements, with the result that we come across orders with different specifications for the same item. This, of course, affects the delivery, price and quality of the item and so misleads the customer.

Our committee has drafted a sequence in which standards are to be worked out and adopted. This draft makes provisions for the following kinds of standardizing documentation, apart from the state standards: branch standards, republic standards and technical specifications of individual plants.

The draft foresees an increasingly larger role for state standards. In the future they are to cover all kinds of industrial and agricultural raw materials, fuels and minerals, as well as all serial manufacture. Standards will be adopted for staple consumer goods as well. The establishment of a unified state system will greatly facilitate the design, manufacture and delivery of goods, will provide better technical documentation and will impose a larger measure of responsibilitiy for quality on the factory producing the item.

Application Problem

To work out a standard is only half the job; the other half is to put it into practice.

Here, too, a planned economy offers certain advantages. When a standard is approved, the exact date it is to take effect all over the country is fixed as well.

The greater volume of our goods is manufactured in conformance with state standards, as the following chart shows:

PERCENTAGE OF GOODS MANUFACTURED IN CONFORMANCE WITH STATE STANDARDS

	In Per Cent
Textile raw materials	97-98
Chemical fibers	85
Leather materials	97-98
Textiles:	
cotton	82-85
wool	24-25
silk	80-82
linen	58-62
Shoes	90-92
Knit fabrics for underwear	90-93
Hosiery	92-95

Here we list only mass-produced consumer items, but the picture is about the same for industry generally.

Quality-control departments in the various plants check on conformance. Each economic council has a standards department, and there are about 300 state-operated control laboratories in the republics and regions. They work directly with our committee, supervise measuring equipment, develop standards and see that they are followed.

Despite these various control agencies, there are standards we approved some time ago which are still waiting to be adopted. Thus, for instance, a standard for a thin steel sheet for transformers was approved by the committee more than two years ago and has gone no further. The introduction of a standard for toothed drawgears for electric and diesel locomotives has also been delayed. There are several other instances of this sort. Why does it happen? Each case has its own reason.

The drawgear standard, for instance, has been delayed because some manufacturing plants have not been able to reach the required production precision. Inadequacies in metal-rolling equipment has delayed the introduction of the steel sheet standard, and so on.

We are still making insufficient use of material incentives to persuade plants to adopt new standards. The introduction of a new standard requires time and money, which is not always profitable to them. We have now worked out procedures which overcome their objections. In some cases the delay in introducing new standards is due to the shortage of instruments necessary to test the finished items.

These are all problems which the committee, jointly with the ministries and research institutions, is now trying to solve.

Aging Standards

Standards age fast. This is due not so much to intrinsic deficiencies as to tremendous developments in science and technology. Home and world market conditions require the constant overhauling of standards. Some of our older ones are not up to the high present-day technical levels. Soviet-made machines, for instance, are heavier than some foreign-made equivalents because we do not make as much use as we should of rolled-steel sections and high-grade, heat-treated steels.

We have 1,700 chemical and petrochemical standards. Many of them, however, do not meet the more exacting current requirements. This is especially true of fertilizers and dyes. Many consumer goods standards also need to be revised.

Our committee is constantly replacing obsolete standards. Standards are checked every three or five years, and those that are not up to the current level are revised. Thus, no fewer than 4,000 standards for staple manufactured goods are to be revised over the next two years.

We are taking advantage of the experience of other countries. The Soviet Union is an active member of the International Organization for Standardization (ISO). Our delegation was in Delhi not so long ago, where it cooperated fruitfully with American experts in the field of standardization.

Under an international agreement we send our standards to 50 countries and in return receive some 13,000 to 15,000 standards annually from other countries. We have set up an Information Fund of Standards, whose area of activity will be growing fast due to expanding world trade, developing contacts among standardization specialists and the fact that the problem of standards is at present the focus of attention of Soviet science and technology.



The Resistible Rise of Arturo Ui *staged by the Student Theater of Moscow. It is not only a historical farce exposing the nature of fascism but a grim warning that servile subordination to demagogic ideas and philistine egoism paves the way to power for the likes of Arturo Ui.*



MOSCOW'S YOUNGEST OLDEST THEATER

BY KONSTANTIN TELYATNIKOV

THIS IS PROBABLY the youngest, and certainly the oldest theater in Moscow. Why the youngest? Because its company is made up of students, many of them freshmen. Why the oldest, in that case? Well, that needs a little more explaining.

First Moscow Playhouse

On the façade of Moscow University is depicted the Temple of Truth. A goddess robed in white descends on a cloud. In her right hand she holds the sun, and in her left, a laurel branch. Awaiting her in the temple are Science, History, Mathematics, Medicine, Logic, Architecture and Music. A little off stand two figures, one in a mask, the other with a blood-stained dagger; both designate the theater.

These symbols of dramaturgy are not there by chance. The first Moscow Public Theater was opened at the university a year after it was founded, in 1756. The initiator was Mikhail Kheraskov, a poet and playwright. The following year a drama school was opened as well.

Since there was not a single actress in the company and all the women's roles had to be played by men, this announcement appeared on June 27, 1757, in the newspaper *Moskovskiye Vedomosti:* "Women and girls with a penchant for and urge to act are requested to apply at the university offices."

Among those who responded to this invitation were Tatyana Troyepolskaya and Avdotya Mikhailova. They subsequently became stars of the Russian stage.

In 1776 a new theater, later called the Petrovsky, sprang from the first. This was the father of the Maly Theater, which opened on October 27, 1824, on Petrovskaya (now Sverdlov) Square, and the Bolshoi Theater, which opened on January 6, 1825.

A Russian Literary Society which organized literary and musical evenings was formed at Moscow University in 1811. In 1835 Nikolai Gogol was elected a member. It was in the university printshop that his *Dead Souls* was printed in 1842. When, in 1844, the student dramatic company staged Gogol's comedy *Marriage,* one of the leading roles was played by Alexei Pisemsky, the future Russian writer. Vissarion Belinsky, the eminent critic, assisted with the production.

From Amateur Company to Student Theater

Early in the twenties of this century, in the same premises where the Moscow Public Theater was founded, the university opened a club. Its drama group was directed by the famous Vasili Kachalov, Olga Knipper-Chekhova, Ivan Moskvin and Mikhail Tarkhanov.

In 1958 the group changed its name to Student Theater and was joined by the well-known Soviet screen director Sergei Yutkevich, a professor of journalism.

In what way did the Student Theater differ from the former company? Most importantly, it undertook to create an *original* repertory.

PHOTOGRAPHS BY IGOR VINOGRADOV



The entire performance is built on contrasts. Its sequence of tragic and burlesque scenes emphasizes the sinister nature of the situation.

The students opened their first season with Pavel Kogout's *Such Love*, a première for the play as well. It was later staged by many theaters in the capital and other cities. The lead role was played by Iya Savvina, a journalism student. Shortly thereafter Savvina was offered the role of Anna Sergeyevna in the film version of Chekhov's "Lady with the Dog." She is now a popular actress.

The theater's audiences waxed enthusiastic over Hackett and Goodrich's *The Diary of Anne Frank* and William Gibson's *Two for the Seesaw*. After showing Muscovites Yevgeni Shvarts' prewar play *The Dragon*, the Student Theater began production of Bertolt Brecht's *The Resistible Rise of Arturo Ui.*

Brecht on the Student Stage

Few knowledgeable people thought the production would be a success, and for many reasons, all of them weighty. First of all, one has to know how to "read" Brecht, how to stage, how to play him professionally. Our audiences will make no allowances for a company's amateur status in such cases. Youthful enthusiasm compensates somewhat for skill and experience, but you can't stage Brecht on enthusiasm alone. *Arturo Ui* demands both experience and skill.

The company's main and unsolvable problem is lack of experience. Why? Because it is a student playhouse. Its company is made up of novices, and it is in the theater (and university) that they learn the ABC's of acting. But no sooner do they pick up a little experience and skill, than they stop being students and leave their theatrical alma mater for good.

There are a few who stay on. Vsevolod Shestakov has been acting with the company 15 years now. When he joined he was a stripling. Now he is a Doctor of Engineering, a professor, and heads a chair in the Geology Department. In *Arturo Ui* he plays Klark, one of the cauliflower trust bosses. Other veteran members of the company are Abram Livshitz, Master of Mathematics, and Irina Litvinova, Master of Biology.

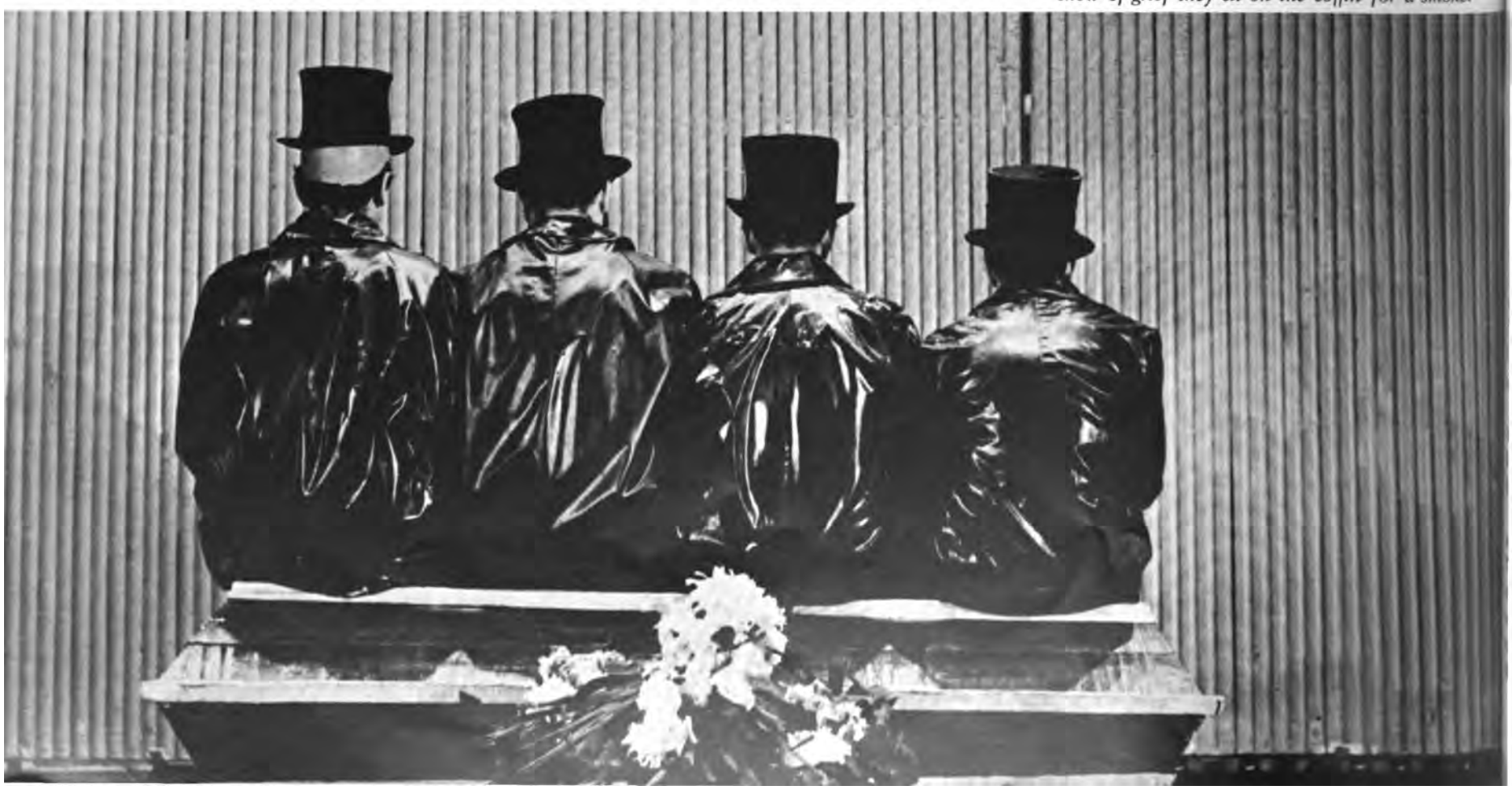
But these are a handful. Almost all the others come and go, like Iya Savvina and Rolland Bykov, who directed *Such Love*. He was offered the role of Akaki Akakievich in the film version of Gogol's *The Overcoat** and did so well with it that he is now considered one of the most popular and promising actors. Vadim Zobin, an iron and steel engineer, who has been playing Arturo Ui, will be leaving too. He was offered the lead role in a new film. And that's the way it goes.

Some people suggest that the company invite professional actors for the more difficult roles. Since the Student Theater gives the professional stage its finest actors, it has the right to at least a small return for its creative losses, say the adherents of this point of view. But the students say No. They do not feel that a hodgepodge of professional and amateur talent is good for anybody concerned. I, for one, agree.

Short on experience as the Student Theater is, it does not live by enthusiasm alone. The company of 60 is supervised by an elected theatrical council, which does all the managing required. It chooses the repertory, does the casting and the like. By council decision a small

* Now being shown in the United States.

Four gangsters turn Dolfit's funeral into a preposterous piece of buffoonery. After a clumsy show of grief they sit on the coffin for a smoke.



studio of 30 students was opened at the theater. There are no competitive auditions, anyone may enter.

Beginning actors are taught the art of movement, make-up and the other mysteries of the craft. The most gifted of the neophytes are invited to join the company.

Despite all the counsels of doom, the company went ahead with the *Arturo Ui* production as though it were headed for brilliant success. Not long before, the play had been staged at the Leningrad Drama Theater by one of the most interesting of our Soviet directors, Georgi Tovstonogov, with Poland's Erwin Axer producing.

But the students were not intimidated by their formidable competitors. Yielding the palm to them in technique, they created an amazingly well-knit cast which found a completely new scenic solution for Brecht's idea—the public exposure of fascism as a social bane. Arturo Ui, a ruthless and depraved gangster, is Brecht's idea of Hitler. And whereas Yevgeni Lebedev of Tovstonogov's theater creates the revolting mask (and no more than a mask) of a cruel and debased maniac, Zobin's Arturo Ui is not simply a mask but a personality. The actor does not merely play-act; he creates a psychologically justified portrait of a bandit become dictator who is neither a maniac nor a superman. This



is a philistine first of all, a dangerous and cunning huckster who uses a ready political climate and the philistine psychology of a certain section of the population.

The production abounds in interesting stage-directing finds. One of them is the "interlude asides," and though they are not provided for by Brecht's text, each of them blends organically into the production. The wall of the orchestra pavilion standing in the recess of the stage spreads open to reveal a row of gangsters. To the mournful strains of Chopin's "Funeral March," they invite their current victim with broad and sweeping gestures to sink through a trap in the floor. Giri (Goering) snatches her hat away and Givola (Goebbels) presents her with flowers, after which the trap door slams shut. Terminating the funeral ritual, the gangsters begin to scream Chopin's melody in a frenzied tempo, accompanying their incantations with hand clapping and twists danced on the trap door.

The production was a brilliant success. The press was unstinting in its praise, and some theater critics, comparing the Leningrad and Moscow productions, said they frankly preferred the student version. It was a tremendous triumph.

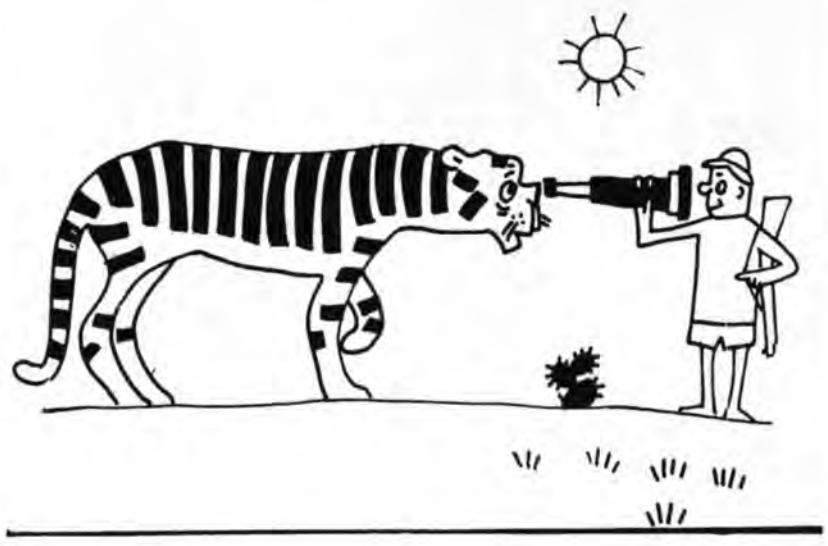
However, the students are anything but dizzy with success. They are much less satisfied with their work than the sophisticated critics imagine. Though tickets to the Student Theater's plays are usually sold out months in advance and the office of Saveli Dvorin, art director of the university's amateur art activities, is besieged by fans, the students are busy searching for new forms and ways to say what they think Moscow's youngest oldest theater should.

HUMOR



Training for the mushroom season.







"Yes, dear, I'll meet you in five minutes."

AROUND *the* COUNTRY



MOTHER-TO-SON KIDNEY TRANSPLANTS

Two mothers, 53-year-old Sofia C. and 47-year-old Lyubov M., gave a kidney each to their sons—30-year-old Boris and 18-year-old Roman (in the photo). These are the first mother-to-son live kidney transplants in the USSR and were done under the guidance of Academician Boris Petrovsky. Doctors had given up hope for Boris and Roman; their kidneys had stopped functioning as a result of 10 years of chronic nephrosis.

From the surgical point of view both operations were highly successful. However, the postoperative period presents many dangers.

Although mother and son are genetically kindred, the organism of the son, nevertheless, tends to reject the tissues of the mother. The patients are being given Imuran, which the clinic purchased for them in the United States, as well as other immunity depressive medicines. Despite this, reflection reaction can set in at any moment, even years later. As of now, mothers and sons are doing well.

CUCUMBERS IN PIPES

An ingenious installation for growing cucumbers in hothouses has been built in the Leningrad Teplichny State Farm. Instead of the customary beds or racks, several hundred long plywood pipes filled with ceramsite pebbles lie on props. One end of the pipe is closed, and a nutritive solution is fed automatically into the other end according to a given schedule. The upper halves of the pipes are removed to allow the rows of sturdy seedlings to grow.

This innovation increases labor productivity by 40 per cent and reduces the quantity of nutritive solution required. Vegetable growers harvest a ton of cucumbers from 36 16-foot-long one-foot-diameter pipes.







COLUMBUS MEDAL

The Institute of International ... tions in Genoa annually award ... Columbus Gold Medal to the radio ... who has done most for the world ... munity. This year's medal went to ... Okulinichev, Doctor of Science (Me... cine), a Soviet radio ham widely ... for his skill as a healer, the ... equipment he has invented and ... contributions to bioastronautics. Its ... tion notes that he has been a radio ... since 1927, a member of the ... tional Federation of Bioastronautics, ... he has invented a variety of elec... instruments for diagnostics and ... and that his life and work illustrate ... questing spirit and world outlook ... characterizes the radio ham.

PAINTINGS BROUGHT TO LIFE

In 1918 painter Igor Grabar exhibited 14 icons from the Kremlin Cathedral which he had restored. Since then his studio has preserved from time's ravages hundreds of masterpieces of Russian and world painting, sculpture and folk art.

The most recent exhibition of his studio's work includes some of these priceless old Russian paintings and sculptures. One of the oldest of the icons on display, from the Archangel Michael Cathedral in Veliki Ustyug, dates back to the thirteenth century. X-ray and cleaning revealed a picture of the winged Archangel. The Archangel in old Russia symbolized victory over the enemy, and this icon, at a time when the country was suffering under the Tatar yoke, was the guidon of the resistance.





SUPERSONIC GIRL

Sports pilot Natasha Prokhanova, a teachers college student, reached an altitude of 79,724 feet in an E-33 supersonic jet training plane, a new world record. Natasha got the chance to fly the supersonic E-33 because she is one of the air sports club's top girl pilots.She has flown MIG-15 and MIG-17 jets. She started flying a glider in a Tambov air sports club when she was still in high school and put in a lot of training before her record-breaking flight: she flew in a G-suit, trained in a pressure chamber and catapulted. All in all, Natasha has more than 1,000 flying hours to her credit.

STORM IN A BASIN

In the Crimea, about two miles from Simeiz, there is a "storm basin," a circular water-filled building where waves are created by blowers. The artificial wind reaches a speed of 62 feet a second, gale equivalent. There is room enough for a car to pass between the double walls of this big steel ring. It has a 131-foot diameter and stands as tall as a two-story building. Shore line effects are eliminated in the circular basin, and the main waves can be studied without the interference of reverberating waves. The entire process of the birth, development and death of wind waves can be observed between the two thick glass walls. It is all registered by still and movie cameras.

The information compiled is used in navigation, shipbuilding and the construction of hydrotechnical structures.



URALS *ESMERALDA*

A hundred dancers from the ... the full complement of the ... ple's Ballet Theater of the Pal... Culture of the Nizhny Tagil Ba... Plant—performed at the Kremlin ... ter in the capital, as amateur ... from various parts of the c... quently do.

The ballet *Esmeralda* won the ... est applause. The title role was ... by laboratory technician Lyud... kova and Captain Phoebus by A... Zhitnikov, a local music school ...

The country has 124,017 clubs, ... palaces of culture, and 174 ... art centers. They provide facilities ... 544,106 amateur groups of various ... with 10 million members.



SYNTHETIC CAVIAR

e laboratory of the Institute of Organic Elements Compounds of USSR Academy of Sciences has syn- zed caviar.

ofessor Grigori Slonimsky, Doctor of ice (Chemistry), who headed the re- ch group, says: "We first made arti- macaroni, noodles and cereals and hole assortment of meat proteins. we started to work on other prod- On one occasion Academician neyanov, the institute director, sug- d that we make synthetic caviar. so we did. 'Chemical' caviar is ab- ely indistinguishable from the na- variety. It takes a microscope to he difference. And this is not just z: chemical analysis confirmed that is everything the best varieties of ir have. Probably the only short- ng is that fish cannot be hatched the synthetic caviar as yet.

ne day is not far off," the professor rked, "when we will be making cial meat, grapes and berries as as the natural products. I have oubt whatsoever that in 15 to 20 synthetic food will be manufac- on a large scale, replenishing al foodstuffs—not replacing but ning them."

PARACHUTING COUPLE

Tomaroviches, husband and wife, ve 2,009 parachute jumps to their . Although Vyacheslav Tomarovich ore experienced than his wife, he ewer jumps to his credit. The most t was his thousandth. This was a usual jump from an AN-2 plane n altitude of 3,280 feet with a parachute; the preceding 999 were more spectacular. Vyacheslav is rachute tester. He is 31 years old, Master of Sports rating and is a record setter. He started parachute ng 14 years ago when he was dent at the Institute of Physical re.



62 MILES OF SUBWAY

The Moscow Metro's 62 miles of line links 72 stations. In 1964 it carried over a billion passengers.

Some days as many as 4,000,000 Muscovites ride the subway. Trains run 55 miles an hour at 90 second intervals. The Metro has its own man-made climate—41° Fahrenheit during the worst frosts, and 64° Fahrenheit on the hottest summer days.

This year the Metro marked its thirtieth anniversary. The first line built was 18 miles long. It was part of a large-scale program for Moscow's reconstruction which is still going on.

In its 30 years the Moscow Metro has carried 20 billion passengers.



150-MILLION-YEAR-OLD TREE

An incredibly ancient tree was found in Latvian glacial deposits. It was discovered in a layer of fine white sand with quartz and black clay admixtures on the bank of a small river. Jurassic deposits here were covered by a 13-foot-thick postglacial period layer. The trunk of the tree is heavily carbonized; its wood is black and brittle. Geologists say it is 150 million years old, and Latvia was then covered by coniferous and fern forests.

COW RECORD

Ezitis is 14, old for a cow. But the Nauene State Farm (Latvia) decided to keep her in the herd for another year so she could have her eleventh calf. To help her along, a stimulating preparation and artificial insemination were used. The stockbreeders were surprised, to put it mildly, and of course delighted when Ezitis presented them with six heifers. They range from 17 pounds 10 ounces to 24 pounds 14 ounces. Their combined weight was 133 pounds 6 ounces.

The sextet were given infrared treatment and named Record, Amour, Granite, Demon, Impulse and Sultan. They are not as strong as ordinary calves, but everything is being done to help them grow up.



USSR GEOLOGICAL MAP

The new 1964 geological map of the USSR reflects the knowledge of the earth's depth the country's geological service has been accumulating for the past decade. More than 500,000 people helped collect specimens and compile the map. It systematizes our knowledge of the country's mineral resources and their probable distribution. The new map provides a general picture of the rock distribution of a sixth of the earth's surface. Displayed at the world forum of geologists in Delhi, it won high praise from specialists.

NEW PICTURES OF THE MOON

Pictures of the hidden side of the moon were obtained by the photo television device of the Soviet automatic interplanetary station Zond 3 on July 20, 1965. They were taken at a distance of about 6,200 miles from the moon's surface. This is the first time we have been able to see the surface of the moon situated between the part visible from the earth and the section of the hidden part photographed by the Soviet automatic interplanetary station on October 7, 1959.

The pictures distinctly show a part of the moon's side visible from the earth, which makes it possible to accurately tie in the new regions of the moon.

The high resolving power of the photo and television device (1,100 lines) will make it possible to compile a detailed map of the new area of the moon.



LARGEST HYDROELECTRIC POWER STATION

The Sayano-Shushenskaya Hydroelectric Power Station—the world's largest—is being built in the upper reaches of the Yenisei, some 300 miles from the five-million-kilowatt Krasnoyarsk Hydroelectric Power Station, also under construction. The new station will have a capacity of 6,360,000 kilowatts. It is being erected near the village of Shushenskoye, where Vladimir Lenin lived in exile at the beginning of the century.

The Yenisei will be blocked by a 774-foot-high dam. Behind it the Sayan Sea will spread for 186 miles. Geologists and drillers are now prospecting the river banks and bed to see whether there are any cracks in the cliffs and whether they will support the enormous weight of the dam. A road is being cut through the cliffs. The photo shows the highway to the hydroelectric power station.

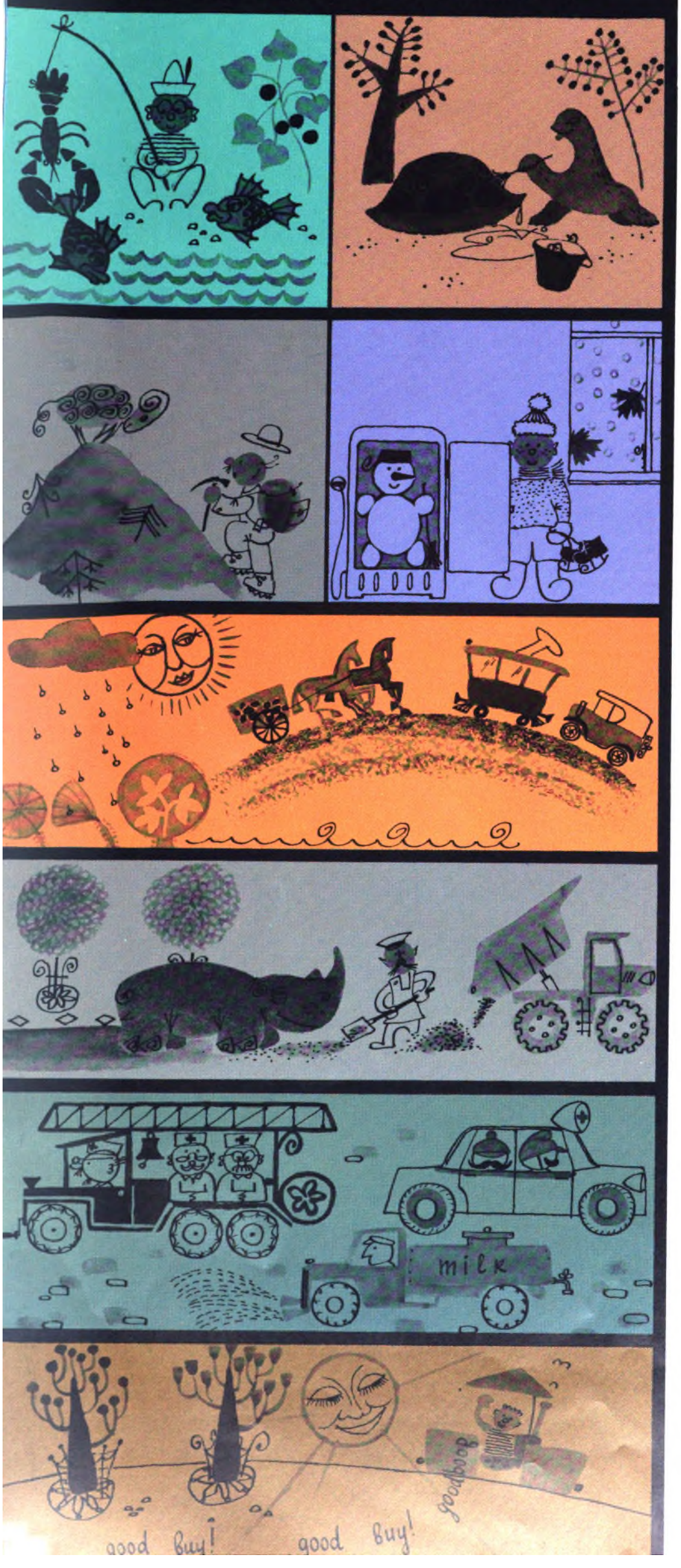


AROUND the COUNTRY

MERRY YOUNGSTERS CLUB

DRAWINGS BY LEONID SERGEYEV

Can you think of funny captions for these pictures?



THE INDIVIDUAL TODAY is all but drowned in the deluge of ne In 490 B.C. it took the champion runner Pheidippides a day to cov 140 miles to bring Sparta word of the Persian landing at Marathon. Tod the teletype carries news over incomparably longer distances in a matt of seconds.

Much of a newspaper's popularity hinges on the efficiency of its ne service. In a way, a newspaper is like a great fish net spread across th stream of life to catch its most significant and interesting happenings. Th calls for skill, speed and, of course, a nose for news.

Editorial Filters

We double and triple check the news we select to print. We scrutinize it from every angle. If selection wasn't necessary, then newspapermen wouldn't be either; electronic robots and a mechanical photo-eye could do the job.

A letter came to the office from a reader in Novosibirsk reporting a startling find in the Siberian forests. Lumberjacks felled a huge pine with a trunk so broad it took three men to clasp hands around it. When they started cutting it up, they found a human skeleton inside a resin-filled hollow.

The fact was authentic—no doubt about that. Print it as it stood? I admit I was just about to initial the item when an inner voice stopped my hand. Was it a madman who had squeezed into the hollow and committed suicide? Or an old and unsolved crime? Or something else? I decided to hold off until we found out.

We contacted the author of the letter and asked if there were any more details. It turned out he had forgotten to mention that there were irons on the skeleton's legs. Old, rusty irons, of the kind used to shackle political prisoners when they were driven into Siberian exile in prerevolutionary times.

Now the item took on content and significance. It was an echo of a nightmarish period in Russian history. An escaped convict had taken refuge in the hollow of an old pine tree and had somehow met his death there. We decided to print the item and then perhaps try to unravel the tragedy that occurred in the Siberian taiga so long ago.

The mystery has not yet been solved, but that news item served a useful purpose. It was one more reminder of the cost at which freedom had been won.

Our staff correspondents are the eyes and ears of *Komsomolskaya Pravda.* They supply roughly from 30 to 40 per cent of the domestic news. Not a bad proportion when you consider that we have a relatively small staff, only about 30 correspondents. A slightly smaller percentage of our domestic news comes from the Telegraph Agency of the Soviet Union (TASS), and the Novosti Press Agency (APN). TASS news is very concise and to the point. APN dispatches are usually longer and fuller, with more background information to fill out the picture. Supplementing one another this way, the two agencies give us sufficient coverage.

Our third and last source of news —and one we particularly prize—is mail we get from readers. When I come to work every morning, I see the stack of mailbags just delivered, and I know that every single letter in that sizable pile will be answered.

The Reader's Advantage

Let's take a look at some of the letters that come into our news department:

Young Azerbaijanian workers a us to write about the progress o project they are constructing joi with workers from Iran—an irri tion complex on the Aras, a bor river, which will bring water thousands of acres of wasteland the Soviet Union and Iran.

A letter from the town of Zlato in the Urals, written on a page from a school notebook was s with two pictures, obviously snapp by an amateur photographer. O shows a young man in a flyer's h met sitting in the cockpit of what first glance looks like a toy pla But we learn from the letter th the plane is not a toy, that the you pilot and his friends built it the selves. The second photogra shows the plane in flight. Readi that letter from Zlatoust, we recall the most recent exhibition of chi dren's technical achievements; i has been shown in many countri the United States included.

News has a short life, and sta news is like warmed-over dinn Even the most skillful writi doesn't help.

A letter takes at least two three days to reach our desk. Do that make it stale news?

I don't think so. The reader has great advantage over the repor because he is on the spot, alw and everywhere. He does not have hop a train or plane to reach th scene of the news. He gets it fir hand. Often, in fact, he is the who makes it. No reporter can ke up with the reader. Here is an in teresting sidelight: TASS sent an item about the midget aircr in Zlatoust the day after we learn about it from our reader's letter.

So much for speed. I shall not g into detail here about what a trea ure store of topics, places and names readers' letters provide. about our various ways of publis ing the letters to give them max immediacy and interest.

A geologist named Beldybay wrote us a letter on a scrap of pap torn from a topographical map. Th letter was water-stained. It was obv ous he had carried it in his ma case for some time before reachi a place where he could mail it. Th letter started off an operation named "The Mystery of the Ters Forest." Beldybayev wrote that whi he and the members of his fie party were in an out-of-the-way pa of Kazakhstan, not far from th Tersek Forest, they saw strang glowing spheres in the air on night. The spheres floated fair low, and from time to time one them would explode with a bang.

Next morning they mentioned to a forester they met. He told the that spheres of that kind ofte often be seen there. Could it be ba lightning? If so, why so many ba all at once? Ball lightning is a ve tary-loving kind of phenomenon

On receiving the letter, we call up an expert at the Physics In

. His voice shook with excite-
t when he learned the news.
ıke a thorough investigation,"
nsisted. "This could be a unique
nanent source of ball lightning.
y important for science. Ball
tning is still terra incognita."
/e sent a correspondent to the
the next day. Three days later
received a detailed report which
no doubt that Beldybayev had
overed a natural laboratory of
lightning.

nowman!" or "Snowman?"

don't know the exact definition
ews, but of those suggested by
nalism theorists, I like this one
: "Brevity plus accuracy plus
liness."
iding in a bus not long ago, I
heard a snatch of conversation.
u don't believe me? Then read
ourself—it's in today's papers."
'e received a report about a
nge woman who had lived in a vil-
in the North Caucasus some 50
0 years ago. Hunters had found
in the woods, starving and sav-
and had brought her to the vil-
. Her body was covered with
; she did not know how to talk;
slept in holes she dug in the
ınd. The woman lived in the
ge many years, but the people
: unable to teach her even to
r clothing.
ientists wondered whether this
ht not be an Abominable Snow-
. The villagers confirmed all the
s above almost unanimously and
ıted to the place where the woman
buried. The logical thing to do
was to exhume the body and let
ropologists settle the question of
ther or not the woman was a
. An expedition set out for the
e, accompanied by newsmen.
ıey sent back reports that were
ational, especially the first re-
that the measurements—made
ily, true—showed considerable
ation from the average. I re-
ıber how we all stood looking
he story just phoned in. We
dn't tear our eyes away from
headline: "Snowman Found!"
rubbed our hands. What a
p!
owever, our critical faculties
still awake. "But what if—?"
whispered in our ear. Painful
gh it was, we sliced it down to
ort item and changed the defi-
"Snowman Found!" to an eva-
"Snowman?"
vo days later we blessed the
tion mark we had put in the
line. It turned out that al-
gh the skeleton did differ a good
from the average, the differ-
s were not of the kind to war-
the conclusion that Zana, as
illagers called her, was a snow-
As a private citizen I could be
easily convinced of a snow-
s existence, but as a newspaper-
I won't put a finger to a type-
r before I see a Yeti with my
eyes and shake his hairy paw.
false report published in the
ınns of a newspaper strikes a
at the reader's faith in the
r. It is like cutting away the
limb you are sitting on. Usually
se report is born of the wish to
something sensational. We like
ıtion-making news as well as
ıext fellow. And we're also for
ıetition between newspapers.
respect for the reader must al-
be the first consideration.



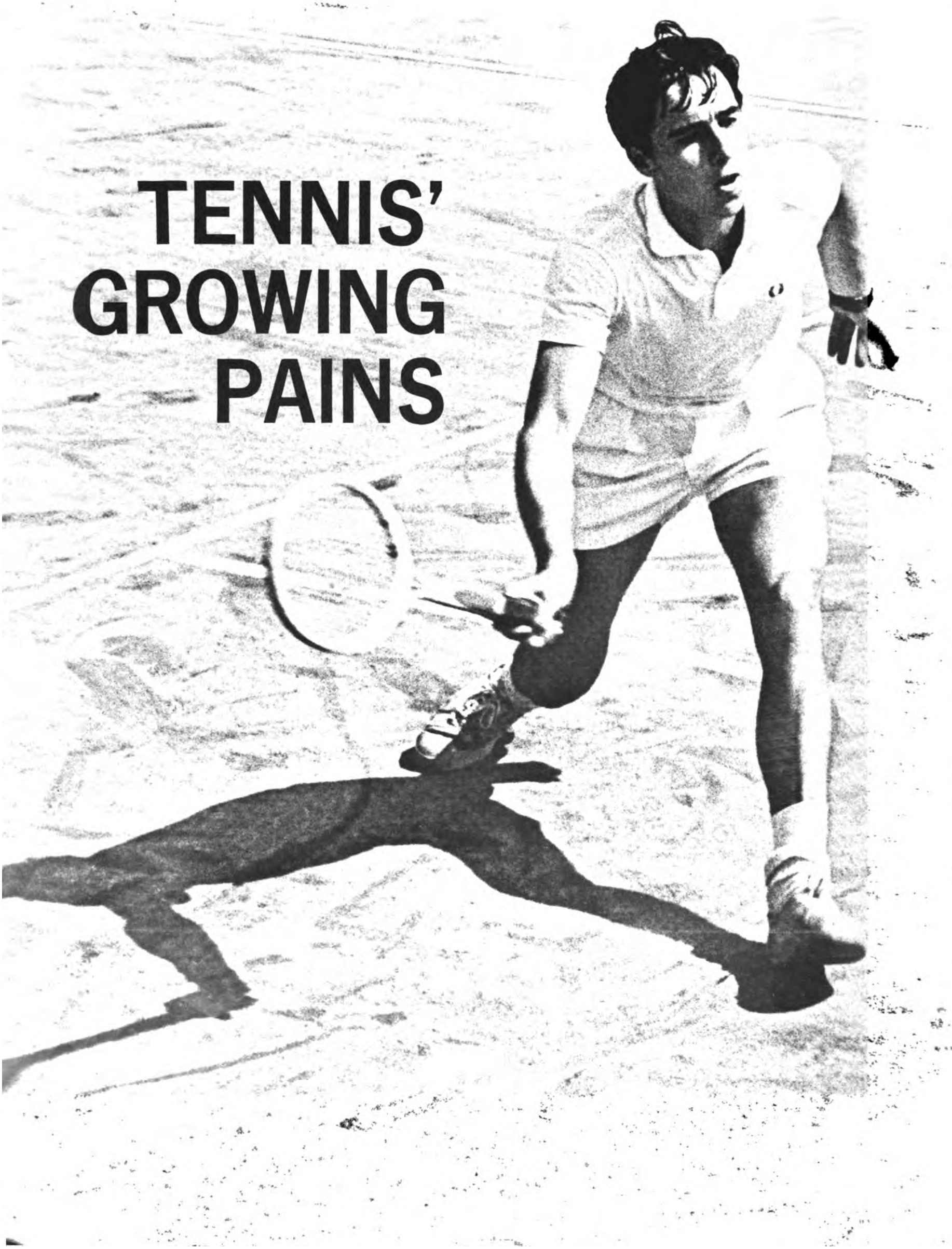
The Information Department staff of Komsomolskaya Pravda *discusses the contents of the next issue. Valentin Lyashchenko is second from the right.*

A NOSE FOR NEWS

BY VALENTIN LYASHCHENKO

News editor of *Komsomolskaya Pravda*, one of the most popular papers in the country with a circulation of more than five million, published by the Young Communist League

TENNIS' GROWING PAINS



I MET your charming compatriot and international tennis star Darlene Hard in London in 1956. She was very interested in the Soviet Union and asked dozens of questions about tennis in our country. Our coaches and players, making their first appearance in Wimbledon, the Mecca of world tennis, satisfied her curiosity as best they could.

Yes, we have a good many tennis players. Yes, it's played by people of all ages and in all walks of life—scientists, factory workers, students, engineers, doctors, schoolchildren, even our famous violinist David Oistrakh and chess grandmaster Paul Keres, who at one time was doubles champion of Estonia.

No, we are not satisfied with the present state of affairs. We want as many tennis devotees as we have for soccer, as many courts as in, say, Australia, and we want to see our boys bring home the Davis Cup at least once.

Yes, we hold many tournaments, including annual national indoor and outdoor championships, and special tournaments for juniors and students. We also arrange international matches and tournaments, but unfortunately only racket-wielders of neighboring countries have visited us so far. Now that we are members of the International Lawn Tennis Federation, we hope these tournaments will be more representative.

Come and see us. You won't be disappointed! Tennis is very popular in our country. Getting a ticket for the USSR indoor championship finals is no easier than for a ballet starring Galina Ulanova.

These were the answers to some of the many questions Miss Hard asked in 1956.

Nine years have elapsed since, and our players have competed at Wimbledon, Forest Hills, and on courts in Belgium, India, Morocco, the Federal Republic of Germany and elsewhere in the world. They were welcomed courteously and cordially, if somewhat condescendingly at first. But now, evidently, our players are looked upon as serious challengers.

It was only by a fluke that Anna Dmitrieva lost to Darlene Hard in 1962. Galina Baksheyeva twice emerged triumphant from the Wimbledon junior tournament. Also at Wimbledon in 1963 McKinley and Ralston, the top-ranking U. S. men's double, were defeated by Lejus and Likhachev. Last year Lejus beat Fletcher of Australia and Osuna, the Mexican and U. S. champion, who ranks among the top five players of the world. Newsmen lost no time in calling Lejus a "giant-killer." And our juniors took the Italian Galéa Cup.

You may scoff at these achievements and point out that none of our players have won a world title or the Davis Cup. It is a fact that our players are only occasional winners, but they do win from the best players of the day, who only a short time ago were thought invincible. But we are also very much aware that these are only our first steps up the ladder of world tennis fame. You might say that our tennis has reached the age where its voice is changing. Will the changed voice be of virtuoso quality? We have high hopes.

The hard job, they say, is catching up with those who are in front. Once you do, the rest is routine. Once you lose the habit of trailing, you naturally keep gathering momentum.

The number of tennis players in the USSR has increased considerably since 1956. The game is now being played in the most remote parts of the country too, places like Magadan in Chukotka, a 12-hour jet flight from Moscow. The Magadan teams fly every year to all the big tennis tournaments in the Soviet Union. Tennis is also the thing now in Arkhangelsk, Tashkent, Omsk, Alma-Ata and in the small Ukrainian town of Severodonetsk, where every third schoolboy and schoolgirl plays the game.

To make tennis generally accessible, we need more courts than we have now. Many have been built in the recent past. Big tennis centers have sprung up in Moscow, Leningrad, Alma-Ata, Tashkent and other places, but the shortage of courts is still a big problem.

Our primary concern, in tennis as in everything else, is the growing generation. We have scores of tennis schools where the boys and girls play under the guidance of experienced instructors. The training is free, naturally.

We could fill dozens of new schools today if we had enough instructors. Our physical culture colleges are training instructors at an accelerated rate, but as yet demand exceeds supply. And we have only a few coaches who can groom world-class players. I think it's time to talk of a Soviet-American exchange of coaches. Ours can give their American counterparts a few useful points in some sports, and vice versa.

But having good trainers isn't enough. To play well, you have to, first of all, play a lot. We are staging more home tournaments and taking part in more international matches. The annual Moscow international tournament has attracted challengers from Australia, the United States, Yugoslavia, France, Italy, Britain, Argentina and Chile.

Your player Froehling has become the idol of Moscow fans, and we would like to have more of your tennis aces as our guests in Moscow. We have a very big group of young hopefuls who need international playing experience against the world's best. These hopefuls are our tennis future.

Take, for instance, 16-year-old Volodya Korotkov, who reached the finals of the Wimbledon junior tournament last year and became a national champion in the senior doubles. Nobody in our country ever chalked up such tennis triumphs at 16. We are counting on Volodya.

There is much talk in our country now about Olympic tennis. People often ask us why we want to see tennis in the Olympic program when we have so little chance of winning.

We think that's secondary. We believe that tennis has won the right to be listed as an Olympic sport. Win or lose, to compete in the Olympic Games is a mark of honor, because the name has come to mean international friendship and cooperation. As for victories, they will come in time. Of that we are sure. And we are exerting every effort to hasten that moment.

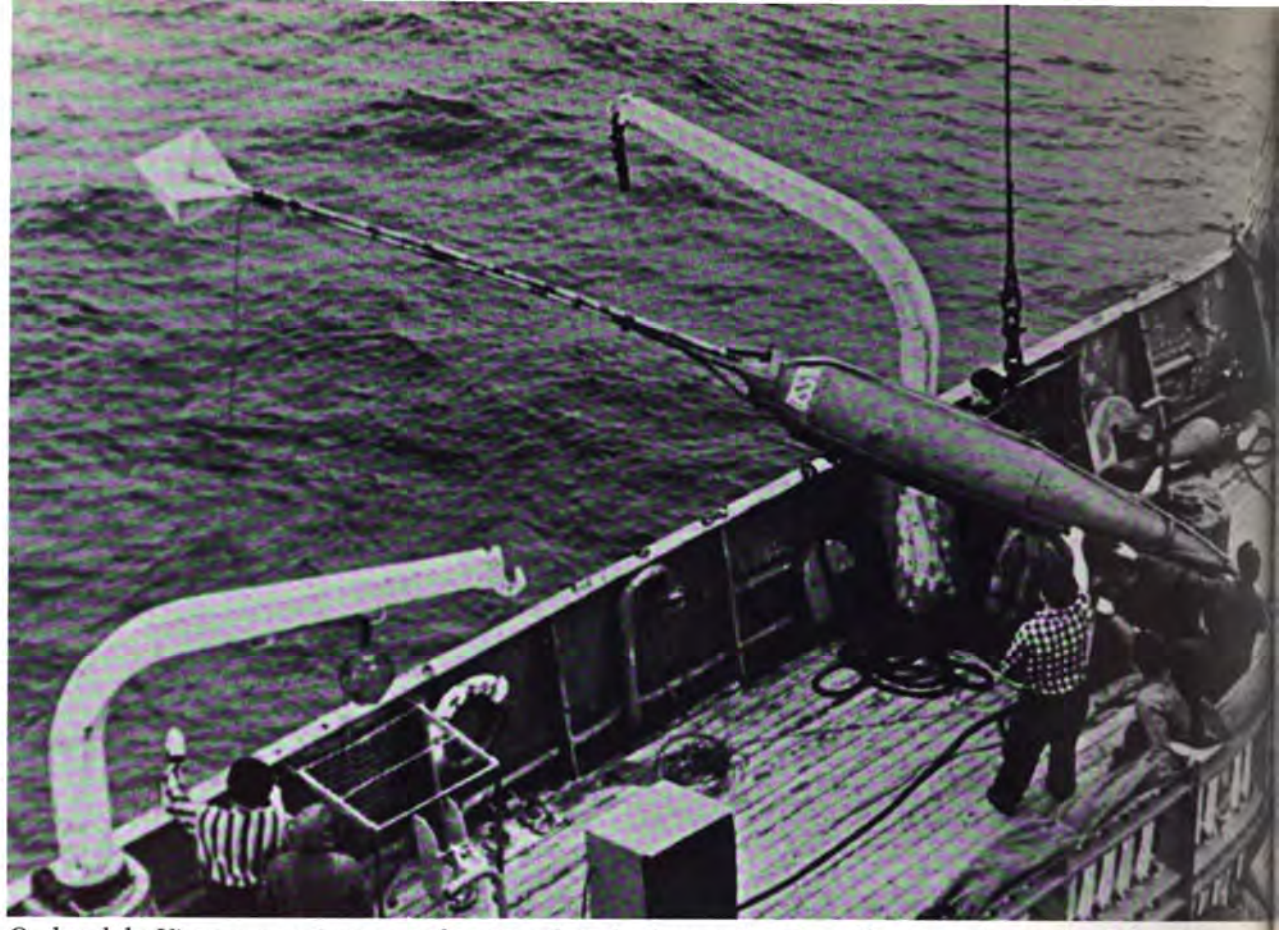
Valeria Kuzmenko-Titova said that Darlene Hard had expressed a wish to visit Moscow. We hope you'll come, Darlene! We'll be very happy to see you!

BY VLADIMIR TSEITLIN



Professor Lev Zenkevich, interviewed here, is one of the founders of Soviet oceanology and has spent many of the past 40 years with expeditions studying life in the sea.

He is the author of many books on ocean flora and fauna. One of them, **The Biology of the Seas of the USSR,** ***was awarded the Lenin Prize in 1965. Recently the 75-year-old scientist embarked on another voyage aboard the research ship*** **Vityaz.** ***This time he will be studying the Kurilo-Kamchatka depression in the Pacific.***



On board the Vityaz *preparations are under way to launch a buoy station that will measure the speed and direction of currents at depths of up to three miles. The measurements will be registered by self-recording devices.*

NEW FOODS FROM THE OCEAN

There has been much talk in the world press of an overpopulated planet with insufficient food resources. We are reaching a point, apparently, when there will not be enough land to feed our ever-growing population. What about the food resources of the oceans?

The ocean, I believe, will eventually become man's most important larder. **The ocean contains the** greater proportion of living matter. **Until now, however, 26 to 28** per cent of the earth's surface **has been feeding the world, while the** oceans, which make up 71 per cent of our planet's surface, **have been** providing only one per cent of our food.

What does the ocean now give us? Fish, mostly. There are approximately 500 million tons of fish in the oceans. Man uses only about 40 million, much too little. Besides fish, man gets whales, walruses, seals, as well as mollusks and crabs from the ocean. We use only three million tons of the very great stores of this sea food. Squid is a nutrient, but here again we use a relatively small proportion of the billion tons in the oceans.

Man has adapted land plants and animals to his needs. He will have to do that with the ocean dwellers as well. Some day the ocean floor will be farmed. Big flotillas will put out to sea for shrimp and squid. Various types of crustaceans, mollusks and algae will be as common on our table as coffee or bread and butter. And then there are the sea meadows. They are already being harvested with underwater implements. Japan and China are planting and growing laminaria at great depths. I am sure that the time is not far off when many countries will be doing underwater farming.

I gather that you do not think we are making adequate use of the ocean's fish resources.

You are correct. The trouble is that the fishing is done unevenly. The Northern Hemisphere gives us 98 per cent of the total catch, and the Southern Hemisphere a mere two per cent. As a result, the fish resources of the Northern Hemisphere keep dwindling.

The research our *Vityaz* did showed that fish resources in the Southern Hemisphere are very substantial. For instance, big schools of tuna were detected in the Indian Ocean.

We should also be giving thought to new species that might be marketable. We have the example of the small country of Peru that now outfishes Japan, China, the USA and the USSR. It became the world leader in a few years by concentrating on anchovy. Big catches of grenadier are now made by the trawl method at depths of 1300-3300 feet.

The Scandinavian, British and Irish press report that Russian Far Eastern salmon are now seen in the rivers of these countries. How do you explain that?

Some years ago millions of fertilized roe of Sakhalin and Kamchatka salmon were flown to the Kola Peninsula. The small fry grown under new conditions were let into rivers. Since then salmon has become a game fish in that part of the world.

This is by far not the only case of fish transmigration. Earlier still, Pacific fishes became acclimated to the waters of New Zealand, the southern part of Latin America and the Atlantic coast of North America. The Atlantic herring and oyster have transmigrated to the waters of the Pacific.

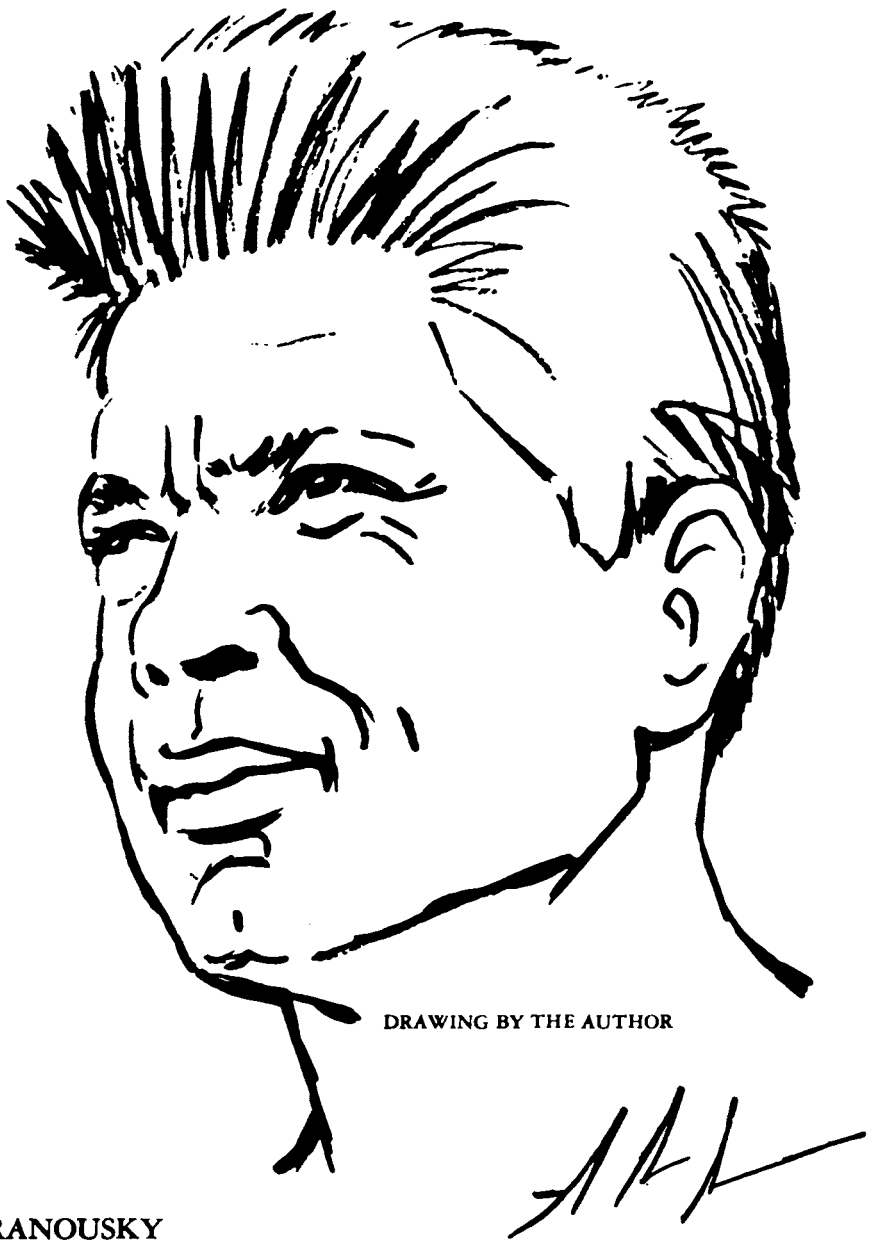
Attempts have recently been made to transmigrate Kamchatka crabs to an area in the Barents Sea four times as big as their present habitat off the western coast of Kamchatka.

Scientists claim that the flora and fauna of the blue continent are much more variegated than on dry land. What new foods can the ocean yield?

Plankton, for example, holds out great promise. It can be used in industry, medicine and, most important, as cattle feed. Analyses show that the nutrient quality of plant plankton is not inferior to corn silage nor is that of animal plankton inferior to beef.

The yearly plankton harvest of the world oceans would add up to scores of billions of tons. Plankton algae multiply amazingly fast. One microscopic diatom, for example, can produce millions like itself in four days. The harvesting of plankton will probably be undertaken soon to supply us with millions of tons of protein substance, vitamins, growth stimulants, antibiotics and medical raw materials.

DOCTOR FYODOROV'S DISCOVERY



DRAWING BY THE AUTHOR

BY ANATOLI AGRANOUSKY

I WANT to tell you of the dreams and quests, the failures and successes of a Russian intellectual. What happened to him is instructive and, in my opinion, worthy of our closest attention. Dr. Fyodorov should be written about. It is high time.

I met him in 1960.

He was a young, broad-shouldered, energetic man, dressed in good taste, and one could see at once that he was very intelligent. Will power and confidence were written on his face. He had prominent cheekbones, a short, slightly turned-up nose, full lips that took on an expression of irony, and an unruly shock of hair. What impressed me from the outset was his way of looking straight at you when he talked and listened.

He called on me with a rather unusual request. He wanted a statement to the effect that he, Fyodorov, had not asked anyone to write about him, Fyodorov, in the local newspaper. Unless he got a statement like that, he told me, that would be the finish of all his work.

At the time Fyodorov was working at the local branch of the Helmholtz State Institute of Eye Diseases in Cheboksary. It was there that he first performed a rare operation which ushered in all his troubles. You may, perhaps, have heard about adapting an artificial crystalline lens to the human eye—it made quite a stir at one time. The operation itself was a success. It should have been, considering that Dr. Fyodorov had spent more than a year preparing for it, experimenting on rabbits, looking for expert craftsmen until he found a patternmaker who could fashion a crystalline lens out of plastic. And then 12-year-old Lena Petrova, who had not seen with her right eye since she was two because of a congenital cataract, began to see with this eye. That was a success!

Then an article appeared in a local newspaper about the innovator in medicine, the skillful craftsman and the little girl from a Chuvash village—everything played up. It was picked up by a big circulation newspaper that called the innovator in medicine the director of the local branch of the institute. A mistake, but it made the real director a lifetime enemy of the doctor. It is a piece of hard luck to be criticized in the press, everybody understands that. But plead guilty, correct your mistakes, and you are forgiven. Should you be praised,however, some people will never forgive you that. In short, Fyodorov was all but gnawed up in Cheboksary. He rushed to Moscow, only to find a cold shoulder there too.

I later met the young doctor's adversaries. I was expecting bureaucratic officials, and I found myself face to face with scientists. Put yourself in their place. What have you learned? A mere boy has his first, perhaps accidental, success, and so much noise about it! And he is not even the first; operations like that have already been performed in Britain, in the United States, in the German Democratic Republic, and in Moscow there was one done just a month before the Cheboksary operation (a Zeiss-made crystalline lens of glass was implanted). This Fyodorov seems to be doing things with a swagger. The whole thing smacks of self-publicity.

I could, of course, object that he is not a boy but an experienced surgeon with a graduate degree in medicine. It was not one but four operations: He had already managed to do three more. Besides, he really hadn't asked to be written up. Newspapermen learned about the rare operation from the director of the branch himself—that was a fact.

All right, these were details you might overlook, ignore. But what about possible side effects? I was asked. What would happen to the little girl? No complications? A doctor just doesn't make a fuss in the press, whip up a sensation, raise the hopes of thousands of sick people before we know all about the possible effects.

"And how long do you have to wait?" I asked.

"Five years, or so."

Five years have now passed since that conversation.

Cheboksary has lost Fyodorov. I could, of course, have said that Fyodorov has lost the possibility of working in Cheboksary. but I very consciously put it the other way around.

Do you know what provincialism is? Where it comes from? Why it is called that? It takes as much time to get to Cheboksary by plane today as it once took to get to Kuntsevo (a former suburb and now a part of Moscow). Apparently, distance from the capital is no longer a criterion of provincialism, just as a college degree is not a criterion of intelligence.

What then? I am not being original when I say that stagnation of thought, lack of independent thinking is the criterion.

Opthalmologists in Moscow have only to voice a doubt and it becomes a directive for the Cheboksary branch of the institute. A frown there and a meeting is called here; a word there and organizational deductions are hurriedly drawn here; a sneeze there reverberates like thunder here. And that is how an operation talked of highly yesterday is branded as "mechanistic," "antiphysiological" and even "contrary to Pavlov." All of a sudden Fyodorov was sent to a far-off place, to find when he returned that his precious rabbits with plastic lenses in their eyes had died simply because they were starved. The director of the branch, without being asked, assigned himself the job of examining the patients Fyodorov had operated on and published data, also without Fyodorov—completely impermissible procedure—in which he cut the actual sight of the patients by almost 50 per cent! Medical ethics? Who even bothered about such intellectual luxuries!

At that time, lacking the five years' wait, I could not write about Dr. Fyodorov, although matters had been carried as far as his dismissal. *Izvestia* intervened on his behalf and he was reinstated. He left Cheboksary soon after because he was not given a chance to continue his research. Dr. Fyodorov sent his credentials to the Arkhangelsk Medical Institute and qualified for the head of the ophthalmology chair. That was the outcome of this case in 1960.

Arkhangelsk accepted Fyodorov.

Yes, of course, provincialism is a social and moral, rather than a geographical, concept. You can find "backwoods people" in the capital, and in the most remote parts of the country come across people of breadth and depth, people whose mental horizons are so wide you envy them. They play an inestimable, if not always appreciated, role. The differences between town and village, between provincial towns and metropolitan centers, these boundaries are being obliterated—that we know. We picture this as a gradual process. In reality it is made up of leaps, in reality we are steering a revolutionary course here too. Pause to reflect, for example, on the famous Professor Vladimir Petrovich Filatov. He turned his city into one of the ophthalmological capitals of the world. His scientific miracle attracted blind people from other cities, other regions, other countries to Odessa.

In Moscow a year ago I met an engineer from the Urals by the name of Ratchin. On his way north to the Arkhangelsk Medical Institute he stopped to see his uncle, who spent a long time trying to persuade him to stay. "Why go to Arkhangelsk? Have the operation done here, you have all the professors you want in Moscow!" But Ratchin went there, the operation helped him, and I think that seeing his nephew's sight restored also opened the uncle's eyes to the truth. His ideas about the "province" and "provincials" underwent the necessary correction, to use the oculists' term.

How are discoveries made?

Perhaps this one began when Fyodorov went to a watchmaker's shop. Someone had told him about a clever lad who worked there. Fyodorov looked him up and explained his new idea. He needed a lens which could be fastened in the eye with very fine shackles. The watchmaker, Victor Smirnov, spent all his evenings on the job and in two weeks produced a miniature press for shaping capron threads. Minute holes had to be drilled in the lens, and Fyodorov found another "Lefty,"* former scene designer Boris Ventsenosov, who had the very fine drills ready in six weeks. Unfortunately, they were good only for metal, they got stuck in plastic. But Fyodorov remembers how ready the old man was to help him. Next he went to the Maimaksan Plant, where the foundrymen made casts for his presses. He went to the Krasnaya Kuznitsa works, where foreman Pavel Tretyakov made an appliance for the operating table. All this done without charge, out of courtesy, "for free."

Actually he had done nothing yet, but Fyodorov was taken by the happy mood which makes everything, absolutely everything, seem possible, and everything somehow becomes possible. He needed an engineer, and just in the nick of time Panasenko, an engineer from Rostov, came for an operation (he could see with only one eye). While he was undergoing his examination, this engineer made a crystalline lens for himself and all the drawings for it. "It's amazing what a wealth of talent there is in the world!" reflected Fyodorov.

He went to Leningrad, to a watch factory, got the workers together in the interval between shifts and laid his drawings, calculations and photographs before them. Here was the mysterious eyeball, its "poles" and "equator," as the doctors call them. The eye is a whole world, the whole world to a man who is unlucky enough to be blind, but in some cases he can be given sight if the "spare parts" are available. One by one, expert workers examined the tiny lens, and after lengthy arguments the high council decided that it could be drilled. Nikolai Lebedev, a mechanic, made a unique little machine, a vise for fastening the lenses, and the other equipment necessary.

* Lefty, a character in a story by Leskov who made shoes for a flea.

But there was still the most complicated thing to make: the molds for the tiny lenses. No one at the factory could do it. The workers talked about an old man who used to work there. He might be able to if he was still alive. What was his name? Karan. But where do you look for him? At Vasilievsky Ostrov. . . . There were four people by that name in Leningrad. Finally, they found the street, the house, the door and the bronze plate on the door: "Alexander Karan."

A thin, sullen old man with hollow cheeks, he met Fyodorov as if he had long been waiting for him. He listened to him without a single interruption. Only when his wife came home with her shopping bag did he begin to question loudly: "But how did you locate me? Got my name at the factory? You say no one there could do it? So they do remember Karan! . . ." Later, as a small way of thanking the old man, Fyodorov invited him to Arkhangelsk. With a very proud air, Karan, in a white smock, stalked through the hospital, shook hands with patients, looked into Panasenko's eye (his lens was already fastened in), and taught the doctors how to use the press, talking to them with the manner of an academician—and he really was an academician in his line: his lenses were as clear as a dewdrop.

What else shall I tell you? When Dr. Fyodorov found that he needed a hydrophile plastic, Leningrad chemists Irina Arbuzova, Lydia Medvedeva and others racked their brains for more than a year over the problem and solved it. Just a courtesy, done entirely without charge. When he had to establish the mechanical properties of the eye, its elasticity, extensibility and strength, physicists Yevgeni Kuvshinsky and Sergei Zakharov built special instruments and took all the necessary measurements. Then he received an unexpected gift. Semyon Milman, the Cheboksary toolmaker who had shaped the first lens, sent a new model, a very promising one. "I had a little time and an idea," he wrote. Alexander Nizhin, a student of optics, helped Fyodorov shape the lenses, the Moscow chemists Tamara Krasovskaya and Ludmila Sobolevskaya synthesized a silicon plastic for him, and so on and so forth. . . . In short, Dr. Fyodorov has already performed 62 operations for implantation of the crystalline lens.

Now that I have told you about my hero, I shall let his adversaries speak. Here, for example, is what Vitali Arkhangelsky, a corresponding member of the USSR Academy of Medical Sciences, has to say:

"The operative technique for extracting a dim crystalline lens is now well developed. After undergoing an operation for cataract (as this disease is called), a great many pa-

tients have been able to see well with the help of glasses. Attempts to implant an artificial lens, advertised abroad as the latest 'sensation,' have not justified themselves. It turned out that this operation does more harm than good."

Well, disputes are useful, opinions vary, and there is nothing wrong about one scientist criticizing another. Especially since Vitali Arkhangelsky is a noted scientist who has done distinguished service. The trouble is that the critic's opinion in this case is fully shared by the chairman of the USSR Ophthalmological Society, Professor Vitali Arkhangelsky. The same position has been adopted by the chief oculist of the Ministry of Health of the USSR, the same Professor Arkhangelsky. It is sanctioned by the chairman of the Ophthalmological Problems Commission of the USSR Academy of Medical Sciences, Professor Arkhangelsky, and supported by the editor of the *Vestnik Oftalmologii*, Professor Arkhangelsky. How can one get at the truth in this dispute?

No, I cannot say that Dr. Fyodorov has at all times encountered active opposition. He has long ceased to be a solitary inventor. At Arkhangelsk he had the support of the staff of the institute, the Regional Committee of the Party and the Regional Executive Committee. He has acquired collaborators: the surgeon Vitali Bedillo has become expert in the new operation, and Valeri Zakharov, a student, has taken on all the technical work connected with the preparation of the lenses. In short, it is no longer so easy to knock Dr. Fyodorov down. But every step took so much effort, was such a strain, that I wonder how he managed to carry on.

"Everybody helped us," he told me. "No one ever refused me help except those whose official duty it was to help me."

It was only here that I began to see the full value of the general, friendly human support my hero got when he appealed "to people." It occurred to me that this was a demonstration of the new relationship between people. But it also occurred to me that had all this been done in the organized way it should have, a hundred times more could have been accomplished. After all, we do not blast furnaces by sheer courtesy. We do not build sputniks in our time off.

And now, about "harm" and "good." Lena Petrova is presently in the eleventh grade. It almost never occurs to her that she has an artificial crystalline lens. A short while ago she came to see Fyodorov again: a cataract in her other eye. Dr. Fyodorov did another operation, implanted another crystalline lens, and now, as Lena wrote me, she is "completely artificial."

I have received letters from many other patients. Mikhail Tikhomirov of Tbilisi writes: "You want an objective judgment on the operation. But how can I be objective when the sight of a normal person has been restored to me?"

Mikhail Kulishenko of Kiev writes: "Four and a half years have passed since the operation. I can see the surface of a tree and the finest tissues. To you it may not seem remarkable, but a person who has lost his sight will understand me. Moreover, I am an artist by profession."

And here is what Vera Gorbunova of Tataria writes: "Everything went smoothly, I did not even feel any pain. On the fourth day, when the bandage was lifted from my eye and I could see Dr. Fyodorov clearly, I was so overjoyed that I did not know what to do."

Railwayman Pyotr Letanin of Chelyabinsk Region says: "It is with joy that I check up on myself every morning. I pick up a box of matches and read everything on it, even the name of the factory. I can see half a mile ahead. Before I was not even allowed on the locomotive, but the commission has now given me permission. . . ."

How then is it possible to say that the operation "has not justified itself"? Risks? Unquestionably there are some—as in any new venture. Fyodorov has had his setbacks; in two cases (out of 62) an inflammation developed in the eye after an operation, and the lens had to be removed. But it is a fact that complications develop even after operations for cataract, which have been performed for 210 years now. Distinguished oculists, to mention only Choice (Britain), Binkhorst (the Netherlands) and Barraquer (Spain) with whom Dr. Fyodorov corresponds, forecast a great future for the artificial crystalline lens. More than 2,000 such operations have been performed outside the Soviet Union. The well-known American ophthalmologist, Dr. A. B. Reese, performed this operation on both eyes of 39 patients and on one eye in 115 cases. He is pleased with the results. How then is it possible to dismiss all that and make our own ophthalmology lag five or ten years behind them? And suppose they suddenly prove to be right? Will we then begin to skip after them?

I am finishing up now. Two months ago the Council for Coordination of Scientific Research of the Ministry of Health of the USSR discussed the work of Svyatoslav Fyodorov. I was present at that meeting, and I can attest to the fact that the discussion was earnest, well-wishing and businesslike. The decision was to approve his line of research to include the study in the plan of one of the major research institutes and to equip a problem laboratory in Arkhangelsk.

Last summer I met Dr. Fyodorov on the Black Sea coast. I was on vacation and so was he. I dropped in to see him at the Tuapse Hotel where he was staying. Yes, victories do not come easily, and I could see that the years of strain had told on the doctor. His eyelids were slightly swollen, and there were stern wrinkles around his mouth. But one could still feel the uncommon strength in this man, in his bulging muscles and square shoulders. He is extremely athletic despite the fact that he lost one leg at the age of 17 (it was then he decided to become a doctor).

I don't know, but I was told by eyewitnesses that at the doctors' conference in Krasnoyarsk he climbed the granite peaks along with his colleagues and was first to reach the summit. He skiis on the Northern Dvina. He took second place in the USSR swimming matches of the Medik Sports Society. He also has a first category rating in chess.

Why this persistence, this will power and determination? I'd say that he has all the attributes of the old Russian intelligentsia: He is responsive, kind, upright and has independence, or what Leo Tolstoy called PRIDE of thought. But this would not have been enough to accomplish what he did in the face of all the odds. His kindness is permeated with power, he is a real fighter, he always knows exactly what he wants. He is at home with ordinary folk, never uncertain face to face with the people, because that is where he himself comes from. The grandson of an ordinary peasant, the son of a cavalryman, he is a communist intellectual.

I have promised a story about Dr. Fyodorov's discovery. Well, new models of the crystalline lens have already been shaped at Arkhangelsk, different from the foreign models; 16 operations have already been performed with the liquid silicon Dr. Fyodorov uses as a substitute for the hyaloid. In one case, trying to save a hopeless eye, he injected about 25 per cent of the plastic and the eye was saved. ("Antiphysiological? Let it be!" remarks Fyodorov. "But it's humane.") But let the scientists judge these explorations, let them judge objectively and severely—they know better.

As for myself, I see something else in Dr. Fyodorov's discovery: He was able to harness for the use of science *the power of our new ethics*. He realized that one can approach any man and get his help, if the help asked is for a noble cause and the people's good. Dr. Fyodorov discovered for himself the Soviet way of life, the Soviet character. And for that reason he won his fight. I am grateful to him for that discovery.

Courtesy of Izvestia. *Abridged*


NEW TRENDS
IN ART

JEALOUSLY the devotees of the other muses lament that the public today is partial to painting. In recent years more people than ever have been thronging to the openings of exhibitions by painters of the Russian Federation. (In this article I shall confine myself to the art of that republic solely). These exhibitions draw people who showed little interest in painting before.

Even the wildest whims of fashion have their explanations. The public's earlier enthusiasm for poetry and its present sudden and growing interest in painting most certainly have theirs. Let us look into some of the leading trends in our diversified art panorama that are probably responsible.

Local Artists Cause Sensation

Soviet critics are agreed on one point: that regional shows by artists of the Russian Federation were much the center of interest this year. Four thousand painters and sculptors who live on the far-flung territory of the Russian Federation simultaneously exhibited 12,000 works in nine cities. So large a cross section of work by contemporary artists was unique in itself. But once recovered from the shock of pure quantity, one noted with pleasure that quality was very much in evidence. All knowledgeable viewers agreed that the professional competence and vigor of the local artists was a challenge to painters in the capital.

Laymen at the exhibitions, who might not venture to gauge subtle differences but who had enough background to make appreciative judgments, were pleased to say that they no longer needed to go to the capital to see good painting.

With whatever allowance there is to be made for local patriotism in such newborn seats of Russian painting as Voronezh, Khabarovsk, Novosibirsk, Sverdlovsk, Rostov-on-Don and Arkhangelsk, the fact remains—regional painting carried the day.

Reasons for Success

At the Black Earth Regional Show in Voronezh painter Mikhail Likhachev told me that in his city they now had a close-knit community of artists "searching, informed, most of them with special education in the arts."

"And what's more," he added, "we have developed confidence in ourselves."

It is this last which is perhaps most important.

I had been to earlier openings of regional shows. I went to one two years ago. Local painters had already begun to attract attention for their vitality and versatility of subject matter. However, their work was clouded by a certain timidity.

The painters Alexei Glandin and Mikhail Likhachev from Voronezh, or the sculptor Nikolai Borosov from Vladivostok, who are now so popular with gallery-goers, showed me work in their studios that I thought was good but—and I hope they will forgive my waiting until now to say so—struck me as, if not exactly imitative, yet not quite their own.

To my mind the root of the evil at the time was not any lack of virility on the artist's part but rather the attitude of the public.

The diffidence of provincial public opinion was a pernicious consequence of the errors we now group under the general head of the personality cult. Little had been done to combat the deep-rooted provincial habit of "looking to the capital." Local viewers were inclined to set greater store by sophisticated and big-city flair than by the intrinsic merit of a painting. And the artist often pandered to their tastes.

The last several years have witnessed a radical change of atmosphere. This is a different viewer who comes to openings of local shows today. He makes bold and independent judgment. He will not take hackneyed art. He expects the artist to assert himself, to have confidence in his own powers.

This new viewer has been created by the times we live in. And if he comes as a surprise, it is because of the astonishing speed with which he has become typical.

More Painters Showing

Another side of the artistic scene in the Russian Federation is that there are so many more painters to be seen. New art movements have brought new names into the limelight. There have been a great many one-man shows of regional artists in the capital. Alongside the latest impressive shows in Moscow of such prominent artists as Pavel Korin, Vladimir Favorsky and President of the USSR Academy of Arts Vladimir Serov (his first one-man show), Vladimir Igoshev, a regional artist from Sverdlovsk, exhibited.

The heightened interest of the public in paintings extends to foreign contemporary painters and sculptors as well as to old masters.

We have had a succession of exhibitions from the United States, France, Italy, Sweden, Norway, Poland, Rumania and the Asian and African countries. Some time ago the Fine Arts Museum in Moscow and the Hermitage in Leningrad were converted into "friendship salons." These famous museums moved half of their own acquisitions to give their best display space to guest showings that roused much discussion and interest.

These museums also renewed their permanent exhibitions and arranged a cycle of masterpiece exchanges with foreign museums. No question but that the new animation in the country's artistic life and the desire to win back viewers enamored of modern art prompted these efforts.

Other highlights in the artistic life of the Russian Federation were group and one-man shows of work from other republics, among them the Ukraine, Azerbaijan, Latvia and Uzbekistan. One memorable show featured the work of Martiros Saryan, Armenia's well-known painter.

With this mention of the by now traditional interest of the Russian public in the work of artists of other nationalities, let us return to the artistic scene of the Russian Federation.

Looking Back

The revival of interest in early Russian painting is very apparent. The recent discovery by the Andrei Rublev Museum of the *Russian Madonna*, which in spirit is akin to the famous Raphael Madonnas, caused much excitement. It was followed by an exhibition at Moscow's Tretyakov Gallery of newly collected works of the northern school of early Russian painting, which focused a startlingly new light on the techniques the early Russian painters used with such mastery. In Moscow,



BY ALEXANDER BAIGUSHEV
ART CRITIC

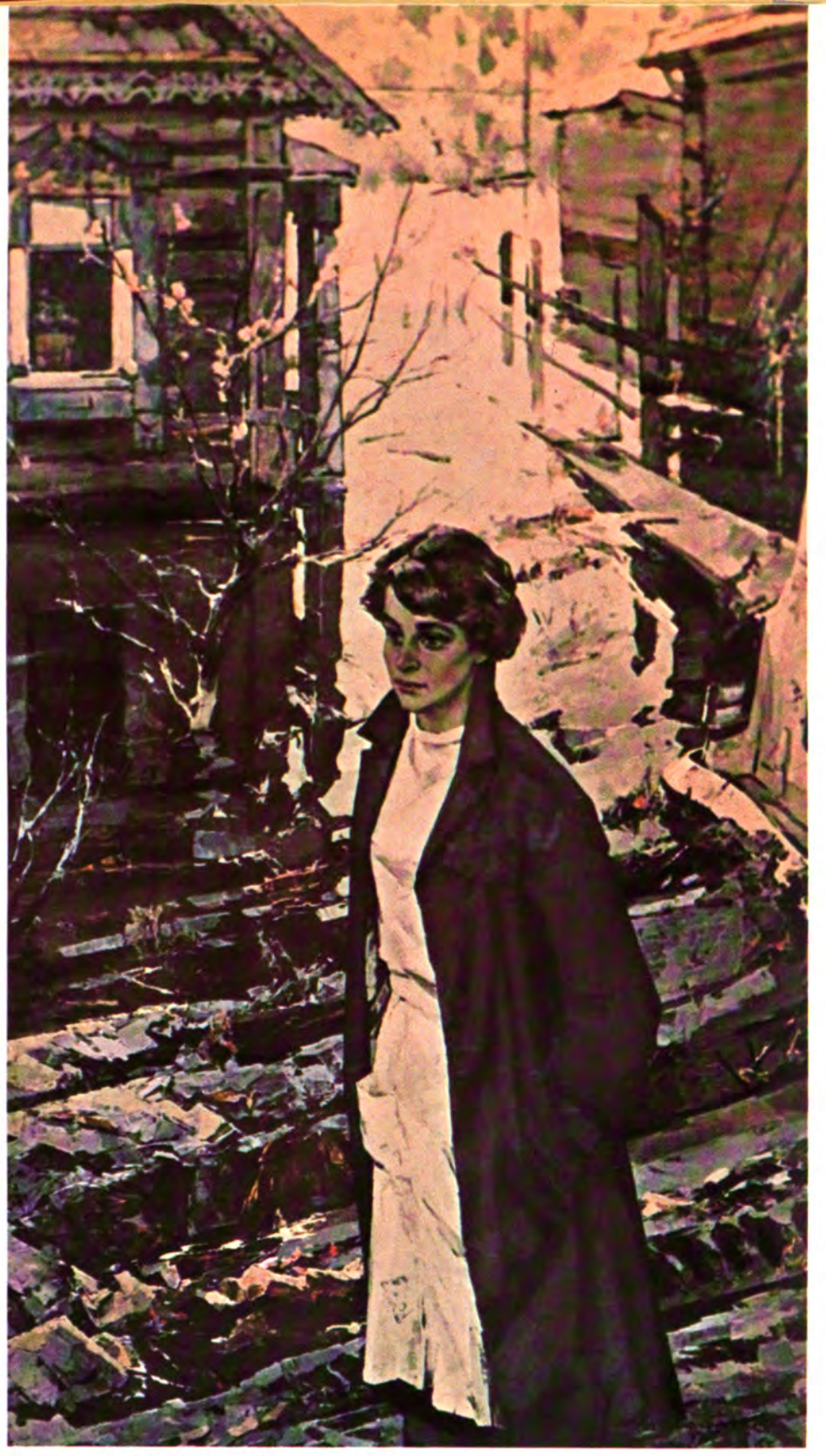




Springtime Sparrows. *Oil. 1962.*
By Kim Koval
of Ussuriisk (born in 1930)



Voronezhskaya Atomic Power Station Under Construction.
Oil. 1964. By Vasili Krivoruchko
of Voronezh (born in 1919)



Once Again It's Spring. *Tempera. 1963.*
By Leonid Kabachek
of Leningrad (born in 1924)



Before the Take-off. *1963.*
By Georgi Nissky
of Moscow (born in 1903)

Seared by the Flames of War. *Triptych. Oil. 1962-1964. By Geli Korzhev of Moscow (born in 1925)*





too, the first exhibition of Russian wood sculpture proved a revelation to even Sergei Konenkov, the dean of Russian sculpture, let alone the general public.

The retrospective exhibitions of Soviet paintings were of especially compelling interest. In 1962 an attempt was made at several exhibitions to look at Soviet art of the twenties and thirties in retrospect. It was motivated by an urgency to evaluate and indeed re-evaluate these works in the light of our own time with an open mind and without prejudice.

At first these exhibitions were somewhat desultory. Later, from solitary undertakings they led to collective research and the efforts of art historians and scholars to reconstruct, step by step, the record of Soviet painting, sculpture and graphic arts from the first days of the October Revolution.

Discussions on key problems of the history of Soviet art sponsored by the Artists Union, the History of Art Institute and the Institute of the Theory and History of Art were very productive. The first chapters of a fundamental study of the history of art are now being published in the magazine *Iskusstvo (Art)*.

Apart from introducing the public to half-forgotten works, such retrospective exhibitions as the one of Soviet graphic arts from 1917 to 1945 held at the Tretyakov stimulated scholarly interest.

The Test of Time

A succession of posthumous one-man shows followed on the trail of the retrospective exhibitions. Last year set a record for this type of show. They were first held in clubs for small groups of admirers. But a wider public responded, and they moved to the larger galleries.

The total output of artists of varying statures and degrees of fame was shown, among them Mikhail Nesterov, Anna Golubkina, Pyotr Shukhmin, Pyotr Konchalovsky, Vasili Basov, Vasili Chekrygin and Ivan Goryushkin-Sorokopudov.

Artists previously known to the public by a few carefully selected paintings or sculptures could now be judged by their entire body of work and the evaluation of critics and art historians verified.

Such shows helped reinforce valid judgments of the past and sweep aside false ones. Thus, showings of the works of Anna Golubkina and Mikhail Nesterov made it evident how bold and original the art of socialist realism was even at its very inception and revealed the artistic logic that led these two towering masters to espouse the new creative method. The works of Pyotr Shukhmin and Pyotr Konchalovsky, who had strongly op-





posed any narrowing of artistic views, testified to the fact that during the period of the personality cult the very best painters made no compromises and retained their distinct individuality.

On the other hand, the one-man show of Ivan Goryushkin-Sorokopudov served to dispel a false legend. Onlookers flocked to the opening because they had heard that this was a popular painter of the early part of the century who, for one reason or another, was not shown afterward. But the exhibition of his work made it evident that his art had outlived itself. A talented man but too susceptible to the influence of more virile artists, he had drifted from one trend to another, identifying himself with such masters as Mikhail Nesterov, Nikolai Roerich and Philip Malyavin, but had never come into his own. The test of time had not been kind to him, this last show clearly demonstrated.

Looking Ahead

Perhaps the best answer to the prospects ahead for Soviet art was furnished by the big show called Soviet Russia, which opened early this year at the Central Exhibition Hall in Moscow. The 3,000 works displayed summed up the very best of the preliminary local exhibitions. Without creating any special sensation, this show reflected today's dominant movements and provided clues to future developments.

The Soviet spectator has grown accustomed to look on a visit to a newly opened big exhibition as a stimulating experience with much to be seen and weighed. Subject matter, if not the determining factor, is at any rate extremely important. And as regards subject matter, the Soviet Russia Exhibition satisfied the most demanding. Long before the exhibition, following established custom, Moscow artists traveled the length and breadth of the country seeking inspiration for their new pictures. They painted spacemen, workers laying a gas pipeline, people in factories and on state farms, scientists, actors and schoolteachers. Life as these painters see it is mutisided and fascinating. It is good to be reminded that Moscow artists are true to our long-standing tradition of portraying life.

The form of their portraits of life, however, has changed perceptibly. Two years ago, when the most forward-thinking artists had already made important headway, many painters were still crowding their pictures with narrative details. At this exhibition, however, the narrative type of picture was conspicuous by its absence. The literary handling of subject matter is dying out, and the painter is using the full range of his own medium to express himself. This is a result of the long and bitter struggle that Soviet painters have

been waging against the pretentious and overstated.

Wide possibilities are now open to the artist. Invention, a high standard of craftsmanship, and multiplicity of form, style and genre are expected of him. Socialist realism is an amalgam of bold pioneering with everything progressive in traditional world culture. But the stereotypes of the personality cult period do not die of their own accord. We have had to combat them vigorously. Nor could extremes be avoided in the course of the struggle. There was the infatuation with purely formalist problems in painting as well as the extreme of photographic depiction. The Soviet Russia Exhibition demonstrated that these extremes have vanished in recent years and a rational approach has crystallized.

Naturalism on the Way Out

A decided aversion for slick art, unimaginative detail and photographic portrayal is general today. Every image cries out for the brushwork best suited to it. To do justice to the human character, the artist uses every means at his disposal. Even Alexander Laktionov, notorious for photographic depiction of detail, is now concentrating more on the face and is less addicted to reproducing the fabric of curtains.

Broad strokes and intense movement mark the work of young artists. Even confirmed believers in traditional painting like Mikhail Likhachev or Vladimir Serov are now inclined to be more daring in their color and emphasis on plane surfaces.

There is growing interest in the schools and techniques of early Russian painting. In portraying the human figure, we now and then find the head alone handled dimensionally while the rest of the figure and background are painted in a flat and decorative manner. However, there were no purely decorative and compositional paintings at the Soviet Russia Exhibition.

While concentrating more on form than before without making it an end in itself, Soviet painters still believe character revelation to be all-important. There were a very impressive number of such strongly painted canvases exhibited.

There were, too, strongly dissonant works, for example, Geli Korzhev's triptych, which aroused much discussion in the press and among onlookers.

Geli Korzhev is a young painter only recently elected a member of the Academy of Arts. He chose to depict three most pathetic figures—a one-eyed war veteran, an old mother and a blind musician—two Russians and a Frenchman. Compositionally the picture follows the principle of the movie close-up and is reminiscent of a still in which the three heads are magnified by the eye of the camera, and the onlooker is asked, as it were, to focus on the most striking details. This fidelity to detail (for example, throbbing veins on the emaciated hands with which the old mother covers her face) has an almost surrealist effect. There is an intensity of color without half tones or reflexes which is more graphic than real.

Medium Speaks for Itself

In sculpture, as in painting, attempts at varnishing are being fought vigorously. The sculptor's principal interest is in the portrait, but he no longer aims at a faithfulness which turns stone into wax or plasticine. Whatever his medium, he looks for its possibilities.

Sculptors try to choose a medium befitting the character they are portraying. Proud bronze, soaring aluminum, gentle marble and frowning concrete, singing wood and durable granite—each has been made to speak for itself. These efforts are evident today in the work of such noted sculptors as Lev Kerbel, Lenin Prize winner and corresponding member of the Academy of Arts, and of a young sculptor like Alexander Semynin, voted only a year ago a candidate member of the Soviet Artists Union.

Soviet sculpture also has its jarring notes. A new manner which is a strange variation of the constructivism of the twenties has appeared. A sculpture of this kind on view at the exhibition shows a group of builders with an actual fragment of the framework of a house appended. The imposing title *We Are Building the Framework of Communism* does not heighten the dubious value of this work.

Graphic Arts Carry the Day

Within the last six or seven years it is almost the expected thing for graphic arts to win the highest praise at exhibitions. Graphic arts are appreciated everywhere and by everyone at face value, with no apologies or explanations required or offered. More rapidly than other visual media, Soviet graphic arts shook off the puerility of naturalism. Many powerful young graphic artists have come to the forefront in recent years—Guri Zakharov, Illarion Golitsin, Anatoli Borodin and others. They enjoy almost as much recognition as their venerable teachers Vladimir Favorsky, Andrei Goncharov and Dementi Shmarinov.

At the Soviet Russia Exhibition the graphic art section, as always, was the most impressive. There were works by a great many artists, but the public did not even have to look at the names to recognize the distinct and characteristic style of each artist.

Paradoxical as it may seem, this was the viewers' only criticism. It may have been not so much criticism (how can one find fault with perfection?) as misgiving: Were the graphic artists resting on their laurels? The artists' own reply is to assure us that they are still full of youth and vigor and are merely gathering energy for a new qualitative leap.

Incidentally, the whole exhibition gives one reason to believe this leap is at hand.

There are any number of flourishing art movements in the Russian Federation today. Competition is keen, and it is too early to say which will prove the most vigorous. But we can safely predict that in the process of stir and change many significant works of art will be born.





Khokhloma. *Oil. 1963.*
By Margarita Kasyanova of
Gorky (born in 1929)

PAINLESS CHILDBIRTH

BY YURI ZMANOVSKY
MASTER OF SCIENCE (MEDICINE)

ONE VERY STRIKING difference, among many others, between today's maternity wards and those of 15 or 20 years ago is the quiet. You rarely hear the screaming which invariably came with labor then.

In the Soviet Union the use of drugs to relieve labor pains goes back to the thirties. Our three decades of experience proves that labor pain can be eliminated. Pain relievers in this case, however, have to be much different from those used in other fields of medicine, surgery for example. The source of the pain and duration of childbirth pose special problems. Not infrequently a woman will be in labor for 24 hours and more, and there is no analgesic which will be effective for that long a period. Repeated administration of the same drug would hurt the mother and would almost certainly harm the child.

There are other considerations that limit the use of drugs in labor. General narcosis is ruled out because the parturient woman must be conscious. It is difficult to block the nerves along the birth canal with local anesthesia; in addition, only simple preparations that can be administered by even a practical nurse must be used. The drug method, therefore, despite its general use in many countries, is not the whole answer.

In 1948 a group of obstetricians from Kharkov led by Konstan Platonov and Ilya Velvovsky suggested a system of psychoprophyla preparation of expectant mothers for painless childbirth. This sys grew out of Pavlov's work on the higher nervous activity of m and animals. The Pavlovian premise is that every vital activity of t organism, childbirth included, is a complex reflex process. Impu coming from the birth canal reach the central nervous system and brain. The brain sends orders to the "working" organs, in this the womb, abdominal muscles, and so on. The pain sensations a the result of impulses coming from the birth canal to the cortex of brain. It is from the cortex that pain comes as a specific psychic ma festation. Hence by changing the functional state of the brain, it sh be possible to alter and even prevent pain sensations.

Can obstetricians do this? They can and do, with a word. A w may change the functional condition of the brain, so much so t irritations will lose their power to evoke pain. Word stimulation of nervous system in the last two months of pregnancy is the basic e ment in the psychoprophylactic method.

Even the very first results demonstrated its great efficacy. Since l this method has been in general use in the Soviet Union, particu in the Ukraine, where 70 to 90 per cent of the pregnant women ta the courses. Millions of women now deliver their babies after psy prophylactic preparation.

The Soviet method has been in wide use in other European coun since 1951. Czechoslovakia and France were the first to apply it. C rently some form of the method is used in more than 50 countries.

There are two kinds of prenatal preparation—what we might the general and the special. General preparation is done during whole period of pregnancy, beginning with the first visit to a mater center.

An obstetrician examines the pregnant woman, follows her prog and the development of the fetus, and prescribes a special diet w indicated. Many obstetricians recommend a series of physical exer from the first months of pregnancy.

Special psychoprophylactic preparation begins at the thirty-se or thirty-third week of pregnancy, when the woman goes on her ma ternity leave before.* She usually takes six sessions at seven-to ten-da tervals. The special preparation may begin at a later stage, but t sessions must be more frequent to get in all six.

The first session is always individual and is in the nature friendly chat. The obstetrician tries to find out how the woman f about motherhood, what she is afraid of and why. His job is convince her that labor pain is not inevitable, that she can train her not to have it.

The remaining sessions are usually conducted with a group of s to eight women. The second session is spent on the act of deliv Special attention is paid to the pangs which signal the beginnin childbirth; they are described in detail. The next sessions are cerned with the woman's own learned activity in childbirth. Sh taught correct respiration and other techniques, such as stroking pressing the "pain prevention points."

The aim of these sessions is to create a temporary connection tween some physical act, such as breathing or stroking, and the doc explanation that childbirth will be painless if all these techniques learned and done properly.

To understand the physiological mechanisms that operate to lieve labor pain, let us turn for a moment to neurophysiology.

* Women are granted a maternity leave of 56 calendar days before and endar days after childbirth at either full, three-quarters or two-thirds pay natal leave is extended to 70 days in cases of abnormal delivery.

Higher nervous activity is an interaction of two processes—stimula-n and inhibition. Stimulations—external and internal—is received nerve ends called receptors, located in the skin, eyes, etc. From these ceptors nerve impulses are transmitted along nerve pathways to the ıtral nervous system from where they return to the "working" organs the form of information. This is a stimulation process. At the same ıe other nerve formations that have not been stimulated are in a te of inhibition which is called inductive. However, there may also inhibition in nerve formations that are stimulated, but this requires ecial conditions. This inhibition which will appear only under special ining conditions Ivan Pavlov called conditioned inhibition, as distinct m the unconditioned (inductive) inhibition which appears without eliminary training.

What the prenatal preparation does, in the main, to inhibit pain ısations in childbirth is to keep the cortex of a parturient woman ively stimulated. This it does by training. Verbal stimulations form ensive foci of excitation in the cerebral cortex of pregnant and turient women. This mechanism of directed inhibition is a general ysiological law that governs the vital activity of man and animals. ıdies made by the Pavlov school showed that dogs did not exhibit n reactions to a most destructive stimulation by electric current. parently such physiological processes also operate when people do exhibit their emotions despite pain stimuli.

Thus, in the process of prenatal preparation, by verbal suggestion d training in the techniques of painless childbirth, doctors form the brain of a pregnant woman a durable system of temporary con-ctions, the essence of which is: "Now I know that childbirth is a ysiological act which will be painless if I follow the techniques cor-tly at each stage of delivery." The success of prenatal preparation de-ıds to a large extent on how well the expectant mother understands part in the childbirth process. Therefore, the very important final sions tell her precisely what she will see in the maternity home, ginning with the reception room and ending with the postdelivery rd.

With adequate psychoprophylactic preparation and normal delivery, majority of women feel no pain at all, or else the pain is momentary d not intense. In addition, the duration of labor in psychoprophylac-ally prepared women is shorter, the postpartum hemorrhage is in-nificant or absent, obstetric operations and interventions are fewer, d pathological conditions in the fetus or newborn are absent or occur ely.

In some West European countries the so-called natural childbirth thod suggested by the English obstetrician Grantly Dick Read is d. It differs in many respects from the Soviet method. The principal ıctical difference is that Read's method trains the pregnant woman relax all her muscles.

In some cases psychoprophylactic preparation will not give sufficient n relief. This is explained by individual nerve system peculiarities. number of studies have shown that psychoprophylactic preparation en fails to give full pain relief to women with weak and insufficiently ive nerve responses. In such cases we repeat the sessions, administer so-called psychotropic drugs in the week or two before childbirth. d use analgesic preparations, the last especially if the course of labor iates from the normal. Analgesic preparations, as a rule, have a mentary effect, are given only once and will, therefore, have no mful effects on either the mother or the child.

We can conclude with the assurance that the problem of relief from or pain is well on the way to being solved. A great many women e learned from their own experience that childbirth is a normal, nless or almost painless physiological act.

ADZHIN-TEPE TREASURES

COLOSSAL BUDDHA EXCAVATED



A MAGNIFICENT Buddhist monastery once stood in a mountain valley in the south of Tajikistan. It was known and revered in all the neighboring kingdoms. Thousands of pilgrims came to bring offerings and to feast their eyes on the temple's statues and paintings.

Buddhist influence in Central Asia waned. The temple was deserted, rain and wind eroded its walls, and as the centuries passed a huge hill rose up in its place, the Adzhin-Tepe.

A few years ago Tajik archeologists began to excavate the hill. Under a thick layer of loess they found monastic cells and passages decorated with extraordinarily beautiful frescoes. Several clay statues of Buddha were also found.

Boris Litvinsky, head of the expedition, says of the statues:

"These eloquent witnesses to the high level of art attained by the ancient ancestors of the Tajiks lie before us in unbroken silence, engrossed in contemplation, as it were. There is a completely preserved sculptured figure with a shoulder belt: the proud posture, the head thrown back slightly, the jaw betraying strong will power and the eyes looking into the distance. The figure conveys a feeling of mobility and omnipotence. It is one of the best we found."

The news that the expedition had unearthed a Buddha 36 feet high created an archeological sensation. It is the first statue this size to be found in Central Asia. The clay colossus had lain buried for almost 14 centuries.

The larger significance of these excavations is the discovery of previously unknown Buddhist-inspired art in North Tokharistan, as the regions of Southwest Tajikistan and South Uzbekistan were once called, and the high level attained by the Central Asian architecture, painting and sculpture of the period.

SERGEI YESENIN

to mark the seventieth anniversary of the poet's birth

BY NIKOLAI BANNIKOV

FOR the Russian reader the first years of Soviet power are associated with two poets: Vladimir Mayakovsky and Sergei Yesenin. Writers whose lives and temperaments were as different as their poetry, they were often at loggerheads, but each was aware of the other's significance. Mayakovsky was the trumpet of the Revolution, its brass and thunder. Yesenin was its lyre. Yesenin's poetry is distinguished for its great sincerity. His unaffected responses to life ring with a crystal-pure tone. Feeling for the Russian countryside invests his poetry. "My lyrics are animated by an all-consuming love for my native land. A feeling for my motherland is uppermost in my verse," Yesenin would say. The tender, virginal birch tree, encountered in many of Yesenin's lines, is the symbol of the poet himself and his blood connection with Russia.

Childhood

Sergei Yesenin was born in Ryazan Region, country that is not notable for its scenic beauty or luxuriance. Like the rest of Central Russia, it is flat, a region of sad, quiet colors, of the subdued rustle of willow and poplar trees, where gloomy pine forests growing from white sandy soil stretch for mile upon mile. Meshchora is the name of the wooded portion, full of lakes and impassable bogs, of grouse and squirrel, that begins not far from Yesenin's native village. There, at the edge of the Meshchora forest, Yesenin went to a school which prepared teachers for parish schools, and there he began to write poetry.

The monotony of the Ryazan landscape is broken by a river, the Oka, a wide, deep blue, majestic tributary of the Volga. Yesenin's house stood on the steep bank, and on the low opposite bank stretched the green meadows where the peasants lived for weeks on end in huts during the summer haymaking. These meadows were the young Yesenin's favorite haunt. In the many pools left by the spring floods the village youngsters caught fish with their bare hands. They herded horses, helped the grownups with their chores, and in the evenings listened to songs and the strains of the accordion and watched the village dances. Yesenin carried the picture of this river and the wondrous meadows of his childhood all his life.

Oh, land of meadows like the ocean,
Oh, blue of heavens, rivers, lakes,
I love with such acute emotion;
The heart alternately sings and aches.

A large and ordinary Russian village stretching along the bank of the Oka, a church, a village school, a two-story wooden manor house with a fenced-in orchard. His simple peasant family owned very little land, and his father lived for long spells in Moscow where he worked as a butcher's clerk. His mother was a simple, illiterate peasant woman, full of pointed phrases and wise maxims, a lover of song. There were two younger sisters and the maternal grandfather, Fyodor Titov, a striking figure, in whose house Yesenin lived for several years as a boy. An enterprising individual, this grandfather, who had floated timber rafts down the Neva to St. Petersburg in his youth. Impoverished in old age, he could no longer do itinerant work and stayed home in the village. Overbearing, with a stern, statuesque face, a long beard and brown knotty hands, he was well versed in sacred writings and religious observances and taught it all to his grandson, who subsequently put his knowledge of the Bible to use in his theomachist poems. Later Yesenin recalled: "Grandfather sang such sad, old, drawn-out songs to me. On Saturdays and Sundays he would talk to me about the Holy Scriptures."

So, this intense, impulsive, mischievous boy with blue eyes and curly golden hair grew up in a Ryazan village. In school he was one of the leaders. Stocky and aggressive, he often came home with a bloody nose. In summer he spent the whole day outdoors, fishing and riding bareback. He was an avid reader, though books were scarce then in a Russian village. When he was 14, he began to write verses which 15 years later appeared in the opening pages of an anthology of his work.

Fame

After several years of study in Spas-Klepiki, he moved to Moscow, where he lived with his father, worked as a proofreader at a print shop, associated with revolutionary-minded workers, took part in demonstrations and attended a people's university. This was a time of deliberation and search, a time of rapid spiritual growth, when he was first published and barely noticed by the reading public. And then sensational success. He came to St. Petersburg and made the acquaintance of Russia's leading poets, who gave his verse a cordial welcome. Yesenin soon became famous. He was invited to the fashionable literary salons and printed in the best magazines. This was during the first years of World War I, with the October Revolution in the offing.

Symbolism, the dominant poetic trend of the prerevolutionary era, was already on the wane. Yesenin, with verse as vivid as daisies and cornflowers, was received in literary circles as the envoy of the Russian countryside. Men of letters in St. Petersburg and Moscow heard the voice of the Russian people, of the Russian peasantry in Yesenin's verse. Afraid of the revolution but at the same time aware that the old way of life was crumbling, they gave him an almost mystical image. They recalled his distant forerunners, especially the talented, self-made poet Alexei Koltsov, the son of a Voronezh wholesale dealer. Alexander Pushkin knew Koltsov, and his songs are still sung and read. Russian literature had other poets who were reminiscent of Koltsov in character and origin—Ivan Nikitin and Ivan Surikov. Yesenin was hailed as their successor. But the times were different and so was the poet, although he too had come from the people.

In the first place, Yesenin did not remain a self-taught poet who gazed upon professional men of letters with reverence and humility. Though he had relatively little schooling, he acquired a background in poetry, delved to the very roots of the Russian language and speedily mastered his art. Yesenin was well and widely read. His open and penetrating mind and his rare gift of spiritual perceptiveness made him, in the words of Maxim Gorky, an instrument especially designed for the creation of poetry.

The Poet and the Revolution

And then came the 1917 Socialist Revolution, giving new power to Yesenin's voice. But for the Revolution, Yesenin would probably have remained a poet of the "sorrowing fields," his shepherd's horn would not have resounded throughout the land. The Revolution gave Yesenin's verse a new intensity, a new and truly universal breadth. It rang with the vernal joy of liberation, with passion for the future, for light, and with the tragic collisions of a critical and difficult period. He was torn by opposing forces. Many things drew him back to the past. However, the mainstream of Yesenin's poetic and spiritual development was directed to new and grand ideals.

The Revolution ushered in the significant and most fruitful period of Yesenin's life. He subjugated himself wholly to poetry, the single passion that tormented and consumed him. For this he sacrificed a stable and ordered way of life, security and shelter, a family and health. His passion wore him out, brought his tragic end—suicide. Ambitious and proud in his own way, Yesenin saw his aim in life making his "meadow songs resound as brass." The eight years that Yesenin lived after the Revolution have written his name forever in the history of Russian literature, in the hearts and minds of his people. Eight short years, but how many fine poems, memorable events, unforgettable encounters, fervent friendships!

With help from friends, Yesenin, in the spring of 1921, traveled in a half-empty railway carriage to the Ural steppes, where Pugachev's rebels once fought the troops of Catherine II. From that trip came his tragic poem "Pugachev," with its violence, its meadow smells and its living characters.

He met the famous American dancer Isadora Duncan, went to Berlin, then visited Venice, Paris, Brussels and New York. Somewhere, in either Italy or France, he recalled with heart-rending sorrow the Ryazan countryside, his barefooted childhood and wrote the purely Russian lines:

O'er the orchard there's sun specks
falling,
Softly August leans on the fence.
I can hear little birds calling
From the linden tree's fetters dense.

Next, we see him in the United States, still



with Isadora Duncan. Yesenin did not like America much, and America did not receive Yesenin very well. He was quarantined on Ellis Island for a long time, and newspaper reporters wrote about him as though he were nobody but the husband of Isadora Duncan. Yesenin described the United States of those days as "an iron Mirgorod," by analogy with Gogol's image of a sleepy little bourgeois town, where the life of the spirit is at a standstill. It was this paltry spiritual life that struck Yesenin most in America. "The reign of the dollar has thwarted all aspirations to anything complex in America," Yesenin wrote then. "An American devotes himself totally to 'business' and cares for nothing else."

The statement is open to question. Yesenin's stay in America was short, and he had little opportunity to see much of anything. Be that as it may, one fact is plain enough, that the poet returned from Europe and America, "still deeper in love with communist construction" and with his Russia. "I may not be very close to the Communists in my romantic poetry," he said, "but I am close to them in consciousness and hope to be close to them in my creative effort."

Next, Yesenin, grown weary of the smoke of taverns, of bouts in Moscow drinking places and of literary Bohemia, left the capital for the Caucasus, where he lived in Georgia and later in Azerbaijan. Yesenin admired the hues of the southern sea, breathed in the smell of the oil wells, mixed with people who were totally new to him, listened to the workaday throb of the exotic Caucasus.

Living by chance and on occasional literary earnings, the poet was full of vigor, young in heart. One inspired poem after another flowed from his pen. He wrote his famous *Persian Motifs* cycle in which he blended his personal impressions of the Orient with images encountered in the works of the old Persian poets: Firdausi, Omar Khayyam, Sa'di. The *Persian Motifs* are unique for their melodic lilt, their transparent shadings, their balanced beauty, unusual even for Russian poetry, which has much to boast of.

My beloved's hands, a pair of swans
Diving in the gold of my fair tresses.
Living on this planet there are none
Whom no wistful song of love impresses.

There in the Caucasus Yesenin worked hard on his best poem, "Anna Snegina." The poem tells how the Revolution came to the Russian village, how it altered the peasants' way of life.

All this rush of work belonged to 1925, the last year of Yesenin's life. Though the foreboding of doom kept him company for a long time, still that fateful December night when he took his own life in the Leningrad hotel Angleterre was accidental, the tragic product of a transient depression.

The 40 years since Yesenin's death have not diminished his popularity. He is beloved by connoisseurs of poetry and by the simple reader, by people in towns and villages. Anyone who loves Russian nature, the Russian land, loves Yesenin's poetry.

MISCARRIAGE OF JUSTICE

The newspapers *Izvestia* and *Literaturnaya Gazeta* held a discussion in print on what seemed at the start to be a self-evident principle of law. But the argument generated such heat that one of the parties concerned, namely the Assistant District Attorney of Chelyabinsk, sued *Izvestia* and its correspondent for impugning his character and degrading the dignity of his office.

This was the sequence of events that led to the charge and the trial: *Literaturnaya Gazeta* published an article by Professor Mikhail Strogovich, corresponding member of the USSR Academy of Sciences and a distinguished legal authority, which analyzed the reasons for miscarriages of justice.

In most cases it was due, he concluded, to faulty evidence offered by the prosecution. To avoid any prejudice by the prosecution against the accused, Professor Strogovich declared that under no circumstances should the accusation be equated with guilt.

Assistant District Attorney Gleb Filimonov took exception to what would seem to be a truism. He interpreted it as an encroachment on the prerogatives of the prosecution. Filimonov asserted in his letter to *Literaturnaya Gazeta* that when the prosecution, after investigation, prefers charges against an accused, they consider him guilty as a matter of course. Otherwise why bring charges?

It might appear at first thought that the D.A.'s obvious lack of understanding of legal theory is not worth the time and attention of the lay public and might better be left to the conscience of the educational institution that gave him his diploma. Nevertheless, Filimonov's letter was also published in *Literaturnaya Gazeta*, and immediately evoked three articles in response:

"A Reply to the D.A." by Professor Strogovich, "Dangerous Ignorance" by the noted journalist Olga Chaikovskaya, and "Accused Does Not Mean Guilty" by Alexander Gorkin, Chairman of the USSR Supreme Court. The first appeared in *Literaturnaya Gazeta*, the other two in *Izvestia*.

The question arises: What need is there for the country's Chief Justice to comment on a principle that even a beginning law student understands?

The point is that this argument passes far beyond the bounds of an academic dispute. What is in question here is not simply which legal standard to apply but the very fundamental question of personal immunity. Filimonov can hardly be accused of wishing to limit personal liberty, but that is where the logic of his position inevitably leads him. A disregard for the basic principles of Soviet law brought the country to a tragic impasse during the period of the personality cult. That is why the investigating bodies and the courts, as well as the public, are so careful to see that not only the spirit but also the letter of the law is strictly observed.

After the Twentieth Congress the Communist Party pushed hard for a greater democratization of the judicial system. Among other things, the rights of the defendant have been much enlarged and the functions of investigating bodies more precisely defined. And the slightest attempt on anyone's part, whether willfully or from ignorance, to abrogate these rights or expand these functions meets with the irreconcilable opposition of government and party officials and leaders of mass organizations.

We are frequently asked: What guarantee is there that the unhappy events that grew out of the personality cult will not repeat themselves? The guarantee lies in this refusal to compromise with any and every attempt to violate the law.

Asked by *Soviet Life* to comment on the suit brought by Filimonov, *Izvestia* defense attorney Ilya Perlov, Doctor of Laws, said:

"The People's Court dismissed Filimonov's suit. This means that our courts of justice once again ruled unequivocally against any attempt to undermine legal guarantees."

The following are the articles and letters that constituted the evidence in the trial.

MISCARRIAGE OF JUSTICE

BY MIKHAIL STROGOVICH

Corresponding Member, USSR Academy of Sciences

A MAN'S FORTUNE, honor, liberty and sometimes life depend on the verdict a court of justice brings in. Legal justice is inseparably bound up with the concept of social justice. For that reason a wrong verdict, a miscarriage of justice, must be seen not simply as a blunder on the part of the court in question but as a serious violation of legality, damaging to both the victim and society.

It goes without saying that the miscarriages of justice we come on will vary in degree. Some can be remedied easily, others not. But none can be tolerated.

Indeed, it might be simple enough to change a verdict and order an innocent man released, but who will repair the damage the innocent man's reputation and his family have suffered, and how?

This happened to X., a woman in Krasnodar Territory. Several years ago her two stepsons, who were 13 and 20 years old, disappeared. The district attorney's office arraigned the stepmother for murder motivated by selfishness. The district court found her guilty and imposed a severe penalty. The territorial court, a court of second instance, upheld the verdict. Only the Supreme Court took issue because the verdict had not been based on authenticated evidence but on presumption. Presumption strong enough to hypnotize the investigating bodies and two courts of justice! The verdict was quashed and the prisoner freed. Where the two boys are, whether they really were murdered and, if they were, who murdered them, we do not know. The truth still has to be established.

Nor can we take comfort from the argument that cases of this kind are few and far between, that, as a rule, miscarriages of justice are caught, that the violations of legality current during the time of the personality cult have been rectified and will not repeat themselves. Today any infringement of legality is impermissible.

Every miscarriage of justice can be explained, of course: a very complicated case, an inexperienced judge or investigating officer, prejudice, neglect, and the like. But while it can be explained, it cannot be justified in the slightest. Our system of justice means just that. To say that it is human to err and that even judges and investigating officers can make mistakes is drivel. It goes against our code of ethics, our concept of justice. No official of the law can be permitted to penalize an honest man and let the criminal go free! He simply has no right to! That is an "error" for which he must be held responsible, as he would for a grievous violation of legality.

Why is it, though, that courts do sometimes bring in wrong verdicts? And what must we do to see that this does not happen?

Miscarriages of justice often result from a mistaken evaluation of the evidence. The court decides whether a man is guilty or not on the basis of accumulated, verified evidence, which includes the testimony of witnesses and the accused, material evidence, etc. When the judge fails to sift all this thoroughly, there is a danger he will base his decision on faulty or inadequate evidence and return a wrang verdict.

An error on the part of the investigating officer does not absolve the judge from responsibility. Under the law the court must examine independently and anew all the circumstances in the case, hear and verify the testimony of the accused and the witnesses, analyze other evidence and bring in a verdict based on conviction and conscience.

A just verdict rests on the real, unequivocal and objective truth. This means that the court's verdict of guilty must correspond to the real facts and that all the attending circumstances must have been fully authenticated, beyond question. The court cannot return a verdict of guilty if the accused's guilt, though probable, has not been fully and completely proved.

A not uncommon source of error in investigation and court practice is the tendency not to distinguish between accused and guilty, between charged and convicted. To some people it may seem that when a man is arraigned and indicted, he is obviously guilty. This kind of thinking can only make for prejudice, for one-sided investigation and for injustice.

Under Soviet law, which is based on the humane and democratic principle of presumption of innocence, no one may be found guilty of a crime and punished under the criminal code except by sentence of a court. Until the court has pronounced its verdict, until it has handed down a final decision in the case, the accused is not held to be guilty nor deemed a criminal, no matter how weighty and convincing the evidence assembled against him may appear.

The court must not only examine the case thoroughly, objectively and without prejudice, it must also guarantee the accused the right to defense, which he may undertake himself or with legal assistance.

Some lawyers still believe that defending the accused hampers investigation and trial, that it protects the criminal. Hence, we not infrequently have instances of the violation of the accused's procedural rights on the pretext of effective and rapid detection of crime. But how can one say confidently that a man is guilty if the case is based on evidence for conviction alone, while testimony for the accused goes unheard and the circumstances is his favor are not fully evaluated?

Soviet law not only permits the accused to defend himself against the charge but also defends the accused, if one may put it that way, from himself. Legal practice knows many instances when an innocent man has confessed to a crime he did not commit, sometimes to shoulder the guilt of a person he holds dear, sometimes because the circumstantial evidence is so strong.

Too much confidence in a confession, the claim that it is final proof, results in very grave miscarriages of justice. The verdict must rest on the full complement of the objective and verified evidence and not solely on the confession of the accused.

I DISAGREE!

BY GLEB FILIMONOV

Assistant District Attorney of Chelyabinsk

IN HIS ARTICLE "Miscarriage of Justice," Professor Mikhail Strogovich explains how investigators should work to avoid miscarriages of justice. While on the whole it is a rather good article, it loses its value because of one erroneous assertion.

Professor Strogovich states: "Under Soviet law, which is based on the humane and democratic principle of presumption of innocence, no one may be found guilty of a crime and punished under the criminal code except by sentence of a court."

But how is this statement of law to be interpreted? I believe that since the conjunction "and" and not "or" connects the phrase "no one may be found guilty of a crime" to the phrase "punished under the criminal code," the two phrases have to be considered together, not separately.

Professor Strogovich ignores the second phrase—"punished under the criminal code"—and therefore reaches an entirely erroneous conclusion when he goes on to say in his article that "Until the court has pronounced its verdict, until it has handed down a final decision in the case, the accused is not held to be guilty nor deemed a criminal, no matter how weighty and convincing the evidence assembled against him may appear."

The esteemed writer of the above errs here. For if this interpretation of the law is accepted, the office of investigator would have to be done away with and the institution of prosecution abolished. This theory says in effect that the district attorney institutes proceedings against innocent persons and prosecutes innocent individuals in court. Is that conceivable?

No, Professor Strogovich, no one will accept your interpretation.

The law has conferred on investigating bodies the right to prefer charges against a particular person and interrogate him as an accused, thereby holding him guilty. The district attorney institutes proceedings against and prosecutes in court a person who, from the point of view of the investigating agencies, that is, from the point of view of the government, is already guilty. All the court does is to check whether the person brought to trial and prosecuted is guilty to the degree charged and whether the criminal merits the penalty prescribed by the criminal code. That is how the law should be interpreted and applied.

A REPLY TO THE D.A.

BY MIKHAIL STROGOVICH

GLEB FILIMONOV's objections to what I say warrant the closest scrutiny. His main point is clearly stated. The question of guilt, we learn, is decided prior to trial in court by the investigating agencies and the district at-

torney. It is not for the court to decide whether the accused is guilty or not. The investigating officers and the district attorney have already decided that. What remains for the court is merely to verify the facts, take into consideration extenuating or aggravating circumstances, and decide whether the accused should be punished and, if so, how.

This point of view is a flagrant contradiction of the very essence of dispensation of justice and the function of the court of justice. It is precisely the court and the court alone that has the legal authority and is obligated to decide every aspect of a criminal case, both as concerns the question of guilt and the question of punishment. Whether the man accused is really guilty, whether he is really a criminal, is solely for the court to decide. Only the court makes the final decision.

Soviet law makes this point crystal clear. "Conviction," it states, "may not rest on presumption and is pronounced only if the guilt of the accused in relation to the crime has been proved in the process of a court hearing." "In the process of a court hearing"—let me repeat that! This means that in the process of the hearing the court must prove the accused guilty, and only then may the accused be deemed guilty.

But Gleb Filimonov maintains otherwise, that the question of guilt is decided before the case comes to trial and what remains for the court is simply to determine the degree of guilt and impose the penalty.

Soviet law contains one more provision that rules out any possibility of misunderstanding in this instance. When the case, together with the indictment drawn up by the district attorney, is referred to a court, the judge makes his decision, provided there is adequate ground to warrant an examination in court, to arraign the accused for trial, "without deciding in advance the question of guilt." Hence, this question is to be decided later, during the hearing, in the verdict returned by the court.

That the court, in handing down its verdict, is obligated not to be swayed by the conclusions drawn and stated in the indictment of the investigating agencies and the district attorney's office as to the guilt of the accused—this is beyond all doubt. The court examines all the facts in the case and returns a verdict of guilty only when guilt is proved in court, in a hearing in which both sides fight it out, in which the accused and witnesses are cross-examined and evidence is put to the test.

Contesting my assertion that only the court may recognize the accused as guilty of a crime, Filimonov exclaims: "No one will accept your interpretation, Professor!" What I say may, of course, be accepted or not. But what the law says, everyone has to accept.

DANGEROUS IGNORANCE

BY OLGA CHAIKOVSKAYA

IF A SURGEON said to you, "The ruling principle in our profession is to cut out the carotid artery," you probably would not believe your ears. No surgeon, of course, would ever say such a thing. But recently we heard a jurist proclaim that people can be found guilty without a trial.

What I am referring to is a letter addressed to the eminent jurist Professor Strogovich, which appeared in *Literaturnaya Gazeta*. In his article "Miscarriage of Justice," Professor Strogovich said the following: "Until the court has pronounced its verdict, until it has handed down a final decision in the case, the accused is not held to be guilty nor deemed a criminal, no matter how weighty and convincing the evidence assembled against him may appear."

Gleb Filimonov, an assistant district attorney in the city of Chelyabinsk, wrote in reply: "No, Professor Strogovich, no one will accept your interpretation. The law has conferred on investigating bodies the right to prefer charges against a particular person and interrogate him as an accused, thereby holding him guilty. The district attorney institutes proceedings against and prosecutes in court a person who, from the point of view of the investigating agencies, that is, from the point of view of the government, is already guilty."

Well, and what if the person "guilty from the point of view of the investigating agencies" should prove not guilty from the point of view of the court? What then? In Filimonov's view that is impossible. Why, then, do we need the court? To this question the Chelyabinsk jurist gives us this startling answer: "All the court does is to check whether the person brought to trial and prosecuted is guilty to the degree charged and whether the criminal merits the penalty prescribed by the criminal code."

You might say, why bother to argue when among the thousands of letters carried by our newspapers one that exhibits such ignorance occasionally appears? But in this case the matter is more serious than it might seem at first glance. *Literaturnaya Gazeta* was right in publishing the letter, and Professor Strogovich was right in answering it. For the ignorance we see exhibited here is malignant.

When during the years of the Stalin cult a person was arrested at night, the next morning he was already called an enemy of the people. I am not saying that Comrade Filimonov is in sympathy with the "law and order" of those days, but that is exactly where his "theory" comes from.

Those times are gone, and other people have long been working in the investigating agencies. But the point is not whether a person working in the judicial system is good or bad. An investigator may be beyond reproach, but he still should not have the right to decide the question of guilt. No matter how good an investigator is, he works alone at first and with no one to oppose him. No one argues with him, no one presents an opposing point of view. He may, of course, be mistaken. To say Guilty is to decide a person's fate. How can we permit that decision to be made behind the closed doors of an investigator's office?

No, Comrade Filimonov, your work will be examined in open court, in public, by the people's elected representatives. After preferring charges and presenting your evidence and arguments to the court, you will have to step aside and wait patiently until your conclusions are carefully gone into.

Defense counsel will call in question every conclusion of yours. And if the investigator has done a competent job and the charges are well founded, then, of course, the refutations of the defense counsel will be unsuccessful. But if the edifice reared by the investigator is jerry-built, it will collapse under the impact of the defense counsel and then of the court.

Filimonov talks as though there were no such thing as defense, as though judges had never sent back cases for re-examination nor brought in verdicts of acquittal.

I have more than once in the course of a trial heard spectators say, even before they had heard a single word from the defendant or knew anything about him: "They got you, mister. You'll get what's coming to you." The thinking of these people is superficial. But a jurist should know that until the court has had its say, a person is not to be deemed guilty.

ACCUSED DOES NOT MEAN GUILTY

BY ALEXANDER GORKIN

Chairman of the USSR Supreme Court

WE cannot possibly accept the interpretation of the law given by Gleb Filimonov. It derives from an erroneous conception of the function and relationship of the investigating authorities and the courts. It demonstrates a parochial approach to a vitally important matter for both: establishment of the facts to show that the accused has committed the crime for which he is charged.

To see that a crime is laid bare and the criminal convicted, that the law is administered so that the guilty are punished and the innocent are not held criminally liable, is without question the task not only of the court but of the investigating authorities and the district attorney's office as well.

To contrapose the latter two agencies to the court is wrong and pernicious. Their common function is to wipe out crime and prevent violations of the law, and that function must be carried out in complete cooperation. But to carry out the particular function for which it was created, each of the three bodies has been endowed by the law with powers and rights inherent only in it.

To disclose criminal acts and bring the guilty to justice, the examining and investigating agencies have been invested with important rights and powers. Where warranted, they have the right, in the manner prescribed by law, to take into custody a person suspected of a crime, to take various preventive measures, to make searches and take other investigative action. When the district attorney has sufficient evidence that a person has committed a crime, he notifies the accused of the charges he is preferring against him, which charges the district attorney has to prove in court.

It goes without saying that when an investigator prefers charges and draws up the indictment and the district attorney sends the case to court, they must be convinced that the evidence collected warrants the conclusion that the person accused of the particular crime is guilty. But to try *to prove* the accused guilty does not mean *to find* him guilty. Only the

court is competent to say that the accused is guilty of the crime committed. Article 7 of the Fundamentals of Criminal Court Procedure for the USSR and the Union Republics expressly states that no person shall be found guilty of a crime and subjected to a criminal penalty except by sentence of the court. This means that only the court, in the name of the state, may find a person guilty and impose a criminal penalty. Distortion of this principle of the law in several theoretical works and in practice, attempts to give it a restrictive meaning and to endow nonjudicial organs with the right to find a person guilty, inevitably leads to infringement of socialist law by officers of inquiry and investigating agencies, the district attorney's office and the court.

Clearly contrary to law is the assertion that the district attorney prosecutes a person "already guilty" and all that is left for the court to do is establish the degree of his guilt and fix the penalty. And while Olga Chaikovskaya, whose article "Dangerous Ignorance" appeared in *Izvestia*, can be criticized for underrating to some degree the role of the investigating authorities and for her intemperate polemics, there can be no question that she is right in her contention that only the court can find a person guilty.

The pretrial stage of a criminal case is only a preliminary investigation, and it is called preliminary for the very reason that it gathers evidence before the trial and for the trial. No conclusions of the investigating authorities are binding on the court. When the hearing begins, the court itself cannot say whether the accused is guilty or not guilty of the charges preferred against him. The law says specifically that in deciding that the accused is to be held for trial, the court does not thereby decide that he is guilty.

The law requires the court to hear the case in public and to examine the facts in the case comprehensively and objectively; to check the evidence adduced; to hear the accused, the prosecutor, defense counsel and representatives of the public; to cross-examine witnesses; to assess expert testimony and other information collected in the preliminary investigation; to demand that other evidence be produced and examine it; and only on that basis pronounce its judgment in the case. A tendency on the investigator's part to play the judge can result in a casual and one-sided trial that will convict an innocent person and leave the real criminal unpunished.

In open trial new facts may be brought out, or facts the investigator knows may appear in a new light, or the defendant and witnesses may change their testimony, or further expert testimony may give a different value to the evidence.

That is why the law says that the "court bases its verdict solely on the evidence heard in the open court," and until he has been so declared by the judges, the accused is not to be considered guilty of the crime for which he is charged. The contention that when a case comes to court the accused is already guilty and that the function of the court is merely to decide whether the accused is guilty to the degree charged and whether he deserves the penalty demanded by the prosecutor, is fallacious and harmful.

HOW DIAMONDS ARE FORMED

BY NIKOLAI CHERSKY
PRESIDENT, YAKUT BRANCH, USSR ACADEMY OF SCIENCES

ONE OF THE MANY interesting and bold hypotheses which Soviet geologists have advanced is on the origin of diamonds.

The diamond—a precious mineral that nature does not match in hardness—still poses a riddle for science. How are diamonds formed? The Yakut Branch of the USSR Academy of Sciences has put forth an interesting theory.

First a few words on the history of the problem. From ancient times to the second half of the nineteenth century, diamonds were extracted from river deposits, from sand and pebbles. But it was clear that they could not have been formed there. Where then were we to search for the mysterious laboratory where this mineral was created?

Any number of hypotheses were proposed, among which the most interesting was the deep-layer theory. Its authors claimed that diamonds appeared at a depth of 40 to 60 miles. From there, through cracks and channels in the earth's crust, they rose to the surface and formed kimberlite pipes.

But this theory could not answer all the questions either. It had many weak spots. Calculations show, for example, that at depths of 40 to 60 miles we do not have the pressures required to produce diamonds. Another explanation had to be looked for.

Analysis of the facts led our scientists to the conclusion that diamonds were formed not in some supposed kimberlite layers of the earth's mantle, but near the earth's surface. It was here that the sites where diamonds are formed appear. From below, magma rises to these sites. The interaction of the magma, hydrocarbons and water vapors starts chemical reactions. Free carbon is released and explosive mixtures formed. Powerful explosive impulses are built up under the earth which produce pressures great enough to form diamond crystals.

How was this hypothesis used in practice to prospect for diamond-bearing fields?

If we connect the formation of diamonds with sites in the upper part of the earth where there is an abundance of hydrocarbons, then the richest kimberlite pipes should be looked for where there are large accumulations of organic material in the form of coal, oil and gas. In the case of Yakutia we find that diamonds occur mostly in areas that favor the accumulation of oil and gas. It was not by chance that during exploratory drilling in Yakutia we observed discharges of liquid oil or fountains of combustible gas. It means that diamonds tend to be located in zones with greater hydrocarbon content.

MEYERHOLD



Vsevolod Meyerhold (1874-1940) founded the first Soviet theater. A pioneering director, he played an important role in the history of the Soviet stage.

Like so many other public figures, Meyerhold suffered the oppressions of the personality cult period. He was exonerated posthumously.

The present flare of interest in the theater of the twenties and thirties, and the innovations of such stage directors as Alexander Tairov, Yevgeni Vakhtangov and most prominently Vsevolod Meyerhold gives current pertinence to these off-the-cuff remarks. They were taken down by Alexander Gladkov, who was Meyerhold's literary secretary and assistant director from 1934 to 1938.

THE THEATER has been my great interest since the age of seven. When I was seven, the grownups would find me making faces in the mirror for amusement. Later I developed a deep interest in music (the violin), literature and politics. But my enthusiasm for the theater proved stronger than all the rest. What influenced me? Many things. First, Russia's great literature, Chekhov in particular. Then Stanislavsky and the wonderful actors at the old Maly Theater. Then Blok, Maeterlinck and Hauptmann, a study of outstanding periods in the theater of the past, a study of the Eastern theater. Then back to the great Russian poets Pushkin, Lermontov and Gogol, the storm of the Socialist Revolution and its grim beauty, the new film art, Mayakovsky, and again Pushkin—and everything with greater intensity. To sort them out is impossible. The artist must take an interest in many different things, respond to them, discard one thing and keep another. You mentioned Hemingway. I've heard of him, and I intend to read him.

* * *

If you wish, I'll tell you what sharply divided artists when the Revolution came. It would be naïve and superficial to think that all the writers, musicians and artists who emigrated were thinking only of the bank accounts they had lost or the summer homes that had been requisitioned. Most of them had none, as a matter of fact. Chaliapin was ambitious. Everybody knows that, but that was not what was most important to him. The thing is that Gorky, Mayakovsky, Bryusov and many others, myself included, realized at once that the Revolution did not mean destruction only. It meant creation too. Those who thought the Revolution meant only destruction cursed it. Mayakovsky and I belong to different generations, but to both of us the Revolution meant being born again.

* * *

As a director, I began by slavishly imitating Stanislavsky. Theoretically I had already rejected many of the methods of his early period and was critical of them, but in practice I timidly followed in his footsteps at the beginning. I am not sorry I did. It did not last long and I passed through it quickly. It was an admirable school of practical stage directing. Imitation by a young artist is not dangerous. It is almost always an inevitable stage. I might even add that in youth it is useful to imitate a good model. In this way you polish your own inner independence and stimulate it. Nobody used to be ashamed of the word "imitate." You have Pushkin's "Imitation of Parny," "Imitation of Chenier," and "Imitation of the Koran." Mayakovsky says he began by imitating Balmont (symbolist poet), then Whitman and Sasha Cherny (satiric poet), but that did not prevent him from becoming himself. I'll put it even more concretely, imitating an artist you feel is close to you helps you to find yourself.

* * *

Prettiness is beauty's greatest enemy.

* * *

In his piano concerto Tchaikovsky used the melody of a French cabaret song that, his brother told me, their uncle used to sing often. The artist has a right to take his material from wherever he wishes. The important thing is what he does with it.

In art it is more important to guess than to know.

* * *

An abyss makes some people think of disaster, others of bridges. I belong to the second group.

* * *

If you can't get rid of some speech defect or awkward gesture, make the audience fall in love with it. Andreyev-Burlak lisped, Rossov stammered, Leonidov whistled when he talked, and Savina and Sarah Bernhardt spoke with a twang, but their acting was so infectious that their faults seemed to be virtues.

Chaliapin's temper with his conductors and partners and his scenes and outbursts at rehearsals and performances are easily explained. He was so exceptionally musical that a barely noticeable false note grated on his nerves the way a piece of brick scraped across glass grates on ours. Try sitting quietly when a mischievous boy scratches a piece of brick across glass. Chaliapin heard everything in the orchestra and anything the slightest bit off key, which you and I would not hear, tortured him. This extreme sensitivity is not only mental; it is also psychophysical, like the easily wounded sensitivity of the lyrical poet, who should be protected from suicide in the same way we protect the worker in an unhealthy trade by feeding him milk. Mayakovsky's death represents a violation of labor protection laws in life's most dangerous field of production—poetry.

* * *

Do not confuse the terms "tradition" and "stereotype." A stereotype is tradition without meaning.

* * *

Picasso has promised to be the artist for our *Hamlet* when we get around to it. When we get around to it! I've dreamed all my life of doing *Hamlet* and keep putting it off for one reason or another. Frankly, I've staged several Hamlets in my imagination. But you know that—I've told you about it. Now I've finally made up my mind. *Hamlet* will be our first production in our new building. We'll open with *Hamlet*. We'll open our new theater with the best play in the world! What a fine omen!

* * *

When I read obituaries or reminiscences about outstanding people I have had the good fortune to know personally, I always wonder whether it is them or not. Who could tell from reading the elegiac pages about Chekhov, Vera Komissarzhevskaya (actress), Alexander Blok or Yevgeni Vakhtangov (stage director) that in real life they were very gay people? But I remember very well how I used to laugh with them. There was the time, when we were playing in Poland, that Vera Komissarzhevskaya and I laughed all day long at all sorts of nonsense. We were in that kind of a mood. I remember Chekhov as almost always laughing. As for Vakhtangov, when we met, we used to crack jokes more than talk seriously about weighty matters. Or was it that they acted that way with me because I am so flippant and lighthearted? I don't think so. If after my death you read reminiscences picturing me swollen up with my own importance and mouthing eternal truths, I implore you to protest that it is all a lie, that I was always gay, first of all because I love to work and working makes one happy and, secondly, because I know for certain that something said in jest is very often more serious than what is said in all seriousness.

* * *

I am often reproached for not developing my discoveries but always hurrying on to something new, after one production staging another that is completely different in style. My excuse is that life is short, and if one repeats oneself, there is not time to do much. Then, where a superficial glance sees a chaos of different styles, my fellow workers and I see the application of one and the same general principle to different material, our different treatment depending on the author's style and the tasks of the present day. There is also something else. Giorgio Vasari, biographer of Renaissance painters, said, speaking of an artist's highest achievement: "In a manner hitherto unknown. . . ." Is that not an exciting phrase? What higher honor can there be for the artist than to do work "in a manner hitherto unknown?"



Autumn

By Valeri Rozhde[illegible]ky

"Gloomy season, delight of mine eyes,
I bask in your parting beauty . . ."

Alex[illegible]shkin

This article is in response to a request from Dean Bailey, a reader from the state of Maine. Mr. Bailey asks about the Soviet of Nationalities, one of the chambers of the Soviet Parliament.

THE SOVIET OF NATIONALITIES

BY LEVON GRIGORYAN

ASSISTANT PROFESSOR MASTER OF LAW

THE SOVIET UNION is a federation of 15 sovereign republics. Each takes its name from the major nationality inhabiting it, but in actual fact there are people of different nationalities living in all of them. Some of the republics, apart from their preponderant nationality, are inhabited by other large national groups and by whole peoples. These groups or peoples have their own autonomy. The country has 20 autonomous republics, 8 autonomous regions and 10 national areas. All told, more than 100 nationalities live in the USSR.

Two-Chamber Parliament

The multinational composition is reflected in the legislative bodies of the Union of Soviet Socialist Republics. It determined the two-chamber structure of the USSR Supreme Soviet, the country's parliament.

One of the chambers—the Soviet of the Union—represents the interests of the population as a whole. The basis of representation is one deputy for every 300,000 people. For election purposes, the country is divided into electoral districts equal in population. The deputies elected are naturally of different nationalities, but nationality is not the basis of representation to the Soviet of the Union, population density is. That is why the Russian Federation, the country's largest republic, has 442 deputies in this chamber and Estonia, the smallest republic, has only four.

A second but equal chamber of Parliament, the Soviet of Nationalities, represents the specific interests of each of the nationalities.

All citizens 18 years of age and older have the right to vote for deputies to both chambers. Suffrage is universal, equal and direct. There are no restrictions whatsoever with regard to race, nationality, sex, religion, level of education, domicile, social origin, property status or former activities. Voting is by secret ballot.

All citizens of the country 23 and older have the right to be elected to public office. The only persons barred are those who have been certified as mentally incompetent.

The basis of representation in the Soviet of Nationalities is not the same as in the Soviet of the Union. Regardless of size of territory or population, each of the country's 15 union republics elects 25 deputies to the Soviet of Nationalities. The autonomous republics, regions and national areas also have direct representation. The autonomous republics each elect 11 deputies to the chamber, the autonomous regions five deputies, and the national areas one deputy.

Thus, each of the sovereign nations in the USSR is represented in the Soviet of Nationalities, this aside from its representation by virtue of population density in the Soviet of the Union.

Guarantees of Equality

Both chambers have the same rights. Neither has any special privileges, though the number of deputies in each is not the same: the present Soviet of the Union has 791, the Soviet of Nationalities 652.

A law requires a simple majority in each chamber for adoption. Amendments to the Constitution require a two-thirds majority.

Another guarantee of the equality of the chambers is that the voting on a bill is always done separately though the debates can take place at joint sessions.

In the event that the two chambers disagree, the Constitution provides for a Conciliation Commission with equal representation from both chambers. If this commission cannot reach a decision, the question at issue is discussed for a second time at a plenary session of the Soviet of the Union and the Soviet of Nationalities. If the two chambers still do not reach a decision, the Presidium of the USSR Supreme Soviet, exercising its function as a collective head of state, dissolves the Supreme Soviet and sets a date for new elections.

The deputies to the Soviet of Nationalities elect from their membership the chairman of the chamber and four vice chairmen. They serve four-year terms. The chairman and vice chairmen preside at regular sessions, and in the intervals between the Supreme Soviet sessions, which are held twice a year, they represent the chamber in its dealings with other government bodies and organizations. They also guide the work of the chamber's various committees.

Committees, Work Groups

These committees play an important part in the activities of the chamber and of the Supreme Soviet as a whole. Each chamber forms standing and provisional committees. Provisional committees are formed



for specific projects and are dissolved when the project is completed (editing bills, investigations and the like).

The Soviet of Nationalities now has five standing committees: credentials, legislative proposals, budget, foreign affairs and economic.

Of the 652 deputies to the Soviet of Nationalities 145 are members of standing committees: 21 serve on the Credentials Committee, 31 on the Legislative Proposals Committee, 39 on the Budget Committee, 23 on the Foreign Affairs Committee and 31 on the Economic Committee. A substantial number of the deputies also work on the subcommittees which all the committees, except the credentials committee, have.

Most deputies are active throughout their term of office in either their chamber committees or those set up by the Supreme Soviet as a whole, *i.e.*, by the two chambers jointly.

The committees draft bills and look into the work of the various state agencies, organizations and officials under their jurisdiction.

The Budget Committee, for example, studies the draft budget submitted by the USSR Council of Ministers for the coming year and checks on the current budget.

The committee members travel to different parts of the country to see how state funds are spent locally. They hear the reports of the Minister of Finance and other members of the government responsible for the budget.

The Budget Committee is also involved in economic planning. It discusses the draft plans and checks on fulfillment. The larger part in planning, however, is played by the Economic Committee.

The Economic Committee was set up in 1957. Its job is everything that has to do with the economic development of the union republics, seeing to it that the interests of each of them is kept in sight when the countrywide economic plan is being drafted and administered. For this same reason the Economic Committee has a different composition from the others—it includes two representatives from each union republic.

The Legislative Proposals Committee of the Soviet of Nationalities works closely with its counterpart in the Soviet of the Union. In the past few years the Supreme Soviet adopted several laws whose drafts were worked out jointly by the two committees: the Law on State Pensions, the Fundamentals of the Criminal Code for the USSR and the Union Republics, the Fundamentals of Criminal Court Procedure for the USSR and the Union Republics, and others. The Legislative Proposals Committees of the two chambers are presently working on Draft Principles for Family and Labor Legislation. Besides deputies, there are legal specialists, court officials and representatives of the Procurator General's office working on the various subcommittees.

Drafts of major bills are published for general discussion, and many of the changes and amendments suggested are incorporated into the law as passed.

The Foreign Affairs Committee is, of course, charged with questions of foreign policy. All foreign policy actions taken by the Supreme Soviet, including the ratification or denunciation of treaties and agreements with other states, are previously discussed by these committees.

The Constitutional Commission, one of several joint commissions, was elected at a joint session of the Soviet of the Union and the Soviet of Nationalities in April 1962. Its task is to prepare the draft of a new Constitution that will embody the changes which have taken place in Soviet society since the adoption of the present Constitution in 1936.

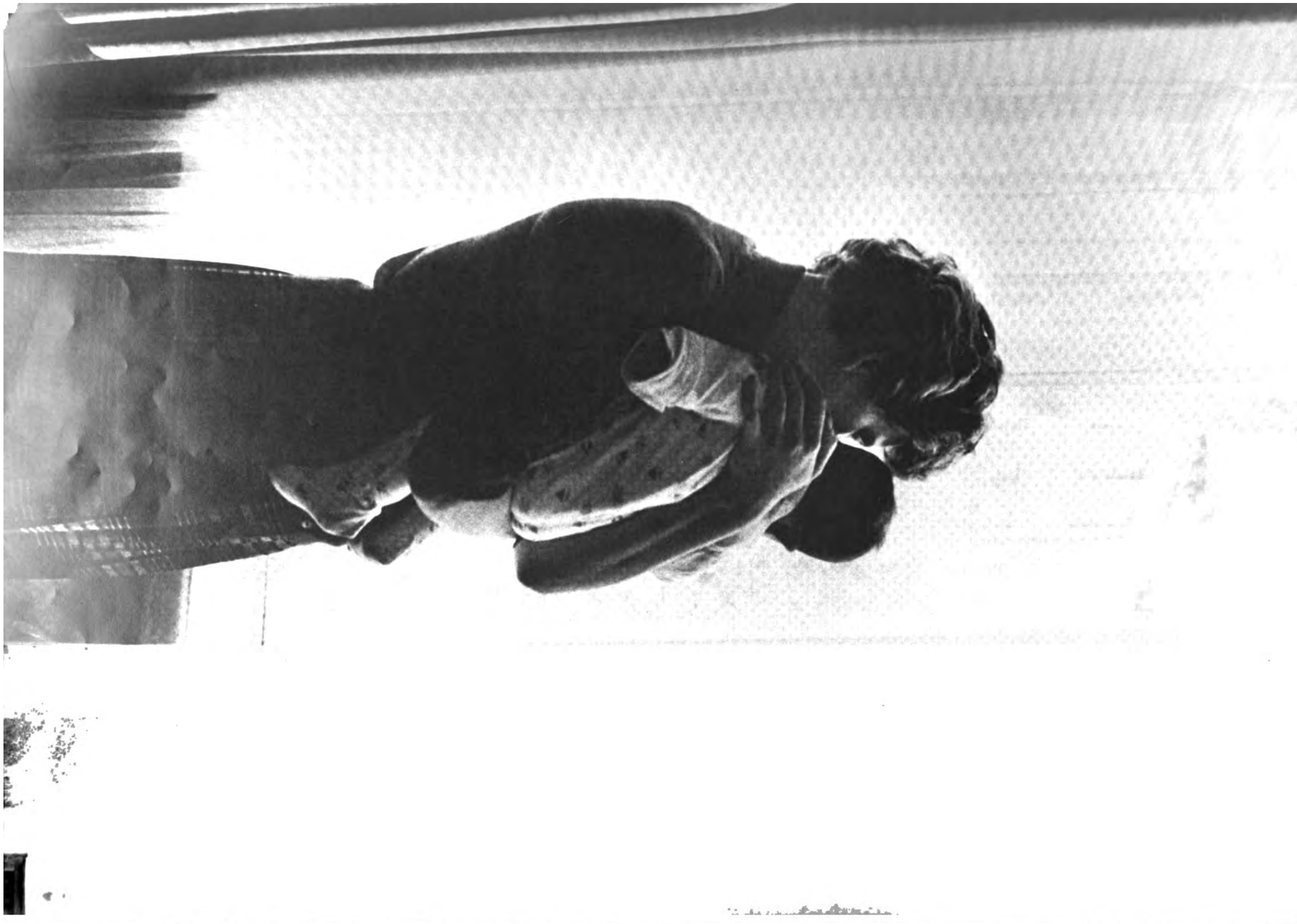
The two chambers jointly elect the Presidium of the Supreme Soviet, which is the collective head of state. It is composed of a president of the Presidium, 15 vice presidents—the head of state of each union republic—a secretary and 16 members. Between sessions the Presidium acts for the Supreme Soviet.

A joint session of the two chambers appoints the USSR Council of Ministers, the country's government, which includes the head of government of each union republic. A joint session elects the Supreme Court and appoints the Procurator General.

The Deputies

The deputies to the Soviet of Nationalities are a cross section of the Soviet population. Of the present total, 345 deputies, or 52.9 per cent, are either workers or farmers, or began their working career as such; 287, or 44 per cent, are directly engaged in production—140 as industrial workers and 147 as collective farmers. The professions and the arts are represented by 20 scientists, 12 physicians, 17 schoolteachers or college instructions, 24 writers and men in the arts. The rest are industrial executives and officials in the Party, trade unions, youth and other organizations.

The joint deliberations of these communist and non-Party deputies of 55 nationalities, of many different professions and trades, and of varying ages is a guarantee that neither the interests of the Soviet Union as a whole nor the needs of each of the country's many nationalities will be neglected.







ordinary eighteen-month-old likes to k her tongue out, and Lena is certainly exception. But there is something cial about this little Muscovite. Her ents are cosmonauts. Her mother entina Nikolayeva-Tereshkova was first woman to travel in space, and father Andrian Nikolayev piloted the tok III in the first joint space flight. Lena has space blood in her.

OSMONAUT, OSMONETTE, OSMOTOT

LETTERS TO THE EDITOR

ON ILYA EHRENBURG

Dear Editor:

. . . It is a pity that Ilya Ehrenburg is known to so few Americans. We feel he is a wonderful writer. How much we owe to Ilya Ehrenburg, because I do not see how anyone can read his *Fall of Paris* and the complete Memoirs without being enriched and enlightened. Therefore, I should like to suggest that his novel *Fall of Paris* be called to the attention of American readers as soon as possible. You may feel that this work is about the past and therefore not suitable. Indeed, it might not be for Soviet readers, but for American readers the story applies here and now. In many ways Ehrenburg might be writing of perhaps any American city in 1965, with the difference that the inhabitants of the American cities might not be as interested in culture as the French characters. Further, American people reading *Fall of Paris* might be enabled to UNDERSTAND things better which now seem confusing to them.

Ehrenburg is a bridge between epochs, the past and the present, the old and the new. Ehrenburg is a bridge between the best of the two worlds, the communist world and the capitalist world. We considered ourselves fairly enlightened; however, upon reading Ehrenburg realized how little we knew after all. We never fully understood the whole thing until we read *Fall of Paris* and the complete three volumes of his Memoirs. We profited immensely from reading these works and would love to tell Dr. Ehrenburg this and thank him.

Where is Ilya Ehrenburg now? I do hope he will write on from the end of the war right up to now. Perhaps an article with photographs of Ehrenburg, in connection with Soviet writers, literature, etc., mentioning *Fall of Paris* might stimulate people to read this. The Memoirs are a most valuable source of cultural information. Most Memoirs are rather boring, but we could not put Ehrenburg's down. They are fascinating, beautifully written and I know of no other work that is such a vast canvas of the entire era. The so-called "critics" here who used these Memoirs in a sort of warped cold-war manner simply did not read them carefully. I never read a more crushing indictment of fascism than Ehrenburg's *Fall of Paris* and his Memoirs.

You may publish this letter if you wish and I hope it may either in this way or as suggested introduce readers to Ilya Ehrenburg. With best wishes

Sincerely yours,
Mrs. Robert Hyland
Los Angeles, California

We published Ilya Ehrenburg's article "Fathers and Sons" and his portrait in our April issue.

Editors

A SUGGESTION

Dear Editor:

I have been a subscriber of SOVIET LIFE for a number of years and I like it very much. It is constantly being improved, with the superb photography, the broadened subject range and the image of ever expanding economics, and cultural life.

I wish to suggest a supplement to your publication—an accurate map of that vast country, so that in reading the text of your articles the reader could get a clearer idea of where a certain industrial or hydroelectrical development etc. is located. I think such a map would be very popular with the readers. . . .

Sincerely,
Bruce Walker
North Bend, Oregon

DOSTOYEVSKY'S WORKS

Dear Sir:

In an article by Alberto Moravia, *Saturday Review*, April 17 issue (Norman Cousins, Editor of periodical *Saturday Review*, is one of our more ethically responsible journalists and citizens), this point is made.

Fyodor Dostoyevsky's books are not permitted to be read in Russia.

Will you please comment on this? It is hard for me to believe that the novelist Moravia has the facts right. If he is correct, though, please give me the reason for the censorship.

Sincerely,
Charles Lamburgh
Rockport, Indiana

Fyodor Dostoyevsky remains an important part of our Russian literary heritage. His books are widely read and have been reprinted many times. A film version of *The Idiot* was made a few years ago, and a biography by Leonid Grossman was published in 1962.

Dostoyevsky has been the subject of wide discussion. The article "The Two Sides of Dostoyevsky," a lengthy analysis of his works, appeared in our November 1963 issue of the magazine.

Editor

ECONOMIC PLANNING AND MANA(

BY VICTOR BELKIN

The author, who is 38 years old, is head of a laboratory for the application of computers to economic research at the Institute of Electronic Cybernetic Machines. He is a Master of Science (Economics) and has published a number of papers on price setting and on the application of mathematics to planning.

MARXISM-LENINISM—the ideology of Soviet economists—proceeds from the fact that the development and improvement of the modes of production underlie the development of human society. A mode of production is the sum total of the productive forces and the production relations. These relations are the relations of people formed in the process of social production.

Although the ownership of the means of production is the basis of the production relations, there are other factors, too, which make up the essence of these relations. They include the organization and management of production and the forms of distribution of material wealth. The productive forces and the production relations are closely interconnected. The production relations develop parallel with the productive forces. New forms of ownership replace the old ones, and the production relations go through various stages of development.

Under socialism the production relations develop on the basis of public property. The present organization and management of social production was arrived at in our country in the early thirties. In those days the limited material resources, lack of skilled personnel, and necessity of accelerating the development of industries decisive in industrialization and the defense of the country made detailed centralized planning and management essential. At present, when the Soviet Union's productive forces have reached a high level of development and the emphasis is on utilizing to the best advantages its enormous resources for the all-round development of the national economy and raising the living standards of the population, it is necessary to further improve the organization and management of production.

Under capitalism the transition from the "free" enterprise stage, for instance, to the monopoly stage proceeded spontaneously.

Unlike capitalism, the production relations under socialism do not develop spontaneously but as the result of purposeful human activity. The goal of improving these relations is to provide the best possible conditions for the development of the productive forces. Today Soviet economists are discussing how to organize and manage social production so that it guarantees a still higher rate of development for the national economy and a still faster rate of growth of material wealth. The problems we are discussing are not created by economic decline or stagnation but, on the contrary, by growth.

Four Viewpoints

The wide range of trends and opinions on the issue of improving economic planning and management in the Soviet Union boils down to four general viewpoints.

The *first* maintains that the existing system of planning and economic management corresponds to the present level of economic development and needs improvement in only some specific areas. True, the ranks of economists with this viewpoint have thinned out lately.

The *second* proceeds from the fact that the existing system of planning and economic management does not correspond to the present level of the productive forces and must be radically improved. And this improvement implies the transition to economic methods.

The *third* is voiced by some economists, mathematicians and engineers who are dealing with the problem of applying mathematical methods and computers to planning and economic management. They maintain that it is necessary to establish an automated optimum planning system because only this can ensure the adequate planning and management of the national economy.

The *fourth* is a synthesis of the two preceding views. Its supporters consider an automated optimum planning system quite necessary but premature. In the interval economic management must be radically improved by immediately changing over to economic methods on a large scale. This approach is winning an increasing number of supporters among both economists and mathematicians.

Administrative and Economic Methods

Before proceeding, we must define these terms. We do not mean purely administrative methods like those, for instance, employed in the army, or purely economic methods, but *mainly administrative* or *mainly economic* methods.

The enterprise is the basic link in the socialist national economy. The successes of communist construction depend primarily on the efficiency of its operation. When we speak of management methods, we mean the methods by which society—the state—controls the operation of the enterprise.

Mainly administrative methods boil down to giving the enterprises a detailed plan assignment rigidly fixing a great number of indicators, including gross commodity output, production costs (specifying input items, number of workers, amount of payroll, profits, and quotas for the purchase of raw and other materials). Such petty control strangles the enterprises' initiative. They are often given plans that do not correspond to their interests. When the degree to which the enterprise carries out its plan is the only gauge of its efficiency, it becomes more profitable to obtain smaller production quotas, which can be fulfilled and overfulfilled easily.

Management by *mainly economic* methods means putting the enterprise into the position of having its interests, and consequently those of its personnel, fully correspond to the interests of society as a whole. Under those circumstances there is no need for detailed, inflexible plan assignments. The enterprise receives a general basic assignment, say, for the output of specific commodities and, on the basis of this and guided by its own interests, the enterprise drafts production plans in conformity with the requirements of society.

The transition from mainly administrative to mainly economic methods of management is not accidental. It is an objective necessity. The national economy has now become so vast and so complex that it is impossible to deal with issues concerning each and every enterprise from the center. And who knows better the available reserves and possibilities than the staff of the enterprise concerned?

What are the basic measures that must be taken to ensure the efficiency of economic methods of management? *First*, enterprises must be given maximum independence within the limits of a restricted range of centralized plan assignments. *Second*, the efficiency of enterprises must be gauged mainly by the profit criterion. *Third*, the enterprise must pay for its fixed and current production assets. *Fourth*, prices must be economically substantiated and reflect the actual cost of production. And *last* but not least, products must be purchased and marketed under direct contracts. All these measures are closely linked and interconnected, forming a single whole.

The extension of the enterprise's rights and independence while restricting centralized plan assignments is expedient provided that economic incentive makes the enterprise operate as the entire society wants it to without detailed directions. On the other hand, economic stimuli will produce the best effect if the enterprise is vested with sufficient rights to take the fullest advantage of these stimuli.

The profit the enterprise gets from marketing its product shows to what extent its receipts exceed its expenditures and, consequently, makes it possible to judge objectively what it gives society. Profit was one of the indicators planned for each enterprise in the past as well, but it never served as the main criterion and was always lost among dozens of other indices. The main thing was to fulfill the plan as to quantity in terms of money. Nobody worried if the enterprise failed to carry out

the plan for profit. However, the evaluation of an enterprise's efficiency by the profit criterion encourages the enterprise to expand production output and to cut production costs since the size of the profit depends on both these things.

But profit cannot serve as the chief criterion if there is no yardstick for comparing input and output. At present it is impossible to compare them because they are expressed in prices fixed on different levels. Thus, for example, the average level of the present prices of fuel and electricity are almost a third lower than those of machine equipment. Moreover, data on output and input are incomplete since prices do not adequately reflect how the total production assets are utilized. Meanwhile, calculations show that one ruble's worth of production assets provides a saving of 15 kopecks of current expenditures a year, taking an average throughout the national economy. Economically substantiated prices that take into consideration the utilization of production assets are an essential condition for comparing input with output and for introducing the principle of payment for production assets. Payment for these assets, which are put at the disposal of the enterprises by society, will encourage the enterprise to utilize them efficiently.

And last but not least, direct contracts for goods deliveries will guarantee that the products turned out meet the requirements of society with regard to both assortment and quality. If they do not, the enterprise will not be able to sell its goods and, consequently, make a profit.

Most of our economists agree to one extent or another that the above measures ought to be carried out. But they have a reservation about the importance of improving the methods of determining price. This evokes particularly heated debates. Some economists maintain that the other measures can be carried out even with the present price structure. If such an important link as prices drops out of the whole chain of interconnected measures, then all the other measures are left suspended in air. Unless there is some criterion for comparing output and input, profit will be useless as a yardstick for measuring the efficiency of enterprises. If the efficiency with which the production assets are used is not taken into account in pricing, there will be no reserve from which to pay for replacement. In many cases enterprises will find it more profitable to take as much materials and equipment as they can get regardless of what they need.

Setting prices which correspond to the real cost of production would by itself produce a certain positive effect. Without adequate, economically substantiated prices, the other measures will be less effective. Thus, in order to draw a clear line in the argument, it must be stated that those who are in favor of prices which express the cost of production are really advocating mainly economic methods of management; those who are against it are supporting mainly administrative methods.

Some foreign observers are trying to depict the measures underlying economic methods of management as a departure from Marxism-Leninism, as a phenomenon incompatible with socialism. This shows a primitive understanding of the political economy of socialism and an incorrect conception of commodity production under socialism.

First of all, all the measures outlined will be carried out on the basis of socialist ownership of the means of production. Secondly, these measures implement the method of economic accounting formulated by Lenin, which we have no intention of refuting. Economic accounting presupposes the independence of an enterprise within the limits of general plan assignments, the implementation of the incentive principle, the replacement of production outlays by each enterprise from its receipts, and an excess of receipts over expenditures. Economic accounting combines centralized planning with the use of value categories in the best possible way. There was a time when some Soviet authors contraposed planning to the law of value. This, by the way, is being done abroad to this day. Actually however, with precise planning, economically substantiated prices and other value categories, these two factors must form an organic unity.

Economic Management and Computer Mathematics

In recent years there has been a rapid development in our country of mathematical methods for economic research and planning based on the use of electronic computers.* The research done by prominent scientists in this field—Academician Leonid Kantorovich, Academician Vasili Nemchinov and Professor Victor Novozhilov—has been acknowledged and honored with a Lenin Prize, the country's highest award.

There is a big future for the application of computer mathematics to economics. A unified system of computation centers for automated optimum planning could draft the optimum dynamic national economic plan. But to do this extensive and detailed information is needed, and this presents certain difficulties. For example, it is difficult to anticipate too many years in advance what the future holds in terms of technical progress, new inventions and discoveries.

The work of mathematicians in the field of economics can be useful only to the extent that economic information is available. This extent is quite great in a planned economy, but it is not unlimited. We are faced with the difficult problem of developing probability methods for programming information. It would, therefore, be wrong to assume that the existing methods of administrative management could be replaced immediately by an all-embracing system of automated optimum management, bypassing economic methods, as some mathematicians propose to do.

The transition to economic methods is an essential prerequisite for the ever increasing application of mathematical programming to management and planning in the national economy for two reasons. First, it will provide a single realiable criterion of production efficiency and of the adequacy of plans drafted with the aid of mathematical methods, *i.e.*, profit, and secondly, it will make enterprises more interested in carrying out these plans. Neither of these conditions prevails, as a rule, in administrative methods of management.

Here is an elementary example. Methods for the optimum planning of shipments—the so-called transportation problem of linear programming—are among the best developed and the most applicable to practical use. The problem is essentially this: There are a number of centers from which goods are shipped and a number of points of destination. It is necessary to find among the multitude of shipping scheme variants the least expensive one. But the cost is expressed in money and, consequently, depends on tariffs, prices, etc. That is why the establishment of a correct pricing system is essential for drafting an optimum transportation plan.

Let's assume, however, that we have succeeded in working this out. Is the shipping organization interested in carrying it out? Not necessarily. The point is that the work of the shipping organization is planned in ton-kilometers. Therefore, its fulfillment is also based on the number of ton-kilometers covered. But the optimum shipping plan is based on decreasing the number of ton-kilometers. If work were measured primarily by the profit criterion, this difficulty would not appear. There would be both the criterion of the optimum shipping plan and the incentive to work according to that plan. The lower the shipping expenses, the higher the profit. With adequate prices, the local optimum found in this case would lead to a corresponding decrease in socially necessary expenditures.

When price reflects the actual cost of production, the optimum plan of the individual enterprise, industry and production amalgamations, worked out by mathematical methods with the aid of electronic computers, will mean a corresponding improvement in the national-economic plan as a whole. That is why the progress from the present method of administrative management to economic methods and to optimum planning based on the large-scale use of computer mathematics follows the same line. Both the economists and the mathematicians working in the sphere of economics are more and more beginning to realize this.

Thus, disputes help to bring out the truth. And all of us who debate and discuss the problem of improving planning and economic management in the Soviet Union are striving toward the same goal: finding the best way to do it.

---

*This problem was discussed in great detail at a round table conference organized by *Soviet Life* (then *USSR*), *Voprosy Ekonomiki* and *Ekonomicheskaya Gazeta* in Moscow and reported in our September 1964 issue.

AN-22, ANTAEUS

THE Soviet Union, which has the lead in giant transport planes with its TU-114, is again proving its superiority. This is a real flying monster, something like a winged steamer."

That is how **Le Paris Jour** described the Soviet plane AN-22, or **Antaeus,** designed by Oleg Antonov, when it landed at Le Bourget Airport this summer for the International Air and Space Show in Paris. Thousands of Parisians crowded around to see the giant that can lift an 80-ton load with ease and transport it 3,100 miles. With a 45-ton load the range increases to 6,800 miles.

The **Antaeus** is 182 feet long, 41 feet high (equal to a four-story building) and has a wing span of 210 feet. Its four 15,000-horsepower turboprop engines guarantee a maximum cruising speed of 460 miles per hour. The plane can take off on three working engines.

Not the least important of the new plane's features is the fact that it does not require concrete runways but can take off from and land on soft fields, and needs only 3,600 feet for take-off and 2,600 feet for landing. From the two-deck cockpit the five-man crew is able to adjust the pressure in the undercarriage wheels before take-off and landing from two and a half to five atmospheres.

The central part of the plane has two doors, one on each side. The interior—108 feet long, 15 feet wide and 15 feet high—resembles a gymnasium. There is enough room in it for 12 excavators or bulldozers, or three big buses.

"The **Antaeus,"** Antonov told newsmen, "is built to cater to the growing needs of our developing economy. It will take less time to transport heavy cargoes to the remote districts of Siberia and the Maritime Territory. Our plane can handle equipment that cannot be transported by railway. It can carry automobiles of all makes, tractors and even small ships."

Antonov's design office is now working on a passenger version of the **Antaeus.** It will be the first passenger plane to have two-story salons. Besides general salons, there will be a special salon for mothers and children, and a bar. It is also planned to equip the plane with television and film projection units.

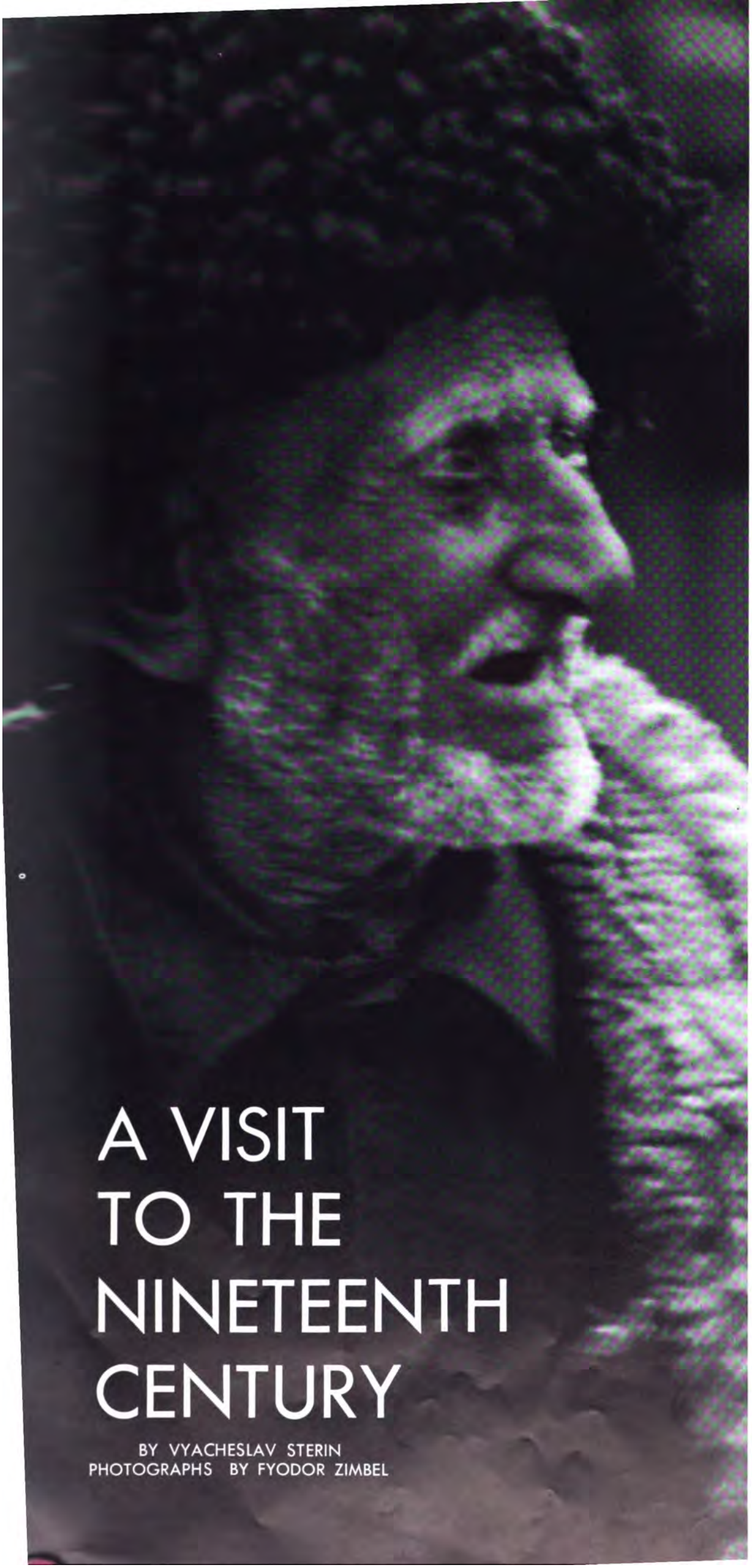
Passengers will enter the plane through 10 doors, and the aircraft will be serviced by 10 or 12 hostesses. The cost of a flight will not exceed the cost of a train ticket for the equivalent distance.

The Soviet Union plans to sell these planes on the international market.

The new Soviet plane Antaeus **can transport 720 passengers or 80 tons of cargo a distance of 3100 miles cruising at 420 miles an hour.**







A VISIT TO THE NINETEENTH CENTURY

BY VYACHESLAV STERIN
PHOTOGRAPHS BY FYODOR ZIMBEL

WE were paying a visit to the nineteenth century, hoping to find it at home. The last USSR census showed that there are many people far more than a century old in the mountainous republics of the Caucasus, in Daghestan especially. These ancients carry their years very lightly and are beset by very few of our only too common twentieth century ailments. Hardly any of them suffer from high blood pressure, cancer, leukemia, or cardiac and vascular disorders.

What would Alexander Pushkin's contemporaries look like today? Or Abraham Lincoln's or Napoleon Bonaparte's? To find the answer I went to the mountains of Daghestan.

But perhaps it was all a tall story? How could one be sure a man was born in such and such a year if there were no birth records or other written proof? I asked my fellow traveler Ramazan Alikoshiyev. He is the chairman of the Daghestan Gerontology Society and wrote his master's thesis on longevity.

"You mean a man could claim to be older than he really is?" he asked. "That's not likely in an *aul* (a mountain village). There is always someone around who remembers his parents talking about the oldest man, somebody who might have seen Shamil himself, say. That is the way these mountain people keep track of the age of a Methuselah who is no longer sure how old he is."

We were heading for the *aul* of Verkhny Urkarakh about a mile above the Caspian Sea level. Landslides, blizzards and dense fog in the ravines are frequent guests here; they make life a very precarious business indeed. And yet it is precisely here that people seem to have tricked Old Man Time.

We stopped at a wicker gate. Kurban Kurbanov, the oldest man in the Soviet Union, lives behind it in a two-story house hugging the mountainside. The house is perched on a ledge with a sheer drop of 2600 feet. Kurban Kurbanov is 160 years old.

Someone was chopping wood in the small yard, grunting with satisfaction at every blow. He sprang smartly erect after every swing. When his fur hat slid askew, he irritably put it right, wiped the sweat away and set his long-handled axe swinging again.

"This is Grandfather Kurban," said Alikoshiyev. I felt curiously shy as I shook Grandfather Kurban's wrinkled but strong



hand. It wasn't every day one shook hands with a man who had lived the length of two normal lives.

Grandfather Kurban could not speak Russian and his son, 50-year-old teacher Solomon Kurbanov, served as interpreter.

Old Kurban thought back and recalled the middle of the last century, when the Daghestanians rose up against the Russian czar. The mountaineers gathered under the banner of Shamil, the legendary rebel hero. Riding through Urkarakh one day, Shamil's detachments came on a solitary shepherd and his flock. It was not Shamil's white horse, ornate weapons and shaggy cloak that fascinated this shepherd, but his boots. Never had he seen anyone in such magnificent, such royal boots —all leather to the very knee.

Catching the shepherd's gaze, Shamil dismounted, sat down on a boulder and pulled off his boots.

"Take them!" he said to Kurban. "And if you are a man, you'll learn to make boots exactly like these."

"How old was Kurban then?" I asked.

"Who can remember! But he says he had a beard by that time."

Kurban kept those boots for a long time but did not do the bidding of the rebel leader. He never learned to make boots. He did not have the tools he needed, and no one in the aul *knew how to make such leather. He continued to tend his flock and sell reed switches at the bazaar to save enough money to pay for a token of manly dignity—a dagger made by the famous smiths of the neighboring* aul *of Kubachi. And the boots? They hung prominently in the special room for guests, prompting endless wonder and delight, for no one in the mountain villages wore boots then. But they served for another legend of Shamil's generosity that swept through the* auls.

Winter yielded to summer, but returned again after a brief autumn. Everybody thought that Kurban had reason to be satisfied. He was respected by his fellow villagers, they trusted their flocks to him. A faithful wife waited for him in his saklia *(Caucasian dwelling), but he grew more and more somber for all that. There were no children in his house. He was sorely troubled by the thought that he might have to depart from this world without leaving any offspring. Was his name to perish with him? Were the Kurbanovs to vanish from the memories of men?*

At the mosque one day he caught sight of Salomat Magometova and could not forget her after that. The Koran allowed him to take a second wife, but Salomat's relatives objected.

"You're not a young man," they said, "and you've been living with Aisat for 40 years."

Old Kurban smiled when he thought of what happened afterward. Anything of the sort today would make him the laughing stock of the village, but the law was different then. There was nothing a *djigit* (skillful horseman) dared not do!

A horseman dashed into the village in a cloud of dust, heading for the girl with a ewer on her head. Why didn't she run away and hide instead of watching that oncoming rider? The vessel rolled through the dust as the rider dashed away, with the girl flung across his saddle. That is how Kurban acquired his second wife, Salomat, who bore him three daughters and a son.

"But how old was he when he did this mad thing?" I asked.

"About 70," said Solomon Kurbanov, questioning his father. "Yes, he must have been about 70," he added after some brief calculations. "I'm 50, and my sisters are close to 70."

The years slipped swiftly by. The Russian czar was toppled from the throne, and a collective farm was set up in the aul. *Kurban tended the collective farm flocks for many years. He had joined the collective farm at once, for long experience had taught him that the solitary sheep could not survive. Without the flock it was lost, unable to find either fodder or the way home.*

When the Second World War came and all the men left for the front, he turned up at the office of the Urkarakh collective farm with cloak and dagger. The chairman knew that he was the oldest man in Urkarakh:

"What do you want, father?" he asked.

"I've come to guard the barns. I can't go out with the flocks any more. I'm too old for that."

"You want to be a watchman?" asked the chairman in wonder. "He'll fall asleep at his post!" he thought to himself. But how could he refuse and hurt the old mountaineer? "All right," he said. "You guard the barn. Remember, that's where we keep our sheepskins for the army!"

"I'll check up on him tonight," the chairman told himself. That night he paid a visit to the barn and found no one at the door, just as he had expected. "The old fellow is asleep!" he thought, grinning. But no sooner had he touched the lock than his neck was burned by the cold steel of a dagger.

"Fall flat, you scum!" snarled Kurban behind him.

"But it's me!" wailed the chairman. Only then did the dagger relent.

The chairman had a good time telling the story afterward.

When the war was over, the men came back, though by far not all. There was grief in many a saklia. *Women grew prematurely gray and children prematurely old. But the old man was one of the lucky ones, his son came back unharmed.*

Talking to Kurban through his son, we could hardly believe him. Wasn't he plagued by the usual infirmities of old age? Wasn't he ever ill?

"At the hospital five years ago, they found a swelling on his tongue," explained the son. "They thought it was cancer, but the report was negative. And last year he fell off the roof and hurt his shoulder, but he got over it soon. He's never been ill otherwise. Nor has he ever kept to any special diet. He eats everything we do. His teeth, though, are beginning to wear down badly. He smokes, but not too much. He also likes a glass of wine now and then. Our mother passed away five years ago, though she was 50 years younger. He always sleeps in a cold room and washes with cold water and salt every day. He detests a soft bed, prefers sleeping like a shepherd, wrapped in a sheepskin."

"How old was he when he started smoking?" asked Alikoshiyev, begininng his medical examination of the old man.

"He started when I was born. He was 110 then!"

Here are some of the doctor's findings: Kurban's blood pressure was slightly below normal, about what you might expect in a 60- to 70-year-old. His heart was normal, the beat was regular and distinct. And his lungs were perfectly clear.

Our car was soon speeding down the winding mountain road. The whole visit would have seemed like a dream if I were not still aware of the warmth of Kurban's handshake. We were returning to the twentieth century now.

QUERIES FROM READERS

These queries are taken from *USSR: Questions and Answers*, a book prepared around questions sent by foreign readers to publications serviced by the Novosti Press Agency.



Copies may be obtained from these American agents of Mezhdunarodnaya Kniga: Znanie Book Shop, 5237 Geary Boulevard, San Francisco, California 94118, and Four Continent Book Corporation, 156 Fifth Avenue, New York, New York 10010.

QUESTION: How big is the USSR?
ANSWER: Its area is 8.6 million square miles, which is more than 16 per cent of the earth's inhabited land space. The Soviet Union is the largest country in the world. It is nearly two and a half times as big as the United States, seven times as big as India, 60 times as big as Japan and 90 times as big as Great Britain.

Maximum distance from north to south is about 3100 miles. From west to east it is about 6200 miles, a quarter the length of the equator.

Eleven of the 24 time zones into which the world is divided pass through the territory of the USSR. When Muscovites sit down to dinner, their fellow countrymen on Sakhalin Island are greeting the dawn.

QUESTION: Can land be bought and sold?
ANSWER: The land needed by a state or cooperative organization, a group of people or an individual is provided by the state free of charge. It may not be sold.

The collective farm land transferred to individual collective farmers to build homes is also free.

A person wishing to sell a summer cottage built at his own expense on land given him by the state or by a collective farm is permitted to do so. But he sells only the cottage. The land on which it stands is transferred to the new owner of the cottage without charge, the way the original owner got it.

QUESTION: May one criticize members of the Council of Ministers?
ANSWER: Of course. They are criticized at Supreme Soviet sessions by deputies and by working people at meetings in factories and offices. Any citizen may, and some do, publicly criticize a minister, through the press or other medium, if he falls short of his responsibilities or if the industries or services he administers do not measure up to need. The minister will, as a rule, answer the criticism through the press by indicating what remedial steps he proposes or has taken.

QUESTION: What is the function of the militia?
ANSWER: The militia, which is subject to the Ministry for the Maintenance of Public Order, has a wide range of activities. It sees to it that laws, decrees and local ordinances regulating public order are observed; it keeps order in public places; it protects public and personal property and watches over the security of private citizens; it sees to it that traffic rules are followed; it keeps a register of motor vehicles and checks on the competence of drivers, and so on. To fight crime, the militia works closely with the courts and the procurator's office in investigating crimes and making arrests. Service in the militia is voluntary, but the minimum service period is three years.

QUESTION: How are prices set?
ANSWER: Price is based on the average cost of production and the cost of marketing the item. The price also includes the enterprise's net profit. This ensures its future operating efficiency as well as its ability to make contributions to the State Budget for the country's economic, social and cultural development. In setting prices, account is taken of the part played by the item in people's lives, as well as supply and demand. The production of the overwhelming majority of items is in the hands of the state.

The state buys most of the marketable farm produce, which is very much to the farmer's advantage, since it gives him a guaranteed market.

All these circumstances make it possible to set economically substantiated prices that are consistent with the over-all economic plan. Thus some manufactured items are sold at cost price, while others (such as toys and medicines) are sold below cost. In the latter case the factory covers its production costs by state subsidies, so that prime necessities are accessible to all consumers. Some articles are sold at low prices because the state wants to see the most effective use made of raw materials or cut down on household chores or both. For instance, ready-made clothes, considering their cost of manufacture, are priced comparatively lower than fabrics.

However, prices on luxury items (furs, jewelry, some type of cosmetics) or on some items whose consumption the government wants to discourage (hard liquor, tobacco) are usually higher than cost.

Prices on key goods are set by the USSR State Planning Committee and on the rest by the governments of the union republics. As a rule prices of manufactured articles are uniform for the whole country. But those on most foods vary according to three territorial belts. The differential is 10 to 25 per cent, not more. There are also some seasonal prices for farm products. In the potato, vegetable, fruit and melon seasons, when there are large supplies, these items are sold at lower retail prices. In winter they are priced higher to cover storage expenses.

The law provides severe penalties for price violations. The right to check on prices charged is vested in a state inspection agency as well as in public organizations, the trade unions in particular.

QUESTION: Do any shops accept foreign currency?
ANSWER: There are special shops that accept foreign currency from tourists who wish to make purchases in their own currency. They are located at airports and in the hotels where foreigners usually stay.

QUESTION: Why are the Russians so fond of bathhouses?
ANSWER: For the Russian a bathhouse is not simply a place to bathe, it is where he relaxes. Many people go to a bathhouse regularly despite the fact that they can bathe at home. A bathhouse refreshes body and spirit. This is not hyperbole but medical fact.

Bathhouses have long been popular in Russia and are even mentioned in the Nestor chronicles (eleventh to twelfth century A.D.).

The sanctum sanctorum of a Russian bathhouse, that raises it above and beyond the usual run of bathhouses, is its steam room. Water and sometimes kvass (which fills the room with the smell of bread) is poured on heated stones to make the steam rise and the room hot. The bathers lie or sit enveloped in steam on wooden or stone benches and clean themselves with bundles of birch twigs.

In Siberian villages, where almost every farm cottage has its own bathhouse, the bathers run out, roll in the snow and then run back into the steam room.

The physiological value of the bathhouse has been studied in Russia. The high temperature speeds up oxidation and metabolism. Steam gets the blood circulating and stirs up slowed-down body processes. Not everyone can stand the steam, and these baths are not recommended for people with weak hearts.

QUESTION: Can a foreigner get a pension?
ANSWER: Under Soviet law, foreigners working in the Soviet Union and their families as well are eligible for pension. In cases where specific length of service is required, two-thirds of the service has to be in the USSR.

The Soviet Union has social insurance agreements with the German Democratic Republic, Hungary, Bulgaria, Czechoslovakia and Rumania. Citizens of these countries who live permanently in the USSR are granted pensions on the same basis as citizens of the USSR.

QUESTION: How does an artist sell his pictures?
ANSWER: He can sell his pictures at exhibitions, art shops and to anybody who cares to buy them. As a rule, art works are commissioned by galleries, traveling exhibits, or to adorn public buildings—schools, theaters, hotels and stadiums. Graphic artists sell large number of prints at special shops. Prints sell at reasonable prices (from two to six rubles) and are popular with Soviet buyers. Many pictures are acquired by public organizations, primarily by trade unions, and by collective farms for their houses of culture, clubhouses, and health and holiday homes.



WATER DESALTING: A FIELD FOR COOPERATION

BY VASILI YEMELYANOV

CORRESPONDING MEMBER OF THE USSR ACADEMY OF SCIENCES

WATER has always been a problem for man. At the dawn of civilization it was solved quite simply: People settled along rivers and fresh-water lakes. Today, with the growth in urban population, rising living standards, and developing national economies, the amount of fresh water needed to satisfy man's daily requirements keeps increasing.

The amount of water an adult drinks varies from one and a half to ten quarts a day, depending on many factors, including the climate. Altogether an average urban inhabitant uses from 140 to 165 gallons for his various needs. The salt content of drinking water must be no more than 0.05 per cent. Some industries (for example, steam equipment and nuclear plants) require an even higher standard of purity.

However, two-thirds of the earth suffers from either a scarcity or complete lack of fresh water. According to the International Atomic Energy Agency, these areas are inhabited by about five per cent of the world's population. Most of the desert or semidesert lands have an abundance of sunshine and need only water to transform them into thriving, prosperous economies.

To help meet the increased demand for fresh water, many countries are building installations for desalting water, particularly sea water. This can be done by a variety of physical and chemical methods, including evaporation or distillation, freezing, ion processes and organic extraction.

The oldest method and the one still most widely used is distillation. It goes all the way back to Aristotle, who wrote about his discovery, "Salt water becomes fresh as it is converted into steam, and the steam does not condense into salt water again."

Fresh water can also be obtained by freezing salt water. By freezing sea water we can make what is technically called a two-phase system, *i.e.*, crystals of hard, fresh water plus brine. The crystals are then separated from the brine and rinsed with fresh water to remove the salt from the surface. Desalted water is obtained by melting these crystals.

The application of ion processes reduces essentially to the formation of positively and negatively charged particles or ions. These particles can be removed by chemical (ion exchange) or electrical (electrodialysis) methods.

The extraction method is based on the fact that some organic liquids absorb more water at a lower temperature than at a higher one. A cooled liquid (extragent) is poured into a tank of salt water, where it absorbs the water but not the salt. The extragent is then put through a heat exchanger where, upon being heated, it releases the fresh water it has absorbed.

Work is in progress on other desalting methods as well. They include ultrafiltration, osmosis, formation and decomposition of hydrates, and combinations of different chemical and physical processes.

Several countries, including the Soviet Union, have built desalting plants that use one of the above methods. In Baku and Krasnovodsk, Caspian Sea water is being desalted. The Baku plant produces 317,000 gallons of fresh water a day, the Krasnovodsk plant 740,000 gallons.

All the desalting techniques require energy, and the cost depends on the cost of power. For example, it takes from 13 to 15 kilowatt-hours to distill 265 gallons of water. This will probably be cut in half when large desalting installations are built.

The use of organic fuel is justified in the construction of relatively small desalting plants, those whose daily output comes to 550,000 to 1.5 million gallons. However, the atomic nucleus is a much more economical source of energy.

The first industrial atomic power plant was built in the Soviet Union more than 10 years ago. In 1958 the first section of an atomic power plant in Siberia went into operation. Its capacity now exceeds 600,000 kilowatts. The Beloyarsk 100,000-kilowatt plant started up in 1963, and the Novo-Voronezh 210,000-kilowatt plant in 1964. The USA, Great Britain and France have atomic power plants with capacities of hundreds of thousands of kilowatts, and powerful plants are now under construction in Czechoslovakia, the German Democratic Republic, Italy and India.

Some Soviet specialists have estimated that it would pay even now to build atomic power stations with a capacity of up to a million kilowatts, and there are people in the United States who share this opinion. For example, in June 1964 President Johnson said that the long-promised day of the economical atomic power plant was near.

The cost of electric power drops as the capacity of nuclear stations grows. The economic alvantages are thrown into full relief by comparing a very large nuclear plant with a plant of the same capacity running on oil or coal. The use of atomic power for desalting would cut the cost of this operation considerably and make it entirely feasible.

A great deal of attention is being paid to water desalting in the Soviet Union. Several experimental plants using different methods have recently been built in Kazakhstan. One of them has been successfully distilling a million and a half gallons of fresh water a day. So far these plants have been using organic fuel, but a fast-neutron one-million-kilowatt reactor will soon be constructed there. It will be sufficient for running a 350,000-kilowatt electric power plant or a power plant of lower capacity coupled with a desalting installation producing up to 27 million gallons of fresh water a day.

The scarcity of water in Kazakhstan has curbed the development of its resources, particularly its ore deposits, which are as rich as those in the Urals, perhaps even richer. Fresh water here means life, activity, progress.

Construction of high-capacity desalting plants is one of the most sensible ways of using nuclear power. Desalting sea water with nuclear energy will give the nuclear industry a boost and bring into use all the know-how accumulated in this field, not to mention the stocks of uranium and plutonium.

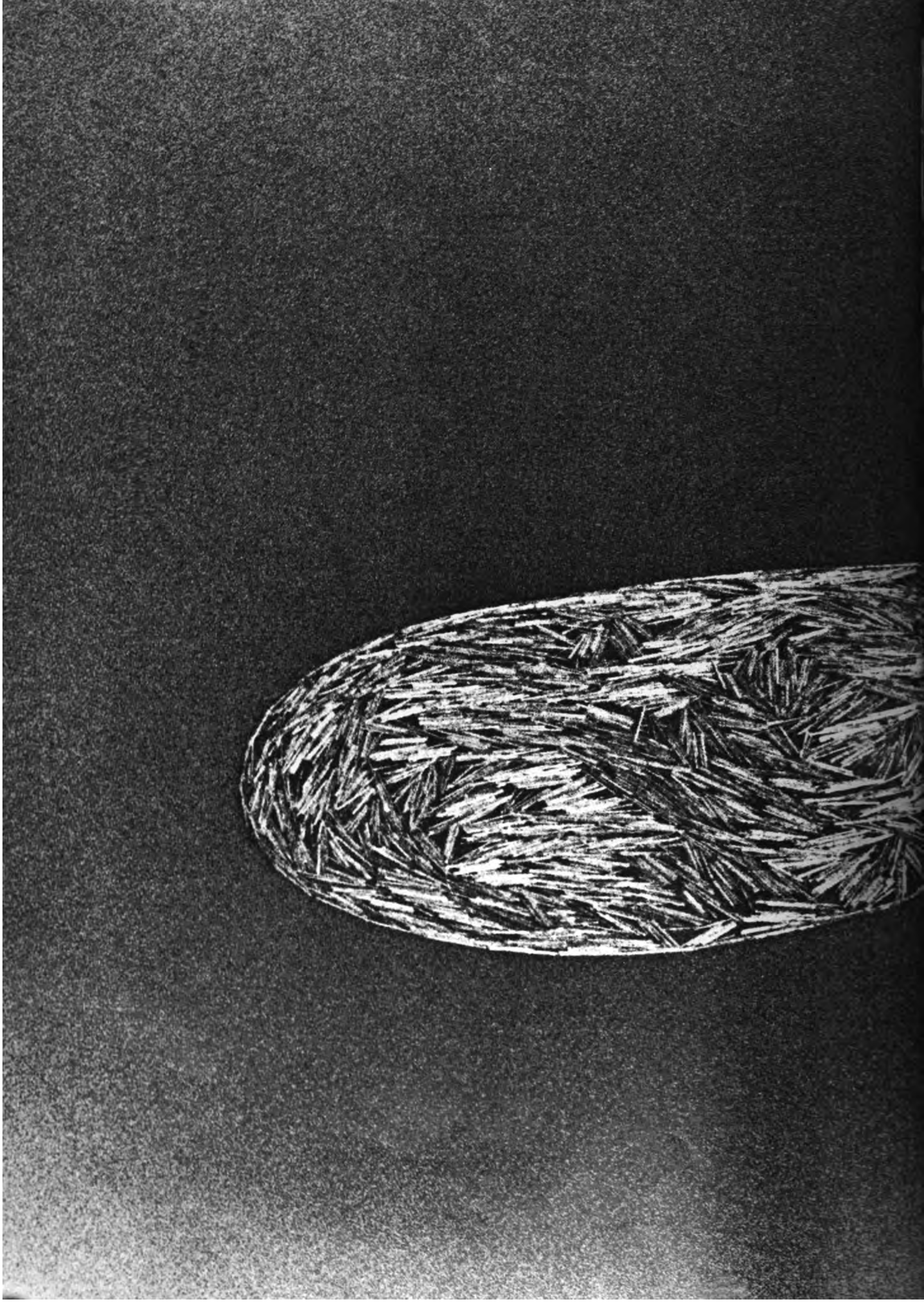
The quickest way of developing a workable method of desalting with nuclear power would be the international cooperation of scientists, above all of those countries which have some experience in nuclear power and are interested in desalting.

In the Soviet Union there are large areas and even whole republics where water supply is one of the primary concerns—Uzbekistan, Kazakhstan, Tajikistan, Azerbaijan and the Crimea. There is also not enough water in several areas of the United States—California, New Mexico, Texas and Arizona. Many countries of Asia, Africa and Latin America are interested in desalting sea water. In other words, the possibility and necessity of international cooperation in this field are apparent beyond doubt. The matter hinges on determining suitable forms of this cooperation.

Several of the United Nations agencies have been investigating desalting possibilities. The United Nations Economic and Social Council called upon all countries in 1960 to intensify their research on water resources. The problem came up at the International Conference on the Use of Science and Engineering for the Advance of the Economy of Developing Countries held in Geneva in 1963. The International Atomic Energy Agency has also been concerned with the problem. The Geneva Conference on Desalting summoned by the International Agency in September 1964 was attended by 19 countries. Several reports dealt with the problem at the Third International Conference for the Peaceful Uses of Atomic Energy in Geneva in 1964.

The capacity of desalting plants must be increased not by just two or three times, but by hundreds of times. Accordingly, nuclear reactors with an output of millions of kilowatts must be designed. The importance of cooperation in such projects can hardly be overemphasized.

On November 18, 1964, an agreement was signed in Moscow between the Soviet Union and the United States on cooperation in desalting sea water, a problem of great scientific and economic significance. All mankind will benefit from the joint work contemplated under this agreement.



A DROP IN THE OCEAN



The tugboat stubbornly making its way up the Yenisei is towing a load of cedar logs. Overcoming the resistance of the water, the logs have taken nature's most streamlined form—the shape of a drop of water—hence its title. The photo was taken by Yuri Abramochkin and Valeri Shustov and was part of the ocean of pictures that engulfed Novosti Press Agency when its 70 photographers submitted their best for the agency's Second Annual Photo Exhibition.

Brief Comments

Training Managers

by Genrikh Emdin



Genrikh Emdin, 51, is a graduate of the Odessa Institute of Finance and Economics. He is an editor of the Ekonomicheskaya Gazeta, *specializing in national planning. He has also written articles on economic policy and finance.*

The Soviet Government has been paying special attention of late to the training of economic managers on all levels. Accelerating rates of economic growth call urgently for people with specific managerial skills. The Soviet Union has built about 12,000 big industrial projects in the last 15 years, and retooled and expanded thousands of operating plants. This explains the growing need for "commanders of production" as economic managers are known here.

As a rule, directors of plants, factories, mines, power stations and railways are graduates of technical institutes and secondary technical schools, which have turned out 11,000,000 specialists in the last 47 years. Their daily performance selects the most vigorous and able for promotion. Many become talented administrators and earn national reputations as industrial organizers.

Why are we not satisfied with this process of "natural selection" that has served us so well for years? The explosive pace of technological progress and the ever more complicated economic situation will not let us be. We make very high demands today on industrial managers for efficient and profitable operation. And scientific instead of impromptu management is not possible unless managers have the special skills required. But our "commanders of production" did not get much of this specific managerial training at their purely engineering colleges. They had to pick it up at scattered courses and seminars given in economic areas, at central ministries and in colleges.

We have a different approach now. A recent decision of the USSR Council of Ministers provides for a modern system of manager training. Departments to train executives for industrial plants and construction projects are to be set up at colleges for the first time.

These departments will be attached to the Moscow, Leningrad and Kharkov economic and engineering institutes and the Urals Polytechnical Institute. A department of industrial planning has been organized at the Moscow Institute of the National Economy.

Each of these departments will have a student body of about 100. The training course will take six months to a year, full time. The students will be people of 40 or less with a higher education and at least five years of job experience after graduation that showed them to be capable administrators. The recommendation of the economic council, ministry, department or planning agency where they worked will be required.

This training program will give hundreds of specialists a background in industrial management and planning and the organization of production. They will learn how to use modern computing techniques and mathematical methods. They will be grappling with the engineering, organizational, financial and other problems that make up the daily fare of the business executive.

Our economic colleges will draw on foreign experience, that of American business schools in particular.

Economic management methods are in a process of vigorous change in the Soviet Union. On the one hand a more efficient system of centralized planning management is being created, and on the other hand the individual enterprise is being given more independence. Under these conditions the personal qualities, knowledge and experience of the administrator become very important factors.

The Law Has Its Way

by Victor Victorov



Victor Victorov, born in 1922, is a graduate of the Leningrad Pedagogical Institute. He worked as a reporter and TV photographer on Sakhalin Island, and now writes for the Moskovskaya Pravda, a leading Soviet newspaper.

We walked down the straight, solemn corridor. Notices on the doors indicated the different courtrooms. We entered one where a civil case was being heard. K., a building foreman, had filed suit against the management of his plant. He claimed that he had been unjustly dismissed. The management contested his claim.

Testimony was given and evidence presented. It painted a very bleak picture for K. He was a poor worker who had more than once been guilty of technical infringements. Two reprimands had failed to reform him. It was very clear that he was not the man for the job.

The hearing over, the judge and two people's assessors withdrew to consider their verdict.

They ruled that the foreman must be reinstated and paid all wages due him for the period of enforced idleness.

Why? What reasons could there be for this seemingly arbitrary decision?

Foreman K. received a favorable decision because the rules for dismissal had been gravely violated by management and the trade union committee. Under labor legislation no one may be fired without the approval of the trade union. Though the trade union committee in this case had agreed with management's decision, it had done so *post factum*.

You may ask whether, under the circumstances, it was really so important to keep to the letter of the law. Couldn't the judges be wrong? No. The trade union functionaries, having once acceded to an accomplished fact, could very well bow to management again and again. Later they may find that a person hastily dismissed by management really did not deserve it. The law prevents this.

The court returned a verdict based on the law. A lawbreaker who gets away once will break the law again. And that must not be allowed to happen.

Agriculture: Where Will the Money Come From?

by Dmitri Rudy



Dmitri Rudy, 64, is a graduate of the Kiev Institute of the National Economy. A well-known journalist, he is the author of a number of books and articles on agriculture, including The Distribution of Income on Collective Farms, Hard Paths *and* These Years Are Worth Decades.

In the coming five-year period the Soviet Union plans to invest 71 billion rubles in agriculture. This is more than was invested during the 34 years from 1928 to 1962. Where will these funds come from? Are the plans realistic?

Soviet agriculture is based on two types of property—state and collective farm property. That is why investments in this sphere are also proceeeding along two lines: 41 billion rubles from the state farms and 30 billion from the collective farms.

Will collective farms be in a position to make such colossal investments when their total annual income in recent years amounted to only 16-17 billion rubles?

The cash income of the collective farms has always grown more rapidly than the gross output of agriculture. During the past five years the latter increased by less than two per cent annually, whereas cash incomes showed an almost six per cent rise. As a result of measures taken to develop agriculture, it can be assumed that collective farms will continue to develop and that their cash incomes will increase at an incomparably higher rate. However, let us approach this matter conservatively. During the 1955-1959 period the annual increase in the gross output of agriculture was 7.6 per cent. Let us assume the same rate for the 1966-1970 period, with an annual 10 per cent increase in cash income. At the same time we must take into account the assistance the collective farms will be receiving in the form of reduced taxes and the higher purchasing prices to be paid by the state for grain and cattle. This year collective farm funds will increase by roughly 500 million rubles as a result of the reduction in taxes, and by an additional 2.5 billion rubles as a result of the higher purchasing prices on grain and cattle.

This is how collective farm income will develop during the next five years (in billions of rubles):

	Cash income from preceding year	10 per cent increase in income	Increase in income from reduced taxes and higher purchasing prices	Total cash income
1966	20.8	2.1	0.3	23.2
1967	23.2	2.3	0.6	26.1
1968	26.1	2.6	1.0	29.7
1969	29.7	3.0	1.4	34.1
1970	34.1	3.4	1.8	39.3
For the 1966-1970 five-year period				152.4

Thus, in five years the cash income of the country's collective farms will amount to more than 152 billion rubles. This includes 5.1 billion rubles from reduced taxes and higher purchasing prices on grain and cattle and an annual 10 per cent increase due to the rise in output and receipts from marketing produce.

In recent years the collective farms allocated slightly more than 20 per cent of their cash income to the indivisible funds set aside for construction, the purchase of machinery, equipment and productive and draft animals, and transportation. Assuming that this proportion will be maintained, a total of more than 30 billion rubles will be directed into the collective farm indivisible funds during the five years from 1966 to 1970. This covers the capital investments which they are to make in the 1966-1970 period.

So much for the collective farms.

Now let us figure out where the state will find the funds to almost double its capital investments in agriculture during the forthcoming five-year period. During the 1961-1965 period 22.5 billion rubles was invested in agriculture. During the next five-year period this sum will be increased by 18.5 billion rubles and will be allocated from the state budget revenue, 90 per cent of which comes from the country's growing socialist economy.

The revenue of the USSR State Budget was 4.8 per cent higher in 1964 than in 1963. It is set at 99.5 billion rubles for 1965, a 6.1 per cent increase over 1964. This rate of increase will probably be maintained from year to year. However, even assuming that the annual increment will not exceed 7 per cent, the state revenue will present approximately the following picture (in billions of rubles):

Year	Budget revenue of preceding year	+7%	Total
1966	99.5	6.9	106.4
1967	106.4	7.5	113.9
1968	113.9	8.0	121.9
1969	121.9	8.5	130.4
1970	130.4	9.1	139.5

The increase in state budget revenue for the entire five-year period will amount to 40 billion rubles. This is more than double the increase in state capital investments in agriculture during this five-year period.

Thus we find that the Soviet state has at its disposal more than enough sources for deriving the funds it plans to invest in agriculture.

IN THE NEXT ISSUE



Some time ago *The Saturday Evening Post* published the results of a Gallup Poll of 3,000 Americans between the ages of 14 and 22. The poll analyzed replies to such questions as: Do you like yourself? What is your favorite dance? What do you dread most? Novosti Press Agency has selected 20 of these questions and asked them of Soviet young people —students, farmers, office clerks and factory workers. Be sure to see Soviet Youth Answers Gallup Poll Questions in the coming issue.

Everyone agrees that Professor Nikolai Kozyrev is an outstanding thinker. But beyond that he remains a controversial figure. His theory on the place of time in the functioning of the universe has stirred up considerable, heated debate. Professor Kozyrev proposes that "it is to time's properties that we should look for the source that maintains the phenomenon of life in the world." Read his thought-provoking article An Unexplored World in the November issue.





Just outside Moscow is Kolomenskoye. Once the suburban country estate of the czars, it is now a museum of sixteenth through eighteenth century art treasures. Its spire-topped brick gate at one time held a clock that chimed the hour. At the entrance ferocious looking lions stood guard. Hides were stretched over their wooden carcasses and a mechanism inside made them roar and roll their eyes. Its palaces and churches staggered sixteenth century imaginations,and what remains causes similar gasps of amazement today. For an illustrated tour see the November issue.

Saved by a miracle! What started as a routine sky-diving session ended in near tragedy when record holder Yuri Belenko made his jump. His parachute failed to open. In one minute he plunged to earth from an altitude of 3300 feet. His friends watching below managed to catch him in a tarpaulin just two feet from the ground. A cameraman presents his shots of that horror-filled minute in the next issue.



Some of the other articles in the November issue are:
John Reed Asks Muscovites Three Questions—a look at the theatrical pageant based on Reed's book *Ten Days that Shook the World;* Artists Who Can't Write —introducing prize-winning artists all less than seven years old; Shadow Boxing—ex-champion Edward Borisov discusses American and Soviet boxing; Hell Drivers—a ride with the truck drivers who do the long hauls between Moscow and other cities; Georgia: Forms and Colors—a survey of contemporary Georgian artists; Tofalaria—the story about a tiny area in Siberia with a population of only 600; Art and Revolution—an essay by Anatoli Lunacharsky.

NOVOSTI PRESS AGENCY

SOVIET LIFE

Do Women Rule the World? What role do women play in today's world? And can they remain women under these conditions?

Siberia: New Horizons A colorful sketch of that rapidly developing land and its people.

COMING SOON

Learning Russian

At the request of readers we are including a translation of the Russian text in this column. This is not a word for word translation but may be used as a reference for understanding idiomatic expressions found in the text.

ЛЕГЕНДА О ДАНКО

Максим Горький

Жи́ли на земле́ в старину́ одни́ лю́ди, непроходи́мые леса́ окружа́ли с трёх сторо́н та́боры э́тих люде́й, а с четвёртой — была́ степь. Бы́ли э́то весёлые, си́льные и сме́лые лю́ди. И вот пришла́ одна́жды тяжёлая пора́: яви́лись отку́да-то ины́е племена́ и прогна́ли пре́жних в глубь ле́са. Там бы́ли боло́та и тьма, потому́ что лес был ста́рый, и так гу́сто переплели́сь его́ ве́тви, что сквозь них не вида́ть бы́ло не́ба, и лучи́ со́лнца едва́ могли́ проби́ть себе́ доро́гу до боло́т сквозь густу́ю листву́. Но когда́ его́ лучи́ па́дали на́ воду боло́т, то подыма́лся смрад, и от него́ лю́ди ги́бли оди́н за други́м. Тогда́ ста́ли пла́кать жёны и де́ти э́того пле́мени, а отцы́ заду́мались и впа́ли в тоску́ Ну́жно бы́ло уйти́ из э́того ле́са, и для того́ бы́ли две доро́ги: одна́ — наза́д,— там бы́ли си́льные и злы́е враги́, друга́я — вперёд,— там стоя́ли велика́ны-дере́вья, пло́тно обня́в друг дру́га могу́чими ветвя́ми, опусти́в узлова́тые ко́рни глубоко́ в це́пкий ил боло́та... Ничто́ — ни рабо́та, ни же́нщины не изнуря́ют тела́ и ду́ши люде́й так, как изнуря́ют тоскли́вые ду́мы. И осла́бли лю́ди от дум... Страх роди́лся среди́ них, сковал им кре́пкие ру́ки, у́жас роди́ли же́нщины пла́чем над тру́пами уме́рших от смра́да и над судьбо́й ско́ванных стра́хом живы́х,— и трусли́вые слова́ ста́ли слышны́ в лесу́, снача́ла ро́бкие и ти́хие, а пото́м всё гро́мче и гро́мче... Уже́ хоте́ли идти́ к врагу́ и принести́ ему́ в дар во́лю свою́, и никто́ уже́, испу́ганный сме́ртью, не боя́лся ра́бской жи́зни... Но тут яви́лся Да́нко и спас всех оди́н.

Да́нко — оди́н из тех люде́й, молодо́й краса́вец. Краси́вые — всегда́ сме́лы. И вот он говори́т им, свои́м това́рищам:

— Не своротить ка́мня с пути́ ду́мою. Кто ничего́ не де́лает, с тем ничего́ не ста́нется. Что мы тра́тим си́лы на ду́му да тоску́? Встава́йте, пойдём в лес и пройдём его́ сквозь, ведь име́ет же он коне́ц — всё на све́те име́ет коне́ц! Идёмте! Ну! Гей!..

Посмотре́ли на него́ и увида́ли, что он лу́чший из всех, потому́ что в оча́х его́ свети́лось мно́го си́лы и живо́го огня́.

— Веди́ ты нас!— сказа́ли они́.

Тогда́ он повёл...

Дру́жно все пошли́ за ним — ве́рили в него́. Тру́дный путь э́то был! Темно́ бы́ло, и на ка́ждом шагу́ боло́то разева́ло свою́ жа́дную гнилу́ю пасть, глота́я люде́й, и дере́вья заступа́ли доро́гу могу́чей стено́й. Переплели́сь их ве́тки ме́жду собо́й; как зме́и, протяну́лись всю́ду ко́рни, и ка́ждый шаг мно́го сто́ил по́та и кро́ви тем лю́дям. До́лго шли они́... Всё гу́ще станови́лся лес, всё ме́ньше бы́ло сил! И вот ста́ли ропта́ть на Да́нко, говоря́, что напра́сно он, молодо́й и нео́пытный, повёл их куда́-то. А он шёл впереди́ их и был бодр и я́сен.

Это был тру́дный путь, и лю́ди, утомлённые им, па́ли ду́хом. Но им сты́дно бы́ло созна́ться в бесси́лии, и вот они́ в зло́бе и гне́ве обру́шились на Да́нко, челове́ка, кото́рый шёл впере́ди их. И ста́ли они́ упрека́ть его́ в неуме́нии управля́ть и́ми,— вот как!

Останови́лись они́ и под торжеству́ющий шум ле́са, среди́ дрожа́щей тьмы, уста́лые и злы́е, ста́ли суди́ть Да́нко.

— Ты,— сказа́ли они́,— ничто́жный и вре́дный челове́к для нас! Ты повёл нас и утоми́л, и за э́то ты поги́бнешь!

THE LEGEND OF DANKO

Maxim Gorky

(Translation)

Long, long ago there lived some people in a place that was bounded on three sides by impenetrable forests and on the fourth by the steppe. They were a cheerful, strong and brave people. But evil times came upon them: other tribes appeared from somewhere and drove them into the depths of the forest. The forest was dark and swampy, for it was very ancient, and the boughs of the trees were so closely interwoven that they shut out the view of the sky, and the sun's rays could hardly pierce the thick foliage and reach the waters of the swamp. But wherever they reached those waters, poisonous vapors arose, and the people began to die, one after another. The women and children of that tribe began to weep, and the men brooded on what had happened and grew despondent. They had to get out of the forest, but there were only two ways: One was back—at the end of this road strong and vicious foes awaited them; the other was forward through the forest—here the giant trees stood, their mighty branches closely entwined and their gnarled roots sunk deep into the mire of the bogs. . . .

Nothing—neither work nor women—can so exhaust a man's body and soul as do despondent thoughts. The men grew weak from brooding. . . . Fear was born in their hearts, binding their strong arms; terror gripped them as they listened to the women wailing over the bodies of those who had died of the poisonous vapors, or lamenting over the fate of the living chained by fear. And cowardly words came to be spoken in the forest—at first soft and timid, and then louder and still louder. . . . And at last came talk of going to the enemy and making him a gift of their freedom. Frightened by death, not one of them shrank from living the life of a slave. . . . But at that moment Danko appeared and saved them. . . .

Danko was one of them, and he was young and handsome. Handsome people are always courageous. And he said to his comrades:

"Stones are not to be removed by thinking. Nothing comes to him who does nothing. Why exhaust our energies thinking and brooding? Arise, and let us go through the forest: after all, it must have an end—everything in the world has an end. Come!"

They looked at him and saw that he was the best among them, for his eyes were aglow with life and strength.

"Lead us," they said.

And he led them. . . .

They followed him willingly, for they believed in him. It was a difficult path. It was dark, and at every step the swamp opened its greedy, rotten jaws, swallowing people up, and the trees were a mighty wall barring the way. Their branches were closely interwoven, their roots were like snakes reaching out in every direction, and every step these people took cost them blood and sweat. They went on for a long time. . . . The forest grew thicker and they had less and less strength. And they began to murmur against Danko, saying that it was wrong for someone so young and inexperienced to lead them. But he kept walking at their head, his spirit undaunted, his mind unclouded.

It was a difficult path, and the people grew exhausted and lost heart. But they were ashamed to admit their weakness and so they poured out their anger and resentment on Danko who was walking at their head. They began to accuse him of being incapable of leading them.

They came to a halt, and, tired and angry, began to upbraid him there in the quivering darkness, amid the triumphant roar of the forest.

"You, you are a despicable and evil creature," they said. "You led us here and you have exhausted us, and for this you shall die."



Special Young Technician Pavilions are opened on July 1 every summer at the USSR Exhibition of Economic Achievements in Moscow. On display are creations sent in from all over the country.

TEENAGE INVENTORS

BY YURI DOKUCHAYEV

FROM JULY 1 to August 15 two of the pavilions at the permanent USSR Exhibition of Economic Achievements in Moscow displayed the work of teenage inventors. The 400-odd items in the two Young Technician pavilions drew people from every age group. There were times when every exhibition visitor seemed to be crowding around the automatic railroad built by teenagers at the Kharkov Pioneer Palace. The railroad is well built, with all the details carefully thought out.

Another steady attraction was a screen on which colors danced, changing and blending to the strains of a Tchaikovsky waltz. This color-music unit was built by members of the Sverdlovsk Pioneer Palace radio club.

A construction crane is nothing special, but automation club members of the children's section of Kharkov's Palace of Culture of Food Industry Workers designed one that certainly is. Their model crane follows the orders of a programming device into which a perforated card is fed. The whole process, from the moment the block is lifted to the time it is installed, follows a set program. The program can be adjusted for 32 operations. Thus far there are no program-operated cranes in actual use, but if the idea of these young technicians from Kharkov is developed, there soon may be.

One of the stands displayed work done by students of School No. 6 in the city of Armavir, Krasnodar Territory, under the guidance of physics instructor Victor Belov. The group has been working since 1955 and has made a good deal of the school's science equipment. Instruments these young physicists designed are also being used in factory production, among them an automatic temperature regulator and an automatic compressor regulator. They were built to specifications of the city's factories and are saving them about 14,000 rubles annually.

The Novosibirsk, Magadan and Chernigov regional stations of young technicians, the Minsk Pioneer Palace and other youth centers also displayed instruments they designed.

Many children dream of becoming cosmonauts, and for this reason cosmonaut clubs have been set up in a number of cities. There are six in Leningrad alone. The local planetarium, the Army Medical Officers College, the Air Club and other organizations assist these youthful space pilots. A program of extracurricular study in astronomy, rocketry, radio engineering and aerodynamics, adjusted to age and school background, has been worked out for the children. They go through a special course in physical training and physiological research. They have parachute training drills, study plans and build rocket models.

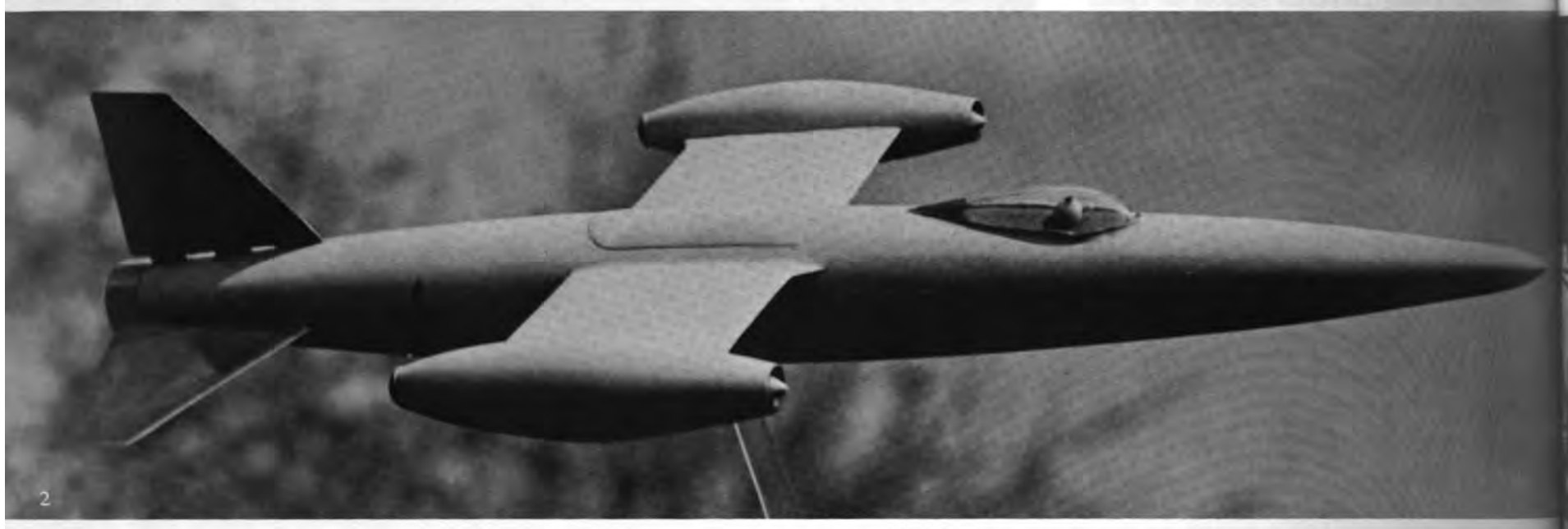
The many instruments, models and machines assembled in the pavilions demonstrate that the country's schools are engaged in extensive creative work. All of the exhibits were on the level of current technological practice.

The work was chosen at territorial, regional and city contests, and the inventors all received certificates of merit. The very best items were awarded the Exhibition Medal.

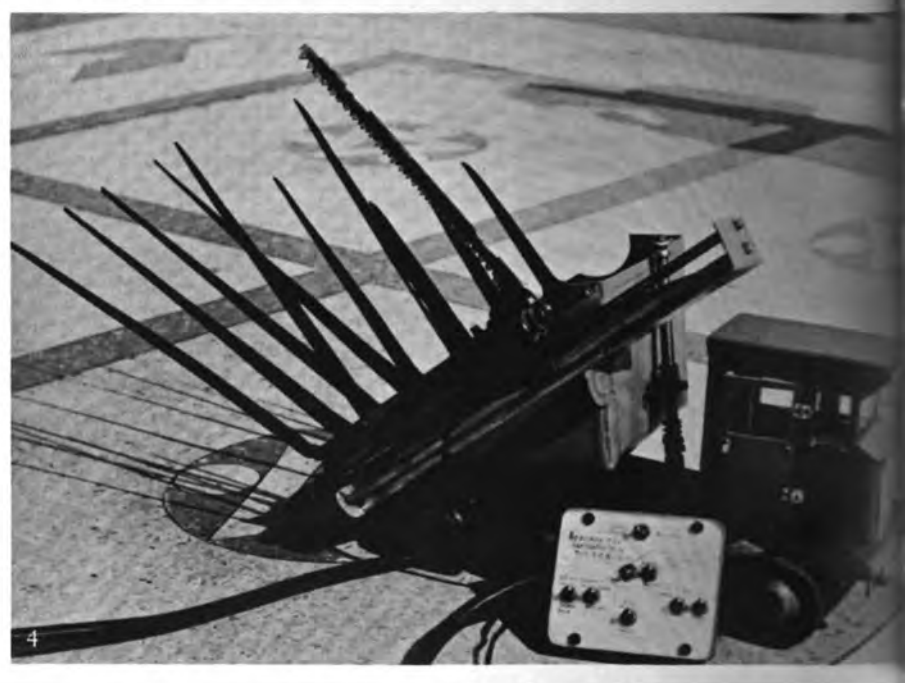
1. *A propeller-driven sleigh sent in by teenagers from Ioshkar-Ola, Mari Autonomous Region.*

2. *Tenth-grade student Georgi Dunin of Krasnodar made this jet at the local Rocket Modeling Lab.*









3. *The Aelita, a cross-country vehicle designed by members of the young inventors circle in Gorky.*

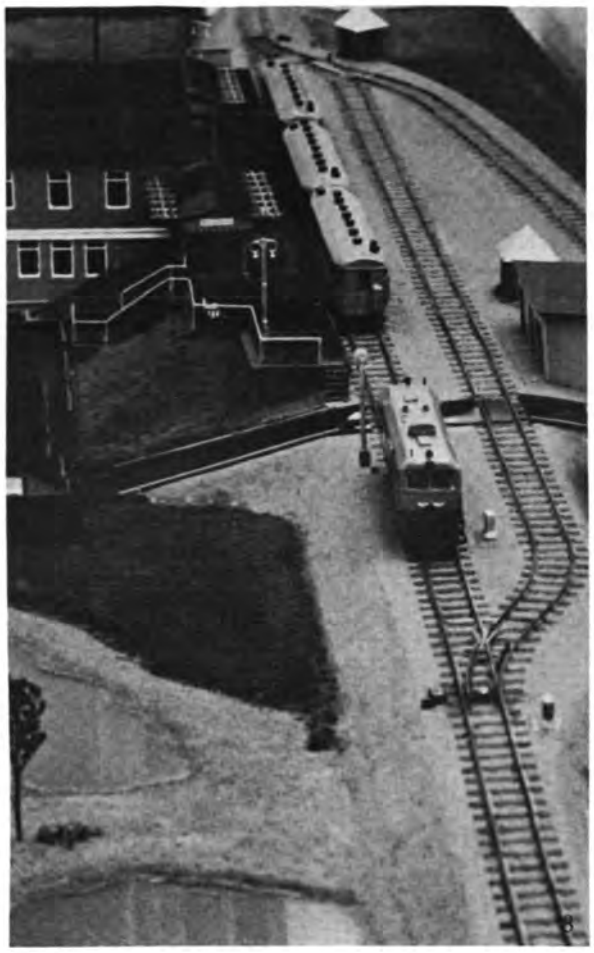
4. *A haymaking machine planned and built by teenagers in the Kursk young technicians group.*

5. *Leningrad teenagers with an eye to the future created this sleek plane at their Pioneer Palace.*



TEENAGE INVENTORS

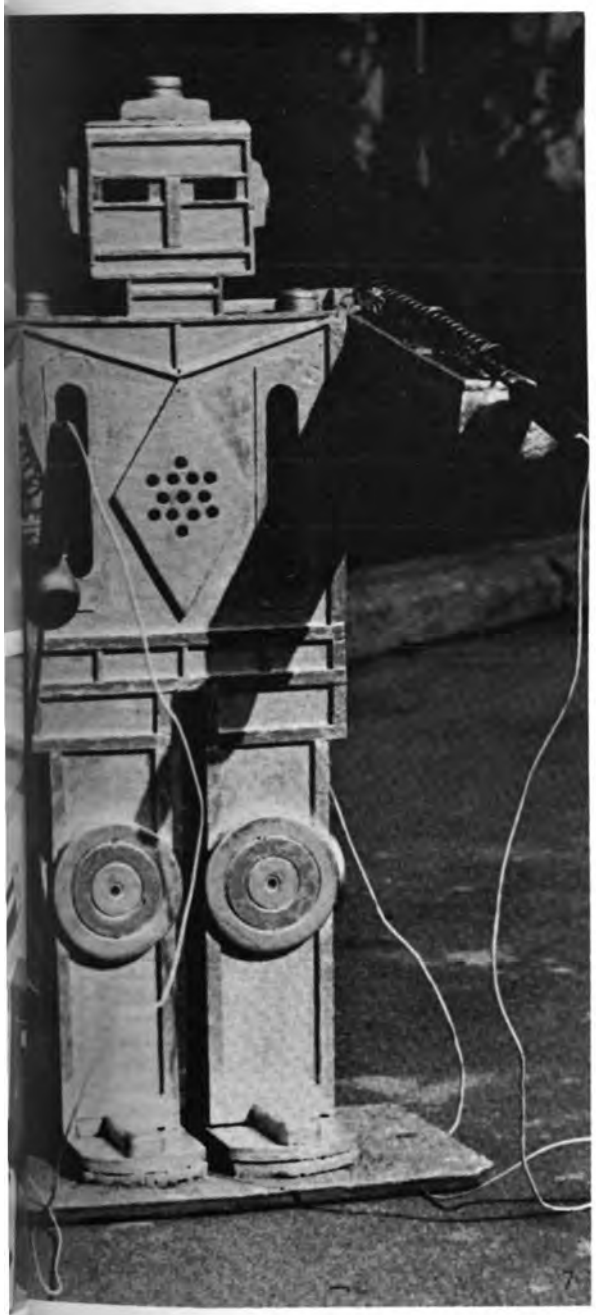


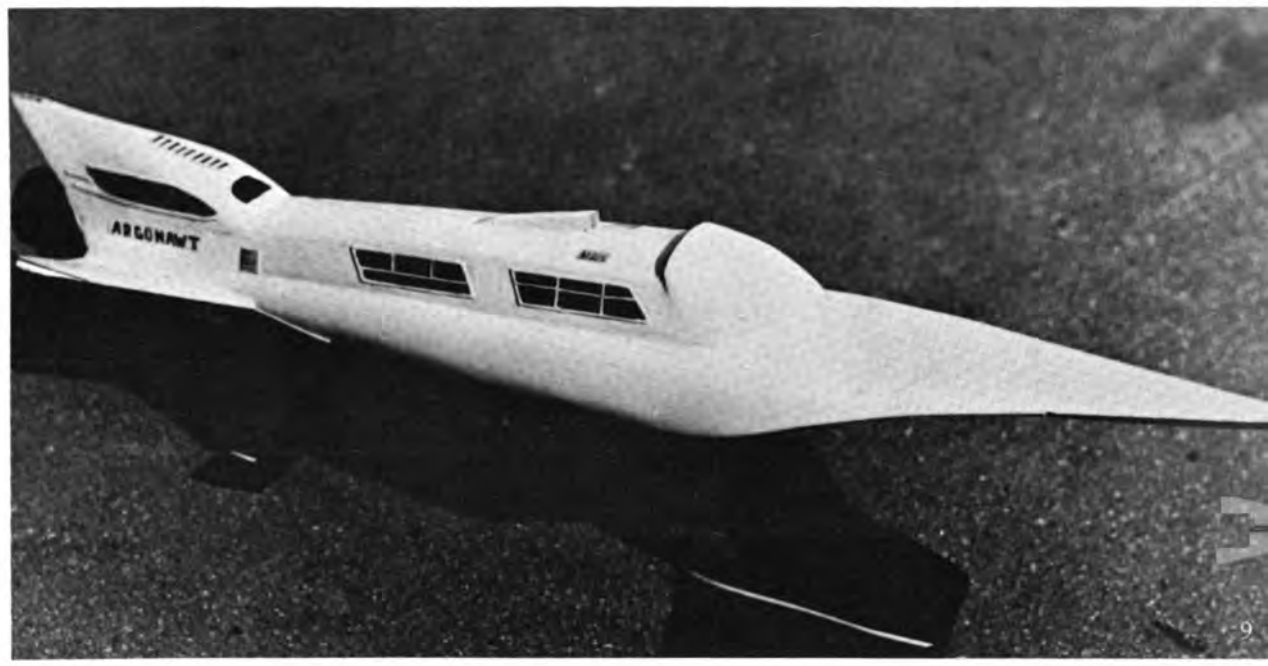


6. *An interplanetary station made by tomorrow's spacemen at the Pioneer Palace in Dzerzhinsk.*

7. *A mechanical Muscovite created by teenagers at the capital's Central Young Technicians Station.*

8. *A miniature railway system built by young technicians from the Kharkov Pioneer Palace.*







9. *Young Pioneers of the Kuban submitted this model of the Argonavt, a jet-engine hydrofoil.*

10. *The Telemechanics Circle in Minsk invented the Chaika for cross-country use on the moon.*



UNUSUAL THINGS AROUND US

By Nikolai Rakhmanov

LEONID ARANOVICH, a Moscow engineer, looks like the usual weekend commuter, except that he climbs aboard the suburban train headed home every Sunday evening with a basketful of acorns topped by branches, twigs, cones and moss, the raw materials of his hobby. In his spare time, engineer Aranovich becomes a magician, transforming his baskets of forest scrap into droll animal and human figures.

Leonid Aranovich says it's not hard to become a magician. All you need is patience and a slightly offbeat view of the world around you. A plain twig, an ordinary acorn, an old cone then becomes a joke, a surprise or a social comment. Aranovich's creations have been displayed at exhibitions and have earned delighted approval and prizes.

SOVIET LIFE

November 1965 35 cents

OCT 15 1965
LIBRARY









JOHN REED ASKS MUSCOVITES THREE QUESTIONS

By Alexander Maryamov







STANISLAVSKY said that the theater begins with the cloakroom.

Yuri Lyubimov, chief stage director of the young Moscow Theater of Drama and Comedy, brought his actors out into the street and had them play, not for but with the pedestrians.

The anachronism of sailors' coats, leather jackets and threadbare uniforms of the First World War hit the eye. Everybody looked at them perplexed.

"What's happening here?"

Ever since last April, the theater on Taganka Street has been giving an outdoor show in two parts twice a week, complete with pantomime, buffoonery, circus tricks and shooting. It is a play about the October Revolution based on John Reed's *Ten Days that Shook the World*.











Photographs by Miroslav Murazov



Many books have been written and many plays staged about the Revolution. The Revolution has also been featured on the screen. In Yuri Lyubimov's theater, the Revolution tells its own story.

Why?

". . . This is no ordinary listing of facts or collection of documents. It is a series of living scenes so typical that everyone who took part in the Revolution recalls identical episodes he witnessed himself. These scenes snatched from life convey with superlative drama the mood of the people, the mood that was background for each act of the great Revolution.

"Reed's book furnishes a panorama of the real mass Revolution and therefore will be of particularly great significance to the youth, to future generations, to those for whom the October Revolution will be history. Reed's book is a kind of epic . . ."

This was what Nadezhda Krupskaya, Lenin's wife, wrote in her preface to the Russian edition of *Ten Days that Shook the World*.

The Russian Revolution is a little less than 50 years old. A whole generation of people, now called the generation of fathers, carried the reality of the grand events over the unsteady bridge of the years, giving to it a part of their hearts for all time.

The problem of fathers and children has always been with us. And it will always be with us, for each new generation wears the colors of its own period. The problem is often reduced to the differences, but this is oversimplification. It is far more difficult to find points of contiguity, areas of contact. The search for common ground is characteristic of our day. The October Revolution was and always will be a measure of the common ground Soviet people stand on. Each generation was brought up on the Revolution but each fashioned its own ideals independently. Fathers and children stand together, but on different levels. The fathers won the Revolution with their own hands, lived by it and died for it, while their children know the Revolution only by hearsay, by its concrete results that have always been part and parcel of their lives.

The show produced by Yuri Lyubimov equalizes the audience, as it were, sets them on the same level. Differences in age disappear—they all become participants in the revolutionary events. Every man and woman, young and old, experiences his Revolution in the theater. Therein lies the show's invariable success with Muscovites.

How?

It begins with John Reed's being questioned by a Senate Committee: "How could he? How dared he?" But to the audience this second question reads—"How daring he is!"

Four young lads in military coats and pea jackets advance to the footlights, strumming guitars.

"The power stems from the people, but to whom does it go, and where does it lead?" they sing.

The song pours over the audience. John Reed and the young revolutionaries of '17 begin interrogating the audience. What did you do for the Revolution? How did you live after the Revolution? Who are you today? The audience listens, understands, accepts all three questions. Lyubimov rejects the one-sided traditional theatrical monologue. For almost three hours actors and audience carry on a tense and living dialogue. That is why all 24 scenes of the show end with clamorous applause, why the curtain calls keep coming, no less than 15 of them.

By employing a variety of dramatic forms, the director is able to bypass the traditional division into positive and negative characters. We are introduced to people of all walks of life—sailors, bourgeoisie, diplomats, workers, members of the Kerensky-led Provisional Government, frontline soldiers, capitalists, starving landless peasants. With the exception of Nikolai Gubenko, who plays the part of Kerensky, every actor has several roles and changes right before the eyes of the audience. All the players move on a single platform. The events they enact are illumined by a single light and imbued with a single tendency. The tendency is Revolution.

There is the rather large scene with which Act I ends. A white transparent screen hides the area of action from the audience. Behind it the actors and the director draw posters of the revolutionary period. A shadow play begins. Forgotten films are flashed on the

JOHN REED ASKS MUSCOVITES THREE QUESTIONS





screen. Flat, disembodied mannequins of the past stalk over the dotted lines of long-gone life. One follows the other; there seems to be no end to them.

Suddenly the screen splits in half, and the spectrum into two colors. Stage-high figures of three fighters of the Revolution—an armed worker, a peasant soldier and a Baltic sailor—tinged flaming red, stand motionless with guns at the ready. The usual dimensions grow confused: the people who just passed in front of us become pigmy small, a petty, squealing, pitiful crowd. They fuss at the feet of the soldier, threaten him with thin squeaks. The soldier's voice tears through the charged atmosphere: "There are only two classes—the proletariat and the burgeoisie."

The Revolution permitted no doubts. It demanded a choice, final and irrevocable. The hyperbole on the stage is born of the hyperbole of the times.

Twenty pairs of hands, snatched out of the black recesses of the stage by spotlights, begin Act II. The hands gesticulate, wax nervous, argue and agree, tremble and threaten. They symbolize one of the last sessions of the State Duma, which the Speaker opens with the words: "Messieurs, the power is still in our hands."

But their power is gone. The hands are too weak and helpless to hold on. Without letting the audience see a single actor, the director creates precise and rounded characters with the hands, nothing more.

Attribute that to the director's gifted technique, to a rich imagination that infects the onlookers and makes them believe in the actors. Abstracted symbols, grotesquerie and conventional theater all contribute to the reality of the action on the stage.

Who?

I did not mention the script writers of *Ten Days that Shook the World* for a reason. The program credits the whole company with authorship. Before our eyes this young theater has revived a type of show rooted in the traditions of the Soviet theater of the twenties. A creative synthesis of the best that has been amassed in dramatic art made this very vivid, trenchant, modern and revolutionary show possible.

Sitting in the audience, I was conscious of the people's reactions, their absorbed interest. They were seeing the youth of the Socialist Revolution, being stirred and inspired by its truth.

It was for this that John Reed walked out onto the stage of the Moscow Theater on Taganka Street. Revolutionary mythology has not exhausted itself in these past five decades. Lyubimov and the young actors are sure of that. The Revolution is always contemporary. You feel this particularly strongly today.

To the brief question of "Who?" the reply is also brief—"All."

That earnest young American understood the heart and the mind of the Russian, the ideals of 200 million men and women.



SOVIET LIFE

NOVEMBER 1965 No. 11 (110)

The magazine SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* AMERICA *in the Soviet Union.*



Front Cover: Two of some 2,000 young people who participated in our efforts to sketch a dynamic portrait of Soviet youth. *See story on page 7.*

PICTURE CREDITS

Miroslav Murazov Cover I-II, 1-3, 7, 16; Vsevolod Tarasevich 8, 15, 24-26; Lev Ustinov 12; Leonid Sergeyev 18; Sergei Solovyov 18-20; Alexander Bushkin 19-20; Leonid Pasternak 23; Edward Pesov 29-33; Igor Vinogradov 36, 62; Gennadi Ikonnikov 42; Victor Reznikov 46-49; Nikolai Vorobyov 50; Alexei Alexandrov 53-55; Painting by Jan Stephan von Calcar 57; Valeri Shustov and Yuri Abramochkin 58-59; Boris Kaufman Cover III; Boris Garbuz Cover IV.

Editor in Chief
(Moscow Editorial Board): Yuri S. Fantalov, APN, Pushkin Sq. 2, Moscow, USSR.

Editor
(Washington Editorial Board): Alexei S. Belokon, 1706 18th St., N.W., Washington, D.C., 20009.

Managing Editor
(Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director
(Moscow Editorial Board): Marina T. Zabolotskaya, APN, Pushkin Sq. 2, Moscow, USSR.

Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine SOVIET LIFE.

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Fawcett Haynes Printing Corporation, Rockville, Md.

Page

The Revolution Hasn't Stopped (Our Trends) by Alexander Kamshalov 6

SOVIET PEOPLE

Soviet Youth Answer Gallup Poll Questions by Vladimir Pozner, Yuri Filinovich and Yuri Sharapov 7
Kozyrev: A Man with a Controversial Theory by Yevgeni Rein 24
Hell Drivers by Yuri Dokuchayev 36
It Wasn't in the Script by Gennadi Ikonnikov 42

SOVIET DEMOCRACY

Those Who Were Not Elected Interview with Sergei Orlov 28
About Disabled Veterans by Alexander Bodyayev 52

PHILOSOPHICAL PROBLEMS

Art and Revolution by Anatoli Lunacharsky 22
Culture and the Worker by Vladimir Filaretov 38
Andreas Vesalius by Dmitri Zhdanov 56

ECONOMY AND SCIENCE

A Spur to Efficiency by Rem Belousov 17
No Mistakes Permitted by Mikhail Klyuyev 21
An Unexplored World by Nikolai Kozyrev 27
Tofalaria by Leonid Likhodeyev 46
Water For Moscow Interview with Vladimir Markizov 58

LITERATURE AND THE ARTS

John Reed Asks Muscovites Three Questions by Alexander Maryamov 1
The Magic in a Pencil 18
Artists Who Can't Write 19
Georgia: Forms and Colors by Marina Khachaturova 29
Edward Bagritsky by Stanislav Lesnevsky 35
Happiness May Be Sitting Right Beside Us by Andrei Platonov 50
Kolomenskoye by Yuri Ovsyannikov 53

RECREATION AND SPORTS

So What's So Hard About Chess? 16
Ham Radio by Anatoli Kryzhansky 62
USSR—USA Shadowboxing by Edward Borisov 64

MISCELLANEOUS

Letters to the Editor 5
Children's Corner 18
Queries from Readers 34
Around the Country 40
Russian Books in English 49
Brief Comments 60
Next Issue 61
Learning Russian 63

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

LETTERS TO THE EDITOR

LINCOLN AND PAINE

Dear Sir:

Thanks for the tribute paid to two of our greatest men. Incidentally, Lincoln was a scholar of Paine and said he never tired of reading Paine. He was contemporary with Karl Marx and exchanged letters. I know what Marx would write to Lincoln. I would like very much to see one of the letters Abe wrote to Marx. In Lincoln's inaugural address, March 4, 1864, he had this to say: "This country with its institutions belongs to the people who inhabit it. Whenever they shall grow weary of the existing Government, they can exercise their constitutional right of amending it. Or their revolutionary right to dismember or overthraw it." Sounds like Karl Marx, doesn't it?

Lincoln is quoted a great deal. I have never heard that, however.

People have blackened the character of Paine that were unfit to blacken his shoes. . . . Paine, like Marx, was ahead of his time.

Russel McIntosh
Yuma, Arizona

COMMENT FROM ENGLAND

Dear Sir:

May I express my appreciation of *SOVIET LIFE* which I find extremely interesting. Special mention must be made of the two contributions "The Frontiers of the Impermissible" by Spartak Beglov in the May issue ond that of "Democritus" by Valentina Chemberdj in the June issue.

Both these writers drove home the message that the values created by mankind have to be fought for and zealously guarded. I was further impressed by the developments taking place in Siberia. The herculean efforts of these pioneers must surely pave the way for the Soviet people to reach new heights. One is forced to the conclusion that these pioneers are also making a great contribution toward eliminating chance from human affairs.

This not only raises the living standards much higher but the whole gigantic plan for Siberia is a living demonstration of the peaceful policy pursued by the Soviet Government and people. The May issue was made memorable by "They Shall Always be Twenty." While there are young people like Pavel Kogan, Nikolai Mayorov and Vsevolod Bagritsky and many others, the future of mankind is assured. One cannot read of those young people and the sacrifice they made and remain unmoved.

I conclude by thanking you again for a magazine of outstanding merit and I trust you are reaching a wide circle of readers.

Yours faithfully,
A. McDonald
Dagenham Essex, England

AGREES WITH RUSSIAN READERS

Dear Sir:

. . . I have had an opportunity to read the August issue of your magazine. It was interesting to note the letters to the editor from Professor Alexander Shveitser and Misses Galina Vesbland and Tatyana Markelova. I must agree wholeheartedly with both. Professor Shveitser sees a need for wider coverage of the current economic and scientific debates in the Soviet Union. There is an understandable editorial dilemma in this regard. *SOVIET LIFE,* perhaps, must steer clear of overly controversial subjects, and it probably must avoid the appearance of "taking sides." There is also, I understand, the fear that lack of unanimity on every subject will be interpreted by some in the West as weakness and imperfection.

On the other hand, news of changes taking place in your country is available here to those who seek it. Indeed, we see that you have some problems we did not know about before. But we also find some suspicions, often exaggerated because of the secrecy surrounding many events and activities, were not well founded. Reporting differences of opinion is, in many respects, more important than the merits of any side of a debate, for no one is an expert in every field, able to say with certainty which side is closest to the truth on every issue. However, reporting the fact of dissent is evidence of confidence in your own system. Above all, it is evidence of the growing freedom of thought in the Soviet Union, a return to the creative spirit of the Lenin years. To many of us, such changes should not be viewed as new dangers in a Cold Wor, but as hopeful signs of a new force favoring the expansion of human freedom and dignity.

Liberman's recent article was directed to proving that his system of profits was "socialist" rather than "capitalist." The article appears to have been prompted by speculation in the West that the Soviet Union had decided that communism does not work and they therefore are embracing capitalism. Admittedly, there is a tendency to popularize the news that way here, but it is impossible to correct such notions, because they are cultural, as opposed to rational. Americans "sense" that "Libermanism" is closer to the Western institutional framework than earlier methods of planning were, and the changes were explained in terms Americans could understand.

The press does not generally observe that Liberman's theories are also more applicable to Western economies than the preindustrial theories of Adam Smith are. But is there really any need far *SOVIET LIFE* to explain these things? The Americans most interested in Soviet statements emphasizing the *differences* in our systems are those generally unfavorable to détente. *SOVIET LIFE* should not give these people ammunition, especially at a time when so many new ideas are being formulated and debated openly in the Soviet Union.

The young ladies I mentioned above suggested that more should be said about student clans ond fashions, and that your humor section should be expanded. I agree wholeheartedly, as an American who would like to see more interest here in the Soviet Union and a less hysterical interest in communism. . . .

J. L.
Bethesda, Maryland

ON SEMANTICS

Dear Sir.

. . . I note that some of the heads of Russian economy talk about their particular enterprises making a "profit." Americans favoring capitalism then use this to show that socialism has failed and Russia is turning to the profit economy. I would ask, just what does the Russian word for profit actually mean?

The English word as explained by Marx means surplus value which one may receive in excess of any values he created. Since, as I understand the Russian economy tries to give each the full value of his work, either in direct payments, or in the building of needed factories and improvements, or in services that are free or nearly so, there can be *no actual profit* in the Russian economy or any other socialist economy. The people never, in general, losing any of the values they create to those who perform no valuable service.

I would like to see in *SOVIET LIFE* a careful explanation of the working socialism at the level of the common working man. Just how much does he have to say regarding the way the shop, factory or farm is run. Just who makes the decisions? How about elections? . . .

Willard F. Smith
Woodland, California

YOUR ARTICLES

Dear Sir:

. . . I believe in an informed and intelligent public which for me your magazine has helped represent. Through my studies at the University of Pennsylvania, I became interested in new and sometimes underdeveloped countries and their ideologies striving for their betterment. May this cause flourish.

All by chance, I happened to read in an advertisement, of *SOVIET LIFE* magazine—this was several years ago. After taking a year's subscription, I have continued this and enjoy reading every issue which you so far have sent me. At Christmas time, if I can find a friend or two who has not already subscribed to *SOVIET LIFE* magazine, I am considering sending it to them. Your articles have made me feel that you issue a high type magazine and also newer and firsthand information concerning the Soviet Union. My congratulations and a sincere hope that your efforts will meet with all success.

Rachel Fitler
Villanova, Pennsylvania

ON TEENAGERS

Dear Sir:

. . . You will probably recall that some time ago I wrote you suggesting you do an article or two on the problems of Soviet young people today. I suggested something along the lines af a "teenage forum" wherein the problems of young Americans and young Soviets could be compared. In reply I received a cordial letter from you (and later from your home office in Moscow) saying you would consider something along those lines in the future.

Well, while you didn't use the forum idea exactly, I wish to nonetheless thank ond congratulate you on your excellent articles "Ilya Ehrenburg on Our Young People Today" (February, 1965) and "Love, Sex and the Young Family" (April-May, 1965). They both gave excellent insights into some of the problems of young Soviet citizens. Thank you very much.

Sincerely,
Thomas Higginbotham
Montvale, New Jersey

THE REVOLUTION HASN'T STOPPED

BY ALEXANDER KAMSHALOV

SECRETARY OF THE YCL CENTRAL COMMITTEE

"Our revolution is still going on."

"You'll excuse me, but that's just fancy rhetoric. We're not making a revolution today, we are building a communist society. Let's not confuse 1965 with 1917."

Yes, we do have young people who think of the revolution as past history. As they see it, the revolution was only a small chapter, as we reckon time, in Soviet history. What came afterwards—rebuilding, the five-year plans, the victory of socialism, the war and the beginning of communist construction—was no longer the revolution. They look upon today's tasks as the consequence, not the continuation, of the revolution.

Of course, there is no denying that communist construction is the consequence of 1917. But it is the continuation of the revolution too. This is the logic of history. It is not just rhetoric when we call the October 1917 Revolution the Great Socialist Revolution. It was not simply the single act of short duration which placed the Soviets in power. The revolution was a lengthy process which was occupied for the most part with economic and cultural betterment, the evolution of new social relationships, the spread of democracy and education.

If we use this more meaningful interpretation of the word revolution, then the relation to the YCL, to every young person who feels responsible for building communism is plain enough. This is how our young people today are continuing to make the revolution. This is why we think of them as the revolutionaries of the new society.

Isn't that something of an exaggeration? No, not at all!

The Rasvumchor Plateau is the roof of the Khibiny Mountain Range on the Kola Peninsula in the Far North. "Tsentralny Mine, a Priority Construction Job," reads the inscription over the archway at the entrance. Three years ago the first miners, YCLers, went up there to live right below the clouds. Blizzards and snowstorms cut them off from the world for days. When they ran out of water, they melted snow. With not enough bunks to sleep in, they took turns. It was a perilous trip getting to their stores. But they faced all that because the country needs apatite for fertilizer. As a result the mountain mine began operating ahead of schedule.

When the Abakan-Taishet Railway in Siberia was completed last January, the honor of driving the last silver spike went to Nikolai Drovnenkov's young track-laying team. But before that happened 400 miles of track had been laid, nine tunnels cut, and 258 bridges built in icy cold winter and pitiless hot summer. The result, in country where you would think no man ever ventured, is a railroad joining up two YCL priority construction jobs—the West Siberian Iron and Steel Works and the Korshunovsky Ore-dressing Plant.

These are only two of the hundreds of instances we could give of young people's participation in the economic development program—today's big priority. In their day-to-day jobs, the heroes of our big construction projects continue the revolution, the great social transformation their fathers initiated.

What are you doing, young man, to continue the revolution? No rhetorical question this, but one our reality puts to every YCLer and to young people generally. It was a question the young people of the twenties, the thirties, the forties and the fifties had to answer. And it is a question generations of young people to come will have to answer also. Our Communist Party expects big things from the YCL, and that imposes a heavy responsibility upon young people.

The responsibility is one every member of the younger generation bears for our common cause. Hence, the question "What are you doing?" asked of every young person must necessarily be supplemented by the question every young person asks himself: "What have I done in my perhaps not very important job to carry out Lenin's charge to youth to take up one or another task in the common effort, even if the task is the smallest and simplest?"

We still have—why hide it?—young people who have their rights so well memorized that if you wake them up in the middle of the night, they can list for you every detail of what society owes them. These same young people can on no account —alas!—recollect what they owe society. All of YCL activity is directed to give young people that high sense of responsibility for the common cause which is so fundamental a part of communist psychology.

A plant in Penza, in the central part of the Volga Basin, supplies chemical industry machinery to 45 priority construction jobs for which YCLers have made themselves responsible. The YCLers at the machine plant, in turn, have pledged to take personal responsibility for seeing to it that everything the machines turn out is of top quality.

This is only one example of many that could be cited.

Responsibility and initiative are twins. Their affinity is a concrete expression of the relation between the idea and the actuality. And when we talk of giving young people a sense of high responsibility, we mean molding their world outlook, strengthening their moral fiber.

The sense of responsibility in itself is in the realm of ideas. It is one thing to beat your breast to show that you know where duty lies, it is another to act out that duty. What a person really does is his yardstick of responsibility in fact. So when we hear a YCLer or young person deplore one or another deficiency but do nothing himself to remedy it, we question how real and sincere his sense of responsibility is.

Young people often complain of serious deficiencies in community services—and sometimes with justice. But complaining alone will not remedy matters. These services will not improve as quickly as we want them to unless young people take a hand.

The YCL Committee of the Baltic Power Plant has shown how the youth can improve community services. On their initiatives and with their businesslike assistance small wonders have been worked in the operation of shops, restaurants and other public services.

"Wait a minute! You've been talking about revolution. And suddenly you've sidetracked us to details like restaurant service!"

No apologies. We don't make up lists of firsts and seconds. Nor do we oppose the big to the small or the day-to-day to the long-term. All we want to do is remind you of the importance of those simple things which make up most of living. This is one of the dialectical aspects of the revolutionary process, which we must never lose sight of.

Lenin always related the achievements of communist construction, the successes of young people in building the new society with their level of education and organizational skill. That relationship is especially critical nowadays. Today we must be highly educated, highly skilled. Otherwise our progress will be extremely slow, if any is made at all. That is why the education of young people, their cultural development in the broadest sense, is a priority task for our YCL.

Abridged. Courtesy of Molodoi Kommunist

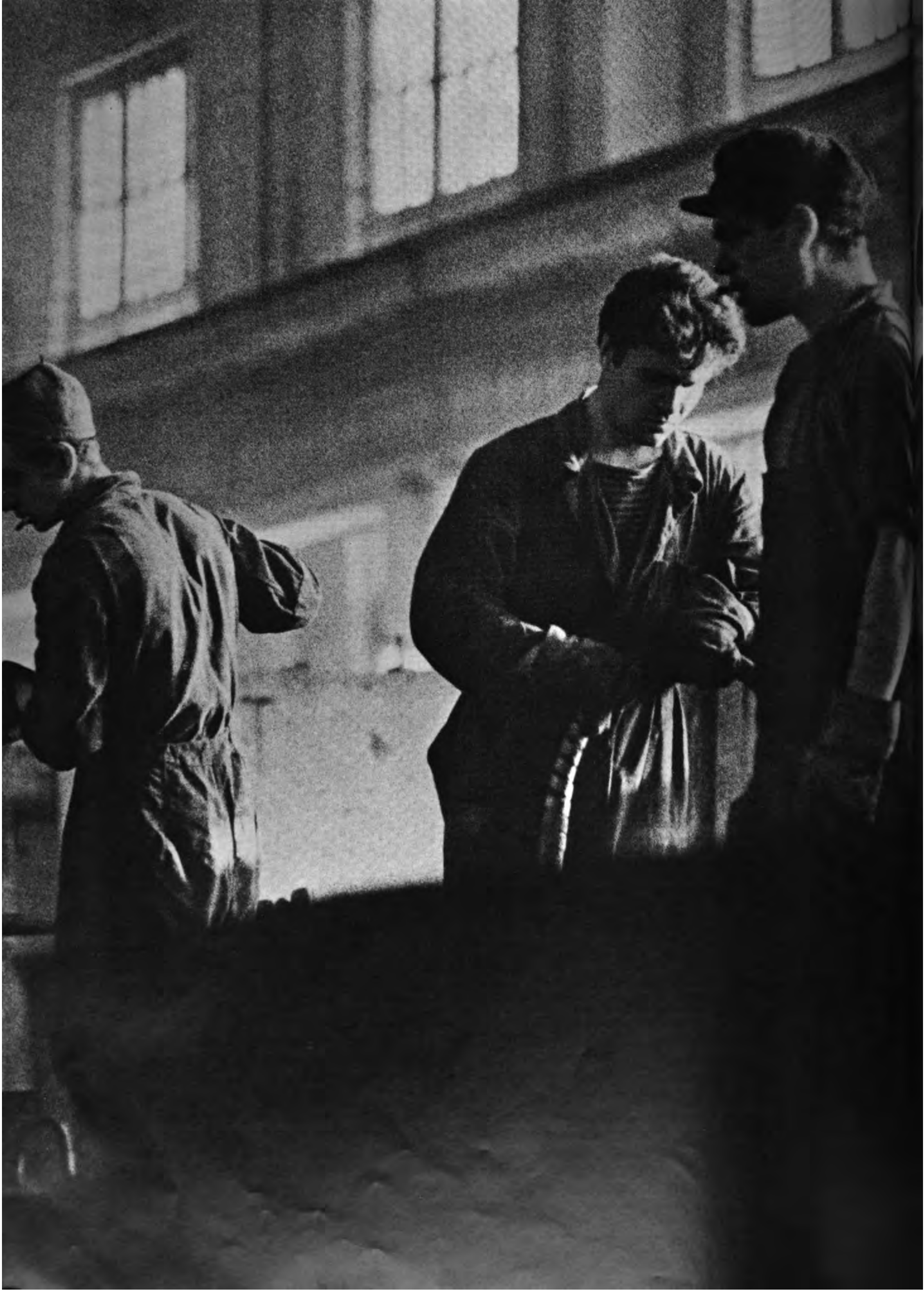
SOVIET YOUTH ANSWER GALLUP POLL QUESTIONS

Young People Speak of Themselves, the Present and the Future



BY VLADIMIR POZNER, YURI FILINOVICH
AND YURI SHARAPOV

Some time ago we had occasion to read in the American magazine Look *the answers of young Americans who were asked what they looked forward to, were afraid of, accepted, thought, dreamed of. We also read a far more exhaustive survey compiled earlier by the Gallup Poll in which more than 3,000 American boys and girls between the ages of 14 and 22 were interviewed, among them high school and college students, clerks, factory workers and farmers. This "self-portrait" of American youth gave us the idea of asking bays and girls in our own country some of the questions asked in the Gallup Poll. We picked those which we thought would best reveal the outlook of the Soviet respondents. We polled nearly 2,000 young people in Moscow, Leningrad, Kiev, Minsk, Baku, Tbilisi, Riga, Voronezh and other towns, as well as the villages in between. We made no selection of respondents. We merely went to a factory shop, a school classroom, a college lecture hall or a farm and passed around questionnaires to all the young people there at the time. The respondents did not have to sign their names if they did not wish to, but were asked to specify their occupation, sex and age.*





Satisfied?

"Do you like your life?"

Igor D., a student in the Philology Department at Moscow University, answered our question. "I do. I live in a society whose ideals and social structure tally with my own conception of justice and reason. I am studying the profession of my choice and will be only too happy to do my bit to help erect the edifice which the entire nation is building. Liking my life, of course, does not mean that everything is running smoothly and that I see no drawbacks. But these drawbacks cannot overshadow the great things, and it is my business, too, to help rid society of them."

Igor's reply was typical of the majority of our respondents. There were also young people who said they were displeased with life. But for the most part it was because they wanted "everything to be perfect." Were the question so posed, few people would claim to be satisfied with life, for Soviet youth is the irreconcilable enemy of the moral corruption which still crops up in our midst.

The results of the survey showed that 57 per cent were satisfied with life, 33 per cent were not, 10 per cent said they did not know.

Although most young people claimed that they liked their lives, what they demanded of life was distinctly different.

"I am not rolling in luxury, but I am building a new world with my fellow citizens and that makes me happy" was the typical Soviet reply.

"Are you pleased with what you have achieved?"

"I would certainly find life easier if we did not have certain difficulties, for example, the housing shortage, and if I could earn more," said a 22-year-old working girl from Smolensk. "But I know that sooner or later these things will straighten themselves out. What worries me most is that I have achieved so little myself and for the good of other people, that I have not as yet been able to realize my hopes."

"Do you like yourself?"

"I am dissatisfied with myself because so far I have accomplished very little for the common good," wrote Volodya B., who attends an industrial vocational school at Volgograd.

A young girl from Lipetsk said: "I do not think I shall ever be satisfied with myself, for that contradicts change and self-improvement, without which life is drab and stagnant."

"Man should be allergic to the very state of self satisfaction," Alexander C., an Irkutsk University student declared.

"Can there really be young people



"They say that man is afraid of the supernatural and maybe that's true. But if it is, that fear is not something real, it has no foundation. Personally I don't know what war is like, I have no direct experience. But I grew up without a father—mine was killed at Stalingrad. And I've heard and read enough about war. Yes, what I fear most is very concrete—war."

"Will we have it better than our parents? Yes and no. History shows that man's standard of living has gone up and up. I'm not talking about specific individuals or classes, I mean all humanity. We'll live better in terms of material wealth, but we will have more complex problems to deal with. That is the historical trend. Where our parents had knotty material problems to solve, our tough ones will be spiritual."



satisfied with themselves?" asked Georgi P., a Leningrad student of 22.

Of the Soviet boys and girls who answered the questionnaire 82 per cent said, "No, I am not satisfied with myself!"

What They Want Most

"What do you most wish to have?"

The desires of the majority of Soviet youth (63 per cent of the respondents, 10 per cent did not answer the question at all) lie in the spiritual, intellectual and moral sphere. What they most wish to have is "knowledge" (12 per cent), "happiness" (11 per cent), "true friends" (11 per cent), "peace" (6 per cent), "time" (3 per cent). Among the 25 per cent who replied in terms of material well-being, 5 per cent wished most of all for money.

"If someone gave you 5,000 rubles, what would you do with it?" (We substituted rubles for dollars and "gave you" for "if you won.")

It is characteristic that the largest group, almost a quarter of those who answered the question, said that they would travel in their own country or abroad. About a fifth of the young people said they would give it to their parents or buy something with it. Fourteen per cent replied that they would spend the money, not specifying for what, 12 per cent wanted to buy an automobile, tape recorder, piano, etc. "Buy the bare necessities," wrote 9 per cent, and 7 per cent said they would collect a library. Some seemed puzzled by the question and declared frankly: "I don't know, I never had so much money in my life." Nobody had the idea of "putting it away for a rainy day."

The Soviet answers point to the fact, firstly, that Soviet young people look upon money as something to be spent and benefited from immediately and, secondly, that the standard of living is still not high enough—indicated by the reply "to buy the bare necessities." Thirdly, young people in the Soviet Union are sufficiently practical to know that money can bring great material benefits, but most of them nevertheless would spend considerable sums for such cultural needs as travel and books. In other words, while Soviet youth knows the value of money, it does not worship at its shrine.

"What is your definition of happiness?"

In the answers of Soviet youth happiness was defined by the majority (54 per cent) as service to society in one form or another: "I want to bring benefit by my labor," "to fight for justice," "to help others," "to be useful to people," "there is happiness when there is peace on earth."

Others (40 per cent) replied that happiness to them was "to realize my goal," "to raise a happy family," "to be fortunate in my personal life," "to see the fulfillment of my wishes," "to get into college," "to be loved," "just to live." Only a few listed security, and a little more than 10 per cent did not answer the question at all.

Among our youth you will find egoists and idlers, but they are too few to set the tone. And it is quite clear from the answers of most of our boys and girls that to them personal happiness is inseparable from the happiness of society as a whole.

"What are your goals and what do you want to be?"

Forty-four per cent of the Soviet youth named concrete professions. A small percentage said they wanted to raise a family, be mothers and wives. Eight per cent did not reply. The rest interpreted the question not as referring to a profession or personal ambitions but rather to moral aspirations—one's mission in life, the person or qualities most worth emulating. Such persons wrote, "I want to be a real human being." Others stressed the character traits they sought to develop in themselves—daring, industry, altruism, perserverance, high principles, originality. Quite a few mentioned a historical personality or hero from literature whom they considered a model. Among those specified were Kirov, Dzerzhinsky, Pavel Korchagin, Fucik, Gaidar, Chkalov, Tsiolkovsky, Kovalevskaya, Gastello, Karbyshev, Dolores Ibarruri, Amundsen, the woman commissar from *The Optimistic Tragedy*, Natasha Rostova (*War and Peace*), the defenders of the Brest Fortress and the Soviet cosmonauts.

"What do you think will be the happiest period of your life?"

Most young people said that it will be the near future: "When I get my college degree," "achieve the aim I have set myself," "enroll in college," "go on my own," "be useful," "have a family of my own." Some said: "right now," "my student years"; others went back to the past —"my childhood." About a fifth replied "don't know."

"If you had the chance to select any period of history to go back to and live, which period would you choose?"

Almost half of our young people replied "the present." The rest divide their preferences between the more or less distant future and various periods of the past.

What They Dread Most

So far, we have tried by our survey to ascertain what the youth of our country want of life. The purpose of the next question borrowed from the Gallup Poll

is actually to ascertain the opposite.

"What do you dread most?"

The answers indicated that while most Soviet boys and girls do not expect nuclear war, more than a third listed it as their greatest dread.

The oldest of the Soviet young people who replied to our questionnaire could not have been more than two years old when the war ended. Therefore, they know about war only from what they have heard from parents, read in books and seen in films. But the one-third who named war as something they feared most were alarmed not so much for themselves (a little less than 4 per cent admitted that they feared death) as for the fate of mankind, of the whole world.

Soviet youth's other replies covered a wide range of sundry fears, and dominant among them, too, were those which strike a social rather than a personal note. Many young people do not want to see "callousness," "base dealings" and "injustice" cast shadows on their society. Others feared "loneliness," "loss of a beloved person," "hardships," "failure in exams," "to become crippled." Some joked about it and answered "a snake," "the dentist," "darkness," "the college dean," "our janitor," "my mother-in-law." Five per cent said "I don't know" and another 5 per cent replied that they feared nothing.

Young People and Their Parents

There is a great deal of talk in the West today of the "problem of the old and the young." Many claim that the two generations are hostile, poles apart, with an enormous gulf between them.

"Each generation blames—and rebels against—its elders," writes the magazine *Look*. "No generation has confronted such problems, or shown such defiance, as the one reared since 1939."

Some sociologists claim, we think wrongly, that there is a wide gap between parents and children in the Soviet Union too. In the light of this, the replies to this question have special interest.

"What do you think of the older generation?"

The results of our survey indicate that more than three quarters of Soviet youth like and respect their elders.

Irina P., a 19-year-old girl from Moscow, wrote: "I have the greatest respect for the older generation. They endured great hardships and acquitted themselves with honor. It is they who won freedom for us and built socialism. We and the next generation also have a great deal to accomplish, but I do not think that we shall have to go through what our elders did."

The same opinion was expressed by Zinaida G., a driller at a machine-tool plant in Kiev: "I admire my elders, their mettle. I want to learn to live, build and overcome hardships just as they did."

An electrician from a plant in Irkutsk replied briefly, "We stand on the shoulders of our fathers."

A much smaller number (11.5 per cent) admitted that they were completely or partly critical of their elders. For example, some said: "They won victory over the fascists, rebuilt the war-ravaged towns and industries. We are grateful to them for that. But they are too fond of telling us what to do, of repeating truths so simple that they are obvious even to a child. We become educated at a much earlier age than our parents. What our parents learned at the age of 20, we learn at 15 or 16."

Or take another reply: "I appreciate my elders. On the whole I find them pleasant company, kind and understanding. But there are some (fortunately in the minority) whom I simply detest. They're the grumbling kind. I hate to listen to them say that young people in their day were different, and life is not what it used to be. They're dreadful. Can't they understand that they are the ones who reared the younger generation they rant about?" An 18-year-old typist from Riga wrote that.

"Whom do you turn to first for advice?"

It is clear from the replies that young people turn first to their parents or other older people, thus acknowledging the superior wisdom of their elders when it comes to living.

"Will you have an easier or harder struggle in life than your parents?"

Nearly two-thirds said easier, almost 17 per cent thought it would be harder, a fifth said they didn't know.

A Soviet university student wrote: "Our parents had clearly defined goals. At the time of the Civil War they knew they had to fight and defeat the enemy. Their next concrete task was rebuilding the economy. During the Second World War, too, the thing to do was to beat the fascists, that was the long and the short of it. We are not going to have it as straightforward as that."

Many stress the great responsibility of the younger generation in solving such problems as constructing a communist society, mastering nature, revealing the mysteries of outer space and the atom.

Honesty First

The Gallup Poll had several questions that bear on moral values. We asked our own youth two of these questions.

"If you saw a fellow student cheating, would you report him?"



"Questions like that make me laugh. How can you split people into the younger and the older generations? When you're 22, are you in the younger or the older generation? What about when you're 29? Or 31? When do you go from one league to the other? I know fathers and mothers I can't stand. The same thing goes for some of my own age group. But I can't stand them as human beings, not because they belong to one or the other generation. I don't see any line between generations."



Evidently there is a tacit agreement among young people not to report a student cheating (with rare exceptions). At the worst, he might be shamed by his fellow students after the examination.

"Do you think honesty is very important for getting ahead in life?"

"Yes, honesty is necessary and important in life," was the reply given by 70 per cent of our young boys and girls. A Kiev girl student held honesty to be "most important," and her view was supported by a fellow student. "Honesty, above all . . ." declared an 18-year-old checker at an electrical plant in Tbilisi.

Some replies, however, like "Yes, I rate honesty high," a young girl writes, "but unfortunately my view clashes with reality," show how badly hurt young people are when they come up against falsehood, deception, hypocrisy and opportunism.

Because they react so keenly to dishonesty and not because they approve of it or are dishonest themselves, 27 per cent of our young people replied in the negative to this question. Their answer denotes deprecation or indignation rather than any lack of integrity. Nor do the majority of Soviet youth who rate honesty high take an idyllic view of the world. Their replies to the question reflect a fighting spirit, the wish to root out evil, to cleanse public life.

Leisure

Time and again visitors to the Soviet Union from abroad have been struck by the large number of people they find reading everywhere—on streetcars, in the subway, on the street and in trains. Such addiction to book reading is, of course, not a prerogative of Soviet people alone. There are many book-lovers all over the world. But it is the fact that book reading has assumed such a mass character that gives us reason for legitimate pride.

"How many and what books have you read in the past six months?"

Forty-five per cent of the respondents claimed to have read from 10 to 20 and more books in the six months before the survey, 15 per cent from four to nine books, 23 per cent—three books, and 17 per cent could not state the exact number and just wrote "many."

"How many newspapers do you read daily? What items interest you most?"

Ninety-four per cent of the young people read the daily newspapers (23 per cent read one paper a day, 29 per cent two, 16 per cent three, 15 per cent four or more. Six per cent admitted they do not or seldom read the daily newspapers).

Soviet young people are mainly interested in world affairs and articles on social and ethical problems.

"How often do you go to (a) the movies, (b) the theater, (c) watch television?"

Soviet girls and boys spend their leisure time in the following way:

Nearly a third go to the movies three or more times a week, more than a third once or twice a week.

Fourteen per cent of our young people go to the theater twice a month or more often, 28 per cent go once or twice a month, and a little over 50 per cent rarely.

Television addicts total 27 per cent (42 per cent rarely watch television or do not watch at all). A great deal of time, as we have already pointed out, is spent reading.

"What is your favorite dance?"

Soviet young people listed about 15, with the waltz (surprising as it may seem) scoring 39 per cent. Next came the twist—16 per cent, and the Charleston—14 per cent.

"What music do you like to hear?"

About 40 per cent of our youth gave first choice to symphony and opera music, 58 per cent voted for light music. Many, however, said they like both classical and popular music.

"I would like to have many things and happiness most of all. What does that take in? For me it takes in love, children, work, to feel needed by one person in particular and by society as a whole."



Self-Portrait

Our survey reveals many attractive features in our young people; it also shows some of their faults. The most striking perhaps is a degree of immaturity, a lack of sophistication. This accounts for an oversimplified approach to some of the problems of our day. But we hope that with growth this fault will be less typical.

The self-portrait of a generation is not static. The generation changes and its image with it. But it is hard to imagine that young people who believe happiness lies in service to humanity will suddenly turn into self-centered egoists; or that people who set the highest store by spiritual values will suddenly begin to worship the golden calf; or that a free-thinking and critical-minded young person will grow into a bigot.

The younger generation reared by Soviet society is without question physically and spiritually sound. It has a buoyancy and vitality that owes not a little to a devotion to communist ideals. These are living human beings with their own intricate and complex intellectual and moral problems, with a profound sense of human dignity, yet not without frailties, and with the zeal, interests and hobbies

typical of young people the world over.

Important conclusions may be drawn from the replies. First and foremost, the younger generation is eager to assert itself, it wants to have its say in shaping the world. Nor is this typical of Soviet youth alone. The same attitude is apparent from the many public opinion polls in other countries, from works of fiction, among them books about "beatniks," "angry young men," *tricheurs* and others who in the West are often called "rebels without a cause." The fact is that if we look deeper, we find that the young rebels do have goals.

The youth is the future of a country. But it wants to contribute to the making of that future. And if for various reasons it is prevented from doing so, if obstacles are put in its way, it becomes, subconsciously perhaps, apathetic and alienated. This gives rise to attitudes which on the surface seem to be purposeless defiance.

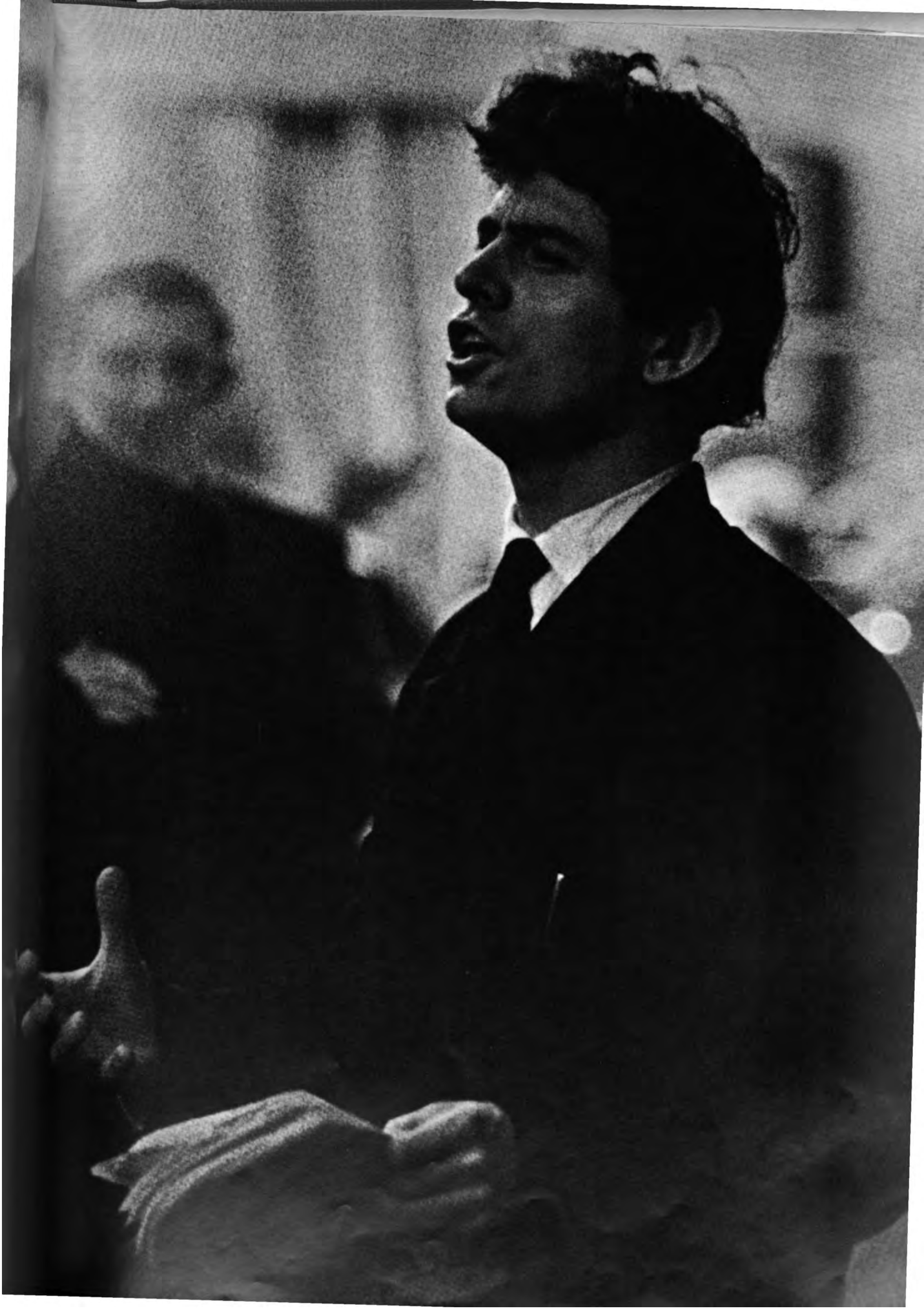
If society glorifies the goals of self-interest and personal security, if it rears its younger generation to be concerned with its own needs mainly, and if, lastly, its youth is taught to deny the social instinct which is just as much a part of human nature as the personal instinct, what can one expect but the alienation of such young people, at any rate of their typical representatives, from the great public issues of our day? In effect, such a system of upbringing is a *violation of the individual*, a deliberate development of only one side of his nature to the detriment of another.

In every young person there is a revolutionary seed, a readiness to dedicate himself to a just and progressive cause. But whether this dedication becomes purposeful does not depend on the youth alone; it depends on society in equal measure. In other words, it depends upon how much society is ready to trust its youth, how much faith it has in its own future.

Youth is never bad. But it is not enough for young people today to be merely "good." We live in an age of great events. Ours is an age of stir and change, of faith and tragedy, of turbulent conflicts and brilliant victories of human genius. It is hallmarked with great hope for the triumph of reason and progress, for the eradication of all forms of oppression, hunger and poverty, for peace and happiness for all men. The realization of this hope depends on the commitment of the youth to the struggle for these great human ideals. Future generations will not forgive the present younger generation if it shrinks from that struggle. Nor will the youth of today absolve a society which prevents it from fulfilling its commitment to mankind.



"People have been trying to figure out what happiness is for a long time, and they're still trying. My feeling is that no matter how you define it, there's no happiness without people, without society. There is no such thing as 'private' happiness. So I can't separate my understanding of happiness from the society I live in."





You don't think I'm smart enough to play?



It's checkmate no matter what he does.



There!

"SO WHAT'S SO HARD ABOUT CHESS?"

Ricky may not seem to be a serious contender for world chess honors, but with someone like Stepan Isaakyan on her side, you can't tell.

Photographs by Miroslav Murazov



He lost and now he's trying to tell me that that's not the king.



He may be angry but that's no excuse for cheating.



Oh, well, he's not really such a bad guy.

A SPUR TO EFFICIENCY

BY REM BELOUSOV
MASTER OF SCIENCE (ECONOMICS)

EVERY YEAR 40 to 45 billion rubles are allocated from the state budget to construct factories, mines and power stations and to manufacture and install equipment, that is, to build up the fixed assets of industry.

The Soviet Union leads the world both in net volume of construction and size of accumulation of fixed assets of industry and agriculture. As a result, it has also won a leading position in the production of many types of technological equipment, metal and building materials.

The new factories, mines, power stations and farms are not ends in themselves; they are indispensable means for raising living standards as fast and as high as possible, for increasing the national income at a continually accelerated rate.

If we take the 1960 per capita national income as 100 per cent, the 1963 picture looked like this:

USSR	250 per cent
Italy	192
France	156
Britain	124
United States	120

Though national income per capita in our country is growing one and a half to two times faster than in the West, we are very critical of the progress achieved. Why?

Between 1950 and 1963 our capital investments multiplied by 3.8 times, production assets by 3.4 times and the national income by only 3.1 times. This means that the growth of the national income was achieved by reason of the extensive growth of production. In recent times returns from every ruble invested have dropped.

There are several reasons for this tendency. The volume of construction is big, and the capital invested is paid back more slowly than money spent on the renovation and reconstruction of operating enterprises.

In the past seven years large sums were allocated for capital construction in the sparsely populated regions of Siberia and the Far North where great deposits of minerals, coal, oil and gas have been found. Big power stations, light metals factories, chemical and pulp and paper plants are being built. Production costs of these enterprises, when they are completed, will be among the lowest in the country. At present capital investments in the eastern regions are relatively high because not only industrial complexes but also housing, schools and hospitals must be built and roads, pipelines and power transmission lines laid in taiga, swamp and sometimes permafrost zones. These huge capital investments will bring returns in later years, when Siberia will have become a great industrial center. For the present, however, returns on the money invested in Siberian construction projects are nil or just beginning to come in.

The problem of the effectiveness of capital investments in our present-day economy is taken very seriously. Both state planning bodies and research institutes are grappling with it.

What is proposed? A great deal is being done to speed up the rate of growth of the most progressive industries, those which require considerably less capital investments for equal but faster returns. I have in mind the development program now under way for a big chemical industry, the use of ferro-concrete elements in construction and the switching of railways to more economical types of traction. Much is also being done to improve the country's fuel pattern. In the 1966-70 economic plan considerable attention is given to modernizing presently operating enterprises, not only to the construction of new plants and factories, which was the emphasis previously.

The government is looking to improve economic planning procedures. Mathematical methods are being applied and electronic computers used.Electronic devices help us find optimal variants for the development of particular branches of industry and the economy as a whole.

Planned economic management, when based on scientific methods of analysis and planning, makes it possible to incorporate these optimal variants simultaneously on a countrywide scale. The positive aspects of our social system are clearly obvious here.

The effectiveness of capital investments does not, however, hinge simply on the correct trends of development of the economy as a whole. Many problems are solved directly at the factory and, as practice has shown, these solutions are not always optimal from the point of view of the common interest. We believe that at the factories proper we must make more general and more active use of economic levelers (prices, credit and financial system) controlled by the socialist state. They may prove highly effective instruments for carrying out economic plans.

Many economists have suggested that free distribution of state capital investments to factories be discontinued and that payment for production assets be introduced, with the factories contributing these charges to the state budget. These economists hold that "payment for assets" will stimulate workers to make better use of the available production equipment and to be more frugal with capital investments.

Under the present system of accounting a factory must repay all expenses by reducing production costs. A one-sided drive for lowering costs when the "fixed assets are free" sometimes conflicts with the proper expenditure of capital investments. Not infrequently factories ask for, and get, additional plant even though they are unable to keep it working at full capacity.

Does not "payment for assets" mean the institution of interest on capital? Is it a departure from socialist norms in the direction of private enterprise?

Certainly not. There is a fundamental difference between the interest on capital in a capitalist economy and payment for assets in a socialist state. This difference is determined above all by the form of ownership of the means of production and the character of appropriation it entails. Whereas interest on capital is appropriated by individuals, the payment for assets in a socialist economy goes to the state budget and is used wholly in the interests of the people for public education, medical services, pensions, and so on.

It has been suggested that payment for assets be effected by cutting deductions from profits contributed by factories to the state budget. The object would be to make these deductions dependent on the volume of operating production assets, which would serve as another means of promoting the efficiency of the socialist economy.

THE MAGIC IN A PENCIL

ALL CHILDREN love to draw. The child soon discovers the pencil's magic power for duplicating every movement of his hand on paper. And shortly thereafter his parents begin to fret and fume for their walls and furniture.

The yearning to create, that strongest of human passions, is manifested from childhood. Children smash toys, but they also build block houses. Our small barbarians will gleefully tear a book into small pieces, but they will also lose themselves completely drawing on a sheet of paper. For the child creation is a joyful process, in contradistinction to the adult, who often finds it a torment. As children play, they learn.

Most children make their first visit to a museum with a school group at about the age of 10. But youngsters, we know, respond to art much earlier, some as early as four. They need to be exposed to form, color, texture.

The Pushkin Museum of Fine Arts in Moscow has a children's art studio open to all youngsters who like to draw. For several hours a week boys and girls between the ages of four and eight spend half their lesson time drawing, the other half looking at paintings, listening to interesting stories about them and learning the basic principles of mixing colors. They are acquainted with Greek and Italian painters, the Dutch school and the French Impressionists.

They like this game: One of them stands with his back to a painting just viewed, and the others ask him questions about it. The replies are often amusing and almost always original. When a girl was asked why a haystack in a Monet was painted pink, she replied, "Because it's full of clover."

The children may not become Rembrandts, but their love of painting and the arts will stay with them forever.

The studio is attended by about 100 youngsters. Those who show a marked aptitude for painting or sculpting go on to art school.

The children are not interested in painting from nature, they prefer to sketch from imagination. Some are inclined to bright, sharp colors, others to the pastel shades. Some choose fairy-tale subjects, others characters associated with the world of engineering. But all their drawings are charmingly fresh.

The teachers take great care not to impose their adult visions of the world on the children nor to stifle their spontaneity. Unobtrusively, they train them, through games, to observe nature more closely.

The children's art studio is only part of the large program of the museum's school division, headed by drawing teacher Erna Larionova. She loves to work with children, and it is due, in large part, to her efforts that the annual juvenile exhibitions have been so successful.



The young artists' exhibit has a formal opening at Moscow's Pushkin Museum of Fine Arts.



CHILDREN'S CORNER



MERRY YOUNGSTERS CLUB

DRAWINGS BY LEONID SERGEYEV

Who is that coming? Some merry animals. What are they carrying? Some big presents. Who are these presents for? For merry youngsters. A gift of honey for Samodelkin, poppy seeds and some ashberries for Petrushka, some mushrooms and berries for Karandash, roasted nuts and gilded kernels for Neznaika. And who is the croaking frog for? It is no ordinary frog, but one that can talk, and it is a present for everybody.

ARTISTS WHO CAN'T WRITE

An awkward situation. Lyuda Romanova was supposed to make a speech when she presented this bouquet, but she forgot the words.





Gray Wolf. *Water color by 4-year-old Misha Bogdanov.*



Peacock Feather. *Water color by Natasha Brilling, age 5.*



Tom Sawyer Whitewashing the Fence. *Water color with* gouache *by Grisha Kiselev, 9.*

The First Cosmic Dogs: Belka and Strelka. *Water color by Seryozha Sariban, age 7.*





Autumn Woods. *Water color*
by Vova Bogdanov, age 7.

My Mogulka Drinking. *Water color*
by Andrei Panfilov, 10.



PICTURES drawn by Soviet children are often exhibited abroad. Last year they were shown in 18 different countries. The youngsters of just one Leningrad kindergarten, No. 29, won 57 gold, silver and bronze medals at contests of children's pictures held in Rome, Tokyo and Delhi. Eighty of their drawings and paintings are being displayed in the United States.

The children learned to draw in kindergartens, schools, Young Pioneer Palaces and the country's 70 art schools.

Here are some of the young artists: Oleg Ivolga, who is four and lives in Leningrad, won a gold medal in Rome; six-year-old Katya Pavlovskaya of Kishinev was the winner of an international contest held in India; three-year-old Pavlusha Peunkov's drawing was awarded a gold medal at the Italian Exhibition of Children's Drawings; six-year-old Natasha Ugryumova of Leningrad was a prize winner at the International Exhibition of Children's Drawings in Poland; and six-year-old Arvidas Lekavichus of Vilnius won a gold medal in Italy.



(Above) This is exhibitor Vova Bogdanov's first show and he likes it. Mostly, he says, he draws things from his head.

Drawings and paintings by Soviet children are often shown abroad. Eighty are being exhibited in the United States.



NO MISTAKES PERMITTED

BY MIKHAIL KLYUYEV

When doctors write a prescription, they call on the pharmacologist to help them heal the patient. Since the pharmacologist is the person who prepares the medicine, they must trust him implicitly. When the patient gets his prescription filled, there must be no doubt in his mind whatever of its purity or efficacy. He must believe in the infallibility of that army of unknown people responsible for the drug in the packet or the bottle handed to him across the counter.

Several readers have sent questions regarding the manufacture of pharmaceuticals in the Soviet Union. We asked Mikhail Klyuyev, who heads the inspection department for pharmacological products of the Ministry of Public Health, to explain what happens to a drug from the time it is prepared to the time it reaches the patient.

BEFORE ANY MEDICINE goes into production we put it through a whole battery of tests. First of all, we want to be sure the preparation is effective. Furthermore, it must not only be good, it must be better than similar medicines we already have. Secondly, the effect on the living organism is studied thoroughly, even the most remote effect.

When chemists produce a compound with the desired medicinal properties, that's the end of the job for them. For the pharmacologist it is just the beginning.

At the institute where the preparation is made, tests begin on animals. Day after day the dose of the substance being experimented with is increased.

Only after the pharmacologists are convinced that the preparation is really effective, not toxic, and offers no threat to the offspring, do they send it on to the Pharmacological Committee of the Ministry of Public Health.

There the committee's distinguished physicians go over the material submitted to decide whether the preparation merits clinical testing.

But even after such a checkup, a medicine cannot be prescribed without clinical tests. The clinic must establish the dosage limits and determine how the preparation affects the human organism before it is recommended for use by the practicing physician.

The testing is entrusted to the foremost clinics in the country. The person appointed to supervise these first tests on human beings is someone with authority and stature, someone whose experience and ability are beyond question. As a rule, clinical tests are carried on for about two years. Then the preparation, with a detailed and complete description, is recommended for mass production. The Pharmacological Committee of the Ministry of Public Health studies the test results and makes the final decision.

It is possible, of course, for mistakes to be made during production—people, after all, are not angels. But as soon as the preparation goes into mass production, a system of control begins to operate, one which, like the most sensitive filter, stops impurities from getting through.

The preparation is subjected to strict control while in production in conformance with the method prescribed by the pharmacopoeia. Then specialists, who are responsible in the eyes of the law for their evaluations, do sample checks of the preparation before it is packaged. This checkup is done either chemically, with reagents, or biologically, on animals (depending on the medicine). Only after that stringent checkup is the preparation packaged.

This is a reliable means of control but we do not think that even this is sufficient. The drugstores have their own control laboratories. They make spot checks of the product they get for sale at their own discretion. They have the right to open and check whatever they choose. Qualified specialists also make spot checks in drug warehouses.

I can't list all of our control posts, there are too many. However, I should indicate that control methods are not the same for all medicines. In some cases it takes more time, in others—less. Blood preparations, for instance, require an especially painstaking checkup since they can spoil during the storage period. Blood substitutes, endocrine preparations and everything else injected intravenously are checked with special thoroughness. For this category of medicine an additional checkup for every series is obligatory, just as it is for vaccines and serums.

Though we try to put out as many medicines as possible in package form, about 30 out of every 100 prescriptions must be prepared at the drugstore since not all medicines can be stored. Furthermore, doctors prescribe different doses. How do we guarantee the quality of these preparations?

Every drugstore has a pharmacist to fill prescriptions. He must be a graduate of a secondary or higher pharmacy school. Special attention is paid to see that working conditions are sterile. Soviet drugstores prepare and sell only medicines, they sell nothing else.

Every drugstore has an analytic table which is supplied with the necessary reagents for control purposes. One of the drugstore employees, the person who fills prescriptions, or a competent chemical analyst, spot checks all orders.

Unfortunately, we still have many diseases for which we have no medicine. But we are doing all we can to fill the gaps. We still do not have enough pharmacological research institutions, although the number is increasing. A problem commission on pharmacology has been set up at the Academy of Medicine. It serves as a coordinating center and helps to make the most efficient and rational use of personnel. It collects information on the work of all the pharmacological institutes and departments in the country, on world findings in the field and on problems that demand urgent solution.

Our duty is to provide our drugstores with medicines for all possible diseases that are being cured anywhere at all. When the commission informs us of a new medicine made abroad which has proved effective, we import the medicine until we make our own, as good or better. We also export medicines to 80 countries. For instance, the children of Ceylon are inoculated against polio with a Soviet vaccine.

Though a medicine is imported from abroad, we do assume responsibility for it. We have no right to place anything on the counters of our drugstores that we ourselves do not stand behind. We cannot trust the advertisements of private firms. Any medicine offered to us is tested all over again. If it passes our tests and its merits have been substantiated in use, we put it on sale. Otherwise, we reject it. We hold ourselves responsible for the quality of everything sold in our drugstores.

The prices of our medicines are not high and are within every person's reach. Last year the average cost of a prescription medicine was 26 kopecks. Early this year the prices of medicines were reduced again. This was the sixth reduction in eight years.

People suffering from chronic ailments have to keep buying medicines, a drain on their budgets. So the state comes to their aid. Diabetics, for example, get their medicines free. Inoculations are also given free of charge. Hospital patients are treated free, and all the medicines they need while there are also free. Nor is there any charge for medicines when a person goes to see a doctor at a hospital or dispensary.

All in all, about 40 per cent (on the basis of cost) of all medicines produced in the country are given to patients in the course of treatment and are paid for by the state.

The advertising of medicines is limited to vitamins and hygienic and preventive remedies. In general we consider it harmful for it is not the patient but the doctor who should decide what medicine to prescribe. Instead of advertisements we publish informational material for doctors on all new pharmaceuticals.

ART and REVOLUTION

Anatoli Lunacharsky would have been 90 years old on November 29. This most versatile of men combined the talents of uncompromising revolutionary with those of orator, journalist and critic. He was a connoisseur of letters and the arts, a playwright, a translator. A leading French newspaper commented that of all the Ministers of Education in Europe he was the most polished and erudite.

When Lenin appointed Lunacharsky to this post, he told him: "You will have to dethrone illiteracy in Russia." What Lenin was asking for was a cultural revolution of enormous magnitude to be carried out in an impossibly short time. Lunacharsky launched a relentless battle against the centuries-old ignorance which the young Republic had inherited from old Russia. He drafted a theory, structure and methodology for the Soviet school system, forced the development of the arts, the theater especially, and helped writers and artists find their place in the new socialist society. Besides his great burden of administrative work, he carried on wide-ranging scholarly activity, wrote studies on philosophy and art history, and acquainted Russian readers with the more important writers and artists of the West.

Lunacharsky also played a role of no small dimension in drafting the basic principles of Soviet policy. In 1933 he wrote several articles against German fascism. The same year he was appointed ambassador to Spain, but he took seriously ill en route and died in France on December 26.

The following is the speech Lunacharsky made in 1919 at the opening of the Free Studios in Petrograd.

WE CAN PREDICT in advance in an epoch of a sharp upheaval, when a whole class which had extensive means, commanded society and largely determined its spiritual life is on the way out, dying and disintegrating, and when a new class which has evolved no formulas or whose formulas differ sharply from those prevailing is coming in—in this epoch the world of art is bound to be upset and go through a violent storm which may prove fatal, morally or physically, for some individuals.

Since it is from this angle that the socialist upheaval is evaluated by the artist, he cannot help feeling inimical towards this upheaval. Even aware of the iniquity of the capitalist system, he cannot help saying: "I wish it would all have remained as of old. I don't mean that the old times were good, but it would have been better if they had changed gradually, without violent convulsions, without an over-all breakup, without surprises, and with more cultured, more educated and better trained masses to whom everything we live by would not be alien."

However, in the eyes of the revolutionary proletarian and in the eyes of an objective sociologist this mood well-nigh deserves that accusation which the great Jean Paul Marat flung into the face of artists when he said that "all these people are the servants of the rich and, consciously or subconsciously, honestly or dishonestly, in one form or another, they bemoan the collapse of the rich like any servant who lived on their handouts."

There is such a thing as spiritual supply and demand, however. The artist must not truckle to anyone or pander to any demand. Of course, there is the fact that he has been commissioned to decorate some palace or erect a monument to a certain person, but this is a purely external circumstance. Just what he will introduce into all this, what part of his soul will be materialized here, depends entirely on him—and this is where he must be as free as possible. In this respect, the artist must be absolutely free at whatever cost.

Will the new socialist system actually give the artist this freedom? I do not propose to paint reality in glowing colors. We are going through a painful transitional period, a civil war, famine and economic dislocation on which the day of victory has just dawned. For some time to come we will be talking of the birth throes of the new society, not of its normal operation. But the normal operation of socialist society does imply the greatest freedom for the artist.

As we mature, we shall provide a prosperous and respected environment for our art students, our graduates launching their art careers and our past masters in art. We will be able to say to them as we would to birds in a tree: "Sing what your heart tells you to, without concern for your livelihood."

This is the statement of the problem which follows from our socialist plan. The closer we come to solving this problem the greater will be our victory, the more complete the artist's victory over the market, over the customer, and the more freely will art pour out of the human heart.

But freedom alone is not sufficient. Freedom is merely the absence of some positive concept and in this sense it is a purely negative concept. Nietzsche was quite right when he said: "Freedom, freedom, you say, my brother. but freedom for what?" I may be free, my hands and legs may not be tied, and I may go to the left or to the right, do something heroic or mean, but from this does not follow that freedom is a positive concept. Thus, to liberate a madman or a criminal is hardly something positive.

Apart from liberating the artist, the new socialist society gives his work direction and meaning.

Socialist society will give an infinitely greater inner content to the artist's life than the society in which he has lived hitherto. It will give breadth, monumentality, power, universality, majesty to his values.

We study the past of mankind, look forward to its future and respond to the phenomena around us like a snail encrusted in its shell or like a stay-at-home contemplating the world outside through a dusty window and hearing its hubbub through a thick wall. Only socialism will bring down this wall, do away with egoism, unite people, break the shells we are carrying tortoise-like, make our minds plastic and receptive to all influences, and hence blend us into the panpsyche of all mankind.

We will sense how limitless, eternal, divine man is when he is no longer confined within his dress coat (through which the alien outside world reaches him as though through a screen), when he no longer guards the frontiers of his ego, when he is panpsychic like the great prophets and can say: "My personality reaches to the sun, to the stars, my personality lives in all the suffering and rejoicing of my contemporaries, my personality shares the joys and woes of mankind in the past and future as though they were my own."

We shall have art collectives—associations of architects, painters and sculptors who will cooperate in designing a vast integral plan and building (not in centuries but in years. considering the technological progress made) not only new cathedrals that incarnate man's ideals and values but perhaps whole garden-cities, which we need so much, and will refashion the face of the earth according to man's dream of beauty and harmony.

If we can expect any damage from that spiritual upheaval which will correspond to the external socialist upheaval, it will perhaps be to lyrical, intimate art. I can very well understand the fears of those artists of gentle sounds or even whispers, the artists of the mystic, of the implied rather than expressed. of the personal, the untranslatable, *i.e.*, the artists of nuances, who say that the human soul will be turned inside out and there will be no recess where the brightest sunshine will not penetrate.

I think, however, there is no such danger. for individualism in the true sense, personal originality, the alembic of temperament through which impressions are perceived will be all the stronger, the more differentiated the society and the more vigorous its life. The

IY ANATOLI LUNACHARSKY



more impressions our soul receives, the harder it is to reduce them to one dead level.

Take some remote godforsaken village: the people there are very much alike. In the outlying areas of Siberia or in barracks where all outside impressions are barred, we observe cases of collective psychosis, individuals who have lost their identities. On the contrary, a large city seems to leave no one alone, yet it fosters the most vigorous form of individual development. Psychiatry tells us, for example, that the greatest number of mental patients in the countryside suffer from depersonalization, while the greatest number of mental patients in large cities are people with sharply pronounced personalities, suffering from the mania of greatness or the mania of persecution or simply some overtense psychic state.

What is shown by mental diseases is symptomatic for the general tenor of life. That urbanization for which we are heading—the development of culture toward a state where everyone is alive to everything happening in the wide world, both spiritually and materially, will invigorate personality, enrich perception and will make more complex all the various nodes of social lines we call human personalities.

From this point of view, creativity in the socialist society will be more original than anywhere else and more vigorous, although it is probable that what we style as the decadent, the beautiful and decaying, will play a decreasing role. Man is moving toward victory over all the evils which have curbed him, and perhaps, mankind, this precocious and sickly child who could not express his soul other than in a minor key will develop into a strong, vigorous, positive young man, full of energy and hopes of happiness, for whom the minor key will not be as characteristic as it has been thus far.

These are the general ideas which can be congenial to the artist as such, assuming that he forgets for a moment those personal and external circumstances which affect everyone and ponders the situation only as an artist. This is the encouraging and brightening word we bring to the artist about that period of world history we are entering, without hiding from him the fact that before we enter the paradise of socialism we shall probably have to pass through a short and bitter purgatory.

Whenever I contemplate modern art, it strikes me that it is no longer something integral. Therefore, different sections of art and different types of artists will respond differently to new social needs.

Traditional and modern art were hostile in the old world too and clashed violently. Young art complained bitterly that there was no freedom for development, it complained about gerontocracy, the domination of old men who took up all the room at the top of the social ladder and imposed their tastes on the young: The dead holding the living back.

We witness an extraordinary phenomenon in our neurasthenic age. Art trends have been changing kaleidoscopically. Nearly every year sees a new school. Young people, eager to discover new Americas, quite often neglect what we call craftsmanship. Perhaps it would be right for the older artists to say that this breath-taking search for something new at all costs affects art unfavorably because sketchy work begins to predominate.

Scarcely anyone is working hard to master the craft aspect of art and acquire the traditional know-how. As a result we may retrogress culturally. In those epochs when art declined, lost its traditions and lapsed into barbarism, no artist admitted that he drew or painted worse than the previous generation; he simply assumed that new tastes had come in. However, the loss of craftsmanship did lead to an epoch of decadence.

It would be right for the older artists to say: Young people are too anxious to become famous and go into anything that passes for original. A young hopeful, still in his teens, is regarded as a master because he can do a trick that has neither rhyme nor reason. Then somebody projects a half-baked theory or simply some mumbo-jumbo that allegedly provides an explanation for the discoveries he has made. And there are always the two or three young people more stupid than he, not clever enough to discover even that trick, who rush to the young master who is not yet beset by disciples and around whom it is easier to look original. The market has adjusted itself to this trend too.

These young people ought to be told that before creating new works and pioneering new roads it would not be a bad idea if they learned how to walk, that they ought to acquire a good schooling in art fundamentals before striking out on their own for new paths.

As long as one thinks that a combination of colors and lines is a value unto itself, he is simply an immature adolescent who can pour no wine into his bags no matter how new they might be. Or else he is the stone-hearted technician fascinated by form who always comes to the fore when culture loses its inner impulse and descends to pure formalism. Chekhov was profoundly right when he said that modern art had lost God, that it did not know what it should teach, that there was nothing art cherished, that it had no ideas, and however skilled the artist was, he was no artist under such conditions.

The man who does not think in images, in dramatic experiences expressed in images, is no artist. At best he is a technician who may create some combinations other artists will be able to use.

The deliberate absence of content, the theory of free combinations of sounds or words without inner content, even in poetry—literature banished from literature—is just what makes genuinely new people regard futurism as something senile, as an ultrarefined dessert for palates jaded by the bourgeois menu, as an effete child of bourgeois culture asking for nightingale's tongue because everything else has palled.

For old art there is a very essential way out: Since this art is realistic it has its *raison d'être*, and there is little doubt that it will reassert itself in the future. Whatever theory we may hold, we cannot deny the fact that combinations of images as given by nature and perceived by a healthy man, combinations of images with a sublime ideological and esthetic content have an undeniable *raison d'être*.

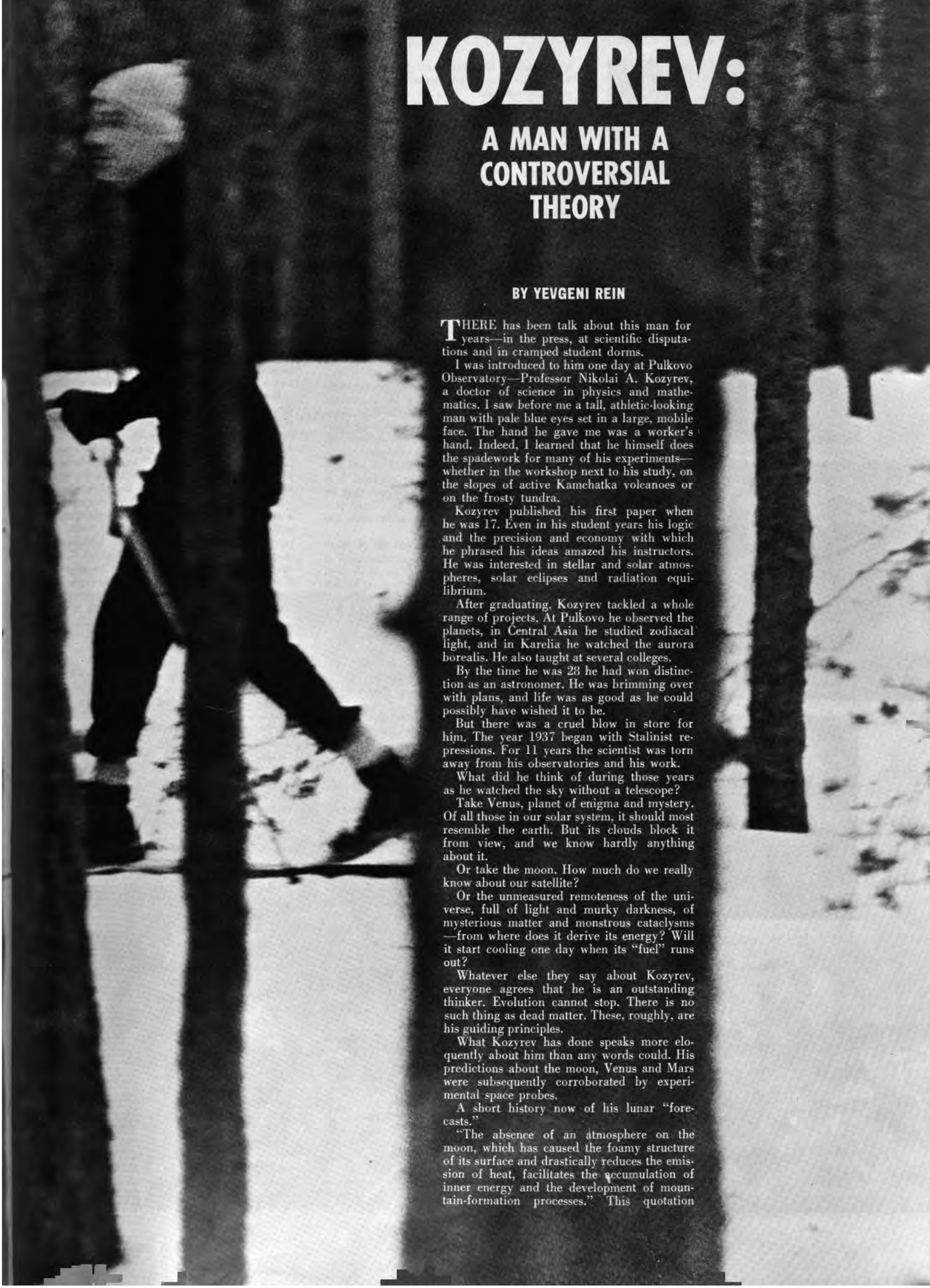
However, this does not mean that art must be realistic and nothing else. This means that as long as man is alive, he has a need to portray people as they appear to him but in a way that expresses his cherished dreams or ideals. This he does by rearranging certain real images.

From this point of view, if what we call "old art" with its realistic, or as an innovator would say, "slavish" approach to nature, acquires a new content, it would call forth wide and vigorous responses. To revive this art is to regain its living soul or, if you like, its *sujet* which has come to be treated scornfully and flippantly.

For the artist who has a sufficient technique, to find his *sujet* is to find everything. The artist should not regard his *sujet* as a peg on which to hang his work. To find the *sujet* means to find a combination of ideas which torments the artist and which he must express because his heart demands it.

(Abridged.)





KOZYREV:

A MAN WITH A CONTROVERSIAL THEORY

BY YEVGENI REIN

THERE has been talk about this man for years—in the press, at scientific disputations and in cramped student dorms.

I was introduced to him one day at Pulkovo Observatory—Professor Nikolai A. Kozyrev, a doctor of science in physics and mathematics. I saw before me a tall, athletic-looking man with pale blue eyes set in a large, mobile face. The hand he gave me was a worker's hand. Indeed, I learned that he himself does the spadework for many of his experiments—whether in the workshop next to his study, on the slopes of active Kamchatka volcanoes or on the frosty tundra.

Kozyrev published his first paper when he was 17. Even in his student years his logic and the precision and economy with which he phrased his ideas amazed his instructors. He was interested in stellar and solar atmospheres, solar eclipses and radiation equilibrium.

After graduating, Kozyrev tackled a whole range of projects. At Pulkovo he observed the planets, in Central Asia he studied zodiacal light, and in Karelia he watched the aurora borealis. He also taught at several colleges.

By the time he was 28 he had won distinction as an astronomer. He was brimming over with plans, and life was as good as he could possibly have wished it to be.

But there was a cruel blow in store for him. The year 1937 began with Stalinist repressions. For 11 years the scientist was torn away from his observatories and his work.

What did he think of during those years as he watched the sky without a telescope?

Take Venus, planet of enigma and mystery. Of all those in our solar system, it should most resemble the earth. But its clouds block it from view, and we know hardly anything about it.

Or take the moon. How much do we really know about our satellite?

Or the unmeasured remoteness of the universe, full of light and murky darkness, of mysterious matter and monstrous cataclysms—from where does it derive its energy? Will it start cooling one day when its "fuel" runs out?

Whatever else they say about Kozyrev, everyone agrees that he is an outstanding thinker. Evolution cannot stop. There is no such thing as dead matter. These, roughly, are his guiding principles.

What Kozyrev has done speaks more eloquently about him than any words could. His predictions about the moon, Venus and Mars were subsequently corroborated by experimental space probes.

A short history now of his lunar "forecasts."

"The absence of an atmosphere on the moon, which has caused the foamy structure of its surface and drastically reduces the emission of heat, facilitates the accumulation of inner energy and the development of mountain-formation processes." This quotation









from one of Kozyrev's articles showed that he had theoretically conjectured the possibility of lunar volcanic activity.

Astronomers watching the moon had now and again spotted smoke in its craters. Could this be an optical illusion, they wondered? Or something else? One day Kozyrev happened to read an article by the American astronomer Dinsmore Alter with a photograph of the Alphonsus crater, the bottom of which seemed blurred. Kozyrev believed that the photograph had recorded an instant of volcanic eruption or at least the emission of volcanic gas. But without spectrograms he could not prove it.

So in November 1958 he decided to make a spectrogram of this crater. Investigations showed that gases had been ejected from the crater's central peak in a two-hour-long process. A year later, in October 1959, he was able to photograph a real volcanic process at the same spot, complete with eruption of ashes and possibly streams of lava. Later he noted traces of an eruption in the area of the Aristarchus crater.

Several years passed. Among photographs of the lunar surface taken by the American Ranger 9 probe were some of the Alphonsus crater. American scientists had deduced from these photographs that the lunar surface, especially the bottom of the Alphonsus crater, could owe its origin only to volcanic activity.

Kozyrev is enamored of the planets. It is the "moon, Venus, Mars and Mercury that we should pay attention to," he says. "They provide an excellent stepping stone to more distant worlds."

The astronomer has observed all of these neighbors of ours and has accumulated a wealth of valuable information about each of them. On the basis of this information he has evolved theories and postulates and hypotheses. Some of them have already been proved, like his lunar forecasts.

Argument is raging around his views of the basic principles underlying the universe. In 1948 he presented for his doctor's degree a dissertation titled "Sources of Stellar Energy and a Theory of the Internal Structure of Stars."

The first point this thesis makes is that "the energy which the sun and the stars spew out into space is primed by specific sources, the nature of which has still not been elucidated."

In 1958 he published a book called *Causal or Asymetrical Mechanics in Linear Approximation.*

Kozyrev believes that the basic drawback of mechanics, which lies at the root of all the exact sciences, is the identity of past and future. Modern science maintains that, physically, past and future are equal, and makes no distinction between them.

Our psychological sense of time seems to tell us that time moves from past to future and that this motion is irrevocable. Eternity is no strip of film that can easily be run backward.

So Kozyrev resolved to put human intuition on firm ground. He conjectured that time possessed a tangible property that made all the difference between past and future, between the cause preceding effect and effect itself.

This property, he asserts, is the beat of time (the velocity of time), a value which is definite and which is always directed only one way, from past to future. The velocity value can be found both theoretically and experimentally. When that is done, Kozyrev predicts, and the appropriate corrections are made in physics and the other exact sciences, many puzzles will be solved and many theories unburdened of their contradictions and inaccuracies.

"I have given much thought to the sources of stellar energy," the scientist says. "It seems to me that the known regularities cannot be reconciled with the present view of the origin of stellar energy. We are accustomed to thinking of the stars as enormous nuclear reactors in which thermonuclear reactions keep taking place. However, against the background of extensive observations I have reached the conclusion that it is not nuclear reactions that play first fiddle, that it is not nuclear reactions that comprise the balance sheet of stellar energy."

What then gives the stars their energy?

In one of his articles Kozyrev wrote: "The ultimate march of time is developing into a physical reality, investing the world with new properties. It is to time's properties that we should look in order to find the source that maintains the phenomenon of life in the world."

In a nutshell, according to Kozyrev, the stars derive their energy from the beat of time.

Opponents of this theory maintain that the effects Kozyrev observes may very well be due to some peripheral cause and not to the operation of forces deriving from the flow of time.

Kozyrev has evolved a whole system of indirect proof. Since in space we have no dominant direction but only one absolute orientation, the distinction between the right and the left hand, Kozyrev associates the many facts of "right-handedness" and "left-handedness" in the world around us with the direction and unequal character of the march of time.

The direction of the spiral in the shell of a mollusk, the structure of some molecules, as well as the structure of the carrier vessels in plants are all asymmetrical. In addition to that, more than a century ago Pasteur discovered the chemical asymmetry of protoplasm. Kozyrev notes: "The asymmetry that organisms tenaciously inherit cannot be a chance thing. Evidently it is the effect of nature's laws in which the asymmetry is due to the direction of time. The asymmetry of organisms may be not only a passive consequence of these laws but also a special device to amplify vital processes with the help of the march of time."

Kozyrev attaches to Lee and Yang's discovery a role of particular importance in the chain of proof he has mustered. The violation of the principle of evenness in nuclear mechanics is also an effect of the asymmetrical forces of time.

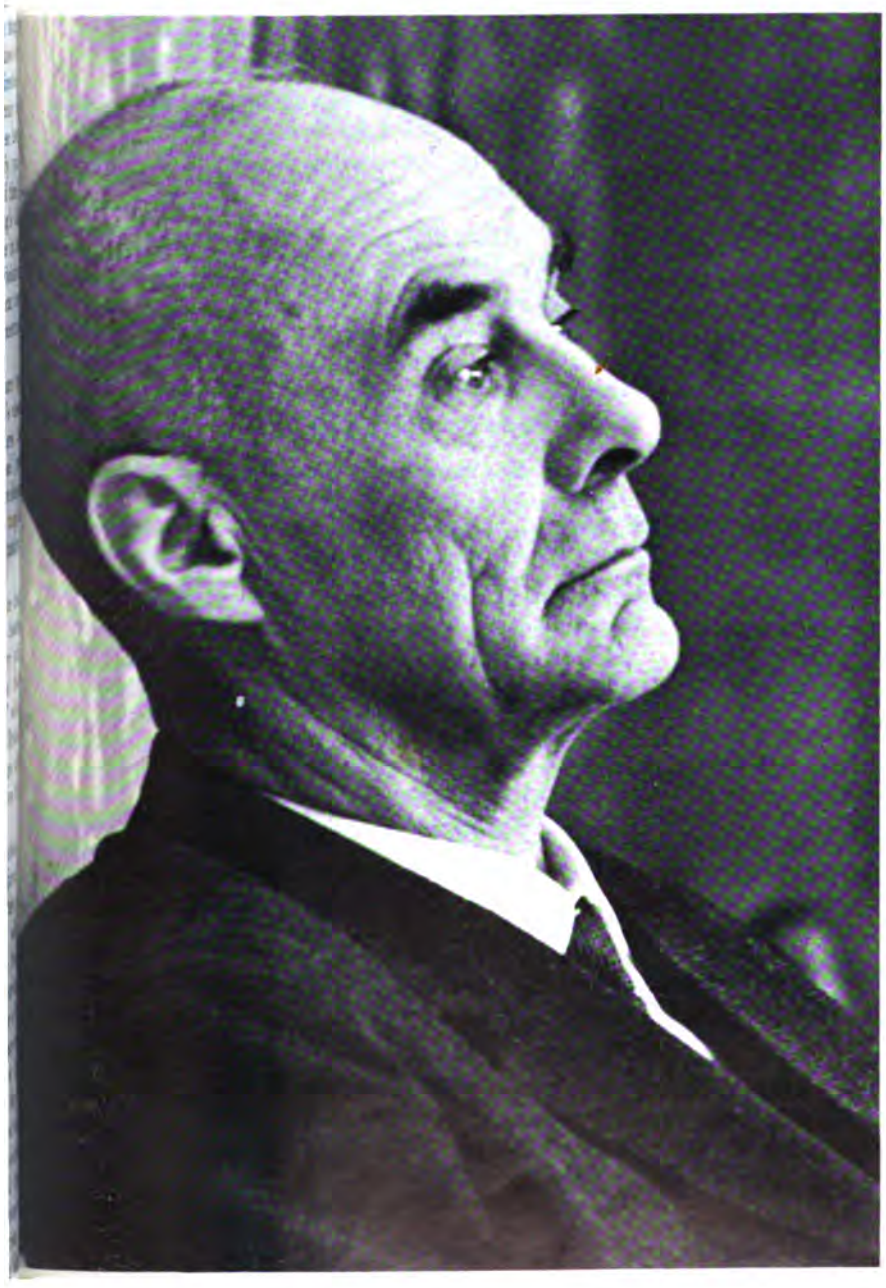
The heated arguments and the chary approach that scientists take to Kozyrev's views are not accidental. It would, of course, be much simpler if the matter concerned just one isolated issue, phenomenon or problem. But what Kozyrev is trying to do is trap a novel, hitherto unknown principle of natural science.

He is by no means the first to realize that modern science's notions of time are inadequate. The eminent nineteenth century philosopher Ludwig Feuerbach believed that time was the "cornerstone of being," while Sir George Biddell Airy, the noted British astronomer, observed that if the future differed from the past, a motor operating on this energy could be designed.

"Twentieth century science has reached a stage when it is necessary to study time in exactly the same way we study the matter and energy filling space." This statement which Academician Vladimir Vernadsky, the Soviet geochemist, once made shows how unerringly Kozyrev has put his finger on the core of the problem. Even his opponents have accepted his attempts to rank time among the basic principles required for understanding the universe as being necessary at this present stage. And yet they advance very serious objections. "We still cannot understand the real import of his assertion that the march of time may give rise to energy," Soviet physicists and Academicians Lev Artsimovich, Pyotr Kapitsa and Igor Tamm have said.

AN UNEXPLORED WORLD

BY NIKOLAI KOZYREV
DOCTOR OF SCIENCE (PHYSICS-MATHEMATICS)



MAN'S KNOWLEDGE begins from the first days of his life. A child's little world is ontological, expedient, purposeful. The child knows that he may ask "What is it for?" and get the answer. But the world expands, and one day a spring shower outside brings the question "What is that rain for?"

"Do you remember, dear, that you tore a picture a few days ago and said that you hadn't meant to, but simply pulled and there it was torn? The same with that rain. It isn't raining because there is something the rain is doing it for—the rain doesn't mean to—it's raining just because some dark clouds have gathered in the sky."

Thus, the new question "Why?" begins to oust the childhood question "What for?" Experience shows that this is a legitimate question and it deserves a proper answer. Such is the world's deepest property known as causality. Scientific knowledge is possible owing to this property of the world.

It is not easy for a child to abandon the purposeful perception of the world so dear to his heart and go over to the grim causality of natural science. However, he is prepared for this transition by the discipline of school studies which, to use the words of Goethe's Mephistopheles, tames the spirit of man and laces it into the Spanish boot of logical thinking. The rigorous logic of mathematical demonstration provides the brilliant tool of mathematical analysis. Far-reaching conclusions can be derived from experiment and their reliability evaluated with the aid of this tool. The question "Why?" that the natural scientist asks himself leads him further and further in search of the basic principles embracing an ever wider range of phenomena. In the last analysis, these principles must express the fundmental properties of matter, space and time. Logic and mathematics have converted these general properties of the world into an exact science, theoretical mechanics, which is the pinnacle of human thought. Essentially, this science must be the highest generalization of our knowledge of the world and hence the groundwork of natural science.

However, despite its significance and progress, theoretical mechanics seems a dry or even dull science. Perhaps this is an emotional indicator of the incompleteness of the principles of the exact sciences. The trouble here lies not in that incompleteness of knowledge which may gradually be eliminated with the progress of scientific knowledge, but in the deep discrepancy between the world of the exact sciences and the real world in which we live. This discrepancy is so deep that the exact sciences cannot ever hope to convey the great harmony of life basic to our world. Having violated this harmony, the exact sciences can only investigate the processes of decay and death.

Indeed, statistical mechanics indicates that any system made up of a large number of elements must go over from a little probable initial state into the most probable state, which is therefore the equilibrium state. Small fluctuations, whose probability can be calculated, are possible around the equilibrium state. The probability for such a large fluctuation as would return the system to the initial state is so small that it is practically tantamount to the total prohibition of this reverse process. From this point of view, the transition of the world into the equilibrium state, and hence its death, is inevitable and irreversible. It is only an interference of another system that may restore the little probable condition. However, in the real universe cosmic bodies are so isolated that the transition of each system into the equilibrium state is likely to occur before another vitalizing impulse comes along. Thus, the world is to become a sheer desert-like monotony. Even this one conclusion, which contradicts so vividly the picture of the world actually observed, may suggest the incompleteness of the principles of the exact sciences and provide a logical method of proving it by *reductio ad absurdum*. In other words, some processes unobserved by mechanics and preventing the death of the world are at work everywhere, maintaining the variety of life. These processes must be similar to biological processes maintaining organic life. Therefore, they may be called vital processes, and the life of cosmic bodies or other physical systems can be referred to as vital processes in this sense. And if vital processes are at work in the world at large, they are likely to be observed in the simplest mechanical experiments in our laboratories.

It may seem that the vast experience of modern engineering proves the validity of the principles of classic mechanics and the impossibility of changing them essentially. It should be borne in mind, however, that the engineer calculates his machine approximately, usually by his slide rule, *i.e.*, accurately to three or four digits. The corrections for vital processes may happen to be essentially smaller. Besides, even if the engineer detects something unusual about the behavior of his mechanism, he is not likely to overhaul the principles of mechanics, but rather will try to get the desired performance from his machine experimentally. The machine works on the principles of statistical mechanics, with its processes tending to degradation, *i.e.*, the leveling of its energy levels. If mechanics enables us some day to detect and control vital processes outside organic life, operating machines will renovate (and not only exhaust) the world's potentialities. Thus, a genuine harmony

(Continued on page 43)

THOSE WHO WERE NOT ELECTED



In elections this year to the local Soviets of the Russian Federation 79,357,229 voters cast ballots; 1,517,493 voted against the candidate; 68,980 did not participate. In all, 1,059,255 deputies were elected to the local Soviets.

In an interview with Sergei Orlov, secretary of the Presidium of the Supreme Soviet of the Russian Federation, we asked him about the candidates who were not elected.

Question: A report on the last elections to the local Soviets of the Russian Federation states that 170 candidates were not elected, that in 11 cases the elections were found invalid, and that in three constituencies elections were not held at all. First of all, why were no elections held in these three constituencies?

Answer: There is a one-month interval between the nomination of candidates and election day. In two constituencies the candidates died in the interim. In the third case the young workingwoman who was nominated is at that happy age when one wants to be thought older. She claimed that she was born in 1945, but it turned out that she was born two years later. This was discovered on the very eve of the election. The minimum age permitted by law for deputies to local Soviets is 18. And so the election in the constituency where the young woman was running had to be postponed.

Question: And now about the elections that were invalidated. When does this happen?

Answer: Generally when there is a mistake on the printed ballot. Here is an instance from the last election.

In one of the constituencies of the Chechen-Ingush Autonomous Republic, Lidia Valentinovna Minayeva, a nurse, was nominated for the rural Soviet. She was listed as Lidia Vasilievna Minayeva on the ballot. A majority of the people in the constituency voted for her, but the election had to be declared invalid.

Question: If such a mistake is possible, then we might very well assume that the voters really do not know the candidate, and whether she is listed as Valentinovna or Vasilievna doesn't make any difference to them. Isn't that so?

Answer: You probably know that in our country we call adults by their given name and patronymic, in this case Lidia Valentinovna. For young people we use only the first names. Minayeva is young and everyone calls her Lida. Many voters did not even know her patronymic. That is why the mistake was not noticed on the ballot.

But here is a case where the electors *really* did not know their candidate. At an election meeting in the Ryazan Rural Soviet, the workers of an enterprise nominated Blinov. He had just come to the district, and nobody really knew him except those who came in contact with him at work. At the meeting a representative of the enterprise talked the voters into nominating Blinov. Since only 10 per cent of the voters went to the polls, this election was also declared invalid.

Question: And finally, about the item in the report on the candidates who were defeated. Why were these 170 candidates blackballed? Was there any organized opposition?

Answer: We cannot know for certain why these particular candidates were defeated since voting is secret. But we do know of other instances where people successfully campaigned against a candidate.

In one of the rural Soviets of Sarych District, Volgograd Region, practically none of the former deputies were proposed for the new Soviet. Those who were nominated did not even bother to wait until they were elected to get together. Before election day they chose Petrova, a woman collective farmer, secretary of the executive committee of the Soviet. When the former secretary of the executive committee learned about the premature meeting, he launched an opposition campaign, and Petrova did not receive a majority of the votes.

Another example. In the Vedrov Rural Soviet, Kostroma Region, the former chairman of the executive committee of the Soviet, Ionina, was defeated. A year ago some of the local people wanted the seat of the rural Soviet moved from Kostroma to Ivanovo Region. Ionina was among those who opposed the move. A group of those who favored the move campaigned against her, and she lost the election.

Question: Supposing an election is not held or is declared invalid, what then?

Answer: In that case new elections must be held no later than two weeks thereafter. This is enough time for discussing and registering the new candidate.

Question: And suppose that, too, is not conclusive?

Answer: Then we wait another two weeks and have another election. Theoretically, this could go on endlessly. But I do not remember any case in the Russian Federation where the second election also blackballed the new candidate.

Question: The rules governing elections state: "A person is considered elected who has been registered as a candidate at the district electoral committee and who has received the majority of votes at the elections." Suppose the majority of voters write in the name of a person who has not been registered at the district electoral committee?

Answer: In that case the election would be invalid.

Question: Is this democratic considering that the people of the district have clearly expressed their will?

Answer: The election law requires that a candidate be registered. The registration system serves to eliminate those unworthy of holding positions of public trust. A candidate is registered only after he is nominated at a public meeting at which his moral fitness and leadership abilities have been thoroughly and publicly discussed. After being registered by the election committee and after what amounts to a second election on voting day, he is officially designated a deputy.

Question: Can a committee refuse to register a candidate nominated at a meeting?

Answer: No, it cannot. That would be illegal.

Question: These nominating meetings, aren't they a formality?

Answer: Judge for yourself. On February 9 at a meeting of the first shift, the workers of an enterprise nominated Shchadrin, chairman of the executive committee of the district Soviet, as their candidate to the Leningrad Soviet. (Several hundred thousand people live in Shchadrin's district.) On the evening of that same day at a meeting of the second shift, the workers turned down Shchadrin because he was uncivil and arrogant. Two days later at a general meeting attended by 1,500 people, his nomination was rejected.

Here is another example. In Karelia at a meeting of drivers at the garage of the Kondopoga lumber mill, the director of the enterprise was proposed. The drivers turned him down because in a previous term as deputy he had not carried out his election pledges. They nominated a mechanic instead. You can see from these instances that the nominating meeting is not a formality.

Question: Can it happen that a candidate proposed by an important mass organization is rejected at a general meeting in one district and then nominated in another?

Answer: No. In that election he cannot be nominated anywhere else.

Question: About the number of candidates. If several candidates are nominated at various meetings, will they all be on the ballot?

Answer: The regulations governing elections state that all registered candidates are to be listed on the ballot. Since the word "all" is used, it means there may be several.

Question: Has there been a case when several candidates were listed on the ballot in a fight for the same office?

Answer: I do not remember such a case. I do remember district committees registering two candidates for the one district, but by the time the ballots were to be printed, one of the two had withdrawn.

Question: How do you explain this disinclination to put up a fight for election? Is it because people don't want to face the possibility of defeat, or the work involved, or what?

Answer: There are many reasons, including those you mention. Some candidates are afraid they won't measure up to the responsibilities of deputy. But I think the main reason is that both registered candidates are pledged to the same over-all election platform. The only question at issue will usually be: Who will do a better job as deputy in the light of his vocational and organizational background and competence and the special needs of the district? For example, if the district has a special problem of school facilities, and a factory worker and a teacher are both proposed, the factory worker may decline in favor of the teacher.

GEORGIA: FORMS AND COLORS

BY MARINA KHACHATUROVA

It takes two days to reach Tbilisi from Moscow by train and only a little more than two hours by plane. Twelve hundred and forty-odd miles and you are in the capital of Georgia.

This is very ancient country with cultural monuments that reach back to the neolithic period. The sorceress Medea of the Greek myths, extolled in the tragedies of Euripides, Seneca and Corneille, was the daughter of Aeëtes, the King of Colchis (the western part of Georgia), land of the Golden Fleece. Medea is not an uncommon name here. Foreigners are pulled up short when a pig-tailed adolescent responds to a casual call for Medea.

Tbilisi is not the oldest Georgian city. It is comparatively young, as a matter of fact, 1,500 years old. It is fringed on all sides by mountains, and from the local funicular one can see a beautiful panorama of the city cleaved by the Kura River.

Georgia is a beautiful country, with a quality all its own. The Georgian artist is uniquely Georgian, molded more than most men by his native soil. Georgians are tempered by the sun, their blood runs rich. Their eyes are used to the lavish natural beauty that surrounds them. Their national characteristics are so deep-rooted they seem almost intuitive.

Georgia has more than 600 professional artists, but we shall confine ourselves to six. These men, all between 36 and 40, have won a measure of fame but hardly rank with the world's great masters as yet. They all graduated from the Tbilisi Academy of Arts and are now working in different genres. Though they have their various styles, they are united by their search for beauty, their native culture and their desire to give contemporary expression to the national art forms.



Georgi Ochiauri



Irakli Ochiauri

WORKING WITH CLAY AND METAL

Irakli and Georgi Ochiauri are two brothers who spent their childhood and youth in Hevsuretia, Georgia's alpine area with its own patriarchal way of life. They look alike and are good friends, and both studied sculpture. They are both great hunters and even like the same artists: Bourdelle and Maillol. However, they chose different directions. Irakli devoted himself to embossing on metal, among the most ancient of Georgian crafts; his younger brother decided to be a sculptor.

While Georgian painting is to some degree in the line of succession of its forebears of the ancient world, Georgian sculpture has been developing quite independently. Sculpture is not characteristic of Georgian art. Georgi is only the third generation of native sculptors.

"What I want to do," he says, "is to build something new on the foundation of our national culture."

This is his actual working principle, and the results are gratifying. While still a student, he carved a series of wood bas-reliefs he called *The Seasons* which testify to his skill for creating compositions infused with vivid local color. Georgi does mostly monumental sculpture. His latest work combines the lyricism and vigor of youth with the strength and simplicity of maturity.

Irakli also started out as a sculptor. His teacher was the noted Yakov Nikoladze who studied with Rodin. As a young sculptor Irakli carved a monument to writer Alexander Kazbegi. It stands near the Daryal Gorge.

He tried to make some metal ornaments for his wife and developed a passion for embossing. He is popularly thought to be the founder of modern Georgian metal inlay work. That is not altogether true. What he actually did was revive the art; thanks to his talent it has become as popular as any of the others.

Although embossing in Georgia has an ancient and honored history, it lay dormant in modern times, and the traditional forms became petrified. Irakli breathed new life into them, made them elements for interior decoration. His metal inlay ornaments are executed with great skill and faultless taste. His figures are wonderfully rhythmic—they almost appear to be moving to the strains of Georgian music.

Irakli works with copper, brass and sometimes silver. He makes the pattern on the reverse side and then presses it to produce a relief. He does not use ornamental processing, and his work usually has a smooth background.

The Ochiauri brothers recently collaborated in decorating the Tbilisi Wedding Palace. Georgi made the bas-reliefs for the façade, and Irakli decorated the interior with monumental inlay work.

Bas-relief for the façade of the Tbilisi Wedding Palace. Georgi Ochiauri.





A Georgian Dance
by Irakli Ochiauri



Love *(for Wedding Palace interior)*
by Irakli Ochiauri.



Snow Leopards
by Irakli Ochiauri.

LYRIC PAINTER

The European coming to Georgia is reminded of Italy. I recall that several years ago a young Georgian director was taken to task for a film he made that was characterized as Italian neorealism. The Georgians themselves did not notice any such influence. The director had simply produced a somewhat stylized movie of the actual Tbilisi.

The pictures which artist Zurab Nizharadze brought from his Italian tour are not much different from those he paints at home. There is the feel of Georgia in Zurab's works, even in his traditional still lifes. They have none of the exuberant optimism and lush color so typical of much of the modern Caucasian art. Lyricism is the quality you first notice in his work. His portraits, landscapes and still lifes all have this strongly lyrical, sometimes sentimental, vein.

"We Georgian artists now are concentrating on the elements of painting itself," says Nizharadze. "We are no longer tied to the literary plot for the topic of our pictures. We want the story told in art values. The national spirit was often depicted in a primitive ethnographic way, by painting in a Caucasian mustache, a Caucasian dagger or a wine horn. We have discarded that kind of obvious and literal representation for imaginative expression through form and color, the qualities of painting itself."



Zurab Nizharadze



Fish Market, Italy
by Zurab Nizharadze.





Portrait of a Girl
by Zurab Nizharadze.

A Cart, Italy
by Zurab Nizharadze.

THE PAST AND THE PRESENT

Two other brothers, Merab and Elgudzha Berdzenishvili, have been equally successful with their sculpture, black-and-white drawing, painting, book illustrating and scene designing. You feel in their work a particularly fine sense of color. Elgudzha, who has studied in all the departments of the Academy, does not seem to have any preferred medium. Merab considers himself primarily a sculptor. His most recent work won first prize at a contest and is to stand in one of the squares in Tbilisi. It is a statue of David Guramishvili, the famous Georgian poet of the eighteenth century, who had a passionate attachment for his homeland but was forced by circumstances to live all his life away from it. Implicit in the figure is the sculptor's creative pattern: the desire to depict man's inner world, the disregard for nonessential details, the modern elongated forms. Guramishvili's face, as seen by Merab, is the face of a Georgian Christ, suffering and inspired. "The function of art is to portray man's spiritual world," says Merab. "No matter what medium you use, it must not be a photographic copy, a cast. That portrays only the outer aspect."

Elgudzha, the elder brother, has a feeling for antiquity and the skill to use its values. His *Absalom and Eteri* is typical of his approach. The theme comes from a Georgian legend about two lovers. The poetic feeling of his pictures derives from his contemporary handling of the ancient Georgian fresco techniques.



Merab
Berdzenishvili



Elgudzha
Berdzenishvili



Shepherd Boy
by Merab Berdzenishvili.



Absalom and Eteri
by Elgudzha Berdzenishvili.



Detail of the Statue of David Guramishvili by Merab Berdzenishvili.



Old Men Drinking Wine
by Merab Berdzenishvili.



A Forge
by Merab Berdzenishvili.

THE SECRET OF "BLACK CERAMICS"

The ceramics of every nation has its individual attributes. Shapes, ornamentation and finishes vary from country to country. The ancient Georgian artisans were famous for their black ceramics, but their secrets were forgotten long ago.

When artist Revaz Yashvili graduated from the Academy of Arts, he decided to rediscover the long lost technique of making black, or to be more precise, dark gray ceramics. He tackled the problem with a technologist, and the two did a great deal of experimenting. The secret was relatively simple. You darkened the piece with smoke before it was finished. However, an infinite number of details had to be worked out before Yashvili achieved the effects he was after.

He has devoted five years of his life to black ceramics, produced a great variety of works and won gold and silver medals at world exhibitions. Now Yashvili ranks with the best Soviet ceramicists. He makes exquisite carafes shaped like deer, bulls and chamois; wine cups; ladles and decorative dishes. And all of them have his special stamp; they are traditional and modern at the same time and have an economy



Revaz Yashvili

of line which borders on the austere. He does not ordinarily use glaze and accentuates the texture of the basic material. His black ceramic articles do not have the characteristic gleam of metal but retain the feel of clay.

Yashvili is a ceramic euthusiast. He thinks its artistic possibilities are inexhaustible and works only in that medium. He is very fond of Ukrainian ceramics, which are quite unlike his own, but does not care for Baltic ware, which he considers too European and without enough character of its own. Besides making houseware and decorative items, Yashvili has been doing monumental ceramics. He is the directing artist of a ceramics factory the Georgian Academy of Arts recently founded.



A Jug
by Revaz Yashvili.



A reindeer decanter
by Revaz Yashvili.

QUERIES FROM READERS

These queries are taken from *USSR: Questions and Answers*, a book prepared around questions sent by foreign readers to publications serviced by the Novosti Press Agency.



Copies may be obtained from these American agents of Mezhdunarodnaya Kniga: Znanie Book Shop, 5237 Geary Boulevard, San Francisco, California 94118, and Four Continent Book Corporation, 156 Fifth Avenue, New York, New York 10010.

QUESTION: What is the city-country population ratio?

ANSWER: As of January 1, 1965, there were slightly more people living in the cities. The urban population was 121,600,000 as compared to the rural population of 107,500,000.

Before the First World War 18 per cent of the population was urban and 82 per cent rural. In 1939 the figures were 32 and 68, respectively, in 1959 they were 48 and 52, and on January 1, 1965, they were 53 and 47.

QUESTION: Who owns the land?

ANSWER: Like all other natural wealth, land is the property of the people, state property. There is no private ownership of land.

Since the state is the sole landowner, the country's natural wealth—its mineral resources, forests, waters and farmland and its productive forces generally—are used in the interests of all the people.

Immediately after the 1917 Socialist Revolution more than 370 million acres of land confiscated from the big landlords was distributed to the peasants. When they organized collective farms, the total area of their arable land was augmented by land from the state reserves. The land was given to the collective farms free and in perpetuity. These land rights are protected by law.

Each farm household may have, free of charge and in perpetuity, a personal plot of land for a kitchen garden and orchard.

The state also gives plots of land to groups of factory and office workers for collective orchards and vegetable gardens and to individuals on which to build homes or summer cottages. Land is likewise given to mass organizations (trade unions, cooperatives, youth groups, sports societies) for vacation and health resorts, sports fields, parks, and so on. In all cases, regardless of size, the plots are given free of charge.

QUESTION: What function does the Procurator General have?

ANSWER: The Procurator General is appointed by the USSR Supreme Soviet for a seven-year term. His function is to see that the law is observed. Should a ministry or local authority make a decision that he believes contrary to law, he can suspend its execution pending an appeal to a higher body.

The Procurator General and the procurators subordinate to him hear complaints lodged by private citizens and take the necessary steps outlined by law to protect their rights. The Procurator's office also supervises penal institutions.

QUESTION: What cooperatives are there in the USSR?

ANSWER: Cooperatives are divided mainly into the following groups:

collective farms which peasants join, pooling their basic implements and means of production to do joint large-scale farming on land deeded them by the state for use in perpetuity;

consumers' cooperatives (mostly rural) that buy consumer goods for their members and market surplus farm products;

fishermen's cooperatives for joint commercial fishing;

house-building cooperatives.

QUESTION: What is the organizational setup of a Soviet factory?

ANSWER: The manager is in charge. The factory's management board, consisting of administrative and technical personnel, is divided, as a rule, into a number of departments: planning, labor and wages, personnel, supply, marketing, quality control, capital construction, accounting, and so on. Technical operations are the province of the chief engineer, who is the assistant manager. The chief engineer, in turn, is assisted by designers, mechanics, power specialists and technologists.

The shop is the main production unit of a big plant, and the production section of small and medium-size factories. The shops, depending on the type and scale of production, are further subdivided into departments, sections or production lines. Heading the shop is a superintendent, heading the section is a foreman, usually a specialist with technical education or a skilled worker with long experience.

QUESTION: What wines does the Soviet Union make?

ANSWER: We make a great variety of wines: champagne, Armenian cognac, Ukrainian nalivkas (a type of brandy), Crimean muscat, the dry Georgian and Moldavian wines, the Cahors wine of Tajikistan, the Madeira of Uzbekistan, all kinds of liqueurs and apple cider, a total of 465 different brands of grape wines, champagnes and brandies, 120 of them vintage.

In the last 20 years our output of grape wine grew from 52 to 317 million gallons. All wine is made by industrial methods. Before the Revolution almost all the country's wine was made by peasants or in primitive wineries. We have no statistics on wine still made by the old methods. Besides grape wine, the country produces several million gallons of fruit-and-berry wine.

QUESTION: How are collective-farm market prices set?

ANSWER: By supply and demand. The collective farms and individual collective farmers sell their surplus meat, milk, eggs, vegetables and fruits on the open market. As distinct from the state and cooperative outlets where prices are fixed, prices at the collective-farm markets are set by agreement between buyer and seller.

However, the level of prices there too is influenced by the state. Since the dominant portion of farm produce is sold through the fixed-price state and cooperative shops, there is a limit to the amount that even an item in heavy demand will bring. The customer will manage with a substitute if he thinks the market price is too high.

As state and cooperative trade expands, the share of the collective-farm market in the country's trade turnover grows smaller. Nevertheless, it still serves a useful function by augmenting urban supplies of farm produce as well as the cash income of collective farms and their members.

QUESTION: Can a mother get her old job back after maternity leave?

ANSWER: By law her job must be kept open for three months after her maternity leave ends. If she goes back to work within a year, her service record is considered unbroken, important for sick benefits, among other things.

When she returns to work she can leave her child in a nursery in the care of qualified nurses and doctors. By law a mother is entitled to a paid break of at least 30 minutes every three and a half hours to breast feed her child.

Not long ago the Trade Union Council adopted a resolution recommending that factory managers provide all women returning to work after giving birth with free accommodations at a health or vacation resort at the factory's expense.

QUESTION: What does free hospitalization cost the state?

ANSWER: An average of five to six rubles a day. Patients do not pay for their hospital stay or for medical consultations, operations, treatment or medicines. A simple operation for appendicitis that requires four days of hospitalization costs the state nearly 68 rubles, while the usual nine days that women spend in a maternity home costs 175 rubles.

Sick benefits paid by the government to factory and office workers and professionals range from 50 to 100 per cent of wages, depending upon seniority.

EDWARD BAGRITSKY

in commemoration of the seventieth anniversary of the poet's birth



BY STANISLAV LESNEVSKY

EDWARD BAGRITSKY, whose real surname was Dzubin, was born in Odessa on November 4, 1895, and grew up in the stifling atmosphere of a Jewish ghetto in prerevolutionary Russia. His boyhood dreams were of distant lands, misty ships and unperceived mirages. As he wrote later in a poem, the world seemed "all topsy-turvy, all as it ought not be. A carp rapped on the window pane; a horse chirped; a hawk dropped into the hollow of the hand; a tree went dancing. And childhood was slipping by."

His first poems were published in 1915. Written for the most part in a mannered, visionary style, they appeared in the Odessa poetry journals of the time under such bizarre titles as "Auto in the Clouds," and "The Seventh Spread."

As a poet and as a man, Edward Bagritsky cannot be disassociated from the Revolution which gave him new sight. In 1917 he went to the battlefront and early in 1918 returned to Odessa to fight in the Civil War with both gun and pen, in newspapers and on armored trains, from club platforms and in partisan detachments.

From 1925 on, Moscow was the poet's home. In 1928 he published his first book of verse, *Southwest.* It opened with the poem "The Fowler," written in 1918. With a new poignancy and keener vision the poet wrote ". . . green below, deep blue o'erhead rose the world like a huge bird, whistling, trilling, tingling."

Bagritsky sees the collapse of a world of inhibitions and dead laws and the rise of a new, unfettered, flaming and sweet-sounding world.

There is perhaps no other Russian poet who so well conveyed the palpitation of the world in its elemental state, as though it had just been born.

But his attitude to that elemental world was far from simple. Tempting as its boons were, he shrank from the danger of a total spiritual yielding. In his ironic poem "The Tavern" he describes the poet tramp who succumbs to the desires of the flesh, the longing for succulent ham, comfort and sweet idleness. But when he finds surfeit in a tavern, he is overcome with remorse, recalling "the hunger that disciplined his pen" and "the full world overgrown with trees and bedewed with water, in mists and auras, abandoned by me." Finally he implores to be readmitted to his old world.

The product of much meditation and many recollections was his "Ballad About Opanas." It was written in 1926 and is unquestionably his best work. The ballad, or *duma* in Ukrainian, is a traditional form of the Ukrainian folk song. The misfortunes and guilt of Opanas are recounted in deeply stirring musical verse.

The source of Opanas' guilt is what interests the poet. Opanas longs for work and freedom and flees from the Bolsheviks to the estate of the colonist Schtoll in search of a job and food. A mediocre poet would have turned the story into a lampoon extolling virtue and punishing vice. But Bagritsky makes it a popular epic of great power in which the principal characters symbolize the tragic forces of history. "I do not want to brandish a gun. I want a job," Opanas tells the White Guard chief Makhno and asks to be shown the road to Schtoll's estate. But Makhno's men had murdered Schtoll, and Opanas sees no way out but to throw in his lot with them.

And Opanas, in a way against his will, becomes a traitor, hangman and murderer. He is betrayed by his compelling need for a smug and comfortable animal existence, the poet tells us.

In startling contrast to the corruption of Opanas is the quiet fortitude of the Bolshevik Commissar Kogan. Opanas faces a moral problem. Kogan is defenseless. To kill him would be mean and paltry murder. He tells the commissar to run away. Kogan clumsily adjusts his glasses and replies, "It is not proper for a commissar to run away like a dog," and refuses Opanas' offer.

The Last Night (1932), Bagritsky's final book of verse, is a triptych of three retrospective poems. It is the night before the outbreak of the First World War. The poet speaks of the fate of his generation, of death and heroism, of the times, which, he says, "made men wily, made them able to keep silent and stare others in the eye."

In this poem there is already a suggestion of the derelict man—"a senile stoop and a young face." He became the hero of the poem "The Suburban Man." This "cabbage and borsch god, a slave of animal instincts" is the poet's long-standing foe. "How lonely I am!" the poet cries. "Where are the merry men of my verses?"

To redeem these sentiments, the image of a dying girl possesses his soul, and he writes "Death of a Young Pioneer Girl," his last. Here he reveals the clash of two faiths, two moral forces. The tiny crucifix brought by the little girl's mother and the idea which breathed in the frail body come to grips in a powerfully written drama. "The crucifix drops upon the woven mat"—spurned as Commissar Kogan had spurned the paltry offer of his life. The mother stands near her dead daughter's body, resurrected by the poet's own faith so that it soars upward in "blue lightning."

The last words of the poem speak of song, which goes "out into the world open to the fury of the winds."

Edward Bagritsky died in 1934 of tuberculosis just before he reached the age of 40.

He was a poet who exalted youth. "Youth is not dead, youth lives!" he exclaimed. He exalted, too, the venturesome and buoyant spirit of man and his feeling and affinity for the new generation. His son Vsevolod, whom he loved deeply, also became a poet and fell in the war against fascism.

HELL DRIVERS

BY YURI DOKUCHAYEV
PHOTOGRAPHS BY IGOR VINOGRADOV

The uniform may be different but speeding and traffic cops are the same the world over.



Stopover at a truckers' motel. Alexei Rotano (sitting on the left) enjoys a game of chess.



A look at Tallinn, one end of the run, while the truck is loaded for the return trip.



ALEXEI ROTANO talked quietly, unhurriedly, but his eyes were riveted to the road. Whenever a car came into view he stopped talking—the speedometer needle was bobbing over the 60 mark.

"But why do they call you people 'long-rangers'?"

"I don't know, really. Maybe it's from the war. That's when a group of us, straight from the front, went to work for the trucking office. But we like the word. It's a serious word, suits the job. A 300- to 600-mile run is a pleasure on a good road. Not so much fun when you've been doing it month after month and year after year. . . . Still you hold on, why I don't know myself. . . . They offered me a better job driving a taxi for some city outfit . . . better pay too. . . . But when it came to a showdown, I decided to stay a long-ranger. . . . There's a beauty for you!"

Beauty? I looked around. The wet ribbon of the road darted under us and away to the back. Both shoulders were lined with piles of dirty snow, and the trees, still bare, formed a grayish wall that looked more like a theater set than a scene from nature. Rooks hung over the woods as motionless as in a child's drawing. They were getting ready to settle for the night. The picture made you lonely and restless, chilled your heart. Winter had not yet come into its own, but the frosts were already at work. The sun, just about finished with its run for the day, spilled a few orange and violet rays across the sky, but there was no cheer in them. A man had to be romantic or crazy about his job to see any beauty in that dismal panorama. Everything probably looked different in the summer, but now . . . .

Alexei's relief, Stepan, sat dozing beside him, oblivious to our conversation. The two of them had evidently long exhausted this subject during their interminable days and nights on the road, while their truck swallowed up the miles of their joint long-range trips from Moscow to Kuibyshev, Moscow to Simferopel, Moscow to Tallinn, Moscow to Orenburg, Moscow to Odessa. They had trucked just about everything: T.V. sets, wrist watches, oranges, jewelry, thread, clothing, preserved fruit, machine tools, thousands upon thousands of tons of freight.

"I sometimes try to add up the distance I've covered," said Alexei, "but I always get mixed up, too many figures. All the 40 years I've lived are connected with this road. During the war I drove a tank all the way to Berlin from the North Caucasus. It was set on fire twice and I was wounded once. I drove thousands of miles after the war too. Here, look at this!" He showed me a gold wrist watch. "That's what they gave me for good driving. Stepan got one, too."

The darkness was gathering swiftly now, and soon we were in fog. The headlights pierced the sticky mist, and the engine grumbled on monotonously. The windshield wipers were set clicking, and Alexei slowed down. The speedometer needle pointed to 40 now. Alexei's hunched figure and his grip on the wheel betrayed tension. The oncoming cars showered the windshield with wet snow and blinded the driver, even though they focused their beams downward. A pair of headlights flared up behind us too. The photographer working on the story with me was in that truck.

"I thought so!" muttered Alexei at a red light down the road. "We started late. Now they'll make us stop over."

Traffic, Militia and Elks

"Fog and bad ice ahead," said the militia sergeant as he checked our papers. "You'll have to get off the road, go on in the morning. I'll stamp your papers at the motel. See you later!"

In a few minutes both of our trucks swung into a parking lot beside the motel. The six of us went to the dining room. Stepan, still half asleep, kept mumbling: "We could have gotten there by morning. Why all the fuss and bother? We could have slowed down and kept going!"

In about half an hour there were 12 other men in the dining room, all of them interurban drivers. While we had coffee they told us what the rules of the road were for long-rangers. The drivers of passenger cars were only warned by the militia about fog or bad stretches of ice, but truck drivers were ordered off the road. Freight might be held up by the stopover, but Alexei and Stepan would get their monthly wage of 200 rubles just the same. All they needed was the inspector's stamp on the travel sheet, indicating that the trip had been interrupted by fog for such and such a period of time. Similar entries were made by the inspector in case of heavy snow or icy roads. The driver worked a seven-hour day. If he was alone, the inspector made him pull off the road after dark. Time to rest! If there were two drivers relieving each other, they were allowed to keep going for two days and nights but were stopped on the third night. These interruptions were apparently no problem to my friends Alexei and Stepan. They figured their speed closely, knew the road, kept their big trucks in good shape and so won bonuses every four months, year in and year out. Moreover, the schedules were arranged to give each driver a day off at home every third day, whenever possible. All that was the reason the militia was making the "fuss and bother" Stepan complained about.

Stepan liked to grumble—not out of anger but just for effect. Alexei would hear him out patiently but kid him when he griped about trifles. Now it was the militia that Stepan was growling about, but it might be the weak coffee or an elk crossing the road.

"Whole herds of them now! We'll be running into them next thing you know."

"Hey, Stepan?" interjected Alexei, very seriously. "I read something about a driver who smashed himself and his truck all to hell on a hippopotamus! It wasn't you, was it?"

This set the whole company guffawing.

Then followed all sorts of stories about elk, tales the drivers were practicing to tell their friends and children when they got home. The youngsters probably listened with feverish excitement. Alexei and Stepan each have two sons. The stories they told them were probably like these, compounded of truth and fiction, like the tall tales of hunters and fishermen. That was our modern oral literature, each tale more fantastic than the one before.

I would have liked to see one of those antlered giants, but nary an elk, not even a little one, turned up all the way.

Song

Farmsteads and whole villages kept drifting by the next day too. Now Stepan was at the wheel. We bypassed Leningrad, and then Narva with its grim fortress riddled with shell holes. That stronghold was left towering over the city as a memorial to the fierce fighting in the Second World War. We were silent now, each of us lost in his own thoughts, in his own memories of the war. Then we reached a pine grove, and soon a deep forest of evergreens spread away on the right and left. The sun thrust its fingers through the clouds, coloring the road, the woods and the tiled red roofs of the farmsteads. We were heading straight for Tallinn now. Over the drone of the motor Alexei began singing, beating time with his foot. The truck drivers of many countries must have songs like it:

We're out on the road far more than at home
For the head-on wind is better than wine.
Our tires keep humming as our engines moan
On the right of the ribbon halved by a line.

Stepan kept quiet at first, then grudgingly joined his partner for the third stanza:

We're out on the road with all sorts of freight,
Rolling on through the mountains in long echelons,
And the only thing really sad in our fate
Is that we rarely see our dear ones.

Listening to their song of the road, I wondered why the long-rangers were also called "hell drivers" sometimes. That, too, smacked of romance. Not our kind of romance, however. Romance has different guises. Alexei and Stepan were anything but "hell drivers." If the term stuck to them, it was because of the fearsome stories they liked to retail about unimaginable accidents, hard-hearted militia, elk that charged 10-ton trucks, and obstinate hippopotamuses.

This letter is reprinted from* Trud (Labor), *the newspaper published by the Soviet trade unions. The editors of* Soviet Life *thought it would be interesting for our readers to see the kind of problems Soviet workers raise in their newspaper. Filaretov's letter will certainly elicit the comments of Soviet workers, and we plan to publish as many as we have room for in subsequent issues. We hope that* Soviet Life *readers will also participate in this discussion. We shall be happy to publish their comments as well and to ask* Trud *to do the same.

CULTURE AND THE

A POSTER announcing a symphony concert was put up near the administration building of my plant the other day. As I stopped to read it, two people came over. One was a fitter from our shop. The other, a young man, I had never seen before.

"Interesting program," the stranger said, pointing to the poster.

"Maybe, but it's for intellectuals," the fitter replied with a shrug. "We're ordinary workers, we want something simpler."

"You're insulting yourself, Comrade Worker," the stranger said reproachfully as he left.

I asked the man at the gate who the young man was, and he told me he was a new worker.

The talk in front of the poster lasted no more than a minute, but it seemed to sum up things I had been thinking about for a long time and the heated arguments I had had with many of my fellow workers. That's what made me decide to write to *Trud* and share my views with others.

The Lenin Machine-tool Plant where I work is a modern factory with the latest equipment. We have good working conditions and every facility for raising our cultural level. But not all the workers are really interested in improving their cultural standards. Their views on culture differ greatly.

As for me, whenever I hear the words "intellectual" and "worker" opposed to each other, I start fighting. It seems to me that some workers have the wrong idea of the current definitions of "cultured" and "intellectual."

I know that in the narrow sense the word "intellectual" means a person who works with his brain, not his brawn. In this sense a line can still be drawn between the intellectual and the manual worker. But even this line is gradually disappearing. We already have shops and whole factories equipped with machines and automatic devices which only workers with a high level of technical knowledge, almost that of engineers, can handle.

But the word also has a broader definition, one that encompasses the general cultural standards of a person. And this, I believe, does not automatically go with a college diploma.

We all live under the same social system. Our society grants equal rights and equal opportunities to all. Since this is so, each individual can raise his cultural level just as much as he himself wants to.

Our theaters, museums, libraries and concert halls are open to factory worker and academician alike. This means that a man's cultural level depends on self-education, on the outlook, aspirations and strivings of the individual, on the way he determines his place in society and asserts himself in that society.

Nikolai Rossikhin, a forge pressman, came to our plant seven years ago. Last year he graduated from an evening technical school with honors and became a foreman.

The inner wealth of this outwardly ordinary man surprises everyone who knows him. Rossikhin loves the theater and is one of the leading actors of the plant's amateur drama group. We all deeply admire his acting.

Thanks to him many of us have a better knowledge of Mayakovsky's works and have become acquainted with Robert Rozhdestvensky's *Requiem* and Blok's poems. Rossikhin is married. His wife also works, studies by correspondence and is a member of the drama group. They have a five-year-old son. And still they manage to find time, patience and love for everything: work, study, rehearsals. Their rich spiritual life is something to be envied.

Or take the fitter Gennadi Kultayev. He is a reporter on the plant's newspaper, the author of many interesting sketches, stories and articles. Gennadi studies at a teacher training college by correspondence, loves painting, literature and the arts in general. He doesn't miss a single art exhibit and can chase around the city for hours searching for a particular book. Plastov's paintings have a great appeal for him. His passion for art and culture has taught him to approach everything and everyone with interest and attention. And he regards his work the same way. He always tries to get to the bottom of things and understand everything he does.

Mikhail Limonchik, head of the plant's technical information bureau, is very well-known in our city. He started his working career as a fitter and is now about to graduate from a polytechnic institute. How much effort he has put into attaining this level of cultural development! Yesterday's fitter has become a man of great erudition: He is an actor in a people's theater, an art consultant to the plant's newspaper and the director of the plant's University of Culture.

It is a great privilege to know such people. They work creatively, putting their hearts into whatever they do. They are always polite, tactful and considerate in their relations with

people. They always show a great deal of respect for others.

Alexander Buntushkin is my idea of a really superior human being. He devotes himself completely to his work and society, and this, I think, places him on a plane with the finest Soviet intellectuals.

Alexander grew up during the war. When his father was killed at the front, he had to bring up his three younger brothers. In spite of all the difficulties, he managed to graduate from a ten-year school, a technical school and an institute. And through it all he held down a job! Buntushkin—rank-and-file electrician, head electrician, engineer—has always been very active on his job, has always tried to learn more and more and to do as much as possible for society. Last year, even though he had to work on and defend his diploma thesis (for which he received the highest grade), he continued to head a political education group and remained an active member of a people's squad for protecting law and order.

Isn't this a truly cultured man? I think he proves my point that the cultural level of a person does not depend on his profession or job. It is the quality of the individual himself, not his job, that makes him a member of the intelligentsia.

Evidently not every worker realizes this. I mean specifically workers who take the easy way out and leave everything that requires thought and mental effort to the "intelligentsia." That is why I argue with them until I grow hoarse. But it seems to me at times that they hang on to their point of view to cover up their mental laziness, their unwillingness to think things out, to see things on a wider plane; it helps them to justify their primitiveness and narrow-mindedness.

There are still people at our plant who are not interested in the future, who won't move a finger to improve their cultural level, who care about nothing but their material well-being.

"My wages are high enough without studying," they say. "Why should I bother?" Their dreams do not go beyond a well-furnished apartment or a new motor scooter. As for anything outside this narrow circle, they say: "It's for the intelligentsia. We are simple workers."

This "nothing but a simple worker" formula belittles a worker's honor, in my opinion. I would even attribute the habits of hard drinking and using foul language—still prevalent among some sections of the workers—to their reluctance to join the wide and bright world of culture, to the narrowness of their intellectual interests.

The machinist Vladimir Afinogenov is only 23. It seems to me that at his age a man should have a particular zest for life, for getting to know what the world is like, for trying to make it a better place in which to live. But while the electric welder Grigori Zborovsky is hurrying to the theater, Afinogenov, dead drunk, is accosting a passer-by. At the same time that quality inspector Stanislav Shutkin is singing in an amateur chorus, his colleague Ivan Kuzmin is facing a comrade's court on charges of being drunk and disorderly.

Whereas fitter Gennadi Kultayev spends all his savings on records and books, fitter Vladimir Gomma spends his last kopeck on liquor. While forge pressman Nikolai Rossikhin is reciting Gorky's works on the stage, his colleagues Pyotr Yeremin and Nikolai Malygin, together with smelters Vasili Kharitonov and Pyotr Matveyev, are poisoning the atmosphere with foul language. And the most terrible thing about all of this is that they try to pass it off as proof of their "belonging to the working class."

When a young man first comes to a factory or a plant, his ambition is to become a real worker. But it takes time to see the fine points of a workingman's life, to get to know the healthy working-class traditions. Not so with foul language; he hears that the minute he enters the door. Often, in order to show that he's a "real worker," he starts swearing too. And even though swear words are insulting, even though they affect a man's mood, no one seems to mind. And when someone says something against swearing, one of the men is sure to reply: "How d'you like that! There's an intellectual for you!"

These so-called real workers do not understand that drinking and swearing smear a worker's honor.

A few words about myself. I came to our plant after I got out of the army. I am a fitter and am in the third year of my studies at an aviation institute.

I am fond of books. At first I did not like music much, but after taking a course in music appreciation at the University of Culture I got to love it and often listen to operas now. Music helps me work, study, understand people, in short, it helps me live. Of course music is only a part of human culture. But even my acquaintance with this small part has greatly enriched my life.

Like many others, I used to be quite capable of tearing a branch off a tree, of overlooking a man's good intentions, of being indifferent to foul language. Music and poetry have opened my eyes to life's real values.

But I don't want to talk about myself. I want all those who fence themselves off from beauty and inner wealth by proclaiming themselves "simple workers" to realize how they are robbing themselves, how they are humiliating the worker's honor. I want them to understand that culture is not the privilege of the mental workers, that any man can be cultured if he really wants to be. And in my opinion, every man should want to be.

WORKER

BY VLADIMIR FILARETOV
FITTER, LENIN MACHINE-TOOL PLANT, KUIBYSHEV

AROUND the COUNTRY



SUPERSONIC LINER

Andrei Tupolev's team of aircarft engineers are now busy designing the TU-144, a supersonic 121-passenger ship with a cruising speed of 1,550 miles per hour and a range of more than 4,000 miles. Taking off from Orly in France, it could reach New York 2 hours and 20 minutes later, flying at an altitude of 12 miles. The 143-ton plane will need a 6,230-foot runway, and its three-man crew will be assisted by automatic computerized navigation instruments. For the greater comfort of the passengers in its two cabins, the engines will be set at the back. The new plane will make for economy flying, the fare will be the same as for a seat on an ordinary airliner.

BETA-2

The Beta-2 installation is lighter yet more powerful than its predecessor, the year-old Beta-1. Designed by the Research Institute of Radiation Engineering, it converts the heat given off in radioactive decay directly into electricity. Its source of energy is the long living strontium-90 isotope, which has a half-life of some 30 years. This means that its power remains constant for over 10 years. The new installation weighs 330 pounds, has a power of 10 watts, and can produce a short-lived impulse of up to one kilowatt. It will be used at automatic radiometeorological stations to take measurements of air pressure and temperature, wind direction and average velocity, precipitation and sunshine. It will be able to radio this information to places 370 miles away.





WHEN YOU WEIGH A TON

Spacemen sustain overloads best w... they are directed from chest to ba... Until now it was thought that an a... of 65 degrees to the direction of ac... eration was the best seating posi... However, Soviet experiments with a l... centrifuge have shown that the cos... naut blacks out under a 10- to 12-f... increase in weight, and that he can... stand a 15-fold increase at all. Af... lengthy experiments to increase his e... durance it was found that seated at ... angle of 80 degrees the cosmonaut c... withstand a 26.5-fold increase and al... sustain a 12-fold increase two to th... times as long as he could previously. ... the photo a Soviet cosmonaut is abo... to enter the centrifuge.

THEATER-IN-A-THEATER

A new theater has been built inside Moscow's Bolshoi. Level with the top balcony is a stage the size of the main one, dressing rooms for 200 performers and a hall seating 180. The new "theater-in-a-theater" will be used for rehearsals and previews, thus permitting the company to prepare and stage several productions simultaneously. As a result the Bolshoi gave three premières—Stravinsky's *The Rite of Spring*, Rossini's *The Barber of Seville* and Benjamin Britten's *A Midsummer Night's Dream*.

SYNTHETIC VITAMINS

Fifty tons of carrots are required to produce 350 grams of vitamin A. Vitamin E can be derived only from young spring plants, chiefly wheat. To get around these costly procedures, scientists have been trying for the past half-century to synthesize vitamins. Working with isoprene, Estonian chemist Koit Laats observed that its structure resembled that of vitamins. With a simple reaction he worked out, vitamins A and E can be derived from isoprene compounds. Engineers of Tallinn, the Estonian capital, are presently designing installations for the commercial production of vitamins. By 1969 they expect to have available 50 tons of vitamin A and 25 tons of vitamin E.

FOREIGN GRADUATES

There are 21,000 foreigners from 119 countries studying at 300 colleges and specialized secondary schools in 80 Soviet cities and towns. Some 3,000 young men and women from 81 countries attend the Lumumba Friendship University in Moscow, the major foreign student center. This year, the university's fifth, saw a noteworthy occasion, the graduation of its first class of 228 young engineers, agronomists and lawyers.

Over the past 10 years Soviet colleges have trained 25,000 specialists from other countries. Many talented young people have earned higher academic degrees. Thus, 400 of the 1,500 foreigners who graduated from Moscow University over the past few years have already earned graduate degrees.





GAS INSTEAD OF WOOL

The Navoinsky Chemical Plant in Uzbekistan, one of the biggest Soviet enterprises built thus far in the development program for the chemical industry, uses natural gas from the great deposits in the Central Asian deserts. The installation was relatively inexpensive because the bulk of the equipment could be mounted in the open air on multi-tiered platforms.

Every care has been taken to avoid waste. In full-capacity operation the plant will produce fertilizers, notably granulated ammonium nitrate, cyanamide, a special preparation that gets rid of cotton plant leaves before picking, and, finally, nitron, an artificial wool. The quantity of nitron to be turned out will equal the wool clip from a million sheep.



POLYCRATES FOUND

For 46 years art scholars searc... high and low for the Polycrates ... on exhibition at Leningrad's Russian M... seum. All they had to go by was ... plaster-of-Paris cast and the knowl... that the bronze original had been ... by the Russian sculptor Mikhail Kozlo... in 1790.

This representation of despair in ... face of inexorable death fuses the el... ments of stark tragedy and artistic ha... mony. Every muscle is strained to bur... point, the head is thrown back in ... final desperate lunge, but all to no ava...

The clue to the meaning is a ... quotation from Solon inscribed at ... base: "No one can count himself ... while he lives." Polycrates, the ... tyrant of Samos, was lucky all his l... But he died in anguish, crucified by ... Persian satrap Oroetes.





BUILDERS OR ARCHEOLOGISTS?

xquisitely worked gold and silver ob- jects are frequently found in Scyth- burial mounds in the steppelands r the Black Sea coast. Two such unds were opened up recently in the aine on the building site of the th Crimean canal. Shown here is one he objects found, a gold quiver pic- ng a stag attacked by a lioness, an le and a serpent.

he most important archeological finds ecent years have been made at con- ction sites. Thus the remnants of the endary town of Ivan Gorod, as old Kiev, were uncovered in siting the ev Hydroelectric Power Station, also he Ukraine. Soviet law requires that ry caution be taken to preserve traces past civilizations found in the course construction.



PEACEFUL RIFLES

nese firearms are not devised for war, hough they shoot better than any y rifle. They confine their fire to rts contests and at world champion- s have brought our sharpshooters es more than once. Soviet-made rifles in great demand abroad too. Sharp- oters in Britain, Norway, the Nether- ds, Sweden, Finland, Japan and the alist countries prize the Strela-3, lon and SM-2 models. Russian hunt- guns are particularly popular and sold in 42 countries.

A BOOK A DAY

The now familiar colophon of Mysl Publishers—a torch with a flame shaped like an open book—appeared two years ago. Mysl puts out both scholarly and popularly written works on philosophy, economics, history and geography, publishes a title a day, and has an annual printing of seven million copies. Titles published for foreign readers include a world history in several volumes translated into 10 languages and Academician Vasili Nemchinov's *Economico-Mathematical Methods and Models* in English, German, Polish, French and Italian. Mysl also publishes translations of foreign writers.

Last year it began a Philosophical Heritage series in several volumes, in which foreign authors are prominently featured.



HEARING REGAINED

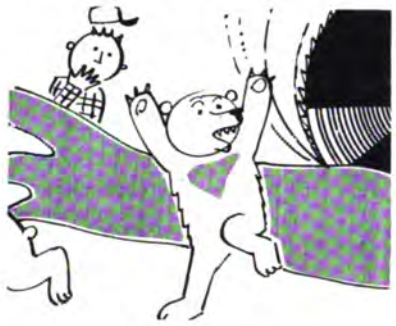
Deafness from otosclerosis comes when one of the ossicles in the middle ear, the stapes, loses its mobility. For a long time there was no cure for the disease. Now a tiny artificial ossicle is inserted in place of the immobile stapes. The operation, which is done under a microscope and which is, as a rule, successful, has been started in the USSR at the Medical Institute in Kuibyshev.

BYELORUSSIAN BOOKPLATES

Byelorussian bookplate collectors are pleased that the art of bookplate making has been recalled from protracted and undeserved oblivion. The republic's State Museum currently boasts a fine collection of bookplates. Apart from Soviet specimens, there are also Russian bookplates of prerevolutionary vintage —the work of such eminent masters as Ilya Repin, Alexander Benoit and Yevgeni Lansare—as well as the handiwork of old Estonian, Lithuanian and Polish masters. The ex libris of the physicist Vadim Savva shows the scientist's portrait against a background interlacing scenes from medieval alchemy with modern depictions of molecular and atomic particles.

HIBERNATION RISKY

A 100-foot-long cedar with a big hollow that Khabarovsk logger Fyodor Lakhtin had felled was about to go to the circular saw when a roar came from inside the trunk. It seems a she-bear with her family had been hibernating there and awakened just in the nick of time. The saw was stopped, and to the guffaws of all present, the she-bear and her cubs waddled off into the forest.



MINERAL DEPOSITS REFLECTED IN SKY

The northern lights are not exclusively northern, they are also observed in Japan, Italy and as far south as Africa. But scientists believe the streams of charged particles producing this ionospheric luminescence are concentrated in the neighborhood of the earth's magnetic poles. How then explain the frequent deviations?

Scientists at the Yakutsk Institute of Space Physics Research think one of the reasons for luminescence in "unexpected" places derives from the magnetism of iron ore deposits. Various Siberian regions where the northern lights have appeared are now being surveyed for iron ore deposits. It is highly probable that magnetic ores are responsible for the northern lights in near-equatorial latitudes.

EIGHT-TIME CHAMPIONS

All 72 games in the European basketball championship held in Moscow and Tbilisi, Georgia, had to be played to decide the winner. The Soviet team beat the Yugoslavs 58 to 49 in the decisive game, lost none of the nine games it played and won the European title for the eighth time. Modestas Paulauskas, 20-year-old student of Kaunas Polytechnic, a devotee of basketball from the tender age of eight—this is his second year on the Soviet team—scored the most points for his side. However, the Basketball Federation chose Gennadi Volnov of the USSR top European basketballer.



500 DOLLARS FOR BLACK SABLE

In fur breeding the USSR stands second after the USA globally. We breed mink, polar fox, sable, silver fox and nutria at big state farms, each of which yields up to 60,000 valuable pelts a year. Last year these-nurseries produced three million pelts.

We mostly raise black and colored mink, whose pelts are in great demand. In cash terms, they comprise three quarters of all the world's fur business. To improve pedigrees, we buy female minks in various countries. Only recently, 2,000 colored female minks were flown in from the USA.

The black sable is raised only in the USSR and its pelts are worth more than their weight in gold. At the last Leningrad fur auction, some black sable pelts sold at 500 dollars apiece.



AROUND *the* COUNTRY











CAMERAMAN Gennadi Ikonnikov tells this story:

It was a sunny day and the boys were sky diving, practicing precision jumps from an altitude of 3,300 feet.

I was busy getting my camera ready and figuring what I would shoot. It's simple on the ground because you can move toward or away from whatever you are shooting, but what I had to do was to film people dropping from the sky. Everything was unusual and beautiful—the sky diver jumping out of the plane, the chute billowing out, the control of the chute, and the landing. I wondered how it would be bailing out with a heavy camera like mine.

I looked up at the plane overhead and saw somebody, just a dot, jump out and fall swiftly. I set my camera going. Seconds passed, and suddenly a shapeless bundle of silk broke out above the skydiver. Something was wrong, the chute didn't fill out.

Everybody on the ground stood frozen, watching the man in the air trying to untangle the shrouds.

"Jerk your spare!" they yelled up.

The falling diver did, but it got tangled with the main chute. Besides that, it got tangled around his arms. It looked as though there was no way to save him. Moments like that you are gripped with horror and can't break out of the grip.

This happened to Yuri Belenko, a man with two world sky-diving records. Talking about it afterward, he said:

"I could see nothing when that chute wound around me. I felt as though I were falling straight into an abyss and that nothing could save me."

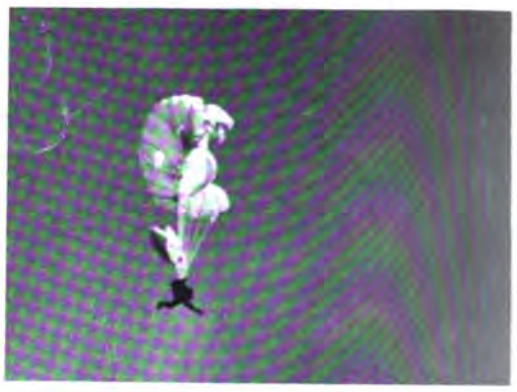
Then someone yelled, "The tarpaulin strip!" (the tarpaulin runner used to pack the chutes).

The men grabbed the tarpaulin strip and raced to the spot where Belenko was falling. He fell 3,300 feet in one minute, while the fellows on the ground dashed 650 feet in a time very few sprinters can show.

Risking their own lives, they held out the tarpaulin runner. Belenko hit it so hard that it was yanked out of the men's hands and some of them were knocked down.

He hurt his leg, but he's fine now. He can walk again and is dreaming, naturally, of more sky diving.

My shots of the incident are not very good. Because of the rush and excitement, I didn't get the focus and aperture right. But here they are, anyway.











IT WASN'T IN THE SCRIPT

AN UNEXPLORED WORLD

(Continued from page 27)

between man and nature may be established. Abstract as this dream sounds, it has a realistic basis.

At the dawn of the nineteenth century, when the triumph of the exact sciences was at its height, Laplace wrote that an intelligent being who knew all the laws of nature and all states of all processes at a certain moment of time would know everything about the world: "Nothing would remain unknown for this being who could scan all of the future as well as the past." This general contention evidently includes all living beings as well. It is difficult, however, to accept this unconditional determinism. In that case human behavior could also always be predicted (and that, incidentally, would be the end of the freedom of choice and hence the end of our feeling of moral responsibility).

The rigid determinism desiccating the world actually follows from the equations of mechanics and is the essence of its laws. Its equations make it possible to calculate processes in the future and the past with the same accuracy. Since in reality cause precedes effect, this is only possible if cause and effect are absolutely equivalent: *causa aequat effectum* is a principle already enunciated in the ancient manuscripts on mechanics. Actually this principle contradicts the causality of natural science and, indeed, its essence. The natural scientist will always distinguish cause from effect by several signs. For example, if the event B appears whenever the event A is reproduced, then A is the cause and B the effect. If, now, B is reproduced, A will not necessarily be observed, for B may be caused by some other event and not only by the event A. If cause and effect are absolutely equivalent, the question "Why?" is meaningless. Therefore the exact sciences answer only the simplest question in the cognition of the world, "How?" and describe accordingly the processes at work in space and time.

At first glance the fact that for all their omnipotence the exact sciences are simply descriptional may seem paradoxical. It is true that the exact sciences describe processes not only in space but also in time (which is not easy!) with a high degree of accuracy. But if we accept the unconditional validity of the principles of the exact sciences as they stand now, the cognition of the world will be impossible. The world can merely be described, and the laws of nature are simply recipes for the economic description of processes or our sensations inasmuch as phenomena can be described by their data. This leads us directly to Mach's philosophy of positivism and empiriocriticism. Ernst Mach was an excellent physicist and had an admirably logical mind. He arrived at his philosophy by analyzing the principles of the exact sciences. Therefore, the discrepancy between Mach's philosophy and what we know about the world shows that these principles are wanting.

The gap between the exact sciences and the natural sciences must vanish if the principle of causality differentiating cause and effect is placed at the basis of the exact sciences. A cause always precedes a consequence in time. Leibnitz came to the conclusion that to distinguish between cause and effect is to distinguish between the future and the past. This implies the objective directionality of time or its flow. This property of time must be introduced in mechanics. We encounter numerous manifestations of this principle in our life and in natural science. Yet this principle is new in both mechanics and physics as a whole. It is noteworthy that Academician Vernadsky wrote in his book on biogeochemistry (1939): ". . . The natural scientist's time is not Minkowski's geometrical time, nor is it the time of mechanics, theoretical physics, chemistry, the time of Galileo or Newton."

Indeed, mechanics has been using only the "geometrical" property of time, its duration size, *i.e.*, the intervals between the events under study. Timed, these intervals acquire the same passive property as the intervals measured between two points of space. It is only this property of time that the exact sciences assumed to be existing objectively, postulating that all other time properties are subjective, *i.e.*, our psychological delusions. However, if we want to differentiate causes and effects, in reality the *flow of time* must be a physical quantity, duly expressed mathematically and entering the equations of mechanics. The physical meaning and mathematical expression of the *flow of time* can be obtained from the space-time properties of causality.

A cause is always external with respect to the body where its effect arises. Therefore, *between cause and effect* there is always an *arbitrary small but not zero spatial difference.* Similarly we can define the time causal relation: *Cause precedes effect and therefore between them there is always an arbitrary small but not zero time difference of a definite sign.* The relation of space to time differences may be a finite quantity and give the rate at which cause becomes effect. At a fixed space difference this quantity will be all the larger, the smaller the time difference between cause and effect, *i.e.*, the more rapidly the time flows. Therefore, the *rate at which cause becomes effect* and which we shall denote C_2 *may serve as a measure of time flow.*

In mechanics forces are causes responsible for the appearance of other forces, of a change of the momentum of the system of bodies under study. If a change of momentum per time unit is, according to Delambre, regarded as inertia, forces may also be effects and not only causes. Intertia may appear only under the action of an external force, *i.e.*, under the action of another body. As one body acts on another in Newton's mechanics there is always (because matter is assumed impenetrable) an arbitrary small (or even point) but not zero space difference. Thus, causality required a non-zero spatial difference between cause and effect, as it was incorporated in classical mechanics. However, causes and effects were not discriminated, *i.e.*, the time difference was assumed to be zero in this system. Hence, Newtonian mechanics corresponds to the world with an infinitely large time flow rate ($C_2 = \infty$). The time flow rate also shows the extent to which the causal relations under study are stable. If the time flow rate is infinite, the stability is absolute, and we have a completely determined world.

In theoretical physics the interaction of particles is described in terms of fields which have become a physical reality, *i.e.*, matter, owing to the theory of relativity. Fields can be added. This possibility of superimposition has eliminated the impenetrability of matter as the basic principle. As a result the spatial incompatibility of cause and effect has also ceased to be an essential principle. At the same time the quantum theory of modern physics has (for the first time in the exact sciences) revealed the nonequivalence of the possibilities for predicting the past and the future. It appears possible to predict the behavior of a system after (but not before) it has been acted upon by a macroscopic body: the investigator's tool. This means that the time difference between the future and the past cannot, as the system is acted upon, be zero in principle. In other words, the denominator of the fraction which gives the time flow rate C_2 is not zero. The numerator, on the other hand, must be assumed zero, according to the field theory. Consequently, the world of nuclear mechanics corresponds to the case in which $C_2 = 0$. In this world there is no time flow, and the cause-effect relation has no stability and hence is simply absent. The concept of a force becomes redundant and can be replaced by the concept of energy which has no causal meaning. The world in which there is no flow of time is the world of indeterminacies, the world of complete indeterminism, where only statistical laws are valid. The theory may be expected to provide recipes for calculating the physical quantities observed, but its penetration into what we might call the essence of phenomena is ruled out. In the limited sphere of physical processes this theory has led to scientific discoveries vastly important theoretically and practically. This, however, does not prove the correspondence of the world of quantum mechanics to the real world. In a sense the world of indeterminism is even less acceptable than the world of complete determinateness of the exact sciences of the classical period. The spread of the principles of quantum mechanics onto the entire world would debase scientific knowledge and lead us to nihilism. These principles would deprive the world of content and depth. In 1947 Einstein wrote to Max Born, who pioneered the statistical interpretation of the solution of quantum mechanical equations, . that Born believed in a dicing God, while he, Einstein, believed in the world of objective being governed by laws.

In those years Einstein was nearly alone in his views. Nowadays many physicists dissatisfied with the purely formal aspect of logical interpretation are looking for new principles for the real world.

The mechanics of the real world must be based on the principles of causal natural science. In particular it must satisfy the conditions of the space and time cause-effect difference and hence be the mechanics of a finite time flow rate. As two extreme schemes it must include classical mechanics ($C_2 = \infty$) and atomic mechanics ($C_2 = 0$).

The world with a finite time flow rate is not simply intermediate between the world of classical mechanics and that of atomic mechanics. The finite time flow rate becomes a physical reality, imparting new qualities to the world. The cause-effect conversion requires the surmounting of an "empty point" of space. The transfer of action over this chasm from one point to another may only be effected with the aid of time flow. In an elementary transfer event no material bodies, but only space and time, are involved. Therefore, the cause-effect conversion rate, *i.e.*, the quantity C_2, hardly depends on the properties of bodies. Rather it is a universal constant. Thus, processes in the world occur not only in time, but also with the aid of time. Time flow is an active property owing to which time may act on a material system. It is natural to suppose that time flow is an intrinsic property of the world, just as the velocity $C_1 = 300{,}000$ km/sec is an intrinsic property of light. Then time flow will counter the trend to equilibrium. Consequently it is in the properties of time that the source maintaining the vital processes of the world should be sought.

The time flow concept must be directional. In other words, C_2 must have a definite sign. Logically, we may visualize a world in which the flow of time would have the opposite direction, *i.e.*, the world with the opposite sign of C_2. Let us now assume that we consider a cause from the point of its effect. Then the flow of time will always be

directed toward our vantage point. How will the reversal of the time direction show up? Geometry leaves us only one possibility: The flow of time is the linear velocity of rotation which may be clockwise or counterclockwise. The concepts clockwise and counterclockwise are equivalent to the concepts of right and left. Thus, if the plane of a top's rotation and that of our body are parallel, we may say that the top spins clockwise when its point remotest from our legs moves to the right and counterclockwise when it moves to the left. Returning now to our effect point from which we contemplate the cause, we may assume that the flow of time rotates to the right. This will be designated by + before C_2. Let us look at ourselves in a mirror. In our mirror image our rotation to the right will be left-hand rotation. Therefore, in our mirror image we will have — before C_2. This means that time will flow in the opposite direction. Thus, the world with the opposite flow of time is equivalent to the mirror image of our world.

Causality still remains in the mirror world. Therefore, in the opposite-time-flow world the same laws hold as in our world. If the direction of time flow is opposite, man will walk as usual face forward and only his right and left will be reversed. It is a mistake to assume that having played back the film of our world in the opposite direction we shall obtain the picture of the world with the opposite direction of time. The sign of time intervals involved in natural laws cannot be reversed formally. This violates causality and leads to an absurdity, to a world which cannot exist. If time flow acts on material systems, the reversal of the time flow direction must alter this action as well. Therefore, the mirrored world will differ in its mechanical properties from our world. Now, classical mechanics postulates the identity of this world. Not so long ago atomic mechanics also postulated this identity and called it parity conservation. However, Lee and Yang's investigations of nuclear processes for weak interactions showed that this principle was erroneous. It should be noted that long before this discovery simple biological observations had pointed to the difference between the world and its mirror image. It was sufficient to consider those working in a mirrored laboratory. They would be manipulating with their left hands, their hearts would be on the right hand side, etc. This alone might have shown the difference between the real laboratory and its mirror image. The morphology of animals and plants furnishes numerous examples of asymmetry in which the right and left are not identical. For example, the shells of mollusks are always twisted to the right. Microbes produce colonies of a definite spiral structure. Similar cases of asymmetry are observed in plants (independent of the hemisphere these plants inhabit). Nor is the asymmetry of organisms shown in their morphology only. Louis Pasteur discovered the chemical asymmetry of protoplasm and showed by a series of brilliant investigations that asymmetry is a basic property of life.

Complex molecules can be built on the principle of the right and left screw. Mixtures occurring in inorganic nature contain the same amounts of right and left forms, while the numbers of right and left molecules observed in protoplasm are sharply different. The effect of right and left molecules on the organism is also different. Thus, left-rotating glucose is not assimilated by the organism.

Persistent and hereditary organic asymmetry cannot be accidental. It is a consequence of the laws of nature in which asymmetry appears because time is directional. Organic asymmetry is perhaps not only a passive sequence of these laws, but also a special natural mechanism for intensifying vital processes by the flow of time.

The quantity C_2 changes its sign when mirrored. Such quantities are known in mathematics as pseudoscalars (in contrast to scalars like mass, volume, temperature, etc.). The pseudoscalar C_2 can be assumed to be oriented along the cause-effect axis. Since the sign of C_2 is conventional, we can assume that in either time direction this pseudoscalar is oriented toward us if we consider the effect from the point of the cause. It will still be directed toward us if we consider the cause from the point of the effect. Indeed, in this transition not only does the time and space cause-effect difference change its sign, but the right and left are also reversed. Hence, the flow of time has the same magnitude but opposite directions in the cause and effect. In the case of two bodies, the cause proves to be indistinguishable from the effect. This is the case in reality. For example, in the case of a collision of two balls we cannot say which has caused the deformation. In nature there are only interactions, which is expressed by Newton's Third Law. It is interesting that this law proves to be a simple consequence of causality and time flow. Indeed, action and counteraction make up one event, and there may be no time gap between them. Incidentally, that is why a system as a whole cannot move due to its internal forces, *i.e.*, motors like the Dean machine are impossible.

Hence we can also derive a fundamental property of time. Let us assume that we have changed by a certain technique the flow of time in a material system. In this process we have perhaps changed the stresses within the system and hence its energy. However, it is impossible in principle to change the total amount of motion of the system, *i.e.*, to obtain a momentum equivalent to an external action. In other words, time may carry energy but no momentum. Time is a nonmomentum material reality. To put it figuratively, one cannot prop oneself against time, nor can time propel space flight.

From the above property of the flow of time it follows directly that the rotation of a body may be used as a device for changing the flow of time in a system. Indeed, in the interaction of a spinning top with an immobile body, the linear velocity U of the rotation of a point of the top can be regarded, similarly to the flow of time, as a pseudoscalar oriented along the rotation axis, its sign for one body being different from that for the other. Thus, the quantities C_2 and U, similar by their properties, prove to be connected with these bodies. The rules of mathematics make it possible to add them. The similarity of the quantities C_2 and U becomes especially striking when their direction coincides. If indeed such an addition occurs in nature and the flow of time C_2 becomes $C_2 + U$ for a rotation system, then there may arise additional interaction forces, aimed along the rotation axis and amounting to the fraction U/C_2 of the initial forces. The emergence of these additional forces is equivalent to an increase of energy for the same momentum. Graphically, this process can be visualized as follows. Time flows into the system in the cause-effect direction, the rotation increases the flow, and hence the system obtains additional energy. At this point theoretical considerations must be postponed until these far-reaching conclusions have been checked experimentally.

Some 12 years ago I bought a balance at a visual aids shop and a fine gyroscope at a toy shop. The gyroscope proved to be beautifully made: small and compact. Spun by a piece of string, it yielded some 300 revolutions per second. The rim velocity of this 150 gr gyroscope was $U = 40$ m/sec. I wrapped it in a paper bag to keep away air currents and suspended it by a vertical rod from a balance beam. As the gyroscope rotated counterclockwise, if viewed from above, the balance registered a decrease of 5 to 10 mg. There were no weight changes in clockwise rotation. In principle the experiment was defective and a precision-made gyroscope would not have registered any weight change. The desired forces act on the rotor and its frame according to Newton's Third Law. They must compensate each other in the rotor-frame system, and therefore the balance should not register anything. The balance did register the effect only because of a strong eccentricity of the rotor in its bearings. The vibration caused by this eccentricity separated the force applied to the rotor from the force applied to the frame and transferred its action to the balance. The resulting pair of forces tipped the scale beam. Granted the separation of forces was unclear. However, the appearance of forces acting along the gyroscope axis and depending on the direction of rotation, *i.e.*, the forces predicted by time flow and causality, was unquestionable. The experiment gave a glimpse into the vast panorama of the physical effect of time. It opened the possibility for using mechanical experiment to study causality and time just as electrical and magnetic processes are studied at physics laboratories. Volumes of philosophical discourses on causality may now be shelved, for no speculative imagination can compare with the experimental investigation of the real world.

Even the simplest experiment made it possible to determine the sign and magnitude of C_2. The fact that the gyroscope lost some weight indicates that the additional forces operate in the same direction as the usual forces between the gyroscope and base. In this case C_2 and U have the same direction and add up. The effect was observed as the gyroscope rotated counterclockwise if viewed from above (and clockwise if viewed from the base). Thus, the flow of time rotates clockwise if viewed from one interacting point to the other. The fact that the balance did not register any weight change as the gyroscope rotated clockwise (if viewed from above) indicates that U acquires the properties of C_2 only if their directions coincide, *i.e.*, when there is a force operating in the direction of U. Now we can define mathematically the sign of C_2: The flow of time of our world is a pseudoscalar, positive in the left system of coordinates. The quantity C_2 is produced by the ratio of the usual to the additional force multiplied by the linear velocity of gyroscope rotation U. Thus we obtain a value on the order of 1,000 km/sec. Further experiments made it possible to specify this value. It can be assumed that $C_2 = +700$ km/sec $\pm$ 50 km/sec (in the left system of coordinates). This quantity is close to $2e^2/h$, and perhaps the flow of time is actually connected with these universal constants. Another essential result of the experiment is the possibility of separating the points of application of additional forces, *i.e.*, to form a pair of forces. This shows that time may impart not only additional energy but also an additional angular momentum to a system.

The above experiment initiated the first run of laboratory investigations. Precision-made gyroscopes used in aircraft engineering were studied. Deflections of balances and deflections of long (from 3 to 11 meters) gyroscope pendulums were studied for different positions of the axes of the gyroscopes. In all cases vibrations were necessary to obtain the effect. The base was vibrated either by a motor with an eccentricity or an electromagnetic relay. The additional time flow forces were found to act always along the axis of a gyroscope, but their direction was found to depend on whether the source of vibration was connected with the base or the rotor. No effects were observed with small vibrations. They appeared only when the vibrations mounted for a considerable portion of the acceleration of gravity and remained unchanged as the vibrations increased. Their magnitude was found to be proportional to the rotating mass of a gyroscope. In a system with vibrations the source (cause) and receiver (effect) are well pronounced. At these points the vibrations must correspond not to the flow of time C_2 but to the quantity $C_2 + U$, *i.e.*, the flow of time altered by gyroscope rotation. The results of the experiments must be interpreted in the sense

that there can be no partial transformation of forces. Either all acting forces (the pressure of the gyroscope and the stresses of the vibrations) correspond to the usual flow of time C_2, or they all transform to the new flow of time $C_2 + U$ as the vibrations reach a certain value. Hence it follows that the flow of time has a certain value at a given point of space, while its direction is assigned by the method of applying vibrations.

The experiments to detect the mechanical effect of the flow of time can be simplified. Indeed, our rotating earth is a giant gyroscope. The time flow forces of the earth's rotations are caused by the interaction of the earth's mass rotating with different liner velocities. Therefore, the flow of time on the earth's surface differs from the usual value C_2: Added to C_2 is a certain averaged velocity U directed along the earth's axis and having different signs at the latitudes of slow rotation (at the poles) and those of fast rotation (at the equator). This means that in both hemispheres there is a latitude where $U = 0$.

Owing to these circumstances the cause-effect relations on the earth's surface must have interesting peculiarities. These can be detected by the same method of vibration as used in gyroscope research. Suspending any weight with a long nylon string, damping the vibrations and vibrating the point of suspension, we can find that this pendulum is deflected southward by a certain magnitude depending on the latitude. Thus, in Leningrad a three-meter pendulum is deflected southward by 0.06 mm as the vibrations become strong enough. If one weight on a balance beam is suspended elastically and the base of the balance is vibrated, the weight can be observed to get heavier in proportion to its mass. If the source of vibration is the weight itself and the balance base is fixed elastically, the effect changes its sign, just as in the gyroscope experiment: the weight becomes lighter by the same quantity. Evidently the pendulum measures the horizontal component of the time flow forces caused by the earth's rotation while the balance measures its vertical component. The ratio of these forces shows that their resultant is actually directed along the axis of the earth's rotation. Hence, we can obtain the position of the earth's axis and the latitude of the place of observation. Measurements showed that there are no time flow forces at 73°05'N.L.

For precise measurements, vibrations are inconvenient because they untune the measurement system. In our experiments damping vibrations are necessary only for fixing the position of the cause and effect. However, another irreversible process can be used for this purpose. Indeed, a pendulum suspended with a metal wire can be deflected southward by heating the suspension point or cooling the body of the pendulum. As the body is heated or the suspension point is cooled, the pendulum is deflected northward. This can be obtained on a torsion balance as well by heating one of the scale pans with an alcohol burner or cooling it with dry ice. In the torsion balance used, the deflections reached from 20° to 40°. Deflections were also obtained with a pendulum (as a constant current was passed through the suspension string) in addition to the Lorentz forces from the earth's magnetic field. With a minus current at the suspension point the pendulum was deflected southward and with a plus current, northward, which corresponds to the direction of the movement of electrons and the propagation of vibrations in the primary variant of the experiment. Similar results were obtained with widely different methods. The only feature common to all of them is the establishment of the cause-effect situation in the system under study.

Another run of experiments in causal relations was started as a result of very unusual data obtained in the experiments of the first cycle. In the vibration experiments described above it is interesting to note the value of vibrations at which time flow forces appear. Though the same experimental conditions were strictly observed, the values of vibrations necessary to obtain the effect varied within a very wide interval because of some factors outside the laboratory. Sudden and irregular variations were often observed. On some days no results were registered in certain experiments, though the former effects were obtained under the same conditions after a while. Evidently the experiments are sensitive to some changes in the properties of time. It can be supposed that apart from the flow of time C_2, time has another (varying) parameter. This parameter can be termed time density or time intensity. It is an analogue of the intensity of light characterizing light apart from the constant velocity of its propagation. Time density may vary versus some physical processes at work in the world. The possibility of registering the time variation shows that the effect of one system on another may be transmitted via time and without the intermediary of a field.

Evidently there are many factors involved in the time density variation. Despite prolonged observations only one regularity was established: In winter the effects were observed more easily than in summer. Probably time density is affected by the processes at work in the terrestrial atmosphere. All this shows that a method by which the experiment could be reproduced at will must be found. Most likely this will require the laboratory reproduction of a physical process with a sharply pronounced cause-effect difference. Since the study object is a universal concept like time, it is sufficient to take the most elementary mechanical process. Thus a mover may lift a weight or stretch a fixed piece of elastic periodically. The resulting system will have two poles: the source of work and the receiver, *i.e.*, will be a cause-effect dipole. A rigid transmission may extend its poles over a sufficiently large distance. The same long pendulum which yielded a southward deflection owing to time flow forces as the suspension point was vibrated could be used. Vibration should be tuned so that only a trend toward the effect, and not the total southern deflection effect, originates. It appears that this trend increases appreciably or even develops into the full effect if the receiver of the exciting system approaches the body of the pendulum or the suspension point. If the other pole (mover) approaches it, the effect is invariably impeded. If the mover and receiver are sufficiently close, their effects will cancel out, and indeed no additional effect is observed in this case. The effect of the poles on the instrument proves to be independent of the direction, *i.e.*, the position of the pole with respect to the pendulum. The effect depends only on the distance and varies not in inverse ratio to the square of it as is the case with fields, but in inverse ratio to the first-order distance. No shields were found to impede its influence.

The results thus obtained show that near the cause-effect system (generator plus receiver) time density does change. Time is rarefied near the generator and becomes denser near the receiver. The impression is that time is stretched by cause and compressed by effect. Therefore, an instrument whose readings depend on the action of time is aided by the receiver and impeded by the generator.

The variation of time intensity in inverse ratio to the first degree of the distance could be foreseen from the following consideration: Time is expressed by rotation and hence involves planes passing through a pole with any orientation in space. In the case of lines of force issuing from a pole, their density decreases in inverse ratio to the square of the distance, while the density of the planes can readily be shown to decrease with the first degree of the distance. This perhaps explains why the effect of time flow is more conspicuous in winter than in summer. In winter the processes in the low atmosphere are closer to us in our latitudes. This circumstance contributes to the time flow effect. In summer the sun produces an atmospheric situation interfering with it. The importance of atmospheric processes is also confirmed by the fact that the experiments do not reproduce as well in the lower latitudes as in the polar regions.

At present an essentially different type of influence of one system on another via time has been found. This influence can be effected by any irreversible process and is registered by a measuring system without any preliminary excitation, i.e., when the cause and effect positions are not separated. In other words, apart from flow and density, time seems to have another property, causal orientation, resembling in a way the polarization of light. This property proves to be so variable that even the sign of the observed influences may change and hence the reciprocal cause and effect position become reversed.

The following question arises: Perhaps the possibility, found in mechanical experiment, to make one system influence another via time furnishes a clue to understanding some biological relations or even many enigmatic psychic processes? Suffice it to recall the data accumulated throughout the history of mankind in favor of telepathy. Sometimes such data are rejected only because they cannot be explained. Now, the flow of time as a source of vital processes is especially important in organic life. Therefore, one organism may perhaps influence another via time, and hence telepathy is not impossible.

Time has no momentum, and the flow of time carries energy only. Therefore, the effect of time cannot propagate in space. It appears everywhere instantaneously, decreasing in direct ratio to the distance. This conclusion is understandable if we recall that the entire world is projected by a point on the axis of time. Watches can be synchronized throughout the world in any system of coordinates. Therefore it is natural to suppose that the appearance of a certain moment of time with certain properties is simultaneous everywhere. The change of time properties created in a labortary must in principle be perceived by the remotest galaxies at the same moment in spite of the fact that it will take billions of years for light to reach them. In other words, instantaneous connection is possible via time. This does not contradict the special theory of relativity. The velocity of light C_1 remains the limiting momentum transfer velocity. On the other hand, the possibility of the material effect of time is neither allowed for by this concept nor rejected by it.

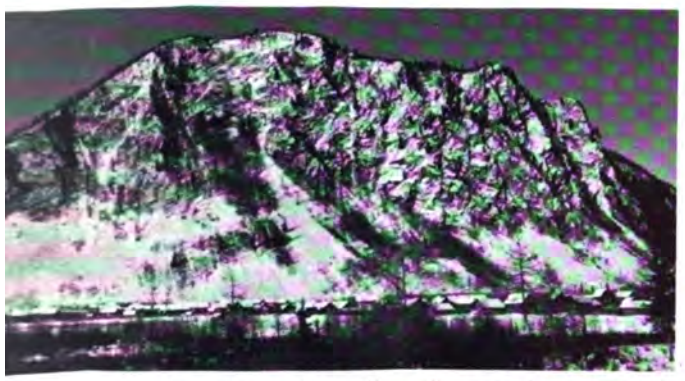
Another important prospect is the possibility of influencing causality. Experiments were made to change causality by the rotation of bodies. It is not impossible that other methods of influence will be found. The flow of time carrying us from the past to the future is not so irreversible as it seemed before. It can be combated because it does not possess an infinite velocity, *i.e.*, a supernatural power, but has a finite and hence humanly surmountable essence. The reversal of causal relations is perhaps not impossible. Even a partial reversal of causal relations means the substitution of the question "What for?" for the question "Why?" In other words, the question which begins a child's cognition of the world may also prove legitimate in the exact sciences.

The active participation of time in natural processes leads to interesting phenomena even in the simplest mechanical experiments. As for the over-all picture of various physical processes, it must reveal a world of new processes, a world still unexplored and lost at the crossroads of our sciences. By inquiring into the properties of time, we shall be able to learn, in Faust's words, "*Was die Welt im Innersten zusammenhält.*"

Courtesy of the magazine Znamya

TOFALARIA

The Country of Hunters and Pathfinders



The village of Verkhny Gutar is located in the heart of Siberia's Eastern Sayan Mountains.

THE SAYANS lay ahead. The peaks were covered with ice—greenish, pale yellow and blue. The slopes were wooded, dark and gray green. The forests were split by jet black streams glittering in the sun at the bends. That was our bird's-eye view of these fairly wide mountain rivers. Now and then we saw a fragment of looking glass hidden in the taiga—a lake.

The vast map unfolded in bas-relief under the wheels of our Yak aircraft. New mountain clusters and taiga took form in the distance. A lake appeared suddenly behind one of the heights, and the plane listed sharply.

We landed in the village of Verkhny Gutar. A short thin man in a gray rubberized cape stood on a hill. His blue cap was pulled low over his forehead and his huge boots seemed to have grown straight out of the yellow earth. He introduced himself—Alexander Shchekin, chairman of the hunting cooperative Krasny Tofalarets.

The first building we came to was the school, and the first village inhabitants we met, therefore, were children. They were busy playing tag and skipping rope, their squeals as ear-piercing as those of their Moscow, Irkutsk or New York equivalents.

People walked to and fro along the boarded sidewalks, paying no attention to us newcomers. "They don't seem to be at all isolated from the world!" I thought. Shchekin must have read my mind. He remarked, "We usually have more visitors than inhabitants."

There are always crowds of strangers in Verkhny Gutar—geologists gathering from

PHOTOGRAPHS BY VICTOR REZNIKOV



Strictly speaking, there is no such country as Tofalaria. It is the name Siberians use for the area in the Eastern Sayans, southwest of Irkutsk Region, inhabited by the Tofalar, one of the smallest nationalities in the world. There are only about 600 of them in this area the size of Belgium.
The exotic little country in the heart of the Sayan Mountains has attracted many writers. These travel notes were borrowed from Leonid Likhodeyev's book Local Time *published in Moscow in 1963.*



The hunting cooperative supplements its income from furs by fishing and raising reindeer. Vladimir Bolkhoyev is a herder.

Traditionally all Tofalar are hunters, mothers included. Their children go to boarding schools.

From the village a plane takes an hour, reindeer three days to reach some of the hunting teams.



the taiga, buyers from the fur enterprises, and what not. Only tourists are missing.

The Krasny Tofalarets Hunting Cooperative also breeds reindeer and fishes the mountain rivers. It has no plowed land to speak of —a tiny section is sown to potatoes, turnips and cabbage. The territory of the cooperative is enormous (it takes an hour by plane or three days by reindeer to reach the working brigades from the administrative office), but not a single ear of rye or grain grows in this marshy taiga region.

The villagers all called themselves Tofalar, though only half of them belong to this people. They are short and broad-shouldered, with the swift, light tread of pathfinders.

It was long believed that this tiny nationality was dying out, that it was degenerating (the small stature of the Tofalar was cited as evidence). It was also said that the Tofalar had died out already, done to death with vodka by the czarist missionaries.

It is more likely than not that the Tofalar are kindred to the Tuvinians. Both Tofalar and Tuvinians lead the same lives. Both are hunters, trappers and deer breeders. The Tuvinians do farming as well, but that is only because Tuva has the farm land that Tofalaria is lacking.

No nation has ever preserved its "racial purity." The idea is an illusion. That is why the Soviet policy is not to create "preserves" for the artificial preservation of small nations in their "primordial state" but to raise their cultural and economic levels to that of the other peoples of the country.

The Tofalar speak Russian, live in sturdy log cabins and "pray to the Russian God," as they say. This is only a figure of speech, however, for we did not see an icon anywhere. We did see shelves of books and a radio in nearly every cabin.

Though the language of the Tofalar is kindred to Tuvinian and belongs to the Turkic group, these people have no written language of their own. They read and write in Russian.

The Tofalar are not dying out. A fam-



ly with less than two children is rare. And he old people nearly always live to three score nd ten.

The characteristic way of life of the Tofalar required special measures in this region. The children live in boarding schools, kindergartens and nurseries with modern medical treatment at hand. The mothers are hunters, for all the Tofalar hunt, and when they go off into the taiga for weeks on end, they must be sure that their children will be warm and well fed.

The local fur farm was the special pride of Verkhny Gutar. It was still a very new venture, Shchekin told us, new not only to Verkhny Gutar but to the whole of Tofalaria.

The farm lay on the opposite bank of the Gutar River, just across the bridge. We crossed the bridge and found a whole fenced-in town of foxes.

The foxes live in small houses instead of burrows. These fox houses are grouped in large compounds, the way one would expect to find them in a zoo. The vixens stood with legs spread, feeding their fuzzy, smoke-colored offspring. While feeding their young, the mothers kept waving their great bushy tails that made one think of beautiful coat collars. In some ways the vixens resembled the Italian she-wolf that reared Romulus and Remus. The little foxes suckled standing up, like the founders of ancient Rome.

New cages were being built near the farm; the venture was growing, the foxes were multiplying like rabbits. The first animals were brought here by plane, silver fox is not native to the region. The newcomers were doing very well in captivity.

Verkhny Gutar is actually provincial Tofalaria, the settlement of Alygdjer is considered the capital. But time makes many corrections. The outlying settlements are racing ahead, like runners on a cinder track. The economic importance of Verkhny Gutar has risen and Alygdjer specialists often come here to round out their experience. What draws them these days is the fur farm.

RUSSIAN BOOKS IN ENGLISH

Among the recent translations in English issued by Soviet publishing houses are:



ONE STEP FORWARD, TWO STEPS BACK. By V. I. Lenin. Paper cover, 100 pp.

This is the book in which Lenin worked out the organizational principles of a Marxist party. He defined it as the Party of the working class, its politically conscious, advanced contingent, equipped with a knowledge of the laws of social development.

"The Party of the proletariat heads the struggle for the common interests of the working class. It is the highest form of working-class organization."



AND QUIET FLOWS THE DON. By Mikhail Sholokhov. Cloth cover, 4 volumes: Book I 647 pp., Book II 619 pp., Book III 686 pp., Book IV 861 pp.

Sholokhov's epic *And Quiet Flows the Don*, perhaps the finest work of Soviet literature, was one of the first Soviet books to be translated into English. Mikhail Sholokhov said in a message to his English readers:

"I should be happy if in this description of the life of the Don Cossacks . . . the reader discerned something else—those colossal changes in everyday habits, life and psychology that resulted from the war and the Revolution.

"My purpose is not only to show the diverse social groups in the Don Region, to trace the tragic fate of individual characters drawn into the powerful vortex of the history of 1914-21, but also to show the people engaged in peaceful construction under socialism."



CHILDREN AND TREES REACH FOR THE SUN. By Dagniya Zigmonte. Cloth cover, 224 pp.

The talented Latvian writer Dagniya Zigmonte (born in 1931) is the author of four novels: *Mournful Time*, *The Sea Gate*, *Children and Trees Reach For the Sun* and *Good Morning, Dawn.*

In her seven years of writing, Dagniya Zigmonte has found readers in many countries. Her novel *Children and Trees Reach For the Sun* was especially successful.

The main character is 12-year-old Ilga, the daughter of a dentist. We see the "grown-up world," life in the city of Riga from 1939 to 1941 through her eyes. This moving novel shows us the inner world of a little girl who, with the trees and everything else left alive on the war-ravaged earth, turns to the sun, to the good and the human.

PRACTICAL RUSSIAN. By E. Vladimirsky, G. Bogatova et al. Paper cover, 144 pp.



For English-speaking students working with a teacher or independently. Its purpose is vocabulary expansion. The running texts and dialogues are on such subjects as "My Family," "On the Sports Field," "At the Theater." The drills and exercises include answers to questions, choice of synonyms and antonyms, building sentences from given words.

Each text has its own vocabulary, and a general Russian-English vocabulary is appended. All Russian words are accented. Explanatory material is in English.

These and a large selection of Russian and Soviet classics, textbooks and publications in science, economics, history and philosophy are available in translation at:

New York: Four Continent Book Corporation
156 Fifth Avenue
New York, New York 10010

Washington: Victor Kamkin, Inc.
1410 Columbia Road, N.W.
Washington, D. C. 20009

Chicago: Cross-World Books & Periodicals
333 South Wacker Drive
Chicago, Illinois 60606

San Francisco: Znanie Book Shop
5237 Geary Boulevard
San Francisco, California 94118



HAPPINESS MAY BE SITTING RIGHT BESIDE US

BY ANDREI PLATONOV

WHEN HE CAME to the grounds of the Technological Institute, young Vasili Chagatayev looked around as though he were seeing this long familar scene for the first time. He had been coming to this courtyard for several years now. He had spent his youth here, and he had no regrets. The time had been used to gather knowledge. All those years he had been climbing a great hill from which he could view the whole of this world warmed by the serene late afternoon sun.

Sparse grass grew from the cracks in the flagstones. People pitied it and tried not to step on it. A square garbage bin stood off in a corner. Beyond that was an old wooden shed and next to it a solitary, neglected old apple tree. Farther on was a boulder that looked as though it weighed all of a ton—no one knew how it got there. Still farther Vasili could see the iron wheel of a locomobile made in the nineteenth century.

There was no one around, and the young man sat down on the doorstep of the shed. He had a certificate from the administrative office of the institute that said he had successfully defended his diploma thesis. The diploma would be sent to him later by mail. He would not have to come back to the institute. There was no reason to.

Now he was taking leave of all the familiar landmarks. He got up and walked around the yard, touching this thing and that, as though imploring them to remember him.

From the experience of his childhood he knew that it was strange and sad to return to a place you had once known very well. Your heart was still tied to the spot, yet everything there had forgotten you, couldn't remember you, had been leading its own active and varied existence without you, and you suddenly realize that you had been alone with your feelings all that time and now you stand there a stranger, unrecognized.

Tables with temporary lighting and decorations had been set up in the old garden behind the shed. The institute director was giving an evening party for the newly graduated economists and technologists. Vasili Chagatayev went to the students' hostel to rest a little before dressing for the evening. He lay down on his bed and fell asleep. He had not intended to, but sleep came with the sudden completeness only the young experience.

Later he returned to the garden. He had put on his handsome gray suit and had shaved with the help of a mirror from a girl's compact. Before leaving for the evening he looked regretfully into the dark cave of his clothes closet. Soon all the things in this room, even this closet, would have forgotten him. Everything of his, even his breath, would be gone from here forever.

An orchestra was playing in the garden. The musicians who usually performed at the neighboring movie theater had been invited for the gala occasion. The tables were placed end to end in a long row and were illuminated by spotlights the electricians had attached to the trees. A quiet, breathless night hung over the festivities. The warm darkness all around, the tranquil sky and the fragrance of flowers amplified the holiday feeling.

The musicians were hard at work, and the young people sat around the tables, ready to go their separate ways after the celebration, ready to build happiness for others and themselves.

The violinist sometimes struck a plaintive note, and it seemed to Vasili that beyond the horizon someone was weeping, pleading for help. He listened to the violin again, and this time it was not plaintive, it was asking him to go away and not come back.

Soon the dancing, the games and other entertainment began. Vasili looked at the people around and at the nocturnal landscape. He had a feeling that he was destined to live a long time, to work, be happy, as happy as he could make others.

He did not know the young woman who sat opposite him. Her dark, shining eyes and blue dress curiously buttoned to the chin, like the dress of an old woman, gave her a helpless, but attractive, look. She did not dance. He could not make up his mind whether she was shy or really did not know how.

She kept looking at Vasili. She liked his dark face and the large clear eyes regarding her kindly and sadly. She wondered at the breadth of his chest that concealed a heart with its own secret feelings, his wide, sensitive mouth ready for both laughter and grief. She did not try to hide her sympathy and smiled at Vasili, but he grew confused and did not respond.

The merriment mounted. Yesterday's students reached for the flowers on the tables to make bouquets for their girls or plucked the grass in the garden to strew on their hair. Confetti was thrown around and everybody was gay. The woman who had been sitting opposite Vasili was dancing with someone on a garden path bright with varicolored bits of paper. She seemed happy too.

The women who had stayed at the table were pleased with the attention they were getting from the men. They were happy with the present around them and with a future that stretched ahead in a rosy forever. Only one of them had no flowers or confetti in her hair. No one bent over her to exchange a joke or a greeting. But she kept smiling to show that she was a part of it all, as happy as anyone else. She seemed no longer young, and her face did not win immediate attention. But her small eyes were lovely, if one looked attentively. They must have been different colors for they shone differently in the light. They were as naïve and expectant as the eyes of a lonely child.

She watched the others kindly, indulgently. When a rose was left on the chair beside her, she reached for it and casually put it in her hair as though she were simply taking something that was rightfully hers, something someone had forgotten to give her. She kept looking around, smiling with shy pleasure. Vasili noticed how she picked up the rose, but he did not know how to interpret her gesture.

He was beginning to find the party dull and was thinking of leaving. The woman had also gone off somewhere. The evening was drawing to a close. The stars had grown large, signalling the lateness of the hour.

Vasili passed the trees and caught sight of the woman with the small eyes and the face that was no longer young. She stood in the shadows watching the dancers.

When he approached and bowed, she of-

fered him her hand. They were acquainted now. She told him that she was a senior at the Chemistry Institute. He asked her to dance, though he knew he danced abominably. She *danced* very well, leading him in time to the music. Her eyes had come alive now. She seemed prettier than before and pressed her body confidently to his. His closeness to her made him forget everything. This unknown woman seemed to radiate serenity and happiness like a hazy recollection of childhood. He would probably never see her again. Happiness is often right beside us like that but re*mains* unrecognized, and we sometimes never meet it again.

The party lasted until daybreak when the garden emptied. Everybody was leaving, abandoning the tables and decorations. Vasili and his new friend Vera were walking through the dawn-colored city. Though he had come here a stranger, it was now like his home town to him. He was grateful for having lived here so long, for having studied here, for having learned to love the people who at first had seemed so alien.

He looked at his companion. She was lovely now. The rising sun lent something to her features, something that made her dear and familiar.

The sky grew deep and clear as the morning sun shed its light, its greatest blessing, on the earth. Vera walked in silence. Vasili looked closely at her from time to time, wondered why she had not appealed to him in the beginning, the moment he first laid eyes on her.

Walking next to her now, noting the tired lines on her cheeks, the expression of her different colored eyes—one brown, the other blue—her full lips and hidden animation, he was so filled with tenderness for her that he could not speak. It embarrassed him to recall that he had wondered whether she was pretty or not—she was beautiful.

"I'm tired," she said. "We've been up all night. I think we'd better say good-by now."

"I'll be leaving town soon," pleaded Vasili. "Let's stay together just a little longer."

They walked on, leaving long streets behind them, but finally stopped.

"I live here," said Vera, pointing to a large new building.

"Can't I see you to the door? I mean, may I? If you'd rather not, then I'll say good night and good-by! I'm tired too and I'm saying things I shouldn't."

"All right," She said and led the way.

There was something sad about her room. It was large, and the furniture was quite ordinary. The curtains were drawn. It seemed empty, as though someone were missing, someone who had gone away, forgetting all about it.

Vera took off her raincoat, and Vasili noted that she was heavier than she had seemed outdoors. She said she would make tea. Vasili begged her not to bother, but she went about getting the tea things from the gloomy corners, opening the curtains only part way and never once turning her face to her guest. A minute or two and Vasili noticed that she was standing absolutely still, her back toward him.

"What's the matter?" he asked anxiously. "You're probably awfully tired. I'd better go now."

She said nothing, but seeing her shoulders tremble he knew she was weeping, silently letting her tears flow, trying to keep her face set so as not to sob aloud.

Vasili was suddenly ashamed and worried, as though he had committed a stupid blunder.

She turned now.

"Please forgive me. I'm not quite well. I'm going to be a mother soon. . . . Well, not so soon, but I'm going to have a baby."

She had regained her composure and dried her tears with a tiny handkerchief. "My husband died . . . recently. . . . My baby will never know its father, and a mother alone is hardly enough for a child. . . . Don't you think so?"

"Hardly enough," agreed Vasili.

He got up. It was time to leave. But when Vera came near him, he asked, "What did your husband die from?"

"Wounds. He was a lieutenant colonel and was in the war from beginning to end. He was brought here, to our university hospital. At first he seemed to be getting better. He even came home once, no twice! Then it turned out that his kidneys were affected. He suffered for a long time before he died. And now I am alone. . . . Alone."

Vasili took her hand, and suddenly neither he nor she could hear anything. The noise of the city was gone. They stood holding hands, conscious only of each other's tremulous breath.

"No!" she said. "Don't pity me! Don't be sorry for me! You don't have to be." She removed her hand from his. "I'll manage."

"I'm not sorry for you," he answered. "Being near you makes me feel better."

He said good-by and went away. But he came back two days later. He was so drawn to Vera that he felt that the world was utterly unpopulated except for one woman with different colored eyes.

He told Vera that he would soon be leaving with a hydrogeological expedition but would be back in six months.

"I'm sorry you have to go away," she said, withdrawing to a dark corner of the room and avoiding his eyes to prevent him from reading hers.

He knew that manner of hers by now, that habit of hiding her face. He was touched by the humility of the gesture and his tenderness for her grew.

"I'm sorry," she repeated. "But we'll meet again, perhaps, when you come back. Won't we?"

"We will," he answered, adding suddenly from the bottom of his heart: "Vera! A mother alone is not enough for your child. . . . You said so yourself! Let me be the father!"

She was lost in thought for some moments, then turned to him and came near.

"There were godfathers, Vasili, in the old days."

"Godfathers? Yes, I know, but what has that got to do with it?"

"I want you to be my baby's godfather when it is born. If you get used to the child and learn to love it, you may become its real father. I can't risk my baby's happiness. You may not like the child. I owe that to the memory of my husband. He's dead, but he left the child to me, not to you. I'm trying to think of everybody now."

Vasili stared. He thought he had gotten to know Vera a little, but he realized that he did not know her at all.

"So that's how it is!" he said finally.

"That's how it is!"

"You don't trust me, do you?"

"I do. I see you and I know you, but the other two do not. One of them is dead, and the other has not yet been born. It's not myself alone I've got to think of, I've got to protect them too."

"I'm beginning to understand!" exclaimed Vasili. "You're a strange, wonderful person."

"Don't say such things! Don't flatter me. I'm weak and might do the wrong thing, something foolish we'd both be sorry for."

"I won't say another word. I'll see you when I come back and become your child's godfather. You're quite right. We'll see what happens then."

"We'll see what happens then!" repeated Vera. "Go home now."

Vasili smiled.

"How strange this is!" he said. "Here I'm going away and may never see you again. On the other hand I may come back and be with you the rest of my life, almost forever."

Vera did not answer. Vasili would have liked to kiss her forehead, but all he did was look at her. She stood there seemingly helpless, but smiling and unconquerable. She was more than a woman, she was a mother and as brave as any soldier.

He went away happy, though he had been promised nothing but a hope.



ANDREI PLATONOV (1899-1951)

He was an uncommonly good, human, charming and talented writer. Everything he wrote—poetry, plays or stories—was permeated with that special brand of Platonov tenderness and love for man.

Andrei Platonov spent his childhood and youth in the outskirts of Voronezh. Born into the family of a mechanic, he himself tried all kinds of jobs. He was an unskilled worker, a mechanic's apprentice, an assistant to a machine operator and, finally, when he graduated from the Polytechnic Institute in 1924, an engineer specializing in farm electrification. Later Platonov wrote: "Besides the fields, the village, my mother and the ringing of chimes, I love—and the longer I live the more I love them—locomotives, machines, the singing whistle and sweaty work."

His first book of stories appeared in 1927. Three or four years later he was already a mature writer with his own way of looking at the world and with his own very personal style.

Platonov never went in for intricate plots. What he did was convey the psychology of people subtly and honestly, describe their innermost thoughts and feelings. His province was the beauty and complexity of human relations. He cautions us not to let ourselves be blinded by egoism or to lose sight of moral values.

One comes across strange people in Platonov's works and unexpected situations. Nevertheless, the strange in his work never stops being real, and the usual never becomes commonplace and dull for it is always illuminated from within by the light of poetry. His characters and situations are always specific, concrete, and yet they have a sense of the universal.

No matter how much his people suffer, no matter how sad some of Platonov's motifs, in the end it is humanity that wins out. "Music always plays for victory, even when it is sad," wrote Platonov in one of his stories.

ABOUT DISABLED VETERANS

REPLY TO A READER

Dear Mr. Livingston:

The editorial board of *Soviet Life* has asked me to reply to your letter. You inquire about the attitude in the USSR toward disabled veterans of the past war. I should like to begin my reply by telling you about myself.

My name is Alexander Bodyayev, and I am one of millions of Soviet veterans. I traversed the roads of the Great Patriotic War as a soldier, going from Moscow to Berlin. I took part in attacks, froze in the trenches, and was seriously wounded. Shortly before Victory Day I lost my sight.

I spent many long days in hospitals, undergoing operations and thinking tormenting thoughts about the future. I remember when, left alone with my terrible pain, thoughts about my fate and my place in life kept coming in one endless stream. "Everything will be all right if I recover my sight, but what if I don't? What then? Eternal inactivity? Walking with a stick all the time? And I had dreamed of finishing technical school, of going on to college!"

I felt even worse when the operations on my right eye failed.

But all of us wounded soldiers were the object of serious, constant concern. The local people—workers, teachers, lawyers—used to come to see us. They would talk with us for a long time and answer our questions. Then discussions were begun in our hospital, where there were more than 200 wounded veterans, on such subjects as: How can a person live and work without his sight? How will the ability to read and write Braille help a blind person? Where can blind people study and work?

Once the director of an industrial training enterprise where blind people worked came to see us. He, too, was blind. We listened to his story: "How I began to work again." Many of the people who had once also lain in hospitals and who were now working at various enterprises for the blind, or were actors or teachers, visited us.

Operations, now on my left eye, were performed one after another. "If you cannot return my sight, at least return my ability to sense light!" It took 11 operations to give me back about 0.02 per cent of my vision. I began to distinguish the silhouettes of people and the sunshine.

"But I am still disabled, still a blind person," was the thought that kept coming over and over again when I was alone. "And although the sun shines, it does not shine for me."

But the caressing hands of my nurse Shura and her voice convinced me that that was not the case. No, it was not so.

"Can she possibly be in love with me?" I wondered. "When there are so many young men who are discharged from this hospital in good health and with their sight restored, why didn't she pick one of them?"

But time passed, our friendship grew, and there we were, husband and wife. Where should we go? Where would we live? I returned to the plant where I had worked as a milling-machine operator before the war.

The war had left millions of crippled and shell-shocked people. They were given pensions, and many were treated for a long time, free of charge, of course. I was also given a pension. The local authorities, in accordance with a government decision that disabled war veterans were to be the first to get housing and work, gave me a good room and offered me the opportunity to study. That is when my knowledge of Braille, acquired in hospital, stood me in good stead. I received a high school education and then began to study in the economics department of the university.

The residents of the town of Stupino, where I live, showed great faith in me—four times they elected me deputy to the City Soviet.

I was elected chairman of the local organization of disabled veterans and the blind. At the request of our organization the City Soviet gave us a plot of land and the state gave us the necessary funds to build a shop especially equipped for disabled veterans in a factory that makes lighting fixtures.

My family consists of four people. We have a modern, two-bedroom apartment. My wife is a nurse in a children's polyclinic. Our daughter Tanya, who is 16, "directs" the music activities of our home. She graduated from a music school. Our son Vova, who is 12, has just been promoted to the sixth grade.

Our family income is 402 rubles a month. I get a salary of 160 rubles, plus my pension of 110 rubles a month, and 60 rubles monthly as a bonus. My wife earns 72 rubles a month. Or take the Buchnev family. The husband and wife are both blind, and they have a five-year-old son. Their income is 400 rubles a month.

I could give you countless other illustrations of the way our war veterans live. We have 250 blind people working at our enterprise today. All of them get state pensions in addition to good salaries. They have families and live in their own apartments. More than half of our workers have a high school or college education.

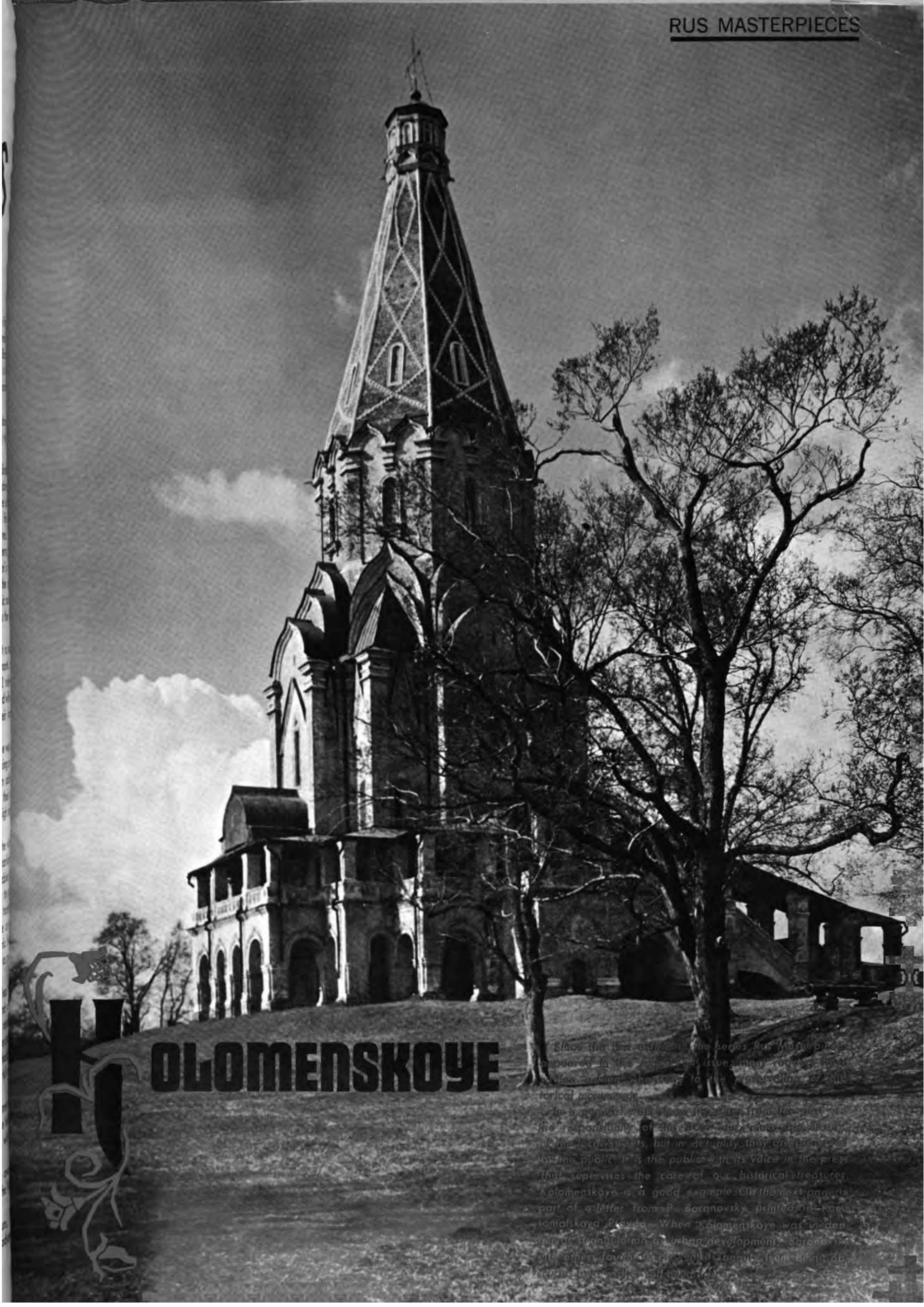
This year, when the twentieth anniversary of the victory over fascist Germany was celebrated, the Soviet parliament passed a law granting additional privileges to disabled war veterans. They include longer vacations, free passes to sanatoriums and holiday resorts, the free use of municipal transport (except taxis) and an 80 per cent discount on the cost of medicines if treatment is taken in an outpatient clinic. Every kind of medical treatment is free of charge, as well as medicines provided in hospitals.

The law stipulates that an enterprise must hire at least two disabled war veterans for every hundred factory and office workers employed. Furthermore, the management is required to equip special departments for disabled war veterans and to provide them with work that can be done at home. Should the disabled veteran desire, he may put in less than a full work week.

The law provides further that families of servicemen who were killed in action are to be given priority for free housing or in obtaining long-term, interest-free loans with which to build their own homes.

On Victory Day 1965 all Soviet veterans were awarded the anniversary medal "Twentieth Anniversary of the Victory in the Great Patriotic War of 1941-1945."

Sincerely yours,
Alexander Bodyayev



KOLOMENSKOYE

Since the first issue of the series Rus Masterpieces appeared in the ... issue ... letters ... the ... historical monuments ... the responsibility of the ... for the ... It is the public with its voice in the press that supervises the care of our historical treasures. Kolomenskoye is a good example. On the next page is part of a letter from P. Baranovsky published in Komsomolskaya Pravda. When Kolomenskoye was in danger of ... reconstruction ... urban development, Baranovsky and others ... protest ... from being ...

. . . Time has preserved the wonderful creations of Russian architects on the high bank of the Moscow River. Old trees that witnessed times long past still stand there.

After the October Revolution the village became a museum of history. It has been visited by hundreds of thousands of people. The place is famous not for its ancient monuments only, it is also extremely beautiful. But grave danger hovered over that village recently. New residential areas started crowding it. Tall buildings threatened to overpower the wonderful monuments of the past, to mar the beauty of the estate ensemble. The idea of turning Kolomenskoye into a museum of wood architecture was crumbling away. All those who treasured the ancient art of our country could not remain indifferent. A campaign for saving the village as a museum began.

In these lines I want to declare to all that reason has triumphed. A decision of the Central Architecture and Planning Administration of Moscow says: "Construction must be stopped."

Another site must be found that will not intrude on Kolomenskoye. A wood architecture museum, an outdoor museum, will be set up in the village. Ancient structures which for some reason cannot be preserved in the places they are now will be transferred to Kolomenskoye. Six wooden structures have already arrived.

I don't like writing. I have taken up the pen this time only because your newspaper, by publishing the article "Homeland," has greatly helped in this important matter.

P. Baranovsky
Honored Art Worker
of the Russian Federation





By Yuri Ovsyannikov

ON THE OUTSKIRTS of Moscow, on a high river bank providing a panoramic view of the surrounding country, the spire of the old Church of the Ascension cleaves the sky. Standing among other structures between 200 and 300 years old, it seems locked in by the mighty spreading trees of the old park. This is Kolomenskoye, once the suburban country estate of the Russian czars.

The earliest mention of Kolomenskoye is in the 1339 chronicles. The Church of the Ascension was the first brick edifice erected in Kolomenskoye in 1532 by Ivan the Terrible's father, Prince Vasili III of Muscovy. The anonymous architect patterned his stone pile on the wooden churches built elsewhere over the two preceding centuries. Shortly afterward a two-story campanile was added. Though outwardly resembling the Church of the Ascension, it had innovations of its own—five pieced arches for the bells on the second story and the same number of architectural embellishments above them. This ornament imparts a certain asymmetry to the bell tower, which in turn lends this admirable specimen of old Russian architecture its inimitable charm.

The large wooden palace that Ivan the Terrible built next to the church went up in flames in 1571 during a Tatar invasion.

Exactly 100 years later Czar Alexei Mikhailovich built a new wooden palace amid the thick vegetation of the park. Boasting more than 250 rooms and 3,000 windows and sumptuously adorned with carved woodwork, painted ornament and gilt, it made contemporaries gape in wonder.

In the late eighteenth century, Empress Catherine II ordered this palace, which had fallen into disuse, dismantled. The only thing left was the big brick gate topped by a spire. Once the gate boasted a clock which chimed the hour, and ferocious-looking lions lay in wait at the entrance. Their wooden carcasses, over which hides were stretched, hid a mechanism that made the lions roll their eyes and roar.

Other extant remains of the seventeenth century palace include the rooms of the imperial office, the guard room, pantries and the court chapel. The large park and the four huge orchards planted there were once tended by the peasants of nine neighboring villages.

In the middle of the last century the French composer Berlioz wrote:

". . . Nothing has ever stunned me so much in my life as the monument of ancient Russian architecture in the village of Kolomenskoye. I have seen much and admired much. I have been impressed by many things, but the time, the ancient time of Russia, which has left over its monument in that village, was the greatest wonder of all wonders for me. . . ."

This beautiful spot with its four 600-year-old oak trees is today a museum of old Russian architecture. The seventeenth century edifices have been restored to their original form, and wooden buildings 300 and more years old have been imported from Siberia, Northern Russia and other parts of the country. Among them are the wooden watch towers and ramparts of the first Russian fortresses to be erected on the shores of the White Sea and the banks of the broad-bosomed Yenesei River in Siberia, as well as Peter the Great's house, complete with all its furniture, from Archangelsk.

The palace houses a museum of sixteenth to eighteenth century folk arts and handicrafts. The lovely painted and carved wooden objects, ceramic architectural embellishments, wrought iron railings, cunningly contrived padlocks and gold and pearl embroidered garments all attest to the superlative talent of Russian potters, weavers, blacksmiths and carvers. No wonder every Muscovite and visitor considers Kolomenskoye a treasure chamber of national esthetic tradition and master craftsmanship.



The czar's izba*—log cabin—brought here from Arkhangelsk. The* izba *is found all over Northern Russia.*

0-year-old blockhouse, part
e Bratsk fortress that
guarded the Yenisei shore.



The late 17th century church built by a local nobleman is typical of that period's architecture.

This room and its furnishings are much as they were when Peter the Great occupied the cabin.



16th century belfry. The 17th ury tower beyond houses a tiled cistern for catching rain water.



A watchtower and fragments of fortress walls erected on the shore of the White Sea 300 years ago.



"No one can become a Communist unless his mind has been enriched with all those values that mankind has created." **Lenin**

ANDREAS VESALIUS

BY PROFESSOR DMITRI ZHDANOV
Corresponding Member
USSR Academy of Medical Sciences

HE KNEW exactly what he wanted of life—to become an anatomist. That was a dream he had cherished from childhood. Perhaps it was nurtured by an inborn wish. His great grandfather had published Avicenna's (980-1037 A.D.) Canon *of Medicine;* his grandfather had written commentaries on the works of the equally celebrated physician Rhazes (850-923 A.D.); and his father was court chemist to Charles V. Legend has it (and there were many legends current about Andreas Vesalius) that he was endowed with an inquiring mind which led him, even as a schoolboy, to dissect cats, dogs and rats.

It is not enough to see your goal; it has to be reached.

Andreas Vesalius worked and studied with a will. He searched eagerly and tirelessly for knowledge. He was fearless in his pursuit of the truth. Determined to study the human skeleton, he fought off savage dogs to dig up bones in graveyards and dodged the arrows of furious watchmen when he stole corpses for dissection. Dissatisfied with the teaching of anatomy and the "inexperienced barbarians" who chopped up the cadavers, he took on himself the despised duties of "surgeon" and did his own dissecting, ignoring the ridicule of his fellow students.

Later he amazed the same audience when, blindfolded and by touch, he guessed to which hand, right or left, each of the seven little wrist bones belonged. While still a student, he rediscovered the valves of the heart the medieval doctors had forgotten. At the age of 23 he earned a doctor's degree and became professor of anatomy and surgery at Padua University.

At first Vesalius was not troubled by doubts. He simply wanted to become an anatomist. In those days that implied the study and worship of Galen, the Greek "Prince of Medicine," whose every word was considered sacred. Even a hair's breadth departure was blasphemy.

Vesalius never even thought of setting himself against Galen. Like any other scholar, he wanted to eat the fruit of his tree of wisdom. That was why he chose the University of Paris, where the best authorities on Galen taught anatomy.

With an innate persistence and thoroughness, Vesalius studied the guides of the celebrated Greek physician. He had to see everything for himself. That led to the first blasphemous doubt about Galen's tenets, the plaguing question as to whether Galen's anatomy was really copied from man's.

Doubts break down the infallibility of authorities even faster than rust eats into metal. Doubts which beset unprejudiced and strong characters lead to the birth of discoveries. Checking and rechecking every word of his predecessors, comparing them with what he himself had seen, measured and tested, Vesalius became convinced that Galen's descriptions of the structure of the human body were based mostly upon a knowledge of the internal organs of pigs, dogs and apes.

That was the young scientist's first discovery. Though it undermined his faith in Galen, he could not say so publicly. A grim obstacle stood in the way—the church, all-powerful for 14 long centuries. Torture and the stake were waiting for anyone who dared raise his voice against a Galen sanctified by the church, for anyone who dared to search for the truth. But man measures up to his time—great times call great men into being.

Padua was the capital of Venice, one of the freedom-loving republics of Italy, the source of that salubrious spring of mankind which inundated the whole of medieval Europe and was called the Renaissance by grateful descendants. The Renaissance needed giants and it brought them forth, giants in thought, passion and character, in versatility and knowledge. Vesalius was one.

To construct a new anatomy based on real and exact knowledge, he had to have cadavers to dissect. The obstacles impeding the 23-year-old professor were likely to be fewest in Venice.

But fewest does not mean few, and what there was taxed all his resources. He stole corpses from graves. He tried to secure official permission from the municipal authorities. He sought to change the method of execution so that the bodies would not be mutilated. He made arrangements with doctors to examine deceased patients. He pleaded with judges, implored them to change execution dates to coincide with his lectures.

Five years of a double life, a double life with a single purpose. Students, lectures and public autopsies in the daytime, and the great work under cover of night.

The anatomist and his friend, the artist Jan Stevenzoon van Calcar, a pupil of the famous Tiziano Vecelli, would lock themselves in a cellar. A corpse, candles and cardboard, a steel scalpel and colored crayons, a frantic passion for investigation and a strain and pace which only Vesalius could endure. Calcar would drop his pencil and fall down exhausted. Vesalius would raise him to his feet, urge him on, coerce him. He himself was immune to fatigue.

That was how he examined, described and copied from nature (as fully as was possible at the time) bones and muscle, the brain and heart, lungs and stomach, the forms and positions of all of man's internal organs. Thus were Galen's 200 mistakes disproved. Thus did Vesalius uncrown the hero of that halo of infallibility which impeded the progress of science, dethroning an authority bolstered by 14 centuries. That was how he founded what the pre-eminent Ivan Pavlov called "the first anatomy of man in the modern history of mankind."

"At present," wrote Vesalius, "I shall not risk investigating more debatable things, moreover, things which, should I venture too far, might expose me to a dangerous conflict with the church. I shall expose without any hesitation the falsehood of Galen's propositions concerning the structure of the human body, but should I have to quote his views on function, I shall present them without criticism. I shall confine myself to hints about my doubt of their correctness."

He understood that he dare not take the risk. He thought he was being cautious, that the painfully acquired truth would serve as a reliable shield in argument. A blunder, but one characteristic of great scholars. The truth can never protect its author from dogmatists and scholasticists, ignoramuses and mediocrities, who cling to official, accepted and sanctioned viewpoints. Aware of all this, of Vesalius's friends urged him not to publish. But he would not sacrifice the truth.

His *De humani corporis fabrica libri septem (Seven Books on the Structure of the Human Body)* appeared in 1543. A significant coincidence: *De revolutionibus orbium coelestium (The Revolutions of the Celestial Bodies)* by Nikolaus Copernicus came off the press that same year. Both these works, each in its own way, marked a revolution in the natural sciences.

Preparing his *Fabrica* for publication, Vesalius was seized by fright. He was afraid—as a father might be for the life of his child, as a creator for the destiny of his creation. To shield his work, he dedicated it to Charles V, over whose empire "the sun never set."

Vesalius underestimated his enemies. Their fury was as great as his own reckless quest for truth in those first five years in Padua, when he dared challenge Galen's authority, uncrowning the idol, the very prop of their existence. Standing behind his enemies was the church, threatened with the loss of another of its strongholds, the hitherto inviolable sacredness of the human body.

A play on words—Vesalius vesanus (the insane)—and the anatomist who dared disclose the truth was declared insane.

Vesalius had invested all his strength in the *Fabrica;* he had no more. His true friends were few, his enemies were solidly united and fanatic. He gave way, surrendered. He burned his manuscripts and withdrew from the struggle. Entering the service of Charles V, he became the emperor's third court physician. He married and had a daughter.

But the scientist in him was still alive. The spark still smoldered. Again and again he returned to his anatomy. Twelve years later he published the second edition of his *Fabrica* with valuable supplements. For 200 years it was studied by doctors and students—their basic, most authoritative textbook.

Vesalius could have given up the struggle then. What he had accomplished was more than enough for one lifetime. He was aware of that: "I am looking forward to the completion of the great work whose foundation I laid so successfully when I was still in the prime of my youth and my capacities that I need not feel ashamed of my past." And yet it weighed upon his mind: "I still nurture the hope," he wrote in the same letter, "that I shall some day be able to return to the study of the real bible—the human body."

He waited a long time, but fate decided otherwise. The ship aboard which Vesalius was returning from Palestine (according to another legend, that was the price he paid for his return to science) was caught in a storm in the Mediterranean and wrecked. He died on the Island of Zante.

His death atoned for years of faintheartedness. The red-bearded rebel was claimed by posterity.

Is not rebellion the very purpose and reason for life?

Three countries claim Andreas Vesalius who, to his contemporaries, was merely an anatomist: Belgium, because he was born in Brussels in the last hours of 1514; France, where he received his medical education; and Italy, which witnessed his greatness at Padua.

Other countries could challenge this claim if a man's nationality were determined by his stay in one country or another, in one city or another. But disputes of this kind are fruitless. The lives of great men and their deeds belong to the world.

(The above article is fifth in a series on the great men of the world to whom we owe our cultural heritage. We began in April with an essay on Vladimir Lenin, whose heirs the Soviet people consider themselves to be. We continued with an article on Democritus in June, Thomas Paine in July and Jean Jacques Rousseau in September.)





Vladimir Markizov, Chief of Moscow's Water Supply and Sewage Department, is interviewed by Georgi Yuryev

TO TAKE LIBERTIES with a familiar adage—man may not live by water alone, but it's pretty hard for him to live without it. About three days is his limit, say those who study such things. And how about a city, one like Moscow, with a population of 6,500,000?

"According to foreign press reports," said I, beginning my talk with Vladimir Markizov, "big cities in many countries had water problems this summer. What about Moscow?"

"The best way to answer you is to ask some questions," said Markizov. "Are you a Muscovite? Do you live in the old section of the city? Can you remember any time when you had no water, or when the water in your apartment building was rationed?"

I thought for a while but could not remember anything of the kind happening in the 20 years I had lived in Moscow.

"I have been with the city's water department for better than 30 years," said Markizov, "and in all that time our water supply has not been interrupted once."

"Do you mean the supply of drinking water or the water for industrial purposes?"

"Both."

"Do they come from different sources?"

"No, we have a single system."

"How does it operate? How is the supply of water regulated?"

"Here is the picture: Backing up Moscow's water supply are the Volga and the Moscow rivers. We have a system of perennially regulated water reservoirs. If you have done any traveling on the Moscow Canal, you probably noticed that the water reservoirs stretch on for miles. These are man-made reservoirs, and we can fill them to suit our needs. This year, for instance, the spring water level of the Moscow River was the lowest in a hundred years, but the water reservoirs were at maximum level.

"From these reservoirs we feed the supply stations, where the water is cleaned, disinfected, then pumped through the mains to the capital."

"Do you make any use of artesian water?"

"Yes, but only for industrial purposes. Artesian wells account for only a small part of Moscow's total water consumption."

"How much water does Moscow use?"

"An averge of 140 gallons daily per person in the course of a year."

"Does this include industrial consumption?"

"Yes."

"Are there any limits on industrial users?"

"Yes, there are. We set quotas for factories that use a lot of water. If they use more than their quota, they have to pay extra for it."

"Is there also a limit on household and utility consumption?"

"No, there is not. Consumption there is practically unlimited. However, this does not mean that we do not try to get people to avoid wasting water."

"How much do Muscovites pay for water?"

"About one and a half kopecks per 100 gallons."

"You said that the consumption of water in Moscow was practically unlimited. I suppose there are peak consumption periods?"

"Of course. Industrial consumption of water stays at about the same level the year round. But that's not true of utility consumption, which is different at various times of the day, week, month and year. Maximum consumption, naturally, is in the summer months. But this varies also. In summer we have two peak periods. The first is in June when the children begin their vacations and get ready to leave the city for summer camp. Parents try to make them look as neat as possible and wash their whole summer supply of clothes. A great deal of water is used then. We know when families leave for their summer houses from the fact that water consumption drops. The second peak period begins when Muscovites come back to town, in September. After that consumption stabilizes at one level."

"What do you do to meet the peak demand?"

"Reserve pumps, which we do not use in normal periods, are started at the supply stations, and all our units work at full capacity. I should add that although Muscovites do not have water supply worries, those of us who have to see that the supply is adequate do."

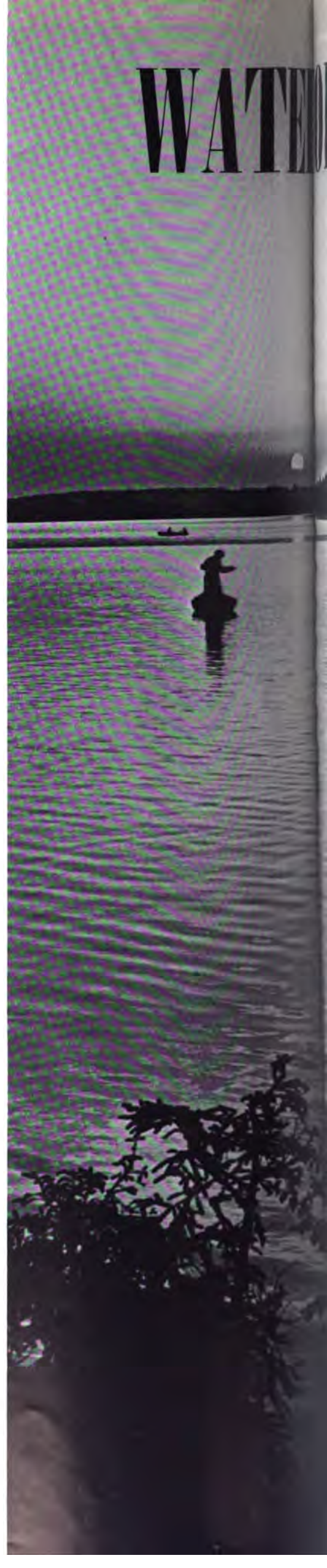
"For instance?"

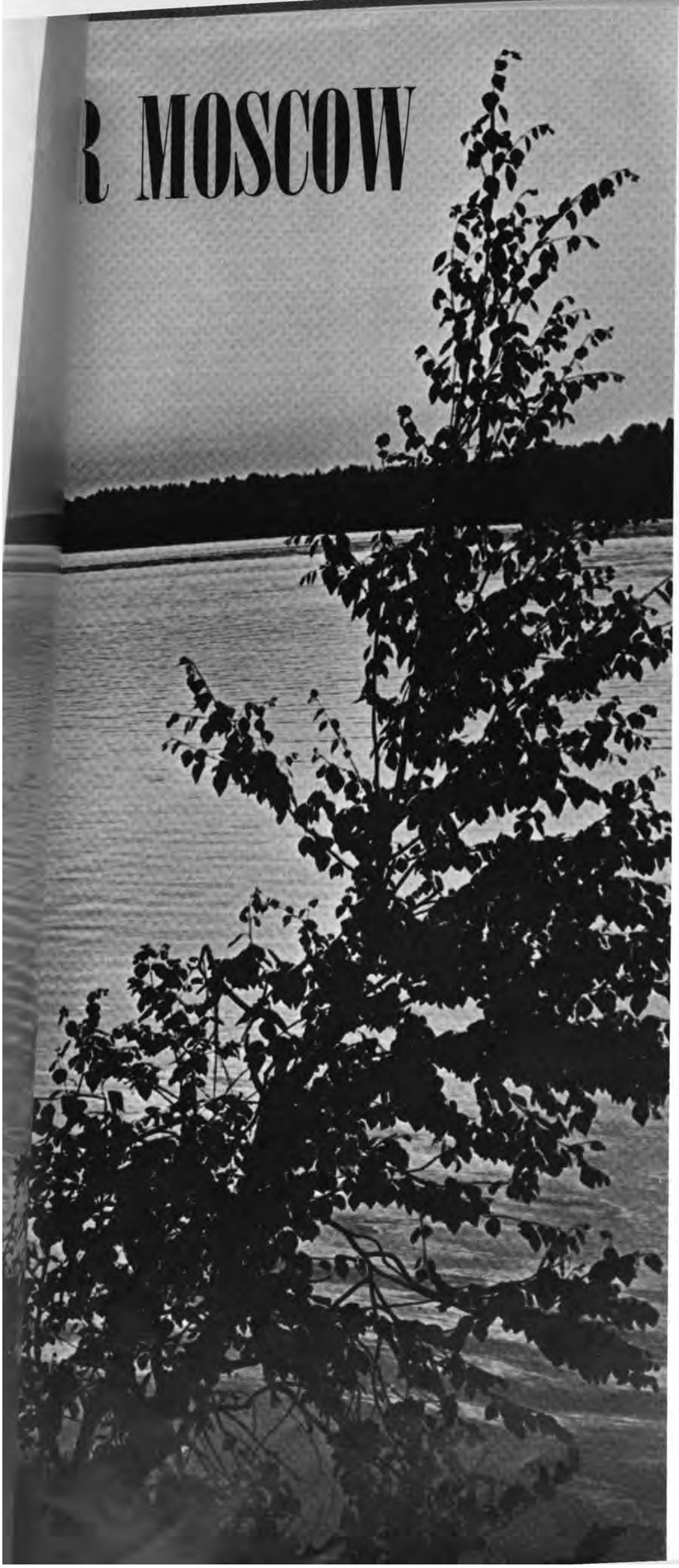
"For instance, the preparations for those peak periods we were talking about. We wait for them with the same worried feeling that a student waits for exams, or the hydroengineering specialist for high water. We keep wondering whether the pipe system, the pumps and the other equipment will stand the strain. There are thousands of things to worry about. We, of course, try to prepare for these periods, by checking and adjusting all the machinery.

"We have to be on the alert all the time because the city's needs keep changing. We can even tell you when an interesting TV program is on. For example, at 8 or 9 P.M. the pressure in the water supply system stays at an average level, then suddenly at 9 P.M. or somewhat later it falls. This means the program is over, and people have started making tea and taking baths, and we have to set additional pumps going."

"What do you mean when you say that the pressure in the water supply system falls?"

"I mean that when we have maximum consumption, the water does not reach the upper stories of houses in some places. Falling pres-





The capital's water system includes the Pestovo, shown here, and the man-made Istra, Klyazma and Ucha reservoirs. Others are under construction.

sure may also be due to a broken main."

"What do you do in such cases?"

"We shut off the water in that section."

"And then how is water supplied to the houses along that broken water main?"

"From the water main in the neighboring street."

"Does this mean that there are pipelines running to the houses from two sides?"

"Quite right, we have one network of pipes backing up another."

"Do I understand that Moscow's water supply system operates by the same principle as its power supply system?"

"Correct. We even use similar machines for modeling the movement of the water in the pipes."

"A big city needs a water supply system that is flexible and ready for all kinds of emergencies. And that, I would assume, takes automation and the very latest equipment."

"Our water supply stations make wide use of automatic operating devices and remote control instruments. We can't complain about Soviet instrument builders; they provide us with very good equipment."

"Moscow is growing vigorously and so is its population. Is the rate of this growth taken into account in long-range plans for the capital's water supply?"

"Of course, in previous years our work was based on the 1935 master plan for the city's development. According to this plan, water from the Volga was used (besides other sources) for Moscow's water supply, and the Istra water reservoir was built. Now we do our development work with a view to what Moscow will be like in 1980 and work out plans with the year 2000 in mind."

"Are you building water reservoirs now?"

"Yes. On the Ruza and the Ozerna Rivers."

"How are the city's new districts being supplied with water?"

"Usually all the pipelines or communications, as we call them, are laid before the construction work starts. That means that we have the water supply provided for before anything else goes up."

"I have heard of water being shut off sometimes in new residential districts (I mean Cheryomushki and Kuntsevo). Why is this necessary?"

"The rate of housing construction is sometimes responsible. We are not given enough time to complete the water supply system. And sometimes it's due to an accident."

"The last question. How is water purified?"

"It would take too long to describe in detail. Briefly, we use physical-chemical methods. We chlorinate and filter and do everything else required to keep Muscovites supplied with fresh, clear, pure water."

Brief Comments

A Generous Contribution

by Vadim Ardatovsky



Vadim Ardatovsky, 39, a graduate of the Moscow Institute of Foreign Relations, worked as a foreign correspondent for Sovetskaya Rossiya for a number of years. He is now a commentator on international affairs for Novosti Press Agency (APN).

The Helsinki Congress for Peace was held in July of this year, long enough ago to evaluate the role and significance of this international forum and to see what new contribution it has made in the fight against a threatening global war.

But first I would like to mention one sight which, I believe, will long stay in the memory of all those who were present at that memorable conference in the Finnish capital. Big groups of boys and girls, four years of age and up, waited at the entrance of the Palace of Culture every morning to greet the delegates. Most of them fair-haired and with serious faces, silently aware that only a tiny percentage of the delegates knew more than a few Finnish words, they held their pads out for autographs. Nobody refused the children. Every delegate carefully wrote his or her name, in Latin letters or Cyrillic letters, Japanese ideographs or Arabic ligatures,and looked paternally or maternally at the young Helsinki autograph-seekers.

Perhaps the unanimity displayed by the congress when its great work ended began with these morning scenes at the entrance. Was it not for the sake of coming generations, for their welfare, peace and happiness that the delegates of 100 countries had come to Helsinki? Among them were hundreds who were 60 and 70 and older. They shared their wisdom and experience with the younger champions of peace.

The Helsinki gathering was the most representative of all peace congresses. Assembled here were representatives of dozens of organizations, some far removed from the World Council of Peace, some even biased against it. In Helsinki these people became convinced that they were wrong.

The threat of a thermonuclear war is a threat to all mankind. Therefore, I venture to predict that we shall, in the near future, witness still broader contacts between most diverse peace-loving forces.

The delegates were most appreciative of the fact that a large group from the United States participated. It was perhaps the second or third largest national delegation at the congress.

There were seven committees functioning. They might better be called international conferences since some of the committees had a membership in excess of 200. The first committee tackled the whole complicated series of problems engendered by the war in Vietnam. I think there is probably not a single delegation, no matter how small, that would fail to participate in the work of this committee, unquestionably the most important in view of the present situation.

The unanimous approval by the congress of the resolution on Vietnam was a major achievement for the peace advocates. The congress declared that it is the sacred and urgent duty of the world's peace forces to secure, by appropriate means, the earliest end of the war.

On one issue there was some argument in the early sessions of the congress. Several delegations—they could be counted on the fingers of one hand—saw no need for adopting a general statement in addition to the resolution on Vietnam. They felt that it would dissipate attention. Their argument is unconvincing. Seats of trouble in other parts of the world must not be neglected by the peace movement. Peace fighters must have a positive program and concrete aims to help reduce international tension and forward universal disarmament.

The General Statement, which embraced the widest range of tasks confronting peace-loving humanity, was endorsed unanimously, with only a few delegates abstaining.

The great success of the congress was the common platform it adopted. Those who hoped for any split of the delegations in Helsinki were sadly disappointed.

"For peace, national independence and general disarmament"—this was the three-in-one watchword of the congress.

Alexei Kosygin, Chairman of the USSR Council of Ministers, said in his message of greeting: "The Soviet people actively support all efforts of the world peace movement, efforts motivated by the principle of peaceful coexistence of states with different social systems, efforts to reduce the threat of a new world war, to strengthen international security and national independence, and to achieve disarmament."

The assembly of the peoples in Helsinki made a generous contribution to the growth of the world peace movement.

Do We Need Union Contracts?

by Alexander Vasilenko



Alexander Vasilenko, born in 1919, is a graduate of one of the country's schools of journalism. He has been on the staff of the newspaper Trud (Labor) since 1962, and is at present assistant editor of its TradeUnionAffairsDepartment.

I recently received a letter from a worker in the Ukraine. "Tell me, please," wrote Vladimir Brykalov, "hasn't collective bargaining lost its significance in our country? Don't you think that the collective bargaining we inherited from the old society as a form of struggle for better conditions is no longer applicable in a society where the workers run the country, where trade unions have extensive rights and the managers are chosen by the state from among the workers?"

A timely question in view of the fact that we will shortly be checking on the fulfillment in the past year of over 50,000 collective bargaining agreements and negotiating new ones for 1966. A big job. Is it worth doing? Do we need collective bargaining in a socialist country which has no private employers? What do the contracts give Soviet factory and office workers?

Vladimir Brykalov is right about one thing, that a collective bargaining agreement in the Soviet Union is not the same thing it is in a capitalist country,where it is a weapon for the collective defense of the workers' economic rights against the factory owner. In the USSR collective bargaining is a means through which the workers participate in running their factories, a way of maintaining public control of production. Soviet workers have no need to specify in their contracts the underlying principles of labor-management relations because they are sufficiently defined in labor legislation binding on both parties.

This, however, does not mean that we do not need collective bargaining. Labor conditions differ greatly in the various industries, and even ideal legislation cannot provide for every contingency. That is why each factory has an agreement that details its particular conditions. Discussed and voted on by the men, signed by the manager and the chairman of the union local and registered with higher economic and union bodies, it becomes, in a way, a supplement to the labor laws.

Workers and management assume mutual commitments under the agreement. The men undertake to do their best to fulfill plan assignments, improve quality and raise output. Management undertakes to mechanize and automate production processes and so lighten jobs, increase productivity and improve working conditions and safety.

The agreement also contains a commitment from management to construct more housing and to build nurseries and summer camps for the children and clubs and recreation areas for the adults. It also specifies various improvements in the plant's medical facilities.

The law says that, in the interests of production, management may transfer a worker from one job to another at either the same factory or one in the neighborhood. The law here again cannot be specific about local conditions, such details are taken care of in the agreement.

There are a variety of other local situations which the union and management have to work out—what work quotas to set, what and where to build with the funds the factory gets for safety engineering, how to spend the so-called factory fund accumulated when the factory overfulfills its plan, and so on.

These agreements are not always negotiated with complete harmony, and some of them are far from perfect. By reason of inability, ignorance or unwillingness, managers do try to underplay or bypass vital questions of working conditions and wages in the collective agreements they negotiate and thus create the conditions for subsequent labor-management disputes. The value of agreements is also nullified by unions that do not check on fulfillment, take action without the membership or do not hold individual executives accountable for their negligence.

But Soviet trade unions do not hide the deficiencies which, unfortunately, one still comes on in collective bargaining agreements. On the contrary, these deficiencies are brought to light and criticized. This is exactly what will be happening in the forthcoming check on old agreements and the conclusion of new ones.

Consumer Demands and Advertising

by Alexander Birman



Alexander Birman, 55, is a graduate of the Moscow Institute of Economics. He holds the rank of professor and a Doctor of Science (Economics) degree and heads the Finance Department of the Plekhanov Institute of National Economy.

For a long time we were short of many commodities. Supply lagged behind demand. But in recent years the consumer goods situ-

n e

as changed radically. Each month we
e list of short-supply commodities grow-
naller and the list of readily available
growing longer. Furthermore, we al-
have a surplus of many commodities
e accompanying problem of disposing
t surplus.

simultaneously with this sizable increase
rchases, stocks of goods have accumu-
at warehouses and retail shops at a far
er rate. The growth in trade turnover in
1965 was 15 per cent, while the ac-
ation of goods in retail trade increased
3 per cent. This included nonfoodstuffs,
showed an increase of 32 per cent.
as it because people had less money to
l? The answer is No. Savings bank de-
have been growing from year to year,
he same goes for the money people have
and. The answer lies somewhere else. The
essential needs of the consumer have
met, and more goods and a larger
ty of goods are manufactured each year.
customer no longer rushes out to buy any-
available, he waits for the best buy. That
es economists nervous because it slows
the rate of money turnover. But the rest
e Soviet population does not have eco-
ic jitters; they simply wait for the shops to
and sell the goods they want.

ow it is a question of how to handle the
ation.

rst of all, we study demand, its ebb and
, and the best way to satisfy this demand.
r all, the goods which lie and gather dust
he warehouses and those which are in
e demand are made out of the same raw
erials and by the same people. Our shops
e enough cotton textiles on hand for three
three and a half months but only enough
co for 22 days. They have enough men's
ol suits for several months and barely
ugh synthetic fiber suits for two weeks.
There is no question that advertising pro-
es a large part of the answer to the prob-
. And there are distinctive signs of
velopment in our advertising.

Display windows are getting primary atten-
n. In a year or so we can expect our shops
d wares to be really eye-catching. A fine
rt along these lines has been made in the
viet Baltic republics and in Leningrad and
ku. Moscow, Kiev, Minsk, Novosibirsk and
her big cities are quickly catching on.

Fashion shows and demonstrations of new
otwear, furniture, household articles and
her goods are being held much more fre-
ently. The press, films and especially tele-
sion are also paying more attention to
dvertising. Industrial designing is a fast grow-
g profession in the USSR. All factories, irre-
pective of their lines—hosiery, confections
machine tools—are searching for better
roduct designs.

We have advertising experts in the art
chools, in all kinds of craft schools and work-
ng with engineers and designers. Young
eople are especially interested in the field.

In a word, we expect that in the near future
ur advertising will stand up with the best
ther countries have to offer, but with a style
f its own, its own content and form. This dis-
inction will not be confined to the outer aspect
alone. It will stem from the essentially different
approach to the matter. Our commercial ad-
vertising does not strive to bedazzle, to hypno-
tize the customer, to impose anything on him.
The principle of "selling by all means" is
impossible for our society and not necessary.

We regard advertising as a means of mass
information, even as a method of cultivating
a fine taste, if you wish.

Thus the study of consumer goods demands
and the adjustment of production plus im-
proved advertising will help us better supply
the consumer and inform him of new
commodities.

IN THE NEXT ISSUE



Five years ago this Nigerian girl saw her first snowfall, walked on a Moscow street for the first time in her life, and opened her first Russian book. She is one of the 228 young men and women, most of them from the developing nations of Asia, Africa and Latin America, who made up the first graduating class of the Patrice Lumumba Friendship University. They are now working in their own countries as engineers, chemists, agronomists, physicians, economists, philologists. Their story is in the next issue.



Dance critics call the Bolshoi's Vladimir Vasilyev one of the all-time greats. His performances have won him standing ovations from audiences in Moscow, New York, London, Paris, Vienna and Cairo. In 1964 he was awarded the Nijinsky Prize in Paris, unofficial acknowledgement of his place as the world's premier dancer. This year he won the Grand Prix and Grand Gold Medal at the international ballet contest in Varna. In the eight years since he left ballet school he has danced as many roles as some do in a lifetime.

Every people has its wonder—a Taj Mahal, a Louvre, a Sphinx. Armenia has its Matenadaran, a depository of 10,000 ancient books and manuscripts, the oldest dating back to the fifth century, long before Russia's conversion to Christianity or the Norman conquest of England. There are books on philosophy and law, mathematics and cosmography, treatises on smelting gold and preparing paints. One of the manuscripts was found hidden deep in a cave. Another one was cut up by a sword. A third is charred. A fourth is bloodstained. Why these marks of siege and battle? See the December issue.





Moscow theatergoers attach the name of a popular director to the theater he heads. Thus, the Lenin Komsomol Theater is now being called the Efros Theater, for its director, Anatoli Efros, who has been making dramatic history for the past five years. His stagings are noted for their extraordinary sensitivity and great depth. On the left is a scene from his much talked about production of *A Soldier Is a Soldier*.

Some of the other articles in the December issue:
The Spring of Soviet Music—by composer Aram Khachaturyan; Television Children—about TV-watching and its effects; Marshal Bagramyan's Reply—the Soviet Deputy Minister of Defense answers a reader's question; Unlucky Alfonso—a gay story about a young naval officer; Six Days in the Mountains—a diary of travels in Transcarpathia; Petrovsky's Seminar—a word sketch of the distinguished, pioneering mathematician and rector of Moscow University; Men at War—on the Georgian film *A Soldier's Father* and its star, who won the prize for the best male role at the recent Moscow Film Festival; Alexius, Patriarch of All Russia—a short biographical account of the man and something about his work to promote world peace; Native Land—Vasili Peskov discusses patriotism.

APN NOVOSTI PRESS AGENCY **SOVIET LIFE**

Siberia: New Horizons — A colorful sketch of this fast developing land seen again after a 10-year absence.

***Genetics* Magazine and Soviet Biology** — Soviet biological sciences move ahead after a lengthy period of retardation.

COMING SOON

Brief Comments

A Generous Contribution

by Vadim Ardatovsky



Vadim Ardatovsky, 39, a graduate of the Moscow Institute of Foreign Relations, worked as a foreign correspondent for Sovetskaya Rossiya for a number of years. He is now a commentator on international affairs for Novosti Press Agency (APN).

The Helsinki Congress for Peace was held in July of this year, long enough ago to evaluate the role and significance of this international forum and to see what new contribution it has made in the fight against a threatening global war.

But first I would like to mention one sight which, I believe, will long stay in the memory of all those who were present at that memorable conference in the Finnish capital. Big groups of boys and girls, four years of age and up, waited at the entrance of the Palace of Culture every morning to greet the delegates. Most of them fair-haired and with serious faces, silently aware that only a tiny percentage of the delegates knew more than a few Finnish words, they held their pads out for autographs. Nobody refused the children. Every delegate carefully wrote his or her name, in Latin letters or Cyrillic letters, Japanese ideographs or Arabic ligatures, and looked paternally or maternally at the young Helsinki autograph-seekers.

Perhaps the unanimity displayed by the congress when its great work ended began with these morning scenes at the entrance. Was it not for the sake of coming generations, for their welfare, peace and happiness that the delegates of 100 countries had come to Helsinki? Among them were hundreds who were 60 and 70 and older. They shared their wisdom and experience with the younger champions of peace.

The Helsinki gathering was the most representative of all peace congresses. Assembled here were representatives of dozens of organizations, some far removed from the World Council of Peace, some even biased against it. In Helsinki these people became convinced that they were wrong.

The threat of a thermonuclear war is a threat to all mankind. Therefore, I venture to predict that we shall, in the near future, witness still broader contacts between most diverse peace-loving forces.

The delegates were most appreciative of the fact that a large group from the United States participated. It was perhaps the second or third largest national delegation at the congress.

There were seven committees functioning. They might better be called international conferences since some of the committees had a membership in excess of 200. The first committee tackled the whole complicated series of problems engendered by the war in Vietnam. I think there is probably not a single delegation, no matter how small, that would fail to participate in the work of this committee, unquestionably the most important in view of the present situation.

The unanimous approval by the congress of the resolution on Vietnam was a major achievement for the peace advocates. The congress declared that it is the sacred and urgent duty of the world's peace forces to secure, by appropriate means, the earliest end of the war.

On one issue there was some argument in the early sessions of the congress. Several delegations—they could be counted on the fingers of one hand—saw no need for adopting a general statement in addition to the resolution on Vietnam. They felt that it would dissipate attention. Their argument is unconvincing. Seats of trouble in other parts of the world must not be neglected by the peace movement. Peace fighters must have a positive program and concrete aims to help reduce international tension and forward universal disarmament.

The General Statement, which embraced the widest range of tasks confronting peace-loving humanity, was endorsed unanimously, with only a few delegates abstaining.

The great success of the congress was the common platform it adopted. Those who hoped for any split of the delegations in Helsinki were sadly disappointed.

"For peace, national independence and general disarmament"—this was the three-in-one watchword of the congress.

Alexei Kosygin, Chairman of the USSR Council of Ministers, said in his message of greeting: "The Soviet people actively support all efforts of the world peace movement, efforts motivated by the principle of peaceful coexistence of states with different social systems, efforts to reduce the threat of a new world war, to strengthen international security and national independence, and to achieve disarmament."

The assembly of the peoples in Helsinki made a generous contribution to the growth of the world peace movement.

Do We Need Union Contracts?

by Alexander Vasilenko



Alexander Vasilenko, born in 1919, is a graduate of one of the country's schools of journalism. He has been on the staff of the newspaper Trud (Labor) since 1962, and is at present assistant editor of its Trade Union Affairs Department.

I recently received a letter from a worker in the Ukraine. "Tell me, please," wrote Vladimir Brykalov, "hasn't collective bargaining lost its significance in our country? Don't you think that the collective bargaining we inherited from the old society as a form of struggle for better conditions is no longer applicable in a society where the workers run the country, where trade unions have extensive rights and the managers are chosen by the state from among the workers?"

A timely question in view of the fact that we will shortly be checking on the fulfillment in the past year of over 50,000 collective bargaining agreements and negotiating new ones for 1966. A big job. Is it worth doing? Do we need collective bargaining in a socialist country which has no private employers? What do the contracts give Soviet factory and office workers?

Vladimir Brykalov is right about one thing, that a collective bargaining agreement in the Soviet Union is not the same thing it is in a capitalist country, where it is a weapon for the collective defense of the workers' economic rights against the factory owner. In the USSR collective bargaining is a means through which the workers participate in running their factories, a way of maintaining public control of production. Soviet workers have no need to specify in their contracts the under... ples of labor-management relation... they are sufficiently defined in labor ... binding on both parties.

This, however, does not mean th... not need collective bargaining. Labo... tions differ greatly in the various ... and even ideal legislation cannot pro... every contingency. That is why eac... has an agreement that details its pa... conditions. Discussed and voted on ... men, signed by the manager and the ... man of the union local and registere... higher economic and union bodies, it ca... in a way, a supplement to the labo...

Workers and management assume ... commitments under the agreement. Th... undertake to do their best to fulfill plan ... ments, improve quality and raise ... Management undertakes to mechan... automate production processes and so ... jobs, increase productivity and improve ... ing conditions and safety.

The agreement also contains a com... from management to construct more ... and to build nurseries and summer cam... the children and clubs and recreation ... for the adults. It also specifies vario... provements in the plant's medical fac...

The law says that, in the interests of pr... tion, management may transfer a worke... one job to another at either the same ... or one in the neighborhood. The law ... again cannot be specific about local ... tions, such details are taken care of ... agreement.

There are a variety of other local sit... which the union and management ha... work out—what work quotas to set, wh... where to build with the funds the factor... for safety engineering, how to spend the ... called factory fund accumulated when ... factory overfulfills its plan, and so on.

These agreements are not always ne... ated with complete harmony, and som... them are far from perfect. By reason of ... ability, ignorance or unwillingness, many ... do try to underplay or bypass vital qu... of working conditions and wages in the co... tive agreements they negotiate and thus cre... the conditions for subsequent labor-manage... disputes. The value of agreements is also ... fied by unions that do not check on fu... take action without the membership or ca... hold individual executives accountable ... their negligence.

But Soviet trade unions do not hide the ... ficiencies which, unfortunately, one still ... on in collective bargaining agreements. On ... contrary, these deficiencies are brou... light and criticized. This is exactly what ... be happening in the forthcoming check on ... agreements and the conclusion of new ...

Consumer Demands and Advertising

by Alexander Birman



Alexander Birman, 55, graduate of the Moscow Institute of Economics. He ... the rank of professor ... Doctor of Science Econ... degree and heads the ... Department of the P... Institute of National Eco...

For a long time we were short of ... commodities. Supply lagged behind de... But in recent years the consumer goods ...

ıent

cify in their contracts the under-
of labor-management relation
are sufficiently defined in lab
ing on both parties.
s, however, does not mean
eed collective bargaining
differ greatly in the variou
ven ideal legislation cannot
contingency. That is why
ı agreement that details
ons. Discussed and voted
gned by the manager and
f the union local and
economic and union bodies
ay, a supplement to the
ers and management
nents under the agreement
ke to do their best to fulf
improve quality and
ment undertakes to
e production processes and
crease productivity and
ditions and safety.
agreement also contains a
anagement to construct
build nurseries and summer
dren and clubs and recrea
adults. It also specifies
ents in the plant's medical
aw says that, in the interests
anagement may transfer a
to another at either the
in the neighborhood.
cannot be specific about
such details are taken care
nent.
e are a variety of other
the union and management
ut—what work quotas
to build with the funds
iety engineering, how to
factory fund accumulated
overfulfills its plan, and
e agreements are not
with complete harmony
re far from perfect. By
ignorance or unwillingness
to underplay or bypass
king conditions and wages
reements they negotiate
ditions for subsequent
s. The value of agreements
unions that do not check
tion without the members'
ndividual executives
gligence.
oviet trade unions do not
es which, unfortunately,
llective bargaining agreements
r, these deficiencies are
d criticized. This is exactly
pening in the forthcoming
ents and the conclusion

onsumer Demand" Advertising

by Alexander B



Alexander Bu
graduate of the
Institute of Econo
the rank of
Doctor of Eco
degree and
Department of
Institute of Ma

a long time we were
ıdities. Supply lagged
recent years the consume

tion has changed radically. Each month we find the list of short-supply commodities growing smaller and the list of readily available items growing longer. Furthermore, we already have a surplus of many commodities and the accompanying problem of disposing of that surplus.

But simultaneously with this sizable increase of purchases, stocks of goods have accumulated at warehouses and retail shops at a far greater rate. The growth in trade turnover in 1961-1965 was 15 per cent, while the accumulation of goods in retail trade increased by 28 per cent. This included nonfoodstuffs, which showed an increase of 32 per cent.

Was it because people had less money to spend? The answer is No. Savings bank deposits have been growing from year to year, and the same goes for the money people have on hand. The answer lies somewhere else. The most essential needs of the consumer have been met, and more goods and a larger variety of goods are manufactured each year. The customer no longer rushes out to buy anything available, he waits for the best buy. That makes economists nervous because it slows down the rate of money turnover. But the rest of the Soviet population does not have economic jitters; they simply wait for the shops to get and sell the goods they want.

Now it is a question of how to handle the situation.

First of all, we study demand, its ebb and flow, and the best way to satisfy this demand. After all, the goods which lie and gather dust in the warehouses and those which are in large demand are made out of the same raw materials and by the same people. Our shops have enough cotton textiles on hand for three or three and a half months but only enough calico for 22 days. They have enough men's wool suits for several months and barely enough synthetic fiber suits for two weeks.

There is no question that advertising provides a large part of the answer to the problem. And there are distinctive signs of development in our advertising.

Display windows are getting primary attention. In a year or so we can expect our shops and wares to be really eye-catching. A fine start along these lines has been made in the Soviet Baltic republics and in Leningrad and Baku. Moscow, Kiev, Minsk, Novosibirsk and other big cities are quickly catching on.

Fashion shows and demonstrations of new footwear, furniture, household articles and other goods are being held much more frequently. The press, films and especially television are also paying more attention to advertising. Industrial designing is a fast growing profession in the USSR. All factories, irrespective of their lines—hosiery, confections or machine tools—are searching for better product designs.

We have advertising experts in the art schools, in all kinds of craft schools and working with engineers and designers. Young people are especially interested in the field.

In a word, we expect that in the near future our advertising will stand up with the best other countries have to offer, but with a style of its own, its own content and form. This distinction will not be confined to the outer aspect alone. It will stem from the essentially different approach to the matter. Our commercial advertising does not strive to bedazzle, to hypnotize the customer, to impose anything on him. The principle of "selling by all means" is impossible for our society and not necessary.

We regard advertising as a means of mass information, even as a method of cultivating a fine taste, if you wish.

Thus the study of consumer goods demands and the adjustment of production plus improved advertising will help us better supply the consumer and inform him of new commodities.

IN THE NEXT ISSUE



Five years ago this Nigerian girl saw her first snowfall, walked on a Moscow street for the first time in her life, and opened her first Russian book. She is one of the 228 young men and women, most of them from the developing nations of Asia, Africa and Latin America, who made up the first graduating class of the Patrice Lumumba Friendship University. They are now working in their own countries as engineers, chemists, agronomists, physicians, economists, philologists. Their story is in the next issue.



Dance critics call the Bolshoi's Vladimir Vasilyev one of the all-time greats. His performances have won him standing ovations from audiences in Moscow, New York, London, Paris, Vienna and Cairo. In 1964 he was awarded the Nijinsky Prize in Paris, unofficial acknowledgement of his place as the world's premier dancer. This year he won the Grand Prix and Grand Gold Medal at the international ballet contest in Varna. In the eight years since he left ballet school he has danced as many roles as some do in a lifetime.



Every people has its wonder—a Taj Mahal, a Louvre, a Sphinx. Armenia has its Matenadaran, a depository of 10,000 ancient books and manuscripts, the oldest dating back to the fifth century, long before Russia's conversion to Christianity or the Norman conquest of England. There are books on philosophy and law, mathematics and cosmography, treatises on smelting gold and preparing paints. One of the manuscripts was found hidden deep in a cave. Another one was cut up by a sword. A third is charred. A fourth is bloodstained. Why these marks of siege and battle? See the December issue.



Moscow theatergoers attach the name of a popular director to the theater he heads. Thus, the Lenin Komsomol Theater is now being called the Efros Theater, for its director, Anatoli Efros, who has been making dramatic history for the past five years. His stagings are noted for their extraordinary sensitivity and great depth. On the left is a scene from his much talked about production of *A Soldier Is a Soldier*.

Some of the other articles in the December issue:
The Spring of Soviet Music—by composer Aram Khachaturyan; Television Children—about TV-watching and its effects; Marshal Bagramyan's Reply—the Soviet Deputy Minister of Defense answers a reader's question; Unlucky Alfonso—a gay story about a young naval officer; Six Days in the Mountains—a diary of travels in Transcarpathia; Petrovsky's Seminar—a word sketch of the distinguished, pioneering mathematician and rector of Moscow University; Men at War—on the Georgian film *A Soldier's Father* and its star, who won the prize for the best male role at the recent Moscow Film Festival; Alexius, Patriarch of All Russia—a short biographical account of the man and something about his work to promote world peace; Native Land—Vasili Peskov discusses patriotism.

APN NOVOSTI PRESS AGENCY

SOVIET LIFE

Siberia: New Horizons — A colorful sketch of this fast developing land seen again after a 10-year absence.

***Genetics* Magazine and Soviet Biology** — Soviet biological sciences move ahead after a lengthy period of retardation.

COMING SOON





Felix Pokrovsky (on the left), UA3BK, is strictly a CW ham. Here he is pounding brass at the last CQ Worldwide DX Contest. Charlie Rogers, W2AIW, New Jersey, is at the other end. Felix's DX awards include WPX and WAC/CHC. SWL's Andy Belousov and Nick Dombikovsky (on the right) belong to the radio club in Moscow. Until they earn licenses, they can operate UA3KAE, the radio club's equipment.

HAM RADIO

By Anatoli Kryzhansky

DX Editor, Radio Moscow

Reader William J. Murray asked us about radio amateurs in the USSR.

YOU ONLY HAVE to go back 40 years to trace Soviet amateur radio to its beginning. And its pioneers are still around. Fyodor Lbov started pounding the key of the first amateur station, R1FL, in January 1925. Operating a 15-watt transmitter in the 96-meter band, he made two-way contact with France, England and Mesopotamia. Mr. Lbov is hale and hearty, though close to 70, and is still probably the most inveterate enthusiast in his home town of Gorky, 250 miles east of Moscow.

The man who made the best DX contact is still this side of pension age, and is still heard on the ham frequencies operating RAEM. He is Ernest Krenkel, president of the national amateur radio union, called the Federation of Radiosport. Krenkel had the same call—RAEM—back in 1930 when he contacted Admiral Richard Byrd's South Pole expedition. That was a true pole to pole QSO since RAEM was located in the Arctic. Both operators spanned a distance of 12,000 miles, with Krenkel using a 250-watt CW transmitter and a home-built two-tube receiver.

Electronics, and with it ham radio, has taken giant strides since. Today we talk about 17-tube dual-conversion superhets and transistor radios. Soviet amateur calls run into many thousands and are heard on all the ham frequencies.

Besides ham operators we have other varieties of electronic enthusiasts. Some people's hobby is listening on amateur and broadcast frequencies. Short-wave listening is not always a step to becoming a ham—for many it is a sole and sufficient hobby. And so old-timers are no rarity among SWL's here. Then there is the kind of hobbyist who gets a kick out of high-speed transmission—and not on the air but in a contest room. What he does is copy nonsensical combinations in the International Morse code heard through headphones. Letter-figure texts against a background of static are transmitted at progressively increasing speeds and are copied on a typewriter or by hand.

Very popular are "fox hunts"—an electronic chase that combines amateur direction finding with cross-country running in search of hidden transmitters. Radio constructors—people with an itch for tinkering—also account for a large number of the electronics hobbyists.

For the technically-minded young the government maintains recreation centers, called pioneer houses, where an electronics section is a must. Boys and girls who are interested can learn the dot-dash system, how to operate a key and the ABC's of radio construction. Also, there is a far-flung network of government supported radio clubs where one can get free instruction in radio electronics and in ham radio operation. These clubs are a great help both to the budding ham and to the old-timer.

Members pay what amounts to token dues and in return they get radio parts at reduced prices or gratis. Electronic equipment, handed over to the clubs as government surplus, is available to them also. The city radio club here in Moscow, like most of its counterparts, has several sections to take care of different interests—SWL's, VHF fans, SW operators and do-it-yourselfers—each in a separate section. They meet on the same day every week to discuss the latest news, to trade ideas, and to give and get technical advice.

Friday is when the DX-men get together. They are of various ages and professions: Boris Stepanov, UW3AX, is a student; Yuri Federovsky, UA3FM, a doctor; Grigori Bezymiansky, UA3ALH, a schoolteacher. They are self-made hams, that is to say, most of their equipment is home-built. They are no different from the rest of the gang in that respect. All Soviet hams start out with 10-watt key-operated transmitters they built with store-bought parts. Gradually, they work their way toward a top-class license which entitles them to use 200 watts on CW, AM and SSB.

There are no restrictions on a potential radio ham except age, to get an amateur station license you have to be 18. However, at 16 you can start learning ham operation in a club station. And you can start on VHF bands even earlier. The rules for Soviet ham operators are essentially the same as those Americans must meet. There is not much difference in the band distribution either. The bands assigned for ham operations here are 80, 40, 20, 15, 10, 2 meters and shorter; 6 meters is a television band; 11 and 160 meters are for professional communications. Since English is the international ham language, Soviet operators use it for contacting amateurs in other countries. Of course, the international Q-code signals and the standard telegraphic contractions are used as well.

There are no taboo countries for Soviet DX-ers, and many have earned DXCC among other international awards. American awards popular with Soviet hams include WAC, WAS and WAZ. Incidentally, WAZ No. 1 for two-way contacts on single-sideband is held by Leo Labutin, UA3CR, of Moscow. In 1961-62 he was the first to log all 40 zones of the world on SSB. The operator of UC2AA in Minsk, Byelorussia, named Ben, seems to have the biggest collection of ham QSL cards—250 or so.

Vlad Byelousov of Moscow, operating station UA3CA, has perhaps the rarest collection of American DX awards. He spent a year in Ulan Bator, Mongolia, operating as JT1CA. Vlad's JT logs contain 6,000 QSO entries from 180 countries (by ham geography, of course). And his trophies include—besides DXCC, WAC and WAZ—certificates from the North Jersey DX Association and the Western Pennsylvania DX Society. The latter award he won for contacting 13 specified ham stations in the W3 area. He also has the WØ1UB award issued by Tom Harmon for working all continents on SSB with R5-S9.

Amateur operators have thousands of conversations daily on short wave. There is no counting the amount of good hams do unconsciously to promote international fellowship. A substantial contribution comes from Soviet hams.

HAM TERMS

AM	amplitude modulator
CW	continuous wave
DX	distance, foreign countries
DXCC	award for contact with 100 foreign countries
Q	international signal
QSL	acknowledgment signal
QSO	contact signal
SSB	single-sideband
SW	short wave
SWL	short-wave listener
VHF	very high frequency
WAC	worked all continents
WAS	worked all states
WAZ	worked all zones

Learning Russian

At the request of readers we are including a translation of the Russian text in this column. This is not a word for word translation but may be used as a reference for understanding idiomatic expressions found in the text.

ЛЕГЕНДА О ДАНКО

Максим Горький

— Вы сказа́ли: «веди́» — и я повёл! — кри́кнул Да́нко, становя́сь про́тив них гру́дью.— Во мне есть му́жество вести́, вот потому́ я повёл вас! А вы? Что сде́лали вы в по́мощь себе́? Вы то́лько шли и не уме́ли сохрани́ть си́лы на путь бо́лее до́лгий! Вы то́лько шли, шли, как ста́до ове́ц!

Но э́ти слова́ разъяри́ли их ещё бо́лее.

— Ты умрёшь! Ты умрёшь!— реве́ли они́.

А лес всё гуде́л и гуде́л, вто́ря их кри́кам, и мо́лнии разрыва́ли тьму в кло́чья. Да́нко смотре́л на тех, ра́ди кото́рых он понёс труд, и ви́дел, что они́ — как зве́ри. Мно́го люде́й стоя́ло вокру́г него́, но не́ было на ли́цах их благоро́дства и нельзи́ бы́ло ему́ ждать поща́ды от них. Тогда́ и в его́ се́рдце вскипе́ло негодова́ние, но от жа́лости к лю́дям оно́ пога́сло. Он люби́л люде́й и ду́мал, что, мо́жет быть, без него́ они́ поги́бнут. И вот его́ се́рдце вспы́хнуло огнём жела́ния спасти́ их, вы́вести на лёгкий путь, и тогда́ в его́ очах засверка́ли лучи́ того́ могу́чего огня́... А они́, увида́в э́то, поду́мали, что он рассвирепе́л, отчего́ так я́рко и разгоре́лись о́чи, и они́ насторожи́лись, как во́лки, ожида́я, что он бу́дет боро́ться с ни́ми, и ста́ли плотне́е окружа́ть его́, что́бы ле́гче им бы́ло схвати́ть и уби́ть Да́нко. А он уже́ по́нял их ду́му, оттого́ ещё я́рче загоре́лось в нём се́рдце, и́бо э́та их ду́ма родила́ в нём тоску́.

— Что сде́лаю я для люде́й?!— сильне́е гро́ма кри́кнул Да́нко.

И вдруг он разорва́л рука́ми себе́ грудь и вы́рвал из неё своё се́рдце и высоко́ по́днял его́ над голово́й.

Оно́ пыла́ло так я́рко, как со́лнце, и я́рче со́лнца, и весь лес замолча́л, освещённый э́тим фа́келом вели́кой любви́ к лю́дям, а тьма разлете́лась от све́та его́ и там, глубоко́ в лесу́, дрожа́щая па́ла в гнило́й зев боло́та. Лю́ди же, изумлённые, ста́ли как ка́мни.

— Идём! — кри́кнул Да́нко и бро́сился вперёд на своё ме́сто, высоко́ держа́ горя́щее се́рдце и освеща́я им путь лю́дям.

Они́ бро́сились за ним, очаро́ванные. Тогда́ лес сно́ва зашуме́л, удивлённо кача́я верши́нами, но его́ шум был заглушён то́потом бегу́щих люде́й. Все бежа́ли бы́стро и сме́ло, увлека́емые чуде́сным зре́лищем горя́щего се́рдца. И тепе́рь ги́бли, но ги́бли без жа́лоб и слёз. А Да́нко всё был впереди́, и се́рдце его́ всё пыла́ло, пыла́ло!

И вот вдруг лес расступи́лся пе́ред ним, расступи́лся и оста́лся сза́ди, пло́тный и немо́й, а Да́нко и все те лю́ди сра́зу окуну́лись в мо́ре со́лнечного све́та и чи́стого во́здуха, промы́того дождём. Гроза́ была́ — там, сза́ди них, над ле́сом, а тут сия́ло со́лнце, вздыха́ла степь, блесте́ла трава́ в бриллья́нтах дожде́й и зо́лотом сверка́ла река́... Был ве́чер, и от лучей зака́та река́ каза́лась кра́сной, как та кровь, что би́ла горя́чей струёй из разо́рванной груди́ Да́нко.

Ки́нул взор вперёд себя́ на ширь степи́ го́рдый смельча́к Да́нко,— ки́нул он ра́достный взор на свобо́дную зе́млю и засмея́лся го́рдо. А пото́м упа́л и — у́мер.

Лю́ди же, ра́достные и по́лные наде́жд, не заме́тили сме́рти его́ и не вида́ли, что ещё пыла́ет ря́дом с тру́пом Да́нко его́ сме́лое се́рдце. То́лько оди́н осторо́жный челове́к заме́тил э́то и, боя́сь чего́-то, наступи́л на го́рдое се́рдце ногой... И вот оно́, рассы́павшись в и́скры, уга́сло...

Вот отку́да они́, голубы́е и́скры сте́пи, что явля́ются пе́ред грозо́й!

THE LEGEND OF DANKO

Maxim Gorky

(Translation)

Continued from the October issue, page 62.

"You said: 'Lead us' and I led you," cried out Danko, turning to face them. "I have the courage to lead you, and that is why I undertook to do it. But you? What have you done to help yourselves? You only followed me, without so much as husbanding your strength for the greater march. You only moved along like a flock of sheep."

But these words infuriated them the more.

"You shall die! You shall die!" they shrieked.

The forest roared and roared, echoing their cries, and the lightning tore the darkness to shreds. Danko gazed upon those for whose sake he had undertaken such great labor, and he saw that they were like beasts. Many people were pressing about him, but there was no sign of humanity in their faces, and he could expect no mercy from them. Then resentment seethed in his breast, but it was quelled by compassion. He loved these people, and he thought that without him they would perish. And the flames of a great yearning to save them and lead them out on to an easy path leaped up in his heart, and these mighty flames were reflected in his eyes. . . . And seeing this, they thought he was enraged and that was why his eyes flashed so. And instantly they grew wary, like wolves, expecting him to throw himself against them, and they drew closer about him that they might seize Danko and kill him. He saw what they were thinking, but the flames in his heart only flared up the brighter, for their thoughts added the oil of sorrow to the flames of his yearning.

"What else can I do for these people?" cried out Danko above the thunder.

And suddenly he ripped open his breast and tore out his heart and held it high above his head.

It shone like the sun, even brighter than the sun, and the raging forest was calmed and lighted up by this torch, the torch of a great love for mankind, and the darkness retreated before it and plunged, quivering, into a yawning bog in the depths of the forest. And in their astonishment the people were as if turned to stone.

"Follow me!" cried Danko, and he rushed forward to his place, holding his flaming heart high above his head to light the way to the people.

And they followed him as if under a spell. And then the forest began to murmur again waving its treetops in wonder, but its murmur was drowned out by the sound of running people. They all were running ahead boldly and swiftly, lured on by the wonderful vision of the flaming heart. And even now there were those who perished, but they perished without tears and complaints. And Danko went on ahead of them, his heart flaming brighter and brighter.

And suddenly the forest in front of him parted; it parted to make way for them and then closed behind them, a mute and solid wall, and Danko and his followers plunged into a sea of sunlight and clear, rain-washed air. The storm was now behind them over the forest, while here the sun shone, the steppe throbbed with life, the grass was hung with diamond raindrops and the river was streaked with gold. . . . It was evening, and the rays of the sunset painted the river as red as the blood which poured in a hot stream from the wound in Danko's breast.

The brave Danko cast his eye over the endless steppe, cast a joyful eye over this land of freedom, and gave a proud laugh. And then he fell down and died.

And the people were so full of joy and hope that they did not notice he had died and that his brave heart was still flaming beside his dead body. But one timid creature noticed it and, fearing he knew not what, stamped on the flaming heart. And it sent up a shower of sparks and went out.

And that is why blue sparks are always to be seen in the steppe before a thunderstorm.

USSR-USA SHADOWBOXING

BY EDWARD BORISOV
EX-CHAMPION OF THE SOVIET UNION

WHEN GENE TUNNEY was preparing for his world title bout with Jack Dempsey, he went out every morning and punched the air while back-pedaling tirelessly for a couple of miles. He was very much aware that Dempsey's right-hand punch was like the kick of a young mustang.

Gene wanted to win, and he knew what he was doing. He did beat Dempsey, and we—my classmate and I—were very happy, because we, too, knew Tunney's secret. We also wanted to become champions.

Our Discovery of America

The first time we saw pictures of American boxing champs was when we stepped inside that sanctuary of ours, the boxing faculty of our physical education college. For a long time we studied their stern and indomitable faces. We were taken with their crew cuts.

As I said before, it seemed to us that we were the only ones who knew how Tunney got in trim for his ring engagement with Dempsey. It was our secret and our hope. My friend was especially proud because he was the one who had read the story about Gene in some magazine or other. It only remained for us now to get crew cuts.

But a surprise awaited us one day after a regular workout: A movie screen was hung up in the hall behind the ring and we saw Joe Louis. There was no need to translate the story from English into Russian to picture the whirlwind of attacks, the fearlessness of the mitt-wielders and the joy of victory. We saw a "living" champion in action on the screen, no smile on his face, moving catlike around the ring. The elegance of his punches brought to mind the faultless lines of ancient sculptures. Before our eyes the "Brown Bomber" and "Detroit Machine Gun" neatly and mightily polished off Max Schmeling, Tony Galento, Buddy Baer and Billy Conn.

We thus discovered America, it's big-time ring game, much of which our country adopted, though regulated in Russian style and infused with our traditions. More than one generation of our boxers learned the mysteries of the sport from Joe Louis. The films were cut up in sections and studied repeatedly. We were assiduous and persevering scholars.

Boxing has a big following in our country, with soccer the only sport that surpasses it in popularity. Incredible accounts were passed on by word of mouth about the sporting feats of our first champions: Nur Alimov, a husky Tatar with fearless bulging eyes and beer-mug-size fists, and Alexei Ankudinov with a waist-long flowing beard, sinewy, who looked as though he were built of steel plates. They say that one of the first Russian trainers, Anatoli Kharlampiev, was a professional boxer who knew the American ring well and, evidently, contributed many of the fine points of overseas training and styles we adopted. Still, before the last war the history of Soviet boxing was a kaleidoscope of names and a variety of boxing schools and trends. Our boxing then, you could say, was as bubbly as champagne, but, as is clear now, lacked strength. At the time, we were like self-educated people, though capable and inquiring.

Our appearances in the international ring those years were very modest, and every birth of a new champion evoked jubilation and fond hopes. The visit of Marcel Thil, a world champion in the professional ranks, and his sparring bouts with our titleholders came like a downpour in a drought area: The shoots rose and brought forth Nikolai Korolyov, a product of the Kharlampiev school and well versed in the ring game. A broad, pleasant face, sharp gray eyes, a burly figure, a chest the size of a weightlifting platform and a weight of 205 pounds—that is Korolyov in a nutshell. He defeated Finnish heavyweights at home and the Poles in their country. Korolyov believed in his own strength and ability, which may have partly accounted for the birth of a bold and startling legend that agitated the whole country, the legend of a possible Joe Louis vs. Nikolai Korolyov fight. When we saw Korolyov shadowboxing, we wanted to see that shadow come alive in the person of the Brown Bomber.

The pupils raised their heads. From an illusory dream of "summit" boxing there sprang the reality, the necessity, the longing for an American vs. Russian match. That was nearly 20 years ago, at the end of the forties.

Lessons at Helsinki and Melbourne

Korolyov never faced Joe Louis, and we can only guess what the outcome of that fantastic bout might have been. We picked up valuable points from Joe and revered Nikolai. By then the possibility had arrived for a test in the world arena. The national team began to train for the Helsinki Olympics. Although not in full measure, the America vs. Russia dream became a reality. We had no idea how good U.S. amateur boxers were, but we soon found out. They set a record unsurpassed till this day: first place in the team score and five champions, including heavyweight Edward Sanders, light-heavyweight Norvel Lee, and young and invincible middleweight Floyd Patterson.

Our light-welterweight Victor Mednov did the best he could in the Helsinki finals but was truly outclassed by his U.S. opponent, Charles Adkins.

What amazed us then was the technique of the Americans, their love for the game, the way they improvised inside the ropes and, above all, their athletic finesse. The American mittmen forced their adversaries to follow their tactics and thus dominated.

As time proved, the adept pupils gained a lot from the Olympic tournament. Our school of boxing was subjected to a thorough revision, from methods of grooming beginners to training experienced ring fighters. The question of talented boxers was raised for the first time, and old canons were tossed around and smashed like unwanted toys.

We registered five medals for the Americans on the debit side of our ledger and got down to work.

The two of us sat at the same school desk and dreamed of great ring victories. We lost no time copying Tunney and going off to the woods every morning to punch the air and move backward like he did. We climbed trees, chopped firewood and hopped over ditches, stumps and fallen trees. My school desk neighbor Igor Mentsov became a good boxer, and I had the fortune to make the Soviet Olympic team for the Melbourne Games.

We prevailed in the down under tournament. What the Americans did not expect was a boxing defeat, and nobody thought the Russians would win. The whole amateur boxing world was stunned by the performance of the Russians, by our amazing progress in the four years since the Helsinki Olympics. Three gold medals in Melbourne went to our boys Vladimir Safronov, Vladimir



Victor Ageyev, one of the best boxers in the Soviet Union, might be a good choice for a U.S.-USSR bout.

Yengibaryan and Gennadi Shatkov, while the Americans returned home with only two.

True, the score in individual showings was again not in our favor. It is also true that the deficit continued to grow after the Melbourne encounters. Light-heavyweight James Boyd added to the string of victories by gaining a hard-won verdict over our Romuald Murauskas in the semifinals. Like his predecessors, Boyd showed all the trimmings of classical ringwork and a keen sense of ring fighting. His performance demonstrated once again that an Olympics man must first of all be a gifted athlete with a well-polished style of his own. Boyd became famous for his sudden and dynamite-packed uppercuts.

U.S. heavyweight Peter Rademacher also defeated our man Lev Mukhin in the finals. Still, as I mentioned before, we picked up three gold medals in Melbourne plus confidence that our team victory over the Americans was not far off. We said good-by to Joe Louis. We now faced our own road.

Time for a Real Match

It was another eight years before we came out in full strength and beat the U.S. boxers by a considerable margin. Evidently we trained better than the Americans did in the period between the Melbourne and Tokyo Olympics.

There were the Rome Games in between, and the results in the Eternal City pleased the Americans more than they did us. Cassius Clay, a new star on the U.S. boxing horizon, continued the unofficial match with us. He defeated our veteran Gennadi Shatkov in the first bout, but neither we nor the Americans succeeded in taking the lead in the team race. The outcome was not very comforting for us, but there were no grounds for despair. Setbacks are inevitable when one generation of athletes is being replaced by the next. It so happened that when the Rome Games arrived, the last of our veteran Melbourne victors were on their way out, while the younger men were only just beginning their climb to top standards of ring craftsmanship.

The Soviet school of boxing is now wide open to all viewers. Nurtured by the courage and fearlessness of the first champions and by natural perseverance and resolve, and having creatively assimilated the fine points of world boxing, the Soviet school has distinguished itself. Summits in the European championships were conquered one after another by Stanislav Stepashkin, Boris Lagutin and Richardas Tamulis, and Velikton Barannikov and Valeri Popenchenko served notice they had arrived. Today our team is unequalled in Europe. The 1963 continental title bouts, held in Moscow, saw all 10 of our boxers reach the finals, with six of them winning the crowns in their respective weight divisions. The Tokyo Olympic bouts saw seven challengers from the USSR make the finals, while the Val Barker Trophy, awarded to Norvel Lee a dozen years ago as the best boxer of the Helsinki Olympic tournament, became the proud possession of Valeri Popenchenko.

Lastly, the 1965 European championships in Berlin saw the Tokyo victors reaffirm their strength. Eight Soviet contestants made the finals, and all eight earned gold medals, a thing that had never happened before in the history of major amateur boxing tournaments.

We are ready for a team match with U.S. amateurs in either New York or Moscow. It is time for a match between these two countries of ours which have contributed so much to world boxing and which have been doing no more than "shadowboxing" until now.

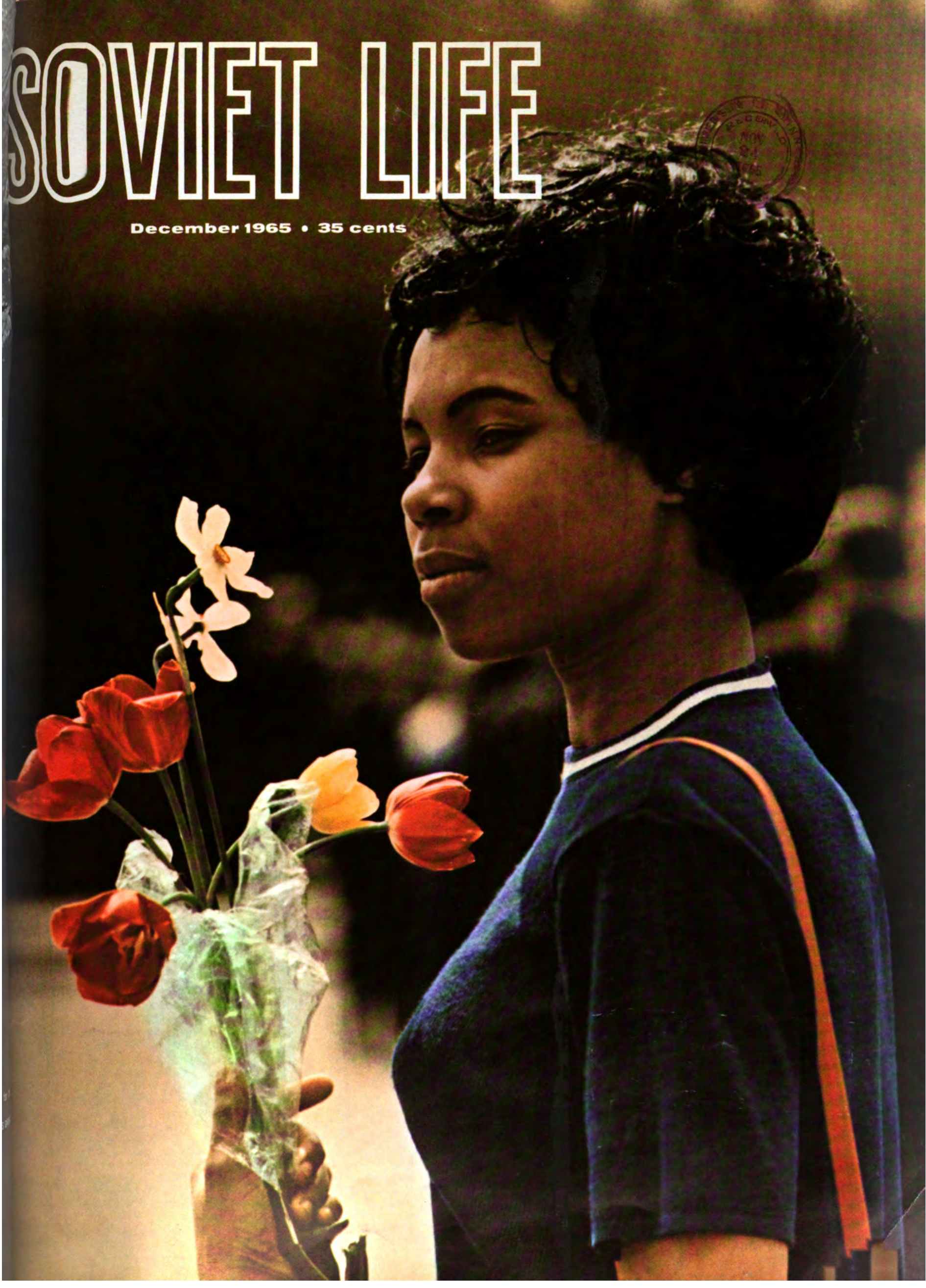
SL 126 566
UNIV OF MINN
WALTER LIBR
MINNEAPOLIS MINN

A victorious solo finish in the USSR championship finals for the women's team of the Zhalgiris Club.

PHOTOGRAPH BY BORIS GARBUZ

SOVIET LIFE

December 1965 • 35 cents



FRIENDSHIP UNIVERSITY'S FIRST



Graduates. They come from Southeast Asia, the Near and Far East, Africa and Latin America.

IN 1960 everything they saw, heard and did was a first. They took their first walk on a Moscow street, saw their first snow, wore their first Russian fur cap, read their first Russian book. Five Moscow summers and winters have now gone by and the 228 men and women of the first graduating class of the Patrice Lumumba Friendship University have said good-by to their student days, to the Soviet capital and to their friends.

The diplomas certified that the 184 graduates from abroad had done more than meet the university's course requirements, they had already made a working contribution to their countries' progress. Their diploma projects were not abstract theses, but had a concrete relation to life in their countries. Garber Moses, who graduated from the engineering faculty, drafted a hydroelectric system for the Sewa River. It is one of the largest rivers in Sierra Leone, where he lives and did his field work.



RADUATING CLASS

"We all feel very good," said Moses, "about the fact that the knowledge we acquired here will be put to use back home. The university taught us to think and work independently. We are happy that we are graduating and sad that it means leaving Moscow. But wherever we are, the friendships we made will continue to grow."

A Ceylonese student wrote his graduation thesis on tea, a student from Indonesia on sea transport, and one from Mexico on the Indians of South America. The subject Mamadou Keita of Mali chose for his thesis was the "The international legal basis for nationalizing foreign monopolist property."

Muscovites said good-by to the first Friendship University graduates at the Kremlin Palace of Congresses and wished them every success in working for the good of their countries. Their places were taken by new students whom Muscovites greeted with the same hearty "Welcome!"

FROM THE BOTTOM OF OUR HEARTS

(Say Graduates of the Patrice Lumumba Friendship University)

AN *IZVESTIA* REPORTER queried some of the graduates of the Patrice Lumumba Friendship University about their impressions of five years of study in the Soviet capital.

Amelia Brito Rojas (Cuba)

I can't tell you how happy I am at having won a diploma with honors. I am happy that I have become the first Cuban woman geologist. I started a family here in Moscow. A month ago my husband and I sent our little "Muscovite" Pablo to Havana.

I am most thankful to our wonderful teachers and to the whole Soviet people for everything they have done for us.



Amelia Brito Rojas, the first Cuban woman geologist, receives a diploma with honors.

Baldev Krishan (India)

It feels like a very short time ago that I received a telegram from Moscow telling me I had been admitted to Friendship University. Four years have passed, and now I am an engineer. I succeeded in graduating from this wonderful university a year early. Before I go back home I want to thank, from the bottom of my heart, the Soviet designers and workers who passed their knowledge and experience on to me. I want to convey the warmest words of gratitude to the faculty advisor of my diploma project, Kirill Stayev, a leading machine-building specialist. It is largely due to him that I am taking home an honors diploma.



Indian student Baldev Krishan earned a degree in engineering.

Marani Omar Umberto (Argentina)

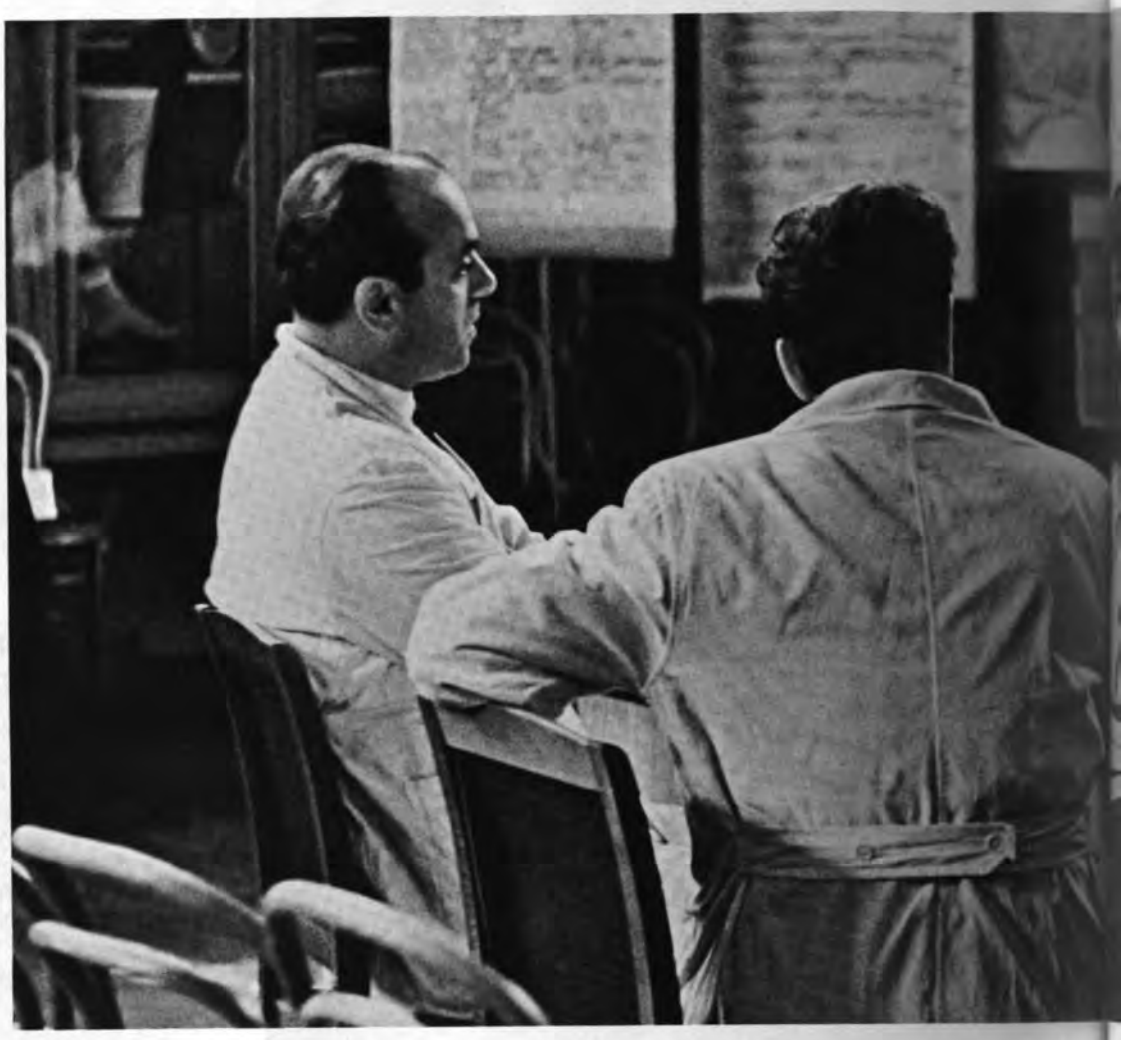
I am thankful to the Soviet people for giving me, a house painter, the opportunity to get a higher education which I would not have been able to get at home. It was difficult for me to study for I had parted with my schoolbooks nine years before. It was not easy making an engineer out of me. Nevertheless, I have become one, and the credit for that goes to the wonderful Soviet professors and the wonderful workers—foreman and engineers—with whom I made friends during my practical training sessions at the Moscow Krasny Proletary and Ordzhonikidze Machine-Tool Plants and the Likhachov Auto Works.

My thanks to you all, friends!



The first Argentinian student to receive a degree from a university in Moscow.

FRIENDSHIP UNIVERSITY'S FIRST GRADUATES









(Top) A future physician takes an examination in dermatology.

(Center left) A student from Brazil relaxes after a full day.

(Center right) Track star Emmanual Egboga has a try at soccer.

(Bottom) The university has two libraries and two reading rooms.

(Far right) Maria Teresa Erises gets a lesson in Russian.







Facts and Figures

As many as 900 lecturers, including 52 professors and Doctors of Science and 296 assistant professors and Masters of Science, conduct classes at the university.

O

In less than five years the university conferred 44 masters and 8 doctors degrees; 70 scholars earned the title of assistant professor and 13 the title of professor.

In these five years more than 800 foreign delegations visited the university. The university maintains contacts with 26 schools of higher learning in 14 countries.

O

Of the 228 students who were graduated this year, 63 are engineers; 26 mathematicians, physicists and chemists; 30 engineer-agronomists; 43 are specialists in economics and economic planning; 31 specialists in international law; 35 historians and philologists. Fifty-seven of the graduates are from Southeast Asia and the Far East, 38 from Africa, 58 from Latin America, 31 from the Arab countries and the Near East, 44 from the USSR.

O

The six main faculties of the university train students in 14 specialties. The university has 79 chairs, 112 laboratories and 55 study rooms.



SOVIET LIFE

DECEMBER 1965 No. 12 (111)

The magazine SOVIET LIFE *is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine* SOVIET LIFE *in the United States and the magazine* AMERICA *in the Soviet Union.*



Front Cover: A Nigerian girl who was part of the first class to graduate from Friendship University. *See story on page 1.*

PICTURE CREDITS

Victor Sak Cover I, 2-3; Anatoli Garanin Cover II, 1; Dmitri Baltermants 1-3; Victor Akhlomov 2-3; Miroslav Murazov 10-11; Gherman Cheryomushkin 12-13; Igor Vinogradov 14-15, 18-19; Alexander Cheprunov 20; Yuri Cherepanov 24-25; Valeri Shustov 27; Yuri Nosov 27; Anatoli Sukhov 28-29; Gennadi Koposov 30; Leonid Zhdanov 32-33, 37, 54, 55; Georgi Petrusov 34-35; Valeri Kosorukov 34; Yevgeni Umnov 36; Yevgeni Tikhanov 40-41; Leonid Sergeyev 45; Isaac Tunkel 46-47, 48; Vasili Peskov 50-51; Alexander Goryachev 54-55; Yuri Chernyshov 62-63, 64, Cover III; David Sholomovich Cover IV.

Editor in Chief (Moscow Editorial Board): Yuri S. Fantalov, APN, Pushkin Sq. 2, Moscow, USSR.

Editor (Washington Editorial Board): Alexei S. Belokon, 1706 18th St., N.W., Washington, D.C., 20009.

Managing Editor (Washington Editorial Board): Alexander L. Makarov, 1706 18th St., N.W., Washington, D. C., 20009.

Art Director (Moscow Editorial Board): Marina T. Zabolotskaya, APN, Pushkin Sq. 2, Moscow, USSR.

Anything in this issue may be reprinted or reproduced with due acknowledgement to the magazine SOVIET LIFE.

Subscription Rates:
6 Months—$1.00 1 Year—$1.90 2 Years—$3.50

Published by the Embassy of the Union of Soviet Socialist Republics in the USA.

Second-class postage paid at Washington, D. C. and at additional mailing offices.

Printed by Fawcett-Haynes Printing Corporation, Rockville, Md.

Page

Improve Industrial Management, Perfect Planning, Strengthen Economic Incentives (Summary of Alexei Kosygin's report at the Plenary Meeting of the Central Committee of the CPSU) 6

SOVIET PEOPLE

Six Days in the Mountains by Konstantin Semyonov 14
Alexius, Patriarch of Moscow and All Russia 26
Petrovsky's Seminar by Lev Kokin 30
Marshal Bagramyan Replies to an American Reader 39
To Find an Idol by Ivan Zuzukin 42

INTERNATIONAL CONTACTS

Friendship University's First Graduating Class 1
From the Bottom of Our Hearts by Alexander Serbin 1
The Psychiatrist and the Soviet Social Order by Isidore Ziferstein, M.D. 22
Two Evenings Out of Twenty-Nine by Robert Tsfasman 40

ECONOMY AND SCIENCE

Demographers Estimate by Professor Boris Urlanis 5
The Agriculture Industry by Dmitri Rudy 20
Cybernetics in the Economy by L. Levshin 25
The Metagalaxy Product of Two Elementary Particles by Professor Kirill Stanyukovich 56

EDUCATION

Television Children by Margarita Smirnova 24
Academicians of the 21st Century by Iosif Nekhamkin 62

LITERATURE AND THE ARTS

Point of Application by Lev Belov 10
Unlucky Alfonso by Victor Konetsky 12
Dancing Is His Life by Mark Khromchenko 32
The Spring of Soviet Music by Aram Khachaturyan 38
Bells and Bell Ringers by Vladimir Desyatnikov 44
Eagle and Sword by Kim Bakshi 46
Men at War by Rezo Chkheidze 58

RECREATION AND SPORTS

Beauty in Motion by Andrei Batashov 57

PROBLEMS WE DISCUSS

Native Land by Vasili Peskov 50

MISCELLANEOUS

Letters to the Editor 5
Queries from Readers 9
Around the Country 28
Children's Corner 45
Father Frost's Fantasies 54
Brief Comments 60
Next Issue 61

NOVOSTI PRESS AGENCY

MATERIAL FOR THIS ISSUE COURTESY OF NOVOSTI PRESS AGENCY

DEMOGRAPHERS ESTIMATE

that world population will have grown by 70 million in 1965; that for every 107 boys 100 girls will have been born.

By Boris Urlanis
Professor, Doctor of Science (Economics)

WORLD POPULATION reached the billion mark a long time ago, at the end of the Napoleonic Wars; it reached the two billion mark in 1930, and the three billion mark a short while ago. Sometime in 1960 the child who opened the count to humanity's fourth billion was born. The anniversary passed unnoticed.

The world's population will be reaching a fantastic four billion before too long. It grew by 68 million in 1964 to an impressive total of 3.302 billion by the end of the year. Which means that the population grew daily by 200,000—every hour another 8,000, every minute another 130, every second two new inhabitants on our planet! In our country three million new citizens were born in 1964. By the end of 1965 about 332 million people will be living in the USSR.

In 1662 John Graunt, an English haberdasher, published a book on mortality in London and noted that the mortality rate for men was higher than that for women. He also noted the fact that for every 100 girls about 106 boys were born. This was the first scientific work on demography, and the problems Graunt raised agitate demographers to this day.

The ratio of men to women varies with age. The initial surplus of male births is spent rather quickly with the years, and a balance of sexes is established at about the age of 18. Then follows a period of female preponderance which lasts through old age.

Unfortunately we know the life expectancies of men and women in only the 60 countries where demographic statistics are compiled. In just three of these countries do men live longer than women—Ceylon, Cambodia and Guatemala. In Bolivia the life expectancy of men and women is the same. The greatest female superiority is observed in economically developed countries. In our country the differential is 8 years, in France it is 6.9 years, in the United States 6.6, in Finland 6.4 and in Brazil 6.2.

Last year's statistics show that in our country this differential is diminishing, but slowly. Millions of our men were killed in the last war. The deficit is less every year but it will be a long time before we reach a balance.

There were about two million marriages in the USSR in 1964. Many of the newlyweds were born during the Second World War. Not all marriages worked out, unfortunately, several hundred thousand were dissolved last year. The pertinent fact here is that nearly half of all the divorced couples were childless.

The average life expectancy in our country reached 70 years in 1964. This will be the average life expectancy of infants born now. (Demographic statistics take into consideration the potentialities of every age group. They show the average life expectancy of children born this year, assuming the mortality rate of each age group stays at its present level.) The life expectancy of people already past their youth is above average. According to the latest data, 30-year-old Soviet citizens will live on the average for another 44 years. Those who are 40 will live for another 35 years, those who are 50 will live for 27 years, and those who are 60 for 19 years.

The average life expectancy of those who are 60 will not be 70 but 79. This is so because all those who have reached old age belong, so to speak, to the elite selected by life itself from particularly viable and "lucky" people. You might say that old people age not by years but by half years! Those who will turn 90 this year can expect to live for at least another five years. And those of them who live for another 10 years and celebrate their centenary can expect to live for at least another three and a half years.

Infant mortality has dropped 89.9 per cent compared with czarist Russia. Our index is lower than Austria's and Italy's but higher than Sweden's and the Netherlands'. Our children are growing sturdier and healthier every year, they are taller and weigh more. In Moscow 14-year-old boys weighed 84 pounds in 1938; in 1959 they weighed 102 pounds, that is 21 per cent more.

For a long time only two of our cities had populations of more than a million—Moscow and Leningrad. In 1959 they were joined by Kiev, then by Baku and in the beginning of 1965 by Gorky, Tashkent, Kharkov and Novosibirsk. Kuibyshev and Sverdlovsk are now close runners-up.

Demographers have to be optimists: All their calculations and forecasts will be worthless in the event of war. But assuming peace, we can predict that 127 million infants will have been born in 1965 and 57 million people will have died.

There are no world statistics for the causes of death, but we can say with certainty less than half of them will die of old age. Three million will die in accidents, millions will die of infectious diseases (tuberculosis primarily) and cancer. Nevertheless, despite the high mortality rate, the population of our planet will have grown by 70 million in 1965, more than half of this increment to be shared by China and India.

1966 is almost here. When it ends, so will two-thirds of the twentieth century. Our world is faced with the job of clothing and feeding its ever increasing population. To do that job we need peace and the scientific and technological progress that comes with it.

LETTERS TO THE EDITOR

Dear Editor:

It is with great interest that I read your article "Our Universities" in the September 1965 issue of SOVIET LIFE. However, the statements of the six Soviet educators on "what they are most proud of" left me more indifferent than impressed. Indeed, as a humanities student I take only a mild interest in such things as radio astronomy, bionics, microelectronics, theoretical astrophysics, etc.; judging from these professors' answers, it seems that Soviet universities produce only scientists. Yet, I am enlightened enough to know better (especially after reading the closing article "Here Comes the Professor," about a lecture on Pushkin).

I myself am studying Classical Philology (ancient Greek and Latin) at a leading American university, and am therefore very interested to learn how classical studies are faring in Soviet universities: are the so-called "dead languages" still alive in the Soviet Union, or are they reolly dead?

Very sincerely yaurs,
Fred Schreiber
Cambridge, Massachusetts

The so-called "dead languages" are still alive in Soviet universities and institutes. They are studied by doctors, lawyers, linguists and students of foreign languages at pedagogical institutes. See our January (p. 12) and May (p. 36) 1965 issues.

Editor

Dear Editor:

It is always with interest that I read *America* magazine. I assume that *Soviet Life* magazine evokes equal interest in Americans...

To my mind the article "Love, Sex and the Young Family" does credit to the magazine. It analyzes thoroughly facts which are usually represented by dry statistical data. "Children's Corner" is also an attractive section.

The articles on Kamchatka, Karelia and Yerevan are certainly of cognitive interest. The photos and the captions for *Yunost*, our favorite magazine, are very expressive.

I would like to mention specifically the articles in the May issue devoted to the Great Patriotic War. The American readers will know, when they read these articles, whot a dear price we had to pay for victory, and they will recall the days when our nations were comrades-in-arms. And at present, too, we should join forces to preserve our planet from the horrors of wor.

Sincerely yours,
Ludmila Bindeman
English Language Instructor
Moscow Institute of Steel and Alloys

TO IMPROVE INDUSTRIAL MANAGEMENT, PERFECT PLANNING, STRENGTHEN ECONOMIC INCENTIVES

Summary of the report made by ALEXEI N. KOSYGIN, Member of the Presidium of the CPSU Central Committee, Chairman of the USSR Council of Ministers

At the end of last September the Plenary Meeting of the Central Committee of the Communist Party of the Soviet Union adopted a decision on improving the management of industry. On the basis of the ideas and recommendations presented at the meeting, the USSR Supreme Soviet has endorsed an improved system of economic management.

The problems of improving economic management, perfecting the planning system, furthering the role of economic incentives, and enhancing the rights and initiative of enterprises have been the subject of lively discussion throughout the country for a number of years. These discussions were held in the press, at economics institutes, specialists' conferences, and party and trade union meetings. In addition, extensive experiments were carried out at hundreds of enterprises in Moscow, Leningrad, Kharkov (the Ukraine), Sverdlovsk (the Urals), Kazan (Tataria) and many other areas of the country, making it possible to check in practice more progressive methods of socialist management and new forms of manpower organization and remuneration.

The discussion at the Plenary Meeting was a logical result and consummation of these efforts and researches by economists, engineers, managers, and workers. The Plenary Meeting decisions sum up, as it were, all the most rational proposals, those verified by life. And this is only natural, for improved economic management combines centralized management and scientifically grounded planning in the various branches of industry with a universal extension of the initiative of enterprises and the even more active participation of workers, engineers and technicians in managing production.

In future issues of **Soviet Life** ***we plan to publish articles by prominent economists and industrial managers as well as on-the-scene reports on this system of management in action. We shall also publish materials on the forthcoming Twenty-third Congress of the CPSU, which is scheduled to convene next March.***

IN a 15,000-word report delivered at the Plenary Meeting of the Central Committee of the Communist Party of the Soviet Union on September 27, 1965, Alexei Kosygin stressed that "in tackling the problems of further developing industry and raising the living standards of the people, emphasis must be placed on improving the methods and forms of industrial management."

To this end, Kosygin proposed:

that the scientific standards of state planning of the economy be raised and that planning organizations provide for the rapid industrial application of science and engineering in their plans;

that the economic independence and initiative of the enterprise be expanded and its importance as the main economic unit in the economy be increased;

that the system of cost accounting be strengthened and the economic stimuli in production be intensified by using on a larger scale such indices as price, profit,* bonuses and credit;

that more material incentives be provided for increasing the interest of factory and office workers in improving the over-all results of the work of their enterprise;

that industrial management be improved by setting up agencies built on the branch principle, *i.e.*, industrial ministries vested with the power to manage the production branches and completely responsible for the development of these branches;

that the branch principle of management be combined with the territorial principle. Kosygin reported on the new rights to be granted the union republics in planning, capital construction, financing, manpower and wages;

that the Supreme Economic Council of the USSR Council of Ministers, the USSR Economic Council, and the republican and regional economic councils be dissolved.

"The improvement of economic management," Kosygin said, "is unthinkable without the further development of its democratic mainstays, without a considerable increase in the participation of the masses in the management of production."

"The proposals, submitted at the Plenary Meeting stem from the leading role of centralized planned management in the development of our economy, Kosygin pointed out." The deviation from this principle would inevitably lead to the loss of advantages offered by a planned socialist economy."

New Demands

Alexei Kosygin pointed out that the successful completion of the program of building the material and technical basis of communism, further raising living standards and strengthening the defense potential of the country largely depends on a correct solution of the problems of planning, management and economic stimulation of production.

During the period of the seven-year plan (1959-1965) the volume of industrial production will grow by 84 per cent instead of the planned 80 per cent. More than 5,500 major industrial enterprises were built and put into operation during these seven years. This means that the fixed assets put into operation in these seven years are equal in value to the assets of Soviet industry in 1958, which represented industry's entire previous development.

During these years a number of measures for raising living standards were carried out: The workday was shortened, the average wage was increased, taxes were either abolished or reduced, and pensions for collective farmers were instituted.

However, the present-day scientific and technical revolution places in the foreground such problems as technical standards, quality of production and its efficient utilization. "The center of gravity of peaceful economic competition between the socialist countries and the capitalist countries is today shifting precisely to these aspects of production," declared Kosygin. He also mentioned that

* the meaning of the word profit under socialism is discussed in our July issue, page 37.

in recent years the national income and industrial output per ruble of fixed assets had declined somewhat and that the rate of growth of labor productivity had also somewhat slowed down. "We can and must improve the situation within the next few years," the Chairman said.

Kosygin pointed out that one of the most important tasks was to increase, within the next few years, the share of the national income spent on consumption.

Kosygin pointed out that the advantages and opportunities offered by the socialist system of economy are still far from being fully utilized. "Although our industry is developing successfully and on the whole is overfulfilling the targets of the Seven-Year Plan," he said," we are not satisfied with the results achieved, especially in such branches as the light, food, chemical, timber and paper industries and in the building materials industry.

"We are aware that in the not-too-distant past quite a few errors were committed in planning, and a thoughtless, voluntaristic approach prevailed in solving important economic problems. This led to an upset in the necessary proportions between the different branches of the economy. For a long time we have not had the necessary correlation between the development of agriculture and the development of industry. The lag in agriculture has resulted in slowing down of the rate of development in industry, especially in the branches producing consumer goods.

"The March Plenary Meeting of the CPSU Central Committee considered in detail the reasons for the lag, and evolved concrete measures to step up the development of all the branches of agricultural production. We must say outright that it was only the March Plenary Meeting which mapped effective measures to do away with that disproportion. The consistent implementation of those measures can already be felt in practice."

Management and Incentives

The forms of management, planning and stimulation of industry now operating no longer accord with modern technical and economic conditions and the present level of the productive forces, Kosygin said. He pointed out that it was necessary to increase the economic independence of enterprises and reduce the number of indices assigned from above, retaining only those aimed at raising production efficiency. For example, to stimulate the enterprises to produce goods really needed by the economy and the consumer, assignments for the volume of goods to be sold will replace the over-all volume of production index. To induce enterprises to raise their production efficiency, it is proposed to use the profit index, which will also be assigned from above.

"Improvement of the forms and methods of planning," Kosygin said, "will make it possible to tackle the problem of strengthening and developing the system of cost accounting in a new way. Lenin stressed that each enterprise must operate on a paying basis, that is, it should completely cover its expenditures from its income and should make a profit.

"The enterprises operating on the cost accounting system and their managers," Kosygin said, "must bear full responsibility for the economic results of the work they do. Lenin's ideas on cost accounting must become firmly entrenched in our economic activities. In the consistent implementation and further development of the idea of cost accounting we see the way to the solution of many of the current problems of communist construction at the present stage.

"What must be done in order to strengthen and develop cost accounting?

"Firstly, the conditions must be created for enterprises to be able to solve their problems of improving production independently, for arousing their interest in utilizing to the utmost the fixed assets assigned to them for increasing output and the amount of profit they receive. It is therefore necessary to leave to the enterprises more of the profits that they derive so that they will be able to develop production, improve their techniques, materially encourage their workers and raise the working and living conditions of the industrial and office workers on their staff. The amount of profits to be left to the enterprise should be in direct proportion to the effectiveness with which it utilizes the fixed assets assigned to it, to the increase in volume of the goods it sells, to the improvement in the quality of its goods, and to the increased profitability of the enterprise. At the same time financial grants made by the state to enterprises for capital investments must be restricted and the credit system expanded.

"Secondly, it is necessary to strengthen the cost accounting system in interenterprise relations, to guarantee that enterprises adhere strictly to consignment deliveries as stated in concluded contracts, and to increase their material responsibility for discharging their obligations.

"Thirdly, on the basis of the cost accounting system it is necessary to provide material incentives for the entire personnel and every shop and section of the enterprise in order to make them interested not only in fulfilling their own individual assignments but also in improving the over-all results of the enterprise.

"In short, it is necessary to orient all the activities of the enterprise toward seeking ways of improving the efficiency of production, of increasing its own income and thereby increasing the over-all national income. . .

"When these measures are implemented, the size of the production-development fund—which the enterprises will be free to use for technical improvements in production—will comprise a much larger sum than it does today. This can be seen from the following data:

"In 1964, expenditures from enterprises' funds* for the introduction of new techniques and development of production in industry totaled 120 million rubles, and 600 million rubles of bank credits were spent for the same purposes; the total figure was therefore 720 million rubles. Under the new conditions the development fund will be equal to approximately 4 billion rubles in 1976, including 2.7 billion rubles in the amortization fund."

Kosygin pointed out that about 50 per cent of industrial enterprises do not possess funds created from their own profits, and in those cases where enterprises do possess them, these funds are very small and sums paid out from them for encouraging the workers are insignificant. Nearly every kind of bonus and other incentive is being paid not from profits but from the wages fund. The achievements made by the enterprise in increasing profits and the profitability of its production do not have any direct effect on the wages of the staff of the enterprise.

"It is necessary to change this system in order to give the workers greater material interest," he said. "It is necessary to introduce a system under which the enterprise's opportunities for increasing the remuneration of its workers would be determined, above all, by the growth of production, improved quality, increased profits and greater profitability of production. The basic wages and salaries of factory and office workers will continue to be raised by central impetus as before. At the same time the enterprises must have at their disposal—in addition to the wages fund—their own source for stimulating the workers to individual achievements and to high over-all results for their enterprises.

"This source must be a part of the profit obtained by the enterprise. Out of this profit the enterprise will pay not only bonuses to factory and office workers for high labor achievements in the course of the year but also a lump sum at the end of the year." For this purpose a fund for the material stimulation of workers will be introduced at each enterprise from the profits obtained by the enterprise.

Kosygin also proposed that a fund for financing social and cultural undertakings and housing construction be set up at each enterprise. The means for this fund will be derived from profits and

* The factory fund was introduced at Soviet enterprises long ago. It is comprised of deductions from profits for the purpose of stimulating production and giving the personnel material incentives. The money is used for technical re-equipment and expansion of production, and for the construction of housing and cultural and public service establishments. In addition it pays for bonuses and accommodations of employees at sanatoriums and resorts. The fund is spent by the manager with the consent of the trade union branch committee.

will be used for housing construction (over and above the central resources allocated for this purpose), for building and maintaining preschool institutions, Young Pioneer camps, rest homes, sanatoriums and for other social and cultural needs.

"Consequently," Kosygin pointed out, "the better the enterprise functions, the more opportunities it will have not only for raising wages but also for improving the living conditions of its workers and for cultural and health-protection undertakings.

"The proposed changes in the methods of planning and economic stimulation are not based on theoretical conclusions alone but also on the results of practical experience which we have already obtained. In 1964 and 1965 new methods of planning and economic stimulation were introduced in a number of enterprises of the clothing, footwear and textile industries. The activities of those enterprises were evaluated on the basis of the fulfillment of the plan for goods sold and the profit obtained.

"Recently a new system of bonus payments to managers, engineers, technicians and office workers was introduced at enterprises in a number of industries, aimed at raising the workers' interest in increasing production and improving the quality of the goods. The first results, which we now have, already confirm the correctness of the road chosen."

Role of Workers

The industrial managers, Kosygin pointed out, bear the entire brunt of personal responsibility for the work they are charged with by the state. This responsibility, the role of one-man command in industry, is becoming especially important now. But this must organically blend with the broadest participation of the workers and office employees in the discussion of all the most important questions of the economic life of the plant and of production management. The success of a manager's work depends on the support he gets from the workers and the authority his efficiency and his adherence to principle win him.

Perfection of management is impossible without further developing its democratic principles, without considerably extending the workers' participation in industrial management. The role of the factory workers and their organizations in the solution of planning problems, the mobilization of internal production reserves, the evaluation of the results of the work and the stimulation of workers must be enhanced.

In view of the increasing enterprise funds, the factory must assume greater responsibility for seeing that they are put to proper use. All workers should be made, by every possible means, to feel that they are the masters of their factory.

Kosygin particularly pointed out that the most important means for drawing the workers into the struggle for more efficient operation of the factories is the collective agreement. Its role will now be greatly enhanced. "The collective agreements," he said, "should be extensively and carefully discussed by the workers and office employees of the factories, for it must be remembered that their interest in improving the general results of the work will greatly increase. Every worker and office employee of the factory should know what concrete measures will be taken to ensure that the factory works better and more profitably, how the improvement of the factory's operation will affect working and living conditions and wages, and what responsibility the collective agreement places upon the workers and office employees. Business managers and trade union organizations are obliged to improve the practice of negotiating collective agreements to make sure that the obligations embodied in the agreement are followed up regularly."

Kosygin noted that the transition to new forms and methods of economic stimulation called for a better system of price formation. He said he thought it would be possible to introduce new prices by 1967-1968.

Entirely Different Conditions

The economic councils, Kosygin said, had a number of positive aspects. But as time passed major shortcomings in industrial management became evident. The setting up of industrial ministries will remedy this. The ministries will plan and control production and handle problems involving technical policy, the supplying of raw materials and equipment, financing, manpower and wages. This centralization will be combined with the development of initiative in the union republics.

It is planned to establish nine All-Union ministries for the guidance of various branches of machine building. Other branches are to be transferred to double subordination: All-Union and republican. For this purpose 11 ministries are to be set up.

It may seem at first glance that a mere return to former ministries is suggested. "To think so, however," said Kosygin, "means to disregard a number of new factors, to make a mistake. The newly organized ministries will work under entirely different conditions when the functions of the administrative management of industry are combined with a considerably greater application of cost accounting methods and economic incentives, when the economic rights and the initiative of enterprises are substantially extended. . . .

"The development of economic methods of industrial management changes the very character of relations between enterprises and higher bodies. The old notion that in relations between leading economic bodies and enterprises the former have only rights and the latter only duties must be discarded. The development of economic methods of management and the extensive introduction of cost accounting in industry call for mutual rights and duties in these relations and for a greater responsibility of both enterprises and industrial management bodies."

The Chairman said that the proposed changes are an important economic reform. He stressed that the measures planned to improve management will be carried out gradually and in an organized manner, according to a carefully drawn-up plan.

Essence of Economy

Kosygin ridiculed the assertions by bourgeois economists of an alleged gradual return of the Soviet economy to capitalism, saying that these talks only testify to their wishful thinking. He also recalled that bourgeois ideologists were seeking to depict the economic reform which was being prepared as a manifestation of weakness of the planned socialist system of economy, as a return to capitalism. "These are vain hopes!" he said. "The essence of an economic system is determined by who holds state power, who owns the means and implements of production, in whose class interest production is developed and profits distributed. This is the fundamental question, and on this question we have always been and will remain staunch adherents of the principles of Marxism-Leninism . . .

"Socialist ownership in the USSR is developing into communist ownership," Kosygin pointed out.

"We understand," Kosygin went on, "that the propaganda clamor on 'difficulties' of the Soviet economy, on its 'bourgeois degeneration' pursues another aim as well.

"Our enemies are dismayed at seeing that many independent countries of Asia and Africa are choosing the socialist road of development, are studying the experience of the Soviet Union and other socialist countries and developing economic and political contacts with them.

"By concocting some kind of 'crisis' in the Soviet economy they would like to discredit socialism, its economic methods, its economic efficiency, and thereby cast aspersions on our country's economic policy. However, these attempts are futile. The decisions our Plenary Meeting will adopt open up new opportunities for making still better use of the advantages of the socialist system of economy.

"The great international importance of the proposed economic reform is that it will strengthen the positions of socialism in the economic competition between the two social systems," declared Alexei Kosygin.

QUERIES FROM READERS

These queries are taken from *USSR: Questions and Answers*, a book prepared around questions sent by foreign readers to publications serviced by the Novosti Press Agency.



Copies may be obtained from these American agents of Mezhdunarodnaya Kniga: Znanie Book Shop, 5237 Geary Boulevard, San Francisco, California 94118, and Four Continent Book Corporation, 156 Fifth Avenue, New York, New York 10010.

QUESTION: How is the inviolability of the home protected?
ANSWER: Laws based on Article 128 of the USSR Constitution provide that no one may enter another person's home without his consent, except for officers of the law in search of evidence who must show sufficient grounds and a court warrant or order from the procurator's office.

The penalties for violation of this constitutional right are severe.

QUESTION: To whom does property jointly acquired in marriage belong?
ANSWER: The problem arises only in exceptional circumstances, when a family breaks up, through divorce, usually. The law says that property jointly acquired in marriage belongs to both partners. Court practice in divorce cases shows that the husband and wife are usually awarded equal shares of such property.

QUESTION: Can one marry in church and baptize children in the USSR?
ANSWER: If bride and groom are religious, there is nothing to prevent them from getting married in church.

The same holds true for religious parents who want to baptize their children. Permission from the local authorities is required only for open-air religious ceremonies and processions. No special permission is required for funeral rites at the cemetery and for processions inside the church grounds.

QUESTION: Are there full-time paid trade union officials? Organizers?
ANSWER: About 96 per cent of the primary trade union organizations do not have any full-time paid officers. All the work is directed by unpaid trade union members who are elected at a general meeting (or conference) by secret ballot for one-year terms. Most of the city and district trade union committees also get along without paid staff. Even some regional trade union committees, like the machine builders, manage with unpaid organizers who work full-time at their regular trades.

QUESTION: What does it cost the government to keep a boy or girl in school?
ANSWER: About 90 rubles a year. At boarding schools maintenance and education cost the state more than 900 rubles a year for each student. On the college level the cost is higher, from 75 to 100 rubles a month, in addition to the stipend each student gets.

QUESTION: What taxes do people pay?
ANSWER: Taxes are low. Only about 7 per cent of the budgetary revenue comes from taxes.

Wage and salary workers, handicraftsmen and other persons living in towns and workers' settlements pay a monthly income tax of from 0.1 to 13 per cent of earnings.

There is a tax on bachelors, spinsters and childless couples which is used to cover a part of the state's allocations for grants to mothers of large families and unmarried mothers and for maternal and child care. The rate is 6 per cent of earnings, and it is paid by bachelors between the ages of 20 and 50, spinsters between the ages of 20 and 45, and by childless couples.

In rural areas an agricultural tax is paid by individuals on the income received from their personal subsidiary husbandries. The payment received by collective farmers for their cooperative labor is figured into the income tax of their collective farm and is therefore not taxable.

In addition to these taxes there are inconsiderable local taxes: owners of houses pay a house tax and land rent; a tax is paid by owners of vehicles and cattle; and a charge is made for a stand at collective farm markets.

QUESTION: Can a doctor have a private practice?
ANSWER: Yes, a doctor who has a properly equipped office in his home is permitted to have a private practice. He pays a tax on what he earns.

Some forms of treatment—like hypnosis and surgical operations—are forbidden to private practitioners, except in emergency cases. In the Soviet Union the scale of private practice is minimal because medical care is free. Many dentists practice privately.

QUESTION: How much do books cost?
ANSWER: Books are very cheap and within everyone's means. The average price of textbooks or general instruction books is 26 kopecks; for books on farming, 27 kopecks; for fiction, 40 kopecks; for scientific books, 52 kopecks. By way of comparison, a ticket for a movie costs 10 to 50 kopecks. There are also more expensive books, of course—fundamental research works, heavily illustrated art books, gift editions. These, too, have large sales. For example, *Science and Mankind* (a collection of essays by scientists of different countries), printed in 100,000 copies and priced at one ruble 58 kopecks, sold out very quickly; 65,000 people subscribed to *A World History of Art*, published in several volumes at seven rubles a volume (this is one of the most expensive editions published). Books can be bought on the installment plan (25 rubles minimum). Old and rare books are bought and sold at secondhand bookshops.

QUESTION: Can a person be evicted from his apartment?
ANSWER: Only in exceptional cases strictly defined by law. A tenant living in a state-owned house may be evicted through court proceedings if he regularly damages the living quarters. This very rarely happens. Another ground for eviction is when none of the members of a family live in their apartment for more than half a year without a valid excuse. It is no wonder that practically no eviction cases come up in court. Finally, the law does allow the eviction of families living in houses marked for demolition. But that is a welcome eviction, as in such cases the state gives the family a new apartment.

QUESTION: How is the privacy of correspondence guaranteed?
ANSWER: It is guaranteed by Article 128 of the USSR Constitution and Article 7 of the Statute of the Ministry of Communications. The law protects the privacy of every form of correspondence—telegrams, money orders, and so on. Censorship offices at post offices existed only during the war. Today the personal correspondence of private citizens may be read only when it is necessary for establishing or discovering a crime. However, in such cases, which seldom occur in practice, a court warrant or the permission of the procurator is required.

QUESTION: Is it possible for people to move freely from one locality to another?
ANSWER: Of course. Where to live and where to work is a matter a person decides according to his wishes, inclinations, interests and habits. Some people prefer to live in one town or village all their life. Others are restless and crave change. The latter move to other places, some of them again and again. The country offers rich opportunities in this respect. Workers and professional people are needed everywhere: in hot Central Asia, in the taiga areas, in the fertile steppes of the Ukraine, in the new towns beyond the Arctic Circle.

QUESTION: Can a person change his place of work?
ANSWER: Certainly. All he has to do is to give the management of the plant or other establishment where he works two weeks' notice.







POINT OF APPLICATION

By Lev Belov

Photographs by Miroslav Murazov

THE POINT of application of our forces is not on the stage or in the rehearsal hall. It is on the globe, amid the major events and achievements of our century." This is what Anatoli Efros said in an interview soon after his appointment as chief director of the Lenin Komsomol Theater in Moscow. Set up in the late thirties as a theater of young people and for young people, the Komsomol Theater enjoyed great popularity for a long time. But for a few years it was in a state of crisis. Its performances deteriorated and its audiences turned away.

The arrival of a new art director, who had already gained prominence by directing productions at the Central Children's Theater, showed quite clearly that the Komsomol Theater was determined to win back its former fame. The choice of Anatoli Efros for the task was right, I think. His name ranks among the new directing "stars" who have come to the fore in the theatrical field in the last seven or eight years.

Oleg Yefremov at the Sovremennik Theater, Boris Lvov-Anokhin at the Stanislavsky Theater and Yuri Lyubimov, who started stage direction at the Drama and Comedy Theater quite recently, are all popular for their bold creative quests. Each of them, I am sure, will readily subscribe to Efros' words cited in the beginning.

To feel the pulse of time, to respond (in one's own creative manner) to the needs and requirements of the people, to show through art the people's life, aspirations and the hard historic struggle for the creation of a new society—this is what each of them strives to do. This is what they all have in common. But how different their creative methods, their manner of direction!

Characteristic of Oleg Yefremov, I think, is a passionate drive for the fullest possible embodiment of the author's ideas on the stage. There are times, when, bent on achieving this aim, he becomes so engrossed in revealing each actor's individual traits to the full that the director in him seems to recede into the background; but there are also times when his bold, sweeping direction acquires a startling prominence.

Boris Lvov-Anokhin is notable for his subtle, refined approach, for his perfect sense of proportion.

Yuri Lyubimov is different. The paradoxical, the grotesque, the sharp, eye-catching manner of direction and bold, clear-cut acting seem to be his element.

And, finally, Anatoli Efros. He values natural performance above all; he does not favor a sweeping style of direction. Everything is "just as in life" in his productions, and he is ready to sacrifice many things to achieve this aim.

Yefremov, Lvov-Anokhin and Lyubimov began their career as actors. Yefremov appears in different parts at the Sovremennik now and then. Lyubimov is still a leading actor at the Vakhtangov Theater and an instructor at this celebrated theater school. Incidentally, the majority of the actors at the Drama and Comedy Theater he heads now come from that school. The graduation performance of senior students at the school, Brecht's *The Good Woman of Setzuan*, was the hit of the season in Moscow. Lyubimov's pupils cast in that play were almost all accepted into the Drama and Comedy Theater.

Anatoli Efros never was a professional actor.

Efros and Yefremov worked together in the Central Children's Theater until 1958. It was there that director Efros and actor Yefremov first began to be noticed.

Efros judged his production of Alexander Pushkin's *Boris Godunov* a failure, in spite of its obvious success with the audience and the flattering reviews. Efros' productions are always a test of the rightness and logic of his conception. The aim of his experiments with Godunov—to arrive via a Pushkin play at the understanding of a contemporary ethical problem—was not achieved. According to him, his concept did not get beyond the laboratory stage.

Yefremov opened the Sovremennik in 1958 with a production of Victor Rozov's *In Quest of Happiness*. Efros staged the same play at the same time at the Children's Theater.

Yefremov's production was done on a sweeping scale, in fleeting *mise en scènes*, in a frankly publicistic key, with a clear-cut opposition of characters. Efros' production was more austere: the major notes were toned down, the action progressed at a seemingly slower pace, the director's imagination was curbed.

Yefremov scored the greater success. But Efros came upon something new in Rozov's play and divined the playwright's further evolution better than any other of the stage directors. In seven years he staged another three plays by Rozov and each time faultlessly sensed the new psychological shades in Rozov intonation.

Efros began his revitalization of the Lenin Komsomol Theater with Rozov's current play, *On the Wedding Day*, in his portfolio. Its première also paralleled Yefremov's. His artistic argumentation turned out to be more convincing than Yefremov's freehand version.

Among the brilliant debuts and triumphs of the last three or four theater seasons were those of Anatoli Efros as well. He won acclaim with very diverse plays. Sometimes a lucky director is afraid his luck will not hold out. Efros is not afraid, and sometimes loses. But he continues to be fearless. He does not believe in coincidence, in luck. He believes in the play that he chooses for his production and in the playwright: "I want my production to show up the directing, to show that the directing fits this particular play, and that the form, style and rhythm were all chosen especially for it."

When he took the job of chief director, Efros staged four plays by present-day dramatists: *On the Wedding Day* by Victor Rozov, *104 Pages About Love* by Edward Radzinsky, *Storm in a Teacup* by Ignati Dvoretsky and *My Poor Marat* by Alexei Arbuzov. All of them were done in short periods of time and showed 37-year-old Efros in excellent form.

But his responsibility as chief director overreaches any vanity he may have. He assigned the production of *Mann ist Mann*, an early play by Brecht (for whom Efros has great respect and affection) to the talented Georgian stage director Mikhail Tumanishvili. Efros yielded that time in order to amplify the area of his experiment.

In their reviews of each of the productions in the theater's new repertory, the critics noted the polemics the Efros of today was waging with the Efros of yesterday with plays of different social impact and graphic and compositional structure.

Recognizing the high artistic merits of Efros' new productions, some critics nevertheless say that these performances are somewhat lacking in the heroic and romantic traditions for which the Lenin Komsomol Theater was notable in its best years. They say that although he is very good at showing the most subtle sentiments of the characters, he does not (in their opinion) always choose plays with the right characters in them. They say that he shows ordinary people who do not do anything heroic. At times he even shows people who have not yet found their right place in life, or people unsettled by the complexity of our time, by the difficulties of the struggle for the construction of a new society.

As if replying to these critics, Efros said in a recent interview: "As I see it, the plays recently staged by the theater conform to the requirements of a theater for young people. In general the theater strives to choose the best of what the modern playwrights offer. But we do not write plays ourselves."

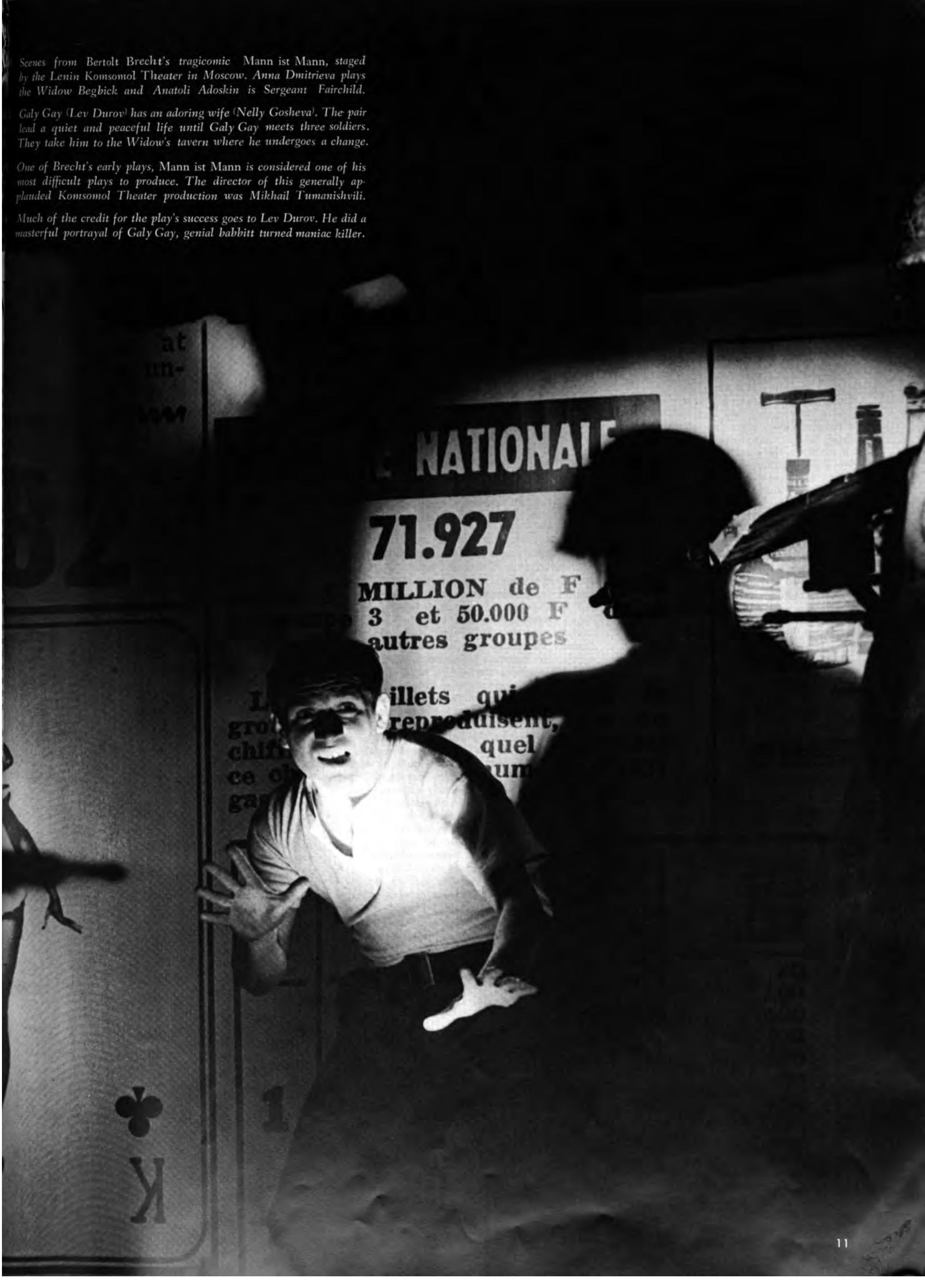
Anatoli Efros has been director of the Lenin Komsomol Theater for only two seasons. He is in his prime now. I am sure that he will turn out many more remarkable productions tackling the complicated problems of our times and worthy of the heroic youth of the Soviet Union.

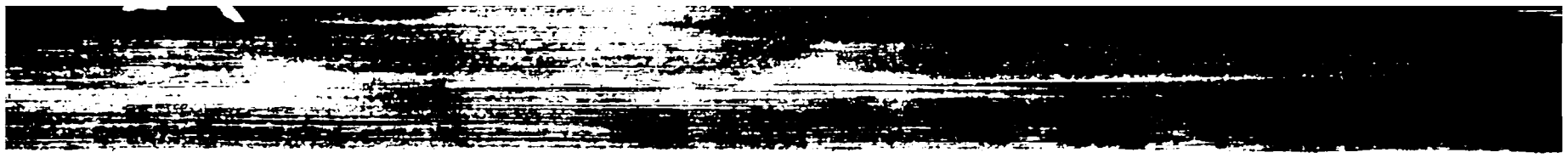
Scenes from Bertolt Brecht's *tragicomic* Mann ist Mann, *staged by the Lenin Komsomol Theater in Moscow. Anna Dmitrieva plays the Widow Begbick and Anatoli Adoskin is Sergeant Fairchild.*

Galy Gay (Lev Durov) has an adoring wife (Nelly Gosheva). The pair lead a quiet and peaceful life until Galy Gay meets three soldiers. They take him to the Widow's tavern where he undergoes a change.

One of Brecht's early plays, Mann ist Mann *is considered one of his most difficult plays to produce. The director of this generally applauded Komsomol Theater production was Mikhail Tumanishvili.*

Much of the credit for the play's success goes to Lev Durov. He did a masterful portrayal of Galy Gay, genial babbitt turned maniac killer.





UNLUCKY ALFONSO

By Victor Konetsky

IT is wrong to think that the world's unlucky people are all elderly bookkeepers, absent-minded students of the humanities or benign, bespectacled specialists in children's diseases. The hapless person exists in every profession, even the most romantic.

Misha Kobylkin, a luckless fellow if ever there was one, served in the Navy.

The nickname Alfonso he had acquired at the naval school we both attended stuck to him. It was the kind of high-sounding name the horse who comes in last always has.

Alfonso was a tall, lanky fellow whose very appearance proved that bad luck can dog a man's footsteps even when he yearns to do something utterly unselfish, like dedicating himself wholly to the good of society or bearing the cross of suffering humanity. Alfonso would have the road to Calvary, but the road to Calvary would not have him, and his every attempt to rush to the rescue of mankind ended in utter fiasco.

The sole reason he was able to enroll in a naval school even before he turned 16 was his father—a general. From that school, sooner than from others, one stood the chance of being assigned to active service. And Alfonso was dying to fight the fascists in single combat. But in the school's first drill, when the cadets were hurling dummy grenades, one of them, no weakling, mistakenly took the back of Alfonso's head for the target. Alfonso went to the hospital and did not leave until a year later. He got his wound stripe, acquired the habits of a seasoned serviceman, and went off to the fighting although he might have applied for a disability discharge and gone home with a clear conscience.

Once more he was prevented from doing great things for humanity. He contracted typhus on the way to his ship in a little place called Buzuluk and was back in the hospital. The experience did not improve his disposition and made him wonder if the war would last long enough for him to prove his mettle.

The Medical Corps major who chaired the hospital committee had no idea of Alfonso's frame of mind nor of the fact that he hated giving particulars about the dummy grenade. Priding himself on a sense of humor, the major pooh-poohed the idea of a young man dawdling away a whole year in the hospital because of a silly wound, not forgetting to add that Alfonso's being the son of a general explained a good deal. Alfonso told the major that the truth could easily be ascertained by a little experiment. Did he think the carafe on the table was heavier than a dummy grenade? The major replied that the question smacked of the penal battalion.* That clinched it. Alfonso seized the carafe and flung it at the major's pate with the steady hand of a good marksman. I do not know how long the major stayed in the hospital, but the blow landed Alfonso in the penal battalion all right.

He hoped that in the little time left he would redeem at the front his long months of idleness in the rear. But once again he reckoned without his bad luck. On the very next day after he was enrolled in the penal battalion, one of the men took it into his head to kick Alfonso off his bunk from the third tier. Alfonso went back to the hospital with a broken leg. He greeted Victory Day with his leg in a plaster cast scribbled all over with good wishes, hoisted to the ceiling and with a weight attached to the heel.

In 1946 he reappeared at our school with a war veteran's medal and the most amazing capacity for dropping off into a dead sleep at will, a habit acquired in his hospital days. A hangover, too, of those days, was his gift for spinning yarns, and he now entertained us with an inexhaustible store of war stories. For all his sad experiences, Alfonso had not lost his yearning to shoulder the burdens of humanity. But his luck was as bad as ever, if not worse. As a matter of fact, he turned into a walking contagion, spreading his pestilence wherever he went.

When he stepped into our drill boat, it capsized, and our section found itself in the Fontanka River. Soon bad luck plagued our platoon, and we had to stay behind sorting potatoes at the vegetable storehouse while the school went off to parade in Moscow. And then the infection spread to the company, too. We realized that when, on our way to the mess-room on the floor below, we found that we did not have to use the stairs, we could drop right through to the ground floor. Of course that could also be explained by the fact that the building which housed our school and which had once been an orphanage belonging to Prince Oldenburg had been badly bombed and shelled at the time of the Leningrad blockade. Anyway, the result was that a number of us went to the hospital, from which, needless to say, Alfonso was the last to be discharged. He had by now grown so used to the knocks of fate that all he wanted was to keep others from sharing his mishaps, but share they did.

Therefore when we finished school, were given our lieutenant's stars, a dirk each, a Navy blanket and two sheets, when we got so soused at the graduation party that between maudlin sobs we assured the superior officers we liked least that their fatherly wisdom would see us through to the end of our lives, when the train whistle blew at last to take us to the different seas, we heaved a sigh of relief at the thought that for some years to come at least we should be spared the pleasure of Alfonso's hapless company.

TEN years later we met for a reunion at the Vostochny Restaurant in Leningrad.

When I say "we" I mean Senior Lieutenant Nikolai Krivobokov (Bok), Senior Lieutenant Vladimir Kuznetsov (Snout), Lieutenant Commander Anatoli Pavlov (Pashka), Junior Lieutenant Misha Kobylkin (Alfonso) and myself (Ginger).

Alfonso, we were quick to notice, had been busted.

We ordered drinks and plunged into the usual talk of old schoolmates. Remembering not to divulge classified information, we kept interspersing our conversation with an endless flow of the numbers of Navy units, the names of their commanding officers, campaigning and wreckage stories, all the while grumbling about the Navy, Navy discipline and customs, officers and men, and the sea not being what it used to be—even the dolphins, we said, didn't poke their heads above the surface any more.

Alfonso alone took no part in our talk, making us wonder if he was ill at ease drinking vodka in the company of superior officers. And when a fellow sits there without trying to tell you how he steered his ship across Central Africa, you let him be. To tell the truth, we didn't mind right then not hearing one of Alfonso's hard luck stories. But after a while we felt a little guilty about his dwindled stars.

"Have something with your drink," Snout pressed.

"Don't mind me, boys," Alfonso said blithely. "Enjoy yourselves. I'll be going soon. I don't want to spoil your evening. If I stay, you may land in the brig or the ceiling might fall down."

"Cut out that nonsense, Lieutenant," I put in. "Hadn't you better make a clean breast of it?"

"There's nothing to tell. My undoing was just a cockroach, nothing but a cockroach, the dark brown kind with long whiskers. The story isn't worth telling."

But we had put down our glasses.

"I had already gotten to be a senior lieutenant when it happened. We were shooting at shore targets with big-caliber guns. I fired as signaled, hit our own flagship, was busted and transferred to the marines."

"You fired point-blank at your own flagship?" I asked, hardly believing my ears.

Amazed as we were, we tried to make light of the whole affair.

"A cockroach got into the signal device," Alfonso went on, "short-circuited it and the signal came on just as the gun barrel pointed at the flagship and not at the target. That's the whole story, boys. How the cockroach got into the signal block nobody knows. But someone had to take the blame. I did. I wasn't surprised, but the flagship certainly was."

"Not so unusual," Pashka said. "Flagships have a way of getting a bit flustered when minesweepers of their own squadron fire at them. A drink, boys?"

"I must be going," Alfonso said, "or I'll be getting you into trouble."

We told him to shut up. We really wanted him to stay. And the only way to make him stay was to ask him to break his neck for our sakes.

Across the table from us sat a most beautiful girl. Her companion was a rather fat and elderly Medical Corps major general. It is always painful to see a pretty young lady waste her charms on an elderly and corpulent fellow. You begin to convince yourself that he has atrocious table manners and stumpy fingers, although he eats gracefully enough and his fingers are no stumpier than your own. A fragrance of flowers and perfume floated from the girl. I had the feeling that she carried a volume of Blok's poetry in her handbag and that every night before falling asleep she read "The Beautiful Lady."

"Alfonso, go on over to that table," Pashka began somewhat regretfully, "give that general who looks like Jack the Ripper a piece of your mind and tell the girl we'd like to have the pleasure of her company."

"Might try it, boys, if you really want me to," Alfonso replied. "I'm not much good with the ladies, but I could ask for her telephone number, couldn't I?"

This was indeed self-sacrifice from someone who had never had a woman ask whether he loved her, and if he did, did he love her passionately, and had he ever loved anybody else as passionately as he loved her. No wife had demanded his pay envelope and sent him off for his regular bath. Women like a man to have confidence. They'll put up with an overaggressive man, but they won't have any truck with a chronic failure. And when on top of his

* The penal batallion was always sent where the fighting was heaviest.



shyness there was the fact that Alfonso only had his tiny lone junior lieutenant star to pit against the major general's big stars and strong-willed face, you can guess to what an ordeal he was ready to expose himself for us.

"Forget it," I advised. "We don't want to get into trouble."

And yet I felt that a man as unlucky as Alfonso, with things going from bad to worse, needed to do something terribly reckless and foolhardy to turn his luck. Of course, there were two possibilities—he might really break the spell of bad fortune, but then, too, he might bring down on himself the worst dose of it yet.

"Suit yourselves, boys. Anything you say is all right with me," Alfonso mumbled.

At any rate we had made him stay with us, that was something. We went on with our rambling talk, which had now turned to women. We cast brazen glances at the beautiful girl, who dropped her eyes in the most charming way and slowly sipped her wine. It was obvious that she found the general boring.

Shuffling his feet and stooping, Alfonso staggered over to her table.

I only vaguely remember what happened when her companion saw before him Alfonso's lanky figure. The general jumped up together with his chair, and when the chair seemed suspended in the air, he leapt to his feet, almost knocking over the table. His neck went a purple red. He was too dumbfounded to speak. Alfonso, too, seemed to have lost his power of speech. Both stood glowering at each other and uttering strange guttural sounds.

"Dad, please!" admonished the girl.

Alfonso stumbled back to our table.

"It's the same man," he uttered. "You wouldn't believe it, but it's the very fellow I hit in the head with a carafe back in 1944!"

"Time we got going," Snout remarked. "Five days' arrest for this nice mess is what we get."

"Nonsense!" I put in. "Can't you see it's Alfonso's last chance to make his luck turn. He's got to go through with it. It's the only way."

"What do you say, Alfonso?" asked Pashka, who was no soberer than I.

"I'm game!" Alfonso agreed somewhat glumly.

He had reached the point where he took a morbid delight in his own calamities. He was like a fellow who stops in the street, sees an enormous icicle, takes off his hat and waits patiently until the icicle drops and hits him right on his crown. Whereupon he mutters to himself: "Good, very good!"

"Go ahead, invite her to dance!" Bok suggested, a very bright and subtle idea considering that there was no orchestra in the restaurant.

Alfonso rose to his feet. He was now like the man waiting for the icicle to drop, knowing that it must drop and that nothing, short of opposing the law of gravity, could prevent it from dropping.

When Alfonso advanced to that table, I felt as nervous as I had on only one other occasion. It was in Byelomorsk when my watch was being stolen off my wrist, and to save face I decided I was not going to let the thief have the strap as well.

Whether Alfonso had asked the girl to dance or not when he approached the table is hard to say, but the general was on his feet in a flash, and with the agility of a young man, he swept out of the restaurant door. Alfonso dropped into the empty chair beside the girl, poured himself a drink from the general's decanter and let his hand rest on a shoulder that smelled of flowers. As we looked on we felt that Alfonso's luck had turned at last. From now on life would be smooth sailing for him. We were, however, sadly mistaken.

"Be good enough to pay your bill and come along," it was the Chief Patrol Officer standing over our table, and behind him loomed the figure of the general.

We did not waste our breath arguing. Naval officers do not argue. They apologize and swear never again to commit whatever they are supposed to have committed. What it is they are usually completely in the dark about.

Assuring the Chief Patrol Officer that we would join him in a minute, we proceeded to eat the last crumb and drink the last drop of everything on the table. We knew that for the next five days at least no *Karski Shashlyk* would be served us. We got under way—for a little coastal trip from the Vostochny Restaurant to the nearby garrison guardhouse.

I knew that old building in Sadovaya Street very well. The great generalissimo, Count Suvorov of Rymnik, had once been confined there. So had Mikhail Lermontov, the famous poet, when he served in the Tengin Infantry Regiment. And so had I, when in 1950 my rifle played me the trick of suddenly getting lost.

In mid-August this year I was standing on the quay of the Krasnoflotsk roadstead at Arkhangelsk waiting for a passenger boat to come in. An old lady puffing at Baikal cigarettes stood at my side, evidently there to meet somebody.

"Dozens get drowned," she said cheerily by way of conversation, "especially in a hot summer like this. They just go out swimming and never come back. It happened to my neighbor last week. He only stayed under water for 15 minutes, but no amount of artificial respiration afterward did him any good."

Just then the boat steamed in, and I caught sight of a familiar figure on board. It was Alfonso.

I had always made fun of Alfonso, but I liked him immensely and he knew it, as people usually do. But as he came down the gangway, he had no eyes for anyone except the old lady at my side.

"Sorry, Mother," he said as he approached her. "No candied marmalade in stock, had to get the ordinary kind."

"I knew it!" the old lady fairly gloated.

I called his name. He turned around and we hugged each other. He had certainly aged—I had not grown any younger myself, of course.

As we strolled off from the waterfront, he asked how things were with me. I told him I was captain of a motor barge. And he was working on a passenger boat.

"As soon as the order came through to cut the Armed Forces, I was one of the first to be kicked out," he said.

"But your dad's a big general, surely he could help."

"Dad's a marshal now," Alfonso told me. "But as it happens, we're hardly on speaking terms—ever since he divorced my mother. But I must tell you the news—I'm a married man now, and the lady you saw at the quay is my mother-in-law."

I wondered what his wife was like. Alfonso told me he had married a short while ago a woman many years his senior, a widow with three children. Her husband, who had sailed on a hydrographic launch, had been drowned.

"Do you remember our getting locked up in the guardhouse," he changed the subject, "because of that major?"

"Do I not! Only it was a major general."

When I asked him if his mother-in-law lived with him, he seemed surprised at the question.

"Of course, we take care of her," he replied, and added, "Life is no bed of roses, but . . . ."

All I can say is that I wish to God there were more people like my friend Alfonso on this planet of ours.



SIX DAYS IN THE MOUNTAINS

By Konstantin Semyonov

Photographs by Igor Vinogradov

The Transcarpathians claim that their small region, lying west of the Carpathian Mountains, south of Poland, east of Czechoslovakia and Hungary, and north of Rumania, has more grape wine, frontier posts and castles per capita than any other part of the Soviet Union.

We did not bother to check on their wine production or count the frontier posts, but we did see more castles—new and old—than we ever had in six days anywhere else.

Some of these castles are very old—average age between 500 and 700 years—most of them have been touched hard by time. But the new castles are very new indeed, eight to ten years on the average. Their builders and owners were never barons or counts, even though they compete with the nobility for length of name, as, for example, the Transcarpathian Regional Trade Union Council. These variously aged castles with their pointed roofs are tourist centers, and each of them sleeps and feeds 1,500-2,000 skiing addicts in the course of a single season. Accommodations—that takes in lodgings, meals, medical care, and skiing instruction—cost 50 rubles for three weeks. Vacationers from all parts of the Soviet Union are welcomed by the major-domos, who modestly call themselves managers of the castles. One is in the village of Jasini, where we stayed.

Most of the guests bring very little baggage, because everything they need, from skis to ski jackets and mess kits, can be rented at the tourist center.

Jasini and the other ski castles often hold balls in the true castle tradition, but with the Twist and Madison besides the national folk dances.

At Jasini we learned, via a questionnaire, that our fellow guests were from points west, east, north and south—from Cologne, Warsaw, Helsinki, Colombo. And this, mind you, at the beginning of the season.

SIX DAYS IN THE MOUNTAINS

First Day—Geography Lesson

Our faith in the omnipotence of motor transport was tested on the very first day of our stay in Jasini (population —6,500). Jasini is one-thousandth the size of Moscow, but it takes just as long —45-50 minutes—to travel from one end of this Transcarpathian village to the other, from one slope to the one opposite. Traffic is all one way—the village is hemmed in by the Tisza River on one side and cliffs on the other.

We decided to move about thereafter only on skis, but we found that you had to have a license of a sort. The instructors at the castle test the skiing ability of each newcomer who wants to explore the mountains. Those who do not know how to twist, turn, slow down and fall—painlessly—on the slopes are taught. Falling is the most important thing there is to know: speeding downhill on skis when you don't know how to fall is like riding in a brakeless car, only more so. Falling is a universal technique for how not to run into trees, cliffs and fellow skiers.

After three of four hours of instruction a trainee begins to fall in a tolerable fashion, and he gets the instructor's dubious blessing to roam the surrounding area.

The mountains around Jasini witnessed and made history. At one time they rose as a barrier in the way of the Tatar hordes that overran Rus. The Tatars were stopped in spots by the Carpathian rapids, but the fate of the Slavs on the other side of the mountains was no better than that of their Eastern tribesmen who succumbed to the Tatar yoke. Ukrainian Transcarpathia became an eastern outlying territory of the Hungarian Kingdom. Nearly two centuries later the Turks ruled this land. The Turks were replaced by the Austrians, and the Austrians by the Hungarians again. The Transcarpathians, subjects of the Austro-Hungarian monarchy, became citizens of Czechoslovakia after the First World War, and in 1939 once more became a part of the Hungarian state. Throughout this period Transcarpathia remained a remote, "alien" outlying area, remembered only when it was time to collect taxes and to recuit young men for the army.

It seemed as though centuries had rolled across these wooded mountains without leaving any trace. In the 1930's German, Czech and Hungarian journalists traveled to that district in search of the primitive and exotic. Their articles, written only a little more than a quarter of a century ago were printed under such eye-catching heads as "Eleventh Century Village" or "Primeval Oasis in the Heart of Europe." In this area, if you knew how to sign your name, you were looked up to as an educated man. Until the mid-twenties all garments were homespun, made of hemp fabric.

These details were told us by the local collective farm chairman Yuri Khalus. We were sitting in his office.

"Write this down too," he added. "When I finished elementary school here in 1938, there were 76 pupils. Today Jasini's six schools have exactly that many teachers, 76."

Second Day—Getting a Chairman

In the village of Verkhne-Vodny, where we spent the night, we saw the fine heifer-calves and bull-calves they raise (a cross of local and Swiss cattle). They are sold to mountain stock farms as far away as the Pamirs.

We also inspected the local heat and power plant and the club, and met doctors, teachers and engineers—graduates of Uzhgorod, Lvov and Kiev colleges. They were all interesting people, but we were especially impressed by the collective farm chairman. We talked with him about farming, folk art and the role of the rural intellectuals in the district's cultural life.

Khalus's comments on things not connected with his job interested us. He assessed everything in his own way, soberly and pointedly.

"What did you do before you became farm chairman?" we asked Khalus.

"I was a blacksmith," he replied.

"Was that why they elected you chairman?"

"One of the reasons," Khalus laughed.

He went on to tell his story: "Our family was well off by the old standards. We didn't have a stove in our house and the smoke curled out through a hole in the roof; we wore homespun clothes, and made our own nails—wooden ones; but my father could afford to send me to a four-year school, a rare thing in those days. After school he arranged to have me taken on as apprentice at the local smithy. When our part of the country was reunited with the Ukraine and collective farms were being formed, our whole village signed up. People had different feelings about collective farms, but one thing was clear, that now everybody would have a share in the land.

"At the first meeting people sat silent; nobody had the courage to speak up. When the representative from the district center said that we had to elect a chairman, people asked why they hadn't sent someone from the city to be the boss.

"The visitor explained that on a collective farm we had to be our own bosses and that the chairman had to be one of us. The hall grew silent again. At last someone got up and said: 'Khalus is the man for the job. First of all, he's young, still a bachelor, without a family, so that there won't be any orphans if something should happen to him. Second, he's a strong fellow, a smith, and he has an education.' "

"And you've been chairman ever since?"

"No, I was re-elected two years later. But my first term as chairman lasted exactly one day. I remember coming to the office that day, sitting down and wondering how to begin. The telephone rang, and a voice from the district center asked me whether we needed pedigree bull-calves.

" 'My dear fellow,' I replied, 'who doesn't need them these days? Bring them over right away.'

" 'How many?'

" 'All you can spare. If we can't breed them, we can make beef out of them.'

" 'You'll have to pay for them—with money,' the party at the other end of the line explained.

" 'Why didn't you say so right off? In that case we'll have to get along without them.'

"I put down the receiver and wondered whether we should have bought those bull-calves, after all. Maybe I was wrong, I didn't know. The phone rang again, and kept ringing. Someone wanted statistics, the average milk yield, things like that. A woman asked about fertilizer, but I couldn't figure out whether she wanted to sell or buy it. I was fed up by that time. I locked the office, gave the key to a friend of mine, and beat it to the mountains. I worked there in a forest smithy for half a year. Even my own folks didn't know where I was: I was afraid I'd get it in the neck for deserting the village people when they discovered my hideout.

"I got up a little nerve after those six months and went back home. All they did was laugh, and I started working on the farm. And, as I told you, I was re-elected 18 months later. I've been the chairman ever since."

Third Day—Two Politicians

Ivan Fedurets, an amateur historian who takes care of the local library, and Gherman Erbs, an old-timer, gave us some background on the town of Rakhov. Erbs said that he had been a tailor, but since he had very little work he decided to try his hand at politics.

"We had only three doctors for a population of 12,000," he told us, "but we had seven political parties, including the Guzul People's Guard, the National Association and the People's Community."

Erbs tried to help organize an eighth party, with the result that he spent a day at the local police station.

"That finished my first venture into politics," Erbs grinned.

We asked him who won the election, but he no longer remembered. Besides, it didn't make any real difference. The town had no money and, consequently, no rights.

When the war ended, aged Erbs was summoned to the town Soviet. This, he told himself, would be his second and real political debut. Alas, that was not what the local authorities wanted him for. It was his health they were interested in, solely. The old man showed us his "first Soviet document," it was for free sanatorium accommodations.

When Erbs returned to Rakhov after a good rest and in better health, he found that all political offices were already occupied. He admitted reluctantly that those in them probably were better suited for politics than he was—they were younger, had more energy and they seemed to know what they were talking about.

Thus, Erbs never did get into politics. So he became the town historian, the local repository for information anyone might need to know about Rakhov—people like us, for example, who seem to keep him busy.

"Ivan should be a politician," Erbs pointed to Fedurets. "He's a brainy chap, a Kharkov University graduate."

Ivan laughed the testimonial away with the remark that he had plenty to do already. Besides his work at the library he has acquired all sorts of voluntary jobs for himself. Boys and girls from the nearby mountain hamlets attend the "vacation art school" at the local Pioneer Club. Ivan gives talks on the history of the region, and on literature and music, and also arranges discussions and concerts.

The day we were in Rakhov, he had been invited over to the cardboard factory's club—the best building in town—to help decorate the hall for a New Year's fancy dress ball.

We and Erbs went along with Ivan. On the way he was stopped several times by people who wanted his advice and help. He is a sort of unofficial town cultural director, which means that he knows how to squeeze money out of tight-pocketed official for a new film projection unit or new furniture for the reading room.

Fourth Day—On the Old Border

Our itinerary took us along the old border near Petrus and Goverla peaks. Frontier posts stood here, and the area was combed by patrols, but . . .

Before we left, Ivan Fedurets told us that more than 100 of the present inhabitants of Rakhov had crossed over from the other side back in the winter of 1940-1941. Some of them hoped to get an education in the Soviet Union, others wanted to find jobs, and still others crossed the border to avoid conscription in the Hungarian Army or to hide from the gendarmery.

In a small mountain cabin on the very edge of the old border our attention was attracted by the figure of a lizard carved out of tree roots. Our host said that it had been made by Ivan Benda. It was a familiar name, we had seen his creations in the museums of Uzhgorod, Kiev and Moscow and at international exhibitions.

The owner of the cabin told us that Ivan Benda had grown up in Mezhgirye, the poorest and most backward part of the region. His father had been killed in the First World War and his mother, with incredible effort, had saved the family from dying of starvation.

Ivan was 10 years old when a young painter who had come to Slovakia to sketch the landscape hired him to carry his easel. That was when Ivan began sketching himself. His first drawings were chalked on Mezhgirye fences and walls.

When he was 16, the lad made his way to Kosice, a Slovak city, where the man who had aroused his interest in drawing lived. Ivan wanted to learn how to paint, but the only work he could find was as a tailor's apprentice. He was mobilized in 1940 for service in the Czechoslovak Army but ran away. He decided to skip across the border, but that was no easy business. He had to hide in the woods for more than half a year. It was then that he turned to wood carving to earn enough to keep alive.

Benda returned to his native land as a sergeant major of the People's Liberation Army with several Czechoslovak and Soviet military decorations. He was warmly welcomed by his fellow villagers. Appointed manager at the rural cooperative, he was more interested in carving figures from wood and roots than in trade. He first gave it his spare time and then became a full-time wood carver. Ivan Benda is now a member of the Artists Union, a famed craftsman, and a teacher of many young wood carvers.

Fifth Day—Studies Start with a Pencil

Once again we saw Jasini below us. From afar we noticed a crowd at the "castle." The newcomers poured out of their rooms to meet us "veterans" back from our excursion. We learned that there were several young scientists from Uzhgorod University among them.

My thoughts went back to that first meeting in this area 20 years ago, in November 1945, when our trainload of demobilized officers and men crossed the border of the USSR. The first Soviet citizen we met was not a frontier guard but a 10-year-old boy in bast shoes and homespun shirt. He ignored our noisy greeting and asked us for pencils. We were surprised. There was no village close by, which meant that the boy had come a long way to find pencils. He explained that a school had opened in his village and everybody was studying, but they were very short of pencils.

One of our men held out a gold-plated mechanical pencil: "Here, take this, and study hard."

The boy shook his head. Who would believe that he had been given such a pencil as a present and had not stolen it?

"I want a plain pencil," he said.

"Hey there, all you men!" someone yelled into the freight cars. "Let's have your pencils!"

The boy pulled out his shirt bottom, and the men dropped in all kinds of pencils—new ones, stubs, plain and painted, a thick Pelican bought in Prague, a Mont Blanc traded in Vienna.

"Remember now, study hard!" the men yelled after him.

Many times after the war I had wanted to look for that boy, but there were so many boys like him and so many meetings like that one at the border.

Among the newcomers were a nuclear physicist, a medical man and a historian. I asked whether any of them had been hunting pencils at a border station back in 1945.

The historian said that he, unfortunately, lived too far away from the railway. The medical man remembered getting two pencils from soldiers passing through his home town in trucks. The physicist sighed: "Why didn't I think of doing a thing like that then?"

Our conversation was interrupted by loud greetings, another group of tourists being welcomed in the local fashion: a cook brought out the favorite Transcarpathian drink—hot wine spiced with sugar, cinnamon and cloves.

We had not negotiated our itinerary altogether honestly. We had taken advantage of the hospitality of the local inhabitants, followed short cuts and bypassed some of the steeper hills. Still we thought ourselves entitled to a glass of the mulled Transcarpathian wine, too.

Sixth Day—Two Politicians Again

Our suitcases were packed when a jeep, an irreplaceable vehicle for the local mountain roads, burst into the camp.

It's always amazing how people know, by some sort of elusive signs, when the boss has come. The Jasini tourist center manager said: "The superintendent of the district cultural department is in that jeep."

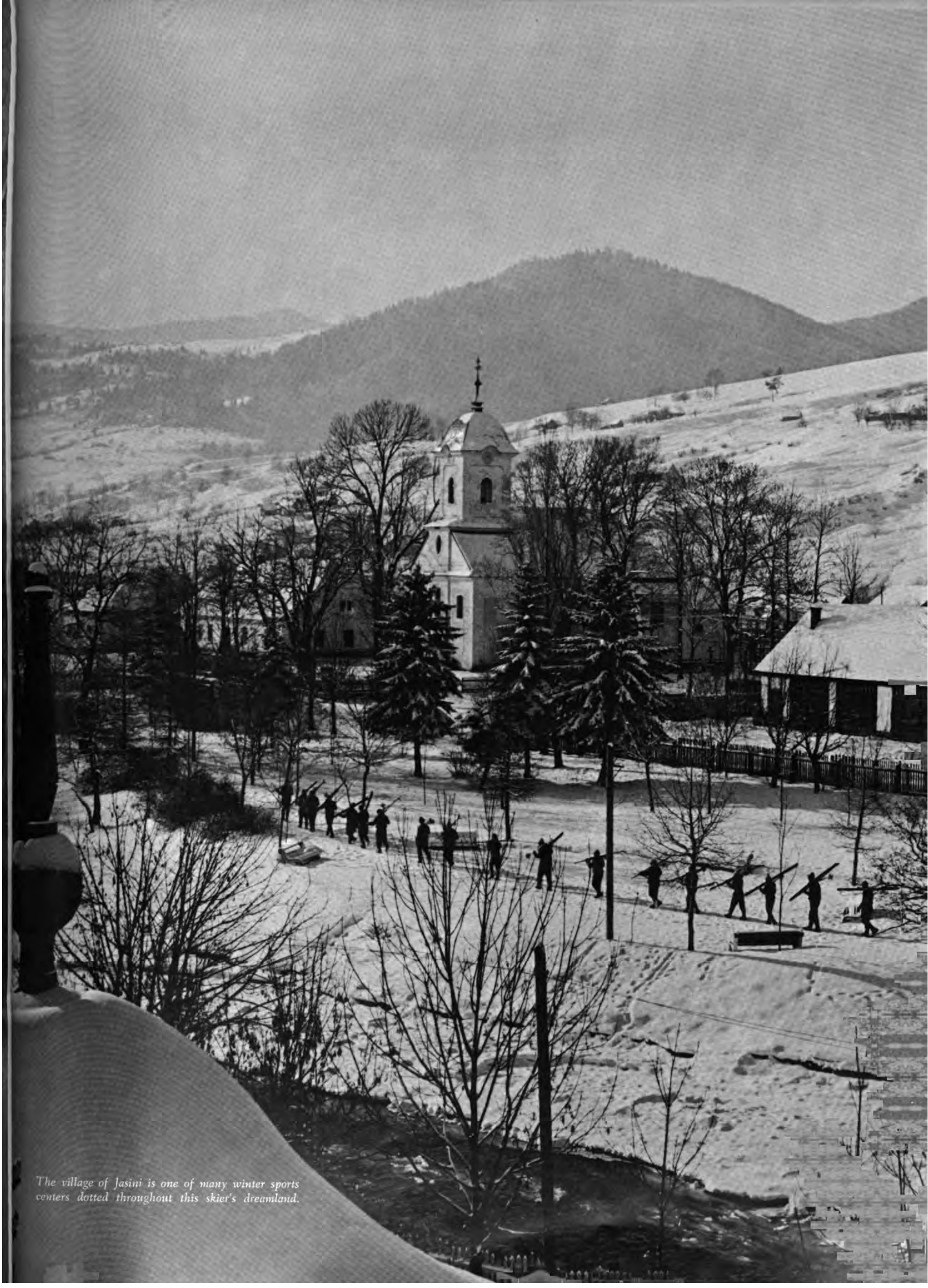
Ivan Fedurets and Gherman Erbs climbed out.

"Where's the superintendent?" we asked.

"Here!" Erbs pointed to Ivan. "He was appointed only yesterday. Don't you remember what I predicted? If I'm not in politics myself, at least I know a good politician when I see one. I asked Ivan to take me along so I could say good-by to you."



Transcarpathia is a stimulating mixture of the old and the new. A corner of Uzhgorod, the capital.



The village of Jasini is one of many winter sports centers dotted throughout this skier's dreamland.


THE AGRICULTURE

INDUSTRY

By Dmitri Rudy

EVEN MIDDLE-AGED Soviet citizens can remember when the words "industry" and "agriculture" used in combination had a strange ring. That was because the Soviet Union did not have an industry that could meet the needs of agriculture. Matches, salt, kerosene, calico, hand and horse-drawn implements—that was about all the factories made for the rural population. For the most part, what the peasant needed he produced himself. Even the power supply—the horse—was homegrown, so to speak. The manufacture of modern farm machinery was at such a low level that there was only one tractor plow, tractor, seeder or cultivator to every 10 to 15 thousand peasant farms.

That was how matters stood only 40 years ago. There was 19 horsepower available per 100 hectares (247 acres) of sown land and only four-tenths of one horsepower per field worker.

The government gave the production of farm machinery high priority in its industrial expansion program. In fact the manufacture of farm machinery, especially tractors, began to grow so fast that it outstripped the growth of the key industries by a wide margin.

The production of iron, steel and rolled goods, oil, all the means of production, and of tractors in particular, has multiplied as follows, by comparison with 1928:

Year	*Iron, steel, rolled goods*	*Oil*	*Means of production*	*Tractors*
1940	4.2	2.7	10.0	24.3
1950	6.1	3.4	11.2	83.7
1958	12.5	10.1	54.0	169.0
1963	18.3	18.4	89.6	250.0

Expansion of the domestic tractor industry provided the basis for mechanizing the countryside. Replacing the horse with the tractor made a fundamental change in the conditions and the very nature of farm work. It opened up the possibility of shifting the burden of plowing, and then of the other farm jobs, almost entirely to machines.

In 1953, 25 years after the technical re-equipment of agriculture was begun, about 750,000 tractors were working the country's farms. This was more tractors than Britain, France and Italy put together had at the time. Available to Soviet farms then was 53 horsepower per 100 hectares of cropland and 2.6 horsepower per farm worker.

Soviet tractor manufacture has grown as follows since 1953:

Year	*Tractors*	*Per cent*
1953	111,300	100
1954 to 1958 (average per year)	181,200	163
1959 to 1963 (average per year)	265,600	239
1964	329,000	296

During this period the number of tractors more than doubled—from 744,000 to 1,565,000. In 1963 the farms had 83 horsepower per 100 hectares of crops and 6.8 horsepower per farm worker.

Much of the benefit was vitiated, however, by gross oversight in planning the types of tractors to be manufactured and the implements to be attached to or mounted on the tractor.

In the 10 years from 1954 to 1963 the area under row crops was expanded from 62 million acres to 148 million. Cultivating these crops is especially labor consuming, and yet the level of mechanization here was low. Few row-crop tractors were manufactured. The situation began to improve in 1954, and in the next 10 years the output of row-crop tractors increased by 600 per cent. There was a threefold increase in the production of row-crop tractors per 1,000 hectares of these crops.

Another disproportion developed when the manufacture of plow tractors was reduced. While the area under crops was expanded by 59 million acres from 1956 to 1963, the average annual production of plow tractors fell from 100,000 in 1956-1960 to 70,000 in the years following.

At the same time the production of cultivators, plows, seeders and other machines and implements attached to or mounted on tractors lagged, relatively speaking, behind the manufacture of tractors. The result was that while farming was fairly highly mechanized, field work still took a great deal of time. The saving in labor from the mechanization of some jobs was wiped out by excessive labor expenditure on jobs where the mechanization level was still low.

The main problem now engaging the attention of scientists, designers and engineers is the all-round mechanization of farm work so that the human hand will not have to come into contact at all with grain crops, cotton or vegetables.

On a recent trip to the Chu Valley in the Central Asian republic of Kirghizia I got a firsthand picture of the progress being made in the all-round mechanization of sugar-beet growing. Seeding, thinning and watering are done by machine. Production line methods are being introduced in harvesting.

The cotton growers also make wide use of machines; for one thing, machines pick nearly a third of the harvest. At a conference of Kirghizia's farm mechanization experts I heard a discussion, backed by facts and figures, on methods of expediting the last stages of mechanization in cultivation and harvesting of sugar beet, corn, cotton, sown grasses and other crops.

Last spring I visited a design office near the Central Russian town of Ryazan, where I watched several new machines—two potato planters and a potato harvesting combine—being put through their paces. The combine is not only more dependable than previous models but is designed to give longer service. It can be used for two-stage harvesting—first to dig four rows of potatoes at a time and stack them, and then to gather them. This raises productivity by from 50 to 100 per cent. Besides potatoes, the combine can harvest beets and onions.

Farm machine design offices and testing stations have been set up in the main agricultural areas of the country, and they are doing their utmost to lighten the farmer's chores.

Here is an example. Two years ago the mechanization of grain harvesting was practically completed, but the level of mechanization in gathering the straw and other by-products was barely 50 per cent. It took three times longer to stack and remove the straw than to harvest the crop. Now three big farm machinery plants are turning out combines that mechanize the job.

Our biggest lag is in mechanizing the labor-consuming operations in livestock raising. Even the main jobs here are barely mechanized, if at all. For instance, only a quarter of the dairy herds are milked by machine. On the cattle farms only two per cent of the feed distribution and seven per cent of the manure removal are mechanized. Before we can progress to all-round mechanization in livestock raising, the present machines have to be improved and new ones designed.

Expansion of production thus remains the No. 1 task of our farm machinery industry.

We must unify and universalize our manufacture of tractors, machines and implements. We have too many different models, and that creates a burden for the state and collective farms so far as maintenance, repair and spare parts are concerned. We are clearly not taking full advantage of the possibilities a planned economy offers for maximum unification of machines. Nor are we taking full advantage of the fact that all industry, including the farm machine industry, is in the hands of a single owner, the state.

We need more intensive electrification, though we can hardly be accused of marking time in this area since 1953. Between 1954 and 1963 the percentage of state farms using electricity increased from 88 to 99, and that of collective farms from 22 to 88. The number of electric motors on collective and state farms rose from 192,000 to 1,336,000, while power consumption in agriculture increased by six times. Despite that, rural electrification leaves much to be desired. Today the farms consume only four per cent of the electricity generated in the Soviet Union, including a paltry two per cent for purposes of production.

A few words about trucks and chemicals. The supply of trucks to the farms followed approximately the same pattern as the supply of plow tractors. It dropped from an annual average of 97,000 trucks between 1956 and 1960 to 79,000 between 1961 and 1965. Now the situation is being remedied.

Mineral fertilizer presents an altogether different picture. Production has risen steadily year by year over the past decade or so from 6.9 million metric tons in 1953 to 20 million in 1963. More than 15 million metric tons was supplied to the farms. The average volume of mineral fertilizer used per acre of plowland is still low, however.

These, in broad outline, are the main problems of farm mechanization.

How do we plan to solve them?

The urgent measures proposed by the Communist Party and the Soviet Government in March of this year and now being carried out will do away with the bottlenecks in the near future. For one thing, the production of tractors is to be doubled by 1970. Of the 1,790,000 tractors to go to the farms in the next five years 780,000 will be plow tractors. Average annual deliveries of these machines to the collective and state farms will be increased to 156,000.

There is also to be a sharp rise in the average annual supply of other machines. For example, 220,000 trucks are to be delivered in the next five-year period. The factories are enlarging their range of farm machines and implements; this year they manufactured more than 550 different models, as compared with 380 in 1960. By 1970 farmers will be using six times as many electric motors as in 1963. And as for mineral fertilizers, this year our chemical industry supplied the farms with 33 million metric tons.

THE PSYCHIATRIST AND THE SOVIET SOCIAL ORDER

By Isidore Ziferstein, M.D.



Dr. Isidore Ziferstein, Associate Clinical Professor of Psychiatry at the University of Southern California, spent 15 months in Moscow and Leningrad hospitals observing, comparing and discussing various psychotherapeutic methods, conceptions and approaches with Soviet doctors. Dr. Ziferstein speaks Russian fluently.

A revealing paper* on the work of Soviet psychiatrists was given by Dr. Isidore Ziferstein, a Los Angeles research psychiatrist, at the International Conference on General Semantics held in San Francisco in August. Commenting on the report, Donovan Bess of the* San Francisco Chronicle *wrote: "Ziferstein spent three years observing Los Angeles therapists with patients as a prelude to 13 months of such scrutiny in a psychoneurological center in Leningrad."

Soviet Life, *whose editor was a guest of the conference, asked Dr. Ziferstein for his permission to publish the paper in the magazine. This permission was granted, and we present it without editorial changes.*

A VIEW FROM INSIDE A LENINGRAD MENTAL HOSPITAL

On my most recent journey to the Soviet Union (my third) I had the unique experience of sitting in on psychotherapeutic sessions day after day for 13 months, with doctor and patient, in the treatment rooms of a Leningrad psychiatric hospital.

My first two trips had been one-month tours, in which I had spread myself thin trying to take in as much as possible of the psychiatric scene. I had managed, on these tours, to get an over-view of facilities for mental health care. But I felt the need for a deeper insight into Soviet psychotherapy.

This time a grant from the Foundations' Fund for Research in Psychiatry, of New Haven, enabled me to spend 15 months in Russia. Thirteen months of this time were spent at the Bechtyerev Psychoneurological Research Institute in Leningrad, making direct, intensive, in-depth observations of the full course of treatment and the day to day progress of 12 patients treated by five different psychotherapists.

In the course of this intensive observation there was much to be learned. As a psychiatrist, I gathered psychiatric data on the patients themselves and learned a great deal about the 12 people who came for treatment. As an adherent of a particular school of psychotherapy in the United States, psychoanalysis, I was introduced to a particular school of Soviet psychotherapy—pathogenetic psychotherapy, which resembles Western dynamic psychotherapy in its efforts to bring to the patient's awareness the hidden causes of his emotional illness. I found that the formulations and interpretations of the Soviet psychotherapists lacked the subtlety, refinement and sophistication that psychoanalysis has developed as a result of decades of intensive delving into the innermost recesses of individual psyches. I found, too, that the Soviet psychotherapist tends to underplay the sexual aspects of the psychogenesis of his patient's symptoms.

Most important, I came to know intimately about a dozen Soviet psychiatrists with whom I worked closely day in and day out. I already knew from research I had been doing for some years in our country on *A Study of the Psychotherapeutic Process* that the therapeutic session, when studied by an experienced observer, reveals at least as much about the personality of the doctor as about the patient. And my work at the Bechtyerev Institute confirmed this.

I also came to know these psychotherapists outside the work situation. During the long Leningrad winter evenings, my wife and I spent many hours with our colleagues and friends, eating *piroshki* and *keksi* (cakes), marinated mushrooms, sprats and caviar, talking about life and politics until the early morning hours. One Saturday night we arrived at 8:30 in the evening and talked until 7:30 Sunday morning, while our hosts took turns, sleeping in shifts.

AVAILABILITY AND ACTIVITY

As time went on I found that the focus on the doctors as well as on the patients was becoming the keystone of my work, because I realized that I could not understand the basic assumptions and practices of Soviet psychotherapy unless I understood the psychology and attitudes of the Soviet psychotherapist —his conception of the influence of society on the emotional health of his patients, his conception of his place in that society, and his conception of his place in the over-all structure of Soviet medicine and psychiatry.

The watchwords of the Soviet psychiatrist seemed to be availability and activity. Once, during a therapeutic session, the door was opened, a man poked his head into the room, without knocking, without apologizing for the intrusion, and said, "Doctor, I must see you." The doctor looked up, unperturbed, and said, "I'm busy right now. Can you wait a half-hour? I'll be able to see you then." It turned out that the intruder was a former patient who felt a need to see his former doctor just then. I later remonstrated with the doctor that the patient should at least have telephoned for an appointment. But the doctor saw nothing wrong and assured me that he wants his patients to know that he is available to them whenever they need him.

The activity of the Soviet psychotherapist is manifested in a variety of ways. He may manipulate the patient's environment, his job, occupation, place of work or residence—if he considers these to be factors in the patient's mental illness. In one case that I observed, the doctor concluded that the patient, a factory worker, had the capacity to be a good engineer and that the unchallenging and unfulfilling nature of his present work contributed to his emotional illness. The doctor wrote out a prescription which was addressed to the factory director, requiring that the patient be enrolled in an engineering institute and be paid his full salary during the entire period of his schooling.

The Soviet psychiatrist is very active in giving the patient emotional support and reassurance, advice and guidance. He vigorously engages in re-educating the patient and presenting to him values and standards of behavior. And the doctor has no doubt about what values and standards are correct, realistic and socially desirable.

"NEVER BE A BYSTANDER!"

This activity is in keeping with the general attitudes advocated in Soviet society: "You are not alone in the world," and "Don't ever be a bystander!" The general idea is that if a Soviet citizen knows something that another citizen doesn't know, it is his obligation and privilege to impart his knowledge to the other. If he sees another citizen behaving in a manner that is socially undesirable or "uncultured," it is his responsibility to correct the erring citizen. As an uninitiated foreigner, I was frequently the object of admonitions by better informed citizens. One day, early in my stay in Leningrad, I was walking along the street, whistling lightheartedly. A passerby stopped me and said, "Citizen, it is uncultured to whistle in the street!" In my uninitiated state, I retorted, "Citizen, it is uncultured to tell another person what it is uncultured to do!" I should add that, after several months in the Soviet Union, I became quite accustomed to this ethos. In fact, I became quite adept myself at correcting others when they erred.

In keeping with these mores, the Soviet psychiatrist is very much in charge in the therapeutic session, where he is the citizen with special knowledge. After the first two or three exploratory sessions, he decides what the patient's major problem areas are and then systematically directs and guides the content and form of each session, so as to explore, in turn, these various areas.

The Soviet psychiatrist holds that an important factor in all mental illness is a physiological disturbance in the functioning of the central nervous system. I had the impression, as I watched the Soviet psychotherapist at work, that he must be constantly following, in his mind's eye, the interplay of excitation and inhibition over the surface of the cerebral cortex of his patient. In keeping with this orientation, he actively employs, in addition to psychotherapy, a wide variety of stimulating and inhibiting drugs, singly and in various combinations and proportions, to correct the imbalance of excitation and inhibition in the central nervous system.

In the course of time I came to realize that my Soviet colleagues' philosophy of the function of drugs was fundamentally different from mine. I considered drugs a foreign substance that is introduced for the purpose of temporarily "tickling" or jogging, or calming the psyche of the patient who is depressed, or agitated, or anxious, or excited. The Soviet psychiatrist looks upon drugs as a beneficent agent which supplies a missing element in the functioning of the central nervous system by strengthening it, or tonicizing it, or protecting it from overstimulation. In keeping with this approach, the psychopharmacology laboratory at the Bechtyerev Institute is now testing synthetic substances like Phenigamma, an analogue of a fatty acid normally found in brain tissue, which they hope to use as a supplementary or replacement treatment, in the same way that thyroid extract is used in thyroid deficiency.

The Soviet psychotherapist also employs a wide variety of hydrotherapeutic and physiotherapeutic measures, including acupuncture, an ancient practice of Chinese folk-medicine, in which fine silver needles are inserted at specific points along the various nerve paths.

* The research on which this paper is based has been aided by a grant from the Foundations' Fund for Research in Psychiatry.

"NO EXIT?"

Because of his Pavlovian orientation, the Soviet psychiatrist attaches great importance to neutralizing the unhealthy "stereotype" established in the "higher nervous activity" of the patient. He strives to substitute for it a healthy "stereotype." For this reason the Soviet psychiatrist takes a dim view of the practice of directly interpreting to the patient, and making him conscious of, his negative feelings. This became most apparent on those occasions when I yielded to the temptation to step out of my role of nonparticipant observer and give the patient an interpretation of the meaning of a symptom.

One such incident occurred when a patient was telling the doctor that she develops feelings of severe anxiety when she is in a movie theater and the ushers close all the doors just before the picture begins, and there is "no exit." At this point, the doctor was called away, but the patient went right on with her associations.

When the patient finished her description, an uncomfortable silence ensued. Aware that my technique of unobtrusive, nonparticipant observation had already gained me the rubric of "The Quiet American" (and not wanting to reinforce this image), I broke the silence with an interpretation. I told the patient that her use of the words "No Exit" reminded me of the play by Sartre in which he depicts hell as a room without doors or windows, in which three people, who are in conflict with each other, are doomed to spend eternity together. I linked her feeling of anxiety about "No Exit" in the movie theater and in closed rooms with her feeling that there is no way out of a severe conflict she is having with her in-laws. If she stays in the same city, she must constantly face her in-laws. Moving to another city is equally difficult because she is afraid of new situations.

When the doctor returned a few minutes later, I repeated our conversation to her. I could see that the doctor was not happy with what I had done. She (the doctor) quickly took the patient's hands in her own, and in concerned, affectionate tones reassured her: "Oh, but you mustn't think that for a moment! Of course there is a way out, and Isidore Samuilovich (referring to me, the no longer Quiet American) and I will help you to find it!"

I later learned from the doctor that she had been concerned that my pure interpretation, reinforced by an appeal to the emotional, artistic impact of Sartre's play, and without any counteracting assurances, might impress on the patient the difficulty of her position and reinforce her feeling of hopelessness, of "no way out."

My notes, made either during the therapeutic sessions or immediately after each session, contain many examples which show that the psychotherapists I observed were often quick to recognize the latent, unconscious, negative meaning of many of the patients' associations and dreams. However, instead of interpreting these meanings to the patient, the therapist would give the patient a countervailing suggestion or advice.

A striking example of this occurred in one session when a patient told a dream: "I saw a funeral procession. A woman was lying in a coffin with her hand up in the air and electrodes connected to it." The patient's association to the dream was: "The woman had died as the result of an electroencephalogram." The patient herself had had an electroencephalogram the day before. My interpretation of the dream, which I did not verbalize this time, having learned my lesson, was that the patient, who was in a state of negative feelings toward the therapist and the treatment, was saying, "This treatment will kill me!" The Soviet doctor did not interpret the dream, but said, "You're a socially aware and active person. You're involved in the rearing of the young," (the patient was a teacher) "through whom we attain immortality." I realized, then, that the doctor was counteracting the latent meaning of the dream by saying, in effect, "No, the therapy will not kill you. It will enable you to go back to your teaching, and thus attain immortality."

Soviet psychiatrists strive to maintain a positive relationship with the patient, because they believe, as Professor V. N. Myasishchev, Director of Research at the Bechtyerev Institute, puts it, that "The relationship of the patient to the doctor is most important and decisive. This relationship becomes an effective force only when it acquires a positive emotional character. The authority of the doctor, the trust, esteem, and love of the patients for him, are not acquired at once, but gradually, as the doctor, by his skillful approach to the patient, helps him to gain an understanding of his life story, of the complicated, confused, ununderstood or misunderstood circumstances of his past and present."

In the case of the woman teacher I mentioned earlier, who dreamed of death by electroencephalogram, the doctor, an outgoing, vigorous, affectionate, demonstrative Mother-Russia type of woman, strove mightily to regain the positive feelings of the patient. She did this by a variety of therapeutic maneuvers. She showered the patient with physical and verbal manifestations of affection. She used every opportunity to demonstrate to the patient her respect and admiration for her skill as a pedagogue. She promised, and gave, the patient support, reassurance and advice in dealing with her problems in relation to her in-laws and her husband. After many sessions the therapist gradually succeeded in her aim of restoring a positive relationship. The patient was eventually discharged after two and a half months of treatment, during which she had had 38 psychotherapeutic sessions, with marked improvement in her symptomatology and in her interpersonal relations.

WORK AS A HEALING AGENT

All the patients I observed were hospitalized patients in the Division of Neuroses and Borderline Conditions of the Bechtyerev Institute. Neurotic patients are usually treated on an ambulatory basis, both in this country and in the Soviet Union. However, these patients were hospitalized in order to make them more easily available for observation and laboratory study by the research staff.

The treatment they received was active and vigorous, and was reminiscent of the "total-push" program advocated in our country for the hospitalized mental patient. That is, the patient's time was totally occupied with a variety of activities, and the mental illness was attacked on a variety of fronts simultaneously. The emphasis was on activity, both by doctors and patients.

An important part of this "total-push" approach was the work-therapy program. On the grounds of the Bechtyerev Institute were a number of fully equipped factories in which several hundred patients were employed. About half were inpatients. The rest were outpatients living in the neighborhood of the institute. In these factories trained foremen and psychiatrists supervised the patients in the production of such articles as furniture, clothing, fountain pens and hammocks. These articles were sold under contract to retail stores, and the patients were paid for their work.

The Bechtyerev Institute is conducting intensive research on the applications and results of work therapy. One finding which has already emerged from this research is that epileptics engaged in work therapy demonstrate a significant decrease in frequency of seizures and a more rapid improvement in various disturbances of function.

Soviet psychiatrists consider work therapy a major tool in their therapeutic armamentarium. This is due in part to the emphasis, in Soviet society, on work as a central element in the life of every person, male or female. And their Marxist ideology teaches that in the course of evolution, man became human when he began to engage in work.

Soviet psychiatrists emphasize that work therapy helps to maintain the patient's contact with reality and to prevent emotional isolation and retreat from the real world; that doing socially useful work, and getting paid for it, helps restore and enhance the patient's self-esteem; and that work under the protected conditions of the therapeutic workshop helps prepare the patient for a return to normal life and work on the outside.

I recall a patient at the Bechtyerev Institute who was assigned by his psychiatrist to work in the shop where electronic devices are manufactured and repaired. On discharge from the institute, he continued working in the electronics shop. Eventually he became skilled enough to get a well-paying job on the outside. He remarked to me, in a follow-up interview, that he was not ashamed of having been in a mental hospital; rather, he was proud to tell everyone that his hospitalization gave him, among other things, a high-status skill.

In 1963, the latter half of which I spent working in the Neurosis Division, 326 patients were discharged from the division. Of these, 25 (7.6 per cent) were listed as recovered, 212 (65 per cent) as markedly improved, and 58 (18 per cent) as improved; 31 (9.4 per cent) were unimproved.

The vigor of the "total-push" program and the activity and availability of the psychiatrist are in marked contrast to the first impression of drabness and not caring that the American visitor receives from the neglected, dilapidated appearance of the hospital buildings and of the equipment and physical plant generally. On my first psychiatric visit to the Soviet Union I took a picture of the main entrance of a leading psychiatric institute in Moscow. The light fixture at the entrance had no bulb in it, a couple of windows were broken, and the cement of the front steps was crumbling. I thought, "The director, who is a member of the Soviet Academy of Medical Sciences, comes in and out of this entrance every day, and he doesn't care!" After several months of my third sojourn, a group of American psychoanalysts came to visit the Bechtyerev Institute. When one of them took me aside and asked why the buildings are so run down, I was taken aback. I had long stopped noticing the state they were in.

The vigor, activity, and directiveness with which the Soviet psychiatrist attacks his patient's illness are determined by several factors:

1. Since, under the Soviet system of medical care, all psychiatric treatment, including psychotherapy, has to be made available without charge to all who need it, a premium is of necessity placed on shorter-term therapies. This inevitably requires greater activity and directiveness on the part of the therapist.

2. The Marxist ideological orientation of the therapist inclines him to place great emphasis on the dictum that man's consciousness is a reflection of reality and that this consciousness in turn operates upon and changes the existing reality. As Professor V. N. Myasishchev states it: "Man is not only an object but also a subject, whose consciousness is a reflection of reality and in turn transforms reality."

The therapist with such an orientation tends to place great stress on the conscious, rational aspects of the patient's psyche. It also inclines the therapist to be active himself and to urge the patient to greater vigor in acting upon his environment.

3. The physiological, Pavlovian orientation of the Soviet psychotherapist inclines him to stress the importance of actively intervening in order to eliminate the "inert point" (or points) of excessive excitation or inhibition in the cortex of the brain. This is done by various stimulating, inhibiting or "generally strengthening" medications, by regulating the patient's regime of work and recreation, by changing the patient's environment, by various physiotherapeutic measures, but primarily by active verbal psychotherapeutic interventions which are calculated to modify the unhealthy stereotype that has been established in the patient's higher nervous activity.

KEY ROLE OF THE COLLECTIVE

However, I have concluded that the main reason for the Soviet psychotherapist's activity and directiveness is the fact that he carries over into his profes-

(Continued on page 60)

TELEVISION CHILDREN

By Margarita Smirnova

CHILDREN have changed nowadays. Adults, particularly those whose windows face the courtyard, have long noticed the change in this once stentorian tribe of boys and girls. Ten or twelve years ago the running, yelling and general pandemonium beneath our windows from morning to night reached catastrophic proportions. Nothing you could do about it, children were children. An aspirin might relieve your headache for a while. And if you were a scholar, you retired to the bathroom to write your thesis.

Nowadays you can do without the pill and use the bathroom to bathe in, for silence descends on all courtyards at exactly 5 P.M. on the dot—to the great relief of janitors, parents and neighbors, especially those on the first floor. The youngsters are too busy to riot, they are watching TV. Not all, perhaps, but most. Those still loyal to the old Order of Little Boys and Little Girls, those who prefer fussing and scurrying about to sitting demurely before a screen the size of a copybook are growing fewer and fewer. They are falling prey to the educational pressure of their well-wishers.

"Why do you keep running about, Vitya (or Petya, or Kolya, or Sasha)? Why don't you look at TV for a while?"

The children do. They get used to it very quickly, and the adults to the fact that the house is quiet, no one dashing from corner to corner, asking endless questions or running around the streets. They have grown used to seeing their children right there at home, within arm's reach.

TV has done what no one could do before. It has tamed the children. They can sit watching the screen for hours, bothering no one. The statistics show that children have become permanent TV spectators, second only to pensioners.

Fortunately, not everyone is pleased with this TV infatuation. Here is what a reader from Perm, the Urals, writes about it: "On the one hand, TV is definitely a help in raising children, but on the other . . . My neighbors, for instance, live in one room. Their two youngsters watch TV day in, day out, including the programs meant for adults, as well as the films. My son too would rather watch TV with the neighbors than be out of doors. When I object, he says that all the boys in his grade watch TV. But the fact remains that they are 10-year-olds and they can't find their way about in matters they are too young to understand. They are bound to misunderstand many things, to get the wrong slant. And this may cripple them spiritually."

Could this be an exceptional opinion, different from most?

To find out we went to school.

"Do you like to watch TV?" That question was put to Grade 5-A in Secondary School No. 29 of Moscow.

There were 36 children in that classroom, youngsters of all kinds: the quiet, the mischievous, the industrious, the troublesome. But they were all confirmed TV watchers. They talked about it with enthusiasm, interrupting one another, and not at all shy of strangers. Now and then they reminded me of adults plunged into discussions on art.

Comparing ourselves at their age, we come off second best. They know a lot more and talk better than we did at the age of 10. That is not surprising, for their knowledge has been bolstered by radio, the movies and TV. They can cite you the names of famous singers, dancers and athletes, and tell you how the people of Ghana live nowadays. They know all about whaling, how to build a prefab house, what's in fashion and what the theaters are showing. They are stuffed with knowledge we didn't dream of at their age. Compared to us at the age of 10, they are practically encyclopedic!

On the one hand this is highly encouraging, but on the other . . .

"How often do you watch TV?"

"Every day!"

"How long do you watch every day?"

It developed that 75 per cent spent three and a half to four hours at it, some five and six hours, watching from start to finish. They were spending a large part and some even all of their leisure time in front of the screen. They hurry home from school, gulp down their dinners and race through their homework. They have to rush, the broadcasts begin at 5 o'clock sharp.

It takes them two to three hours a day to do their homework. Do they get out into the fresh air any more? Very rarely or not at all. Do they do any reading? No time. Do they help their mothers with the housework? Of course not! No time!

Teachers and parents some years ago decided that children were overburdened with homework. Course schedules were duly revised and less homework assigned. But only to give the children more time to watch TV, it turns out. TV devours their time. It has become a stimulant children crave. It has also become a devourer of sleep. The children now go to bed only after the TV announcer's smiling good night.

We asked if they had seen the last late broadcast.

"Oh, yes!" they answered in a merry chorus.

"When was it over?"

The whole Grade 5-A chanted in unison, "Twenty past twelve!"

The head teacher of the grade was there and was shocked. She had no idea her pupils spent so much time watching TV, that they went to bed so late and were out of doors so little.

What effect does all this TV have on health?

The Children and Adolescent Department of the Erisman Hygiene Research Institute has been studying this problem for a year, and the findings are anything but comforting. Viewed too long, TV can have a harmful effect on the child's central nervous system and psychology.

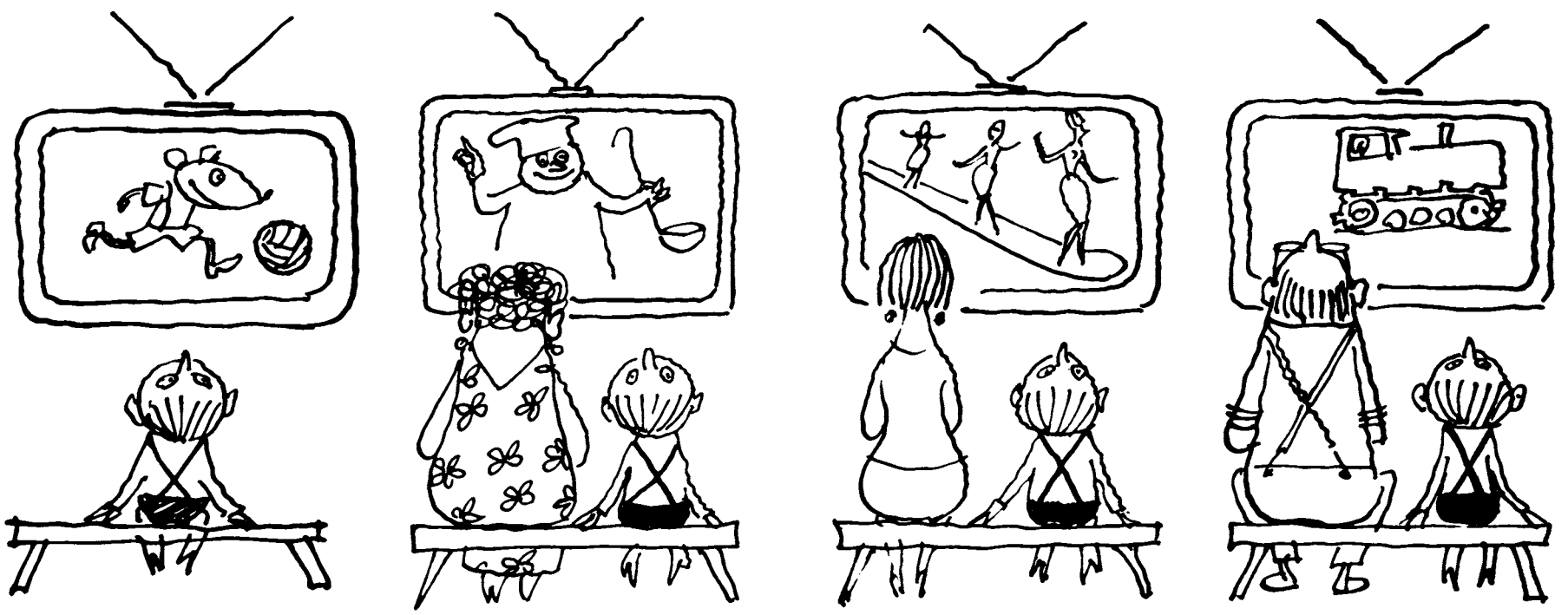
"That's a fact!' insisted one of the institute researchers. "It is not by accident that a school lesson is only 40 minutes long. The child's organism is receptive, but only within limits. Children tire quickly; they can't carry big loads. If TV people looked at their special children's broadcasts —the reports and talks the studios are so fond of—from our medical point of view, they would find a lot to surprise them. First of all they would learn that a 20-minute talk—the undramatic kind, helped along by maps and charts—tires children about as much as watching a two-hour film."

That is what the doctors say. Something to keep in mind when your children settle down to TV.

But the nervous strain on the child is only one side of the problem. There is another and more important side.

TV undoubtedly widens the child's outlook and adds to his knowledge. Talk to him and he'll rattle off words like cybernetics or heredity or tell you that you're not thinking spatially. They pick up words easily at that age, but don't be fooled.

Having seen the film "Eugene Onegin," the youngsters know the story plot and are not likely to be interested in reading the original poem by Pushkin or hearing Tchaikovsky's operatic version. Since they had seen the



film "Moomoo," our same Grade 5-A felt there was no point, or at any rate very little point, in reading Turgenev's book. The child's mind works somewhat as follows: Once he knows the general outline of a work or its rudimentary idea, he is sure that he has fathomed the work to the very bottom. To persuade him to go to the original source (in this case, the book "Moomoo") becomes a real problem. A child soaks up information like a sponge. He is not interested in relearning something, even if his first acquaintance with it is as superficial as it can possibly be.

TV fascinates the child with its wealth of information about life and the world. Before he can absorb one piece of information the TV is regaling him with another. That is why we so often hear children say, "Oh, we know all that! We've heard of it before. We've seen it already. . . ." There is nothing you can surprise them with any more.

"It is perfectly obvious that children are reading less nowadays," said the head of the curriculum department of Moscow School No. 57. "They haven't the time for it. All their free time is spent watching TV. They pick up odds and ends of superficial information on TV," she went on, "and that worries us teachers. We do not want to raise dilettantes, people who give the appearance of knowing everything but who actually know nothing."

We know these are fifth graders we are speaking of, but these fifth graders will eventually graduate. How will they be equipped for the business of life?

TV is a fine, useful instrument but it can easily turn malevolent. Have a person swallow 20 pills of Vitamin C a day and it's going to do him a great deal more harm than good.

The problem of the child and TV needs looking into. Idle TV watching for hours, day by day, breeds mental laziness, sluggish thinking, dull-wittedness.

Dear grownups—mamas, papas, uncles and aunts—please remember that school is not the only place where children do their learning. They also learn from us. And it is certainly from us that they learned to eat while they stare at TV, to leaf through magazines with their eyes on TV, to chat about nothing in particular with their eyes glued to the screen. It is certainly from us, to go on, that they learned to watch, without any discrimination whatsoever, everything the TV screen serves up. It is we who are to blame when children giggle at the sight of a kiss on the screen, for what can they know about love, the deepest of man's emotions? They will understand in time, of course. They will understand everything in time, but why should they be sitting beside us now, watching something they will begin to understand only five, seven or ten years from now?

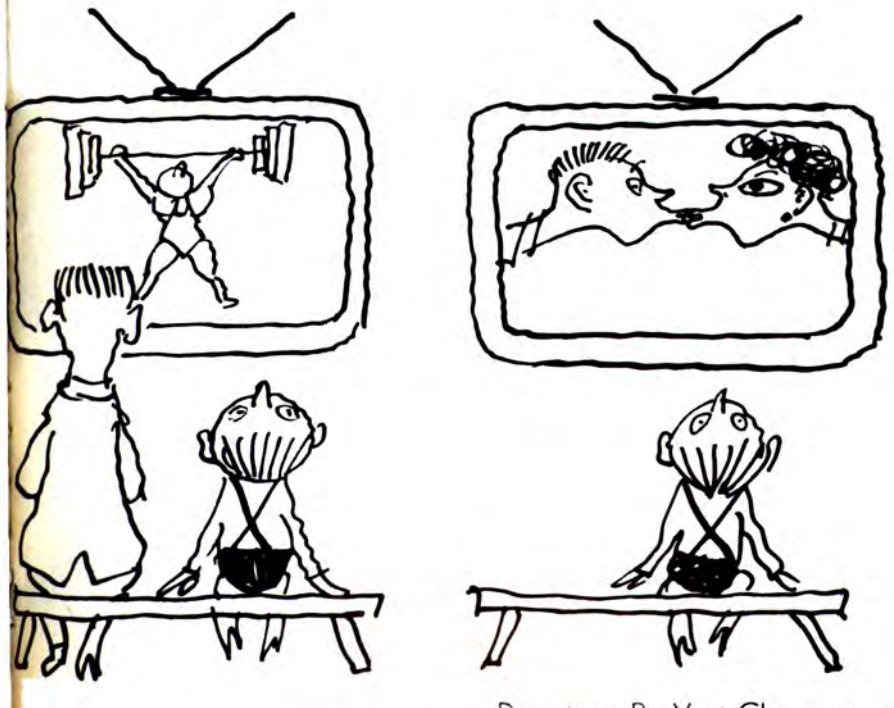
At the movies we are accustomed to the notice: "Children under 16 not admitted!" Ticket collectors warily gauge the ages of the youngsters clamoring to get in. They are fooled sometimes. Still, a barrier does exist, even if it isn't foolproof. But what do we see at home? We switch on our TV and calmly gather our brood around us to keep them from chasing about in the yard.

Do we really know what broadcasts our children should see? Do we ever tell them what is and what is not worth looking at? Not very often.

TV has become part of our lives. It can be found in nearly every home. But in nearly every home there are children racing through their lessons to be able to curl up before the fascinating screen as soon as possible. As we said before, this has its good and bad sides. The bad is bad enough, in fact, to worry the doctors. Parents too are beginning to show some concern. Only the teaching profession stays aloof, pretending that TV was never invented.

It is about time we had a serious discussion about children and television.

Courtesy of **Sovetskaya Kultura**



Drawings By Yuri Cherepanov

CYBERNETICS IN THE ECONOMY

By L. Levshin
Master of Science (Economics)



THE BOOK *Economists and Mathematicians at a Round Table Conference*, by Y. Davidov, L. Lopatnikov and L. Glazer (paper cover, Moscow, 1965, 207 pp.), contains the statements of the participants in a conference sponsored by the magazines *USSR* (now called *Soviet Life*), *Voprosy Ekonomiki* and *Ekonomicheskaya Gazeta* (reported in the September 1964 issue of *USSR*).

Leading economists, mathematicians and philosophers; chairmen of state committees and heads of departments and planning and statistical bodies; directors of research institutes and college presidents assembled at the Novosti Press Agency of Moscow and for two days discussed various aspects of Soviet economic development, concentrating on the application of mathematical methods to economic planning and management.

Discussions on this problem have been going on in the Soviet press and in scientific, economic and planning circles for a number of years. At first the economists did not agree on the possibility of applying mathematical methods to socialist economic management, some regarding the very mention of the subject as a concession to bourgeois economic theories. On the other hand, there was a group of scientists who, in in their zeal to stress the necessity of introducing computers into economic management, oversimplified the task, underestimating the fact that the application of mathematics to economics is impossible without first solving some important problems of economic theory and practice.

In the course of the discussions, and particularly as a result of the contact established between the economists and mathematicians, a considerable number of disagreements were resolved. That was also shown by the conference whose proceedings are published in the book being reviewed. The overwhelming number of conference participants agreed that it is necessary to achieve the organic unity of the qualitative and quantitative methods of economic research, which must be mutually enriching. It is only on this basis, through the joint efforts of the economists and mathematicians, that the task of creating a well-balanced economic-mathematical model of socialist production can be carried out.

But many concrete problems in the application of mathematical methods to economic planning (the criteria for an optimal plan, the system of price setting and others) are still heatedly debated. The book *Economists and Mathematicians at a Round Table Conference* presents a clear picture of the disagreements on these and other concrete problems.

There was quite a divergence of views on how to improve economic management and on the role of mathematics in this field. In their economic concepts some economists and mathematicians proceeded from the premise that the application of electronic computers would result in the creation of a highly centralized system of nationwide economic management which would be fully automated and based on extremely detailed plans.

Other scientists did not share that view and thought that the economic-mathematical model of socialist economy must be based not on abstract logic but on the direct and inverse relations which actually exist between production and consumption and are expressed in commodity-monetary relations. The economic-mathematical model of the socialist mode of production must, in the opinion of Academician Anatoli Dorodnitsyn, be subdivided into "separate blocs functioning autonomously" (p. 121) that would maintain a definite relationship with each other and be put into motion not by external but by internal economic impulses.

The same idea was expressed by Oleg Antonov, corresponding member of the Ukrainian Academy of Sciences, who thinks that "an enterprise must know in which direction to develop its production. For this it must be able to get the consumer's reaction to its products as quickly as possible. Without this kind of relationship no automation, even partial, is possible in the management of industry. Nor is it possible when the plant manager does not have the power to work out solutions and order definite corrections in the production methods. In other words, a democratization of the system of economic management is necessary, an extension of plant managers' rights" (p. 117).

On the whole, the book *Economists and Mathematicians at a Round Table Conference* shows the current state of the science of national economy, the urgent problems that must be solved in order to improve the entire system of economic management, of planned socialist economy.

While presenting the battle of opinions on the problems of applying mathematical methods to the economy, the compilers of the book also express their own views.

***Courtesy of the magazine* The Communist**

ALEXIUS,

PATRIARCH OF MOSCOW AND ALL RUSSIA

***PATRIARCH ALEXIUS** turned 88 this November. For 63 years he has been an ordained priest and for 50 years a bishop.*

All his adult life has been spent in the service of the Church of Christ. He has risen from simple monk to Patriarch of Moscow and All Russia.

He took holy orders at a changing period in history, when the 1917 October Revolution brought to Russia a new social system which separated church and state.

The Patriarch has both a religious and secular background. His general erudition and his knowledge of church doctrine and tradition combine to give him a profound awareness of the place of the church in modern life and of the needs of today's worshippers.

The Patriarch was born in Moscow in 1877. He spent his childhood and youth in Moscow. The scion of an old aristocratic family, he received the finest education available—at the Nicholas Lyceum and subsequently at Moscow University. Sergei Vladimirovich Simansky (his lay name) was given every opportunity for a brilliant worldly career, but he chose otherwise. His veneration for the church and his desire to emulate the saints moved him to enter the Moscow Theological Academy.

At the academy Alexius was ordained a deacon and later a priest. He was graduated in the spring of 1904 with a magisterial degree in divinity. His dissertation was on Metropolitan Filaret (Drozdov), the famous nineteenth century prelate of the Russian Church.

As a priest and subsequently as archimandrite, he taught at theological seminaries in Pskov and later in Tula and Novgorod. It was in ancient Novgorod that he was consecrated bishop in 1913 by the visiting Patriarch of Antioch, Gregory IV, then a guest of the Russian Church.

He moved up the heirarchy to become Metropolitan of Leningrad and Novgorod. He did not forsake his congregation during the terrible siege of Leningrad in the war against fascism; by word and action he set an example.

From 1927 on he assisted Patriarch Sergius. When Sergius died in May 1944, Alexius became Acting Patriarch at the behest of his predecessor.

In 1945 the Holy Synod of the Russian Orthodox Church met in Moscow and elected him Patriarch of Moscow and All Russia. Present were primates of the old Orthodox Churches of Alexandria and Antioch and representatives from many dioceses.

Despite his advanced age the Patriarch has lost none of his faculties. Nothing of consequence in the life of his own church or the Christian world generally escapes his attention.

He is much involved with the country's theological schools, especially those in Moscow. He reads the books and articles written by the Moscow Theological Academy faculty, approves dissertations and awards academic degrees. He often attends lectures, examinations, debates and other functions at the Moscow academy. For his learned writings the Patriarch has been honored with Doctor of Divinity degrees by the theological academies of both Moscow and Leningrad.

He is an active champion of world peace, as is the church he heads. He has spoken at peace congresses, has delegated representatives to such gatherings and has addressed messages to the heads of other churches and governments.

The Russian Orthodox Church holds a high place among the world's orthodox churches. Through meetings and exchanges of prelates and delegations it continues to strengthen its traditional ties with other churches.



AROUND *the* COUNTRY



ON A TOWLINE BEHIND A PLANE

Sergeant Major Vycheslav Zharikov of the Paratrooper Force gave a fine demonstration of skill and courage at the aviation sports festival held in Tula to celebrate Youth Day. Attached to a 165-foot towline, he jumped from an airplane traveling at 110 miles per hour. He maintained his balance by spreading out his arms and legs. When the plane was over the center of the airfield, Zharikov let the line go, opened his parachute and safely came to the ground. At the request of cameramen, he repeated the stunt two days later to cover over six miles.

IN RUDAGI'S MEMORY

More than 40 Soviet sculptors took part in the competition for the best monumental design to mark the eleventh centenary of the birth of Rudagi, the founder of Persian-Tajik classical verse. Fuad Abdurakhmanov, an Azerbaijan sculptor, was declared the winner. Using his models, Azerbaijanian craftsmen cast a 30-foot bronze statue of the poet. The monument to Rudagi was recently erected on one of the squares in Dushanbe, the capital of Tajikistan.





JOINTS OF METAL

Orthopedists are concerned today with the problem of tissue incompatibility. Though experiments on the transplantation of donors' joints have been a success, orthopedists may at times prefer metal to bone tissue. The Central Institute of Traumatology and Orthopedics was the first to make use of metal phalanges. Dr. Sivash has already transplanted 72 metal hip joints. The injured natural bones are replaced by an alloy consisting of cobalt, molybdenum and chromium—what is otherwise known as Comochron. It is very strong and absolutely harmless for the body.

MORE FLEECE

Sixty-two collective farmers from many regions of Kazakhstan demonstrated their shearing skill at a national competition here. Sabit Botanitayev of the Alma Ata Region won the title after he made 116 sheep take off their warm coats within seven hours. Bazar Askarova was first in the women's section.





ETRUSCANS SPEAK OUT

The Etruscans left us outstanding riches —paintings, rock and bronze sculptures, sarcophagi, pottery. But until recently scientists had not found the key to the ancient culture. No one could read the Etruscan inscriptions.

Alexei Kharsenin, a Soviet linguist, recently succeeded in reading over 40 Etruscan texts of a religious and ritual nature. With a colleague, he also deciphered the inscriptions on Etruscan gold plates which were recently found in the ruins of a temple near Rome. The plates are believed to date from the fourth or third century B.C.

AN ELECTRIC EXAMINER

More than 1,500 testing computers have been manufactured in Minsk and Mogiliev, Byelorussia. They will act as impartial examiners for schoolchildren and college students. The machine is easy to operate and inexpensive. Plug-in units provide 12 academic programs.

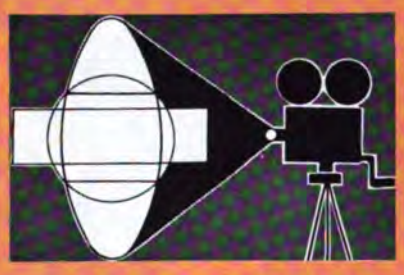
INSECTS IN THE SNOW

It was formerly thought that mountainous glaciers were entirely barren of life. But a jet-black gnat, long-legged, long-feelered and uncommonly broad-winged, was recently found on the permanent snow of the Tien Shan. Glacierlings, small black insects, were found there, too. They are also long-legged and have a long proboscis and thin appendages in place of wings. When sensing danger they sink into the snow. Nobody knows what they live on and how.



SAVED BY AN EAGLE

Azerbaijanian shepherd Sultan Aliyev found a golden eagle when it was a nestling. As the bird grew, it followed its master and his flock from pasture to pasture. One morning the shepherd was awakened by the bird's angry screeching. A venomous snake was lying just a few inches from his face. The eagle snatched it and flew into the sky. Aliyev called the bird back but in vain. The eagle had been bitten by the snake and was making its last flight. In a few minutes it fell to the ground.



NEW VARIOSCOPIC FILMS

Even in his time, Sergei Eisenstein, Soviet film producer, was dreaming of a screen whose size and shape could be varied at will. He thought that the emotional impact of films could be greatly enhanced if frame configuration were to vary with content. Eisenstein's idea is about to become a reality. Leningrad and Moscow film engineers have developed models of an optical system to serve a new type of movie theater—Varioscopic films. Full-scale realization of its immense possibilities will depend on new theaters to be built with special equipment. The Varioscopic films, however, can also be demonstrated on enlarged wide screens.

THERMOMETER IN A HEN'S EGG

Leningrad scientists working at the Agrophysical Institute have put a thermometer into a hen's egg. A microscopic transducer, which is fixed on the tip of a needle, is introduced into the egg to stay inside until the embryo completes its development, providing information on the optimal conditions of incubation.

FIFTEENTH CENTURY ICON

A North Russian icon painted in the fifteenth century was recently exhibited in the Tretyakov Gallery in Moscow. The icon portrays Saint Georgi. Georgi Pobedonosets killing the dragon personified in old Russian painting the victory of good over evil, thus expressing people's belief in the triumph of just causes.

Students of art have been looking for and sometimes finding magnificent monuments of original painting workmanship in moss-covered wooden chapels in out-of-the-way villages deep in the Northern woods.





PUZZLE OF THE TIEN SHAN

Climbing high mountains is known to cause a rise in blood pressure. But there is one place where this does not hold true—the Northern Tien Shan. The residents of these mountains have lower blood pressure than their counterparts in the valleys. Scientists explain that negative ions in the Tien Shan atmosphere are responsible for this phenomenon. This area offers good possibilities for building first-class hospitals to treat hypertensive patients.



FOR HORSEMANSHIP ENTHUSIASTS

Equestrian sports rank high among the most popular events in the USSR. In the European part of the country, in Central Asia and in Transcaucasia equestrian sportsmen are particularly numerous. They belong to voluntary sports associations which have a membership in the millions. The associations have their own horsemanship sections and anyone may join them. Dues for a year's membership are 30 kopecks. The associations' costs are largely met by trade union treasuries. Equestrian sports schools are now open in more than a thousand towns and villages.

ANCIENT VESSELS FOUND

At the bottom of the Supoi, a tributary of the Dnieper in the Ukraine, an antique service was found that seems to date from the fifth or fourth centuries B.C. The bronze service includes amphorae, hydriae, situlae, and a complete set of 15 vessels for storing, mixing, cooling and filtering wines.

Most of the vessels are ornamented with pictures of sirens, eagles, lion heads and griffins. The service was lying close to human remains and fragments of a skiff, which might possibly have sunk there. That the find is located so far up the Dnieper bears testimony to the fact that the Greeks had gone very far to the north of the regions which Herodotus considered known to his countrymen.



COLD-BLOODED DANCER

A group of Moscow tourists were mountainclimbing in southern Kirghizia. One day they saw their companion Yuri Dodonov engaged in a somewhat strange activity. He was playing the guitar while an adder twisted dashingly before him. The serpent coiled up as soon as the music stopped, but at the very next chord it stood up straight again. The performance lasted for a couple or hours, until at last the tired adder crawled away.



THE STOMACH GOES ON THE AIR

Clinically tested radio pills to investigate the gastrointestinal tract went into mass production recently. The capsule is a tiny laboratory equipped with a radio transmitter — 11.15 millimeters long and 8 millimeters in diameter. The patient swallows the "sending set" which then reports the events en route through the stomach and intestines, while a special purpose recorder plots the information.

VOLCANIC REACTOR

Tamara Zolotovitskaya and her husband Ramiz Agamirzoyev, scientists from Azerbaijan, discovered that erupted rock from mud volcanoes is highly radioactive. They succeeded in detecting gamma rays in the erupted mud. The more recent mud streams appear to be the most radioactive. The researchers have made the assumption that radium has an important part to play in these processes, its half-life being relatively short. It is probable that deep in the earth's entrails, with a pressure of over a thousand atmospheres and temperature of many hundred degrees, the energy stored from radioactive decay might become a kind of fuse which, at a critical point, gives rise to volcanic eruption.

MAN VS. BEAR

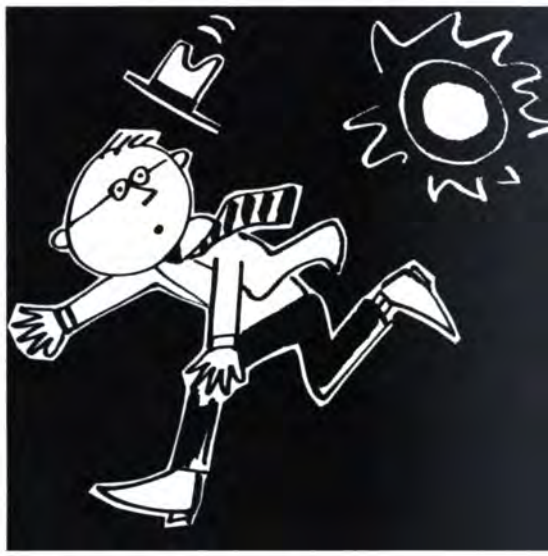
There was a thick fog, and Timofei Krasnov, a hunter from the island of Sakhalin, was working his way through a fir grove when he nearly bumped into a bear. Krasnov snatched his gun from his shoulder and fired a shot. With one smack of its paw the wounded animal smashed the gun and knocked the hunter to the ground. Krasnov could not reach his knife so he thrust his arm deep into the gaping mouth. His fist stopped the windpipe, choking the infuriated beast, and saved the hunter.



THREE AND A HALF MILLION BOOKS PER DAY

Three and a half million new books are put into circulation daily in the Soviet Union. Most of these books go to shops and eventually into private libraries. In addition, there are about 400,000 public libraries in our country. There are also some 140,000 libraries for village readers, and more than 50,000 specialized reading rooms and stacks which cater especially to scientific and engineering professions.





A PUZZLE OF THE FIREBALLS

A group of geographers from the Tzelinograd Branch of the Soil Studies Institute, Kazakhstan Academy of Sciences, were on a soil-surveying mission in the Kustanai Region, near the Tersek Woods. Strange wandering lights had been rumored to rise over that forest every night. And on the first night the geographers saw two red-yellow balls eight to ten inches in diameter. The next morning they scrutinized the location where the strange balls had been seen, but there were no traces to be found either on the ground or in the grass. Three more balls appeared at the same place the next night. Up they blazed and out they went, about 160 feet up and down, about 6,500 yards back and forth. L. M. Ozerny of the Physics Institute of the USSR Academy of Sciences made an assumption that a variety of ball lightning might have been involved, most common to the Tersek Woods. A research expedition was sent to the Kustanai Region to investigate that strange phenomenon.

AROUND *the* COUNTRY

A REALLY GOOD STUDENT has little time to get acquainted with the rector of Moscow University. For which the rector is sorry. But that is in the nature of things for the student who wants to continue drawing his scholarship stipend. His time is precious, and his Alma Mater is very generous with her lectures, laboratory work and seminars. The rector's function is to see that the budding physicist can listen to Academicians Landau, Artsimovich and Leontovich, and that the future chemist can study under Academicians Semenov, Nesmeyanov and Kargin. He knows that the research level achieved by the future scientists will depend on the level they reach in their studies.

The university's laboratories are excellent, though some are not as good as those in the leading research institutes. Not so long ago it was made possible for seniors specializing in nuclear physics to work at the Nuclear Research Institute in Dubna. This laid the foundation for an affiliated branch of the physics department. The chemistry and biology departments are doing likewise at the various institutes of the Academy of Sciences. These branches, which involve a building for a dormitory and lecture room and arranging for the use of the institute's laboratories, are the rector's brain children. He believes that the university must and will grow "not quantitatively, but qualitatively," and that changes must be made accordingly; for example, transferring senior students from other universities that do not have as favorable study conditions in certain disciplines as Moscow University. This experiment has already proven itself.

PETROVSKY'S SEMINAR

By Lev Kokin



The Rector's Extraordinary List

Everything runs smoothly and well enough so long as the future scientist gets fairly good grades in his studies and has no need to seek the acquaintance of the rector or the dean. But things turn out differently sometimes. Occasionally a student becomes so infatuated with peripheral things that he has no time left for study. That is when he finds himself sitting in the rector's office, stammering such phrases as: "I've neglected my studies . . . failed in my exams . . . they're expelling me!"

The rector sits thinking, hand supporting his chin, at one end of the long cloth-topped table—the sort of a table at which weighty conferences are held. What is he thinking about? The fate of a man cannot be deduced from a mathematical formula. He has heard such stories before, plenty of them, but each required its own solution. What sort of a fellow is this one facing him? And the even more difficult question, what sort of fellow is he going to turn into?

Bouncing up from his chair, he suddenly darts to the telephone—as impetuous as a teenager, but as cautious as a doctor.

"Let me speak to the dean, please. Hello, is that you? Well, one of your students is here. . . ."

What if some hotheads do accuse him of unwarranted tolerance! He knows that surgery is not the best pedagogical method. The rector has an extraordinary list of names, one he never shows newsmen. There are 10 names on that list—10 professors who have one thing in common: All of them, when they were students, were saved by the rector from expulsion.

Hello for the Fifth Time!

This is a shop where character is molded, a laboratory where talent sparks forth under high tension. Students leave it in five years, ready to shoulder the burdens of science. These are five years of continuous discovery, years in which each of them is tempered in the heat of argument, in the hammering he gets in exams, in tests for strength of mind, tests for genius—five years of student life! His songs and recollections about them will last until well after his hair has silvered. Alma Mater! That is what students have always called their universities. Alma Mater—Fostering Mother!

Ivan Petrovsky never left his Alma Mater.

He climbed the university ladder rung by rung: student, postgraduate, assistant lecturer, assistant professor, professor, head of a chair, department dean. He began that climb when he matriculated way back in 1922.

After the remote backwoods where he had lived, the half-dark Moscow of those days simply astounded him with its magnificence, for all that it had no student hostels, no dormitories. He had to find lodgings. Sometimes, not to abuse the hospitality of friends, he sat for long spells on any free bench he could find in the Kursk Railway Station. Finally he came on a miraculous advertisement: "Janitor wanted for children's home!" That meant a room with heat, perhaps even with electricity!

But let us skip a few rungs here.

Petrovsky's works on differential equations have long been the foundation of an important area of mathematics. Differential equations are one of the main pumps through which natural science imbibes nature's secrets.

The importance of those works will best be seen by comparing the textbooks of the twenties with their descendants of today. Where differential equations with partial derivatives were concerned, the old textbooks were actually collections of separate problems—books of problems and their answers, nothing more. There was no general approach. The theory that could unite the solutions into a well-knit system, into a key, was lacking. That "key" was supplied by Petrovsky in his 1937 to 1939 studies.

There was a crisis in the mechanics and mathematics department in 1940. There had been no dean for the department for months. No suitable candidate could be decided upon, and the matter was finally settled by vote.

"Nowadays we elect our deans," explains Academician Pavel Alexandrov, "but in those days they were appointed. Academic elections

were thought bizarre. Ivan Georgievich was elected—and by an overwhelming majority; he always had the respect of the department. But it seems to me. . . ." Here he turns to Professor Alexander Kurosh, who is sitting next to him, "that there were two candidates. . . . Do you happen to remember who the other fellow was?"

"I should say I do!" exclaims the professor. "I remember him perfectly well. I was the other fellow!"

Though Petrovsky was immersed in his scientific work, he agreed to accept the post—to the detriment of his research—on condition that it would be for only one year, that he would be free to return to his studies in 1941.

In the war year of 1941 Dean Ivan Georgievich Petrovsky was busy organizing the work of his department in Ashkhabad, to which it moved for the duration. His cares then were far from mathematics, and his return to his studies seemed more remote than ever. That, however, was a deceptive impression. While the dean was finding suitable quarters for classes and suitable rations and housing for the faculty, the professors were anything but idle. One of them was engaged in calibrating tank instruments; another, artillery shells. Kolmogorov worked on firing methods.

On the next rung of the ladder Ivan Petrovsky emerged as academician, rector and head of one of the world's great science and university centers. He hopes to be useful to his Alma Mater in these capacities. His former activities as dean helped him assimilate the role of learned organizer. Many scientific works will be turned out under his auspices.

They say that Petrovsky has gotten into the habit of greeting his friends and acquaintances several times a day, whenever he happens to meet them, since he became rector. The reason, they also say, is that he is afraid someone might think that his new promotion has gone to his head.

Greeting people, he often gets the following answer:

"Hello Ivan Georgievich, hello for the fifth time!"

Executive or Scientist?

More than a third of the Soviet Union's academicians were educated at Moscow University. Fully a third of them teach there. The university's chairs and laboratories are researching every scientific field of any importance. But mathematics is still very much in the limelight amid this variety of modern fields of knowledge.

The mathematician in the role of organizer is no rare figure nowadays. Moscow University is not the only learned institution headed by a mathematician. It is true of the USSR Academy of Sciences, whose president is Academician Mstislav Keldysh, and its branch in Siberia, which is headed by Academician Mikhail Lavrentiev. Among the many others we could mention is the Georgian Academy of Sciences and its president Academician Nikolai Muskhelishvili.

Some people think that a scientist ought to stick to research. Mathematicians like Petrovsky are rare, they say, while organizers of his caliber crop up more frequently.

Those who hold to this idea overlook one important truth: To organize science means, first of all, to direct the course of its development. It means viewing science not only in its present condition, but in motion, in all of its contradictions, appraising the direction of its movement, its speed and its acceleration with an eye to the needs of the future. All this requires a great and farsighted scientist.

The present is fraught with discoveries in biochemistry and biophysics, in the physics of solid bodies and in genetics. But science does not pause even for an instant, and tomorrow will bring new potentialities quite unknown today.

When physicists talk about Petrovsky, they invariably say: "Physics is well within the range of his interests." Similarly, biologists declare: "Biology holds an important place in his range of interests." While historians confidently claim: "His range certainly encompasses history!" What an enormous range!

Shopping

A quarter of an hour of "rummaging through papers" followed by talks and more talks—that is the order of his day as rector. There is no sign on his door listing his reception hours. People come whenever they like, merely asking:

"Is Ivan Georgievich in?"

Petrovsky's old friends think he is an introvert, not at all inclined to be sociable. If that is so, why does he talk to scores of people every day, to those who need his aid or advice, or whose aid and advice he needs? Before reaching a decision on anything important, he makes it a point to listen to the opinions of others. Of course it is true that he prefers to talk to one person at a time and doesn't like long and crowded sessions with their ponderous speeches.

In conversation with Ivan Petrovsky one has the feeling that something inside him is hard at work, as though the information he is receiving is being ground down by the millstones of his thoughts, as though he is refining everything he hears, picking the ore and discarding the rock. Then comes the time when he feels he must think over what he has seen and heard, that he must simply be alone.

Conferring with many people and living among them every day, he is unable to stay among them constantly.

At least once a week he comes to the university later than usual.

"I'm going to do a little shopping in the morning!" he warns his secretary the day before.

The route he takes on such occasions has been the same for many years but has been kept a jealous secret, for seclusion is its chief purpose and delight. Having learned to speak English not so long ago, he calls it "browsing."

Though this word is a comparatively new acquisition, stemming from his sudden flare for English, he has been "browsing" for a long time, and his old friends the booksellers are often at their wit's end wondering what to offer him. Rare editions and exotic bindings leave him cold. He takes fire only when leafing through a book, and no one can tell what that book will be—the volume he will single out from scores of others. Ivan Petrovsky chooses his books as carefully as his friends. He has many book friends, phonograph record friends and picture friends. Having chosen these friends slowly and with great care, he remains loyal to them, keeps them affectionately, for he likes to return to them from time to time. He also likes to walk the same city streets and the same woodland paths.

"Trivial" is an expression mathematicians often used. "That was a trivial solution," they say in dismissal. Or, "that was not trivial!" and nod their heads approvingly.

Speaking of Petrovsky, one of his pupils remarked: "He's no trivial person!"

He does not like to travel and has never been to the Crimea or the Caucasus. Though he has to make business trips from time to time, he always does so most unwillingly. This is not a sign of old age, he has never liked traveling. New surroundings evidently interfere with the mental concentration he finds so necessary. He may be afraid, too, that new impressions will frighten away an essential train of thought.

Mathematical Culture

There are scientists who are veritable treasure houses of ideas it would take many lifetimes to develop fully. Such masters have numerous pupils who are nurtured by their ideas. But there is another kind of scientist, too, the kind who tackles a single difficult and fundamental problem that claims many long years of his life, but which he works out to its end, making important discoveries and achieving astonishing results. Though the pupils of such a scientist are not numerous, this does not imply that the trace he leaves on science will be less significant.

Very serious-minded reports on special problems may be heard in a small lecture room on the fifteenth floor of the main building. Cross-examined by his colleagues, the speaker often reminds one of a student fighting his way through a harrowing examination.

Petrovsky has been giving his seminars at the department of mechanics and mathematics for almost 20 years. The present participants, hardly older than the course itself, may be regarded as Petrovsky's scientific "grandchildren," for they are the pupils of his pupils. His "sons" and "daughters" are at work in many cities of the Soviet Union. Though they are few, some of them are known the world over.

The whole of an important section of mathematics has been influenced by Petrovsky's ideas for a quarter of a century. His researches outstripped his time, and many years were needed to appraise and digest them completely.

Various works have been published both in the Soviet Union and abroad reviewing Petrovsky's ideas from different angles, developing them, looking into them more deeply. The French Academician Jean Leray, the Swedish Academician Lars Garding, and outstanding Soviet mathematicians who were once the pupils of Petrovsky spent many years doing just that.

Several generations of students have been raised on Petrovsky's lecture courses. His textbooks have been translated into many languages. He does not teach detail; what he is interested in is widening the mental horizon of his students. He wants them to appreciate the beauty of mathematical thought instead of confining themselves to some narrow area. The quality he strives to nurture is commonly called mathematical culture. The mathematician armed with such culture nearly always does something basically important.

Petrovsky is an implacable foe of the superficial. Communion with him is much like a seminar. It has the qualities he demands from himself and expects from others—simplicity, clarity and depth.

Courtesy of the magazine Ogonyok

DANCING IS HIS LIFE

About Vladimir Vasiliev, winner of the Nijinsky Prize in Paris in 1964 and of the Grand Prix and Grand Gold Medal at the World Ballet Contest held in Varna in 1965.

By Mark Khromchenko

HIS FAVORITE WORD is "tremendous!" A tremendous affair! Tremendous music! A tremendous joke! You have to see and hear him pronounce the word to appreciate it. He relishes it. Jumps up, waves his arms, and bursts into a smile. Tremendous! Can you beat it—the wonderful way this world is packed with so much that is interesting, fascinating, and tre-men-dous!

He exudes' *joie de vivre,* humor and optimism, and never tries to save it for a rainy day. He spends it generously, all aglow with the sparkling vitality of living.

It is the same with his work, to which he devotes himself completely. One long series of lessons and rehearsals, rehearsals and lessons, roles and performances demanding every ounce of his energy.

Eight years ago, a graduate of the Moscow Ballet School, he joined the famous Bolshoi Ballet, or rather the theater's company, for he had a long way to go before he could get to the Bolshoi Ballet. And yet he did join the ballet, for he spanned the distance between beginner and star in such a short time that you would think he was an accomplished dancer when he started. By the end of his second season he had danced as many leading parts as would have filled any other dancer's stage career: in the classical *Chopiniana (Les Sylphides)* and the gay Shostakovich *Suite*, Pan in Gounod's *Walpurgis Night,* the prince in Tchaikovsky's *Nutcracker* and Prokofiev's *Cinderella,* Daniil in Prokofiev's *The Stone Flower* and Ivanushka in Shchedrin's *The Little Humpbacked Horse*—the list speaks for itself.

His dancing, turbulent and audacious as the gust of a willful spring wind, his splendid turns and famous leap—in ballet terminology this is called *ballon*—delighted and drew enthusiastic ovations from audiences in Moscow, New York, London, Paris, Cairo and Vienna. His plasticity, coordination and beauty of movement are amazing. They strike one both on and off the stage. You see it in the way he walks, swims, plays volleyball. I saw him step onto a tennis court for the first time. Two hours later—I am not exaggerating in the least—he was playing with the elegance of an experienced racket-wielder.

To the uninitiated it seems that everything comes to Vladimir Vasiliev with remarkable facility, that he was born talented. It is true that he is highly gifted, but one can only wonder where it all comes from. His family had nothing to do with art. Vasiliev senior was a truck driver, and his wife a factory worker. But the boy's penchant for the arts appeared so early and with such urgency that nobody doubted it for a moment.

Talent alone, however, is not enough (a truth that is as banal as it is invariable). His colleagues alone know how exacting he is, how much he drives himself. The lightness of his step, simplicity,



Vladimir Vasiliev was awarded the Nijinsky Prize in Paris in 1964, unofficial acknowledgement that he is the world's premier dancer.

Photographs By

Yevgeni Umnov

Georgi Petrusov

Leonid Zhdanov





As Paganini



As Pan





As Petrushka





Vladimir Vasiliev rehearses with his wife Yekaterina Maximova. She is also a member of the Bolshoi company. Their mentor is the incomparable Galina Ulanova.

the inner freedom and spontaneity that are so rare in the ballet, are a combination of innate qualities and endless work, sore feet, acrid sweat and terrible fatigue. The slightest detail—only a fleeting moment on the stage—is polished by long hours of classwork and rehearsals.

Vasiliev loves to work with those who are as exacting of him as he is of himself. From that encyclopedist of choreography Kasyan Goleizovsky he learned how to be a thinker in the dance; from the once brilliant Alexei Yermolayev he learned the value of precise gestures, turns, stops and poses; from Alexander Radunsky he learned the secrets of artistic expressiveness. He took from each whatever he had to give. That was his road to mastery.

Five years ago he permitted himself to appear on the stage not altogether "finished." It was natural—youth is impatient, not to speak of so ebullient a youth. Today Vasiliev realizes that he has the right to appear on the stage only after he has convinced himself that his role is absolutely finished (absolutely—for the première, but he goes on searching for perfection in every subsequent performance).

Five years ago he could fail. He could dance *Chopiniana* and consent to dance the prince in *Swan Lake*. Today he refuses these roles, realizing they are not for him. Without the least false modesty, he says he can dance them as well as anybody else. As well. But not better. He has earned the right to his own criteria, and makes others respect them.

He is aware that his audience expects something new from every new role he dances. That is why he prepared the parts of Paganini, Basil in *Don Quixote* and Mejnun in Goleizovsky's remarkable production so painstakingly.

Vasiliev knows that he is Vasiliev. But only on the stage. Off it he is as happy and surprised as a 25-year-old man should be by all that life gives him and by all that he takes from it.

He had a free evening, a few free days, after working to the point of exhaustion. He felt as though he could just about get himself to bed. But his friends were waiting for him. Knowing that

Vladimir Vasiliev is today in the prime of his career. With Raisa Struchkova.



he was free, they hurried to his house and carried him off to an artist's studio, to see a (tremendous) film, to celebrate the birthday of one of his friends. A few minutes and he was the center of attention, joking, grinning and making everybody guffaw louder than he himself.

On vacation he always tries to find something to do. He'll get himself all messed up helping a man repair his car, or get covered with scales cleaning a freshly caught fish for chowder.

You can find him roasting meat for *shashlyk* or humming a tune to the strumming of a melancholic guitarist. In the midst of gayety, he can pick up a book or sketch pad and go off to paint a dawn or flaming sunset. Because painting (and sculpture too) were his first vocations. Having yielded way to the dance, they remained as hobbies, helping him in work and recreation, enabling him to express himself when the dance proves an inadequate medium.

He has no end of plans. One is to choreograph his favorite ballet, *Le Sacre du Printemps*, for the Bolshoi. He intends to prepare a program to be performed with his wife Yekaterina Maximova of the Bolshoi Ballet.

And dance, dance, dance. Dance to the last breath. Because dancing is his life.

THE SPRING OF SOVIET MUSIC

By Aram Khachaturyan

SPRING is the time of festivals. Joyful. Diverse. Traditional. And, above all, musical. We have our Moscow Stars, our White Nights of Leningrad, our Transcaucasian Spring, our Decade of Russian Music in Armenia. Last spring, when distinguished Russian musicians were playing to Yerevan audiences, the State Symphony Orchestra of the Armenian Philharmonica, conducted by Ogan Duryan, appeared in Moscow to great acclaim. Yerevan's musicians introduced Moscow's music lovers to the symphonies of Alexander Arutyunyan and Edward Mirzoyan—two very gifted Armenian composers. The orchestra gave an interesting rendition of Tchaikovsky's music at the Moscow Stars Festival, which was devoted to the 125th anniversary of the Russian composer's birth. It so happened that the festival of Russian music in Armenia coincided with the performance of Armenian musicians in our country's capital.

This, to a certain extent, is symbolic. More than that, it is logical. It is the result not only of the long and friendly ties binding Armenia and Russia, but also of the fraternal friendship of the arts among all the nations of the Soviet Union.

The Russian school of music, with its great breadth and grandeur, gradually took shape through the centuries and crystallized the best that the Russian people had to give. Naturally enough, in originating their national music, the peoples of the Soviet Union, especially those who prior to 1917 had no professional music or professional musicians of their own, oriented themselves by the trail blazed by Russian musical culture. Their path is the same. But it has several parallel lines of equal significance along which the fruitful interrelation of Russian music and that of the other national republics is progressing. The study of the rich experience of Russian music, that is to say, of the manner in which the Russian classical composers, with their great humanism and passionate desire to create a national school of music, approached the Russian theme, is one of the most dramatic of the directions this interrelation of the national cultures is taking.

We can see how the national music schools of Transcaucasia, Central Asia and the Volga autonomous republics (Tataria in particular) are being formed. It is a signal, natural and gratifying process. In general, the mutual exchange of cultural values gives rise to common spiritual characteristics within the different nationalities, characteristics which stem from the new type of social relations and embody the finest traditions of the Soviet peoples. An international culture common to all the nations is being evolved, and out of the development of these national artistic idiosyncrasies an international art will be born. This, I repeat, is the result of this close and constant communion, a unique musical diffusion. And this diffusion covers both music for the lay public (the many lectures, concerts, universities of culture, evening music schools for adults, etc.) and the training of musicians.

Among the teachers of the Moscow and Leningrad conservatories we find many musicians from the national republics; and in the conservatories of the republics, a great many musicians from Moscow and Leningrad. The same holds for the students. For instance, in my class at the Moscow Conservatory I have an Azerbaijanian, a Russian and an Armenian. Three years ago my pupil Nodar Gabuniya, a Georgian, earned his diploma. Of course, this is a special case, and yet it is typical. Musical studies are one of the oldest and most fruitful paths of intercourse among the national musical cultures. The composer and folklorist Jasep Witol, founder of the Riga Conservatory, studied at the St. Petersburg Conservatory under Nikolai Rimsky-Korsakov. Later, Sergei Prokofiev and Nikolai Miaskovsky studied composition under Witol. I had the good fortune to study at the Moscow Conservatory with Miaskovsky, and it is thanks to him that I acquired a proper appreciation of the music of Borodin, Moussorgsky and Rimsky-Korsakov, who became my favorite composers and life-long teachers.

The impressions of my childhood and youth, associated with the elements of the Caucasian melos, were later multiplied by my study in depth of Russian classical music at the Moscow Conservatory. I believe that as a composer I was born on the crossroads (or in the synthesis) of these two musical cultures.

I can cite several similar examples. For instance, the talent of Alexander Spendiarov, that classic of Armenian music, was formed in close creative contact with Rimsky-Korsakov, Alexander Glazunov and Anatoli Liadov. That is why musicologists all note that Spendiarov introduced into Armenian music the element of professionalism on the level of the latest achievements of the music of his day, having borrowed for his symphonies Rimsky-Korsakov's clear and logical system of notation, fine sense of orchestration, his dislike of ostentation and all peripheral effects, and his austerity of expression. Having become characteristic of his style, this also became the property of all Armenian music. If we return to our day, we shall find that the works of the young Armenian composers Edgar Oganesyan, Arno Babadjanyan and Djivan Tertatevosyan show the strong influence not only of Tchaikovsky, Rimsky-Korsakov and Rachmaninoff, but of Shostakovich, Prokofiev, Miaskovsky and a number of other Soviet composers as well.

I have more examples. Vissarion Shebalin's pupils include the Russian composer Tikhon Khrennikov and the Armenian composer Karen Khachaturyan, and among the graduates of the Alma-Ata Conservatory are the Russian composer Alexander Zatsepin and the Kazakh composer Kudus Kuzhamyarov.

Education, however, is not the only way our music is diffused. Of great significance are the musical friendship days, the festivals of "musical springs," which are held in all the republics and territories of the Soviet Union without exception. Ukrainians go to Uzbekistan, Lithuanians to Russia, Byelorussians to Moldavia. Armenia plays the music of Azerbaijan, Georgia the music of Armenia, etc. The national theaters stage Russian operas and ballets; and the Russian theaters, national productions (for instance, the opera *Stolen Happiness* by the Ukrainian composer Yuri Meitus is running in Tallinn and Chelyabinsk.)

Of great significance is the dissemination of music by Russian composers in the national republics: Rheinhold Glière and Sergei Vasilenko in Uzbekistan and Nikolai Peiko, Vladimir Vlasov, Vladimir Feré and Mikhail Raukhverger in Kirghizia. We find this scene repeating itself constantly in the country's concert halls: At music festivals "hosts" receive their "guests," and heated debates and discussions ensue. Congratulations and praise are replaced by high-principled criticism, serious talk about musical ideas and expression, and the ways and means to develop national music. These problems are also raised at the plenary sessions and congresses of the composers of the USSR, the Russian Federation and the national republics. All this creates an interesting musical alloy and facilitates the mutual enrichment of cultures and schools of composition. This diffusion, this mutual musical study, however, applies not only to the music of the peoples of the USSR, but also to the music of the West. We learn from the finest composers of the West, and they learn from us. We try to adopt the best traditions of foreign musical experience, just as the experience of our eminent composers is studied in the West. The influence of Shostakovich, Prokofiev and other Soviet composers is unquestionable.

To return to the interrelation between Russian and Armenian music, however, I should like to note that aside from the great influence Tchaikovsky, Moussorgsky and Prokofiev have exerted on the work of modern Armenian composers, they have also been influenced by Béla Bartók, Leoš Janáček and other foreign composers, let alone the classics of the past. Shostakovich, the teacher, has also had an influence on the work of Kara-Karayev of Azerbaijan, his pupil.

In speaking of all these influences, what I have in mind is not the melodic system, but the compositional methods, details of intonation, development of material, etc.

Part and parcel of this musical diffusion is the influence of the national cultures on Russian music. It would be in place to recall here the priceless work done by the Georgian composer Arakeshvili in collecting Russian folk songs and arranging the Russian music of Spendiarov.

Dmitri Shostakovich's Eighth Symphony shows the influence of Oriental intonation on the music of one of our notable Soviet composers.

Thus, Soviet music, the friendship of national cultures, develops in close and diverse interrelations. I have tried to indicate some of the directions this mutual enrichment is taking.

Marshal Ivan Bagramyan Replies to an American Reader

To Mr. Fantalov, Editor of *Soviet Life*

As an American of Armenian descent, there has always been a question in my mind as to what part the Armenians in the Soviet Union played in the fighting against Germany during World War II. I have heard conflicting reports on the role they played. Can you shed some light on this question? Is it true that they were among the first troops to go into Berlin and that they played an important role in the defense of Sevastopol?

Yours truly,
Harry Basmagian



Marshal of the Soviet Union Ivan Bagramyan was born in December 1897 in the town of Yelizavetpol (the present city of Kirovabad), Azerbaijan. He was the son of a railroad worker. In 1915, after finishing a railway technical school, he volunteered for service on the Russian-Turkish front. He distinguished himself in action and in two years became an officer. After the overthrow of the czarist regime he took an active part in the fighting which led to the victory of Soviet power in the Caucasus.

Between the two wars he studied at the Frunze Military Academy and the General Staff Academy. When the Nazis invaded the country, Bagramyan had the rank of colonel and was serving in the Ukraine. He headed the operations department of the Headquarters of the Southwestern Front. He was appointed chief of staff of the headquarters of this front and the chief of the operations group of the Main Headquarters of the Southwestern Sector. Subsequently he commanded the Eleventh Guards Army. He ended the war as commander in chief of the Baltic Front.

Marshal Bagramyan is a Hero of the Soviet Union and has been awarded many Soviet and foreign decorations. He is now Deputy Minister of Defense.

Dear Mr. Basmagian,

It gives me great pleasure to answer your letter.

In my homeland Armenia there is the small village of Aigezard, one of many such villages. In the summer of 1941, 130 men from this village went off to war. Fifty-four did not come back, but the memory of these soldiers lives on with the people who, in keeping with ancient custom, built a memorial at a spring well in the village square. The spring gives the refreshing water of life to people who bend down for a drink on a hot day. There are many such memorials in Armenia, many of them built along the roads. A traveler will stop at such a well, drink the refreshing water and stand in silence for a moment. The memory of our fallen soldiers is as pure and everlasting as the clear water of our eternal springs.

Memorials to Armenian soldiers stand wherever they fought and died for the happiness and freedom of the homeland. These monuments are well kept. In the Cossack village of Verkhnyaya Bazanskaya I bowed to a memorial to Hero of the Soviet Union Unan Avetisyan. A memorial at Gornaya Hill near Sevastopol bears the following inscription: "Eternal glory to the soldiers of the Armenian Taman Red Banner Division who died the death of heroes to liberate Sevastopol from the Nazi invaders."

On a tour of the Ukraine I visited a village on the right bank of the Dnieper. In the village schoolyard I saw an obelisk. The pedestal was strewn with fresh bouquets of wild flowers. The inscription "Garegin Balayan" indicated that it was a memorial to a glorious son of Armenia who was the first to cross the Dnieper at the head of his battalion and who died in the battle for that village. When I asked the villagers why they had buried him in front of the school, they said, "We want our children always to see the name of the man who gave his life to free us."

We know that when the nazi leaders planned their blitzkrieg against the Soviet Union they had high hopes of breaking the unity of our peoples. They thought that with the very first blow national strife would be kindled in our country, that the nationalities of the USSR (of whom there are more than a hundred) would begin fighting each other. They thought that national discord would be one of their trump cards. But they figured badly. The friendship of our peoples stood the test of war, the worst and most savage of all wars in history.

I am glad, as a son of Armenia, that our comparatively small people made so large a contribution to defeat the Nazis. At the outbreak of war Armenia sent tens of thousands of her sons to defend the freedom and independence of the Soviet homeland.

Armenian soldiers fought along the entire length of the vast front, from the Arctic to the Black Sea. There were sons of the Armenian people among the heroes who defended the Brest Fortress. In July 1941, when the nazi hordes pushed deep into Byelorussia, a handful of soldiers went on fighting in the ruins of this old fortress, holding off a whole enemy infantry division. The brave commissar Samvel Matevosyan led the counterattacks. Among the defenders of Leningrad and Odessa was the famous pilot, Twice Hero of the Soviet Union Nelson Stepanyan. His comrades called him "the bravest of the brave." He flew 239 sorties, shot down 30 German planes, burned 85 tanks, sank 13 ships, smashed 105 artillery pieces and some 600 motor vehicles. When his plane appeared over the front-line, the Germans would announce over the radio, "*Achtung! Achtung!* Beware, Nelson is in the air!"

At the front I remember how, in the short lulls, the Armenian soldiers would read letters from their fathers, mothers, wives and sweethearts urging them to fight bravely. It seemed to us as if the ancient earth of Armenia, her very mountains were sending us that same message. Our fellow countrymen wrote us, "We follow your battles with great hope. Sons, be worthy of your people. Each step you advance westward brings closer the day of your triumphant return home to Armenia."

And the Armenian soldiers carried out the orders of their motherland with honor. Some 50 Armenians won high rank in the armed forces for distinguished service. Among them there are such outstanding military leaders as Admiral of the Fleet Ivan Isakov and Marshal of Aviation Sergei Khudyakov-Khanferyan. The fact that during the war 100 Armenians were honored with the title Hero of the Soviet Union and some 70,000 were awarded orders and medals testifies to the valor and patriotism of our people.

When the nazi divisions forced their way to the foothills of the Caucasus, Armenia together with the other Transcaucasian republics formed four national divisions which thrust back the fierce onslaught. Then these divisions with other troops of the Soviet Army pursued the enemy westward.

Here is the record of only one of these divisions, the Eighty-ninth Armenian Rifles. It was led through the whole war from the foothills of the Caucasus to Berlin by Major General Nver Safaryan. This division won glory for its colors in battles for the liberation of the Kuban region and Novorossiisk. Its regiments forced the Nazis from the Taman Peninsula into the Kerch Strait, and by an audacious maneuver established a beachhead on the Crimean shore. The division was awarded the Order of the Red Banner for its valor, and for distinguishing itself at Taman, that name was officially added to its title.

In the battles for the liberation of Sevastopol our men stormed Gornaya Hill, a key position in the enemy defenses, for three days running and finally took it after a bloody fight that opened the road to Sevastopol. Hundreds of men who participated in this assault were awarded orders and medals. The title of Hero of the Soviet Union was conferred on five: Bagdasaryan, Arutyunyan, Khachaturyan, Mkrtchyan and Rostomyan. Two regiments were awarded the honorary title of Sevastopol Regiments, and the division won its second Order of the Red Banner.

The Taman Division was considered one of the advance formations of the Soviet Army. Its officers and men took part in the liberation of Poland and in the crossings of the Vistula and the Oder. The division did particularly hard fighting on the Oder bridgehead in the last days of the war when its men had to repel as many as 10 attacks of large enemy tank forces a day.

In April 1945 the soldiers of this glorious division were among the troops that took part in the assault of the nazi den, Berlin. They forced the Nazis out of the concrete bunkers in Humboldt-Haydn Park, smashed the German fortifications in Rheinikersdort-Ost and other districts of the nazi capital. For heroism on the Oder bridgehead and in the assault on Berlin, the division was awarded the Order of Kutuzov Second Class.

Twenty years ago in May the men of those Soviet units that entered Berlin left their signatures on the columns and walls of the smashed *Reichstag* building. Among the autographs of the victors—Russians, Ukrainians, Byelorussians, Georgians and Uzbeks—there were Armenian signatures too. Our men did not tarnish the glory of their forefathers, they did the bidding of their homeland.

I hope you find this answer satisfactory.

Sincerely yours,
Ivan Bagramyan

P.S. If you have a chance to visit Armenia, you will see how beautiful our ancient land has become.

Photographs By Yevgeni Tikhanov

By Robert Tsfasman

WHAT were the Americans like?
What did you do there?
What did you talk about?

These were some of the questions YCLer Yuri Chekanovsky's friends peppered him with the day after his party for the visiting Americans.

"I hardly know where to begin," Yuri replied. "They're like us—just people, very sociable. And we did the same things we do when we get together. We talked, laughed, danced, sang and had a few drinks. They do drink differently. They sip their vodka and were surprised when we downed it in one gulp. Of course, that wasn't the only thing that surprised them. Take the YCL, for example. All evening they popped questions as us, wanting to know what sort of an organization it is and what it does. Generally speaking though, they weren't interested in politics, they wanted to know about us, what we do and how we live. In short, we had a fine time."

The foreigners—there were seven of them at the party, five girls and two boys—took the fancy not only of their host alone. Our boys were charmed by attractive Carol Otten and her friends, while the Russian girls were taken with witty Minnesota dentist Gerry Fraiser and Canadian student Eric Haythorn. Eric displayed a gravity far beyond his years. Though the first few minutes were a bit strained, as is usually the case when strangers meet, the ice was broken very fast. The guests were amazingly direct and lively, the ideal type who do not have to be entertained. "What, not enough chairs? Never mind, the floor will do fine." "Which American songs do you like best? 'Greenfields?' Well, Carol will write out the words for each of you." And indeed, Carol, who is taking a course in stenography at college, assiduously took down the words straight from the tape recorder.

The so-called language barrier turned out not to be much of a barrier after all. Interpreter Alexei Mikhalev, who found himself the cynosure of all eyes, was not taken aback for a moment. He not only interpreted, but also egged on both Russians and Americans to play all sorts of tricks.

A meeting with Russians in an unconstrained atmosphere was exactly what everyone in this tourist group wanted. There were 16 of them with their leader Clark Olsen, a Unitarian minister. Incidentally all the Americans were Unitarians, a church which, according to its members, brooks no dogmas. The Americans joked that their only dogma was, perhaps, a daily ice cream. Clark Olsen has the reputation of being the most secular of ministers, in the group he was known as the "Wrong Reverend."

The Americans were not only of the same church but also of about the same age group. Most of them were young people, students. One common feature was their vast interest in Russia. In fact their tour was called a Russian study trip. Many had come just out of curiosity, others for some special reason. Dick Harmon, for instance, plans to teach the geography of the USSR, and Nancy Lewis and Jenifer Winn are majoring in Russian language and literature.



"Go, man!" "Do togo!" "Shaibu!"—the same in American, Czech or Russian.

A couple more sucks and Dick Harmon will win the contest for the U.S. team.



2 EVENINGS

The languages are different, but the twist is just about the same everywhere.



They all came over in high spirits, anticipating new and interesting meetings. Though one of them frankly admitted, moreover to a large audience, that he had had some hesitancies about coming. However, his repentant excuses were interrupted by such loud cries from the rest, that he quickly switched the conversation to other channels.

There are loads of interesting things in the USSR for someone who is visiting for the first time. It was only natural for the Americans, inquisitive as young people usually are, to hang on every word uttered by their guide and to photograph everything in sight. Dick, incidentally, was nicknamed the Camerabug. But most of all, they were curious about people. They made acquaintances everywhere with everyone and at every off-the-record gathering turned up with new friends. The interpreter remarked later that he had never had a group so interested in literally every little thing.



What Carol Otten is getting her teeth into is pirog*—Russian style pie.*

OUT OF 29

The Americans visited 11 Soviet cities, spending a total of 29 days in the country. They went on any number of exciting trips and had many interesting encounters. But the best was at Moscow's Youth Café on July 10.

The Molodyozhnoye—to give it its Russian name—is a very popular café. The only way to get in is to show up an hour before opening time. That evening there was a terrific crowd outside. People had heard there were 14 Americans and 31 Czechs inside. It was really an international affair. The hosts were the Komsomols of the USSR's biggest airport—Sheremetyevo. They tried to get as many young Russians as possible who knew English, not to have the poor interpreter on his feet all the time.

Vadim Sakun's jazz trio, one of Moscow's best, played for the guests. The Americans said they were very good but were sorry the program was exclusively modern jazz since they wanted to hear some old Russian songs. The hosts were happy to oblige.

The highlight of the occasion was the quiz and fun competition. Three teams—American, Czech and Russian—were made up and each was asked questions, mostly of the comic sort, that called for impromptu wit. They were also asked to divide a pie into eight pieces in the space of three minutes with only three strokes of a knife and gobble up the slices. The Czechs won. Carol, Rosemary and Dick were at a loss. Their colleagues coached them but were not very helpful. Finally Agnes Lassetchouck, who was considered the wittiest, grabbed a knife from someone and rushed to the cake, but, alas, too late. The Americans did win the next event, with Dick drinking wine out of flask through a nipple faster than anyone else. True, "at the finish line," the winner was swaying slightly and muttering frantically, "Give me a bite quick, somebody!"

Towards the close, both hosts and guests were twisting for all their life. The Americans taught their new friends the bunny hop, which will most likely be a great hit with Molodyozhnoye Café patrons now. The young people managed in the space of the evening to discuss everything under the sun, including literature, art and those eternal problems young people have, whatever their nationality. Both sides were pleased with each other. Everybody's general conclusion was that, "We're just like them." Incidentally Valya Solyankina, an airport clerk who found herself at the same table with 64-year-old Californian Herbert Reed, believes the older generation of Americans are like Soviet old people in many ways. Again something in common. At any rate Herbert was just like some of our elderly compatriots when, with tolerant geniality, he criticized the younger generation for its tastes and habits. It's the same everywhere!

Outside the Americans kept telling our young folk that of all the evenings on their trip this had been the nicest. Meanwhile their leader Clark Olsen spoke for everyone when he said that their trip had proved to be "a good mixture of historical sights, contemporary Soviet institutions and free time for the individual group members."

A contest—the idea is to cut the pie quickly and gobble up the slices.



TO FIND AN IDOL

By Ivan Zuzukin



"HE'S A CROSS between a teacher and a pupil," declared Volodya Yakovlev, who is the poet and boxer of Grade 11-A at High School No. 19 in Vyazma. He did not as much as bat an eyelid when he made this rather extravagant and not too complimentary pronouncement.

"A cross?" His classmates eyed one another doubtfully. But the next moment they were in gleeful agreement with Volodya. He had hit the nail on the head all right!

"Tell him something in confidence and he'll take it to the grave."

"Don't you go and write that 'though he's no longer young, a youthful heart beats in his breast.' We forget he's older than us."

I swore there would be no "youthful hearts" in my story and went on listening. And so they continued their verbal portrait of Robert Uyemov.

It appeared that Uyemov was frank to admit when he didn't know something. And if a student wanted to speak his mind, Uyemov just reddened a little and murmured his usual, "Go ahead." And when somebody didn't agree with him, he squinted belligerently and said, "Want to fight it out?"

Listening to them, you got the impression that this 30-year-old man, Robert Uyemov, never left the school. That he sat for hours at their gatherings, sang and philosophized or kept quiet with them. That he helped the drama group put on their make-up. And that if one of the amateur prima donnas suddenly got stage fright, he would coax her out of the dressing room.

After class, if he did drop into the Teachers' Room, it was only to get his coat. He would troop along to a concert with a noisy batch of young music critics. If he did open his briefcase, it would be to pull out his sneakers. Robert Uyemov, I was told, never missed a game of volleyball in the school playground. "His defense isn't too bad," conceded the local forward.

I looked at them with curiosity and wondered aloud what they thought of his classes. The whole 11-B cackled happily: "Classes! They aren't classes! They're just fun! We argue and theorize. And when the lesson is over, we often ask him to give us another." (He would look up at the clock, but they would go on pleading, "Oh, Robert Petrovich, please!")

Next he would be trapped by tenth-graders who wanted to know what "Oh, Robert Petrovich, please!" though about jazz-artist and screen-star Smoktunovsky.

Somewhere around midnight, he would try to recall where he had left his old briefcase. Then, carefully skirting the moonlit puddles, he would plod homeward to find, on his doorstep, a figure bent double by some great midnight problem, shifting from foot to foot impatiently. The voice, so familiar for its blithe thoughtless answers in class, now unrecognizably agitated.

"Robert Petrovich, may I ask a question?"

"Is it that urgent?"

"Very. It's a personal matter."

"Oh, well, go ahead . . ."

Afterwards, the figure would splash cheerfully home through the puddles, while a light would go on in the house on whose doorstep a soul had been unburdened. And the light would burn until the small hours, for Robert Uyemov's briefcase contained, besides his sneakers, such things as unmarked papers, unopened letters, and books.

"If we could only be like him!" sighed the seniors, and they commenced to sing praise to the "cross between."

Slowly pacing the classroom we had chosen for our conversation was an elegantly dressed man, handsome, somewhat superciliously so, I thought. His head was almost gray, and that set off the youthful face and eyes to advantage.

"Believe me," he said with a slight drawl, "this fussing over children and playing up to them I find unpleasant. Like when they are told, 'Boys, are you coming to the gathering? Oh, you don't want to come alone? But it's more important than taking your girl friend some place else.' "

"Well, well!" I thought to myself, somewhat taken aback by the man's irony.

With a polite but determined gesture, as if warding off an imaginary opponent, he went on, "No, I don't put up with nonsense. In one of my classes, when I was talking about those who had died for us, a boy made funny faces at the girl next to him. What do you think I should have done?"

"Made them stand up in front of the class?"

"With their hands plastered to their sides? That isn't my way. They've outgrown the infant stage. They're perfectly well aware that they are not just 'little screws in the mechanism of our state.' But sometimes—like that young smart aleck—they imagine themselves to be free bodies, unbound to anything or anybody. I asked the boy to leave the class and think it over in the corridor."

Mentally, I said to him that we paid too little attention to the serious part corridors played in education. Aloud, I asked him:

"What is the teacher's role in a situation like that?"

"Anything but that of a clucking mother hen. If I were to do what educational theory says I should, I would have to spend all my time visiting the children's parents. Beg a drinking father not to drink. Dig into the boy Petya's soul to find out whether his low marks are the result of a fight with his girl Lena. . . . The teacher can't do everything. In the daytime he wages a struggle for knowledge and discipline, and in the evening another struggle against copybook errors."

I was nonplused. Here, confronting me, was a dignified, ultrabusy and inaccessible teacher, one who the children of many schools waited for hopefully. And while he is solemnly correcting their mistakes in grammar, they make worse mistakes living.

Who was he railing against? He acted like a colleague who was piqued by a journalist's interest in another. It seemed as though he, Robert Uyemov, was feuding with himself.

There was a good deal of room for thought here. What made his pupils so fond of him? Did he undergo a kind of spiritual transformation when he talked to adults?

Then I recalled what Sasha Morozova of 10-B had said, "He's in a class by himself. People don't take to him immediately."

As a matter of fact, I had pictured him as one of those children's game organizers. But as we went on talking, the image I had of a sunny-natured good old soul got all blurry. Only afterward, alone with my notes, did I manage to straighten out my contradictory impressions.

I thought back to the lesson he gave 11-B in social science. His subject was "The tie between theory and practice." Uyemov spoke in a low and somewhat reluctant voice (I learned later that it was his way of preserving his much-abused vocal chords). But before I knew it, the class was raging away. Genka Vasilyev and his arrogant proposition that "theory is the thing!" was under attack. And Valerka Semishkin was pouring out his contempt of "hollow-chested bookworms."

A few minutes before the bell for recess Robert Uyemov said, "That'll do." In a moment he had the two boys confounded and with brilliant logic and examples that he dug up God alone knows where smashed both of their theories to smithereens.

"In our next lesson," his voice thundered over the spellbound silence of the classroom and the bell, "we'll go on from there."

He had had more trouble with this 11-B than with any other class in the school. The other teachers had just been driven to distraction. They were used to rushing into the Teachers' Room, clutching their heads and wailing, "No, we weren't like them in our day." It really had been a pretty notorious class. The year-end reports usually mentioned it at the point where the speaker paused with a weary sigh: "However, we have to admit . . . ."

It had had its secret smokers and frank laggers, loud-mouthed talkers in class and close-mouthed yawners at meetings. Neither calling their parents nor satirizing them in the Young Pioneer wall newspaper helped. Their formidable solidarity was an enigma to everybody. If they did not choose to study under a certain teacher, about all he could do was curse his fate and report to the principal.

They had not been bothered in the least by the fact that history and social sciences would be taught by a new teacher, a "certain Uyemov." To all the attempts of R.P. (Robert Petrovich, that is) to find a common tongue with them, the first and last rows replied with silly giggles.

"You do the chewing, teacher, and we'll do the swallowing. Teacher talks and pupils listen. As for 'What's your opinion?' and 'Let's argue the point'—we know all about that stuff. Let one of us say something out of the way and he'll have the devil of a time proving he's normal. Better tell us what you were like yourself when you went to school. Tell us about the time when flowers smelled good to you and doubts were nonexistent. What? Stay after school and talk about art? In this town of ours that hasn't got a single concert hall or picture gallery? Oh, no, Robert Petrovich, we get pretty tired. You've read in the newspapers yourself about the poor little children who are so overburdened with lessons and homework that they have no time to eat or sleep."

Their affected sighs and spiteful glances were enough to make a statue burst. But R.P. could work up so much excitement over a side remark that when the bell rang, he would mutter in distraction, "It looks like I've messed up this lesson all right." But the fact was that this man who was supposed to teach the humanities could make the properties of matter far more interesting than their teacher of physics. And, to prod their provincial humility, he talked to them as though he were talking to connoisseurs about the voice of the incomparable Renata Scotto.

No amount of erudition would have helped him, however, if he hadn't infected them with his sincerity. R.P. never waited for them to muster the courage to ask him a tricky question. He himself asked the question, and the clowning "intellect" would get up and say, with a sullen stare, "Oh, all right, I'll answer. But don't hold me to it, okay?"

Questions are frightening only when one is afraid to answer them, when one is afraid that these almost six-footers will not be able to digest it all.

But they will. Their view of the world is more innocent and more kindly than ours. And they have to be told everything with much greater courage.

He had drawn the storm of their curiosity upon his own head. It appeared these skeptics were terribly anxious to know whether there was such a thing as love at first sight and what a poet began with—joy or suffering.

They stalked him wherever they could with their fateful secrets and sudden revelations. Anybody else would have gone mad long since or concocted some gentle cliché for every situation. But he, drawing upon some bottomless well for fresh words and feelings, was always prepared to answer their questions. Even when a cable lay in his pocket calling him to his father's sickbed.

They were always a little egoistic. They thought the world was created for the sole purpose of being revealed to them. Robert Uyemov, however, did not want to destroy this happy illusion of theirs—this illusion that made little Leo the great Leo Tolstoy and drew Columbus to the New World.

And so they, the lesson-burdened children, wanting to win his trust, wrote compositions in social science and reports on cybernetics. Without knowing how to read music, they decided to organize a band.

Why should he, the assistant principal in charge of the junior classes, bother so much with senior grades? Out of this reserved supercourteous man, I managed, almost with pincers, as it were, to extract only the terse, "It helps. . . ."

In general, he thought my interviewing him a pure waste of time—for me, that is. The point was that he was simply a teacher. And that he was very strict and sometimes even sharp with the children. And that he did not treat them alike. Among them there were serious boys and girls, and those who put on airs—the latter he had no use for. If he was doing anything for these seniors, it was only because they had asked him to.

I could not tell whether it was out of modesty or pride that he thought their devotion a little too rosy. He was not deluded by that devotion a bit.

To someone who thinks in big city terms, teacher Uyemov might seem clever and interesting enough but a little pious, a bit conservative in some ways.

But there is a consistency about him—the grand manner, his scrupulous punctuality, his taste—everything is in character. He can speak for hours about Tchaikovsky and Chaliapin, but he will just not talk about jazz. He has a deep-lying distaste for films in which the heroes talk of love with cigarettes in their mouths. But he insisted that the students see *Hamlet* —and promised them he would ask no questions in class.

His style of teaching is also conservative. He does not chase after pedagogical novelties. Though he allows the children to argue, he reserves the last word for himself. It is fine if a child shows a capacity for thinking, but he must also learn how to listen.

There is a steely quality about him: He does not bend, he does not bow before the current winds and storms. A teacher should be exactly that kind of man. He is not training children for today or tomorrow but for all time. He emanates a steady light, the kind that penetrates through the walls of the ages. He leaves a strong imprint on students—his industry, sympathy, humanity—the kind of imprint that does not rub off.

I wanted to learn what the eleventh-graders were planning to do after graduation. I had the idea that they were all going to walk in the footsteps of their idol. Later I realized how naïve and bookish that idea was. In fact, few people want to be teachers. One of the girls thought the question was mad, "A teacher? To suffer like he does? Not on your life!"

Base ingratitude? No. The greatest recognition a teacher can get is sympathy for the cross he has to bear. With the mist of sleepless nights in his eyes and worn vocal chords, he will always be their model of happy selflessness. For them he remains an ideal! See how they besiege Robert Uyemov during a recess, and you will understand how important it is for ideals, even the noblest of ideals, to be embodied in a real man.

The graduates of our day, looking avidly at the show windows of the centuries, dream of manipulating electronic computers, flying, extracting fountains of oil. They may eventually break through to space, or climb Mt. Everest. But below, as in a scene shot from a helicopter, in the tearful whirlwind of annual meetings and partings, they will always see their R.P., a man whose trade it is simply to teach.



Alexander Butylin, a bell ringer by family tradition, is 75 years old.

Gorky Film Studio sound engineer making a recording of the bells.



BELLS AND BELL RINGERS

By Vladimir Desyatnikov

THE ROSTOV KREMLIN is one of Russia's ancient architectural monuments. This "fable in stone"—so called for its beauty—is reflected in the great mirror of Lake Nero, on whose shore it stands. From afar one can see its graceful bell tower rising from the many other Kremlin structures, whose white walls and golden cupolas shine in the sun. And visible in the tower are the famous Rostov bells.

Bells have called the Russian people to battle, they have rung out victory and pealed the return of heroes from the war. Our composers have woven bell tunes into their operas, symphonies and oratorios. Recall Mikhail Glinka's *Ivan Susanin,* Tchaikovsky's *1812 Overture,* and the music of Sergei Prokofiev and Georgi Sviridov.

All of the major Soviet opera theaters have belfries with a full set of bells. The best toned hang in the Bolshoi Theater in Moscow and in the Kirov Opera and Ballet Theater in Leningrad.

Russians have a long-standing affection for bell tunes. Novgorod, Pskov, Moscow and other cities were famous for their bell ensembles but none matched Rostov's bell "orchestra."

The belfry of Rostov's Uspensky Cathedral has a 13-bell ensemble. The biggest are known by name as well as by "voice." The bass bell Sysoi, cast by master craftsman Flor Terentyev in 1689, weighs about 35 tons. It rings an eight-foot C. Two other bells, Polyelei and Lebed, weighing about 18 and 9 tons respectively, cast by Philip and Kiprian Andreyev in 1682-1683, ring eight-foot E and G, thereby making up a C Major triad. This cheerful major consonance is a characteristic of the Rostov bell tunes. They can be heard 10 miles from the city.

All the Rostov bells are hung in one row in the belfry. And the bell ringers position themselves so they can see each other to keep time, one of the essentials for good harmony. The Rostov bell tunes are played by five bell ringers with two men swinging the Sysoi clapper. The ringing is done in three different timbres after a score compiled by Aristarkh Izrailev in the nineteenth century. There are four types of tunes extant: Iononsky, Akimovsky, Yegoryevsky and Budnichny. Each has its own melody and a specified number of bells and bell ringers. The Akimovsky tune, for instance, is played by five bell ringers on all 13 bells. The Budnichny tune is played by one bell ringer on six bells.

The Rostov bell ringers of today are hereditary masters at their job. Alexander Butylin, the oldest of them, is 75, but his hand is as firm as ever and his ear almost perfect. His four assistants are a fit complement for Butylin. Not so long ago they displayed their unaging skill. With Nikolai Pomerantsev, Honored Art Worker of the RSFSR, conducting, they made stereophonic recordings of the ancient tunes for use in theater productions, concerts and films and for home listening. Sergei Bondarchuk, director of the film ***War and Peace***, has worked some of the bell tunes into the picture.

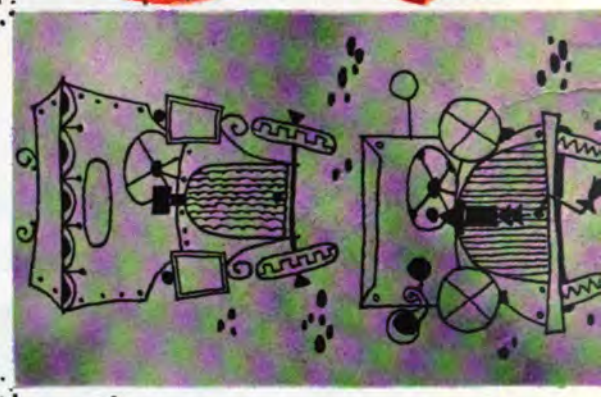
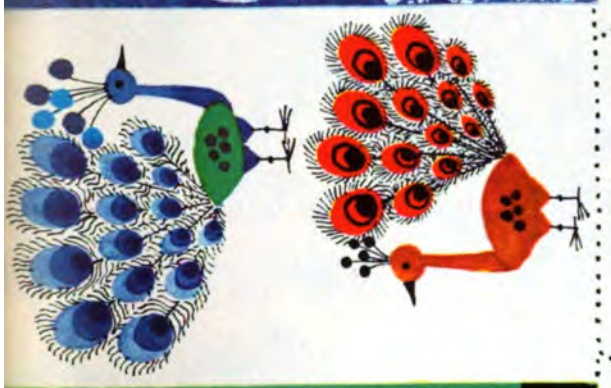
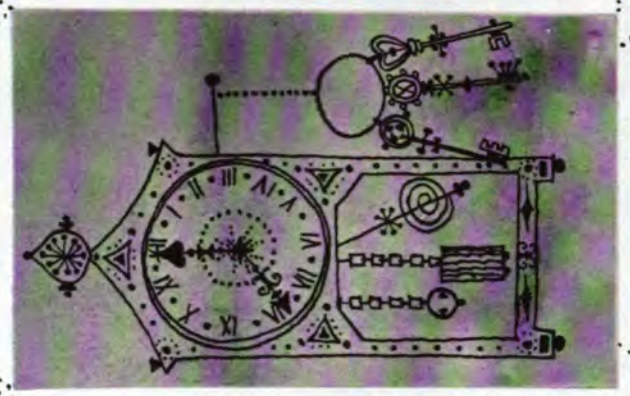
MERRY YOUNGSTERS CLUB

DRAWINGS BY LEONID SERGEYEV

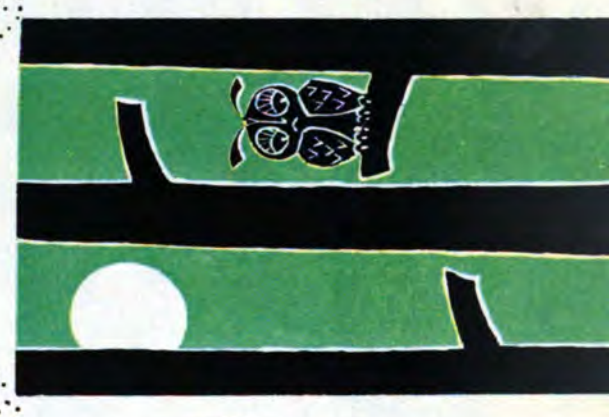
Dear children: Cut out these flags and use them to decorate your Christmas tree.


















EAGLE AND SWORD

By Kim Bakshi

Photographs By Isaak Tunkel



(Bottom left) This *treasured manuscript was printed in the year* 986.

(Right) An ancient bookcover made of exquisitely worked silver filigree.

(Far right) Khoran—*the front page of a manuscript—from the 13th century.*

(Bottom right) Fragment of a miniature attributed to the 13th century.











The mosaic over the doorway pictures the Armenian people in their struggle against the Persians in 451.

EAGLE AND SWORD

EVERY PEOPLE has its own Kremlin, its Louvre, its own Valley of Pyramids. Armenia has its Matenadaran.

We enter the Matenadaran as though to the sounds of music. First the orchestra tunes up. Strolling along a street lined with pink walls, we hear the rattle of streetcars, the honk of horns blown by impatient drivers, the creak of a crane as it lifts high a container filled with blocks of tufa, and the tap-tap of a pneumatic drill in the adjoining street.

As we climb the hill the sounds fade out one by one, and the air fills with the deafening twitter of sparrows and the guttural cries of children on the steps of a flat and deserted staircase.

That is the first musical theme. And as we climb higher and higher, this music is joined by a crescendo of the solemn melody of the Matenadaran.

The Matenadaran looms closer and closer in all its magnificence, towering into view like a fortress, like a monument. Its front against the background of mountains is the *khoran,* the title page of one of the ancient manuscripts in its collections.

Matenadaran signifies ten thousand ancient Armenian manuscripts and books, the smallest weighing less than a quarter of an ounce, and the biggest, a giant parchment, tipping the scales at 70 pounds. The oldest were penned in the fifth century, long before Russia's conversion to Christianity, long before the Norman invasion of England.

In the year 405, Mesrop Mashtotz created the Armenian alphabet, 36 letters used to this day as capitals, the so-called Mesrop letters. What Mashtotz and his disciples did in a few decades of the fifth century was nothing less than monumental. Its import is all the greater since the first productions—some of them veritable masterpieces—of the national schools founded throughout the country by Mesrop's pupils were created in a conquered and dismembered Armenia, divided between Sassanid Persia and Byzantium.

And so, from the very moment of its birth the Armenian book was not simply a collection of information recorded on parchment and bound between covers. It was a sword with which the people fought for independence, for national identity. The Matenadaran has the historian Ehishe's commentary *About Vardan and the Armenian War.* It was written hot on the heels of the Armenian and Georgian uprisings against the enslavers. Its author was the shocked witness of the Battle of Avarayr, in which the Persians threw elephants into action. He mourns the death of Vardan Mamikonian, the leader of the insurgents.

Ehishe's commentary, produced "without time distance," has served for many centuries as a clarion call, rousing the people to struggle against the invaders.

Generations of historians, beginning with Moses of Khoren (fifth century), author of the famous *History of Armenia,* left behind priceless information found nowhere else about the Transcaucasus, Iran, the Byzantine Empire and India, about the Arabs, Seljuks and Mongols.

The collections of the Matenadaran are truly unique. Some writings of the ancient Greek philosophers, translations from the Syrian and Old French, are found only here and only in the Armenian language, the originals having been lost a long time ago.

The ancient treatises of the Matenadaran contain brilliant scientific conjectures, the kernels of many discoveries.

As far back as the seventh century, Anania Shirakatzi maintained in his *Geography* that the shape of the earth was global, that the Milky Way is a vast conglomeration of faint stars, that the moon shines with the reflected light of the sun, and so on. Many centuries of research, blundering, great scientific discoveries and technical progress were required to confirm the previsions of that ancient Armenian naturalist. And what of Shirakatzi's brilliant dialectical surmise: "The origin is the beginning of extinction, and extinction in its turn is the beginning of the origin. Because it is out of this harmless contradiction that the world acquires longevity."

There are books on philosophy and law, mathematics and cosmography. Chemical treatises on how to smelt gold, how to prepare paints, and next to them, in confirmation as it were, unfading letters and miniatures. In fact, they become clearer and brighter with the passage of time. Evidence of the quality of the ink is contained in a fossil book. It was found in a cave. The manuscript had for centuries been washed and cemented by lime water. The parchment was destroyed, but not the ink: the letters look as if they had been hewed in stone.

Why was this manuscript hidden deep in a cave? And why was that one sliced up with a sword? And the next one—why was it burnt? And why is that one stained with blood?

Books burnt. Cripples with pages and miniatures torn out. Wandering books, vagabonds.

If there is any need for a living illustration of Armenia's tragic history, then we have it here: A history of popular uprisings and defeats, short respites when culture and handicrafts blossom quickly like tulips in a desert, and then once again the country is flooded by blood. Universities, monasteries and cities go up in flames. Armenians leave their homeland by the thousands, taking books, their most treasured possessions, with them.

Memoranda at the end of ancient manuscripts, brief, hastily written, at times unfinished, they read like frozen cries, "Oh, brothers! This book was written in a bitter and sorrowful time." And in another hand. "The calligrapher was slain by aliens. And only I, a commoner, saved this book. . . ." And further: "Lord Zakharius had given it away as security, and I, Semeon Vardapet, redeemed the manuscript from the invaders for 30 silver tanga."

And again, blood stains.

Like warriors, books shared the fate of the people. They were burned in the squares and marched off into captivity. Ten thousand volumes were destroyed at the time of the Seljuk invasion in 1179. Khan Lenktemur ordered Tathev Monastery burned and its great library consigned to flames.

But the Armenian people preserved in the books their language and nationality, defending their history and their future. New manuscripts and book vaults appeared in place of the old.

The *grich* (scribe) is one of the dramatic figures in Armenian history. Iovannes Mankasarents (fifteenth century) went blind copying books "for 72 years at a stretch, in summer and winter, by day and by night," in the words of his pupil Zakarius. Unan was also blinded by this work, and his forefinger withered away after 42 years of uninterrupted copying.

When foes came, the *grich* went with the people, shouldering the heavy burden of parchments, ink, colors, books and patterns. And wherever he stopped, he continued his copying.

At the entrance to the Matenadaran is a bas-relief of an eagle and a sword. Its meaning: Wisdom in the hands of the people is a weapon against the enemy.

In the last 40 years the Matenadaran collection has grown two and a half times.

Books, like people, are returning to their homeland.

NATIVE LAND

Reflections on a Letter

By Vasili Peskov



THERE IS A LETTER on my desk, and we had better begin with that. It was written by Olga Yurevna D. from Ryazan. "Now don't imagine that this letter is a complaint!" she writes. "My son is no worse than any other boy. He has always been respectful. He took a job for a while but went back to school and is in the ninth form now. He is a good, serious student, but I decided to write to you after the talk I had with him yesterday. Volodya's friend came over and the two of them got down to fixing a radio. That's the style now: walking along the street with little radios. They don't hear anything around them except the crackling music—as if this were the source of all happiness. They take their radios along, too, when they go into the woods. 'Why don't you listen to the birds, children?' But they laugh at this, saying: 'You don't understand, Mama!' But that's the least of the trouble, for fashions change. While they were fixing their radio yesterday, I stopped sewing and listened to them talk for a while. 'One's native land is the dearest thing one has!' I told them. Whereupon they laughed again, saying: 'Native land indeed! That's something sentimental people thought up. Life can be pleasant anywhere—wherever it is easy. The same sun shines in all countries, and the grass is green everywhere.' I realized that I had to explain something very important to them, but I just couldn't get it across. I began telling them about Pushkin, about Gagarin. But they laughed, 'What do you understand about such things, Mama?' They fixed their radio and went off. But I decided to write to you. The feeling for one's native land must be kept alive in every person. That feeling may come with maturity, but I think it needs to be nurtured, too."

The first thing that strikes you after reading this letter is that Volodya has a good and intelligent mother. It is likely, too, that both Volodya and his friend will grow up to be very good young people some day. It is simply that there is a lot they have not seen yet, a lot they still do not understand. But the mother's anxiety is not unjustified. And this idea of native land, this most exalted of human feelings, is something worth talking about. His native land—what does it mean to a man?

In New Zealand last year I had an encounter I shall not soon forget. Find New Zealand on the map. It is below Australia, almost touching the white spot of the Antarctic. There you will find the town of Christchurch. At our hotel my friends and I were visited by a man with a seven-year-old girl. Introducing himself, he asked: "Any of you from Leningrad?" He asked as though his life depended on it. His little girl pressed against him. We kept quiet, we didn't know what to say.

The man had been a Soviet sailor taken prisoner during the war. When the war was over, he should have come back, but he thought the world was large, that he was young and strong, that it did not matter where he lived. He had lived in Germany, Italy, somewhere in Africa, in Australia and at last had found himself at the end of the world. It was there he fathomed his mistake to the bottom.

He was healthy. His hands were still strong, and he was not in need. He had his own house, his job. As he put it: "I'm dressed as well as you are. I have a wife and daughter." But something was missing. Without it there was no joy in anything. As for grief. . . . He waved his hand and reached for his handkerchief. "My wife is Scotch and just as homesick as I am. My daughter was born here in New Zealand. Every evening my little girl and I sit down to write a letter to the Russian bear. I thought that up to teach her Russian. Taiska, tell these gentlemen the names of the cosmonauts you know." But the little girl looked at her father bewildered. She could not understand what was happening. We kept quiet, for this was a situation in which nothing you could say would make a person feel better. Watching him for two minutes, we understood something not easily comprehended if you stay at home all the time.

That was his story, though the sun rises in New Zealand exactly as it does in Ryazan or in Voronezh.

And here is another more recent case. I have to put my pen and paper aside and go to the airport to meet a plane from Berlin. I'm going to meet a man who thought he was a German. His name was

Waldemar Schilke. I say "was," for it turned out that he was really a Russian, that the fascists had taken him from the Ukraine at the age of four. His peace of mind was gone when he learned what his country really was. Now he is returning. His mother has been found, and he is on his way to a small Siberian town. By now, too, he has his former Russian name—Victor Levchenko.

What is the source of this affection for everything implied by the words "native land?" Let me cite four lines from an unknown poet. It is even possible that he was no poet but simply a human being whose feelings broke into poetry. These lines were written behind the barbed wire of a facsist concentration camp, perhaps an hour before he died.

I shall yet return to you, dear Russia.
To hear your murmuring forests again,
To see your blue rivers once more,
And tread the path of my forefathers.

Reverence for antiquity is the mark of true enlightenment.
Friedrich Engels

". . . What are roots and how long have we had them? If our species has existed for a couple of million years, what is its history? Our remote ancestors followed the game, moved with the food supply, and fled from evil weather, from ice and the changing seasons. Then after millennia beyond thinking they domesticated some animals so that they lived with their food supply. Then of necessity they followed the grass that fed their flocks in endless wanderings. Only when agriculture came into practice—and that's not very long ago in terms of the whole history—did a place achieve meaning and value and permanence. . . . In this view we are a restless species with a very short history of roots, and those not widely distributed. Perhaps we have overrated roots as a psychic need. Maybe the greater the urge, the deeper and more ancient is the need, the will, the hunger to be somewhere else."

The excerpt from John Steinbeck's Travels with Charlie in Search of America *echoes, in a way, the feelings of the son of Olga Yurevna D., who lives in the city of Ryazan. This young man, who also yearns to be "somewhere else," evidently feels that the same sun shines in all countries and that the grass is green everywhere. Those feelings disturb his mother. They also disturb Vasili Peskov, a correspondent of* Komsomolskaya Pravda, *one of the largest Soviet youth newspapers. In this article, written for his newspaper, Peskov comments on the letter from Olga Yurevna D.*

The article also deplores the fact that we have not always done as much as we should to protect the creations of our forefathers from the morbid winds of our age.



The last of these lines has a bearing on our subject. The words "native land" take in a great deal: a path that runs across a brook, and the vast spaces of a sixth of the globe. They stand for a rocket aimed at the moon, and a bird flying northward over our roofs, for Moscow and my native village of Orlovo, for many great names, for big machines, and for dancers every city in the world applauds. They stand for the chief designer of space rockets and the man who lights the buoys along the Volga. They stand for my father, who was an engine driver, and for yours, who was a shepherd. They stand for you and me with our world of feelings. our joys and our cares. Our native land is like a great tree whose leaves cannot be counted. It draws its strength from all the good we do. But every tree must have its roots, for without them it would fall before the slightest breeze. The roots nurture the tree, tying it to the earth. The roots represent what we lived through yesterday, a year, a century, a millenium ago. They are nothing less than our history. They represent our grandfathers and great-grandfathers; it is their handiwork that continues to live mutely in our midst, in the stone images in the steppes, in the carved platbands of ancient structures, in wooden toys and weird temples, in our wonderful folk songs and tales. They can be identified with the names of soldiers, poets, and fighters for the cause of the people. A people that does not have such deep roots is a poor people, no matter how fast its planes fly, no matter how many spaceships it puts into orbit, no matter how high its buildings of aluminum and glass reach.

There is a heap of letters on my desk. Hundreds of people keep looking for their parents and relatives lost during the war. "I was a little girl when I was lost in an air raid. Now I am a grown woman and am working as an engineer in the city of Kazan. It is hard to live without knowing the names of one's parents. I don't hope to find them alive but would at least like to know who and what they were. That would help me to understand myself, to know who and what I am." These words convey all the wisdom of man's relations to his past. A human being must know his roots. Knowing them, he will find the air he breathes healthier and the ground on which he stands much dearer. Knowing them, everything his hands produce will be hallowed by the skill of his forebears, by the beauty accumulated through the centuries.

Some 30 or more years ago there were many who thought that these were moth-eaten notions. "The old roots must be cut and thrown away!" they declared. The baggage of the past did indeed contain much that needed discarding, but it turned out that not everything could or should be thrown overboard from the ship of history. In the critical years of the war we drew upon the past for aid. We were heartened by the images of our great forefathers—Alexander Nevsky, Dmitri Donskoy, Kuzman Minin, Dmitri Pozharsky, Alexander Suvorov, Mikhail Kutuzov. The past, too, served us as a weapon. Its effectiveness was never measured, but it could hardly have been less devastating than our famous Katyusha mine thrower. And the past shall serve us again if things take a bad turn.

Our native land stands for our yesterdays, our todays and tomorrows.

Recently I visited a scientist whose acquaintance I made at the cosmodrome. Switching on his tape recorder, he smiled and asked: "Recognize that?" What we heard was the roar of the rockets that carried Belyayev and Leonov into space. Then there was silence, except for the bells of Rostov. Those were rich sounds addressing themselves to our hearts. "Not everybody knows about those bells," said my friend, "just as they do not know that the Rostov of the bells is not the city on the Don but the one you reach along the Yaroslav Highway. Tourists from all parts of the world visit that city. Nor does everyone know that the main bells of ancient Rostov got their names from the people: Sysoi, Lebed and Polyelei. A recording of the music of these Rostov bells was made but was sold out in two days. I had to borrow a record to make this tape recording."

He rewound the reel and switched it on again to hear the thunder of the rockets and the song of the bells—portentous thunder followed by solemn chimes.

We cannot properly evaluate the present without an understanding of the past. The tree of our native land is a single entity from its green crown to its deep roots. Let us think of those roots for a while. My father thought about them even in a death camp. What about us? Are we allowing the paths our fathers and forefathers cut to grow thick with weeds?

Can you imagine Red Square without St. Basil's Cathedral? I was 20 years old when I used my first wages to pay for a visit to Moscow from Voronezh. People all over the earth have heard of Red Square. How can I describe my feelings on seeing it for the first time, on touching the flagstones underfoot and resting my cheek against its rough wall? I stood there silently. The bells rang several times, and the hour hand on the great tower clock described a complete circle. I felt as though I were doing the most important thing in my life. People hurried by, and I could not understand how anyone could rush past this square, remarking on the weather or making other small talk. No one was allowed inside the Kremlin in those days. I waited for the gates to St. Basil's to open. For some reason I was most impressed on that occasion by the narrow white stairs hollowed by so many footsteps. "That scratch," I thought, "might have been made by the staff of Ivan the Terrible."

I have visited the square many a time since, after having seen the world and drawn comparisons. I was sure that no city anywhere else had so beautiful a square, one so unique. Can you imagine that square without St. Basil's? Let me tell you something incredible! I would never have believed it if I hadn't heard it no more than a week ago from a person who is still alive and well and has fortunately preserved the fighting qualities of a real patriot. This is what I was told by Pyotr Dmitrievich Baranovsky, one of the best restorers of our country's ancient memorials: "Before the war I was summoned to the offices of one of our top authoritative bodies and told: 'We're going to demolish the cathedral, Red Square must be enlarged. We want you to make the preliminary calculations. . . .' A lump rose in my throat when I heard this. I could not speak nor even believe what I heard. But finally I said: 'That's both criminal and stupid. You can do what you like with me, but I'll kill myself if you tear that structure down. . . .' Someone had the wisdom to prevent that irrevocable enormity. The cathedral was left intact."

What would have happened if such wisdom had not been displayed? They would have dismantled the cathedral to make way for more automobiles. But what has time shown us? No cars whatever are permitted to cross Red Square today because it is a sacred place, as is evident from the endless crowds that traverse it step by reverent step.

I mention this not only to condemn someone's ignorance but also to commend someone's wisdom, because all of us need more of that wisdom today.

One can hardly enumerate the precious things being destroyed before our very eyes today out of ignorance, indifference, or the zeal to smash everything old, without any consideration. Here is a recent example. All Muscovites undoubtedly remember the little brick house with the lanceted tower on Leningrad Avenue near the Dynamo Stadium. Among the surrounding rectangular buildings of today this small house was the raisin you put into cider in the old days, the thing that made that drink so deliciously enticing. This architectural raisin gladdened the eye, creating the contrast to give us an inkling of the remote past. That small building made it possible for Muscovites to picture the former environs of their city. It was called "the hunting lodge," also "Peter's Castle." Relieving the monotony of the surrounding modern streets, it fitted handsomely into this corner of Moscow, lending it a charm all its own.

Returning from a trip two weeks ago, I could hardly believe my eyes when I found the little structure gone! It had been demolished, and the site where it had stood was being zealously leveled by a bulldozer. Those who have visited Rome will no doubt remember the modern airport building and the ruins of an ancient wall running through it. The architects there had been intelligent enough to keep the bulldozer out. The wall remains. The adjacent aluminum and ancient bricks blend in beauty. Seeing them there together, you feel at once that this land and this people have had a long history, that the Italians cherish the memorials of their past. The whole city of Rome owes its quality to this surprising blend of the modern and the ancient. The Yugoslavs, Bulgarians and Czechs also know how to preserve their memorials. Their ancient castles house not only museums, but restaurants and cafés as well. The ancient buildings continue to live, to please the eye and heart, and are no burden at all on the treasury. Could not the same thing have been done with the not very old but certainly unique "hunting lodge"? Our planners and architects could be shown a long public bill of valuables irretrievably lost.

We have been building many things. Entire cities have risen in the past 20 years. We are proud of our creative potential, but do we always give sufficient thought to the beauty and originality of our cities? Let us face the facts and admit that when we visit a new town we often feel as though we have seen the place before. These towns are like twins, full of standard stereotyped buildings, and poorly built in the bargain. For the money spent they could have been better and more interesting structures. We may not have reflected on this fact sufficiently, but there is no denying that the face of a city shows in the character of its dwellers. I saw something of this myself last year in Tallinn, an enchanting city for its lovingly preserved antiquity. As I looked at it, it occurred to me that a man raised in such a city could not help being a patriot and a person with good taste and rich imagination. This thought was confirmed the next day, when I visited the young carpenter Yukhan Roost, who had just built himself a house. It was a lovely structure, the child of clear thought and good taste. The entire section at this edge of the city was made up of cheerful well-put-together houses, all different. Their builders, familiar with Tallinn from their childhood, could not have done it any other way. From their earliest days the city had shaped their taste, taught them its own esthetics of construction. The standard and faceless city, on the other hand, leaves neither a legacy of good taste and imagination, nor filial devotion. We should not forget that a city or town influences everyone of its inhabitants. day by day and hour by hour. With present standardization, it is not easy to give a new city a profile of its own, but we should strive for it anyway. What beauty we have inherited from the past must, of course, be preserved as a most valuable heritage.

The following is aimed at our indifference and ignorance. Last autumn the Czech travelers Hanzelka and Zikmund visited Moscow.

"How do you like our country?" we asked them. We were eager to know what this pair of famous travelers felt. A long and friendly discussion ensued in which our guests offered some discerning judgments on our people, our country, our doings and our plans.

"But don't you like it here?"

Came the reply:

"We can't understand your lack of concern for your ancient memorials. We just can't understand why you treat them that way."

The reproach was perfectly justified. It made us feel ashamed of ourselves.

It is really hard to understand why we look on at the destruction of our national riches with such indifference, why we must make special efforts to prove that those riches ought to be preserved and protected.

The ancient wooden church in Vytegorsk, Vologodsk Region, burned down two years ago. That miracle of Russian carpentry had stood there for 250 years, older even than the world-famous wooden church in

Kizhi. But it had caught fire and burned down! Its wood, warmed by two and a half centuries of sunshine, flamed up like tinder. This ancient song created by unknown carpenters of old was burned to the ground. And we watched the fire, disgracefully complacent, never sounding the alarm, as though nothing important were happening, as though a thatched, rotten old shed were burning and nothing more.

In the village of Belaya Sluda in Arkhangelsk Region an ancient tabernacle with a priceless iconostasis and a bema reminiscent of an ancient Roman theater burned to the ground very recently. This ancient memorial was destroyed by sheer neglect. And again we were silent. Some people even said: "What does a church matter anyway? This will help the fight against religion."

This Hydra-headed idiocy is very much alive. Its devotees fail to understand a simple truth. What has doffing our hats before St. Basil's Cathedral on Red Square to do with God? We doff our hats to the *creators* of that miracle. It was certainly no fault of our forefathers that they—the architects, carpenters and painters—could lavish their talents only on the construction of monasteries, churches and cathedrals. This truth should be brought home to people of every age, and we, the educators, ought to mark it well. Neither the relics of the state nor the relics of the family can be cherished without education. Education is no seasonal job, it goes on forever. Furthermore, every bit of it pays off.

But the memorials need urgent aid. The ancient structures are perishing from neglect at an alarming rate. The same is happening to the handicrafts. The secrets and mysteries of fine craftsmanship accumulated over the centuries are dribbling away. Ancient church plates, ancient church paintings, rare books and documents are turning into rubbish. Many of the tombs and homes of our illustrious forefathers are utterly neglected. Gone and forgotten are the names of even many of our recent heroes.

But we can cite good examples also. The ancient memorials of Georgia and Armenia are well kept as are many of the ancient relics of Central Asia. We must let ourselves be infected by these examples. For all our current cares, needs and cosmic flights, it is imperative to see that our children grow up patriots who appreciate the creations of their fathers and forefathers. A large public effort is needed—supported by the state, of course. A part of the necessary funds can certainly be raised by attracting tourists to the ancient monuments. The very modest admission fees could be raised in some places. More than 40,000 tourists from all parts of the country visit the little island of Kizhi in Karelia every year. They spend 50 to 100 rubles to get there. I am sure they would not feel burdened at an additional 50-kopeck admission fee to the island, especially if they knew that the money was going to preserve its monuments.

Nor is it always a question of money. There are some treasures that cannot be seen or touched, but may easily be lost by careless handling. I am a Communist, and I revere the name of Karl Marx, but I am not at all sure that we are right in changing the names of such streets as Okhotny Ryad (Hunters' Row). Call the finest and handsomest of the new Moscow thoroughfares Marx Street, but do not change the name of Okhotny Ryad, for that is a part of history. Those two words—Okhotny Ryad—nestling in the heart of Moscow could be as dramatic and memorable as the ruins of the ancient wall running through the modern airport in Rome. The names of our rivers, cities, towns and streets are rich in poetry. They are rich with our past. Recall such names as Smolensk, Serpukhov, Volokolamsk, Yaroslavl, Suzdal, Kolomna, Mytishchi. These are magic sounds, for they are fraught with history. It was the poet Pushkin who exclaimed: "Moscow! What chords that word strikes in the heart of a Russian! How meaningful it is to him!" We have been apt to forget this and have often yielded to the temptation to change the old name of a city or town, to say nothing of the frequency with which we change the names of streets.

A child forms his conception of his native land, seen through the glass of the past and the present, from the first toy, the first fairy tale, the first talk at school about the surrounding world. Only in this way will he grow to maturity with a vision of tomorrow, with a pride and faith in his country's future, and with the will to defend it, if need be. In all our doings we frequently seek the advice of Lenin. Open one of his volumes and you find this strict admonition: "It is absolutely imperative to make every effort to prevent the fall of the pillars of our culture. The proletariat would never forgive us for such a thing."

Are we ready to tackle this job jointly? Many initial efforts are already evident. Especially interesting is the Moscow club "Homeland" set up by Komsomol students. The club has barely gotten started, but it has already acquired many sponsors. The Moscow Regional Committee of the Young Communist League, the Ministry of Culture, the cosmonaut Leonov, the writer Leonov, the sculptor Konenkov, the aircraft designer Oleg Antonov, the writer Soloukhin, many artists, physicists, critics, and the singer Ivan Kozlovsky think the club has a major role to play.

To visit the club you look for the Krutitsky tower house beside the Moscow River. This ancient, very beautiful structure was once the retreat of metropolitans, rebel writers, the archpriest Avvakum, and the great publicist Hertzen. When you meet the young men and women powdered with lime and brick dust at the tower, do not ask them who is in charge of the club; all of them are. They are putting it in order, helping to restore it. While they rest and chat, they will tell you that their number includes a learned young linguist, an auto worker, several high school boys and girls, two physicists, students from many of the colleges in Moscow, young architects and artists. Also an older man—Pyotr Dmitrievich Baranovsky, the same man who so staunchly opposed the demolition of St. Basil's Cathedral. Others among them are a historian with a unique collection of bricks, a young designer who has compiled a phenomenal catalogue of the historical structures of Moscow, and a graduate student who collects the folk songs of Pechora Region.

These enthusiasts recently gave an evening party they called "The Poetry of Russia" at the Yunost (Youth) Hotel. Those lucky enough to be present testified that it was a joyous meeting with Russian folk art. The young artists enriched the exhibition in the lobby of their club with reproductions of the emblems of ancient and new cities, the emblems, for instance, of Komsomolsk, Dubna and Kosmodrom. It made an admirable display. The magazine *Ogonyok* would do well to publish a photo story in color of the club's activities. It would please those interested in our folk heritage and perhaps attract the many more who should be. A thought. Why don't our cities fly their municipal emblem alongside the flag of their republic?

The regional research club Homeland is a new venture, but with large plans. It will take responsibility for the care, preservation and popularization of ancient memorials, study the old painting, unearth the names of those who died for the countr , gather traces of folk art, preserve the natural treasures and do whatever else is required to immortalize the great events of our times. How the club came into being is in itself interesting and instructive. The students of the Mendeleyev Institute equipped a special autobus for a tour of the cities along the Yaroslav Highway: Zagorsk, Pereslavl-Zalessky and Rostov-Veliky. Only three hours' drive out of Moscow they found an ancient world. They were ashamed of themselves when they learned that these cities were visited by thousands of foreign guests every year, while they had never been there before. They were bothered enough to found their club at the very next Komsomol meeting in Moscow. The new club's membership is growing fast.

We suggest that regional lore researchers, lovers of nature and of the works of the ancients form similar clubs in other towns and cities. Such activities are useful, interesting and certainly commendable. It would be well if Young Communist League members initiated these clubs and helped to define their tasks.

But to return to the letter of the mother from Ryazan. We share her anxiety. We, too, must be concerned with what happens to her son, whether he grows into a citizen and patriot or, like a tumbleweed, is rolled about by any wind. Every man must grow up a son of his country. For the great ventures we are engaged in today, we must know where we came from and how we began. We must cherish the achievements of our forefathers. The great revolution led by Lenin was fought and won by our fathers. What we do is linked with the past, with the surrounding world of nature, with our hearths and homes—all of this is encompassed by the word Homeland. Love of country cannot be decreed, it must be learned and lived.

The sun lavishes its light on people everywhere, but it shines brighter for those who love their native land.

Courtesy of Komsomolskaya Pravda





FATHER FROST'S FANTASIES

NATURE is a most patient and undemanding model and doesn't even ask to be paid for posing. That is why the poor artists paint landscapes, the rich ones paint portraits.

But nature does more than pose for fine paintings and sculptures. In its spacious studio four acknowledged geniuses are ever at work: Spring (who prefers green water colors to anything else); Summer (whose palette contains every conceivable shade of paint); Autumn (who goes in for yellows, oranges and reds); and Winter (who holds annual exhibitions of its graphics





work on windowpanes and of its frosty white sculptures in the forests).

Here are three masterpieces by Winter. On the left is a weird tropical parrot, as Winter sees it (don't forget it has never visited the tropics). In the center are lovely clouds carved of thawing ice, and on the right is a sculptural group titled "The Pessimist and the Optimist."

Hurry to the woods to see Winter's show before envious Spring thaws it and paints everything green!

THE METAGALAXY

product of two elementary particles

By Kirill Stanyukovich

PROFESSOR, DOCTOR OF SCIENCE (TECHNOLOGY)

For the past 10 years the author, a theoretical physicist, has been working on a new theory of gravitation.

THE COMMON BELIEF seems to be that the general theory of relativity is complete, verified by logic, demonstrated by science, and needs no further refinement. However, there are more and more scientists today who think otherwise. The research done by Fred Hoyle, D. Narlikar, Robert Dicke and many others shows that much still needs to be done to build a really precise and logical theory of gravitation.

One of the most fascinating problems of modern science is the nature of gravitation. Its solution is essential for a study of the universe as a whole.

The law of universal gravitation has been qualitatively substantiated by mathematical calculation and astronomical observation.

Albert Einstein's general theory of relativity was the first real step toward the solution of the problem. His theory, however, has several basic shortcomings, the most serious being that its equations, as applied to the problems of cosmology, do not satisfy so fundamental a law as the principle of the conservation of energy. Since it is an absolute law of nature, it cannot be broken under any conditions. And yet, the general theory of relativity assumes that, when shifting from one frame of reference to another, the gravitational energy content of certain bodies can not only change but even be annihilated. At one time this raised questions about the reality of gravitational waves.

The scientists of a number of countries, the Soviet Union for one, have been studying this whole question for the past 10 years.

It is a truism that a theory must be submitted to experimental proof, and yet the general theory of relativity has not been substantiated by physical experiment and, after the first fundamental works of Einstein himself and the gifted Soviet mathematician Alexander Friedman, has not been developed further. (*Soviet Life* carried an article on Alexander Friedman, "Will the World End?" in August 1964).

Einstein, it is true, pointed the way to such an experiment. I refer to the so-called gravitational waves, which, according to theoretical calculations, should arise during accelerated motion, for example, oscillations of any bodies, and propagate like electromagnetic waves in all directions. The energy of gravitational waves, however, is infinitesimally small, and that is why scientists have not as yet succeeded in detecting them directly.

A new approach to this problem has now been mapped out.

Paul Dirac, the eminent British physicist, once claimed that gravitation slowly falls off with time. If a steel spring weakens, the bodies it connects gradually begin to move away from each other. If the "spring of gravitation" weakens, our region of the universe must gradually expand. We know that galaxies really do recede in different directions, but thus far we do not know what part the "aging" of gravitation plays in the process. Dirac's suggestion that the value of the constant of gravitation in our region of the universe can vary with time is acceptable in principle. However, the equations he arrived at, like Einstein's, do not satisfy the law of the conservation of energy.

Suppose we assumed that not only the gravitational constant but several other cosmic and nuclear constants as well undergo definite change as our region of the universe "ages." Proceeding from this assumption and the general laws of the conservation of matter and energy, scientists succeeded in calculating how the constants vary with time. They found that Einstein's equation with the new, "variable" constants was entirely consistent with the law of the conservation of energy.

What is the physical expression of this new conception? The assumption that elementary particles radiate gravitational waves. According to modern atomic physics, elementary particles, known as nucleons, have a complex internal structure. Clouds of mesons move around the nucleonic nucleus. Their energy is, generally speaking, insufficient to overcome the force of interaction with the nucleus. But we can assume that a certain small number of the mesons, because of the centrifugal forces which develop in their moving cloud, do "escape" to the outside. These are the elementary portions, or quanta, of gravitation, otherwise called gravitons.

Calculations show that 10^{-45} of a gram of matter passes over into the gravitational field every second in each cubic centimeter of space!

Two mutually opposed processes apparently go on in the universe: the transformation of matter in the gravitational field and the "materialization" of gravitons. What is more, numerical calculations show that they are in dynamic equilibrium.

Thus, according to the new concepts, the "meson cloak" of a nucleon is a unique "clot" of gravitation, and gravitons are the fluctuations (*i.e.*, the deviations from a certain mean value) of the energy of the nucleons. If that proves to be so, it will mean that the forces of gravitation are nothing more than the fluctuations of electromagnetic forces.

With the concept of the radiation of gravitons by nucleons, we can find the physical expression of the theory of the variation of universal constants and build up a harmonious and comprehensive picture of the development of matter in our region of the universe.

It follows from the new theory that the nucleons gradually lose their initial energy and mass. The gravitons, in turn, also lose a certain part of their energy, thereby giving birth to smaller particles, and so forth and so on. Thus, the particles of each subsequent class are the fluctuations of the energy of the particles of the preceding one.

All previous theoretical "models" of the universe were consciously made finite. In describing a definite and restricted range of phenomena, they did not permit further generalizations. The new theoretical scheme has the possibility for subsequent development. An interesting hypothesis of the origin of cosmic bodies in our region of the universe also follows from it. To the uninitiated, this hypothesis will seem altogether incredible. It says that our metagalaxy was formed as a result of the collision of two (!) elementary particles, two protons, for example, tearing along at a tremendous speed, close to the speed of light.

Imagine that two billiard balls have collided, and suddenly, as a result of this collision, billions of others form of much larger dimensions.

"But that's impossible!" you will say and you are right, from the standpoint of our "earthly" notions, that is. But when we have nuclear processes to deal with, phenomena of cosmic scope, our usual notions frequently prove worthless.

It follows from the theory of relativity that the mass of a particle depends upon its speed of motion. In principle, an ultrafast particle moving at a speed close to that of light can have a mass greatly exceeding that of the whole galaxy and even of the entire metagalaxy.

And now imagine that two ultrafast particles have collided, two nucleons (but not necessarily identical particles), moving at a speed very close to that of light and, therefore, possessing a colossal margin of energy. This gives rise to myriads of new particles in the surrounding space, quite enough, it turns out, to form a galaxy.

Then why are not galaxies and metagalaxies formed every day?

The answer is probability, for not just any two particles will do; they must be particles with a speed close to that of light. Such particles are very rare. And the chance collision of two of them is a very extraordinary event indeed.

Thus, a continuous process of formation of particles of all classes goes on in the universe. The collision of particles having great speed and mass can result in the formation of new cosmic bodies. The possibility is not excluded that the birth of certain new galaxies and of supernovae outbursts may be explained by such collisions.

Courtesy of the magazine
Nauka i Vselennaya (Science and the Universe)

Beauty and Motion



World Champion Ludmila Savinkova

By Andrei Batashov

WHAT is art gymnastics? Some people think it is merely bad ballet. But Yuri Titov, a world champion in sports gymnastics, is of a different opinion: "I follow the women's art gymnastics performances with great interest. Honestly, I get more pleasure from them than I do even from sports gymnastics."

Art gymnastics is an organic synthesis of the free exercises of sports gymnastics and elements of the dance and acrobatics.

The first art gymnastics groups made their appearance in Moscow, Leningrad, Yerevan and the Soviet Baltic republics in the early forties. The adherents of the new sport wanted to create special gymnastics for women. After some experimentation a complex of exercises with and without a goal was worked out around the free exercises of sports gymnastics.

There was the usual quota of skeptics who argued that since it lacked the complexity of "real gymnastics," it was no sport, just "walking with ribbons."

Hardly anyone would offer that argument seriously today. Artistry, with the accent on femininity and grace—that's what art gymnastics is. And these virtues are having a growing influence on sports gymnastics.

The first European championship competition was held in Budapest in 1963. Soviet sportswomen won all three top places and Ludmila Savinkova became Europe's first champion. A year later the Fédération Internationale de Gymnastique adopted a rule making this meet a world championship, an unprecedented action. A year after the contest Ludmila was informed that she was the global champion!

Now let us take a look at Ludmila through the eyes of the audience.

Her figure, in a severe black leotard, is sharply outlined. Seconds of deep concentration when nobody approaches her, not even her trainer. Ludmila seems to be listening to something inside herself, as if she is looking with her mind's eye at the score where the melody of her movement is inscribed. And the element from which her compositions are born is music. Every movement, gesture and look—all this must have inner justification. Unquestionably the influence of the classical ballet. There is nothing superfluous—only the graphics of inspired movement, an exact pattern which might have been engraved with a steel pen.

Her accompanist is a graduate of the Moscow Conservatory. The music of Rachmaninoff, Tchaikovsky, Liszt.

The moving lyricism of a veritable ballet adagio gives way to the risky boldness of an acrobatic combination and then to the explosive dynamics of purely gymnastic elements.

Ludmila is now 25. She has been studying art gymnastics since the age of 11. Maria Lisitsian, her trainer, is one of the founders of the sport.

"I owe everything to my trainer," says Ludmila, "even my mental and emotional growth."

"Ludmila has been training with me since she was 14," Maria Lisitsian said. "She impressed me immediately with her sensitivity and technical mastery, though she was so thin that I wondered where it all came from."

Ludmila is generally considered the country's leading art gymnast. But somehow or other she never managed to win the national title, there were always inexplicable slips and accidents. Therefore her aim now is to prepare herself so well for the second world championship as to rule out accident.

"I'm already 25," she says. "Another four years and I'll have to wind up. It's terrible that there is so little time left. Of course, I'd love to win the championship at Prague, but that's going to be a hard job. Czechoslovak and Bulgarian sportswomen have been making a lot of progress."

Yes, indeed, the world champion has no intentions of surrendering her title without a fight. She operates by a very strict daily regimen. Up at seven, then a two-hour run in Sokolniki Park and gymnastics exercises. After that Ludmila gets down to her textbooks (she is a student at an evening architectural institute). At midday she trains—"For three or four hours. It really should be more, but I simply don't have the time."—and in the evenings she has her institute classes.

It is hard to believe that she can still find time for music, theater, books and household chores. She sews, knits and is an excellent cook. Her sweaters are the prettiest and her tarts the tastiest.

But the big thing in her life is beauty in motion, what art gymnastics is frequently called. Ludmila follows all the trends in modern ballet, the reason she keeps changing her program and why her compositions have so much sensibility and depth.

Ludmila loves sculpture, but she has a real passion for architecture. "I once read something by an American architect who said that the plan for a building should be a harmony of space filled with light. Yes, harmony is the ideal toward which every person who has anything to do with art, whether an architect, ballerina or gymnast, should strive. This harmony must first of all echo in a person's heart. It is difficult, I suppose even impossible, for that harmony in one's soul to take on perfect form. But the very process of working at it, the very striving for perfection of expression—that is what gives one the joy of creation."



MEN AT WAR

By Rezo Chkheidze

FILM DIRECTOR, HONORED ART WORKER OF THE GEORGIAN SSR

Rezo Chkheidze made a name for himself as a film director in the fifties with his Lurdzha Magdany *produced jointly with Tengiz Abuladze),* Our Backyard, Maiya of Tskhneta, The Treasure *and* The Sea Path. *Here he tells about his most recent film,* A Soldier's Father.

A sturdy old peasant of Kakhetia makes the rounds of his vineyard, tenderly propping a bunch of grapes here and there, as he takes leave of his beloved garden. His wife hurries him on as the villagers see him off on a long journey to a frontline hospital in search of his son, a tankman wounded by the Nazis.

When the old man reaches the hospital, he learns that his son has recovered and gone back to his unit stationed somewhere in the vicinity. Old Georgi goes to find him, and gets a taste of the war and the enemy's cruelty. Before his eyes a fascist kills a badly wounded young Russian soldier with whom Georgi had made friends.

He realizes that he must take part, actively and directly, in the struggle his whole people are waging. Not without difficulty, he talks HQ into letting him enlist. And thus the soldier's father becomes a soldier himself.

Georgi is played by People's Artist of the USSR Sergo Zakariadze, a star of both stage and screen, famous for his lead roles in *The Last Cross-Bearers, Kutuzov, Dariko, The First and the Last Day* and *Paliastomi*. I first worked with him three years ago on *The Sea Path*, where he played an old sailor who gives up his life to save a young seaman. Tall, broad-shouldered and gray haired, he stands defying the foaming breakers (this scene was shot near Batumi), very reminiscent of Hemingway's fisherman in *Old Man and the Sea*.

About that time young scriptwriter Suliko Zhgenti and I were talking about the conflict in his future screen story *A Soldier's Father*, and it occurred to me that Sergo Zakariadze would be just the man for the title role. Zakariadze liked the idea. And that led to the old peasant role in *A Soldier's Father*.

The theme of man and war has been filmed any number of times both at home and abroad. Many films in the West have made the point that war brutalizes men, that they are psychologically crippled for years afterward. We, on the other hand, in the best of our war films, try to show man's humanity, man worthy of the name, who, when having passed through the furnace of war, does not lose his clear-sighted optimism or his love of life.

Sergo Zakariadze's Georgi is altogether simple and human, a man of probity. Everywhere and at all times he remains true to himself, a son of the soil. But this does not prevent him from being a fine soldier. In several scenes the comic and the tragic elements of the character are fused, with no contradictions. At one point we see Georgi trying to save the burning wheat. Moments later, shaken by the heinous murder of his friend, he rises to full height and with set eyes and lips advances on the fascist gunner to take revenge.

When we shot the film, we traveled the long and thorny roads of war with Georgi Makharashvili the soldier. We experienced with him that stirring moment when our scouts chanced to dig up from under the snow a frontier post that the fascist invaders had torn down. The faces of our hero and his comrades-in-arms become radiant at the sight of that post. They have cleared their country of the enemy and are now headed for his!

Let me describe another episode which characterizes our hero. His company is on alien territory, and the old soldier sees that our men are turning their tanks into a vineyard. He rushes to save the grapevines, insisting that the tanks back out. A completely natural action for a peasant.

The finale of the film is tragic. Fate brings father and son together during the battle for a house where the enemy is dug in. Georgi hears the voice of his Goderzi and then sees him shot down by a fascist bullet. Zakariadze plays this scene with great reserve. His eyes alone give away the depths of his paternal grief. But he fights on towards victory. His unit comes to a bridge with an inscription testifying to the fact that it was captured from the enemy by his son.

The music for the film was composed by talented Sulkhan Tsintsadze of Georgia. He borrowed the popular Russian tune "A People's War" for his score.

At the Moscow Film Festival this year Zakariadze was awarded the prize for the best male role for his portrayal of Georgi.













Brief Comments

Planning Employment

By Genrikh Emdin



Genrikh Emdin, 51, is a graduate of the Odessa Institute of Finance and Economics. He is an editor of the Ekonomicheskaya Gazeta, *specializing in national planning. He has also written articles on economic policy and finance.*

In each of the past few years three million men and women have been added to the number gainfully employed in the country's economy. Last year the total was 76 million. In the next 20 years the population is expected to grow by a third, employment in industry by 50 to 60 per cent and employment in service, cultural and the other non-goods producing areas by two to three times. Hence, the need for more manpower.

Despite that, we will probably continue to have for some time groups of available able-bodied persons not employed in the national economy in certain densely-populated areas, notably small and medium sized cities with insufficient industry. This is largely due to deficiencies in the distribution of production facilities and poor territorial planning. This also explains why some regions which are being intensively developed, particularly in the East and the North, are short of workers and specialists.

The 1961 Program of the Communist Party set the tasks of paring down big city overpopulation and leveling out the economic development of the different parts of the country.

What we face then is not a problem of employment as such, but the problem of the most efficient and fullest use of our manpower.

That is why demographic studies and analyses of population migration and manpower requirements of the union republics, economic regions and industrial complexes were made before the regular five-year plan and the 1966 plan were drawn up. Data collected by authoritative commissions sent to various cities made it possible to distribute production facilities more rationally, with an eye to available and potential manpower resources.

The 1966 plan makes provisions for jobs and training for young people just out of school. Next June the country will have two sets of high school graduates to take care of: the first graduating class of the new 10-year system now in effect and the last graduating class of the old 11-year system. For the most part the young people will be moving into the newer industries and the service and cultural areas, as well as into universities and institutes. This year two million boys and girls entered institutes and technical schools.

In studying the problem of Soviet manpower resources, we have to keep these several considerations in mind. The service areas, presently far from adequate to meet growing material and cultural demands, are slated for very rapid expansion, which means more workers. The average annual number of full-time students is expected to rise. An ambitious farm program will increase seasonal manpower requirements. Labor expenditure on individual farm plots will probably be rising also with the recent lifting of restrictions. Consequently, the flow of manpower from agriculture into industry, construction and other branches is likely to slow down, although this exodus is quite natural in view of growing mechanization of farm work.

The national economic plan provides for an expanded system of vocational and professional training, a sharp increase in the output of household appliances and services to reduce housekeeping chores, and more nurseries, kindergartens and boarding schools. All this, combined with improved management and planning methods, is expected to fill the country's manpower requirements and to make every able-bodied person economically productive.

THE PSYCHIATRIST AND THE SOVIET SOCIAL ORDER

(Continued from page 23)

sional work the values and attitudes he has grown up with from earliest childhood.

From birth, and one might say before birth (David and Vera Mace report in their book *The Soviet Family:* "Soviet mothers like to deliver their babies in the atmosphere of the collective. They would consider it almost a punishment to be banished to a private room."), the Soviet child (the future psychotherapist) functions as a member of a group, of a collective. This orientation continues in the crèche, where several infants are placed in one playpen to learn to socialize. At a later age the toddler is given blocks that are so bulky that he must call on other children to cooperate and help him in handling them.

The collective, cooperative orientation continues in the kindergarten, the school, the organization of Octobrists, the Pioneers and the Komsomol. In these organizations the child learns very early (and this indoctrination is constantly reinforced) that his personal problems are the problems of the collective, and vice versa. If he has misbehaved or is not doing well in his studies, these matters will be taken up at a meeting of his entire class or of the Pioneer organization. If his parents are not getting along harmoniously and this is interfering with his studying, this will become the concern of the trade union organization to which his parents belong.

An example: In an indignant letter to the editor of a Leningrad newspaper, a woman complains that her husband, who is secretary of the Communist Party cell of his factory and should therefore be an exemplary citizen, is in reality a bad husband and abuses her. She writes that she took this matter to the executive committee of the Party cell, but nothing was done about it, perhaps because her husband is the head man. She demands justice. The editor replies that this is indeed an intolerable dereliction of duty by the Party organization and that he will see to it that the higher Party organs make certain that the Party cell does its duty, intervenes and straightens out the marital mess.

The professional career of the psychiatrist confirms and reinforces these collective attitudes. Throughout his professional life he continues to function as a member of a collective, on the staff of either an outpatient clinic or an inpatient hospital.

Furthermore, the Soviet psychiatrist emphasizes that all of the prophylactic, therapeutic, and mental-health-educational techniques that he employs would not be effective if they were not integrated with a whole series of social legislation regulations which he considers to be forms of nonspecific anxiety-reducing public health measures. He refers to such general factors as: the absence of unemployment; opportunities for training in various skills and professions through free higher education with payment of stipends to students; material security in case of illness and old age through a pension system; measures that are being taken to involve retired people in community affairs and keep them socially active and vigorous, etc., etc.

The point here is not whether, and to what degree, other societies make similar provisions, but that the Soviet psychiatrist considers all these measures as part of his therapeutic-prophylactic armamentarium, and, conversely, he considers himself and his work an integral part of the over-all social effort.

An important part of his professional work consists in enforcing various public health regulations. For instance, he may inspect factories to determine whether the noise level or the speed of the conveyor belt is such as to be damaging to the mental health of the workers. Conversely, in treating patients, he may call on various social institutions or organizations for help in his work of rehabilitating and reorienting the patient. For example, when he discharges a patient, he is likely to write to the trade union organization, suggesting what attitudes toward the newly discharged patient will help his recovery.

This two-way, reciprocal relationship with society is in the forefront of the Soviet psychiatrist's consciousness: society employs his professional skills for the benefit of the over-all social enterprise, and he uses society to help him in his professional work with the individual patient.

INTERCULTURAL PSYCHIATRY—A STUDY IN CONTRASTS

In sum, as I indicated at the beginning of this article, the most fascinating and instructive part of my long sojourn in Russia was what I learned about the psychology of my Soviet colleagues. I learned that, whatever scientific theories they invoked to explain their psychotherapeutic methods, a fundamental reason for their active approach to their patients lay in the fact that they were simply being themselves. They were reacting, in the therapeutic setting, in the way that their upbringing and total life experience has prepared them to react. Their approach to psychotherapy is a reflection of the ideals of interpersonal relationships that prevail in their society.

These findings have a bearing on transcultural, or comparative, psychiatry. Both in the United States and in Russia the psychotherapist believes that it is necessary and desirable to create in the therapeutic situation an ideal relationship, a relationship that will provide for the patient a therapeutic emotional experience and a model for his other human relations. However, the concept of what constitutes an ideal relationship may vary from society to society.

In the West the ideal of interpersonal relations between adults is as complete permissiveness as possible, a pluralistic, *laissez faire* approach, where no person tells any other person how to lead his life. Soviet society is a "collective-parental" society, which stresses, as ideals, mutual aid and the central role of the collective in the security system of the individual, in the satisfaction of his material and emotional needs, and in the furthering of his growth and development.

Yevtushenko's New Poem

by Lev Anninsky



Lev Anninsky, 31, is a graduate of Moscow University's Philology Department. He is a literary critic, a contributor to leading Soviet magazines, and the author of* The Kernel, *dealing with the present trends in Soviet literature.

Last December Yevgeni Yevtushenko recited several fragments from his new poem "Bratsk Power Station" to members of the Moscow Actors Club.

For two hours the eyes of 400 people were riveted on the poet whose striped sweater made him look even lankier than he was. No doubt in Siberia too the thousands of builders of the hydroelectric power project on the Angara River had listened just as closely as he recited this poem he had written about them.

Yevtushenko has tried to make a unity of the present and the past. He has tried to interpret certain events of history, to summarize the meaning of the industrial transformation Siberia is now going through.

He began his recitation with the section on the execution of Stepan Razin, leader of the seventeenth century Cossack uprising, followed it with an excerpt on the Decembrists (revolutionary noblemen of the nineteenth century). Then he moved on to Lenin's youth and the dramatic events of the twenties and thirties of this century. And as culmination, our own times —the Bratsk building site against the background of which he wove the theme of love. The intricate composition, built on authentic history, the brilliance with which he introduces detail, the caustic sonorities testifying to the author's erudition and courage, the fine "instrumentation"—with this whole arsenal of the avant-garde poet I saw how deeply Yevtushenko moved his audience. Once again I saw how skillfully he wielded his chief weapon—his ability to join the most remote, the most incompatible things, the most contrasting elements of reality.

Not that I thought his epic was altogether faultless. But, listening to him recite it, I was carried away by something else—his wonderful way of reciting, the way he creates mood, the way he grips and holds his listener to the end—there he is second only to Mayakovsky. In his trenchant recitation there is something for the elderly and serious dramatic historian with a taste for reminiscence, for the restless young actor avid for truth, and for the student girl who is sure that life is impelled by love. When the doomed and forsaken rebel Stepan Razin refuses to recant even on the block, when a young Red Army man but recently freed from the darkness of illiteracy falls under the bullets of the White Guards, and when a Bolshevik hydroelectric engineer under the oppressive glare of a searchlight in a 1937 prison reflects that "These men are torturing me with the light I fought to win for happiness," this Villon-like paradox stands illuminated by so modern a world outlook that the merits or demerits of one line or another matter very little.

When Yevtushenko's new poem was published in the youth magazine *Yunost* in April 1965, it covered 41 pages. And as happens with every literary work of stature, it was analyzed by literary critics and taken apart by scholars. But they were a different audience.

In the packed hall of the Actors Club, where 400 people listened rapt and openhearted to the lanky poet, there was no taking to critical pieces. The poem was being put to a different test—could it move people?

As for me, I asked myself only one question —Was the birth of this compelling poem an important event in Soviet poetry?

And I answered myself—It was!

IN THE NEXT ISSUE



Webster defines a mountain as "Any part of a land mass which projects conspicuously above its surroundings." But for a skier a mountain is much more—it is a challenge. And the higher the mountain, the greater the challenge. The Carpathians have already been conquered, as the front cover of our next issue shows. So have the Altais, the Pamirs and the Sayans. Skiers are now tackling the highest peak in the European continent, Mt. Elbrus. But this is no Spartan venture, what with first-class hotels, ski lifts and a sun that shines with that special Caucasus Mountain brilliance. See the January issue for an article on the beauty, fun and exhilaration of a winter vacation at Elbrus.

Everything Siberian is big—distances, rivers, industrial projects, even talk. Siberians, writes Vladimir Pozner, are somewhat like Texans—expansive. They know people live in other parts of the country, but they can't understand why. Pozner made a cross-Siberian trip some years ago and shows you the region then and now in The New Frontier.





If anything additional were needed to prove the point that teenagers, no matter where they are born and bred, are an incomprehensible breed of people to their elders, schoolteacher Ludmila Ochakovskaya supplies it in the articles Boys and Girls, in which she discusses such universal teenage lamentations as: "Why am I not popular?" and "Why doesn't he like me?" Also such grumblings of teachers and parents the world over as: "Is chivalry out of style?" and "Make-up—at your age!"

For several issues we have been acquainting readers with venerable examples of Russian architecture at Rostov, Suzdal, Pskov, Kolomenskoye and elsewhere. We now turn to the monuments of the other peoples who live in the Soviet Union. Our first picture story in this series is about Samarkand. The old poets called it "the most ancient and most beautiful gem in the necklace of Central Asian cities." Alexander the Great sacked it, Ghenghis Kahn razed it, Tamerlane made it his capital.



Other articles in the January issue are:
Twentieth Century Miracle—Moscow's International Exhibition of Chemistry in Industry, Construction and Agriculture; More about Richter—by the teacher of the celebrated pianist; Petrov-Vodkin, a Painter of the Russian School—about a noted Soviet artist; The Soviet and American Worker: Job Attitudes—the very statistical reply of a Soviet sociologist to an American colleague; Readin', 'Ritin', 'Rithmetic . . . All in English—a photo story on the Soviet youngsters who were guests of an American television program; Dahlias—in which Yevgeni Bogat writes about two unusual flower growers; Omar Khayyam—an article on the eleventh century mathematician, scientist, philosopher and author of the *Rubaiyat*; two articles on sports telling what's new and in the offing; some new features—Theory, Experiment, Practice and Your Questions on Communism; the popular regular features Around the Country Our Trends and Children's Corner.

NOVOSTI PRESS AGENCY

SOVIET LIFE

Nature: Use and Protect It — A series of articles and interviews on the use of our natural resources.

From Kindergarten to Ph.D. — Facts and figures on education and the training of scientific workers.

Man's Faith — Man must believe in something, but must it be in God? a scientist asks.

COMING SOON

Star-gazing (below) or fairytale land (above).

ACADEMICIANS OF

THE 21ST CENTURY

By Iosif Nekhamkin

Photographs by Yuri Chernyshov

HOW CAN a gift for research be discovered in the schoolboy of today? How can it be developed? How should young people be trained for creative work?

These are old questions, but enormously important today. The tempo of scientific development and the progress of society depend on the answers. Formulas will not work here. Fresh ideas and pedagogical exploring are needed.

Interesting in this connection is the experiment of Ukrainian teachers. They have organized a Little Academy of Sciences in Simferopol, capital of the Crimea. Members and candidate members are schoolchildren from 12 to 18.

The Little Academy is not confined to Simferopol. Like a strong young tree, it has spread its branches to 16 cities and districts of the Crimea to unite the creative efforts of several thousand youngsters. The work is coordinated and guided by the Academy Council, headed by its president, Professor Yakov Kozin, and vice presidents—high school seniors. The president is not the only adult scientist and teacher involved. Many other distinguished scientists helped to set up the academy and continue to provide instruments and equipment, deliver lectures, conduct seminars and guide laboratory and design work.

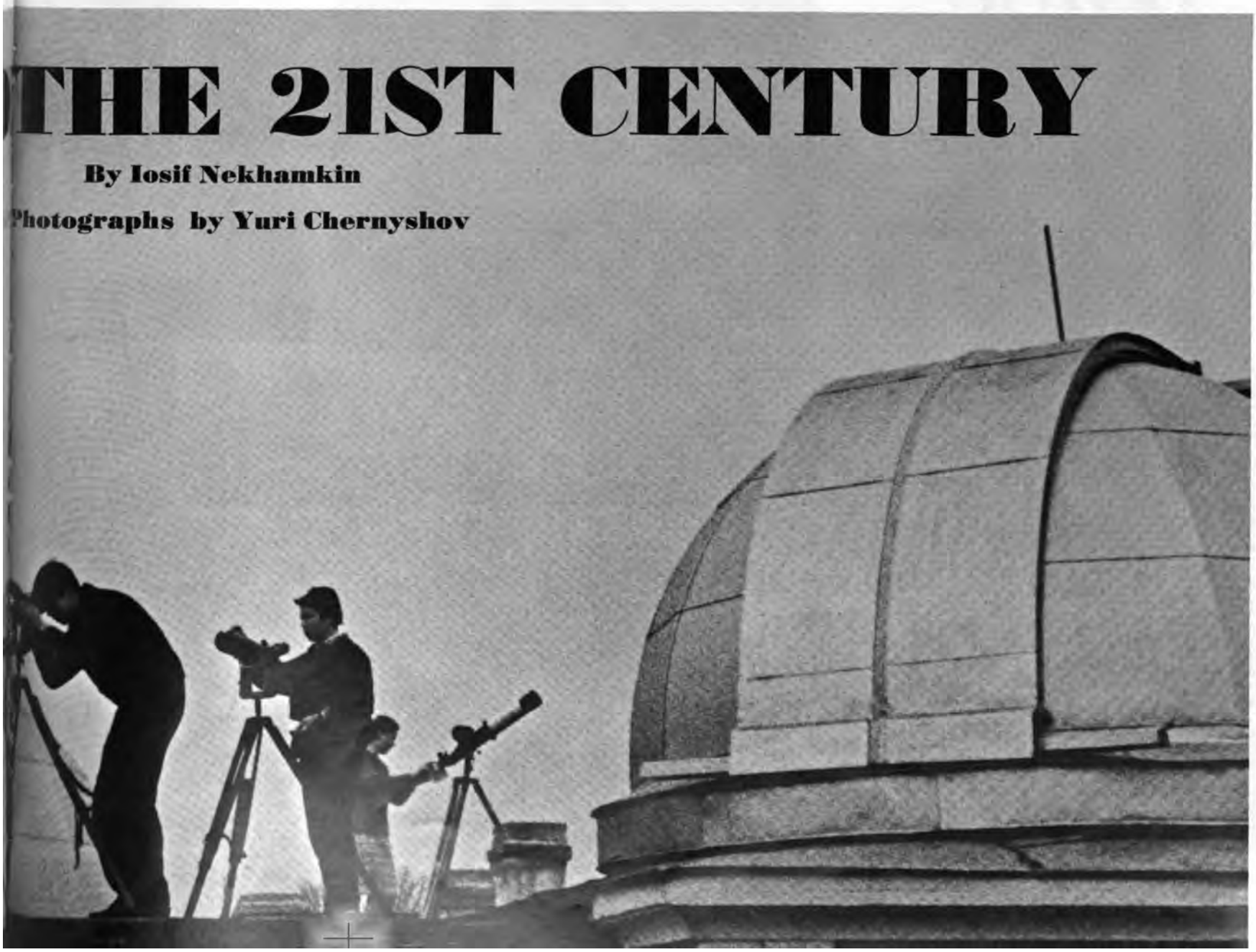
Those who founded the academy were motivated by the desire to introduce young people to science via actual, not play, situations. Young biologists are doing studies on proteins. They have learned to work with the spectropolarimeter and to isolate pure proteins from various organic compounds. Students of cybernetics who became enthusiastic about the possibilities of the study helped them along by constructing a complex device for protein research.

Guided by specialists, youngsters interested in agronomy, chemistry and biology draw up regional soil maps, set up agrochemical laboratories and experiment with fertilizers. Students who like speleology study the famous Crimean caves, do archeological digging in ancient settlements and explore the water resources of the mountain areas.

This is not amateur science by a long shot. Take the children's astronomical observatory, for example. It was part of the world network of scientific institutions which made observations for the International Year of the Quiet Sun. The young Crimean astronomers registered tens of thousands of meteors, discovered two formerly unknown meteor showers and took a great many spectra of meteors, which have been listed in spectra catalogues throughout the world. Not every adult researcher can boast such results.

Despite the serious work, the members and candidate members of the academy nevertheless remain jolly, spirited and playful boys and girls. Like all young people, they are busy with sports and other activities. Their mentors often join them and share their joys and disappointments. For the knowledge the adults give so generously, they get in return that vivacity and freshness of perception so characteristic of youth. Thus, the benefit is mutual.

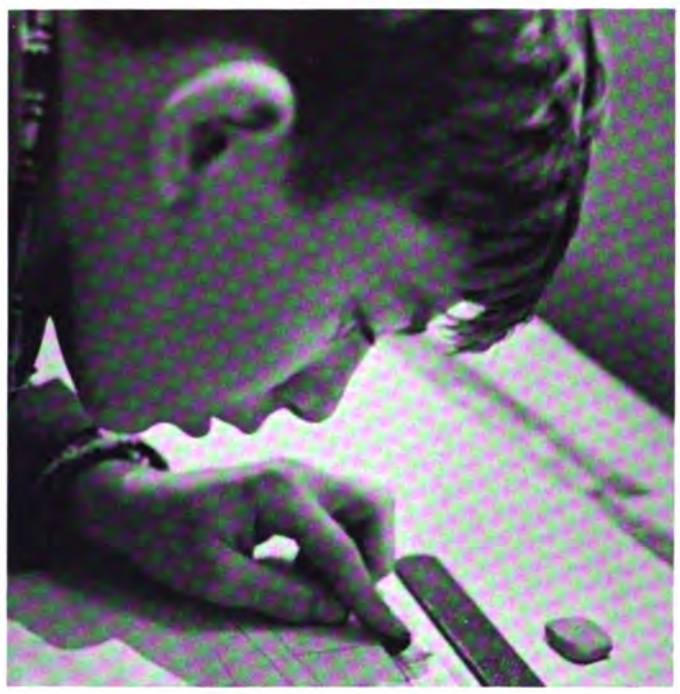
The work of the Little Academy of Sciences has proved the viability and value of the idea which is already being picked up in other parts of the country.





Photograph a lunar eclipse . . .

ACADEMICIANS OF THE 21ST CENTURY



Make calculations . . .



Shoot a film about themselves . . .



Launch rockets . . .



Look into space . . .

Design instruments . . .





Test radio equipment on model ship . . .



Icebreaker in the Arctic

PHOTOGRAPH BY DAVID SHOLOMOVICH

UNIVERSITY OF MINNESOTA
RECEIVED
NOV
2
1965
LIBRARY

SOVIET LIFE

Illustrated Monthly

INDEX—Issue Nos. 1(100) - 12(111)—January-December 1965

Supplement to December Issue

AGRICULTURE

Some data on Soviet corn production and consumption, *Queries* ..... 1(100):12
"Very Engineering" ..... 3(102):26
What is the difference between the former kulak farm and the present individual farm? *Queries* .. 3(102):43
Why do individual farm plots yield more per acre than collective farm fields? *Queries* ..... 7(106):47
70 Billion Rubles for Agriculture ..... 7(106):58
Eureka Tractor ..... 9(108):15
Socialism and the Countryside ..... 9(108):36
Cucumbers in Pipes ..... 10(109):18
Agriculture: Where Will the Money Come From? ..... 10(109):60
How are collective farm market prices set? *Queries* ..... 11(110):34
The Agriculture Industry ... 12(111):20
More Fleece ..... 12(111):28

ANIMALS

Does the USSR have laws preventing cruelty to animals? *Queries* ..... 1(100):12
Apex Hanover Stayed in Moscow ..... 1(100):58
Displaced Bees ..... 3(102):44
Headed for Siberia ..... 4(103):10
Our Shaggy Pets ..... 4(103):64
Are there national parks? How are they managed? *Queries* ..... 5(104):36
30,000 Duels ..... 5(104):40
Brown Death ..... 6(105):25
Kirghizian Preserve ..... 6(105):50
The Leningrad Zoo ..... 8(107): 1
Suburban Monkey ..... 9(108):15
The Case of the Venomous Pretzel ..... 9(108):46
Cow Record ..... 10(109):19
"So What's So Hard About Chess?" ..... 11(110):16
Hibernation Risky ..... 11(110):41
Saved by an Eagle ..... 12(111):28
Cold-Blooded Dancer ..... 12(111):29
Man vs. Bear ..... 12(111):29

CHILDREN

Merry Youngsters Club ..... 1(100):45
Getting to Know Soviet Children ..... 2(101):34
Out of the Mouths of Babes .. 2(101):42
Merry Youngsters Club ..... 2(101):45
40 Years in the Writing ..... 2(101):61
Merry Youngsters Club ..... 3(102):33
Is it true that military toys are not manufactured in the Soviet Union? *Queries* 3(102):43
Juvenile Heaven ..... 3(102):45
Merry Youngsters Club ..... 4(103):18
Soviet Schoolchildren on ABC-TV ..... 4(103):46
Merry Youngsters Club ..... 5(104):34
Writing for Children ..... 6(105):62
Marite—Café for Kids ..... 7(106):14
Juvenile Artist Wins Gold Medal ..... 7(106):41
Making Creative Children ... 9(108): 6
Drawn from Imagination ..... 9(108): 9
Children's World ..... 9(108):14
The Nikitin Approach ..... 9(108):55
Merry Youngsters Club ..... 10(109):20
The Magic in a Pencil ..... 11(110):18
Merry Youngsters Club ..... 11(110):18
Artists Who Can't Write ..... 11(110):19
Television Children ..... 12(111):24
Merry Youngsters Club ..... 12(111):45
Academicians of the 21st Century ..... 12(111):62

DISARMAMENT AND PEACE

Path of Peace ..... 1(100): 3
Frontiers and Territorial Disputes ..... 1(100):14
Plan for 1965 Spells Higher Living Standards and Stronger Peace, *Our Trends* ..... 2(101): 3
I Thought Up the Holiday ... 3(102):61
Cuts in Military Spending: Threat or Blessing? ..... 4(103):56
Policy of Mutual Example ... 4(103):62
The Frontier of the Impermissible, *Our Trends* ..... 5(104): 1
Potsdam—As Momentous as Ever ..... 7(106):58
A Generous Contribution .... 11(110):60

ECONOMY

Something about the con-



struction of high-voltage lines, *Queries* 1(100):12
Debating Economic Development 1(100):14
Winter in Tataria 1(100):40
Plan for 1965 Spells Higher Living Standards and Stronger Peace, *Our Trends* 2(101): 3
Do you pay interest on savings bank deposits, and how much? *Queries* 2(101):39
Concerning production as the key to a greater society, *Queries* 2(101):39
Do you have insurance companies that insure a worker against sickness? *Queries* 2(101):39
How are the rights of seasonal workers protected? *Queries* 2(101):39
Facts and Figures on Power 2(101):60
Public Control 3(102): 3
Data on the Development of the Soviet Merchant Marine 3(102):14
The Ukraine: Industrial and Agricultural Progress 3(102):23
Bank of the Soviet Union 3(102):34
Small Bank—Big Business 3(102):38
Byelorussian Oil 3(102):44
We Can Do Business, *Our Trends* 4(103): 4
The City on the Sozh 4(103):14
Karelia, the Forest Republic 4(103):42
For the Consumer 4(103):62
Are there national parks? How are they managed? *Queries* 5(104):36
Where are the Soviet mints located? Is it possible to get examples of the memorial medals the mints put out? *Queries* 5(104):36
What are the prices of foodstuffs and consumer goods? *Queries* 5(104):36
What are the average earnings of a high school teacher in a large city? What advantages do teachers have? *Queries* 5(104):86
Why the drop in population increase? *Queries* 5(104):36
Half-Million-Kilowatt Generator 5(104):40
The Land of 100 Volcanoes 5(104):58
Communism and Quality 5(104):62
Increasing Rate of Soviet Economic Growth 5(104):63
What Siberia Costs, *Our Trends* 6(105): 6
Siberia and the Far West 6(105):10
Where Russia Begins 6(105):12
Yakutia 6(105):23
Brown Death 6(105):25
Diamond Town 6(105):30
The Siberian Challenge 6(105):33
Forest Fire 6(105):34
The Quest for the Dyomin Treasure 6(105):36
A Planned Discovery 6(105):39
Science Against Administration 6(105):40
Bratsk Has Become Warmer 6(105):45
The Times Call for More American-Soviet Trade 6(105):62
More Efficient Investment 6(105):63
Mathematical Models for the Economy of the Baltic Republics 7(106): 6
They Fish All Seas 7(106):14
Grand Prix Balsam 7(106):15
Are We Flirting with Capitalism? *by Professor Yevsei Liberman* 7(106):36
Do you have advertisements? What is their purpose? *Queries* 7(106):47
Fishermen from Saaremaa 7(106):53
Chuvashia Today 8(107):12
Magma-Operated Power Station 8(107):15
Atomic Power Prospects 8(107):15
Economic Planning to Meet Consumer Demand 8(107):36
Automation and the Worker 8(107):44
International Socialist Bank 9(108):12
Bashkiria 9(108):38
Centralization or Decentralization? 9(108):58
Why All the Talk About Standards? 10(109):18
Largest Hydroelectric Power Station 10(109):19
Economic Planning and Management: Methods and Approaches 10(109):50
How big is the USSR? *Queries* 10(109):56
How are prices set? *Queries* 10(109):56
Training Managers 10(109):60
A Spur to Efficiency 11(110):17
What it the city-country population ratio? *Queries* 11(110):34
What cooperatives are there? *Queries* 11(110):34
What is the organizational setup of a Soviet factory? *Queries* 11(110):34
What wines does the Soviet Union make? *Queries* 11(110):34
500 Dollars for Black Sable 11(110):41
Do We Need Union Contracts? 11(110):60
Consumer Demands and Advertising 11(110):60
Demographers Estimate 12(111): 5
Improve Industrial Management, Perfect Planning, Strengthen Economic Incentives, *summary of Alexei Kosygin's report to the plenary meeting of the Central Committee* 12(111): 6
Problems of Soviet Economics 12(111):25
Planning Employment 12(111):60

EDUCATION

Do Soviet universities offer courses in Latin and ancient Roman civilization? *Queries* 1(100):12
New Library 2(101):61
Tomorrow's Doctors 3(102):20
Learning Russian 3(102):28
Learning Russian 4(103):44
Learning Russian 5(104):35
What are the average earnings of a high school teacher in a large city? What advantages do teachers have? *Queries* 5(104):36
To what extent are Latin and Greek taught in Soviet schools and colleges? *Queries* 5(104):36
Learning Russian 6(105):52
Learning Russian 7(106):20
Learning Russian 8(107):41
Learning Russian 9(108): 8
Are Soviet educational methods proving as fruitful for invention as is essential to the progress of socialism? *Queries* 9(108):42
The Nikitin Approach 9(108):54
Our Universities 9(108):62
Learning Russian 10(109):62
Foreign Graduates 11(110):40
Learning Russian 11(110):63
What does it cost the government to keep a boy or girl in school? *Queries* 12(111): 9
Television Children 12(111):24
An Electric Examiner 12(111):28
Academicians of the 21st Century 12(111):62

FINE ARTS AND HANDICRAFTS

The Palekh Revival 1(100):31
The Secret of Russian Lacquer Ware 1(100):34
Prints All the Rage 1(100):62
Sputnik on Mir Prospect 1(100):63
The Russian National Costume 2(101):30
Saints and Symbols 3(102):29
Art at 40 Below 3(102):45
Vladimir, *Rus Masterpieces* 4(103):22
Introducing Five Young Painters 4(103):29
Masterpiece Restored 5(104):41
Rostov Veliky, *Rus Masterpieces* 6(105): 1
Beauty on His Brush 7(106):32
At Picasso's Request 7(106):41
Ulugh-Beg Minaret Straightened 7(106):41
Sun-Kissed Colors 8(107):46
Drawn from Imagination 9(108): 9
Russian Masters 9(108):14
Pskov, *Rus Masterpieces* 9(108):49
Paintings Brought to Life 10(109):18
New Trends in Art 10(109):29
How does an artist sell his pictures? *Queries* 10(109):56
Georgia: Forms and Colors 11(110):29
Polycrates Found 11(110):40
Builders or Archeologists? 11(110):41
Kolomenskoye, *Rus Masterpieces* 11(110):53
Fifteen Century Icon 12(111):28
Eagle and Sword 12(111):46

HISTORY

What Do You Know About Russian-American Relations? *Quiz* 1(100):49
Lithuanica Shot Down by Nazis 1(100):62
The Face of Ivan the Terrible 3(102):18
Mystery of the Czar's Tomb 3(102):18
Who Said It? *Quiz* 3(102):22
Saints and Symbols 3(102):29
How many countries took part in the intervention against Soviet Russia in 1919? *Queries* 3(102):43
Vladimir, *Rus Masterpieces* 4(103):22
Abraham Lincoln and Russian Public Opinion 4(103):24
The Great Patriotic War 5(104): 2
Guerrilla Warfare 5(104):12
1944: Smashing the Wehrmacht 5(104):16
The Real Story of Soviet Strategy 5(104):20
From Burning Hell to Victory 5(104):30
Volgograd 5(104):32
They Shall Always Be Twenty 5(104):56
Rostov Veliky, *Rus Masterpieces* 6(105): 1
Democritus 6(105): 2
The Deal That Fell Through 6(105): 5
Yakutia 6(105):23
Basement Treasures 6(105):51
Thomas Paine 7(106):16
Baron Von Munchhausen's Castle 7(106):52
Potsdam—As Momentous

As Ever ..
The Lost Lik..e
Ivan the Ta..
Russian Enc..
Jean Jacque..o
Pskov, *Rus* .. 7(106):47
Kolomenskoy .. 7(106):49
Masterpiec.. 7(106):56
Andreas Ves.. 7(106):60
Eagle and S.. 8(107):14
.. 8(107):14
.. 8(107):15

INDUSTR... AND T...

.. 8(107):22
.. 8(107):26
What about .. 8(107):30
production.. 8(107):50
What about ..
of machine.. 8(107):54
tools? *Que*.. 8(107):58
Something a.. 9(108): 4
struction ..
power line.. 9(108):14
Chatka .... 9(108):17
Drilling for .. 9(108):25
Almost 100 ..
High-Tensio.. 9(108):46
Walking .. 9(108):52
From Baku .. 9(108):55
by Water .. 9(108):60
Floating Fac..
Long .... 10(109): 3
Production Q.. 10(109):18
the Worke.. 10(109):18
Subways in ..
Tbisili .... 10(109):25
New Moskvi.. 10(109):38
Cheaper and.. 10(109):44
Railway S..
Merchant M.. 10(109):48
Another Tup..
No Speed Li.. 10(109):54
Giant Shovel..
Helicopter C..
The Secret .. 10(109):56
Caviar ....
Inch-Long D.. 11(110):25
New Zaporo.. 11(110):35
100-Year-Old.. 11(110):36
Fashion and .. 11(110):42
A Half-Ton .. 11(110):51
Construction.. 12(111):14
Largest Hot..
Half-Million.. 12(111):26
Generator .. 12(111):29
Diesel-Electr.. 12(111):30
Flying in Si.. 12(111):32
For the Far ..
Information ..
and driver.. 12(111):39
Queries .... 12(111):42
Polymers to .. 12(111):50
New Siberia..
Water Unde..
How many g..
private au..
Moscow? ..
Robot Driver..
In Turkmeni..
Moscow's Ne..
New Low-Fr..
Diffusion W..
Vacuum ..
Student City..
The Saddled ..
210-Ton Tra..
Soviet Airlin..
Eureka Trac..
Airships Ag..
62 Miles of ..
Largest Hydr..
Power Sta..
AN-22, Anta..
Supersonic L..
Gas Instead ..

INTERNA...

Frontiers an..

ISCUSS

.. 2(101):22

y 3(102):46

.. 4(103):56
.. 7(106):50
.. 8(107):28
... 8(107):49
... 8(107):56
.... 9(108):23

....10(109):25
....10(109):40
....11(110):22
....11(110):38
....12(111):50

GIONS
S

.... 1(100):27
.... 1(100):30
.... 1(100):40

.... 2(101):30

... 2(101):39
ıd
... 3(102):23
in
es 3(102):43
.... 3(102):44
.... 3(102):51
..... 4(103):10
..... 4(103):10
(. 4(103):11
.... 4(103):14
s 4(103):22
.... 4(103):26

.... 4(103):42
.... 5(104):32
e 5(104):51
s.. 5(104):58

.... 6(105): 1

.... 6(105): 5
... 6(105):10
.... 6(105):12
.... 6(105):23
.... 6(105):33
.... 6(105):39
er 6(105):45

... 6(105):54
he

.... 7(106): 6
... 7(106):18

... 7(106):29

-

... 7(106):47

... 7(106):52
a 7(106):53
.. 7(106):60
.. 8(107): 1
.. 8(107):12
.. 8(107):15
s 8(107):58
.. 9(108):38
.. 9(108):49
..10(109): 8

..11(110):28
11(110):29
.11(110):46

11(110):53
11(110):58
.12(111):14
.12(111):46

SCIENCE (See also Space)

Tradition of Scientific Contacts ..... 1(100):46
Lebedev Institute Proceedings to Be Translated ..... 1(100):62
104th Element ..... 1(100):63
Mystery of the Sakachi-Alyan Picture Rocks ..... 2(101):37
Are you doing much research in cybernetics? *Queries* ..... 2(101):39
Tears of Gold ..... 2(101):41
At the Sixth International Biochemical Congress ..... 2(101):48
Moscow Rose Garden ..... 2(101):60
The "Daisy" Generator ..... 2(101):61
10,000 Years Ago ..... 3(102):44
TV Cameras on the Ocean Bottom ..... 3(102):44
3,000-Year-Old Skates ..... 3(102):45
First Nivkhi Scientist ..... 3(102):45
Natural Science and Contemporary Philosophy 3(102):46
Underwater Glider ..... 4(103):10
Nobel Prize Winners ..... 4(103):11
Geology Excursions ..... 5(104):40
30,000 Duels ..... 5(104):40
Color Stereotelevision ..... 5(104):41
The Mystery of Lake Khaiyr 6(105):41
Pyotr Kapitsa Wins Niels Bohr Medal ..... 6(105):50
Kirghizian Preserve ..... 6(105):50
Scientific Barbarians ..... 6(105):50
Water's Fourth State ..... 6(105):51
He Hunted Mammoths ..... 7(106):12
Martian or Savage ..... 7(106):40
Polymers to Freshen Water 7(106):40
Water Under the Desert ..... 7(106):40
Avalanche, Stop! ..... 7(106):40
At Picasso's Request ..... 7(106):41
Freud and Esthetics ..... 7(106):50
New Low-Friction Plastic .... 8(107):14
Magma-Operated Power Station ..... 8(107):15
World Weather Service ..... 8(107):15
Arctic Volcanos ..... 8(107):15
Atomic Power Prospects ..... 8(107):15
Diffusion Welding in Vacuum ..... 8(107):15
Lilliputs of the World of Stars ..... 8(107):15
Quanta . . . Quanta ..... 8(107):26
Poetry or Equations ..... 8(107):28
Crimean Caves Explored ..... 9(108):14
Roast Mammoth ..... 9(108):15
Students See "Beethoven" .... 9(108):15
Suburban Monkey ..... 9(108):15
Do Soviet biologists accept the DNA theory of heredity? *Queries* ..... 9(108):42
Storm in a Basin ..... 10(109):18
Synthetic Caviar ..... 10(109):19
150-Million-Year-Old Tree .. 10(109):19
USSR Geological Map ..... 10(109):19
New Foods from the Ocean ..... 10(109):24
Adzhin-Tepe Treasures ..... 10(109):37
How Diamonds Are Formed ..... 10(109):43
Water Desalting: A Field for Cooperation ..... 10(109):57
Kozyrev: A Man with a Controversial Theory ..... 11(110):25
An Unexplored World ..... 11(110):27
Synthetic Vitamins ..... 11(110):40
Beta-2 ..... 11(110):40
Gas Instead of Wool ..... 11(110):40
Mineral Deposits Reflected in Sky ..... 11(110):41
Thermometer in a Hen's Egg ..... 12(111):28
Etruscans Speak Out ..... 12(111):29
Insects in the Snow ..... 12(111):29
Ancient Vessels Found ..... 12(111):29
Volcanic Reactor ..... 12(111):29
A Puzzle of the Fireballs .... 12(111):29
The Metagalaxy, Product of Two Elementary Particles ..... 12(111):56

SOVIET-AMERICAN RELATIONS

Tradition of Scientific Contacts ..... 1(100):46
A Trailer Caravan Comes to Moscow ..... 1(100):62
Women for Friendship ..... 2(101): 5
Soviet Medical Exhibit in the USA ..... 3(102):21
"The Visit Rejoiced Our Souls" ..... 3(102):56
Moscow Art Theater in New York ..... 3(102):57
The Last Wagon West ..... 3(102):58
The Ice Is Melting ..... 4(103): 8
He Talked to Lenin ..... 4(103): 9
Dialogue with an American Coach ..... 4(103):12
Soviet Schoolchildren on ABC-TV ..... 4(103):46
About New USA-USSR Exchange Agreement ..... 4(103):62
Russia Revisited ..... 5(104):52
Arms of Friendship ..... 5(104):54
Ambassador from Colorado . 6(105):47
The Times Call for More American-Soviet Trade .... 6(105):62
800,000 Visit Communications USA ..... 7(106): 1
Saga of Two Georges ..... 7(106):25
What American films are popular in the USSR? *Queries* ..... 7(106):47
Seventh Battle of the Titans 7(106):64
Abraham Lincoln ..... 8(107):52
"American" Commune in Russia ..... 8(107):54
Reflections on the Cleveland Orchestra's Soviet Tour .... 9(108): 1
What We Liked in the USA ..... 9(108):16
America Sees Cosmonauts "Leoning" ..... 9(108):27
Siberia Applauds Van Cliburn ..... 9(108):58
Kirill Kondrashin on Conducting ..... 10(109): 1
Soloists to Come with the Moscow Philharmonic ..... 10(109): 1
To Tour the U.S. ..... 10(109): 2
Water Desalting: A Field for Cooperation ..... 10(109):57
The Psychiatrist and the Soviet Social Order ..... 12(111):22
Two Evenings Out of Twenty-Nine ..... 12(111):40

SOVIET DEMOCRACY

Is there a national quota system for immigrants in the USSR? *Queries* ..... 1(100):12
Our Dynamic Century ..... 1(100):60
Learning to Live ..... 2(101): 6
What Do You Know About the Soviet Parliament? .... 2(101):36
Do Soviet citizens who disagree with Communist Party and government policy have any sort of representation in legislative bodies? *Queries* ..... 2(101):39
What is the penalty for a Soviet citizen who tries to leave the country illegally? *Queries* ..... 2(101):39
Are Soviet citizens who are religious permitted to work for the government? Are they permitted to work in Soviet embassies abroad? *Queries* ..... 2(101):39
Are priests of the Russian Orthodox Church paid by the state? *Queries* ..... 2(101):39
Public Control, *Our Trends* 3(102): 3

No Hebrew Bible Since 1917? 3(102): 4
Is the Average Man a Mediocrity? 3(102):16
Is it true that three big jails have been closed in Moscow? *Queries* 3(102):43
Are your trade unions wealthy? *Queries* 3(102):43
The Leader and Politics 3(102):60
Queries About the Soviet Legal System and Capital Punishment 4(103):20
Endless Tasks 4(103):26
Discrimination Against Jews? *Editors Notes* 4(103):61
Are religious believers permitted to work in government institutions? *Queries* 5(104):36
Is it true that you have only one party? *Queries* 5(104):36
Do religious sects or religion in general create problems for communist ideas or theories? *Queries* 5(104):36
Are communism and capitalism coming closer to each other in many respects? *Queries* 5(104):36
For Vacationing Millions 5(104):62
Lutheran Church in Latvia 7(106):14
News and Public Opinion 7(106):26
What difference is there between the Russian Federation and the Soviet Federation? *Queries* 7(106):47
Do you train your politicians and businessmen? *Queries* 7(106):47
At a Buddhist Monastery 8(107):30
Automation and the Worker 8(107):44
Religion and Atheism 8(107):56
School of Administration, *Our Trends* 9(108):22
Workers Fire "Boss" 9(108):25
Trade Union Dues and Benefits 9(108):26
Why does not the Soviet Government make some provision for an order of succession or transfer of political power among its leaders? Does the Soviet Government still adhere to the Stalin Constitution of 1936? *Queries* 9(108):42
What would happen to a Soviet citizen if he started speaking and writing procapitalist propaganda? *Queries* 9(108):42
What is the lawyer's situation in the USSR? What inducement does a lawyer paid by the state have to defend his client when his fee is the same whether he wins his case or loses it? *Queries* 9(108):42
Another Three Million 9(108):58
The Soviet of Nationalities 10(109):46
Can land be bought and sold? *Queries* 10(109):56
May one criticize members of the Council of Ministers? *Queries* 10(109):56
What is the function of the militia? *Queries* 10(109):56
Can a foreigner get a pension? *Queries* 10(109):56
The Law Has Its Way 10(109):60
The Revolution Hasn't Stopped, *Our Trends* 11(110): 6
Those Who Were Not Elected 11(110):28
Who owns the land? *Queries* 11(110):34
What function does the Procurator General have? *Queries* 11(110):34
Can a mother get her old job back after maternity leave? *Queries* 11(110):34
About Disabled Veterans 11(110):52
Do We Need Union Contracts 11(110):60
How is the inviolability of the home protected? *Queries* 12(111): 9
To whom does property jointly acquired in marriage belong? *Queries* 12(111): 9
Can one marry in church and baptize children in the USSR? *Queries* 12(111): 9
Are there full-time paid trade union officials? Organizers? *Queries* 12(111): 9
What taxes do people pay? *Queries* 12(111): 9
Can a person be evicted from his apartment? *Queries* 12(111): 9
How is the privacy of correspondence guaranteed? *Queries* 12(111): 9
Is it possible for people to move freely from one locality to another? *Queries* 12(111): 9
Can a person change his place of work? *Queries* 12(111): 9

SPACE

Troika in Orbit 1(100): 4
New Stage in Exploration of Space 1(100): 6
Interplanetary Dialogue 2(101):60
A 120-Day Space Experiment 2(101):60
Is it true that Boris Yegorov of the three-man crew of the *Voskhod* spaceship said that Hemingway is one of his favorite authors? *Queries* 3(102):43
New Observatory 4(103):10
Space Psychology 4(103):34
Countdown at Baikonur 5(104):44
Photo of the Cosmonauts 5(104):46
Three Stages of Space Conquest 5(104):48
Plasma Motors 5(104):48
Spaceman's Menu 5(104):49
About the *Voskhod* 5(104):49
The Crew of *Voskhod II* 6(105):56
A Walk in Space 6(105):56
Cosmonauts in Trouble: Who Helps? 6(105):57
Chart of Spacecraft and Satellites 6(105):58
Man's First Walk in Space 6(105):60
No Psychological Barriers 6(105):61
America Sees Cosmonauts "Leoning" 9(108):27
What Is Space Made Of? 9(108):28
The Latest on Space 9(108):28
A New Space Series 9(108):45
Communications with Extraterrestrial Civilizations 9(108):47
New Pictures of the Moon 10(109):19
Cosmonaut, Cosmonette, Cosmotot 10(109):48
When You Weigh a Ton 11(110):40

SPORTS AND RECREATION

Apex Hanover Stayed in Moscow 1(100):58
22 Days in the Sky 1(100):62
Grace and Speed on Ice 1(100):64
Discover Russia for Yourself! 3(102):52
Aragvi 3(102):54
Cosmic Stamps 4(103):10
Poet Commemorated 4(103):10
Collective Farm Jazz Combo 4(103):11
Dialogue with an American Coach 4(103):12
Home Museum 5(104):41
"Winter Bouquet" 5(104):41
Two Chess Crowns at 23 5(104):41
Russian Mushrooms 5(104):41
Teenage Olympic Mermaid 5(104):64
Gem of the Sea 6(105):50
A New Larissa 6(105):50
Kriss: The Man Behind the Mask 6(105):64
TTT Team 7(106):15
Woman Breaks Air Speed Record 7(106):41
The Most Beautiful 7(106):41
Seventh Battle of the Titans 7(106):64
Could Anything Be Tastier? 8(107):21
A Whole Country at the Stadium 8(107):22
Archery 8(107):22
Valeri Brumel at Home 9(108): 4
Crimean Caves Explored 9(108):14
Skin Divers Hunt Treasure 9(108):15
Scaling the High Peaks 9(108):43
A New Space Series 9(108):45
The Case of the Venomous Pretzel 9(108):46
Urals *Esmeralda* 10(109):18
Supersonic Girl 10(109):18
Parachuting Couple 10(109):19
Tennis' Growing Pains 10(109):22
Unusual Things Around Us 10(109):Cover IV
"So What's So Hard About Chess?" 11(110):16
The Magic in a Pencil 11(110):18
Artists Who Can't Write 11(110):19
Peaceful Rifles 11(110):41
Byelorussian Bookplates 11(110):41
Eight-Time Champions 11(110):41
It Wasn't in the Script 11(110):42
Ham Radio 11(110):62
USSR-USA Shadowboxing 11(110):64
On a Towline Behind a Plane 12(111):28
For Horsemanship Enthusiasts 12(111):29
Father Frost's Fantasies 12(111):54
Beauty in Motion 12(111):57

WOMEN

Women for Friendship 2(101): 5
How do Soviet women feel about cosmetics? *Queries* 3(102):43
Fashion and Folk Costumes 4(103):11
Two Chess Crowns at 23 5(104):41
That Baltic Look 7(106):21
Woman Breaks Air Speed Record 7(106):41
Supersonic Girl 10(109):18

YOUTH

The Brightest Flame 1(100):38
Ilya Ehrenburg on Our Young People Today 2(101): 1
Learning to Live 2(101): 6
Geology Excursions 5(104):40
A 15-Year-Old Artist 5(104):40
They Shall Always Be Twenty 5(104):56
Teenage Olympic Mermaid 5(104):64
Baltic Youth, *Our Trends* 7(106): 5
Schoolgirl Researchers 7(106):40
"Cribs" 7(106):40
Realists and Dreamers 7(106):63
Student City Planners 8(107):16
Working Teenagers 9(108):23
Our Universities 9(108):62
Teenage Inventors 10(109):63
Soviet Youth Answer Gallup Poll Questions 11(110): 7
Two Evenings Out of Twenty-Nine 12(111):40







UNIVERSITY OF MINNESOTA
wils,per 1965:no.1-12

Soviet life.

3 1951 001 364 267 O

MINITEX
Minnesota Library Access Center
9ZAR05D04S06TK1