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LETTER

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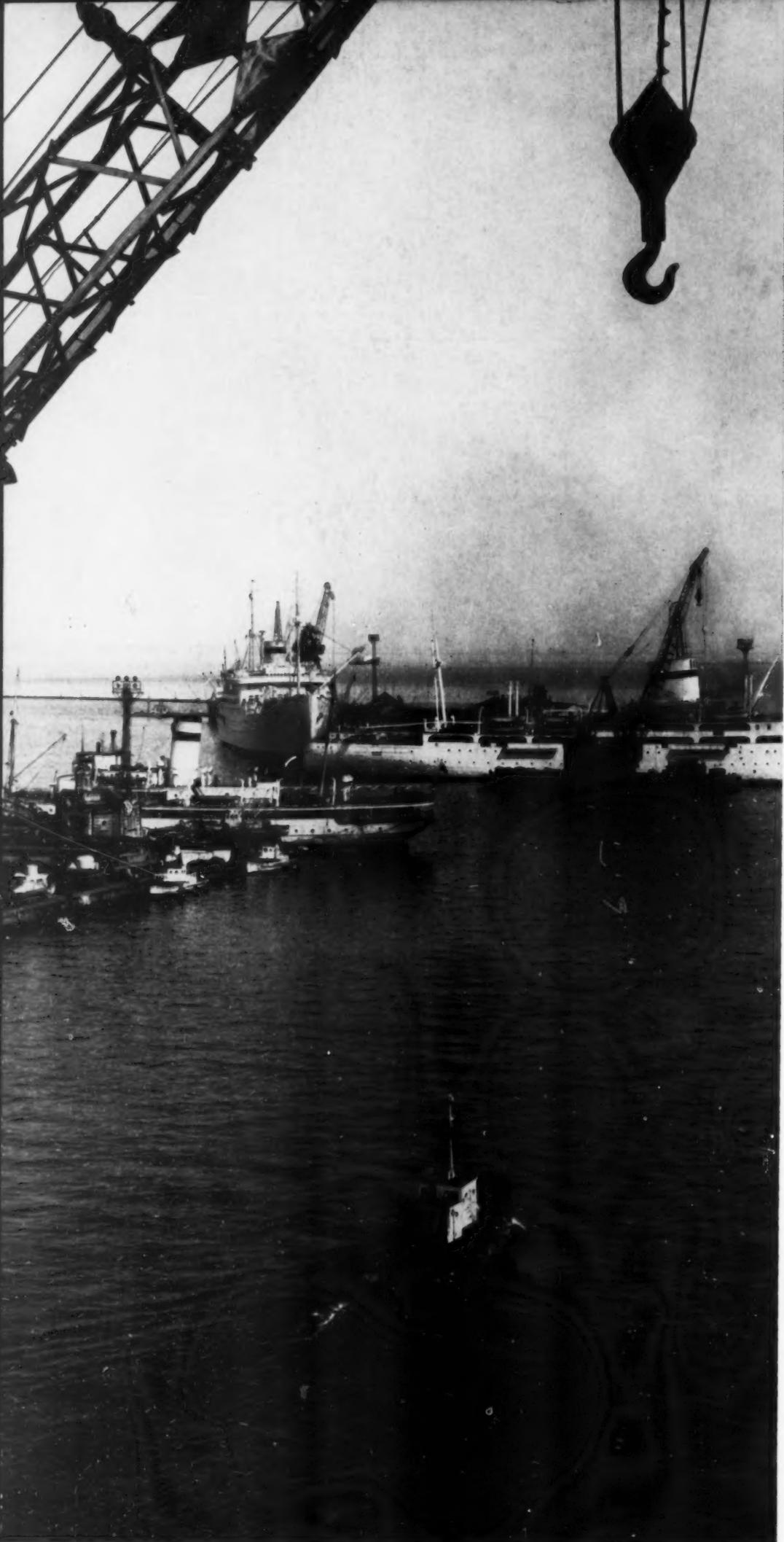
FROM N. KHRUSHCHEV

—See page 7



DESTINATION—SPACE

see page 34



MORE AND MORE SHIPS FROM ALL OVER THE WORLD DOCK AT ODESSA, SOUTHERN TRADE GATE TO THE SOVIET UNION.
—See article on page 30.

USSR

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January, 1960 No. 1 (40)

	Page
A Letter of Thanks from Nikita Khrushchev	1
Plans Become Reality Interviews with delegates of the 21st Party Congress	2
Cultural Exchange Program in Progress by Georgi Zhukov	6
Moscow-Washington Motion Picture Premières	12
Youth Exchanges by Vladimir Popov	14
Soviet Economy in the New Year by Mark Postolovsky	16
The Working Day and Communism by Stanislav Strumilin	20
State Farm on Virgin Land by Anatoli Berezansky	26
Trade With 70 Countries by Vladimir Alkhimov	30
Destination—Space by Alexander Bakulev	34
Pre-Sputnik History of Soviet Rocketry by Y. A. Pobedonostsev	34
Food for Future Astronauts by G. A. Arutyunov	36
Man in Outer Space pictured by Andrei Sokolov	38
Human Satellite Around the Sun by Gennadi Sibirtsev	39
Struggle Against Death by Vladimir Negovsky	42
Cooking Is Their Business by Georgi Pavlov	44
Moscow Broadcasts for Children by Sergei Bogomazov	48
One Hundredth Anniversary of Chekhov's Birth by Zinovi Paperni	52
Gooseberries a short story by Chekhov	54
Alexei Katkov and the 7-Year Plan by Adolf Antonov	56
Fashions for 1960 by Lyudmila Turchanovskaya	59
Everybody Has a Winter Hobby	62

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NIKITA KHRUSHCHEV GREETES THE PEOPLE GATHERED TO WELCOME HIM UPON HIS ARRIVAL IN SAN FRANCISCO.

A Letter of Thanks *from NIKITA KHRUSHCHEV*

THE USSR Council of Ministers and the Central Committee of our Party have received and are still receiving thousands of letters and telegrams from Soviet comrades and foreign citizens in connection with my recent trip to the United States. These are warm and friendly messages expressing pleasure at the improvement in American-Soviet relations, at the prospect which has opened for easing tension in the relations between states, at the thaw which has set in in the international climate. The letters express deep satisfaction with the Soviet Union's proposal for general and complete disarmament, the implementation of which would usher in a new era in the development of mankind, would pave the road to lasting and inviolable world peace.

I wish to thank warmly all the Soviet comrades, all foreign friends and citizens of the various countries who have sent me their good wishes, letters and telegrams.

Many friendly letters have come from American citizens—workers, farmers, intellectuals and businessmen. These letters welcome the exchange of visits between the Chairman of the USSR Council of Ministers and the President of the United States, express the wish that the relations between the Soviet Union and the United States may improve all the time and become friendlier, that the Soviet government may continue its efforts to end the "cold war" and the arms race. I wish to reply to my American correspondents that the Soviet government has always pursued and will continue to pursue the Leninist peaceable foreign policy. It is guided by the principle of noninterference of states in one another's affairs, seeks cooperation and friendship on a reciprocal basis with all countries, including the United States, has done and is doing everything for the consolidation of world peace.

Many letters have been received from citizens of the socialist countries. They are moving, exceptionally warm messages expressing pride in the achievements of the Soviet Union and all the socialist countries, pride in the socialist system which spurs the peoples of our countries on and accounts for their exceptional successes.

I am sincerely glad of the fact that in the great stream of well-wishing letters I received in connection with my visit to the United States, there

are letters from all countries of the world. As I read these letters, I become more and more convinced that the whole world attentively followed my trip to the United States and regarded it as an important step toward strengthening world peace.

And, of course, the largest number of letters have come from my dear compatriots, citizens of the Soviet Union. One cannot read without deep emotion and joy these heartfelt letters from Soviet people who write with such pride in our socialist homeland, in our Communist Party, in the socialist system which is so dear to all of us, in communism—toward which the Soviet people are confidently and resolutely advancing. Like the real masters that they are of their lives and of their socialist state, the Soviet people approve and hail the peaceable foreign policy of the Soviet government, express their joy over the achievements of our foreign policy.

The letters I have received are filled with deep concern for the strengthening of world peace and expressions of hope for a further easing of international tension. I am happy to say that the intentions of the Soviet government fully coincide with these noble wishes of the people of all countries. An atmosphere has now been created that makes it possible and necessary to prevent the "cold war" advocates from again aggravating the international climate. As regards the Soviet government and the Soviet people, they will do everything possible to improve relations between states, to rid mankind forever of the threat of a new war, so that the principles of peaceful coexistence may triumph.

With all my heart I again thank the Soviet comrades and our foreign friends, citizens of all countries who have sent their good wishes, for expressing warm sentiments and for approving the active peaceable policy of the Soviet government, as well as for the kind words addressed to me which I take to be addressed to our great Soviet people.

November 20, 1959

N. KHRUSHCHEV



AT THE 21st PARTY CONGRESS HELD ONE YEAR AGO.

PLANS

become **REALITY**

The delegates to the 21st Communist Party Congress report on the year's progress in carrying out the decisions on the seven-year plan

I WAS ONE of the delegates sent by the Communists of the city of Gorky to represent them at the 21st Party Congress. During a discussion period I told the Congress what the people in the shipyard where I work were doing to get started on the seven-year plan.

In the year since the Congress met our Sormovo shipbuilders have done even better in the way of exceeding schedules than they foresaw at the time.

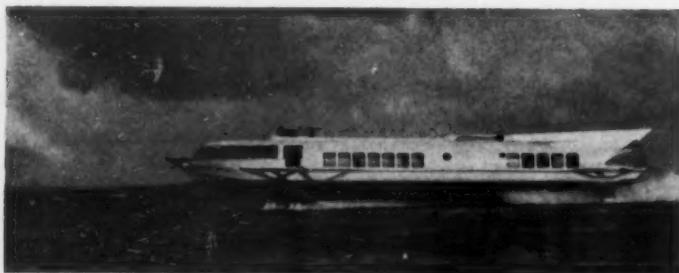
Chronologically our shipyard is old—it was founded more than a century ago, but it would seem to be growing younger in spirit every day. To judge by the first-class work, the up-to-date equipment, production methods and the quality of output, it is a very young shipyard.

The steel mill connected with our shipyard was one of the first plants in the Soviet Union to replace the traditional mold casting and rolling with the new method of continuous steel pouring. At the time the Congress met we had only one installation for continuous pouring, now we have two. Our ordinary lathes are being replaced by automatic machine tools and we've been installing conveyor lines. All these new techniques ease the work and raise productivity at the same time. The end result is more production and, hence, higher earnings with less expenditure of energy. More and more the machine carries the load.

At the time the 21st Congress met our Sormovo shipyard launched the biggest vessel it had ever built, the diesel-electric passenger ship *Lenin* of the river-lake type. Since then we have turned out vessels like it but of improved design.

In 1958 we started making high-speed screw propeller vessels with underwater wings. This is one of the latest things in ship design. Now we're working on a new high-speed river vessel—the *Meteor*—equipped with underwater wings. It will carry 150 passengers and do 45 miles

THE METEOR, A NEW HIGH-SPEED RIVER VESSEL, WILL DO 45 MILES AN HOUR.



WE'RE AHEAD OF SCHEDULE

Nikolai Anishchenkov

Steelmaker,
Krasnoye Sormovo Shipyard



an hour. Created by our designers, led by Roman Alexeyev, a hereditary Sormovo shipbuilder, it represents in shipbuilding what the TU-104, the world's first jet passenger air-liner, did in aviation—a pioneering achievement.

The appearance of our city, Gorky, has been steadily changing. New apartment buildings have been going up all over. Two years ago our government started a program aimed at ending the country's housing shortage in the next ten to twelve years. The citizens of Gorky decided to lick their housing problem in less time. They propose to do it by the time the seven-year plan is completed.

So far the prospect is good. The amount of housing built last year was well ahead of schedule and it looks as if the goal of 130,000 new apartments by 1965, enough to meet all Gorky's housing needs, is going to be met.

Our life is steadily becoming better and richer; this is the underlying factor of our uninterrupted progress and magnificent achievements. To carry out the seven-year plan, we need peace.

We are confidently advancing along the road of peace and friendship. Khrushchev's words of peace and friendship addressed to the American people during his visit to the United States expressed the cherished thoughts, feelings and aspirations of my comrades and friends, of every Soviet citizen. The Soviet people's thoughts and sentiments find their living embodiment in the devoted labor effort aimed at accomplishing the seven-year program of peaceful construction in the shortest possible time.



RYAZAN FARMERS SET THE COUNTRY'S PACE

Ivan Bobkov

Chairman, Executive Committee,
Ryazan Regional Soviet
of Working People's Deputies



RYAZAN COLLECTIVE FARMERS AT A KREMLIN RECEPTION.

A YEAR AGO at the 21st Party Congress our Ryazan farmers pledged a big spurt in their meat production totals. They have been gathering something of a nationwide reputation for the speed with which they are meeting the pledge. For the first nine months of last year they produced 1.4 tons of meat per hundred acres as compared with 0.4 tons for the corresponding period of 1958.

This means an increase in meat sales of many millions of pounds and a guarantee of even larger meat production totals to follow. The herds throughout the region are growing steadily. In the collective farms, for example, the number of cows has grown by more than 10 per cent during the period. In the state farms the increase is more than 17 per cent. The figure for hogs and poultry is even higher. This great increase comes from improvements in haymaking, better care of animals and greater use of corn for fodder.

Farmers in the Ryazan region are working for the country's good and for their own personal benefit as well. Higher yields mean higher incomes. In the past five years the income of collective farms in the region has grown 600 per cent with a corresponding rise in living standards. This is reflected in the 60,000 newly-built houses and in the hundreds of new clubs, libraries, schools and nurseries. In most villages, every second or third building is a new one.

The farmers in the region have also won the esteem of the country and been presented with medals and awards of honor. Collective farmers like Praskovia Kovrova and Xenia Petukhova have for the second

time earned the honorary title Heroine of Socialist Labor, the highest national award, and have had their sculptured portraits erected in their native villages.

Ryazan farmers have been acknowledged dairy experts for some years. Their milk yield per cow tripled between 1953 and 1957. Today Ryazan livestock farmers are out to set equally high meat-producing records. Their livestock breeders challenged the country to fulfill the seven-year livestock quota ahead of schedule. They themselves pledged to do it in two or three years instead of the scheduled seven.

When a group of Ryazan farm women called at the Kremlin a while ago, Nikita Khrushchev praised them for their excellent animal husbandry work. He said: "You have shown what inexhaustible resources and possibilities our farms have, what our people are capable of getting done. . . Your initiative is of tremendous importance, a big contribution toward building communism."

With Ryazan setting the pace by its record output of meat and other livestock products in the first year of the plan, all signs point to the country's meeting its target figures ahead of time. It means greater quantities and more varieties of food for every Soviet family.

It is entirely possible for us to accomplish this task. And what matters most is that the working people of the Soviet countryside fervently desire and are fully determined to reach their goal as soon as possible. That goal is to have the world's highest standard in per capita production.

A TREASURE HOUSE UNDER OUR FEET

Kanysh Satpayev

President, Kazakh Academy of Sciences

SOVIET SCIENTISTS will bring all their knowledge and their energy to this great plan for peaceful construction—this was what I said on behalf of our Kazakh scientists when I spoke as delegate to the 21st Party Congress.

The seven-year plan presented our researchers with far-reaching problems. During the first year of the plan Soviet science made great strides forward in such fundamental studies as the peaceful applications of atomic energy and outer space exploration. Their success was pointed up by the interplanetary laboratory that photographed the hidden side of the moon.

Although Soviet scientists reach for the stars, they still stand firmly on earth, particularly those in my field of study—geology. There is plenty to explore under our feet.

Until a comparatively short time ago eminent scientists thought there were no mineral resources other than salt in my republic, Kazakhstan. Now we find that it is a bottomless storehouse of natural resources. Geologists have found rich deposits of iron manganese, nickel, copper, zinc, bauxite, coal, oil, gas and a good deal of other wealth.



A metallurgy plant being built at Temi-Tau, in Kazakhstan.



A TREASURE HOUSE UNDER OUR FEET

Until very recently our republic's major and almost sole industry was livestock breeding. Now it is a big grain producer with more than 57 million acres of virgin land turned to the plow.

At present our republic is first in the Soviet Union for production of lead, zinc and copper and second in production of grain.

The gross output of industry is more than 40 times that of the pre-revolutionary period. By the time the seven-year plan is completed it will be 2.7 times what it is now. The nonferrous metals, power, machine-building, chemical, oil, coal, cement, food and light industries are scheduled for greater development, and a large-scale iron and steel industry is to be built.

Like scientists elsewhere in the country, Kazakh researchers feel that their major job is to help develop the country's productive capacities as speedily as possible. They therefore give first place to research that is closely related to heavy industry development, such as natural resource exploration. In this respect the past year has been especially productive.

Kazakh scientists have worked out the most economical and most productive sizes for mines and a system for mine mechanization which cuts labor and raises productivity 150 or 200 per cent. Boris Reznikov,

Aizik Tonkonogy and Ibragim Onayev of the Power and Steel Institute of our Academy of Sciences have built and tested a new furnace for smelting zinc whose productivity is 80 times that of the furnaces imported from abroad 30 years ago. All processes in this furnace are mechanized and automated.

New mineral deposits have been discovered. I helped to find huge deposits of copper and zinc in central Kazakhstan. In that same region unique deposits of sulphur were found as well as rich oil and gas-bearing strata.

A large canal to link the Irtysh with Karaganda has gone through the planning stage and is ready for construction. A study of the great subterranean lakes in the arid steppes has been completed and methods worked out for tapping the waters. This will make it possible to end Kazakhstan's ancient water shortage and to supply water in quantity to new industrial centers and to cities and villages.

Agrobiologists have evolved a new variety of drought-proof wheat for the virgin land tracts. The new physiological method of livestock care is helping to raise the milk yield. The pertinent institutes of our Academy of Sciences are studying the republic's health resort possibilities.

The republic's industry fulfilled the year's plan ahead of schedule. It increased the volume of output by 15 per cent as compared with last year. This is better than the country's average yearly increase of 11 or 12 per cent.

In general Kazakhstan is doing well. So are its scientists, who are probing into the treasure house under our feet.



MEETING THE PEOPLE'S NEEDS

Alexei Zolov

Vice-Chairman,
Council of Ministers,
Byelorussia

EACH ONE of the eight million people who live in Byelorussia has felt the impact of the seven-year plan on his own life this past year and has been conscious of the progress made. Each one of these people has his own needs and demands. The purpose of the plan is to meet and satisfy these needs.

We Byelorussians have been working to meet our quotas ahead of schedule and we have made considerable headway. The plan for 1959 scheduled an increase of 7.7 per cent over the 1958 level in industrial output. We did 13 percent.

In our republic new industrial enterprises are going up as they are everywhere else in the country. They include an oil refinery, an electric power station, a worsted mill, a potassium plant—it will be the largest in Europe. A comprehensive program of mechanization and automation

WHEN THE NAZIS RETREATED FROM MINSK, THEY LEFT THE BYELORUSSIAN CAPITAL IN RUINS. NOW IT IS VIRTUALLY A NEW CITY. THESE ARE REBUILT APARTMENT HOUSES.



is under way. Our industry for a long time to come will need as much trained labor as it can get.

Since the 21st Congress met a year ago the working day has been reduced at most enterprises. Wages, instead of being cut, have risen. In 1960 all industrial and office workers will be switched to a seven-hour work day and the changeover to a still shorter work day will begin. This is called for by the seven-year plan.

During the Second World War many of our Byelorussian cities and villages were completely razed by the Nazis. Now Minsk, Vitebsk, Mogilev, Orsha, Grodno, Gomel and all other cities have not only been rebuilt but modernized.

Housing, however, is still one of our most pressing problems. Our

MY SIBERIAN CITY GROWS

Tatyana Zimina

Ballerina, Novosibirsk Opera and Ballet Theater



SNOW FLAKES are twirling over Novosibirsk. The branches of the big maples and birch trees in the city's parks and squares are covered with snow. I look at my native Siberian city in its winter dress and am reminded of Moscow a year ago when I was so happy and proud to walk into the Grand Kremlin Palace as a delegate to the 21st Congress of the Communist Party.

That eventful congress brought many changes in the life of the country, the city and in my own life and that of my family. The change in the city can be seen everywhere you walk—in the many new apartment buildings, schools, kindergartens and hospitals. Novosibirsk has opened one more school of higher education, its thirteenth—the State University.

The new hydropower station on the Ob River is already working at full capacity. The various institutes and laboratories of the Siberian branch of the USSR Academy of Sciences are going up one after another.

Workers in many of the city's industrial plants have switched over to a seven-hour working day. They have more time for recreation and their wages are higher. So that we in the entertainment field have had to be on our toes.

An operetta theater was opened this season, the city's sixth theater. Many of the factories have organized amateur theater groups. Some of their productions are on a very high level indeed. *Romeo and Juliet* staged by amateur actors at the Clara Zetkin Workers' Club would do credit to any professional group. It has been enjoying a big success in Novosibirsk. My colleagues and I work with these amateur theaters.

As for my own work, this season I danced a new and very interesting part—the Sang Shengmu goddess in the Chinese folk ballet *Precious Lotus Lantern*. This lovely and poetic ballet that embodies the earthy wisdom of the people was staged for the first time in the Soviet Union

goal is to provide every family with a modern apartment. Last year we built more apartment houses than the plan called for. Our budget for 1960 provides funds for an even greater spurt in construction.

Our output of textiles, shoes, furniture and other consumer goods is on the rise. So is our output of farm products—grain, meat, milk, eggs, potatoes, flax. With the purchasing power of our citizens continually rising, we have a virtually unlimited market for expanding production of food and manufactured goods.

New schools and colleges, libraries, clubs, hospitals, vacation resorts and theaters are going up in every corner of our republic. All this construction, industry and farming has only one aim—to give our citizens an easier, more interesting and more satisfying life.

by the Novosibirsk Opera and Ballet Theater. The first performance was an unqualified success. Even the most demanding connoisseurs of ballet in Novosibirsk—and we have a good many—liked the performance. Together with other dancers I did a guest performance tour of Rumania where we were very well received.

The people of our city and those of Omsk are old friends—and rivals. We compete with them in producing machinery, building houses, planting trees and flowers in public squares and, of course, in the theater arts. And as part of our neighborly competition, our ballet troupe recently danced for Omsk audiences. They will be returning the favor.

I was particularly stirred by an event which was certainly the most important of the year. I am reminded of it by a book recently published. On its light blue cover is a photograph of the heads of government of the Soviet Union and the United States. The simple title reads *To Live in Peace and Friendship*.

These are wonderfully encouraging words. One cannot read this account of Khrushchev's visit with indifference nor remain unmoved by the hospitality and friendship which Americans showed the envoy of our country.

To live in peace! To live in friendship! That is what we all hope and work for. It was one of the first toasts offered at a house-warming party we gave to celebrate our new apartment last year. "Peace" and "friendship" were the first words my daughter Natasha learned in school. These are words near and dear to people everywhere in the world.

SWAN LAKE PERFORMED BY AMATEUR DANCERS IN STALINSK, SIBERIA.





By **GEORGI ZHUKOV**

*Chairman,
USSR State Committee
for Cultural Relations
with Foreign Countries*



U.S. Ambassador Llewellyn Thompson and Chairman of the USSR State Committee for Cultural Relations with Foreign Countries Georgi Zhukov after signing the exchange agreement for 1960-61.

CULTURAL EXCHANGE P



Portrait gallery opening the American National Exhibition held in Moscow last summer.

P EACEFUL COEXISTENCE of countries with different social systems is not a new concept in international relations. Since Nikita Khrushchev's visit to the United States, his meetings with American people and talks with Dwight Eisenhower the concept of peaceful coexistence has won new millions of supporters throughout the world.

As a result of this historic mission the global barometer has begun to swing over from "cloudy" and "storm" to "clearing". In this changing atmosphere international contacts of all kinds, including those in the cultural and scientific fields, are acquiring a new significance.

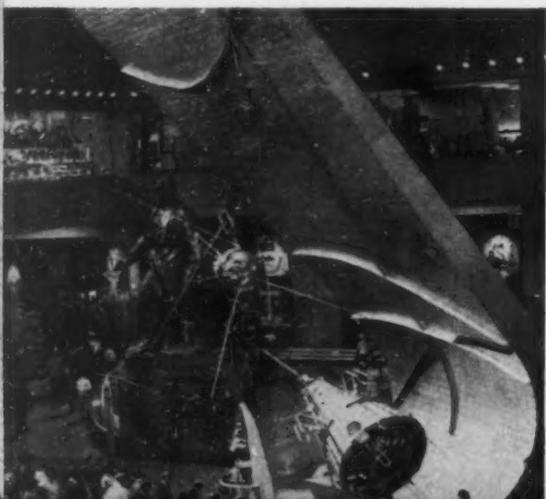
When Nikita Khrushchev met with Congressional leaders and members of the Senate Foreign Affairs Committee, he was asked by Senator Carl Hayden whether the Soviet

Union favored expanding the program of exchange activities. Khrushchev replied with an emphatic: "Yes, we are for the broadest possible cultural and scientific exchange between our two countries."

The Soviet Premier reaffirmed this statement in the speech he made at a luncheon given by New York's Mayor Robert Wagner. "We are for broad contacts," he said, "for the promotion of cultural and scientific relations, for an exchange of scientific literature, for cooperation with the United States and all other countries regardless of their social systems."

This is no recent declaration of policy; the Soviet Union has always advocated the widest extension of international contacts. It is a regrettable fact that in spite of our efforts, Soviet-American cultural exchanges were, to

The main hall of the USSR Exhibition of Science, Technology and Culture held in New York.



One of the many exchanges of scientists. A group of Soviet nuclear specialists see a mock-up of the reactor power plant for an atom-powered merchant vessel being fitted out in a New York shipyard.





Van Cliburn won the hearts of Soviet audiences. The young Texan pianist and Soviet conductor Kirill Kondrashin made several joint concert tours.



Dmitri Shostakovich with Leopold Stokowski who conducted the orchestra at a Moscow performance of the Soviet composer's Eleventh symphony.

E PROGRAM IN PROGRESS

all intents and purposes, non-existent for so many years. The success in launching the first sputnik helped to thaw frozen attitudes. It strengthened the voices of those who argued for a radical revision of exchange policy with regard to the Soviet Union.

On January 27, 1958, a Soviet-American agreement on exchanges in the fields of culture, technology and education was signed in Washington.

In a message to President Eisenhower, Premier Khrushchev characterized the agreement as a forward step in bringing the two countries closer together. "It is gratifying to see," he wrote, "that this agreement was so generally welcomed by the American and Soviet public, as well as by people in other countries. I think this favorable reaction is to be attributed first of all to the fact that people

looked on this agreement as concrete proof that Soviet-American relations could actually be improved and that there was, consequently, reason to hope for a general improvement in the present unstable and alarming international situation."

As we review the consistency with which the exchanges have been carried through on this second anniversary of the agreement, we can say that the hope was well-founded.

We Are Proud To Show the Best

The past two years' exchanges in the field of art have been unprecedented for both countries. Among the dance groups to tour the United States were the Moiseyev Folk Ensemble, the Beryozka dancers, the Ukrainian, Georgian, Armenian and Uzbek groups,

and, of course, the unforgettable Bolshoi Ballet. Among the musicians were such noted performers as Emil Gilels, Leonid Kogan and Vladimir Ashkinazi.

We are proud to say that our aim has always been to show the American public the best we have in art. We think the Americans must feel the same way.

However, we admit that there are people who disagree with this. The most convincing answer to those who sought to persuade the Americans not to "fall for" cultural ties with the Soviet Union because it would "put its best foot forward" was the enthusiastic ovations given Soviet artists and the queues that lined up for tickets for the guest performances.

During these past two years the Soviet people had many chances to meet performers from the United States. The world famous

American visitors at the Dubna Joint Institute for Nuclear Research. An addendum to the exchange agreement for 1960-61 provides for cooperation in the use of atomic energy for peaceful purposes.



An exchange delegation of American teachers sit in at an English class in a Moscow school.





An American agricultural delegation in the Soviet Union. The new agreement calls for exchange of people working in number of farm specialties.



Robert Dowling, U.S. National Theater and Academy head, plants lilac bushes brought from home in the Moscow Friendship House garden.



Dr. William DuBois, a Lenin Peace Prize laureate, was guest of Soviet Peace Committee.

Cultural Exchange Program in Progress

conductor Leopold Stokowski and the young pianist Van Cliburn, who at the time he won the Tchaikovsky Contest in Moscow was virtually unknown in the music world, were both received with warmth and appreciation by Soviet audiences. The New York Philharmonic and the Philadelphia Orchestra scored notable successes, as did Ed Sullivan's variety show and the "Holiday on Ice" troupe.

Soviet audiences are as hospitable as they are demanding, and America's artists, to judge by the reception, met the demands admirably. These were unforgettable experiences for audiences and performers alike.

Besides performing arts there were also exchanges in other cultural fields as provided for by the agreement. A group of American composers, for example, visited the Soviet Union and a return visit of Soviet composers headed by Dmitri Shostakovich was made in October and November of 1959.

The first showings of an American film in the Soviet Union and a Soviet film in the United States were held last November. Soviet movie-goers will see nine more American films and Americans, six more Soviet films. These are the first selections made by the two sides, and we hope that this good beginning will continue on a regular basis.

A particularly significant landmark in the development of contacts were the exchange exhibitions—the Soviet Exhibition of Science, Technology and Culture in New York and the American National Exhibition in Moscow.

Contacts in science, technology, public health and education have taken on very

A delegation of U.S. governors visited the Soviet Union in 1959. They are shown with American exchange students at Moscow University.



A delegation of U.S. university presidents with students of the Kazakh State University. The new agreement broadens this area of exchange.





Americans visiting the Soviet Union come from all walks of life. This is Governor Frank Clement of Tennessee in a Moscow schoolroom.



The National Council of American Women and its counterpart in the Soviet Union exchanged delegations. The American visitors at a maternity clinic.

considerable scope. Dozens of delegations of specialists in diverse fields have exchanged visits. In the fall of 1959 there was a first and noteworthy visit to the United States by a group of Soviet economists headed by Anushavan Arzumanyan, Corresponding Member of the USSR Academy of Sciences.

An exchange of particular import was one of American and Soviet specialists in the peaceful uses of atomic energy. We consider this the first step toward systematic cooperation of scientists not only on behalf of the two countries directly concerned but of world science.

In addition to exchanges of specialists in higher education, there were 22 American undergraduate and graduate students in attendance at Soviet universities in 1958, and 17 Soviet students in American colleges. In 1959 the number was increased to 27 for each country.

Sport exchanges—in track and field, weight lifting, ice hockey and basketball—have attracted the keen interest of fans in both countries. These athletic meets between the countries are becoming traditional.

In addition to the exchanges provided for in the formal agreement, scores of Soviet delegations and groups of scientists attended various national and international conferences held in the United States and American scientists attended congresses held in the Soviet Union. The International Astronomical Congress in Moscow, for example, was attended by 170 Americans and 67 were present at the General Assembly of the Special Committee of the International Geophysical Year, also held in Moscow.

It is now clear beyond question that scientific and technical exchanges are equally beneficial to both countries. Today one can only smile at the "argument" of the opponents of such exchanges with the Soviet Union, who only a few years ago asserted that the United States could not learn anything useful from Soviet scientists and engineers.

Tourist exchange has been on the upswing these past two years. Suffice it to say that only in the first nine months of 1959 there were 10,000 Americans among foreign tourists visiting the Soviet Union. The number of Soviet tourists traveling to the United States has also grown but on a somewhat smaller scale as compared with the hundreds of thousands of Soviet tourists who visit other countries.

Responsible for the slower growth in the number of Soviet tourists crossing the Atlantic is the fact that the United States has not yet reciprocated in setting up preferential rates of exchange for foreign tourists. Were Soviet tourists to enjoy the same preferential rates of exchange in the United States as Americans do in the Soviet Union, there is no doubt at all that larger numbers of Soviet citizens would be touring American cities.

The New Agreement

On November 21, 1959, a new exchange agreement was signed in Moscow for the years 1960 and 1961, providing for a more extensive program than its predecessor. The people on both sides of the Atlantic are becoming accustomed to the fact that Soviet-American contacts are broadening, and they endorse the new agreement which envisages further expansion of exchanges in the most diverse fields of national endeavor: industry and transportation, building and trade, agriculture and public health, education and sports, science and the arts.

The new agreement provides for cooperation in exchanging movies, radio and TV programs, performing arts and publications. Both countries have agreed to promote trips to be made by representatives of public organizations and groups, to exchange athletes and to develop tourist exchange so that travelers will really be able to get to know about the life, work and culture of the people whose country they are visiting.



Healing techniques exchanged. An American surgeon records Soviet operating procedure.

USA-USSR meet. The agreement provides for home and away contests in many sports.





American radio-electronics specialists look over the lab equipment at Moscow University.

Cultural Exchange Program in Progress



Soviet space scientists shown here stressed cooperative work in cosmic exploration in the papers they read at the 14th annual meeting of the American Rocket Society held in Washington last November.



Erskine Caldwell meets a few of his Soviet readers at one of the big Moscow libraries.

The new agreement emphasizes scientific exchanges to be carried on in accordance with the agreement between the USSR Academy of Sciences and the National Academy of Sciences of the United States. It provides for cooperation in work on the peaceful uses of atomic energy. It is significant that cooperation in the peaceful uses of atomic energy is included as a special addendum to the 1960-61 exchange agreement. It provides for looking into the desirability of the two countries' collaborating on projects, for exchanging delegations and information to acquaint scientists with the activities of corresponding centers in each country, for exploring the possibility of making scientific instruments available on a reciprocal basis.

Provision is made in the general agreement for the exchange of specialists in the humani-

ties—history, economics, philosophy, literary studies, linguistics. To cite only one example, teachers of English and Russian are to be exchanged. Specialists in medicine and public health will also be exchanged. Cooperation of research establishments in the study of cancer, cardiovascular diseases and poliomyelitis will be broadened considerably.

There will be more contacts in the field of education to cover technical training, methods of training skilled workers, special education in the arts, the work of libraries and educational research. More undergraduate and graduate students as well as young instructors and researchers will be exchanged: 35 from each country this academic year and 50 next year. Moscow University and Columbia, Leningrad and Harvard, Kiev and Yale, Tashkent and Indiana will exchange lecturers.



American radio ham William Jackson meets up with a Moscow radio ham Nikolai Kazansky.



American sculptor John Roden (left) and painter William Smith (center) visit at the home of noted Soviet artist Vitali Goryayev. The new agreement provides for exchange visits for art study and lecturing.



The Moiseyev folk dancers made an unforgettable impression on American audiences. So did the Bolshoi Ballet on its memorable tour. Soviet guest musicians included Emil Gilels and Leonid Kogan.

Cultural exchanges will include tours by individual artists, theatrical and ballet companies, choirs and orchestras. The United States will be visited by the USSR State Symphony Orchestra in January, and later by the Moscow Art Theater, the Georgian Folk Dance Ensemble and the Komitas Quartet of Armenia. The sale and purchase of films for broad distribution on mutually acceptable principles of equality, the exchange of documentary films and the organization of joint productions are all part of the new agreement.

The exchange of national exhibitions last summer between the Soviet Union and the United States showed it was a good method for acquainting the people of each country with the life of the other. The new agreement provides for discussions to determine the possibility of continuing this kind of exchange on a regular basis. Definitely mentioned is the exchange of exhibitions on medicine and medical services, as well as Soviet exhibitions in the United States on children's books and illustrations and children's artistic and technical work, and American exhibitions in the Soviet Union on plastics and transport.

No Trojan Horses

The Soviet Union is gratified at the progress that has been made in broadening the areas of exchange. They serve as invaluable means toward better understanding and cooperation between our nations.

We do not feel that the formal exchange agreements we conclude with other countries need become the Procrustean bed on which all contacts must be stretched or cut to size; we feel that all contacts need not necessarily be carried on through diplomatic channels alone. We should be pleased if these agreements serve as a stepping-off point for less formal contacts of the widest possible kind both for groups and individuals.

We have been and are very much in favor of the broadest kind of exchanges. But we

are firmly opposed to any use of these exchanges for attacks on the political system of the other side or for spreading unacceptable ideological concepts. Let us concentrate our attention on those areas—and they are vast—where we can build agreement and cooperation rather than on those which serve merely to accentuate and dangerously sharpen our differences.

The developing cultural and scientific ties between the United States and the Soviet Union mark a new period in our relationship. Both our peoples stand to gain from exchanges honestly and sincerely carried through by joint efforts.

These exchanges must not be permitted to become a Trojan horse. Nor can anyone agree with those who under the guise of cultural exchanges seek to impose on the other side things that have nothing in common with culture and which at times are totally at odds not only with the high standards of socialist society but with the ethical concepts of any normal individual as well.

Speaking in Los Angeles, Khrushchev put the question bluntly. "Let us not hide our identities. You represent the capitalist world and we, the socialist world. That being so, not all of our literature suits you, just as not all of your literature suits us. Let us not beat about the bush.

"We are for cultural exchanges, provided they serve to improve our relations, not to make them worse . . . The rule we stick to is this: You offer us your 'merchandise,' we choose and buy what we need. We in turn offer you what we have, and you buy what you like. If you don't like it, you don't have to buy it."

That is the position of the Soviet government on exchanges between our countries. It offers every opportunity for expanding cultural relations on a healthy basis, a basis not poisoned by attempts to use exchanges for ends that have nothing in common with the friendly cooperation of nations .



Lawrence Derthick, U.S. Commissioner of Education (left), hears a Soviet youngster recite.



U.S. Supreme Court Justice Warren touring a housing development in southwest Moscow.



THE AMERICAN FILM *MARTY* SHOWN AT UDARNIK, ONE OF THE LARGEST CINEMA THEATERS IN MOSCOW. TEN AMERICAN AND SEVEN SOVIET FILMS WILL BE EXCHANGED.



MOSCOW-WASHINGTON M

TWO PREMIERES of much more than customary import were held last November 10 in motion picture theaters half a world apart. Two Washington theaters showed the Soviet prize-winning film *The Cranes are Flying*, and the huge Udarnik Theater in Moscow showed the American film *Marty*, a 1955 Academy Award winner. The dual premières inaugurated the Soviet-American film exchange provided for in the general exchange agreement signed in January 1958.

Visiting Moscow for the occasion was a Hollywood delegation that included Arnold Picker, vice president of United Artists; Delbert Mann, director of *Marty*; Harold Hecht, its co-producer; and film stars Gary Cooper and Edward G. Robinson. They were welcomed at the Udarnik première by Minister of Culture Nikolai Mikhailov.

The theater was packed with guests from all over Moscow and a good sprinkling of eminent movie people—directors, actors and script writers. Among those who addressed the audience was Mr. Llewellyn E. Thompson, American Ambassador to the Soviet Union.

Greeting the American guests on behalf of the Soviet motion picture industry at a gathering the next day, director Sergei Yutkevich expressed the hope that the visit would be the first of many and that it prefaced a continued exchange of films, ideas and people. He noted that as member of the jury of the International Film Festival in Cannes, he had voted to award the Grand Prix to *Marty*.

"Later," he added, "that eminent American motion picture figure Charles Vidor was a member of a jury that awarded an analogous prize to the Soviet film *The Cranes are Flying*. Here was unquestioned testimony to the fact that we can come close on artistic matters."

Film star Edward G. Robinson expressed the thanks of his delegation for the very cordial reception. He spoke of the values that derive from an exchange of films and the excellent prospects for friendship following on Chairman Khrushchev's talks with President Eisenhower.

SECRETARY OF STATE HERTER WITH SOVIET STARS WHO CAME FOR THE OPENING.



AMERICAN PREMIERE THE CRANES ARE FLYING



THE PRIZE WINNING SOVIET FILM WAS SCHEDULED TO PREMIER AT ONE THEATER BUT REQUESTS TO ATTEND WERE SO NUMEROUS THAT DUAL SHOWINGS WERE HELD.

MOTION PICTURE PREMIERES

The reviews of *Marty* by the Moscow press were uniformly favorable and commented on the audience applause. *Sovietskaya Kultura* wrote: "A brilliant artistic presentation of human psychology. The film has a wonderful cast. The star is unquestionably Ernest Borgnine."

The *Literaturnaya Gazeta* critic said he was very glad to get acquainted with the very human characters. "I wish the butcher and the Brooklyn teacher the best of luck."

Izvestia commented that *Marty* treats with understanding and sympathy the life of the plain man. Although the authors did not draw the social conclusions—they confined themselves to personal and family relations—the film nevertheless is striking for its portrayal of kindness and humanity.

The Cranes are Flying opened to distinguished Washington audiences that included Secretary of State Christian Herter. Originally the premiere was scheduled for only one theater, but official requests for attendance were so numerous that dual showings were held simultaneously in two theaters.

Host for the opening was Eric Johnston, president of the Motion Picture Association of America. In a brief address he said: "It is more than just one Soviet film which we will see here, and one American film which has been shown in Moscow this very night. It could lead to something more, a new sort of ambassadorship between our two countries, an ambassadorship through which the image of men in one country can be transmitted to the eyes of men in another."

Four prominent Soviet film stars came to Washington for the film inaugural. Heading the delegation was Nikolai Cherkasov, star of many Soviet motion pictures including the recent wide screen color film *Don Quixote*. Cherkasov holds the honorary title of People's Artist of the USSR, the highest national award an actor can receive. He also serves as an elected deputy to the USSR Supreme Soviet.

The other members of the delegation were Elena Bistritskaya, star of *Quiet Flows the Don*; Sergei Bondarchuk who stars in the film *Othello*; and Vasili Merkuriev who has one of the leading roles in *The Cranes are Flying*.

After its run in Washington *The Cranes are Flying* will be shown in theaters throughout the United States. It will be followed by six other films chosen by American distributors for release on U.S. screens. The films are *Swan Lake*, *Othello*, *Circus Artists*, *The Idiot*, *Don Quixote*, and *Quiet Flows the Don*.

Marty is one of ten films purchased by the Soviet Union from American motion picture companies. The others are: *The Seventh Voyage of Sinbad*, *Man of a Thousand Faces*, *Oklahoma*, *Lili*, *The Great Caruso*, *Rhapsody*, *Roman Holiday*, *Old Man and the Sea*, and *Beneath the Twelve-Mile Reef*.

MINISTER OF CULTURE MIKHAILOV OFFICIALLY OPENS THE MARTY PREMIERE.





Galina Betekhtina helped the American exchange students in Moscow improve their Russian. Each graduate chose his own research project.



William Benjamin visited the schools in Moscow to get material for his dissertation on the Soviet system of training specialists in education.



YOUTH EXCHANGES

I REMEMBER when an American youth delegation came to Moscow early in 1958 at the invitation of our Committee of Youth Organizations. It was a much talked of event. We study American history and literature in our schools and colleges, read American books and listen to American artists who perform in our country. But no one has ever invented a replacement for shaking hands and friendly talk.

Soviet-American youth exchange was one of the many admirable issues of the general exchange agreement between our countries concluded in January 1958. Between that date and the second exchange agreement signed in November of 1959 exchanges of young people have occupied a conspicuous place in the program.

In May 1958 a Soviet youth delegation went to New York to discuss the details of exchange. This was the first Soviet youth group to visit the United States since the war, one I had the good fortune to lead. Our American friends called us the "pilot group"—an appropriately descriptive name—and gave us a most heartwarming welcome.

Once started, contacts moved quickly—as though to testify to the fact that young people in both countries had been waiting impatiently for a long time to get to know each other better.

During the summer of 1958 a twenty-member delegation of Soviet students visited the United States at the invitation of the U.S. Student Travel Council. That same summer a large group of American students visited the Soviet Union. They toured Moscow, Leningrad, Stalingrad, Tashkent and Rostov; did some good mountain climbing near Alma-Ata in Central Asia; saw the ancient monuments of Samarkand and spent part of the summer with Soviet students at a youth camp near Kiev.

At the invitation of the Young Quakers' Committee of North America, two Soviet youth representatives participated in a seminar on "Cooperation in a World of Differences" and three others toured the United States. Young Americans took part in an international symposium in Moscow on the "Peaceful Uses of Atomic Energy" and a conference in Leningrad of architectural students.

In 1959 there were many more reciprocal visits. About 300 young Americans toured the Soviet Union last summer at the invitation of our Committee, including groups formed by the U.S. Student Travel Council and tourist groups of various colleges. Dozens of American delegates to the Vienna World Youth Festival visited the Soviet Union

Professor Alexander Sokolov of Moscow University meets with Willis Conick and James O'Bailey who worked on 19th century Russian poetry.



Alfred Riber and his wife Edith, shown in a dormitory room at Moscow University, are getting ready for their seminar at the History Faculty.





American students were given every opportunity to observe, study and use all available facilities. Here is a group at a collective farm nursery.



New Englander Tom Riha joins a group of Soviet friends for a song fest. All agreed that the student exchange program is a good idea.

By Vladimir Popov

Vice Chairman, Committee of USSR Youth Organizations

through the services of our Committee's Bureau of International Youth Tourism. A group of YWCA and YMCA students spent 20 days as guests of Ukrainian students at the Sosnovy summer camp of the Kiev Polytechnical Institute.

The consensus of opinion was that the youth exchanges between our countries "were wonderful"—that was the most moderate word used in meetings to which the young people reported when they got home, or when they wrote about their impressions in magazines and newspapers.

As provided for in the general exchange agreement between our countries, 16 young American university graduates spent nearly nine months of the 1958-59 academic year at Moscow University and six others studied at the University of Leningrad. They did the equivalent of a year of Soviet graduate study. A similar group of Soviet students spent a year in American universities and colleges.

This first exchange is now being followed by new groups of students in the current academic year. The new agreement signed last November provides for more new student exchanges in the years ahead.

The pictures on these pages show some of the American students, now back home, who studied in the Soviet Union last year. They had the same wide-open opportunity for research work as do Soviet students, including laboratory and library facilities, and the chance to work with eminent men in their fields of study. They all received stipends just as Soviet students do.

Each of them worked in the specialty he chose. James O'Bailey of Indiana University, for example, did work on nineteenth century Russian poetry. Jerome Azrael studied Soviet industrialization. Robert Taafe of Chicago did research in Soviet economics. His study of economic regional divisions in the Soviet Union was prepared for publication by a Soviet publishing house.

The American students lived in the same dormitories as their Soviet classmates. They studied, worked and played together.

Like all other foreign students in the Soviet Union, the Americans had every chance to see the everyday life of the country. They visited industrial regions, farms, scientific centers. For their vacations they went to summer resorts in the Caucasus and Crimea on the Black Sea, as Soviet people do.

Said Willis Conick of Washington, summing up an unforgettable study year: "Marvelous impressions and many Soviet friends. I hope I get the chance to come again and to continue with my studies."



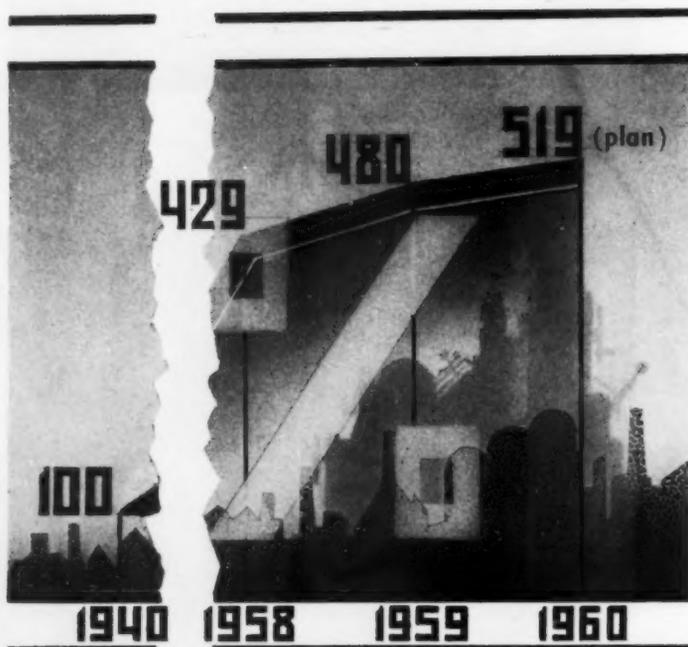
American and Soviet students lived, worked and played together, and the basketball courts were the scene of several exciting encounters.

Harold Swayze's bicycle was never far away so that after a day of concentrated study he could explore the terrain around Lenin Hills.



SOVIET ECONOMY IN THE N

By Mark Postolovsky



Rate of growth of Soviet industry (in per cent compared with 1940). Heavy industry development in 1960 assures progress of the whole economy.



Growth in the overall volume of retail trade (in billions of rubles). The volume of retail trade turnover has almost tripled in the past eight years.

AS the new year begins, the Soviet people look back with satisfaction on the old. It was a good year, a year of exciting achievements. The plan for industrial production was substantially exceeded in all the fifteen republics of the Soviet Union. In basic industries output surpassed the goals set for the year, and this was true of consumer goods, too. Farm productivity increased considerably, especially in respect to milk and meat. Notwithstanding last year's drought in certain regions of the country, the harvest will amply provide for the country's requirements. Last year also brought increased incomes for the population, the development of public service facilities and a higher rate of consumption.

And so the people are starting to work on the second year of the Seven-Year Plan with increased confidence. After widespread discussion and adjustment the national economic plan and the state budget for 1960 were approved by the USSR Supreme Soviet and became law. They tell of the even greater and more intensive progress mapped out for all branches of the Soviet economy.

No Fading in the Tempo of Development

The characteristic feature of this progress is the tempo of production, which will be greater than was initially envisioned. To take just one example: steel output in 1960 will be three million metric tons higher. The theory of fading in the tempo of development of the industrially mature countries receives no confirmation on Soviet soil. The dynamic development of the planned socialist economy and the high rate and continuity of advance inherent in it reveal ever new additional reserves for development.

While the state plan for 1958 stipulated a 7.6 per cent increase in industrial produce, it actually amounted to 10 per cent. The 1959 plan provided for a 7.7 per cent increase and, according to preliminary data, it has come to 12 per cent. The goal for industrial output in 1960 is an increase of 8.1 per cent. But taking past experiences into consideration and the potential of Soviet economy, it is safe to assume that this plan will also be topped.

The average annual increase in gross output of agriculture in the past five years was 8.6 per cent. This is unprecedented in the history of socialist agriculture. The over-all grain harvest in 1960 is expected to approximate 152.5 million metric tons. Meat production is to rise to 10.6 million tons (dead weight), milk to 72 million tons—345 quarts for every individual.

Going by calculations of Soviet economists, in the first two years of the Seven-Year Plan (1959-60) the target figures for industrial output will be exceeded by roughly 25 billion dollars. Hence, the first two years of the Seven-Year Plan will be a good springboard for a new leap. In the final analysis it will mean that the Seven-Year Plan will be completed sooner and consequently the fundamental economic task of the Soviet Union—to overtake and outstrip the more developed countries in per capita production—will be accomplished sooner than was anticipated, that is before 1970.

Intensive Technical Progress

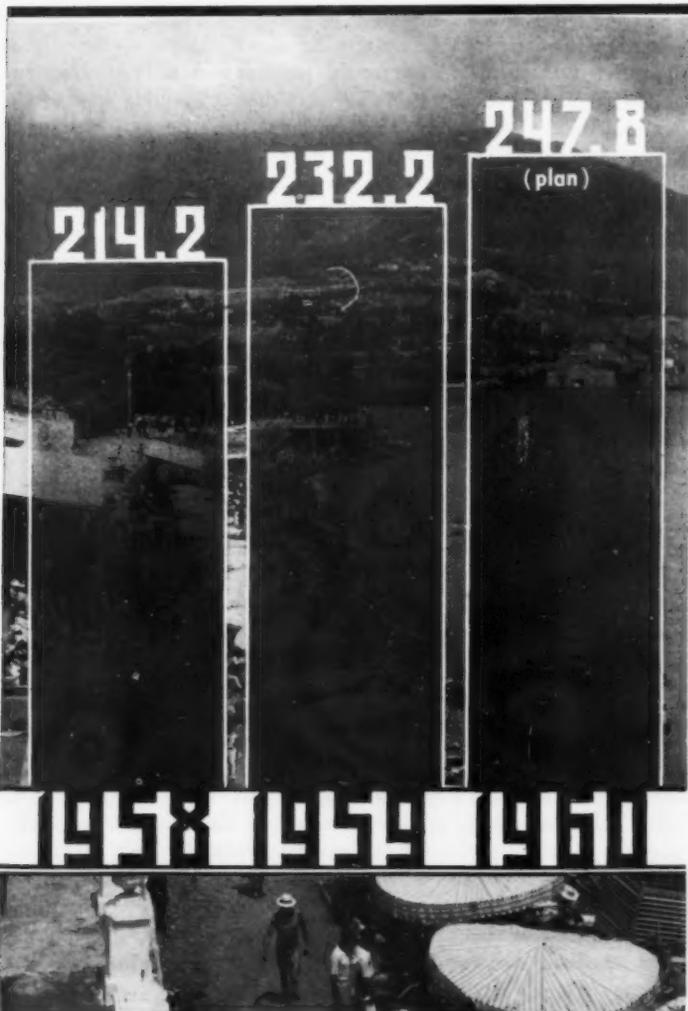
The distinguishing feature of the economic program for 1960 is the intensive development of production in the spheres which ensure the technical progress of the national economy as a whole. Steel production, for example, will go up to 65 million metric tons and exceed the 1959 level by 5 million tons. Extraction of iron ore will exceed 105 million tons. Oil output will increase by 15 million tons and total 144 million tons, gas production will exceed 53 billion cubic meters.

NEW YEAR

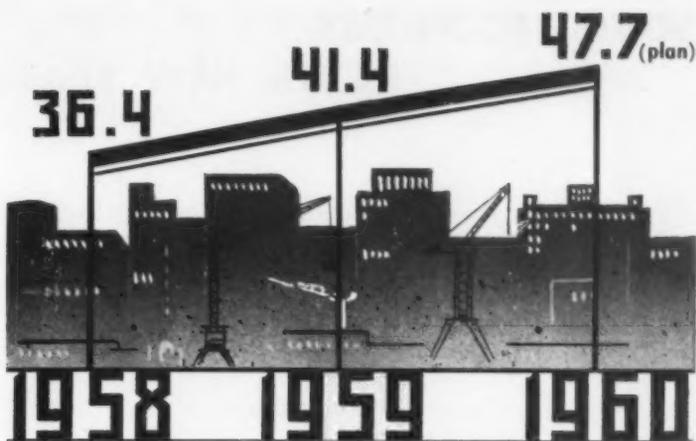
Coal output will rise insignificantly and chiefly at the expense of coking coal. As a matter of fact, coal is steadily being replaced by oil and gas. This will save the country a billion rubles in 1960.

Electric power is continuing to develop rapidly. Generation of electricity will soar to 291 billion kilowatt-hours, compared with 261 billion in 1959.

Chemistry will develop at an exceptionally high rate and will play an increasingly greater part in the technical progress of the whole of the national economy and in providing greater opportunities for the production of consumer goods. A powerful industry for manufacturing plastics, synthetic fibers and other synthetic materials is being developed. In 1960 production of plastics will go up by 20 per cent and chemical



The growth in budgetary allocations (in billions of rubles) for education, public health, pensions, social security and other social-cultural services.



Budget increases for urban housing (in billions of rubles). In the last three years alone more than five and a half million apartments were built.

fibers by 17 per cent. One new or reconstructed chemical enterprise will be put into operation every ten days throughout the Seven-Year Plan at a cost of 40 million rubles a day.

Mechanical engineering, the foundation of technical progress in the national economy, will play a big role. Output in the machine-building and metal-working industries will increase by 12 per cent during the year. Production of machinery, equipment, instruments and automation devices will grow at an even higher rate. In 1960 the machine-building industry will also turn out a large quantity of equipment for its own technical reorganization—65,000 new machine tools and some 7,000 forging presses for engineering plants. That is almost half the annual output of Soviet machine building.

Big shipments of equipment will go to other branches of industry and agriculture, where manual labor is being replaced by machinery at a rapid pace. The state budget has assigned 80 billion rubles—nearly 13 per cent more than last year—for re-equipment of the Soviet economy.

The Largest Budget in the Country's History

The financial plan for 1960 has been worked out to provide the necessary sums for the fulfillment of the economic plan. In all the Soviet state's history the budget has never been so large: 773 billion rubles' revenue and 746 billion rubles' expenditure. The budget reflects the scope of economic and cultural construction in the country and its two leading and closely connected lines: peaceful construction and the satisfaction of the people's requirements.

The bulk of the budget revenue, or more than 90 per cent, is composed of the accumulation of the publicly owned enterprises and organizations. Taxation of the population accounts for a mere fourteenth part. When Nikita Khrushchev visited the United States last year, he told his TV audience that there would be no personal taxes in the Soviet Union before long. At present concrete proposals on the matter are being worked out and will soon be submitted for discussion.

Meanwhile, the policy of reducing taxes continues. In the past few years the revenue from taxation of the population has decreased by 12 billion rubles a year as a result of the reduction and elimination of some taxes. In the 1960 budget the share of the revenue derived from taxation of the population dropped from last year's 7.8 per cent to 7.4 per cent, although the number of employed persons has considerably increased.

Military expenditure is another item in the budget which has been reduced each year. The Soviet Union has cut its armed forces and defense expenditure very considerably in the past few years, with the result that the share of all these expenditures in the 1960 budget constitutes 12.9 per cent as against 19.9 per cent in 1955.

The lion's share—575 billion rubles, or more than two-thirds of the budget—is being spent on economic development and on meeting the social and cultural needs of the population. Of this sum more than 328 billion rubles have been allocated for the national economy. If to this we

SOVIET ECONOMY IN THE NEW YEAR

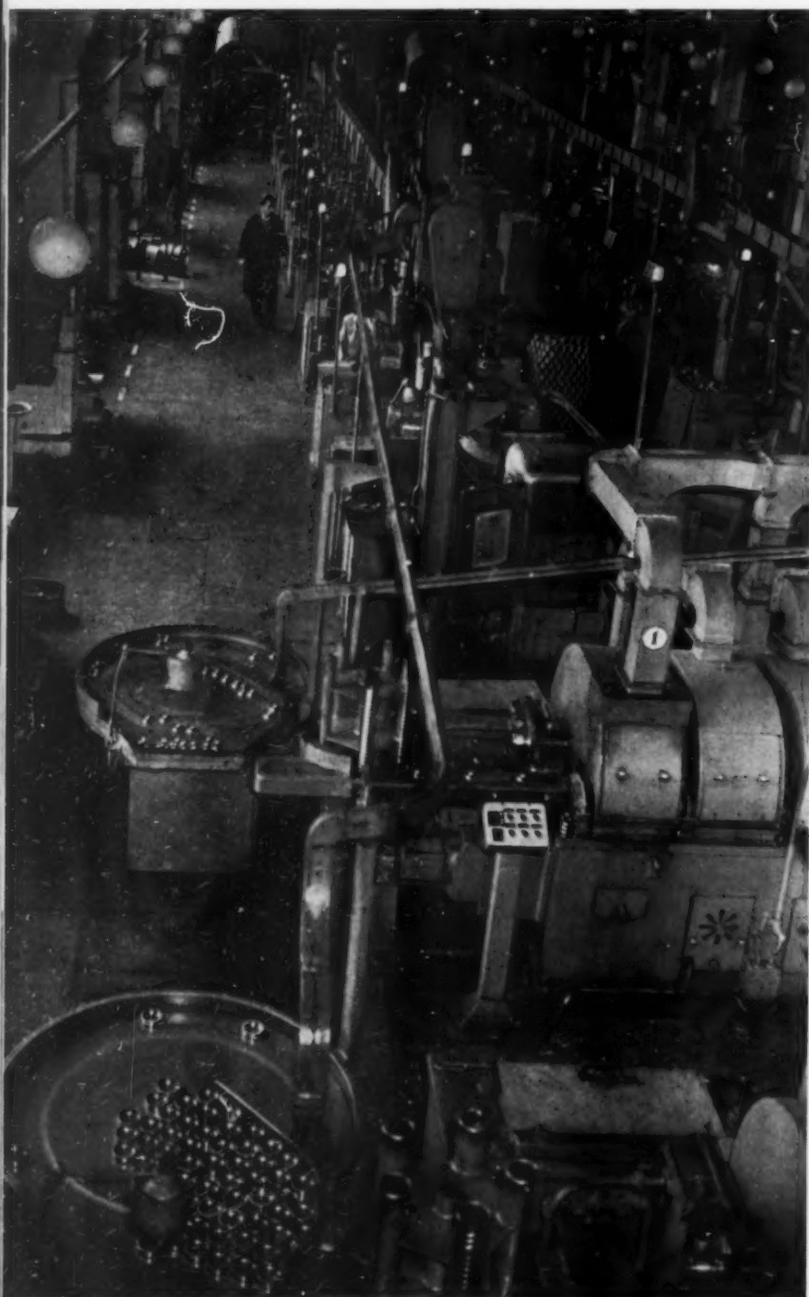
add the amounts to be contributed by each enterprise, we shall see that in the new year more than 522 billion rubles, or almost 40 billion rubles more than in 1959, will be spent on economic development.

Over 278 billion rubles will go to industry and more than 50 billion rubles to agriculture. Many more billions of rubles of collective farm funds and long-term state credits will be added to this.

Basis for Growing Prosperity

Large sums have been allocated for the expansion of the light and food industries. Output of textiles will rise to 8.7 billion yards, knitted goods up to 548 million items, leather footwear up to 407 million pairs. It is planned to increase capacities considerably, especially in the textile

Automated machinery is replacing hand labor at a fast rate. The budget allocates nearly 13 per cent more than last year for industrial re-equipment.



industry, at enterprises producing both cultural and utilitarian goods as well as in the food industry. Quite a few sugar refineries, creameries, meat packing and cold storage plants will be built this year.

The fresh upsurge in consumer goods industries is planned with an eye to raising living standards. In both the national economic plan and the state budget man and his needs come first. This year's budget appropriates almost 248 billion rubles, or 62 billion dollars at the official rate of exchange, to cover social requirements of the population as against 232 billion rubles, or 58 billion dollars, in 1959.

This increase in appropriations for social services—pensions, stipends, sick benefits, paid vacations, free medical services, free education, and other benefits—is over and above the rising earnings of factory and office workers and farmers. It is characteristic of the socialist economy that the workday is decreasing while income is increasing. In 1960 the changeover to a seven-hour working day for all factory and office workers and to a six-hour day for miners and people employed on other hazardous jobs will be completed.

In 1960 the state allocates 14 billion rubles to cover expenditures connected with the switchover to a shorter workday. By the end of the year 58.5 million factory and office workers, who will then be employed in the national economy, will enjoy the benefits of a shorter workday. In a few years' time the transition will begin to a 30- and 35-hour workweek with two full days off.

Health protection and old-age maintenance figure prominently in both the economic plan and the budget. Thus, expenditure on public health and physical culture in the new year is to increase by nearly 3.5 billion rubles. Expenditure for state social insurance and maintenance has gone up by more than 4 billion rubles and is now almost 98 billion rubles. Pensions have improved most radically. In 1960 expenditure on pensions will increase to 70 billion rubles compared with 29.7 billion rubles in 1955. This means that since the adoption in 1956 of the new state pensions law the income of the population in the form of pensions alone has risen 2.3-fold.

Housing

Housing is an important factor in improving the well-being of the population. Budget expenditure for this purpose is steadily growing. In the past three years alone (1957-59) more than 5.5 million apartments were built in the cities and towns, chiefly at the expense of the state. In the same period the collective farmers built more than a million houses in the countryside.

World War II left a serious housing shortage in its wake, with 25 million Soviet citizens homeless. The problem is still acute, but the government is trying to solve it as quickly as possible. In the near future there will be a comfortable apartment for every family. In 1960 centralized state expenditure alone for housing construction will amount to almost 48 billion rubles—a sum greater than that invested in 1940 for the entire national economic development. This will make it possible to provide new housing for ten million people. In the course of the Seven-Year Plan the state expenditure will grow progressively, along with the national wealth of the country.

Incomes

The national income now derived by the Soviet Union every 15 days is equal to the annual income of prerevolutionary Russia. During the past year the national income again increased by 10 per cent. In 1960 it is to rise by roughly 9 per cent. On this basis the real incomes of the factory and office workers and the peasants will rise on an average by 5 per cent annually per working person. This means that in 1960 the real incomes of factory and office workers will be more than doubled compared with the prewar level, and the incomes of the peasants will be almost two and a half times higher.

The steady rise in the purchasing power of the population naturally increases the volume of individual purchases. In the past eight years the volume of retail trade turnover almost tripled. Sales of highly nourishing foodstuffs increased even more. The rise is particularly evident in the purchase of such goods as TV sets, refrigerators, washing machines, cameras, cars, furniture, prefabricated houses and the like. Taking into account the greater purchasing power of the population, the sales of these goods will increase by 50 or 100 per cent in 1960 as compared with 1958. The over-all volume of retail trade in 1960 will rise by roughly 50 billion rubles and will amount to 765 billion rubles.



The 1960 budget figure for agricultural development is 50 billion rubles. To this will be added many more billions from funds of collective farms.

1,000,000 Engineers and 300,000 Scientists

The significance of the Soviet system of education and the rising level of culture and science in the country is generally acknowledged everywhere. The Soviet national economy now has an army of 900,000 certified engineers—far more than any other country. Another 119,000 will be trained in the new year as against 106,000 in 1959.

Allocations for education, the training of workers and the development of science and culture in 1960 come to 102 billion rubles compared to 94.4 billion rubles in 1959. Such vast appropriations make it possible, in the new year, to continue the reorganization of public education, to introduce industrial training in secondary schools on a wider scale, to improve the school facilities and develop correspondence and evening studies. More than 22 billion rubles are to be spent on maintenance of secondary and higher schools and on professional and engineering education.

Expenditures for scientific development will increase by more than 15 per cent. This means that the 300,000 scientific workers employed in research and educational institutions will receive nearly 33 billion rubles for the further development of their scientific activity.

The Soviet people are starting out on the second year of the Seven-Year Plan with new enthusiasm, for our fondest hope—that world peace will be strengthened—seems to be coming true. It is not hard to understand why we welcome the warmer political climate now prevailing in international relations and hail it with satisfaction and joy, for all our energy, our entire lives have been devoted to peaceful economic and cultural construction. This, too, is the objective of the goals we set for 1960.



The 1960 budget provides for the construction of new housing for ten million people. The goal is a modern apartment for every Soviet family.

The number of certified engineers now totals 900,000. The budget provides funds for training another 119,000 in 1960 compared with 106,000 in 1959.





The pictures on these pages were taken at the Vladimir Ilyich electromechanical plant built in a Moscow suburb at the end of the century. Fyodor Titov got his first job at this plant 45 years ago. At that time—before the Revolution—he worked an 11-hour day.

THE WORKING D

THE GOAL of communism, in our opinion, is the creation of a society in which everyone will enjoy unlimited freedom for the harmonious development of all his or her best qualities and creative possibilities.

Neither high productivity of labor, nor an infinite abundance of material benefits can in themselves be a goal, though we cannot conceive of communism without these conditions. The same holds true of the shorter work day. Yet all of these are the basic prerequisites for attaining the ultimate goals of the construction of a new society.

It is no accident that upon entering the period of the comprehensive construction of communism in the Soviet Union, our Communist Party has set, among many other tasks, this specific task—to effect the shortest work day in the world within a few years.

What is meant is a work week of 30 to 35 hours, that is, a six-hour work day in general and a five-hour work day in all branches of more arduous labor. This is only the first decisive step in this direction. The connection between a shorter work day and the movement toward communism is close and inseparable.

Productivity of Labor

We know that a high rate of growth of the productivity of labor is a decisive condition for the construction of communism. This is our chief trump in the peaceful competition with capitalist countries.

The productivity of industrial work in the USSR had increased ten-fold by 1958 as compared with 1913, while in the USA it had only somewhat more than doubled in the same period. Looking forward, we may say that a new and still more considerable growth of labor productivity is expected as automation develops. Practically speaking, it has no limit.

Under the conditions of capitalism, higher productivity of labor leads to insoluble problems. As a matter of fact, it opens up only two very real possibilities. The first is the possibility of still greater cuts in the total labor force. But who then is going to buy those mass consumer goods, the production of which is helped by automation? The second possibility is to reduce the work day without reducing wages. In this case a source of profit will soon end as will the very purpose of capitalist production.



When the Soviet government came to power in 1917, an 8-hour day was established by law throughout the country. By the time Anatoli Shamovich, shown here, came to work at the plant in 1929, a shorter day had been instituted for the night shift and for those workers who did the more arduous and hazardous jobs. As the country's economy grew stronger, the Soviet government was able to cut the workday again, but that was halted by the Nazi attack.

The builders of communism are not faced with such problems. A shorter work day, accompanied by a constant rise in the working people's living standards, far from contradicting anyone's interests as the growth of productive forces attains a certain level, becomes an objective necessity and a law of development of our society on the road toward communism. A shorter work day in our country is directly linked with steadily rising labor productivity.

V. I. Lenin foreseeing these prospects as far back as 1914 wrote: "Large-scale production,

machinery, railways, telephones—all these offer thousands of possibilities to cut the working time of organized labor to a quarter and to ensure living standards four times higher than now." In 1914 the work day in Russia was not less than 10 hours, with a legalized norm of eleven and a half hours. Reduction of these norms to one quarter would mean not more than three hours a day as the norm of labor necessary under communism. Quite recently, in May 1959, N. S. Khrushchev, speaking in Moldavia, referred to a time when "the country will come to communism" and "peo-

THE WORK DAY AND COMMUNISM

By Academician Stanislav Strumilin

ple will work three or four hours a day, or perhaps even less."

The possibility of free creative work—individual work and still more effective and enjoyable collective work—is now becoming increasingly accessible to the builders of communism. This inspires them to overcome the greatest difficulties and accomplish new feats of labor.

Yet under the conditions of complete communism, these possibilities will increase to such an extent that we may call it a leap from the realm of necessity to the realm of freedom.

Necessity and Freedom

Karl Marx maintained that the "realm of freedom" begins only where work dictated by necessity and outer expediency ends, and that consequently this realm, by the nature of things, lies on the other side of the sphere of material production proper.

To keep on living and to reproduce, man must fight nature, whatever the form of society he lives in and whatever the mode of production. It is an external element that makes it expedient for man to undertake this struggle and the labor it imposes on him. This is the realm of natural necessity, because man feels completely free only when he sets for himself, without constraint, any aim stemming from his inner inclinations and the social aspirations in him. As man's natural requirements grow, so does the corresponding "realm of necessity" expand. However, together with this, the productive forces used to satisfy these requirements also expand.

"... A real realm of freedom," Marx wrote, "... can flourish only with this realm of necessity as its basis. The reduction of the work day is the main requisite."

When speaking of the reduction of the work day, Marx naturally means only the labor required for the production of material boons on an expanded scale. This by no means sets any limit to man's free creative activities outside this sphere of material production. Moreover, the shorter the work day in the sphere of material production, the more time society has left for the perfection of man himself and the development of all his gifts in creative work and social activities. Thus, while reducing our obligatory labor within the "realm of necessity," we are already extending now, as we move toward communism, the boundaries of the coming "realm of freedom," in which every person will find all the doors open to any activity that suits his desires and abilities.

The boundaries between these two realms are, of course, rather conventional. As technology progresses and the work day becomes shorter under socialism, work in material production noticeably changes its character. It becomes more rational and productive and therefore more interesting. Since it is not too

tiring, it keeps on engendering in the sound organism a spirit of emulation for better achievements in the comradely collective. Furthermore, by training the brain and brawn of all the emulating members, this kind of work often assumes in addition an entirely novel sporting interest and the fascination of struggle, whereby, incidentally, the entire collective always stands to gain, regardless of who takes first place.

We are gradually getting rid of the difference between mental and manual labor. In this respect, too, the productive sphere of

labor is coming closer and closer to the non-productive sphere. Moreover, the shorter the work day becomes, the closer together the two spheres get.

Development of Everyone's Abilities

Let us imagine roughly the following daily regimen under communism when not more than four hours will be required for obligatory labor for whatever purpose. We can allot ten hours to sleep, meals and other daily doings. Then every working man will have at



When the country had rebuilt itself after the enormous destruction of the Second World War, the work day was reduced to 7 hours with a 6-hour day for men who worked at particularly hard jobs. The changeover began in 1956. Konstantin Oboyev began working at the plant in 1958. He has never worked more than a 7-hour day. As a matter of fact, he puts in a 40-hour week, since everybody works 2 hours less on Saturdays and on the eve of holidays.



Shorter working day gives more time for

THE WORKING DAY AND COMMUNISM

his full disposal another ten hours of free time. Of this amount he could spend at least four hours on reading and mental activity of his own choice, and another four on sports, amateur art and social work. He would still have another two hours of free time, which he could spend watching television, going to the cinema or attending a concert. In these two hours he would passively expose himself to all the influences of the society around him.

These changes in activity already presuppose rather versatile abilities in every person and ensure an ever broader development due to constant exchange and mutual enrichment

in a collective. At the same time, the constant change of occupations in passing from some working functions to others, ever more interesting and attractive, throughout the work day, makes work easier, reduces fatigue and increases productivity. Seasonal shifts of labor from one branch to another—for example, temporary “mobilizations” to the countryside during harvest time may prove rather important. Given good organization, they may prove highly useful. The fact is that harvesting machinery operates only a few weeks a year and for maximum efficiency in these weeks the operators should work in two, or even three shifts. It would be inexpedient to maintain an excessive staff of combine and other machine operators throughout the year. It would be much more desirable to have them sent from the city for this period.

Under the conditions of world victory of communism there will be no need for state coercion and administration. Soldiers and generals will also be superfluous. Yet anarchistic discord and chaos are hardly permissible in large-scale collective production, where the efforts of many thousands of people are united and coordinated. Even in circles of free social self-expression, comradesly discipline, leaders and organizers of a common undertaking—coaches, producers and conductors—are necessary, if the undertaking is to be successful.

Under conditions of communism such “conductors” will be even more necessary in the economic sphere for regulating, planning and managing all production processes in the center and locally. The only essential difference is that under communism, when the level of a college trained engineer or a secondary

technical school graduate will be common to all the labor army, the promotion of “conductors” of all kinds and the replacement of those less worthy by those more capable will be easier than ever before.

Under such conditions it will be possible to organize work in shifts for all directors and managers of production, selecting them for short periods and replacing them with new candidates from the same working environment. Given an abundance of talent, this system would only do good, contributing to a more speedy promotion of people to those posts and jobs for which they are especially fit.

A short work day brings us closer to communism by extending the self-activity of the masses and raising their general cultural standards.

This has already been reflected primarily in a broad development of the highly versatile and active cultural self-expression of the working people in the Soviet Union. They want and are able not only to perceive passively, but also to develop actively everything that brings them closer to socialist culture, thus cultivating the already mature sprouts of communism. Free schooling all the way through college is much more accessible to them than in any capitalist country. This combination of production and science is very valuable in one's mature age. Yet all the possibilities of such vigorous studies will be fully revealed only when the work day has been reduced considerably.

The Soviet working man is already striving to make all the arts and literature part and parcel of his life. At every factory and on

Some 800 of the plant people are doing after-work study at specialized secondary schools and colleges, including the Moscow Conservatory. There are several educational establishments at the plant itself—a secondary school for general study, an evening electrical engineering secondary school, and a branch of the Moscow Electrical Engineering College for advanced students.

The union was an important factor in getting the plant and personnel prepared for the switchover to the 7-hour day without any reduction in pay. Here Mikhail Gershkovich, who heads the plant's labor and wages department, reports to the union committee on the change in the wage scale that accompanied the cut in the work day.



every farm, the working people are putting out wall newspapers or even printed publications devoted to local events. Dramatic, vocal, music, dancing and various other circles and groups are very popular in every city and at practically every large enterprise. The trade unions alone have 216,000 of such amateur art groups with a membership of about four million which in the past year gave more than 760,000 shows and concerts.

But to achieve the harmonious development of all of man's abilities, as we travel along the road to communism, it would be inexcusable if we were to limit ourselves to the narrow confines of spiritual culture alone. As the ancients said: "Mens sana in corpore sano." In the Soviet Union the active work which the masses of working people do goes hand in hand with the education of physically strong, enduring builders of communism.

Free Time and its "Dangers"

The reduction of the work day is already an economic necessity. But when we have low cultural levels, extra free time may be spent in different ways. Bourgeois moralists are already prepared to view such extra free time merely as the menacing danger of encouragement of idleness, giving rise not only to do-nothings and drones but also to evil drunken debauchery and hooliganism.

Alcoholism is indeed a great and terrible calamity. It can be abolished only under the high cultural standards of communism. No wonder that our young people are already strenuously combating it now.

The shorter work day will allow the raising of general cultural standards and will broaden fields for the masses' own creativity. At the same time it will extend opportunities for the interesting and rational spending of leisure time, thus blunting the appeal of drunken carousals with their distasteful hangovers. The liking for strong drink—even where there are no bans on it—will lose its hold. It will then be easier to cope with more isolated manifestations of it together with the help of public censure, cartoons in wall newspapers and other similar methods.

We shall require a high cultural standard also in order to re-pattern fundamentally the regimen of labor and the entire cultural level of the working people in a way that is bound to take place under communism.

What do we mean by a high cultural standard of the people?

It is, of course, not only observance of the elementary norms of politeness, social decency and "bon ton." All these rules tell us only what we shouldn't do. But the task of cultural advancement is precisely to teach each and everyone what he must do to scale all the summits of human culture sooner.



Along with the changeover to the 7-hour day came not only more free time but a general overhaul of the wage system. Workers in the low and medium wage brackets received substantial raises—for the past three years they total more than 33 per cent. The salaries of engineers and technical personnel were also revised upward—their average wage in 1959 went up by 123 rubles a month. This is quite aside from the general increase in monthly earnings due to higher productivity.



When the plant switched over to the shorter workday fitter Pyotr Kozlov had extra time to spend in the plant's reading room. A great deal of preparatory work had to be done by the factory management, engineers and all the workers to turn out as much in 7 hours as had been turned out in 8. Labor productivity had to be increased about 14 per cent. It was

done not by speed up, but by installing more modern machinery, by using available machinery more efficiently, and by generally modernizing and automating the production process. 250 organizational and technical improvements made at the suggestion of the workers resulted in their turning out more in 7 hours than they did in 8, with a corresponding wage increase.



THE WORKING DAY AND COMMUNISM

By a high standard of culture we mean not a passive acceptance of its components, but an active effort to rise to each new rung in its development. It manifests itself, above all, in respect for another man's labor and for the working people and in maintaining one's own dignity as a human being. It is expressed in service to science and worship of the truth, in the tireless cult of the good and beautiful and, hence, in creative self-expression in study, the learning of arts and skills. A high cultural standard gives us an organic disgust for such survivals of the old way of life as swearing, drunken debauchery and hooliganism. As we

are not utopian dreamers, we realize that all these ugly things will not vanish at once, even under communism. But we already clearly see how to get rid of them.

Neither drunken carousals nor abusive insults, neither fistfights nor even killings will disappear of their own accord. There still remain many human passions—whether envy, anger or jealousy—that will impel people, in a fit of temporary insanity and without any concerted repulse from those around them, to take to crime.

Under communism, however, any collective is bound to repulse criminal passions. People who have made up their minds to live and work in the communist way cannot remain indifferent to wrongs done to their friends or to their friends' grief, nor can they tolerate incorrigible wrong-doers in their midst. Each collective will have more than enough means at its disposal to act against such wrong-doers, even when police becomes unnecessary. Today it is not only for drunkenness, but also for other breaches of communist ethics that the communist work teams call any member of the collective to book, publicly censuring him or expelling him from their ranks. The future communes, whenever necessary, will have comrades' courts enjoying broad responsibilities for bringing public influence to bear.

"To go over to communism," N. S. Khrushchev said, "we need not only a powerful material and technical base, but also that all the citizens of the socialist society have a high

standard of awareness." In the process of building communism "the entire spiritual life of society likewise changes. Man himself changes and his communist world outlook is molded."

Changes in Everyday Life

One can easily imagine how the everyday life of the working man will change when at the first stage of communism all the working people will have free meals, free education for their children, and many other benefits. This day is not at all a long way off.

"It is quite likely," said N. S. Khrushchev at the 21st Congress of the Communist Party, "that we can get to a point in the not too distant future when the requirements of all the Soviet people as regards food, housing and clothing will be fully satisfied within necessary and rational limits. We don't need so much time in order, say, to provide school-children with free meals and have all the children kept at nurseries, kindergartens and boarding schools at the expense of society." This alone will completely change the everyday life of the working man.

Household chores and day-to-day affairs will give way more and more to collective forms and communal services. Free meals, the bringing up of children outside the home, and the maintenance of all working people in their old age will not only provide the best guarantee against the dangers of neglect and destitution of the old and minor members of the work-

ing man's family, but will also free all working wives and mothers from the bondage of the kitchen and other household burdens. This will also refashion the future family in a new way.

The new forms of public servicing of the working people's needs will call likewise for a new organization of everyday life, both in town and countryside. This is conceivable considering the public catering of meals and the planned supply of large working collectives, as a whole system of consumers' communes, which will be linked with one or another urban factory or rural farm center.

As a model for such consumers' communes of the future, we could take, for example, any of the present-day Soviet vacation centers, where our working people spend their leisure without having to bother about anything. In the future every apartment house in the cities and towns or a group of dwellings in the factory settlements and villages, would be similarly provided for by a special public service organization.

As primary consumers' communes they will have all the children's, public service and cultural institutions catering to the population. The combination of such residential sections and the factory or the farm with which they are linked, will constitute a far more complex, but integral, big producer-consumer commune.

Such a large commune will, as time goes by,

make out of its main collective—welded together as it is by common daily work and common interests in life—a friendly working-class family.

Atmosphere of Creative Work

There can be absolutely free creative work, provided that all other civil liberties are guaranteed.

In the socialist countries the working people now fully enjoy all political liberties. The only elements who could complain of any restrictions here are the rump of the defeated counter-revolution, foreign spies and wreckers who are themselves the arch-enemies of the working people's freedom. Until class contradictions and the state machinery used by one or another class for coercive purpose are done away with on a worldwide scale, there are bound to be such restrictions.

When one contemplates the requirements for the fullest freedom of self-expression in all spheres of human activity, one must say together with Lenin: "The fuller democracy grows, the nearer the day approaches when democracy will become unnecessary."

When we have communist labor we shall have plenty and more not only of material boons, but also of the fruits of free spiritual creativity and there will be in every collective many splendid artists and connoisseurs of art. Not all their works will be shown at nation-

wide festivals and exhibitions or in the museums art galleries of the capital. More, therefore, will be left to adorn the communes in the provinces.

Each factory will become a cultural center. Many are already becoming combined factories and institutions of higher learning, with their own experimental facilities and laboratories.

Each factory will have a green belt around it. Each workshop will have murals showing the working man's everyday life and scenes from nature. At the entrance it will have statues of local innovators of production and of the most revered people of the country. The daylight lamps above the automatic lines of machine tools will stimulate the labor of the operators. The muted rhythm of labor will be enlivened by music. The pure air-conditioned climate of the factories, even in the hot shops — the ozone-enriched atmosphere will feel like the air in a pinewoods after a thunderstorm—will mitigate the infernal heat of the furnaces, and, dispersing by its fresh coolness all smoke and grime, will fill every breast with inexhaustible energy. Naturally, in such surroundings all labor will become more appealing and productive. And as we imagine this coming communist labor we are already prepared to exclaim in heartfelt greeting: "Glory to Labor!"

Translated from *Literaturnaya Gazeta*

These jazz enthusiasts make full use of their extra hour for rehearsals. Many more workers and their families are availing themselves of the recreational facilities at the plant's House of Culture, and the trade union committee is devoting more effort to planning leisure time activities. Lectures on literature, art, science and technology given by leading people in the field are very popular. There are some 20 amateur groups now functioning for those interested in music, theater, dancing and various other hobbies. The plant also has its own sports teams and more than a thousand workers participating in the Trud Sports Society.



STATE FARM on Virgin Land

By Anatoli Berezansky

Chairman, Trade Union Committee, Krasnodonsky State Farm

Photos by Valentin Khukhlayev

IN THE SPRING of 1954, twenty-four of us came to this spot where our settlement now spreads out. All around there was nothing but virgin steppe. The soil was dark and sodden, with patches of spongy snow here and there.

We lived in tents, warmed ourselves before open fires and read by kerosene lamps. We were out to build a state farm in this bare and uninhabited wilderness and we did. Now there are 3,000 of us living here in 500 houses roofed with tile and sprouting with aerials. Along the broad streets of our village run electric transmission lines.

Our fields and pastures spread over acres. We feel we need more trees than we now have. So we are increasing our plantings, and in a few years we will have both shade trees and fruit orchards.

The Farm's Growth

In the first three years about 400 state farms like ours were developed on the virgin lands of Kazakhstan, Siberia and other regions in the eastern part of the country.

Our farm was set up as a state-owned enterprise to grow wheat. During our first year, while we were still in the throes of building and getting ourselves organized, we plowed about 30,000 acres of virgin land. The follow-

ing year we turned up 65,000 acres. Now we have about 100,000 arable acres with 67,500 sowed to spring wheat. We have grown into a huge machine-operated wheat-growing factory with 500 tractors, combines and trucks. All the farm's equipment is now worth about 20 million rubles.

By 1956 the farm cleared the initial investment. Now we are making not only enough to cover expenses—including housing and maintenance of public service establishments—but in addition we have a profit left over to give to the national budget.

Our initial job was wheat, but as we grew we branched out into livestock breeding as well. We have miles of fine untouched grazing land for pasture, and we have begun to grow corn, oats and barley for fodder.

Four years ago the farm bought pedigreed cattle. We have built barns and dairies and equipped them with automatic feeders, mono-rails and electric milking machines. We have also opened an artificial insemination station.

In 1955 we had some 200-odd head of cattle, and only 64 of them were cows. Now we have ten times as many cattle, including 700 cows. Besides that we have 600 pigs, 4,000 sheep and a poultry division with 8,000 ducks, chickens and turkeys. So that now we're in the meat growing business, too.

Working Conditions

One of the first things we did after we got our Krasnodonsky State Farm set up was to elect a trade union committee. Its job is to keep a supervisory eye on such things as working conditions, housing, medical care and education. It administers the state social insurance fund and takes care of many other aspects of the workers' welfare.

Wages are paid on our farm monthly on the piece-rate system. Our committee helps to check proper payment of wages in strict accord with the quantity and quality of work performed.

The total sum of wages received by our workers rises with the farm's income. Three years ago we earned upwards of four million rubles for 12 months' work and this year we raised this to more than seven million.

For extra-high yields of grain, milk and wool, and for especially promising work in livestock breeding we get premiums in cash and kind. An average annual wage on our farm will run from 9,000 to 10,000 rubles.

My four brothers work with me on the farm. My brother Vladimir's wage last year was fairly representative. He's a combine operator and received 9,400 rubles in cash and three-quarters of a ton of grain.

THE FIVE BEREZANSKY BROTHERS (FROM LEFT TO RIGHT): ANATOLI, CHAIRMAN OF THE FARM'S UNION COMMITTEE; YAKOV, A GARAGE DISPATCHER; VLADIMIR, A COMBINE OPERATOR





COMBINE OPERATOR NIKOLAI ZHELYAZKO IS ONE OF THE 24 FIRST SETTLERS WHO FOUNDED THE FARM IN 1954.

ERATOR
YURI AND JOSIF, MECHANICS. "WE'RE PROUD," THE BROTHERS SAY, "TO HELP BUILD SOMETHING NEW NOT ONLY FOR OURSELVES BUT ALSO FOR THE COUNTRY."



STATE FARM on Virgin Land

The trained worker is well paid on our farm and our union helps people qualify for better jobs by assisting the management to organize free courses in operation and maintenance of tractors, combines and trucks. The union popularizes new and better production methods and technical innovations.

Recreation and Culture

Most of us settlers in these new areas are young people. Pioneering virgin soil is a young man's—and a young woman's—job. Facilities for education, recreation, sports and such matters were therefore somewhat more immediately necessary than they might have been for an older group.

The management of our farm built a House of Culture at a cost of half a million rubles. It has an auditorium for film showings and concerts, and there are facilities for other cultural and recreational activities. Our union committee takes an active part in running this workers' club.

We have motion picture showings several times a week and frequent concerts and theater presentations by artists who come from Moscow, Leningrad, Sverdlovsk and other cities. In the last six months we've had some 30 guest artists, including some from the Bolshoi and Maly Theaters in the capital.

Our trade union committee is also responsible for the flourishing amateur choral, instrumental, dance and drama groups. The union allows our farm local 70,000 rubles annually for instruments, props, costumes and instructors. Almost all the young men and women are active in one or another of these groups.

We set up a library that now has about 8,000 books and 400 regular borrowers. We buy about 9,000 rubles worth of new books every year. We have a professional librarian, Rimma Maslova, who came to the farm after graduating from a library school in Astrakhan.

Public Services

Our trade union committee from the very beginning saw to it that the farm's facilities for education and medical care kept growing with the population. One of the first public buildings to go up was a school. At first it doubled in the evening as a clubhouse and movie. Then a much needed kindergarten was opened.

We now have seven schools—five on the elementary level and two on the high school level. My wife teaches in the lower grades.

Her school has nine teachers and accommodates 160 pupils. The school building has the usual classrooms, laboratories for physics, biology and chemistry and a wood-working and metal-working shop.

We have a district polyclinic and hospital maintained out of government funds. There are also medical stations in various outlying parts of the farm. All services are given free of charge, as everywhere in our country. The physician-in-charge, Dr. Anna Shkvarchuk, came here two years ago after graduating from the Odessa Medical Institute, got married and now thinks of herself as an old settler.

Population Keeps Increasing

Any number of the young people have met their husbands and wives here. We have an average of some 40 weddings a year, and this means that new families are growing.

is kept by the borrower. This means that Zhernakov has to pay back only 13,000 rubles.

The number of people building their own homes has been growing from year to year. The figure for 1957 was 40, the following year it was 50 and in 1959 there were more than a hundred families building homes on these long term loans.

Our New Home Now

We're all proud of our farm. Every bit of it was the work of our own hands. My brothers and I occasionally get to talking of how we came here.

When the Party and the Government issued a call for young people to turn these millions of acres of fertile land into a new granary for the country, we were living on a collective farm in the Crimea not far from Simferopol. I was driving a truck, Vladimir was a com-



ANATOLI BEREZANSKY AND HIS FRIEND LIKE TO GO FISHING ON A MAN-MADE LAKE RECENTLY BUILT ON THE FARM.

Our population is also increased by families that move here from other parts of the country. A while ago combine operator Yakov Zhernakov arrived from the Baltic region with his wife and two children. For a while they lived in a rented apartment and then decided to build their own house. With the help of our trade union committee Zhernakov arranged for a home building loan from the farm.

Up to 20,000 rubles payable over a ten-year period can be borrowed. The first installment does not have to be paid until three years after you start building and only 65 per cent of the loan has to be repaid. The other 35 per cent

is kept by the borrower. This means that Zhernakov has to pay back only 13,000 rubles. The younger ones in the family were still in school then.

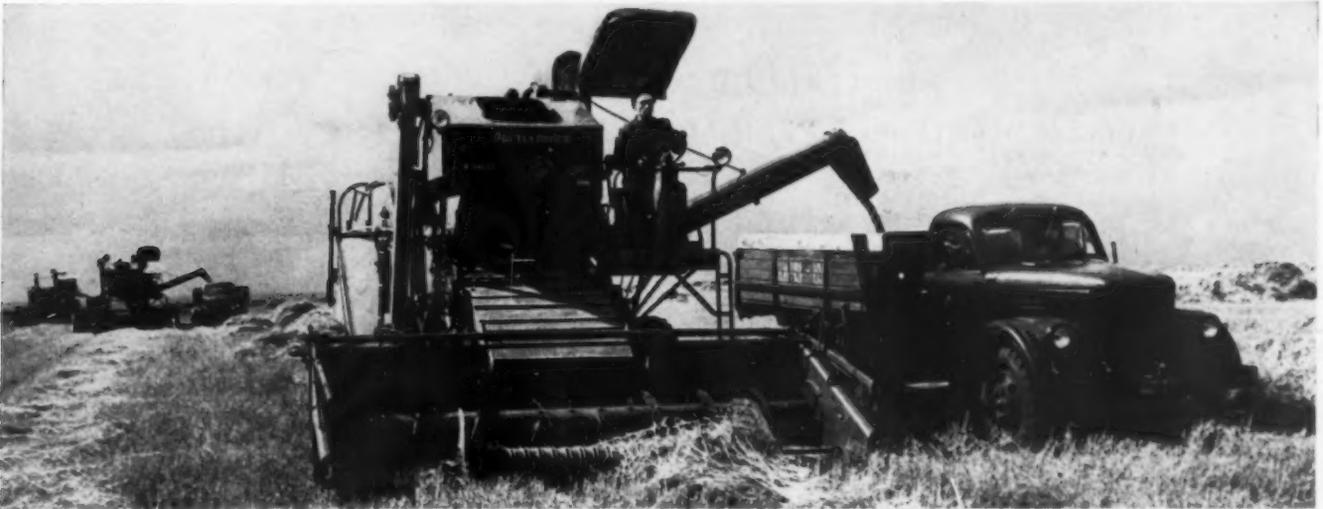
We had our own house and were making a good living but we were taken with the idea of helping to build up something new not only for ourselves but also for the country.

We have been here six years and they have been years of real happiness. This is our new home now. My second son was born here and so were Vladimir's and Yuri's first born. Yuri met his wife here when she was working in the farm's dining hall as a cook. Their very small Lyudmila is one of the most recent additions to the farm's population.



THERE ARE 3,000 PEOPLE NOW WORKING AT THE KRASNODONSKY STATE FARM. THE PAST SIX YEARS WITNESSED 500 HOUSES BUILT IN THIS WILDERNESS.

THE FARM'S FIELDS AND MEADOWS NOW STRETCH FOR 175,000 ACRES. SINCE 1954 ABOUT 400 STATE FARMS LIKE IT HAVE BEEN BUILT ON VIRGIN LAND.



THE FARM IS A BIG WHEAT GROWER. WITH MILES OF UNTOUCHED GRAZING LAND AVAILABLE AND PLENTY OF FODDER IT NOW RAISES LIVESTOCK AS WELL.

THIS HOUSE OF CULTURE COST THE FARM HALF A MILLION RUBLES. IT HAS AN AUDITORIUM FOR FREQUENT FILM SHOWINGS, CONCERTS AND THEATRICALS.



TRADE WITH

70

COUNTRIES

By VLADIMIR ALKHIMOV

Commercial Counselor of the USSR Embassy in the USA

FOREIGN TRADE offers the advantages of economic division of labor on a world scale. In one country the available raw material, the technological level of industry and the skill and background of the workers make it profitable to produce one kind of goods; in another country, with a different set of factors, it pays to produce a different kind of goods.

International trade has many more values, however, than are implied by the simple interchange of commodities. Mutually beneficial economic cooperation makes possible a rise in living standards of the peoples of the cooperating countries. The contacts developed in process of trade help to build a bridge of understanding and of friendship that preserves and strengthens the peace.

"It is our deep conviction," said Nikita S. Khrushchev in his speech to the General Assembly of the United Nations on September 18, 1959, "that trade provides a good foundation for building peaceful cooperation between states and mutual confidence between peoples." The Soviet Union has been and continues to be a strong advocate of trade with all countries on a basis that is equal, non-discriminative and mutually advantageous.

Science and technology at their present high level can serve either for incendiary war or for peaceful construction. It is critically important for the world that our two countries, the two most technologically creative, direct their potentials toward peace, that we learn to live, to work, and to trade with each other.

Some people maintain that trade follows on political agreements between countries. Improve the political and you improve the trade relations, they say. This is self-evident. But the reverse is also true—that good trade relations make for good political relations. We need not wait for one or the other to reach a specified level—they are two sides of the same coin.

The exchanges of the past year have given the world a better understanding of the policy of peaceful coexistence which the Soviet Union champions so vigorously. The visits to the United States of First Deputy Chairmen of the USSR Council of Ministers Anastas Mikoyan and Frol Kozlov and Vice-President Richard Nixon's tour of our country helped promote Soviet-American understanding. So did the exhibitions held in New York and Moscow. Moreover, Chairman Khrushchev's visit to the United States and his talks with President Eisenhower not only marked a new stage in relations between the two countries but had a most beneficial effect on the whole international climate. There is therefore, no need, no reason to delay trade expansion.

Soviet Foreign Trade Grows

The very rapid rate of Soviet economic growth presents large possibilities for trade. The progress of the seven-year plan makes these possibilities more evident every day. The Soviet Union will at least double its volume of foreign trade before 1965, the year the plan ends.

In volume, Soviet trade has increased sevenfold compared with the 1938 level. From sixteenth place on the world trade list, we have risen to sixth. Since 1950 the total volume of our foreign trade has grown 2.5 times. The increase in our trade with the capitalist countries between 1950 and 1958 was even greater—3.5 times. In 1959 and 1960 the volume is scheduled to mount by 25 per cent.

The type of goods we ship has changed significantly. During the postwar period we exported, along with traditional items, principally machines, industrial equipment and metals. In 1958 manufactured goods accounted for more than 60 per cent of the country's total export; 18 per cent of that figure represented machines and equipment.

We ship large quantities of the most diverse kinds of machinery and equipment ranging from the simplest of instruments to the most intricate of research apparatus and equipment for entire plants. During 1960 we will be helping to build 383 industrial plants in 22 countries, including 288 in the socialist countries.

In spite of this, the Soviet Union is still one of the world's major importers of machinery and equipment. We buy large quantities of metal-cutting machine tools; forge and press equipment; mining machinery; equipment for the iron, steel, and chemical industries, including equipment for the manufacture of artificial fibers and plastics; gas pipes; diesel and electric engines; equipment for housing construction; and a long list of other items. Important changes have also taken place in the kind of goods we import. We now buy a variety of consumer goods and the raw materials for their production. Our 1958 volume of imports of such goods totalled 1.8 billion dollars.

Between the first and the second world wars, we carried on regular trade with 40 countries. Now we have commercial relations with more than 70 and trade agreements with more than 45 countries. As of the beginning of this year we have trade agreements with 35 capitalist countries; in 1953 we had agreements with only 15.

There has been a decided increase in trade with a number of Western countries, Great Britain in particular. We have contracts with British firms for the equipment of whole plants—a tire factory, an acetate-silk factory and others.

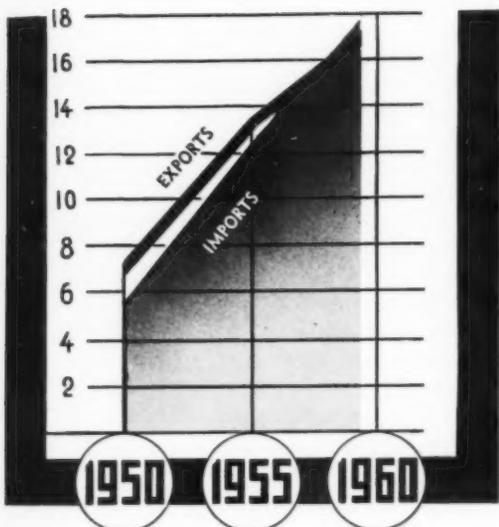
The five-year trade agreement signed in May of 1959 was an important step forward in Anglo-Soviet economic relations. One of its principal aims was to obtain a substantial increase in the turnover of the traditional goods of both countries. By the terms of Article 3 of the agreement the Soviet foreign trade au-



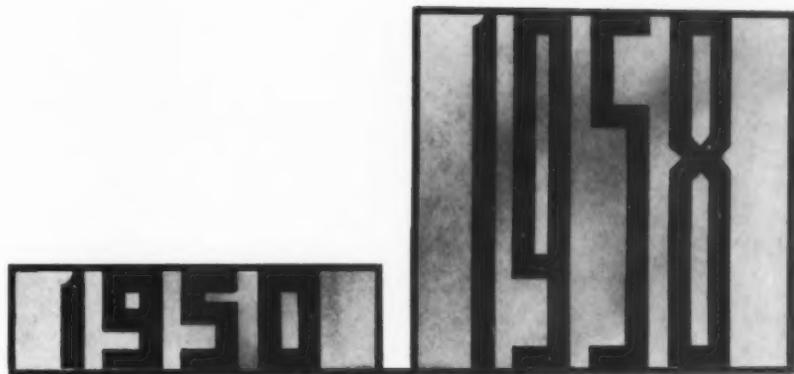
TOTAL VOLUME OF SOVIET FOREIGN TRADE (IN BILLION RUBLES).

thorities will be placing substantial orders in Britain for chemical industry equipment, including equipment for manufacturing synthetic fibers and plastics; equipment for the pulp and paper industry; forging, stamping and casting equipment; metal-working machine tools; equipment for the electro-engineering and cable industry; automation equipment; pumping, compressing and refrigeration equipment; equipment for the building industries; and equipment for the food and light industries. The agreement also opens up new avenues for trade in a wide variety of consumer goods.

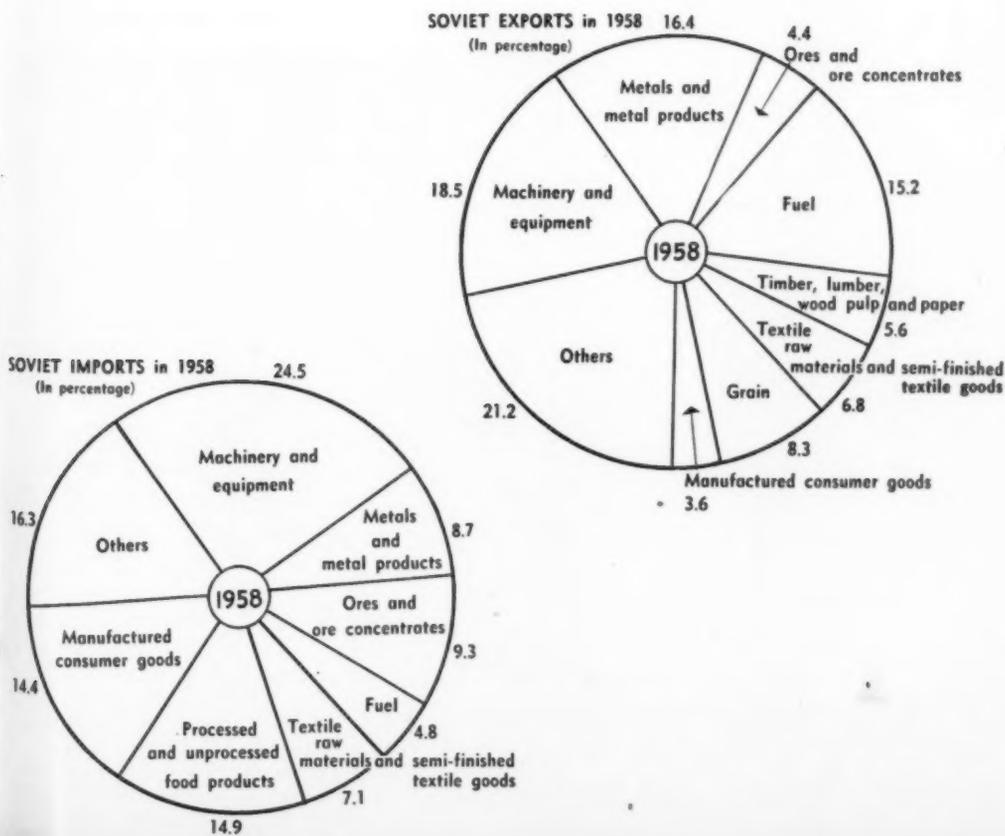
For the first year, additional quotas in the neighborhood of 5.5 million dollars will be set by both parties. It is worth noting that the credit for some of the goods we order from British firms will be guaranteed by the British Government.



SOVIET EXPORTS AND IMPORTS (IN BILLION RUBLES).



BY 1958 TRADE WITH CAPITALIST COUNTRIES HAD INCREASED 3.5-FOLD COMPARED WITH 1950.



Why Not More Soviet-American Trade?

This agreement obviously means a considerable and regularized expansion of trade between Britain and the Soviet Union. But even without that increase the volume of trade we have with Britain, France or West Germany is anywhere from seven to ten times greater than the volume of our trade with the United States—a regrettable situation in the face of the possibilities.

Our position is a very clear-cut one. We are very much for large-scale Soviet-American trade and we are convinced it would be mutually profitable. If we can have trade agreements with Great Britain, France, West Germany and other Western countries, why not a trade agreement with the United States? If our trade with all these other countries is growing, then why not with the United States? With our present parallel technological development, not only can we learn from you but your technical people could learn a lot from our engineers and scientists.

We have had good commercial relations in the past. We started trading in the 1920's and there have been periods when our volume of trade was considerable. We placed large or-

TRADE WITH 70 COUNTRIES

ders with many of your firms for machines and equipment. During the war period and the first few postwar years our trading organizations and your companies did a significant amount of mutually profitable business.

Our engineers and workers thought highly of the quality of electro-technical equipment delivered by General Electric and Westinghouse. We still haven't forgotten the General Electric personnel who worked with us in the early thirties on the construction of Dnieproges—the largest hydropower project of the time.

American firms like Baldwin-Lima-Hamilton, Cincinnati Milling, the Ex-Cello-O Corporation and the Norton Company sent us forging, stamping and casting equipment and machine tools. We remember the Ford engineers and technicians who worked with us when we were building our Soviet automobile industry in the early thirties.

United States Steel, Bethlehem, Republic Steel, the Leonard Buck Corporation and other companies supplied us with steel sheets, rails, pipes and other steel products. We shipped Soviet-made goods to the United States. This was mutually profitable trade for both our countries.

Unfortunately, Soviet-American trade dwindled away almost to the vanishing point soon



INDUSTRIAL EQUIPMENT AND MACHINERY FOR EXPORT LOADED AT BLACK SEA PORT OF ODESSA.

INDUSTRIALISTS MARK TOBAN AND DAVID PACKARD AT A SMALL CAR PLANT IN MOSCOW.



AMERICAN BUSINESSMEN VISIT A SOVIET BEARING PLANT.

after World War II. All told, during 1958 our exports to the United States totalled 26 million dollars; our imports, 4.8 million dollars. For 1960 these figures will probably be larger but still quite insignificant for two countries the size of ours.

The total turnover of Soviet trade in current world prices increased almost 17 times between 1938 and 1958, while trade with the United States was reduced 10 times. Certainly an unfortunate picture. Accounting for it were the trade restrictions imposed by the United States. Today the United States is the only great power with which the Soviet Union has no trade agreement. American import duties on some of our goods were greatly increased as compared with duties on similar goods imported from other countries. In addition, the import of some goods was altogether prohibited.

There are also many obstacles in the way of exporting American goods to the Soviet Union. Certain goods are completely banned for export to our country, for many others, which are not specifically banned, American firms must obtain individual licenses. Since it is almost impossible to foretell whether a license will be granted or not, the difficulties of doing business are obvious enough.

Profits or Losses?

There were those who hoped to slow down the economic progress of the Soviet Union by such a policy. But this only meant that we had to work harder and faster to build our own industries to supply our needs.

It may help to cite one example of this restrictive policy. Just after World War II we needed a large number of powerful excavators for mining and for rebuilding the hydropower

plants destroyed during the war. Excavators of the type we needed were then being made by only two companies—Bucyrus-Erie and Marion Power Shovel. We signed contracts with these companies for a certain number of these machines, but they were unable to deliver more than a few of the excavators because of export prohibitions. The licenses for the export of these machines have not been granted.

And the result—heavy financial losses suffered by the American firms involved since the contracts had to be cancelled and production stopped. Our Soviet engineers had no recourse but to design and build their own excavators. At present we make enough of these complex machines to satisfy all our own needs with enough left over for sale to foreign buyers. In 1958 we exported 534 different excavators to foreign countries.

This is one example among a number we could cite. They all make the same point—that trade restrictions and discriminations are wasteful and unprofitable.

Some people argue against Soviet-American trade on the ground that it is a “one-shot affair,” and that, so they allege, Soviet buying organizations are not dependable suppliers or steady customers.

There is not a shred of evidence to support the argument. We are prepared to sit down with American firms and in a business-like way work out a point-by-point program of reciprocal deliveries for three, five, or even seven years on normal trade terms, assuming, of course, that the United States Government agrees.

Another point of opposition advanced is that the Soviet Union does not respect foreign patents. But this too is not the case. Soviet law protects the rights of foreigners and for-

eign companies in the same way it protects the rights of Soviet citizens and business enterprises. We are, as a matter of record, buying patents and paying royalties.

Some claim to see Soviet-American trade as an economic threat to the United States and West European countries. The threat is non-existent.

Our planned system has its own built-in controls. For this reason we can buy and sell without creating difficulties for the foreign trade of other countries. We are able to trade on a healthy competitive basis.

Our economy is designed to satisfy the continually growing requirements of the country's population. Because our economy is planned we produce only those goods and only those quantities which our population needs and can absorb. We have no reason to overproduce or to dump our goods on foreign markets.

We are countering these arguments here to set the record straight. We are not begging for trade. We do not have to. Our country's business is prosperous and growing. We would like to have good relations with the United States in all areas, trade included, and are prepared to discuss the details. What the times call for are reasoned discussions which offer mutually acceptable solutions for trade problems.

The Soviet Union is for greater international trade and cooperation. It does not demand any special privileges for itself and has no intention of cornering the world market in any commodity. During the entire life of the Soviet state no complaint has ever been levelled at our foreign trade organizations for nonfulfillment of obligations. As a major partner in international trade, the Soviet Union fulfills its obligations to the letter, whether as buyer or seller.

ANASTAS MIKOYAN, FIRST DEPUTY CHAIRMAN OF THE USSR COUNCIL OF MINISTERS, RECEIVING A DELEGATION OF THE SAN FRANCISCO CHAMBER OF COMMERCE IN 1959.





DESTINATION— SPACE

By Alexander Bakulev
President, USSR Academy of Medical Sciences

MANNED cosmic flight has been taken from the realm of fantasy and placed on the agenda of present-day science and technology. Recent advances in rocketry speak for themselves, but much still remains to be done before people and not only rockets will be able to reach that destination—space.

Before a man-carrying space vehicle is built and launched, scientists and engineers must find solutions to a host of problems concerning the safety of the astronaut. How will the stress of launching and the weightlessness of free flight affect him? How can his organism be guaranteed against the hazards of the cosmos? What is to be done to provide normal conditions of life and work in the space ship? What are the best methods of re-entry into the atmosphere and safe landing?

We must preclude even the slightest margin of error in answering these and related questions. That is why theoretical research is aug-

mented by practical experiments. Biologists are experimenting with animals, those pioneers of space exploration sent up in rockets to the upper atmosphere and beyond its limits. There have also been other experiments in which certain conditions of cosmic flight have been reproduced so that man's reactions to them can be tested.

The Soviet press frequently carries reports on these experiments. The following is a slightly abridged translation of an article by Alexander Bakulev, President of the USSR Academy of Medical Sciences, published in the newspaper Meditsinsky Rabotnik (Medical Worker).

He deals with some of the medical aspects of the future space flight of man.

Soviet physiologists have already obtained experimental data proving that the living organism is not seriously affected during space

flight. The most convincing confirmation is the dog Laika's voyage around the earth in Sputnik II.

Radiotelemetric apparatus transmitted from the hermetically sealed cabin the animal's pulse rate, the frequency of respiration, the arterial blood pressure and even an electrocardiogram. The data obtained demonstrates that the animal successfully survived the acceleration during launching and the condition of weightlessness when the rocket achieved its orbit. Throughout the whole experiment Laika's condition remained quite satisfactory.

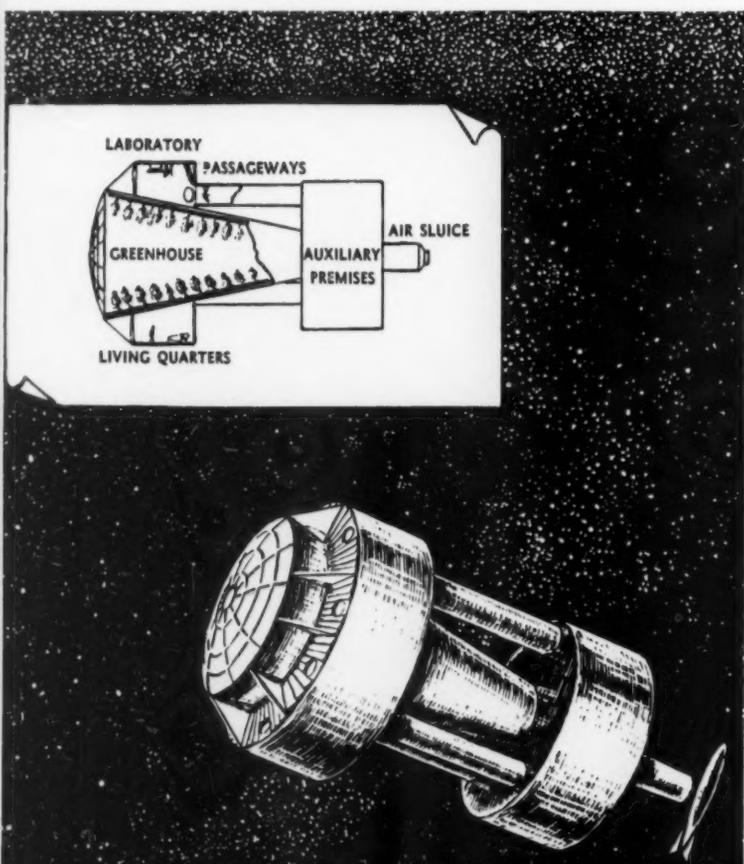
Of course, there are still many difficulties in the way of man's cosmic flight. To help surmount them, extensive research is carried on in various fields of space medicine, a new branch of science. Among problems now under study are protection against acceleration and ionizing radiation, the effect of weightlessness, methods of overcoming oxygen deficiency during flight.

Experimental research has shown that man can tolerate acceleration 12 to 15 times greater than the force of the earth's gravity for seven minutes without ill effects if he is conditioned by systematic training, equipped with a special anti-gravity suit to prevent disturbances in cerebral blood circulation and seated in the rocket so that the mechanical forces act perpendicularly to the longitudinal axis of his body.

Other experiments have shown that the human organism can easily endure a state of weightlessness lasting 30 to 45 seconds. It has been ascertained that with recurrence of

Pre-Sputnik History of Soviet Rocketry

Konstantin Tsiolkovsky, the Russian scientist who did pioneering work in rocket propulsion, sketched this extra-terrestrial station.



By Professor Y. A. Pobedonostsev

IT IS STARTLING to recall the chronology of space research. Science today talks of manned cosmic flight as an actuality of the very near future and we are only a half-century removed from the initial studies in rocket propulsion. There was a time when we measured scientific progress in centuries—today we measure in years and even in weeks.

Tsiolkovsky—Founder of Modern Rocketry

The first Sputnik and the last Lunik are separated by only two years—a relatively short period which also witnessed the launching of other space rockets. They are all links in a chain of research projects that Konstantin Tsiolkovsky began at the turn of the century when he proved it theoretically possible to launch and to fly a ship in the regions outside the earth's atmosphere. In 1895 the pioneering Russian scientist was making studies of jet propulsion and in 1903 he summed up his research in a book which won him a place with the immortals in world science.

In his *Exploration of Space by Rocket Devices* Tsiolkovsky proposed a multistage vehicle flown by a jet engine operating on liquid fuel and an oxidizer. The rocket's speed and range of flight, he declared, were



Registering instruments are attached to the pilot's body in a test reproducing conditions of space flight.



Final check and last minute instructions from a medical researcher before the test pilot takes off on his flight.



The altitude the test calls for has now been reached.

weightlessness man adjusts himself to this state, retains orientation in space and may coordinate his movements accurately.

A hermetically sealed cabin equipped to regenerate the air will completely protect the astronaut from the effect of the extremely low barometric pressure in space. If the hermetic seal of one of the cabin's sections is broken (as a result of damage by a meteorite, for instance), a reliable space suit will safeguard the astronaut against external effects.

For oxygen supply during space flights, var-

ious methods are suggested. One of them is the use of liquid oxygen. For the absorption of carbon dioxide and water vapor, asbestos impregnated with alkalis may be used. Plants with the ability to absorb carbon dioxide intensively and produce oxygen in adequate amounts will render invaluable service in prolonged flights.

The problem of overcoming oxygen deficiency has been fairly well studied and now presents no serious difficulties. A great deal more research is needed to solve the problem

of protecting man against harmful ionizing radiation.

The higher the astronaut rises into space, the more intensive will be the effect of various forms of radiation. They must be studied thoroughly to avoid any risks. The Soviet space rockets have already supplied helpful data on ionization beyond the limits of the atmosphere and on cosmic rays. Further investigations will enable designers to provide space ships with reliable protection.

Another problem under study is the effect

practically unlimited and depended on exhaust velocity and fuel supply. He also suggested the eventual construction of stations in space from which flights could be launched to distant planets.

Many of Tsiolkovsky's ideas have been realized in modern rocket research by an entire school of Soviet rocket engineers who picked up where this fertile originator left off. "Mankind will not remain tied to the earth forever," he predicted. "In his quest for light and space, man will penetrate beyond the atmosphere, timidly at first, and will then win for himself all the space around the sun."

First Launchings

Y. V. Kondratyuk experimented with rocket propulsion after the Socialist Revolution of 1917. His important theoretical work, which supplemented Tsiolkovsky's studies, was published in 1929.

Another scientist, F. A. Tsander, who had been working on rocket propulsion since 1919, built an original jet engine in 1930. This was OR-1 which ran on gasoline and air. It passed stringent tests and proved in practice that a jet-propelled mechanism could operate efficiently.

Two years later, Tsander led a group which built the OR-2, an improved engine running on gasoline and liquid oxygen which developed a thrust of 50 kilograms (110 pounds), an altogether respectable achievement for that time. Tsander also designed a jet engine with a 5,000-kilogram (11,000-pound) thrust and an engine with a 600-kilogram (1,322-pound) thrust to run on liquid and solid fuels.

Under Tsander's supervision construction of the GIRD-10 was begun. This rocket, with an engine fed on liquid fuel (alcohol) and liquid oxygen, was calculated to rise to an altitude of 5.5 kilometers (3.4 miles). It was 2.2 meters (7.2 feet) long, had a diameter of 0.14 meters (5.5 inches) and weighed 29.5 kilograms (65 pounds). Tsander did not live to see his rocket in flight through the atmosphere. He died ten days after the first test of the trial model.

"Forward, comrades, keep moving forward. Raise rockets higher and higher, nearer to the stars," he urged his students in a letter written

shortly before his death. And they carried out his bidding. On November 25, 1933, the first Soviet liquid fuel rocket was launched.

Somewhat earlier that same year a successful trial flight of a half-liquid fuel rocket marked another forward step in the development of rocket engineering in the Soviet Union.

Liquid-Fuel Engines

The most remarkable feature of that amazing mechanism we call the liquid-fuel rocket engine is that it functions without oxygen from the air. The fuel it burns fulfills all requirements. It serves as both fuel and oxidizer for burning. This type of engine can therefore work not only at altitudes at which planes with air-jet engines fly, but also in airless space, at distances many thousands of miles from the earth.

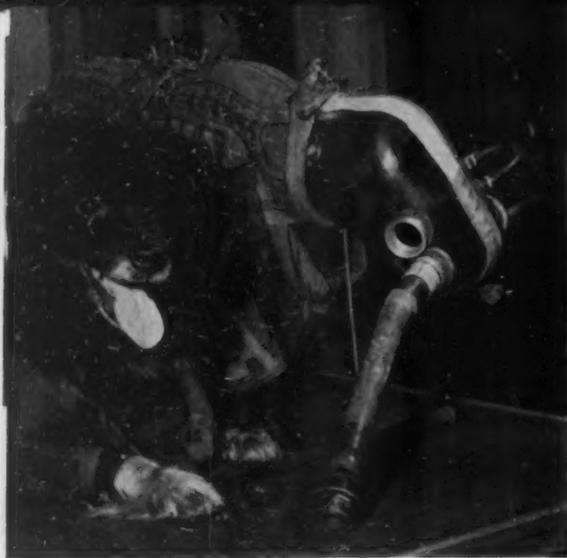
Compact and light, the liquid-fuel engine can develop more thrust power than any other jet engine of the same size and weight—the reason it is now used so generally for rockets of various kinds.

In 1930 a group of Soviet scientists recommended the use of nitric acid, nitrogen tetroxide, hydrogen peroxide, tetranitromethane, perchloric acid and their solutions as oxidizers for liquid fuel rocket engines. Many of these oxidizers were later employed by rocket engineers in the Soviet Union and then in other countries.

ORM-1, the first Soviet liquid-fuel rocket engine was designed that same year. Tested with liquid oxygen and gasoline, it developed a thrust of up to 20 kilograms (44 pounds).

A whole series of such engines operating on kerosene and nitric acid was designed in 1933. The ORM-50, one of the series, developed a thrust of 150 kilograms (330 pounds). Another, the ORM-52, tested successfully the same year, developed a thrust of 300 kilograms (661 pounds).

The ORM-65 was tested three years later. It worked on kerosene and nitric acid, the pressure in the combustion chamber being 22 atmospheres. The engine had a pyrotechnical ignition and a fuel-feed cylinder. In 1937-39 it was tested in the RP-318 rocket plane and in a winged rocket on the ground and in the air.



Four-legged test pilots are readied for flight. Tsiganka is all set, Mishka is not yet dressed.

DESTINATION— SPACE

of cosmic conditions on the activity of various viruses. Specifically, of great significance is the activity of saprophytic viruses living in the human body which under terrestrial conditions are harmless. Might these viruses cause severe disease under different conditions?

Preliminary data indicates that saprophytes cannot cause any particular harm, since the functions of compensatory mechanisms of the human organism would intensify during cosmic flight and would arrest the development of infection. Besides, sterilization of the space ship and special prophylactic measures will

protect the astronauts from possible diseases caused by microbes and viruses.

Soviet pharmacologists have been testing drugs which prevent disturbances of the higher nervous activity during flight as well as drugs which accelerate or retard metabolic processes. Specialists on nutrition have been creating special foods to solve the problem of feeding under space flight conditions.

A multitude of studies have been carried on in medicine and related areas all designed to ensure that there will be no danger whatsoever to the health and life of future astronauts. Many of the studies are closely interconnected with research in other sciences and engineering. The thought and work of all concerned is to bring the day closer when the first man can be sent on the first voyage into space—and be returned safely to the earth.

FOOD FOR FUTURE ASTRONAUTS

By G. A. Arutyunov
M. S. (Medicine)

FOOD for space travel must be very compact, very light and capable of being stored for long periods. The most likely forms will be concentrates or canned foods containing the usual amounts of proteins, carbohydrates and vitamins but less fats.

Considerable research is being done on food assimilation. Scientists of other coun-

tries are inclined toward synthetic mixtures of amino acids and carbohydrates to guarantee 100 per cent assimilation. Soviet scientists prefer natural products enriched with amino acids.

In a hermetically sealed cabin with a constant temperature there will be no need nor reason to heat or to cool foods. Meals must

be more frequent, at intervals of 3 or 4 hours, but in smaller amounts.

As to the actual eating process, here we must cope with weightlessness. Liquids, for example, take on the shape of a sphere, so that there is no drinking from a glass. Water spilled—or better put, shaken—out of a glass will soar in the cabin as one or a number of

Pre-Sputnik History of Soviet Rocketry

Uniflow Jet Engines

During the same period work was being done on air jet engine construction. Subsequently this type of engine has been widely used in jet aircraft. Young designers took their lead from the studies of the eminent Academician B. S. Stechkin, who worked out the theory of these motors.

I cooperated on the earliest experiments in this field. In the thirties, I. A. Merkulov, on the basis of Stechkin's theoretical studies and the experiments conducted under my direction, undertook to design the first uniflow jet engine.

Before installing the engine in a plane, the designer decided to test it

in a rocket. He built a two-stage rocket for the purpose in 1936. Its initial weight was 7 kilograms (15 pounds).

The first stage was a gun-powder engine which was to detach itself after driving the rocket up to the required speed. The engine worked 8 seconds at a gas-flow speed of 1,860 meters (6,080 feet) per second. The second stage was a rocket with a uniflow jet engine and had stabilizing aerodynamic surfaces.

On May 19, 1939, a group of designers and engineers assembled at Station Planernaya, near Moscow, where the rocket was mounted on the launching pad. The first stage was placed in operation. Gliding up along vertical guides, the rocket took off from the launching pad and began to scale its vertical trajectory. It returned safely to earth after fulfilling the given program of the flight. The success of the experiment encouraged rocket engineering enthusiasts and prepared the groundwork for building a uniflow jet engine.

First Jet Aircraft

In the same year, I. A. Merkulov finished several designs for aircraft jet motors: cigar-shaped tubes 1.5 meters (almost 5 feet) long and 0.4 meters (15.7 inches) in diameter weighing 12 kilograms (26.4 pounds). The fuel, gasoline, was heated in the engine and injected into the combustion chamber in a vapor state. Two such engines were mounted on the I-15 fighter designed by N. N. Polikarpov.

On January 25, 1940, an official commission registered the birth of a new aircraft jet engine when a plane flown by test pilot P. E. Loginov took off from the Frunze Central Airfield. Observers on the ground saw two bright torchlights under the plane's wings, the world's first uniflow jet engines for aircraft in operation.

Following Loginov other pilots made test flights in planes with uniflow jet engines. These motors were successfully tested on the I-153 plane designed by N. N. Polikarpov and the Yak-7 plane designed by A. S. Yakovlev. Later other countries also began practical tests of uniflow engines in flight.



Inscription on this commemorative bronze medal reads: "World's first Soviet cosmic rocket reached the surface of the moon. September 12-14, 1959."



Canine space explorers like Kozyavka help scientists to determine how the living organism will react to weightlessness and other space flight factors.



Before these astronauts are launched they are trained in the laboratory to withstand noise, vibration, high acceleration and other flight hazards.

ellipsoids. It must therefore be sucked out of a closed vessel through a tube.

Under weightless conditions the astronaut may be troubled by food crumbs. They will not fall "down" but will float upward and around the cabin. Food must therefore be solid and compact.

Space food creators must also reckon with the fact that the astronauts will wear oxygen masks. That is why most convenient will be thick, pasty foods made of highly nourishing elements—meat soups, chocolate creams.

The food must be packaged so that it can

flow from the receptacle through a valve in the oxygen mask and then into the flyer's mouth without hampering his breathing. An automatic feeding device built along these lines was used for Laika, the first animal space traveler.

Flights of several months' duration present a somewhat different set of problems since a rocket will carry a limited supply of food and water. Two solutions are suggested.

The first is to create new foods by chemical means—proteins, fats, carbohydrates and vitamins can be obtained from the products of

nitrous metabolism. The second is the use of microorganisms and water plants.

Scientists have already found about 15 varieties of water plants that can serve as adequate human foods. A plant called chlorella has particular merit since it also converts carbon dioxide into oxygen. People in some countries, the Japanese for example, use water plants as part of their normal diet.

Another problem is the water supply. On a long flight it can be obtained either from the air in the cabin which settles in drops on the cooled surfaces or by chemical means.

Work on jet engines was carried on through the war years without interruption. In 1943, the RD-1 with a thrust of 300 kilograms (661 pounds) and an ether-and-air ignition was officially tested. It worked on kerosene and nitric acid with a pump feed. At the traditional air display at the Tushino Airfield on August 18, 1946, spectators watched S. A. Lavochkin's plane, fitted with the RD-IX3, an improved and modified model of this engine with similar hauling power but with chemical ignition.

Dreams Come True

Merkulov's rocket, launched on May 19, 1939, was one of the first steps in constructing composite rockets. Multistage rockets, as Tsiolkovsky had envisioned, can work up high velocities. They are now used in most of the known projects for space vehicles.

Thus it was the thirties that laid the foundation for Soviet jet propulsion engineering. Without that solid groundwork, we could not have developed today's fast aircraft or cosmic rockets.

Shortly before his death, on May 1, 1935, Tsiolkovsky could declare: "Now I am firmly convinced that my dream of interplanetary flight, which I have substantiated theoretically, will come true. I have been working for 40 years on the jet engine and thought that an excursion to Mars would be undertaken only many centuries hence. But times change. I believe that many among you will witness the first trans-atmospheric voyage."

The spade work done by a large group of Soviet scientists and engineers led to the very light and powerful engines now used to launch cosmic rockets. But besides rocket specialists, credit is also due to those who worked on the design of a reliable control system, to those who designed the compact power sources and the delicate measuring and communication instruments. All these complex and basically new scientific and technical problems were successfully solved in the many types of rockets designed for the exploration of the upper atmosphere.

The first rocket to make a vertical ascent was launched in May 1949

to an altitude of 110 kilometers (68 miles). It was followed by several other rockets of the same class. Their payload of scientific instruments weighed 120 to 130 kilograms (260 to 280 pounds).

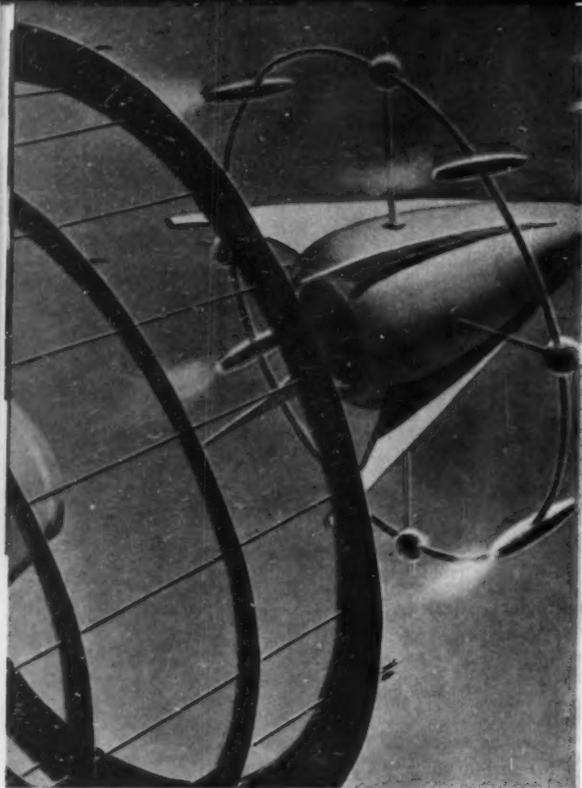
As the program of research became more comprehensive the rockets carried heavier payloads. In May 1957 a rocket weighing 2,200 kilograms (4,848 pounds) was fired to an altitude of 212 kilometers (131 miles). The scientific instruments and the test animals carried were safely returned to earth.

The most remarkable achievement of Soviet rocket builders in the postwar period was the intercontinental ballistic missile. In August 1957 the first multistage ICBM was shot to an altitude never before reached by any other flying object and covered an enormous distance. Highly significant was the fact that the missile landed at the intended point with accurate precision.

That eminently successful rocket made it possible to launch Sputnik I slightly more than a month later.

Academician Anatoli Blagonravov (right) and Valerian Krasovsky, cosmic radiation expert, with Lunik III model presented by Soviet scientists to the American Rocket Society at its Fourteenth Annual Meeting last November.



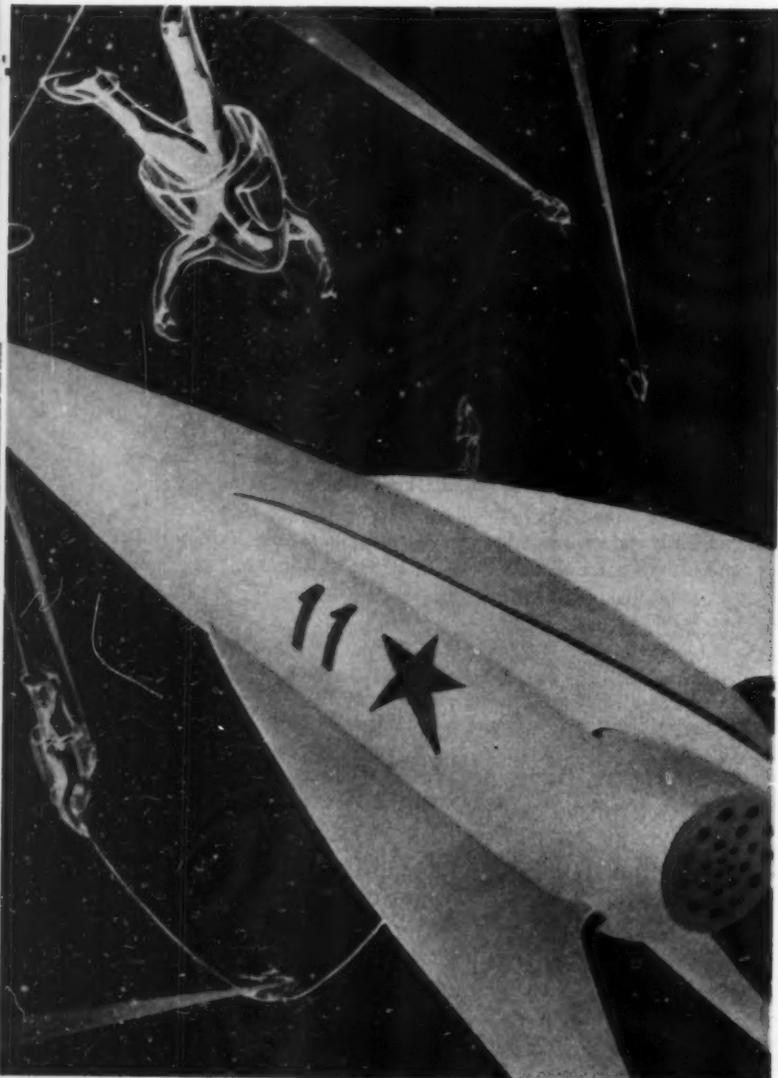


Prepared for launching. On the ring belting the rocket are the aerial controls which will guide it through the dense layers of the atmosphere.



Here the cosmonauts in protective space suits and attached by connective lines to their ship study the surface of the moon. The artist has sketched the outline of our natural satellite so that it conforms precisely with the scientific information that is presently available.

The cosmonauts check the first stage of the rocket at the space station which is based on one of the earth's artificial satellites. After inspection, the cosmic ship will be ready to continue its voyage.



Man in Outer Space



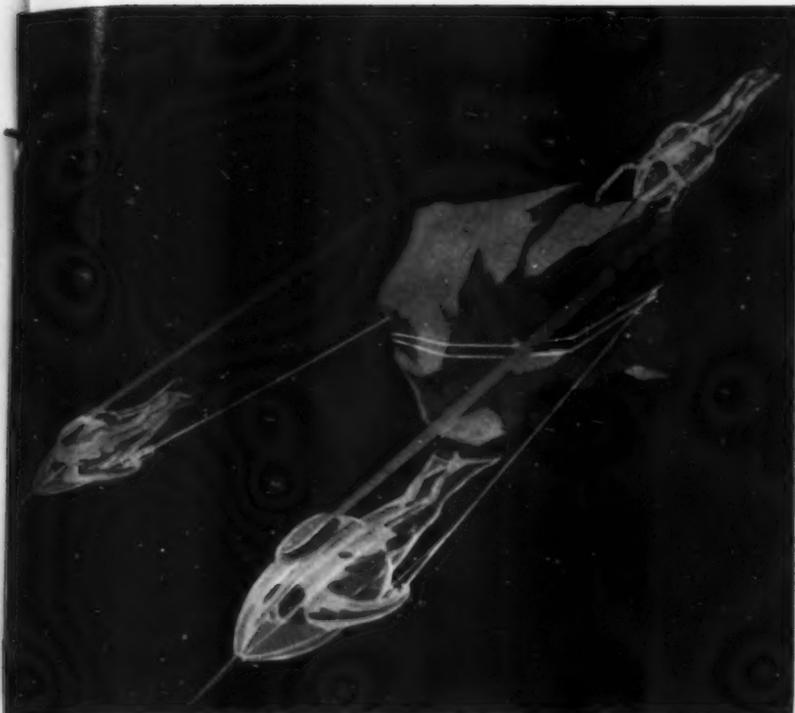
pictured by

Andrei Sokolov

IT IS altogether likely that nothing in man's history has so fired the imagination as the advent of the cosmic age. Writers, sculptors, painters, musicians—creative workers in every medium—have been inspired to pay tribute to those who built and launched the first sputnik and succeeding earth satellites and cosmic rockets. Novels and short stories have been written, motion pictures have been filmed, songs and symphonies have been composed, sculptors have vied with each other to fashion the grand conceptions of space and to depict the daring attempts of man to explore and to conquer the universe.

Andrei Sokolov, whose drawings are reproduced on these pages, has long been greatly interested in the work of the founder of modern rocketry, the Russian scientist Konstantin Tsiolkovsky. These sketches are part of a series on which he worked for a year in close consultation with scientists in the field. The artist pictures the rockets of the future and gives his impression of man moving out into space.

The directors of the Moscow Studio of Popular Science Films learned of the artist's work and invited him to assist in making a feature motion picture, *Human Satellite Around the Sun*. The film is now being shown on Soviet screens.



Transporting an asteroid for study. Enormously heavy under earth gravity conditions, the asteroid is weightless in outer space. The cosmonauts are propelled by the jet engines with which their cosmic suits are equipped.

HUMAN SATELLITE AROUND THE SUN

By Gennadi Sibirtsev

THE SOVIET COSMIC ROCKET launched on January 2, 1959, became the first artificial planet—a satellite of the sun. It was not manned, but art does not wait for the time when men will take off for the stars. While scientists were inventing and designing, writers of science fiction had already sent men off into outer space.

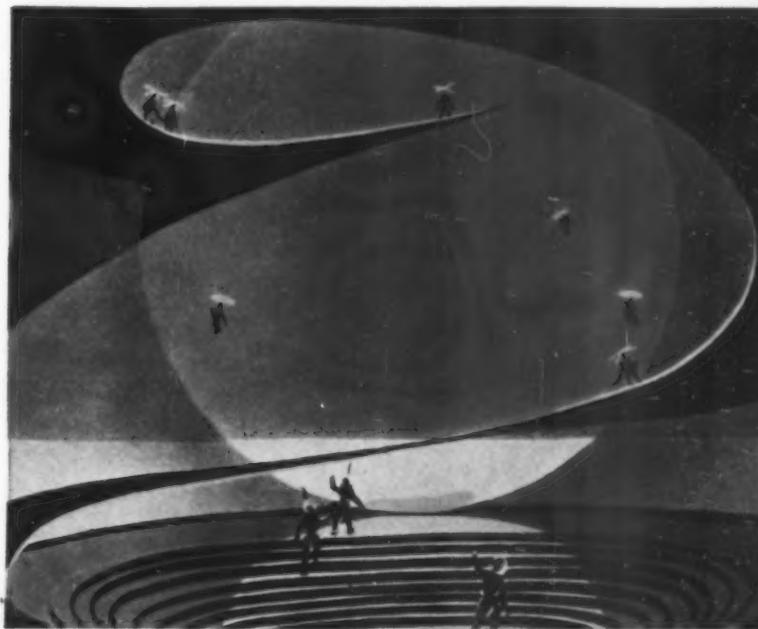
One of them became a sun satellite. He took off from the Moscow Studio of Popular Science Films. Unlike his movie fellows of earlier days, who had to fly beyond the boundaries of the earth on the wings of their author's imagination, this one made use of a space vehicle which corresponded to the most exact scientific specifications presently known.

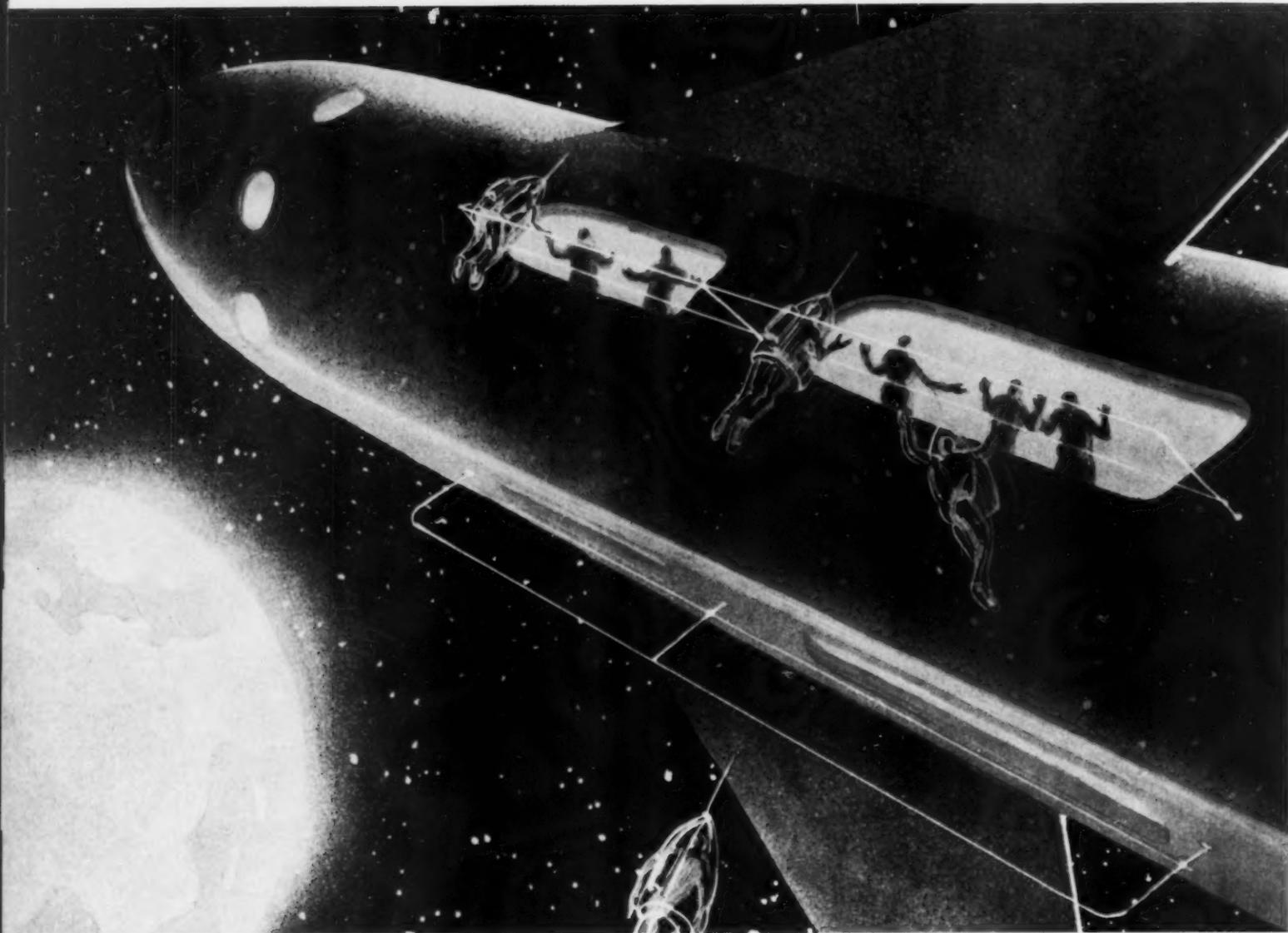
The film is called *Human Satellite Around the Sun*. From the scientific point of view, say Soviet rocket specialists, everything in the film is quite possible and feasible. This expert opinion is especially important in a film of this type where the author's imagination is very likely to outrun the more sober speculation of science. The thrilling dramatic story in the film does not only combine science with fantasy, but also serves as an excellent means for popularizing scientific problems difficult to grasp.



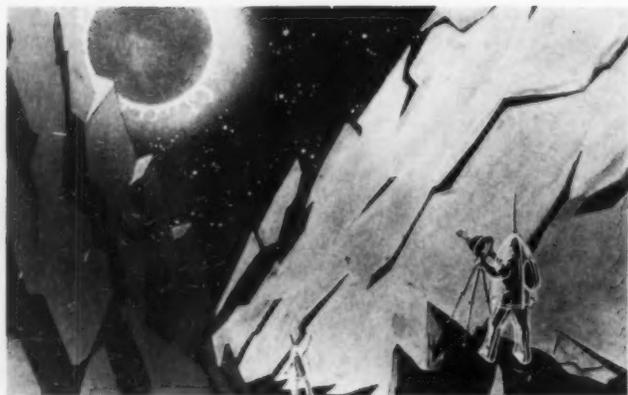
The space ship approaches Mars. The outline of the planet—it is inhabited—can be seen straight ahead. The Martians are awaiting the arrival of the ship to begin work on a joint Mars-Earth project.

The Martians propel themselves by use of special flying devices. They collaborate with the Earthmen to build a great hangar for the many space ships that are expected to be arriving from Earth.





THE SPACE SHIP AT ONE OF THE INTERPLANETARY STATIONS READY FOR TAKE-OFF BACK TO EARTH. SPACE STATION PERSONNEL ARE BIDDING THE COSMONAUTS GOOD-BY.



FROM THE MOON'S SURFACE THE COSMONAUTS SEE AN ECLIPSE OF THE SUN.

TECHNICIANS CHECKING THE OUTSIDE OF THE INTERPLANETARY STATION.



HUMAN SATELLITE AROUND THE SUN

... Once upon a time—this happened when there were scores of man-made satellites orbiting around the earth and space ships were making regular trips between the earth and the moon—a twelve-year-old boy came on a mysterious case. Switching on his videophone—an apparatus which reproduces images and sound on telemagnetic tape—he saw pictures that had been recorded many years ago.

The screen showed a man sitting in a rocket cabin with instrument lights flashing around him in the most alarming way. The man was saying: "There is nothing. . . . Can it be that our satellite-laboratories fell down onto the sun?"

The lamps continued to flash still more alarmingly. And again the man's anxious voice: "Earth. . . . Earth. . . . Communication is being disrupted. . . ."

What was the man looking for in space and what laboratories was he speaking of?—the boy kept thinking.



A STILL FROM THE MOTION PICTURE. SPACE PILOT ANDREI IN HIS OFFICE BEFORE COSMIC FLIGHT.

His father answered some of the questions, but much was left unexplained. He started by telling the boy of the magnetic storms that break radio communication and put compasses out of service. Men had long been aware of the fact that these storms were caused by the sun. A number of automatic satellites had been launched to the sun to study the conditions that gave rise to such phenomena.

These satellites had been launched by the man the boy had seen on the videophone screen—Igor Petrovich, a scientist who was investigating electromagnetic phenomena in the earth's atmosphere as it related to space travel. Igor Petrovich thought that the sun gave rise to great zones in space in which the normal operation of electronic devices was impossible. Once a space ship wandered into such a zone, its electronic devices would fail and the ship's sheathing would lose its protective properties.

But the satellite-laboratories which were to corroborate this hypothesis did not get back to earth. So Igor Petrovich had taken off into space to find his laboratories. This cost him his life. But just before he died, he succeeded in sending to earth an automatic container housing a moving-picture camera recorder. This was how people found out what had happened to the courageous scientist. But nobody knew the cause of his failure.

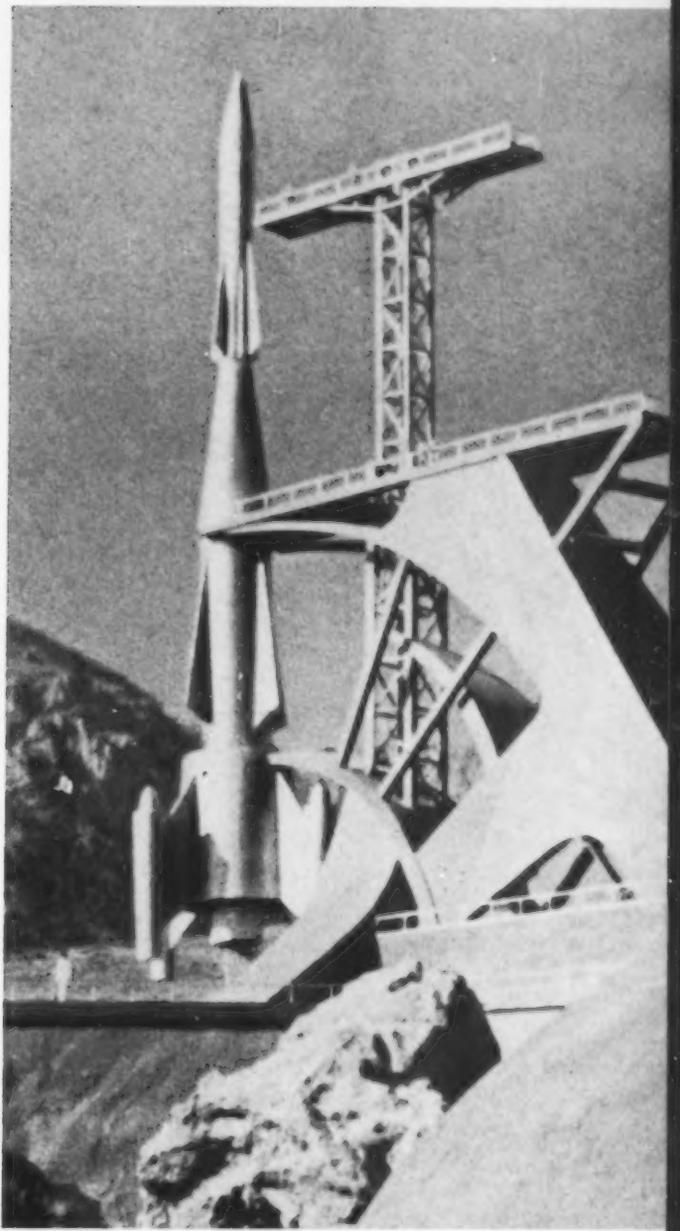
The years pass. The unsolved mystery has long been forgotten by Andrei—that is the name of the boy who learned of the tragic fate of the scientist. Like many of the boys of his time Andrei has become a space pilot and engineer. Now he is working in a laboratory where a new material capable of protecting man against cosmic radiations is being devised.

One of the little monkeys that had been sent into space on an exploratory rocket guided from the earth comes back affected by radiation disease. And Igor Petrovich's hypothesis is recalled.

Andrei takes off in a rocket ship to search for the flying laboratories. We learn that he is the son of Igor Petrovich. The daring scientist had asked his best friend to adopt the boy in case he should perish. The friend had been father to Andrei all these years.

Space puts a multitude of unexpected obstacles in the cosmic pilot's way. Andrei succeeds in finding his father's laboratories. But in order to get them back to earth he must sacrifice his own return and transfer his whole stock of fuel to the laboratories. So, Andrei decides to become the sun's eternal satellite.

But the people, thanks to Andrei's selfless deed, are now able to solve this mystery of nature and they finally succeed in bringing the daring space pilot back to the earth.



A STILL. THE MULTISTAGE SPACE ROCKET READY FOR TAKE-OFF.

A STILL. SCIENTIST KALININ IN THE CONTROL CABIN OF THE ROCKET.





This woman was revived from a state of clinical death experienced as a result of loss of much blood. Now she is back at her work as railway conductor.

STRUGGLE AGAINST DEATH

By Professor VLADIMIR NEGOVSKY
*Chief, Laboratory of Experimental Physiology,
USSR Academy of Medical Sciences*

trauma, for example—then, in a number of cases, the man's vital functions can be revived through special methods of treatment.

This condition of clinical—one might call it suspended—death lasts for about five or six minutes, not longer at present. The duration is determined by the extreme sensitivity of the brain cortex to any disturbance of the blood circulation, and hence, to oxygen starvation. After that, irreversible lesions develop in the cells of the central nervous system which cause death of the tissues known as biological death. An organism in this condition cannot be revived.

Reviving Organisms

The Russian scientist Fyodor Andreyev is acknowledged the founder of the scientific theory of resuscitation of organisms. His method is based on the injection of a nutrient adrenalin solution into the arteries after clinical death. Subsequently, this method was further developed in our Laboratory of Experimental Physiology for Resuscitation of Organisms of the USSR Academy of Medical Sciences.

For the last twenty years our laboratory has been doing experimental and clinical studies of the process of dying with the aim to work out reliable methods of combatting untimely death. Resuscitation treatment used by our researchers is quite complex and varies from case to case. The most general are the

CONTRARY to popular belief, death is not an instantaneous phenomenon. Science has established the fact that it is a gradual process in which the organism's vital functions are successively arrested. In this process of dying the cerebral cortex first stops functioning.

The cortex is that part of the brain which controls the higher divisions of the central nervous system and regulates the adaptation an organism makes to changes in the environment. Ivan Pavlov, the famous Russian physiologist, proved that it was the locus for the conditioned reflex centers.

By the timetable of human evolution, the cerebral cortex was the last to arrive. The youngest and most sensitive, it is particularly vulnerable to adverse conditions and, in this

process of dying, the first to stop functioning. The expiration of its activity is indicated by loss of consciousness and the absence of those special electric currents known as brain waves which record on the oscillograph during the death process.

After the cortex, the lower divisions stop functioning; next the spinal cord goes out of action; and last of all the medulla oblongata dies—the lungs and the heart then stop working, and somatic or clinical death, as it is called, sets in.

But in spite of the external signs of death—the termination of cardiac activity and respiration—the vital activity of the organism has not yet ended completely. If death has taken place with the important organs undamaged—as a result of shock, loss of blood or electric



Professor Vladimir Negovsky heads the research work on combatting untimely death.

following steps: blood and adrenalin are pumped into the arteries; artificial respiration is induced by use of special instruments; uncoordinated contractions of the cardiac muscle fibers are stopped; the physician then starts massaging rhythmically with his hand the heart that had stopped beating, thus pumping the blood from the heart into the blood vessels.

The all-round scientific study of death processes and restoration of vital functions, however, has barely begun. The most immediate problem is to prolong the period of clinical death. The five or six minutes before the irreversible changes in the cells of the cerebral cortex manifest themselves and biological death sets in is much too short a time to take the necessary steps for resuscitation.

But even if it were possible to restore the vital functions of a human being after a longer period, this would still be a defective, "brainless" being, without intellect. To prevent that, measures must be taken to retard the speedy degeneration of the cortex cells and thus prolong the period of clinical death.

Artificial Cooling

As long ago as the beginning of the century the Russian scientist Porfiry Bakhmetyev proved that by artificially cooling the organism of a warm-blooded animal a state of retarded vital activity could be induced. The rate of metabolism is lowered, less energy is used up



This schoolboy was brought to the hospital in death agony. The surgeons of Negovsky's laboratory saved his life by their resuscitation method based on pumping blood into an artery.

The period of clinical death in animals who died as a result of loss of blood can be extended now from the usual five or six minutes to almost an hour by use of anaesthesia and hypothermy.



and the organism's nutrition requirements are diminished. Hence, decay of the cells which require a constant supply of nutritional substances and oxygen is retarded.

Artificial cooling — hypothermy — is now used in cardiac surgery in the Soviet Union and other countries. Highly complicated and lengthy heart operations which the patient could not survive at normal body temperature, are now performed successfully under hypothermy. Artificial cooling is also being employed in Soviet research to prolong the period of clinical death.

In experiments with animals whose death resulted from loss of blood, the period of clinical death has been prolonged from the usual five or six minutes to a half hour and even an hour by use of anaesthesia and hypothermy.

After a clinical death lasting for nearly an hour, Soviet scientists were able to restore all the vital functions, including those of the cerebral cortex. A notable step forward this is in the solution of that most universally significant of research problems—how to prolong human life.

COOKING IS THEIR

By Georgi Pavlov

IVAN Abroskin is chef of the big cafeteria at the Petrov factory in Stalingrad which manufactures farm machinery and oil equipment. The cafeteria is housed in a two-story building on the plant grounds, and has two large dining halls and a gleaming modern tile and stainless steel kitchen. It's Abroskin's job to see that his 3,000 daily customers get up from the lunch and dinner tables well-fed and pleased with the dishes he serves.

Usually you will find Abroskin—he'll be pointed out to you as the stocky man in the snow-white jacket and high chef's hat—standing over the electric stove with his eye fixed on a simmering griddle. It's likely to be a new fish dish he's experimenting with—Ivan is famous for his fish delicacies. When the dish is fried to the exact turn that meets his very demanding tastes, he'll be glad to answer your question.

How he evolved into a cook? Abroskin says he has to go back quite a stretch to answer that question. In 1928, when he was 17, he came to Stalingrad from his native village

to learn a trade. He got a job at the construction site of a tractor plant and learned how to operate an excavator. But he very soon traded his excavator bucket for a cook's ladle.

"A Bushel of Salt"

"This is the way it happened," Ivan explains. "Evenings after work my friends and I used to cook our own suppers in our rooming house. We arranged it so that each of us was cook in turn. But the boys liked my cooking best, so they all insisted that I make supper every day. That's how I started cooking.

"Every once in a while I'd get a pointer from one of the real professionals and try it out on the boys. I liked cooking so much that I decided to change trades and got a job as a kitchen hand at a factory cafeteria. I was lucky enough to work under Vasili Chernikov, the head cook. He was fond of young people and used to gather all the kitchen hands like myself around him and teach us the fine points of the trade.

"I still remember his favorite expression. When we'd bombard him with questions—why do you do this and how do you do that—he'd stop and say: 'Take it easy. Step by step. Don't be in such a hurry to swallow every recipe before you taste the salt in it. You'll have eaten a bushel of salt before you become a cook worth the name.'"

Abroskin ate his "bushel of salt" a long time ago. He celebrated his thirtieth year in the kitchen in 1958. It's no easy job meeting the tastes of so many different people, he'll tell you, but he likes the constant challenge and, say his customers, it's the very rare occasion when his dishes don't hit the spot.

Wartime Chef

Even during the war period, with rationing and shortages, Abroskin was famous for his imaginative touch with food. He worked in one of the kitchens that served the army during the heroic defense of Stalingrad. After that incredible battle which turned the tide of the

Lunch or dinner costs 5-7 rubles at the plant cafeteria where Ivan Abroskin is chef. Partially or completely cooked meals can be carried out at a 10 per cent discount.



R BUSINESS

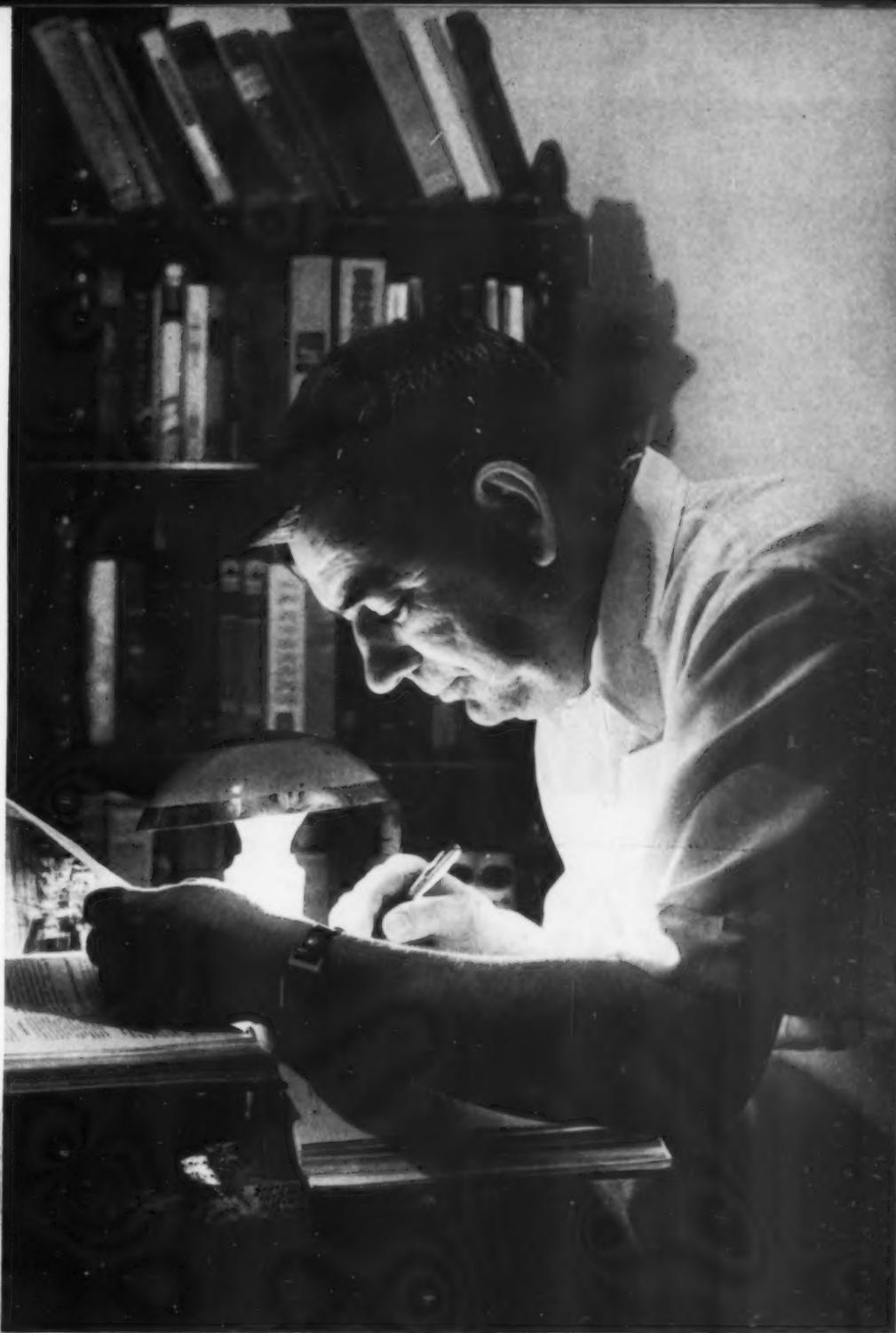
war the city was a picture of desolation—nothing but ruins, piles of broken brick and twisted steel surrounding the burned down skeletons of houses and factories. Practically every building in the city had to be rebuilt.

The cafeteria where Abroskin had worked was completely destroyed. At Beketovka on the outskirts of Stalingrad a small single-story building by some miracle had remained intact. "This is your cafeteria," the veteran chef was told.

He and the staff pitched in, built what was necessary, installed equipment and got started cooking for the people who were rehabilitating the city. It wasn't long before Stalingrad was back to normal with new stores and restaurants. Shortly afterward, Abroskin's cafeteria was moved to one of the new buildings.

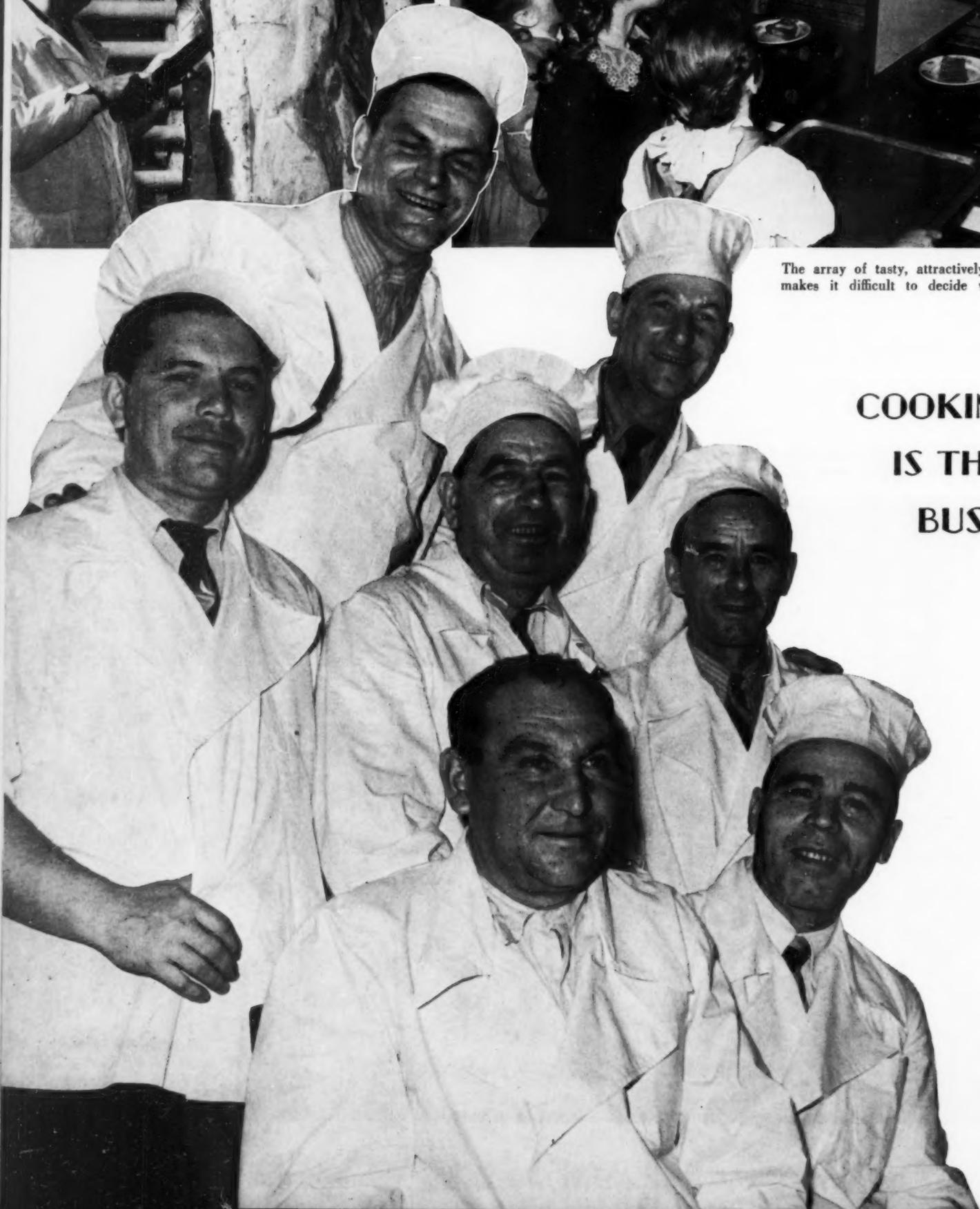
Ivan's big problem then was cooks. There weren't any available, so he trained his own. One of the students Ivan taught in that little cafeteria in Beketovka, Matryona Lavrova, has been working with him ever since. Now she's a first class cook in her own right.

Ivan Abroskin has been collecting cook books for years and credits the hobby with his inspirations for new ideas.





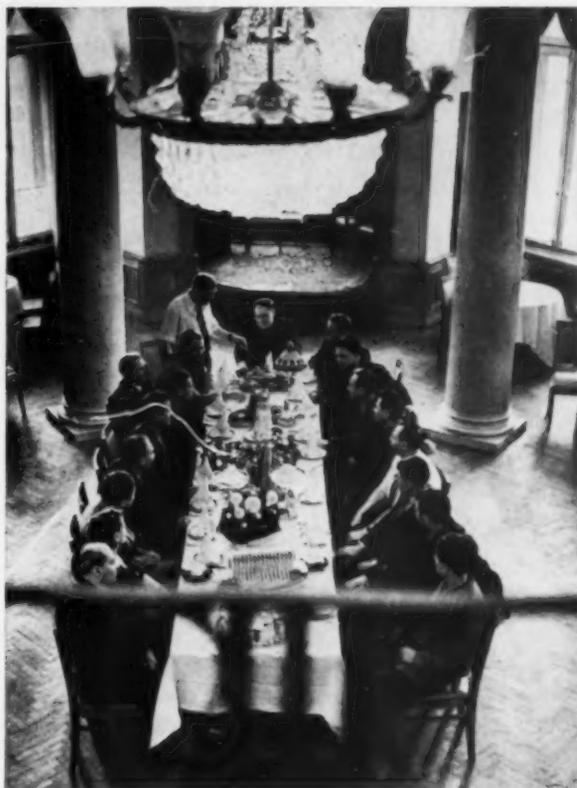
The array of tasty, attractively prepared food makes it difficult to decide what to choose.



**COOKING
IS THEIR
BUSINESS**



Ivan Abroskin (right), who has trained many a good cook, breaks in Victor Bashmakov.



The Stalingrad Culinary Board meets regularly to pass on the merits of new creations concocted by the city's leading chefs.



Dishes are checked to make sure they meet the high standards of nutrition.

Tasty Menus

Abroskin's cafeteria services the Petrov Plant workers and their families. A three-course dinner runs five to seven rubles. The bill of fare, changed daily, offers five or six soups and broths, ten to a dozen entrees and several choices of dessert. Typical dishes are chicken broth, borshch, steak, chicken with rice, fish, pudding, stewed fruit, ice cream.

Abroskin follows the likes and dislikes of his customers very closely. He recently set up a special baked goods department when he noticed a steady demand for pancakes and *vareniki* (curd or fruit dumplings). Now tasty meat pies, patties, cakes and doughnuts are available all the time.

Ivan likes to quote the statement of Pavlov. The famous physiologist said that to eat normally and healthfully means to eat with appetite and pleasure. That, says Abroskin, is the motto he cooks by.

The food in his cafeteria is so appetizing that many women prefer to serve his dishes at home instead of doing their own cooking. These ready-prepared dinners are packed in vacuum flasks and other heat-conserving vessels and are sold at ten per cent less than dinners eaten at the cafeteria. Besides these prepared dinners, the cafeteria sells about twenty different kinds of half-ready items, from dehydrated soups to chops and steaks that take very little time for the working housewife to prepare.

Abroskin's cafeteria also caters for birthdays, weddings and other such festive occasions and will prepare special menus on re-

quest. A section of the cafeteria, incidentally, is reserved for those on special diets prescribed by physicians.

Besides being a top quality chef Abroskin does some inventing on the side. He recently worked out a device with a revolving drum which scales fish in a matter of seconds. This is one of his many ingenious gadgets to lighten kitchen chores.

Abroskin has won honors for his culinary skill. In 1954 the Ministry of Trade awarded him the title "Master Cook"—the highest citation in the public catering trades. Besides the honor, the award meant a substantial increase in wages. He was also appointed a member of the Culinary Council. This council, responsible to the Ministry of Trade of the Russian Federation, studies and publicizes the best practices in public catering.

Abroskin lectures and gives demonstrations at the Stalingrad School of Culinary Apprenticeship where young secondary school graduates get a two-year course to qualify as chefs. Many of Abroskin's former students now work in restaurants and cafeterias in Stalingrad and other cities of the country.

Quality Food and Service

The Petrov Plant cafeteria is supervised by the City Soviet. More directly, a committee of the trade union at the plant, the Public Catering Control Committee made up of thirty or so workers at the plant, sees to it that the cafeteria's food and service is up to par.

This is general practice in all commercial and industrial enterprises. There are about

3,000 of these voluntary public inspectors who check on cafeterias and restaurants in Stalingrad. They have a good deal of authority and a complaint from an inspector as to quality of food or service will ordinarily bring speedy remedy. On occasion, as happened recently with Valentina Yeliseyeva who worked in one of the factory cafeterias in Stalingrad, a cook will be discharged on the complaint of a public inspector.

All food establishments are inspected regularly by physicians and food is tested to see that it measures up to the required standard of quality and caloric value.

There are some 600 restaurants of various kinds in Stalingrad, patronized by a third of the city's 600,000 population. The daily turnover is in the neighborhood of a million rubles. Another 250 restaurants are soon to be opened as part of the plan to increase the number of public catering establishments. Nationally more than 64,000 cafeterias, coffee houses and restaurants will be added within the next half-dozen years to the present 127,000 which cater to some 37 million people. Scheduled too are further reductions in prices.

In the very near future these restaurants will be supplied with half-prepared dishes instead of the raw ingredients, shipped from central mechanized factories which will prepare food on a large scale. A factory of this kind is now being built in Stalingrad. Says Abroskin: "I'm all for the idea. First, it cuts down on labor in the kitchen; second, it's a better guarantee of top-quality food and cooking; third, with lower overhead, we'll be able to reduce our prices again."



Much of the charm of the children's programs lies in the fact that the youngsters themselves participate. This five-year-old is telling her interviewer which radio plays she liked best last year.

MOSCOW BROADCASTS FOR CHILDREN

By Sergei Bogomazov

SSH! DADDY'S LISTENING to the children's program.

Now that doesn't mean that daddy has gone off his rocker. Our children's broadcasts have an appeal and interest for all ages, and that means we have achieved a measure of success.

The programs are broadcast six times a day from Radio Moscow over a countrywide hookup. They add up to approximately 3 hours 40 minutes of listening time—almost 1,500 hours a year—the equivalent of 55 whole days and nights! They rank high in inventiveness and listening interest, and draw millions of children to the radio.

One of the reasons these programs are so popular is that they are not only *for* children, but to a large extent are *by* children. That augments their educational value.

Wide Range of Programs

The morning starts with *Pioneers' Reveille*—a 25-minute program for school children. It combines music with items of interest from all over the world. It is not a mere newscast. There are interviews, stories and on-the-spot reports; parents, teachers and children are invited to speak. In short, there's not a dull moment.

One broadcast, for example, told the story of the school pupils in the far away village of

Nizhni Cherek in the North Caucasus who with their own hands dammed a mountain stream and built a small hydroelectric station. This was quite an undertaking, and you can imagine the excitement of the young builders on the great day when the generator was switched on and electric lamps lighted the school and homes of the collective farmers for the first time!

Things like this fire a child's imagination. This is the way the younger generation is brought into the country's construction effort, the life of the nation.

Helping mother is another big topic, and what to do with the mischief-makers at school. In fact all the million and one things that make up the life of the younger generation are dealt with.

Another popular program is *Talking Heart to Heart*. It is recorded live at the school auditorium or local recreation center. The boys and girls meet some well-known writer, journalist, scientist or any other person they hold in high esteem and shower him with questions. They also express their own opinions. This program goes on the air without any coaching.

For instance, senior pupils in Leningrad—16- and 17-year-olds—devoted an evening to an interesting talk on love and friendship. Freely and frankly they expressed their thoughts on true love and friendship. One of the girls



That the unrehearsed broadcasts are the most fun is quite obvious from the kindergarten group performing on the program For the Littlest Ones.



Irina Pototskaya, one of the Russian Federation's finest artists, is doing a program for pre-school children that includes reading favorite fairy tales.

spoke about jealousy—could it be reconciled with genuine love?

In Moscow the popular children's writer Lev Kassil had a talk with juvenile readers on the subject of taste. His audience gave serious thought to what they understood by really good taste. He was bombarded with questions and there was a lively discussion, much laughter, lots of fun and witty observations.

Literary Mailbag is another fascinating program. It not only excites juvenile interest but does a good job in popularizing literature. The mail brings letters packed with questions indicating that the younger generation likes to read and go far beyond the school syllabus. Here are some of the questions:

What should one read about Pushkin?

How can one become a poet?

What did Shakespeare express in *Hamlet*?

What is meant by impressionism?

Literary Mailbag is conceived as an aid to school children, as a means of broadening their scope of knowledge. Those questions which are not of general interest are answered by mail.

Another highlight is the sports program called Ready, Steady, Go. It has been on the air for 10 years now and is still going strong. Its purpose is not only to popularize sports as a spectacle, but to get the youngsters interested in active participation.

And now a word or two about the toddlers, about those who do not yet go to school, who only recently learned to dress themselves and for whom the ABC's are still a deep mystery.

They are great radio fans, and listen with delight to such broadcasts as Story after Story and Your Favorite Book. They love the radio plays featuring Little Red Riding Hood, Puss in Boots, Snow Maiden and Tom Thumb—the favorites of every child.

Science on the Air

Our older generation has coined a proverb: A man is not a man if he has not planted at least one tree in his lifetime. One of the popular science programs which goes on the air carries this a step further. It inspires the children to try their hand at gardening. Scientists and laymen tell the children about nature, its secrets and wonders. The children, too, come to the microphone to talk about the things they have done and to share their experiences.

Budding landscape gardeners—pupils in School No. 80 in Stalingrad—told how they turned a strip of ground that had been torn up by shells and mortar bombs during the historic battle for the Volga stronghold into a pleasant garden. Their effort so delighted them that they composed a song about it and sang it for their audience.

The other sciences are also presented in a no less interesting manner.

Books are wonderful, but not even the best of them can take the place of meetings and talks with people—men and women renowned for their accomplishments. So Radio Moscow has a program called the Personalities Club. One of the most interesting broadcasts on this program was recorded in a laboratory where the children met Professor Negovsky and saw a real miracle. Before their eyes a dog whose heart had ceased beating was restored to life.

The questions with which they showered the professor and his answers made a lively and interesting broadcast. And how useful it was to be reminded that often things that on the surface might seem unimportant, in reality are quite useful—that heroism is needed not only on the field of battle but in the quiet of the laboratory.

Questions and Answers

Children have an insatiable curiosity. The word "why" is one of the first that falls from the child's lips. As he grows up, his interests widen. So it is not at all surprising that Radio Moscow's response to the never-ending stream of all kinds of "whys" was the Question and Answer program.

Twice a month scientists, inventors, ex-



Lena Varvarova, 9, and Olesya Larchenko, 13, have just been invited to appear on a children's music program. Olesya played a duet with Van Cliburn when he was in Moscow.



The programs appeal to the children's sense of right and wrong. Of course, anyone can listen, but only those who get good marks in school, behave properly and help others are allowed to participate.

MOSCOW BROADCASTS FOR CHILDREN

plorers, sports champions, and other interesting people come to the microphone to answer teasers like these:

What is lethargy?

How and when did everything that surrounds us come into existence?

What food should I give to my guinea-pig and at what intervals?

What is the purpose of a radio beacon?

Certainly the producers of Questions and Answers have plenty to do to keep up with their audience.

Two years ago in October their daily mail-bag swelled to breaking point. It's not hard to guess why. Of course, it was the launching of the first sputnik.

"What is inside it, that's the thing that puzzles me," wrote Volodya Naumov from the Crimea. From two eight-year-olds came the urgent query: "What keeps the sputnik up, why doesn't it fall down to earth?"

Naturally, the sputnik broadcasts by scientists were a terrific success.

The Lighter Side

Who doesn't like to laugh? Certainly Soviet youngsters laugh as heartily as any.

So far we have spoken only of educational programs. But Soviet boys and girls are also interested in the lighter side—in art, in the theater, in music.

We broadcast many plays. Some are recorded directly from the theater, others are

radio plays. The range is wide—comedy, adventure, dramatizations of favorite books and fairy tales—everything but crime and horror stories.

The programs bring us Pushkin and Gogol, Tolstoy and Turgenev, Swift and Dickens, Cervantes and Andersen, Daudet and Jules Verne, Chekhov and Gorky, Marshak and Mark Twain.

The theaters in the country don't have nearly as many names on their billboards nor plays on their stages as the unseen Radio Theater.

Extremely popular is the radio show Dimka-Nevidimka. Its hero, the eight-year-old pupil Dimka, puts his faith in the magic cap, nevidimka—the invisible—which, in his imagination, helped him to enter unseen the teacher's room where he changed his "Poor" marks to "Excellent."

And who can leave the radio set when out of the old copper pitcher—which had lain at the bottom of the river for 3,000 years—there suddenly appears the gray-bearded oriental magician Khotabych? Liberated by the Pioneer Volka, the old genie continues to perform his astonishing wonders but, alas, in our workaday world he is always getting into scrapes.

Then there is our old friend—Hans Christian Andersen with his famous Talking Frog, the saucy Darning Needle, and the little Tin Soldier—story after story, each funnier than the other. And where but on radio can such a character as Darning Needle be played with

such brilliance? After all in the theater this role cannot be played even by the most talented actor.

It is interesting to follow the progress of some of the plays from the microphone to the stage. Dimka-Nevidimka, for example, is now being played at the Central Children's Theater. The radio play *The Three Fat Men* gave Vladimir Rubin the idea for his comic opera presently running at the Saratov Opera House.

"Music Is In My Heart"

These words, spoken by the great Russian composer Glinka, while still a boy, could with every justification be repeated by the millions who listen every week to Music Box, the request program for young music enthusiasts.

"Dear Music Box," write two schoolgirls from Krasnodar Territory, "please play the Dance of the Cygnets from *Swan Lake*. Tchaikovsky is our favorite composer."

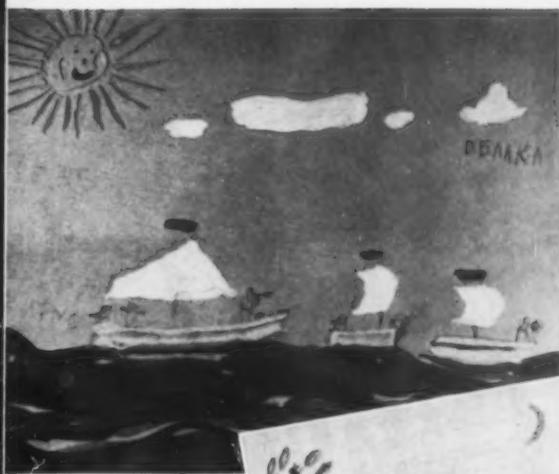
"I cannot tell you how much I love music," writes sixteen-year-old Vera Pekhtereva from far away Petrozavodsk.

"Everything begins with music: happiness, sorrow, and love," is the philosophical thought contained in a letter from Gurgen Arutunyan, technical school student in Yerevan.

But it is not enough to like music, one must be able to understand it. And this is the function of the Children's Music Club program. The clever use of literature helps to hold the interest of the young listeners and



It's a full-time job to read all the letters, usually accompanied by gifts, sent by young listeners to the studio each day, but it's one Studio Editor Elena Lebedeva finds most rewarding.



These are three of many drawings made by pre-school children which the studio received in response to an art contest announced over the radio.

goes far to demonstrate a point. For example in the talk on melody, which without words expresses the feelings and moods of people, the producers included an excerpt from Chekhov's story *The Steppe*.

"... Suddenly the sound of a song, sung softly, was heard. A woman was singing nearby, but where exactly, and in what direction, it was difficult to say. . . . Yegorushka looked around but couldn't make out where the strange song came from. . . . He began to think that the grass was singing. . . ."

Then there are the entertaining guessing concerts *Which Country?* This is a musical program in which lyrical stories about different lands are interwoven with their national music. In this series we might single out the *Musical Tour of Indonesia* and the concert devoted to Japan.

The children react in a most lively manner to these broadcasts. Not only do they guess the country from which the music comes but of their own accord they write additional information about these countries. So the children make fascinating tours round the world on the wings of music.

"Riddle-Me-See"

The words "Riddle-me-See" came over the air for the first time in the spring of 1944, when the war was still raging. The characters in this program—the boy Borya, the girl Galochka, and their grandfather—come to the

microphone once a month to present riddles to the listeners.

The riddles broaden the minds of the small children and arouse their interest in the things around them. It is a program broadcast only for those who are not naughty and who listen to their elders. And how many solemn promises and candid admissions there are in the letters from the young listeners! "I have been naughty, but I promise to be good." "On my word of honor I will stop quarrelling, please let me join in." "I won't break Mother's cups any more."

An entire exhibition could be arranged, with the gifts which pour into Riddle-me-See from the children.

The morning mail is being opened and all at once a fragrance fills the producer's room. In reply to a riddle about a flower-bed some youngsters have sent flowers in envelopes.

After the riddle "the useful sisters" (about buttons), so many of the envelopes contained buttons that the producers didn't know what to do with them.

And now, here is a riddle for you:

How many letters has Riddle-me-See received during the sixteen years this program has been on the air?

The answer: over half a million.

Is there such a thing in the world as a magic taxi?

Hardly—would be the reply of those who have never heard the program for children known as *The Magic Taxi*.

The Magic Taxi

But the youngsters know that it exists. They see it on the air at holiday time and it takes them wherever they want to go. Of course, it goes to Fairyland and has room for as many passengers as you please. Step in! There is room for all except . . . you know who. And after every mile the magic speedometer throws out sweets of every description for the little ones.

The *Magic Taxi* is a new program, a new kind of children's review combining scenes and sketches from the most popular radio programs.

Broadcasting accompanies the Soviet child throughout his life. Children guess the answers to riddles and become friendly with the bears and rabbits of the fairy tales. Radio helps the school children to study better and opens a window for them into the great and wonderful world.

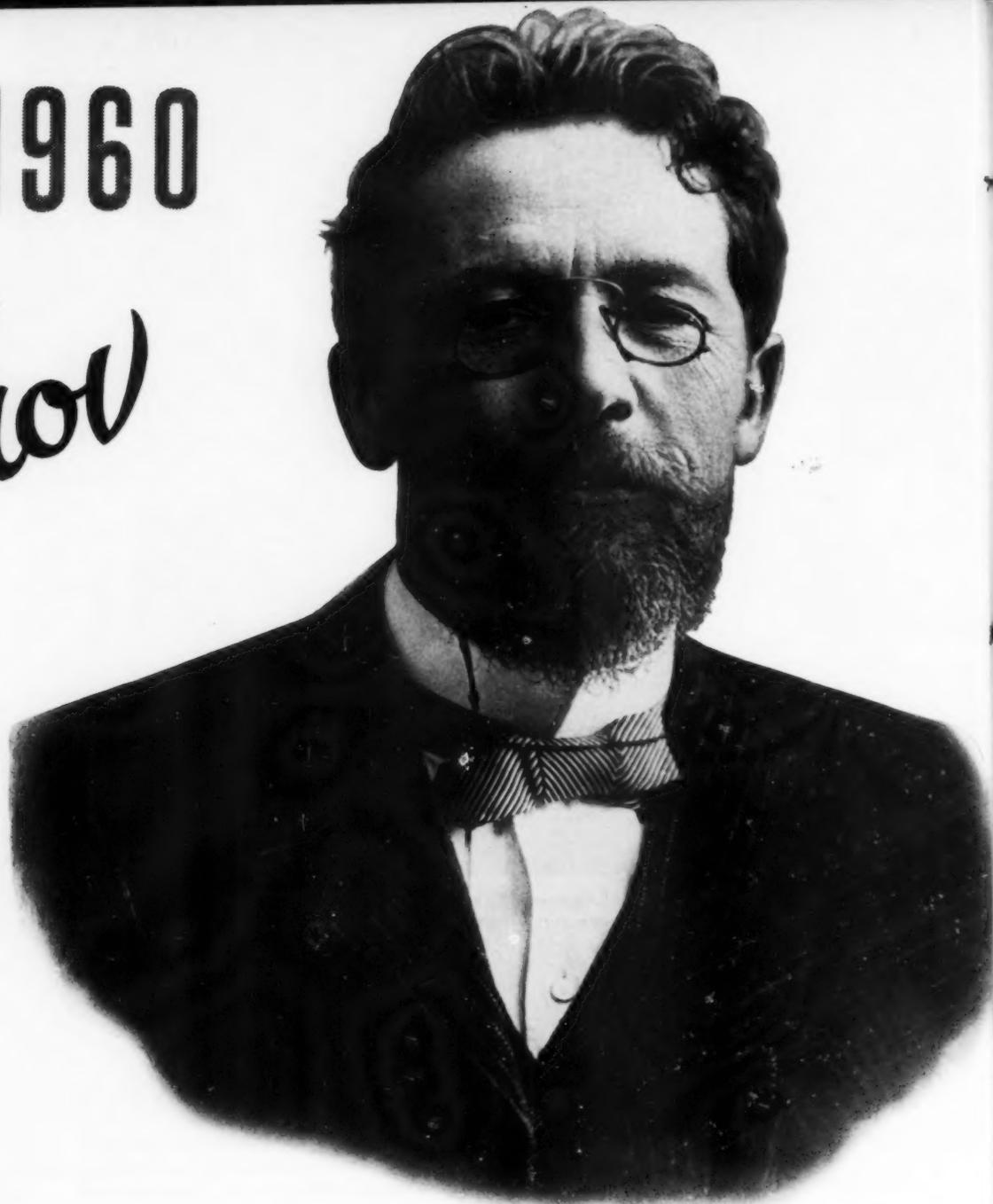
And when school days are over and our young are confronted with the question—What shall I be, what path shall I take in life?—the radio comes to their aid, telling them about the wonderful opportunities awaiting them in their future life.

Radio is a source of knowledge, a delightful companion, a reliable friend and counselor. That is why every day millions of Soviet children impatiently await the announcement:

"And now we present another program for our young listeners."

1860 - 1960

Chekhov



By Zinovi Paperni

One Hundredth Anniversary of the Birth of the Great Russian Writer and Playwright

ANTON PAVLOVICH CHEKHOV lived a comparatively short life. He died in 1904, a year before the first Russian revolution, when he was only 44.

But passing time has shown that these 44 years were only the beginning of a long life for this writer in the hearts of generations of readers. Chekhov, conquering time and distance and brushing death aside, is the wise and understanding friend of hosts of people in every continent.

For a quarter of a century he was a prolific writer of short stories, novelettes and plays. An edition of his complete works and letters published in the Soviet Union runs to 20 bulky volumes. He began to write in his youth. While still a medical student at the University of Moscow he contributed to various humor-

ous magazines. They wanted stories from him that were short and amusing. He used to say in jest that they had to be "shorter than a sparrow's beak."

Ever since his childhood, Chekhov had had a flair for humor and the brief and amusing stories they asked for flowed with ease from his ready pen.

One of the very early stories which he did not include in his collected works is that of a long-time bachelor explaining why he stayed single although he wanted a family. He had fallen in love several times and each time, just when it seemed that happiness would be his, fate had interfered. He invited Zoya, a girl he loved "madly, passionately, awfully" to the opera to hear Faust. To the magic strains of the overture he began to speak to her of music

and love, but at the crucial moment he was seized with a fit of hiccupping which was as "irrepressible, mad and awful" as love. Zoya turns away, embarrassed, and her papa, a colonel, mumbles indignantly into the erstwhile fiance's ear, "Sir, if you had to hiccup, why didn't you do it at home."

Stories of Laughter and Tears

Early in his career Chekhov moved on from these facile sketches, really half anecdotes, to stories in which humor was mingled with tragedy, stories of laughter and tears. Take his *Polyinka*. On a casual first reading, it would seem to be no more than another amusing little anecdote, but it is much more than that.

Polyinka, young, slender and blonde, is sent by her mistress, owner of a fashionable dress-making establishment, to buy some lace and buttons at Paris Novelties, a dry-goods shop. The salesman who waits on her describes the various items in stock, but every now and then we hear a personal note that tells us he is in love with the girl and is jealous because she is taken with someone else, a student.

The conversation between the two builds around a playful contrast of the articles on sale and confessions of love. But the story, instead of making you smile, makes you feel sad as you go on reading.

At the same time that the salesman tries to conceal his own emotions, he has to hide Polyinka from sight when she bursts into tears. Aloud he says, "We have two kinds of lace—cotton and silk," and in an undertone, "For God's sake, dry your tears, there's some one coming this way."

In the story the humor serves to underline the sadness, just as the salesman's confused shop talk accentuates Polyinka's sobs.

Biting Satire

Tracing Chekhov's creative path, one is impressed by the firmness with which the writer turned down those publishers and editors of humor magazines who insisted that he confine himself to the droll and the entertaining. While still young he was writing biting satiric stories which exposed bureaucrats and bootlickers.

Pages of books by the mature Chekhov are filled with charming pictures of the Russian countryside written in a clean, terse style, with none of the traditionally florid "descriptiveness". Against this unadorned background of natural beauty he depicts the sordidness and emptiness of the life of his time, without goal or meaning.

A character in one of his plays says, "Sometimes when I lie awake I think: Lord, thou hast given us enormous forests, boundless fields and great vistas. Living surrounded by all this we should be giants."

"Brevity is Talent's Sister"

Chekhov sketched the most diverse types of characters in the Russia of the 19th and early 20th centuries. He portrayed the intellectual in *A Dull Story*, *Teacher of Literature*, and *The Black Monk*; the merchant in *Three Years* and his other novelettes. He chose characters who resented the existing order, who dreamed of a better world, located not in the heavens but on their native earth.

He discarded long descriptions and detailed editorial comments to explain the behavior of his characters—a resort of the insensitive writer who does not credit his readers with sufficient intelligence to draw their own conclusions. Chekhov aimed at a pithy and succinct style. He practiced his own well-known dictum "Brevity is talent's sister."

Chekhov's great force lies not alone in his own genius but in his faith in the reader's ability to perceive, feel and grasp all that the writer wishes to say through his characters. He believed that an idea must not be obtrusively thrust into a story but must unfold naturally with the characters and the plot.

His themes and characters are most diverse. But for all their difference they have an inner unity and a pervasive motif. Wherein does happiness lie? How can it be found?—this is the keynote and underlying theme of all Chekhov's work.

In one of his stories, he wrote, "A harmonious duet alone does not make for personal happiness. What is needed is a harmonious trio with life itself as the third party. But life never enters into an alliance. It always goes its own way."

The point Chekhov was making is that it is not enough for a man and woman to love each other. Life, too, must love them. The tragedy of Chekhov's heroes is that their love of life remains unrequited. Bigotry, money-grubbing, mercenary self-interest, exploitation, red-tape, falsehood and violence—all these were the typical order of things in pre-revolutionary Russia. The happiness that Chekhov's heroes dreamed of came up sharp against an ugly, mocking reality.

The best of his characters are not satisfied with a placid, sheltered and smug "happiness", simply an enjoyment of the comforts of life. They say, "A comfortable and undisturbed existence is not happiness." Happiness comes with freedom to create, with the effort and labor to build. It does not come with spiritual complacency and indolence. *Teacher of Literature*, one of Chekhov's most typical stories has this as theme.

Teacher of Literature

Nikitin, a teacher of literature, seems to get everything he wants. He loves Masha, she returns his love, they get married. Only two years ago he was a student living in cheap lodgings. Now he is a respected teacher in the high school with a lovely bride, and a fine dowry of a house, 20 thousand rubles in cash and an estate thrown in. Life is pleasant, comfortable and very snug, he thinks, sprawled on the Turkish divan in his study.

Masha turns out to be an efficient and economical housekeeper. When she finds a piece of stale cheese or sausage in the cupboard she unflinchingly finds a use for it. "They'll eat it in the kitchen," she says. Her whole world is centered in her home and family.

Nikitin and his wife are a harmonious duet, but not a trio, for life does not enter into an alliance with them. They have fenced themselves off from life. They live only for themselves, with no interest in anything and anybody else.

One night Nikitin returns from his club in bad humor. He had lost twelve rubles at cards and as he paid up, his partner had remarked that he "wallowed in money," obviously referring to the dowry. It gives Nikitin an unpleasant feeling. The money, and the rest of the dowry had come to him without effort, so had his happiness come, without effort. And suddenly all of it turns sour.

As he comes home, he sees his wife, matronly and self-possessed, taking a sip of water to wash down candied fruit. At her side is a fluffy white cat purring away. It is all peaceful and placid—and unendurable.

"He thought that, besides the soft lamplight smiling upon that tranquil domestic happiness, that besides the narrow world in which he and

that cat over there lived so peacefully and sweetly, there was another world. . . . And passionately, to the point of anguish, he longed for that other world so that he would himself work somewhere, in a factory or workshop, hold forth from a speaker's platform, compose, publish, tire himself, suffer. . . ."

This is Chekhov's vision of happiness—disturbing, exacting, irreconcilable with Philistine smugness—a longing for free and creative labor.

One of his notebooks has this entry: "You must have decent, well-dressed children, and your children, too, must have a good home and children, and their children also children and good homes, and what for—the devil knows."

A home, comfort, good clothes, all these, of course, are essential, but they do not make up the whole meaning of life. Nikitin feels suffocated in his stuffy, Philistine world. ". . . To run from here, run today, otherwise I shall go mad!" he writes in his diary.

The Bride

Nadya, the heroine of *The Bride*, the last story Chekhov wrote, also has to make her choice between a life of comfort and well-fed indolence and one that is a search and struggle for real happiness. On the surface, Andrei, her fiance, seems a good match—handsome, distinguished-looking, with an elegant turn of phrase. But when he speaks of his love, it seems to her as though she had read it all before in an old-fashioned novel.

One day Andrei takes her to the house where they are to live after their marriage. She sees a gleaming parquet floor, furniture upholstered in bright blue, and a massive gilt frame displaying a nude. She is repelled by the ostentatious luxury.

Andrei puts his arm around her waist and speaks rapturously of the happiness that awaits them but she is conscious only of the oppressive vulgarity around her.

To marry this idler in love with himself, to look at the nude in the gilt frame every day, to lead an empty life of leisure—this is to be her life. We are prepared to have her bid farewell to dreams of a fuller and happier life.

But Chekhov would have her end the story differently. On the eve of the wedding Nadya breaks off her engagement and leaves town. She leaves happy, her thoughts on a future full of unknown promise in which she will study, work and become mistress of her own destiny.

In Chekhov's last play *The Cherry Orchard* written after *Sea Gull*, *Uncle Vanya*, and *Three Sisters*, the heroine also breaks with her life of empty idleness. Her own and her friend's young voices are gay and challenging as they cry, "We greet you, new life!"

This is the motif of Chekhov's work. He was not a man to reconcile himself to prosaic existence. He sat in ruthless judgment on those who stagnated in their self-complacent little worlds, who thought only of their own small selves. Chekhov's finest characters spurn such an existence. They are intent on changing their lives, they are searching for a happiness that is an essential part of this world. They live in a world of turmoil and of struggle and of endless quest.

GOOSEBERRIES

By Anton Chekhov



THERE ARE TWO of us brothers—I, Ivan Ivanich, and my brother, Nikolai Ivanich, two years younger. I went in for a learned profession and became a veterinary surgeon, while Nikolai started working in a government office when he was only nineteen. Our father, Chimsha-Himalaisky, was educated in a school for the sons of private soldiers, but he died with an officer's rank and left us his title of nobility and a small estate. After his death the estate went to pay his debts, but at least our childhood was spent in the freedom of the countryside, where we roamed the fields and the woods like peasant children, taking the horses to graze, peeling bark from the trunks of lime trees, fishing, and things of that sort. And, you know, anyone who has once in his life fished for perch or watched the thrushes fly south in the autumn, watched how they rise high over the village on clear, cool days, is spoiled for town life and will long for the countryside for the rest of his days. My brother was miserable in his government office. The years passed and he went on sitting in the same place every day, went on writing the same documents and thinking of one and the same thing—how to get back to the country. And this longing of his gradually turned into a fixed idea, into a dream of buying himself a little estate somewhere on the bank of a river or the shore of a lake.

He was a gentle, good-natured fellow and I loved him, but I never could feel any sympa-

thy with this desire to shut himself up for the rest of his life on a little estate of his own. They say that a man needs only six feet of earth. But six feet is what a corpse needs, not a man. They say, too, now, that if our intellectuals yearn for the land and a country house, this is a good sign. But these estates are nothing but those same six feet of earth. To escape from the town, from the struggle, from the bustle of life, to retreat and bury oneself on one's country estate is not life, it is egoism, laziness; it's monasticism of a sort, but monasticism without good deeds. It is not six feet of earth, not a country estate, that man needs, but the whole earth, all nature, room to display his qualities and the individual characteristics of his free spirit.

My brother Nikolai, sitting in his government office, dreamed of how he would eat soup made from his own cabbages which would fill the whole yard with a delicious aroma, how he would eat out of doors, on the green grass, sleep in the sun, sit for hours on a bench near his gate, gazing at the fields and woods. Books on farming and the hints in almanacs were his delight, his favorite spiritual sustenance. He liked reading newspapers, too, but all he read in them were advertisements of the sale of so many acres of arable and meadowland, with residence attached, a river, an orchard, a mill and millpond. His head was full of visions of garden paths, flowers, fruit, nesting boxes, carp ponds and things of that sort. These visions varied according to

the advertisements he came across, but for some reason gooseberry bushes invariably figured in them. He could not picture to himself a single estate or picturesque nook that did not have gooseberry bushes on it.

"Country life has its advantages," he would say. "You sit on the veranda drinking tea, with your own ducks swimming on the pond, and everything smells so nice, and . . . and the gooseberries ripen on the bushes."

He used to draw up plans of his estate, and every plan showed the same features: a) the main house, b) the servant's cottage, c) the kitchen garden, d) gooseberry bushes. He lived frugally, never had enough to eat and drink, dressed any which way, like a beggar, and saved all his money and put it in the bank. He became terribly stingy. It used to hurt me to see him, and whenever I gave him a little money or sent him a present on some holiday, he put that away, too. Once a man gets an idea into his head, there's no doing anything with him.

The years passed and he was transferred to another province. He was over forty and was still reading advertisements in the papers and saving his money. Then I heard that he had married. With the same idea in mind, to buy himself an estate with gooseberry bushes on it, he married a homely elderly widow, for whom he had not the slightest affection, just because she had some money. After his marriage he went on living as parsimoniously as ever, half starving his wife and putting her money in his own bank account. Her first husband had been a postmaster and she was used to pies and cordials, but with her second husband she did not even get enough black bread to eat. She began to pine away in her new life, and three years later gave up her soul to God. Of course my brother never for a moment thought himself to blame for her death. Money, like vodka, can play queer tricks with a man. There was a merchant in our town who asked for a plate of honey on his deathbed and ate up all his money and lottery tickets with the honey so that no one else should get it. And one day when I was examining a consignment of cattle at a railway station, a drover fell under the engine and his leg was cut off. We carried him into the waiting room, with blood pouring down—a terrible sight—and all he did was to keep begging us to look for his leg, worrying all the time. He had twenty rubles in the boot and he was afraid they would be lost.

After his wife's death my brother began to look for an estate. You can search for five years, of course, and in the end make a mistake and buy something quite different from what you have been dreaming of. My brother Nikolai bought three hundred acres, complete with a gentleman's house, servants' quarters and a park, as well as a mortgage to be paid through an agent, but there was no orchard,

no gooseberry bushes, no duck pond. There was a river, but the water in it was the color of coffee because the estate lay between a brickyard and bone kilns. But my brother Nikolai Ivanich was not a bit disconcerted by this. He ordered two dozen gooseberry bushes and settled down to the life of a country gentleman.

Last year I paid him a visit. I thought I would go and see how he was getting along. In his letters my brother gave his address as Chumbaroklova Pustosh or Himalaiskoye. I arrived at Himalaiskoye in the afternoon. It was very hot. There were ditches, fences, hedges, rows of fir trees everywhere, and I couldn't figure out how to drive into the yard and find a place to leave my carriage. As I walked toward the house a ginger-colored dog as fat as a pig came out to meet me. I'm sure he would have barked if he had not been so lazy. The cook, who was also as fat as a pig, came out of the kitchen, barefoot, and said her master was having his after-dinner rest. I made my way to my brother's room and found him sitting up in bed, his knees covered by a blanket. He had aged and grown stout and flabby. His cheeks, nose and lips were pendulous—I half expected him to grunt into the blanket.

We embraced and wept—tears of joy mingled with sadness—to think that we had once been young and were now both gray-haired and approaching the grave. He put on his clothes and went out to show me his estate.

"Well, how are you getting along here?" I asked.

"All right, thank God. I'm doing very well."

He was no longer the poor, timid clerk, but a real landowner, a gentleman. He had settled down to country life and was really enjoying it. He ate a lot, washed in the bathhouse and was getting fat. He had already gotten into legal tussles with the parish, the brickyard and the bone kilns, and took offense if the peasants did not call him "Your Lordship." Like a good landowner, he looked after his soul and performed good deeds pompously, never simply. And what good deeds! He would dose the peasants with bicarbonate of soda and castor oil for all their ailments, and on his name day he would have a special thanksgiving service held in the middle of the village and treat the peasants to half a bucket of vodka, which he thought the right thing to do. Oh, those horrible buckets of vodka! One day the fat landlord hauls the peasants to court for letting their sheep graze on his land, and the next, if it's a holiday, he treats them to half a bucket of vodka, and they drink and sing and shout hurrah and lick his boots in their drunkenness. A change to good eating and idleness develops the most insolent complacency in a Russian. Nikolai Ivanich, who had been terrified of having an opinion of his own when he was in the government service, now uttered nothing but platitudes, and these in the tone of a minister of state. "Education is essential, but the people are not ready for it yet." "Corporal punishment is harmful as a rule, but in some cases it is beneficial and indispensable."

"I know the people and I know how to treat them," he said. "The people love me.

I have only to lift my little finger and the people will do whatever I want."

And all this, mark you, was said with a kindly smile of wisdom. Over and over again he repeated: "We, the gentry," or "speaking as a gentleman," and seemed to have quite forgotten that our grandfather was a peasant and our father a common soldier. Even our family name—Chimsha-Himalaisky—in reality so absurd, now seemed to him sonorous, distinguished and delightful.

But my point does not concern him so much as myself. I want to tell you what a change came over me in those few hours I spent on my brother's estate. While we were having tea in the evening, the cook brought us a plateful of gooseberries. These were not gooseberries bought for money; they came from his own garden and were the first fruits of the bushes he had planted. Nikolai Ivanich laughed with joy and for a full five minutes looked at the gooseberries with tears in his eyes. Speechless with emotion, he popped one into his mouth and glanced at me in triumph, like a child who has at last been given a longed-for toy, and said:

"Delicious!"

And he ate them greedily, repeating over and over again: "Simply delicious! You try them."

They were hard and sour, but, as Pushkin said: "The illusion which exalts us is dearer to us than a thousand sober truths." I saw before me a really happy man, one whose dearest wish had come true, who had achieved his aim in life, had gotten what he wanted, and was content with his destiny and with himself. There had always been an element of sadness in my idea of human happiness, and now, confronted by a happy man, I was overcome by a feeling of sadness bordering on despair. It weighed on me particularly at night. A bed was made up for me in the room next to my brother's, and I could hear him moving about restlessly, every now and then getting up to take a gooseberry from the plate. How many happy, satisfied people there must be after all, I said to myself. What a suffocating force it is! Just look at life—the arrogance and idleness of the strong, the ignorance and bestiality of the weak, horrible poverty everywhere, overcrowded dwellings, degeneracy, drunkenness, hypocrisy, lying . . . Yet in all the houses and in all the streets there is peace and quiet. Of the fifty thousand people who live in a town, there is not one who would cry out, who would give vent to his indignation aloud. We see the people going to the market for food, eating by day and sleeping by night, prattling away, getting married, growing old, following their dead to the cemetery. But we do not hear and we do not see those who suffer, and what is terrible in life goes on somewhere behind the scenes. Everything is peaceful and quiet, and against it all there is only the silent protest of statistics: so many go mad, so many gallons of vodka are drunk, so many children die of malnutrition. . . . And this, obviously, is what we want. Apparently those who are happy can only enjoy themselves because the unhappy bear their burdens in silence, and if it were not for this silence, happiness would be impossible. It is a kind of universal hypnosis.



There ought to be a man with a hammer behind the door of every happy man, to remind him by his constant knocks that there are unhappy people and that however happy we may be, life will sooner or later show its claws and some misfortune will befall him—sickness, poverty, loss—and nobody will see it, just as he now neither sees nor hears the misfortunes of others. But there is no man with a hammer, and the happy man goes on living and the petty cares of life touch him lightly, like the wind in an aspen tree, and all is well.

That night I understood that I, too, had been happy and content. I, too, while out hunting or at the dinner table, had held forth on the right way to live, to worship, to govern the people. I, too, had declared that without knowledge there can be no light, that education is essential, but that bare literacy is sufficient for the common people. Freedom is a blessing, I had said, as necessary as the air we breathe, but we must wait. Yes, that is what I had said, and now I ask: Why must we wait? Why must we wait, I ask you. For what reason? Don't be in such a hurry, they tell me, every idea is realized gradually, in time. But who says so? Where is the proof that it is so? You refer to the natural order of things, to the law governing all phenomena, but is there order or logic if I, a living, thinking creature, should stand on the edge of a ditch and wait for it to be gradually filled up or choked with silt, when I could jump across it or build a bridge over it? Tell me again, why must we wait? Wait, when we have no strength to live and yet must live and are full of the desire to live!

I left my brother early the next morning, and from that time on I have found it impossible to live in town. The peace and quiet oppress me, and I am afraid to look into windows, because there is now no more dreadful spectacle for me than a happy family sitting around a table having tea. I am old and no good for the struggle, I am not even capable of feeling hatred. I can only suffer inwardly, get irritated and worked up; at night my head burns with the rush of ideas and I cannot sleep. . . . Oh, if only I were young. If only I were still young!

—Abridged



Alexei Katkov and the 7-Year Plan

AS THE SECOND YEAR of the seven-year plan begins, there is hardly a corner of the country that doesn't show signs of the progress made in every field of national endeavor. How has the plan touched the average Soviet worker? Has he, in its first year just ended, felt any change in his working life, in his home life, in his leisure time pursuits?

Let us look into the history of Alexei Katkov, a worker at the Frezer tool manufacturing plant in a Moscow suburb.

Alexei Katkov is 48 years old. He was born in the village of Vnukovo in the wooded countryside of Moscow Region. Although his father worked at the railroad shops in the city, poverty forced him to keep his family in the village, and it was only on rare occasions that he could afford to visit them. All

Alexei remembers of his childhood is perpetual want and work far beyond his strength and years. At the time the country was barely recovering from the destruction of the First World War, the Civil War and the foreign intervention which followed the Socialist Revolution of 1917.

At 17 Alexei was working as a loader on the railroad. Later he took another unskilled job in a bakery. But he wanted to learn a trade and so he applied for a job at the Frezer plant in 1934. There he became a lathe hand and later a machine-tool set-up man.

Alexei had just begun to make his way, had gotten married in 1940—"fairly late," as he says—when the Nazi armies attacked the Soviet Union. The plant was evacuated to the East and Katkov went to the West—to fight at

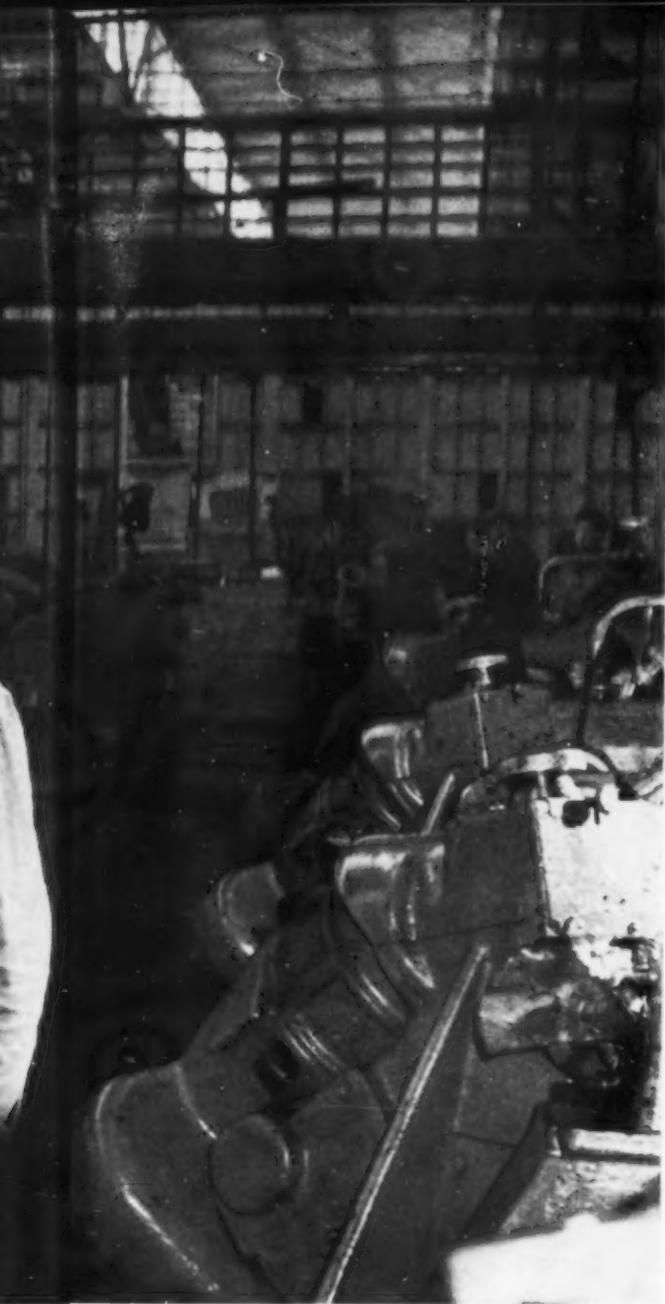
the front. In December 1941 he was seriously wounded and received an honorable discharge and a disability pension.

In spite of his disability he returned to the plant. His first daughter, Nina, was born while the war was still in progress; Elena came three years later.

So much for Katkov's past history. Now for 1959 and the first year of the seven-year plan. He and the rest of the Frezer personnel had a big job to do last year.

Automation Increases Productivity

Frezer was built in the early thirties and its shops were originally equipped with imported machines. Good at that time, they are outdated now. So the plant's seven-year plan



Alexei Katkov (left) is a machine-tool set-up man at the Frezer plant where he has been working for 25 years.

By Adolf Antonov

Photos by Alexander Mokletsov

calls for re-equipping the shops with more efficient machinery, both by installing new equipment and modernizing many of the old machines.

Workers released because of increased mechanization and automation are not discharged. The plant constantly expands production and there is a choice of new jobs. For those who wish to acquire new skills the management offers free retraining courses. This is one of the provisions in the collective agreement concluded annually between the plant's trade union committee and the management.

Another provision is that the management cannot discharge or transfer workers without the union's consent. Safeguarding the workers' interests, the union also participates in any



The stores have a lot more clothing to sell these days and the people a lot more money with which to buy. Wages have gone up in spite of the decrease in the working day.

The Katkovs moved to a new apartment last year and are now refurnishing it. The first purchase on an installment plan, adopted lately, was a radio-phonograph combination.





Alexei has gotten his two daughters interested in helping him collect picture postcards.

Alexei Katkov and the 7-Year Plan

revision of production quotas for each job affected by technical innovations.

The modernization program at Frezer was very soon apparent in the plant's operation—labor productivity rose, on an average, by one third. Since wages at Frezer, like anywhere else in Soviet industry, are based mostly on the piece-rate system, the increased productivity meant higher earnings.

"When we increase productivity," comments Alexei Katkov, "we know our country becomes richer. It's not only my personal earnings but the wealth of the whole nation that insures the prosperity of my family."

A certain proportion of the increased profits of the plant was channelled into the national budget for the needs of the entire country. Combined with the profits of all the other plants and factories, these are used by the government for further expansion of the national economy, for accelerating housing construction, for more and better education, medical care, cultural facilities and other services enjoyed by the nation as a whole and by each family individually. In line with this is the provision of the seven-year plan to cut the working day without reduction in pay.

Shorter Hours—Higher Wages

Last September the working day at the Frezer plant was cut from eight to seven hours. As for the workers' wages, Alexei Katkov is typical. Formerly he averaged 6.74 rubles an hour and now his hourly rate has risen to an average of 8.12 rubles.

Calculated on a weekly or a monthly basis his wage after the transition to a shorter working day not only was not reduced but as a matter of fact was increased somewhat. With his regular premiums for good work, Alexei's average earnings now reach 1,500 rubles a month. On top of that he still draws his monthly pension of 200 rubles for service disability.

About the new seven-hour schedule Alexei says: "It makes a big difference in the size of the day. There are always more things you want to do than you have time for."

There's more time for Alexei's hobbies. He was a pretty good soccer player in his day. But now he's quite satisfied to sit in the stands and cheer for the Spartak eleven, his favorite team. And like the loyal rooter he is, the fact that they did not do so well last year did not make him any less enthusiastic.

Leisure Time Activities

Alexei has been an active trade unionist for many years. At present he is chairman of the cultural committee of the union local at the plant. The committee's main job is to arrange leisure time activities.

During the summer months, for example, the workers of the Frezer plant like to take trips to the countryside together, going out in chartered buses with their families. They play soccer or volleyball, swim or hike in the woods. An orchestra and refreshment bar add to the enjoyment. As many as a thousand people have participated in these week-end excursions.

The workers pay nothing for this kind of leisure time activity. Also free of charge for workers and their families are various amateur art groups, sports facilities and the plant's library. For all these and other cultural services the management allocates 100,000 rubles annually. The union provides some 50,000 rubles a year in addition.

"Invisible Income"

These expenditures are only a fraction of what Soviet workers term their "invisible income." Its various items do not appear in Katkov's pay envelope, but they mean a sizable addition to the family budget. This "invisible income" will be increasing with every year of the seven-year plan.

To get an accurate picture of the family budget, we must, for instance, take into account free schooling all the way through college for Katkov's two daughters. Then there are free medical and dental services, including major surgery and hospitalization if they are required, for every member of the family. Also, the state social security system which provides sick benefits and old-age and disability pensions.

There are many more—a whole long list of

welfare services allocated in an increasingly larger slice of the national budget every year. Take the matter of an annual vacation with full pay guaranteed to every Soviet worker by law.

This year the Katkovs plan to go South, to one of the vacation resorts in the Crimea or the Caucasus. Not only do they draw their normal pay, but their trade union will get them accommodations at 30 per cent of the actual cost or perhaps pay the entire bill from the state social security fund.

Rent and Taxes

Now let us take housing. One of the major goals of the seven-year plan is to end the housing shortage in the country. The target for the seven years is 15 million new apartments in towns and cities and 7 million new houses in the countryside. It averages out to more than three million new housing units yearly.

The Katkovs got one of the new apartments built last year. They live in a housing project near the plant. Their apartment is not large, but it's adequate for a family of four.

Rent in the Soviet Union is lower than anywhere else in the world. The Katkovs pay only 72 rubles a month, which comes to about 3.3 per cent of their joint monthly earnings. Katkov's wife works as a packer at the Frezer plant, and they together earn about 2,200 rubles a month.

The Katkovs pay an income tax of 90-100 rubles a month on their earnings. This comes to a low 5 per cent or thereabouts. But even this relatively low tax is slated to go. The intention of the Soviet government—Chairman Khrushchev told American audiences when he visited the United States—is to abolish all taxes on income in the very near future.

More Consumer Goods

Last year the Katkovs, like most Soviet families, bought more than they did during the preceding year. There has been considerable expansion in the manufacture of consumer goods as part of the seven-year plan. The retail stores are much better stocked than they ever have been and the quality of the goods sold is higher.

The other side of the picture is that the Katkovs, like all other Soviet families, have more money to spend. Both derive from the same cause, the greater productivity of the Soviet economy.

The Katkovs are presently outfitting their new apartment. They are buying their furniture on the installment plan recently introduced. They pay 20 to 25 per cent of the price of the article at the time of purchase and the rest they ask the plant bookkeeper to deduct from their wages in installments over a specified 6- to 12-month period.

"All in all," say the Katkovs, "the first year of the seven-year plan has been a good one for us. It has brought us more income, a shorter working day, a new apartment and more goods of all kinds. We look forward confidently to an even better second year of the seven-year plan."



An evening gown of black silk embroidered with beads. The matching wrap has a high standing collar and a nipped-in waist.



The Central Fashion House in Moscow has daily shows where current styles of the season are displayed.

Fashions for 1960

This soft wool dress with wide tie and big patch pockets comes in lovely pastel shades.



Pale rose ensemble—wool for skirt and jacket, lush satin for blouse and lining.



By **Lyudmila Turchanovskaya**
Designer, Central Fashion House

OUR COUNTRY is so large and has so many different nationalities, each with its own background of tradition and taste in clothes, that our dress designers cannot dictate a featured style for the season. Although a particular fashion trend may win general favor, it will be modified and individualized by the fashion houses of each of the Soviet Union's republics.

There are 24 fashion houses in the larger cities. The designers pool their ideas and models at annual shows. The leading houses in cities like Moscow, Leningrad, Kiev and Riga, send their patterns to dress factories elsewhere in the country.

This season Soviet women favor the dress belted at the waistline. Large off-the-neck collars are very much the vogue. Very popular,



For street wear (left to right): Three-quarter coat and matching skirt of checkered wool; two-piece striped wool dress; printed ensemble with umbrella to match and pert solid-colored roller.

This warm sport jacket is made of wool and goatskin from Uzbekistan. It is worn with a beret which follows the lines of a peaked cap. Beret and jacket are finished in handsome braid.



Fashions for 1960

too, are fur stoles, capes and coats, as well as fur trimmed suits. Many of the printed and woven fabrics are patterned on folk designs, different in various parts of the country. The tones are rich and the silhouettes flattering. The garments are both modish and practical.

The majority of the styles are designed to be mass-produced. At our Central Fashion House in Moscow we design about 3,000 styles every year for shipment to factories throughout the country complete with technical specifications.

The Fashion House in Moscow employs about 50 designers, most of them graduates of the Moscow Textile Institute. The largest group—all women—work on dresses. The coat and suit designers are mostly men. There are other departments for children's clothing, furs, millinery and accessories.

We have a well-stocked library with books on the history of costume, technical material on design and pattern making and style books from France, England, the United States and other countries. The library is used a great deal by our own designers and by people in related industries—textile, knitwear, shoe and others.

At the Moscow Fashion House we display some 250 samples of garments—house dresses, evening gowns, sport clothes, suits and coats. We also show men's and children's wear. This is a permanent fashion show, open to the public, with mannequins modeling the latest

A loose-fitting gray Persian lamb coat with wide cuffed sleeves for nippy winter weather.





Velveteen and waterproof rep have been cleverly combined to produce a rain ensemble. It is pretty enough to wear even on the sunniest of days. The hooded coat is reversible.

styles from the stage of a specially equipped hall. Women who make their own clothes may buy patterns if they wish. A second display hall is reserved for the trade.

In recent years we have been taking part with increasing frequency in international fashion shows and expositions. Our garments have been shown in Austria, Canada, China, the German Democratic Republic, Greece, Poland, Turkey, the United States and other countries. We will generally display 20 to 30 styles of different kinds. These are not especially made. They are chosen from the regular stock of the Moscow Fashion House or other garment design centers.

We have been flattered by the increasing attention and approval of foreign stylists. We are pleased, of course, but attribute it to the fact that we are challenged by the demands Soviet women make on us all the time, like women anywhere else in the world, for more original and more interesting creations.



Sport slacks are worn with a crew-neck sweater and waterproof jacket.

The dress underneath is made of the same nubby tweed as the fur-trimmed belted coat.

Wide stitching on pockets, sleeves, collar and front trim this smart soft wool box coat.



This fitted wool street dress with tucked waist has a matching coat with a blue fox collar.



The most popular business suit this season is worn with a warm vest of harmonizing color.

Milady's three-quarter padded wool coat has a white lambswool collar and hat to match.



Everybody Has A Winter Hobby



It's hard to convince a real devotee of winter sports that a vacation at any other time of year is not wasted. But vacation time or not, there's plenty to do. Skating rinks and ice-hockey matches lure those who like to keep close to home, while the ski trails in the countryside beckon the more adventurous to tourist lodges that provide for both indoor and outdoor pleasures. Though the thermometer registers below freezing, the warmth of good fellowship that prevails is an integral part of winter fun.





MOVING slowly from North to South, winter finally settles down on most of this country that stretches across two continents. By January woods and fields are blanketed with snow and lakes are frozen. Only the subtropical Black Sea shore and the Central Asian valleys are as green as ever.

Life, however, is by no means frozen anywhere in the country. Almost everyone has a winter hobby and awaits winter with its special charm. Soccer matches are replaced by ice-hockey contests, and tennis and basketball courts are flooded to make ice-skating rinks. A run through the woods on skis is as much fun as swimming and sunbathing. Ice fishing is no less pleasurable than trolling from a boat.

The resorts are open and many people prefer to take their annual vacations at this exhilarating time of year. Ask a schoolboy which he prefers—summer or winter vacation—and he is likely to vote for summer. But only because it's longer. Otherwise he likes his winter vacation—the first two weeks in January—as well as his two-month summer vacation.





During the winter semester break students flock to the mountains of the Caucasus and Kazakhstan for skiing, skating and hiking. The hard-packed snow near the cabins makes a good field for ingenious games played with a volleyball. There's always somebody around strumming a guitar, and as the skiers return they join the improvised chorus. And for the lull between planned activities, nobody is too old to enjoy a good snowball fight.

Everybody Has A Winter Hobby

The same holds for the college student. His winter vacation—in late January and early February—is a busy and exciting time no matter in what part of the country he lives. If he is a hiker, he finds young men and women with the same interest at the many winter touring centers. And after a day on the trail, there is the base to return to with its crackling fire and friendship and indoor games.

If he is an athlete, there are scores of local and national winter contests. Soviet students have their own sports society called The Stormy Petrel. It has an active—this is a participating, not a spectator—membership of 1,340,000 and dozens of sports centers and vacation resorts scattered throughout the country.

This time of year winter sport addicts flock to the mountain slopes of the Caucasus at Bakuriani and the Alta-Tau Range in Kazakhstan. Early in January the country's top skiers compete at Bakuriani in racing and jumping. After that the students take over. Whether they are novices or experts, there are slopes to fit everyone's skill. And atop the peaks to which the ski lifts carry them is a breathtaking view of glorious mountain country.

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EVERYBODY HAS A WINTER HOBBY
see page 62



