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USSR

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U.S. BASKETBALLERS POSE FOR A PICTURE IN FRONT OF THE CZAR GUN, AN OLD RELIC ON THE KREMLIN GROUNDS.

USSR

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Front cover: American pianist Van Cliburn, winner of the International Tchaikovsky Music Contest, is congratulated by Nikita Khrushchev at a Moscow reception.

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*The Soviet Union Favors More
Scientific, Cultural and Trade Exchanges
with the United States*



LINKS OF GOOD WILL

THE most important word in today's international dictionary is coexistence. Translated into any language, coexistence means neighborly relations, and neighborly relations means peace for a troubled world.

From its founding the Soviet Union has worked to develop friendly relations with all countries, to broaden the area of mutual understanding and trust through cultural, scientific and trade exchange.

International agreements for reciprocal visits of artists, actors, dancers and athletes, scientists and teachers, farmers and businessmen, people in a large range of occupations and avocations have been increasingly fostered by the Soviet Union. Such agreements have been concluded with many countries, including the West European nations, and cover exchange of people, films, publications, broadcasts. With many of these countries mutually beneficial trade agreements have been negotiated.

The value of these exchanges and trade agreements can hardly be overstressed. Aside from their more direct service in providing for an exchange of cultural, technical or scientific work or an exchange of goods, they contribute immeasurably toward that mutual understanding which the world so sorely needs today.

When people are given an opportunity to get together, to sit around a dinner table as guest and host, to discuss problems in an effort to reach a common meeting ground, suspicion and mistrust dissolve. As people learn about each other they find similarities and sympathies that are larger than their differences and disagreements.

Certainly that has been adequately shown by the reception accorded Van Cliburn and the Philadelphia Orchestra in the Soviet Union and by the equally warm response to the Moiseyev dancers in the United States. It has been demonstrated, in every one of the exchanges, whether of musicians, or farmers or college students. The exchanges have all been most successful, there have been no failures.

Each visit has brought a wish and a demand for more—more tours and concerts, more athletic contests, more meetings of scientists. So, too, with commercial agreements.

They have invariably been followed by renewals on a larger scale and a greater scope wherever they have been concluded.

The progress of American-Soviet exchanges in the few months since the agreement was signed last January is a hopeful promise for the future. Premier Khrushchev expressed the feelings of all Soviet people in his June 2 message to President Eisenhower, when he wrote:

"The recent Soviet-American agreement on exchanges in the fields of culture, technology and education was, I believe, a good practical step toward rapprochement between our countries.

"It is gratifying that this agreement has been widely approved both in the Soviet Union, and the United States, and in other countries. This, I believe, is due primarily to the fact that the peoples have seen it as concrete proof that Soviet-American relations can really be bettered, holding out hopes for a general improvement of the present unstable and alarming international situation."

The agreement is regarded in the Soviet Union as a foundation stone upon which a solid structure of Soviet-American understanding can be built, rather than as a hard shell within which the accord is to be confined. The Soviet Union is eager to broaden the exchange program, to provide many more opportunities for the people of our countries to get to know each other.

We should like to see more tourists traveling both ways, more exchanges of delegations, more pooling of knowledge and experience. We should like to see a resumption of large-scale trade between our two countries, trade that could run into billions of dollars, with benefits equally advantageous for both sides. We should like to see Soviet and American scientists teamed in an all-out attack against the scourge of cancer, and Soviet and American research pooled in a joint exploration of the cosmos.

The prospects for exchange and cooperation for the world's good are boundless. All that is needed is trust and good will. The Soviet Union is ready to join forces with the United States to work toward these great objectives.



U.S. PIANIST VAN CLIBURN AND HIS SOVIET CONDUCTOR, KIRILL KONDRASHIN.

SIX MONTHS OF USSR-USA EXCHANGE

By ALEXANDER KUZNETSOV

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

THE Moiseyev dancers and Van Cliburn have become popular household words in both the Soviet Union and the United States in a relatively short period. The mention of either of these ambassadors of friendship is generally enough to convince even the most doubting skeptic of the actual value of the exchange agreement signed six months ago by representatives of our two countries.

The joint communiqué issued last January hailed the agreement as "a significant first step in the improvement of mutual understanding between the peoples of the Union of Soviet Socialist Republics and the United States . . . It is sincerely hoped that it will be carried out in such a way as to contribute substantially to the betterment of relations between the two countries, thereby also contributing to a lessening of international tensions."

This agreement is extremely important and the first one in twenty years between the two powers. Its signing and implementation proves that it is possible for the two countries to confer and reach decisions on important questions between them.

The Soviet Union has similar agreements

with some 90 foreign countries. All of them have had a most favorable effect on the development of friendly relations and have contributed to mutual understanding. The atmosphere of good will, which is the natural by-product of these agreements, motivates further efforts to extend them, since we believe this would help improve the international climate.

When Van Cliburn won the Tchiakovsky Piano Competition in Moscow, he became friendly with his Soviet conductor, Kirill Kondrashin. That relationship grew to the point that when Cliburn was about to return to America, he invited Kondrashin to accompany him. Kondrashin conducted the orchestra in the pianist's appearances in the United States and then in Europe, too.

Our mutual agreement provides for exchanges in such media as motion pictures, radio and TV programs, and in a number of cultural, educational and technical fields. It covers the exchange of scientists engaged in research, of students and university instructors, of physicians and artists, of agricultural and industrial experts and of athletic teams. I think that the experience of these six months since the agreement was concluded

has been found most promising by both sides.

Although we have had some exchanges with each other prior to this agreement, they have been occasional and rather piecemeal. There was the American *Porgy and Bess* company that was very warmly received when it performed in Moscow and Leningrad in 1955. Then there was the Boston Symphony last year, which also was widely hailed by our audiences.

But as a result of the present agreement, the exchanges are now definitely planned. They cover a much larger area and are the rule instead of infrequent exceptions.

American music lovers turned out in throngs for the recitals given by two visiting Soviet artists, the pianist Emil Gilels and the violinist Leonid Kogan. The American opera star Blanche Thebom was given an ovation when she sang the lead in *Carmen* before a standing-room audience of thousands at Moscow's Bolshoi Theater. Then there were the brilliant concerts of the Philadelphia Orchestra conducted by Eugene Ormandy. Later, when Leopold Stokowski conducted Soviet symphony orchestras in Moscow, Leningrad and Kiev, there was not nearly enough

room to seat everybody who wanted to attend.

As a parallel to this there followed the reception given the Moiseyev Folk Dance Ensemble in many American cities which found every ticket sold months in advance of the performance. There is no reason to believe a less enthusiastic reception will be accorded the Beryozka Folk Dance Company when it starts its United States concert tour later this year, or the famous Bolshoi Theater's Ballet when it dances in 1959. Soviet audiences are eagerly awaiting the appearances of scheduled American artists at about the same time.

The representatives of the Soviet and American governments agreed to an extensive program on the exchange of motion picture productions that includes the purchase of films, the exchange of motion picture industry experts, the joint production of films, and provides for a Soviet Film Week in the United States coupled with an American Film Week in the Soviet Union at the end of 1958.

All of these questions were discussed in the initial conferences between the delegation of Soviet film experts and the Motion Picture Association of America during last March and April in Washington. We hope that at the second conference to be held in Moscow both sides will agree upon the commercial exchange of film productions and other pending questions.

Joint film production is under consideration and Soviet producers have suggested that they would like to join the Americans in filming three features: *Martin Eden* based on Jack London's novel; *Sergei Rachmaninov*, a biographical film of the great composer; and *Airlines of Friendship*, which is built around the nonstop flight from the USSR to the USA of the Soviet airmen Chkalov, Belyakov and Baidukov in the thirties.

Soviet proposals have also suggested the joint production of several documentary and popular science features. These might include a color film of interesting buildings in the two countries, a full-length documentary in color on the work of scientists in the International Geophysical Year, one on the peaceful uses of atomic energy in both our countries, another on farming, and a series of nature films done in both countries.

Another section of the agreement covers exchanges of radio and TV programs in such subjects as science, technology, industry, farming, education, public health and sports, and for the exchange of delegations of radio and TV experts.

We feel that the exchange of authors and artists, including sculptors, as provided in the agreement, will be beneficial to the public of both countries in helping convey the realities of the life of each people through these media.

In June a group of editors of American student newspapers and magazines toured the Soviet Union for one month while their Soviet counterparts were visiting educational institutions in the United States. The student journalists of both countries were given a complete picture of college life and saw many other things of interest while making new friends abroad.

In July the agreement was further implemented when 20 Soviet and 20 American

students exchanged visits following a plan worked out between the Committee of the USSR Youth Organizations and the USA Council of Student Travel.

There are another 20 undergraduate and graduate students of Moscow and Leningrad Universities who will start their work at Harvard, Columbia, Chicago, California and George Washington Universities, while 20 American undergraduate and graduate students will enroll in Moscow and Leningrad Universities. The number will reach 30 from each country in 1959.

The students of Columbia University have already started to make the acquaintance of their Soviet colleagues through programs prepared with the help of the radio and newspaper facilities of Moscow University. The broadcasts introduce Soviet students and professors, familiarize the Americans with procedures of Moscow University, its studies, extracurricular activities, athletics and sports. They generally give the visitors a preview of Soviet university life.

Another section of the agreement between our countries covers the exchange of scientists in various fields to conduct studies and to lecture before groups on their specialties. There has already been some activity in this area coming from arrangements concluded by the Academies of Sciences of our countries. Physicians in a broad list of medical fields have also made a number of exchange visits.

In the field of education the program is already under way. A large delegation of American educators visited the Soviet Union last June to study the Soviet school system. This group, headed by Lawrence G. Derthick,

U.S. Commissioner of Education, visited several Soviet cities during their month-long stay.

Commissioner Derthick recalled that all members of the American delegation were qualified specialists. Despite this, he said, they were amazed to find how little they knew about the Soviet system of education. This once again emphasizes the importance of exchange in all spheres.

Other delegations of Soviet educators and school experts are now visiting the United States, while American groups are visiting our schools and colleges to learn our methods and approach.

Several American delegations representing different sections of U.S. industry visited Soviet factories while reciprocal visits of American plants were being made by Soviet engineers and managers. During the first six months of the agreement more than ten such American delegations visited the Soviet Union, and some twelve Soviet groups of specialists in automation, plastics, agriculture and other fields inspected American institutions.

We have both witnessed a healthy degree of activity in our sports exchange program during this period. We have had competition in basketball, in wrestling and weightlifting, along with track and field sports and ice hockey games. In every instance the public of both countries manifested keen interest and appreciation.

Over-all, it can be seen, almost every section of the agreement has been put into action or will soon be implemented. The first six months have demonstrated good results and have shown the desirability of extending our contacts with each other. ■

LEOPOLD STOKOWSKI ACKNOWLEDGES DMITRI SHOSTAKOVICH AFTER PLAYING HIS 11TH SYMPHONY IN MOSCOW.





Anatoli Sofronov
Writer

As a writer, and especially as the editor of a widely read magazine—the illustrated weekly *Ogonyok*—I was really pleased that our two countries signed an exchange agreement. We writers feel that this agreement has special importance for us. By meeting your artists, athletes, farmers and scientists, and the average tourist, too, we'll get a better picture of your life and be able to convey it to our readers. When I was in the United States two years ago as a member of a delegation of journalists, I had a chance to travel through the whole country. Everywhere our delegation had to answer lots of questions about every aspect of life in the Soviet Union. By the same token, the Soviet people want to know more about the Americans. The agreement provides for all kinds of exchanges and will thus make it possible for us to really get to know each other. This is the surest way to better understanding.



SOVIET PEOPLE

Irina Semyonova
Housewife

Mothers the world over have much the same feelings about their children. Women who have borne children and have helped them grow to adulthood have a special stake in peace. That is why we are glad that an agreement was signed which will help strengthen friendship between our peoples.



Tamara Abalkina
Dressmaker

I am always on the lookout for new ideas and often find things I consider attractive in American fashions. All women like to be well-dressed and want smartly designed clothes for business and social wear. I think it would be a fine idea if we exchanged the best of our fashions.

Ivan Kuznetsov
Sales Clerk

Working behind a counter for years, as I have, you really get to know people—their characters, tastes, even their hopes. It's the same with trade between countries. I am sure that this would be still another way for us to find out how much Soviet and American people have in common.





Mikhail Kalatozov
Movie Director

Toward the end of the Second World War I had a chance to visit the United States and meet many people working in the movie industry. At that time Samuel Goldwyn, well-known producer, asked me: "When do we start joint productions?" The agreement enables me to answer his question: "Now."

Dr. Yevgeni Korovin
USSR Academy of Sciences

Recent Soviet-American contacts in the fields of culture, science and education are concrete manifestations of the principle of coexistence of states with different social and economic systems. Of course, what has been done so far is only the beginning, but we are headed in the right direction.



LEON USSR-USA EXCHANGE PROGRAM



Alexander Yakutin
Mechanic

As far as I know, Americans are a business-like people who can turn out a good job. That's something I like. I'm sure that if I happened to meet an American mechanic, we'd understand each other right away, without an interpreter. People who work at the same trade speak the same language.



Natan Zaidman
Chairman, Printshop Union Committee

In my position I get to know the opinions of those who are represented by our shop committee. I can say without any qualification that our workers and office personnel are heartily in favor of the exchange program. We are sure it will help us find new ways to cooperate for our mutual benefit.

Larisa Sadkova
Student

When I learned that 20 American students would be coming to the Soviet Union this fall in exchange for 20 Soviet students who will go to the United States, I was very pleased. We have students from many foreign countries in our colleges and now will be most happy to welcome Americans as our guests.





**Sergei Romanovsky, Chairman,
Committee of Youth Organizations**

The American people have a wise saying: "Where there's a will, there's a way." It comes to mind involuntarily when the conversation turns to the Soviet-American agreement on cultural exchange. To live in peace is the cherished dream of all young people. And no matter how great the obstacles, when we work together, we can find a solution. Young people are curious. They want to know, see and hear for themselves. Our young men and women are eager to meet the young people of America, to make friends with them, find out what their lives are like. They want to visit the United States and have American youth visit the Soviet Union. The agreement has taken this out of the realm of dreams and made it a living reality. Plans for exchanges have already been made in various areas of interest to youth. Some have been carried out, others are scheduled for the near future.



**Zinaida Lebedeva
Director of the TB Institute**

As a doctor, I would like to see all physicians join forces to eliminate disease. As a deputy to the USSR Supreme Soviet, I would like to see more contacts between legislators. A better understanding between our countries will go far toward helping to relieve the tension in international relations.

SOVIET PEOPLE ON USSR-USA EXCHANGE PROGRAM



**Alexei Surkov, First Secretary,
Union of Soviet Writers**

Friendliness and understanding between our peoples will increase daily with the implementation of the agreement. How much better it is to compete in the creation of cultural values to enrich the life of humanity rather than in new ways to destroy it. We have made a good start. Let's expand and broaden it!



**Matvei Ospishchev
Army Officer**

I met American officers and soldiers on the Elbe in April 1945, and we liked each other on sight. The friendship between our countries helped win the war. There is as much reason for us to work toward the same friendly relations to win the peace. The exchange agreement is a step in this direction.



**Varvara Detkova
Collective Farm Woman**

I've heard a lot about the achievements of American farmers. We here in our country have a slogan: "Let's surpass America in the per capita production of meat, milk and butter." I don't think the Americans will hold this against us, since no one can lose in this kind of peaceful competition.



AFTER SEEING AND PHOTOGRAPHING ALL THE EXHIBITS AND PAVILIONS, AMERICAN TOURISTS PAUSE FOR A PICTURE AT THE AGRICULTURAL EXHIBITION GROUNDS IN MOSCOW.

VISITING THE SOVIET UNION

CROWDS of tourists in increasing volume arrive from all parts of the world in cities, towns and villages across the expanses of the Soviet Union. Tourist travel has grown especially in the past years.

Official statistics show 485,000 foreigners visited our country in 1956, while last year the total topped 550,000. In 1957 there were 1,500 visitors from the United States, while the first half of this year showed a total of almost 2,500.

The flow of tourist travel is not at all one-sided. In 1956 there were 561,000 Soviet tourists abroad, while last year the number reached 716,000.

Choice of 40 Tours

Intourist, Soviet travel agency maintaining connections with travel agencies throughout the world, offers a choice of 40 tours. They range from a five-day junket to an extensive 23-day itinerary to principal cities. These tours are available in four classes of service: de luxe, first class, and tourist classes A and B. The price of each tour covers everything from hotel accommodations and meals, to interpreters, excursions and travel reservations for the entire period of the visit.

There are also tours for those who wish to drive their own cars and a service for guests who prefer to travel on their own routes and follow their own schedule.

Tours by Intourist include free passage between any two cities on an

itinerary within a 600-mile limit and also discounts from regular rail and plane fares. Additionally, there is a substantial saving in the special tourist rate of currency exchange. For Americans this provides ten rubles for each dollar instead of the official 4 to 1 rate.

Foreign guests who consider a short visit to the Soviet Union are offered five-day tours for either Moscow or Leningrad. Then there are tours covering both Moscow and Leningrad or other two-city combinations extending from six to ten days. The Intourist itineraries also include a variety of tours covering three or more cities selected by the visitor. These tours range from 12 to 23 days and afford an opportunity to see both the European and Asian parts of the Soviet Union.

Tourist Visas

Americans desiring to visit the Soviet Union can make their arrangements through any of the two dozen travel agencies in major U.S. cities with which Intourist deals. The agencies will provide all the information needed as to itineraries, prices and other details.

Visas are issued promptly through the Soviet Embassy in Washington once the proper documents are filed by the travel agency. There are no consular fees for tourist visas.

Regardless of what type of tour is taken, the visitor will find a hearty and cordial welcome everywhere in the Soviet land.

Continued on next page

Visiting the Soviet Union

Continued



VISITING AMERICAN CATERERS SAMPLE FOOD SERVED AT MOSCOW UNIVERSITY.



VALENTINA LEONTIEVA, A MOSCOW TV ANNOUNCER, AND AN AMERICAN FRIEND.



PROF. W. M. STANLEY, NOBEL PRIZE WINNER, GIVES A TALK ON VIRUS AND CANCER.



U.S. UNIVERSITY EDITORS VISIT THE OFFICE OF THEIR LENINGRAD COLLEAGUES.



SOVIET ACTRESS TAMARA MAKAROVA CHATS WITH SAM SPIEGEL, U.S. MOVIE DIRECTOR



AMERICAN VISITORS MADE A TOUR OF ONE OF THE NEW APARTMENT PROJECTS IN MOSCOW'S SOUTHWESTERN SECTION, A RESIDENTIAL AREA STARTED JUST A FEW YEARS AGO.



PROFESSOR DAWSON (RIGHT) FOUND MUCH TO DISCUSS WITH SOVIET PHYSICISTS.



A CAMERA FAN WORTH HIS SALT ISN'T FUSSY ABOUT WHERE HE CHANGES FILM.

Visiting the Soviet Union

Continued



IVAN LOVEIKO, MOSCOW'S CHIEF ARCHITECT, SHOWS AMERICANS THE CITY'S PLAN.



A DELEGATION OF AMERICAN SPECIALISTS HEADED BY PROF. TUN Y. LIN OF THE UNIVERSITY OF CALIFORNIA INSPECTS CONCRETE CONSTRUCTION IN A HOUSING DEVELOPMENT.

THE HISTORY OF LENINGRAD AND ITS BUILDINGS CAPTURED ON TOURISTS' FILM.

DR. E. BLAKE (LEFT) LED A DELEGATION OF U.S. CLERGYMEN ON A MOSCOW VISIT.



THIS IS A GOOD START

—says Robert Dowling

AMONG the recent American visitors to the Soviet Union was Robert W. Dowling, New York real estate executive and Chairman of the Board of the American National Theater and Academy. He also heads this organization's International Cultural Exchange Service. Mr. Dowling and his wife were the guests of the USSR State Committee for Cultural Relations with Foreign Countries.

During his stay, Mr. Dowling visited a number of cultural institutions and colleges in Moscow, Kiev and Leningrad. He was also in attendance at concerts and theatrical performances and met with representatives of the arts and professions, including leaders of various Soviet societies and organizations.

Mr. Dowling discussed means for furthering Soviet-American contacts, conferring with Georgi Zhukov, Chairman of the host Committee, Nikolai Mikhailov, Minister of Culture, and Nina Popova, Chairman of the Presidium of the Union of Soviet Societies for Friendship and Cultural Relations with Foreign Countries.

Before his departure Mr. Dowling was received by Prime Minister Nikita Khrushchev.

In an informal statement released to the press, Mr. Dowling recalled that this was his second visit in slightly more than a year and stated that it was all the more gratifying to find that cultural relations between the two countries had been so markedly broadened in that period. He said it seemed deeply symbolic to him that at a time when Americans have been enthusiastically applauding the performances of the Moiseyev



On his arrival at the Moscow Airport, Robert W. Dowling told correspondents and his hosts of his pleasure at coming back to the city once again.

Dance Ensemble, Muscovites were according a tremendous reception to the young American pianist, Van Cliburn.

The agreement between our two governments for exchanges in the fields of culture, science and technology, Mr. Dowling said, has furnished the basis for the development and reinforcement of contacts in the cultural field. Figuratively speaking, he concluded, the seeds we planted have sprouted and are already showing signs of a good crop. But this is only a start. Let's keep on broadening our contacts. ■



Nina Popova gives Mr. Dowling answers to his questions. She heads the Union of Soviet Societies for Friendship and Cultural Relations with Foreign Countries.



Film producer Grigori Alexandrov entertains the Downings (at the right) at his suburban home. Georgi Zhukov is third from the left.

GREAT POSSIBILITIES OF SOVIET-AMERICAN TRADE

Soviet Purchases of American Goods Could Run into Billions

By Oleg Bogomolov USSR Economic Research Institute

THE Soviet Union is prepared to purchase American goods to the value of several billions of dollars within the next few years, declared Premier Khrushchev in a letter addressed to President Eisenhower in June of this year.

Trade between the United States and the Soviet Union would not be a new and untried venture. Prior to the war the Soviet Union made large purchases from companies like Ford, General Electric and International Harvester. And for a short time after the war trade between the two countries reached a high level.

During the past ten years, however, American-Soviet trade has been reduced almost to the vanishing point. At the present time the United States is the only great power which does not have a trade agreement with the Soviet Union. The relatively small amount of business done by Soviet foreign trade organizations with American firms does not even begin to approach the possibilities.

The Soviet Union has declared time and again that it is prepared to place large orders with American firms. There can hardly be any doubt that these orders would help to spur American industrial activity. For the Soviet Union purchases from American firms would help to speed development in such industries as synthetic fibers and plastics and would increase the amount of consumer goods available for the home market.

Ready to Buy and to Sell

"I want to stress particularly, Mr. President," says the Soviet Premier's letter, "that in putting forth this proposal of greater Soviet-American trade, the Soviet Government does not mean armaments or equipment for the defense industry."

The proposal envisages purchase from American firms of industrial equipment for entire factories and plants, agreements for the use of industrial processes, the employment of

American technical consultants, exchange of technical information and joint American-Soviet research in new types of synthetic materials and technological processes.

The Soviet Union is prepared to buy equipment for consumer goods production. It can use American refrigerators and air-conditioners; equipment for cellulose, paper and woodworking plants, and for textile, leather and shoe factories; television equipment; automatic machinery for packing, sorting and weighing; pumps and compressors; machines for the manufacture of building materials; mining machinery; transport equipment and a long list of materials like rolled ferrous metals, piping for city gas installations, chemicals, medical supplies.

Soviet Imports

The volume of Soviet foreign trade has increased more than six times over in comparable prices since 1938. The increase as compared with 1956 is 13 per cent. The Soviet Union now trades with some 70 countries.

Imports make up approximately half of Soviet foreign trade. In addition to its own multifaceted machine-tool production, the country is a large-scale importer of machinery, industrial and transport equipment.

During the postwar years the Soviet Union purchased abroad about 25,000 metal-cutting machine tools, nearly 27,000 railway cars, many freighters, fishing boats and passenger ships. It has been increasing its purchase of

THESE GOODS FROM ABROAD ARE BEING UNLOADED ON A FREIGHT WHARF LOCATED IN THE PORT OF ODESSA.





ALL TYPES OF FOREIGN FABRICS LIKE THESE YARD GOODS ARE IN BRISK DEMAND IN SOVIET RETAIL SHOPS.

foreign equipment for metallurgy, power, mining, chemical, building, printing, food and many if its light industries.

The Soviet Union also imports rolled iron and steel, some nonferrous metals, chemicals, rubber and other materials to supplement the quantities produced by its own industry. It imports large stocks of foods and consumer goods. In the years after the war some 100 million yards of woolen fabrics and 55 million pairs of shoes were among the many consumer items bought abroad.

Successfully concluded were negotiations between representatives of the Soviet foreign trade organization Tekhnopromimport and a large group of British firms for purchase of a complete plant for making tires. The cost of equipment bought from these British firms will exceed 14 million pounds sterling. The plant will be the largest in Europe.

The Soviet proposals on USA-USSR trade forecasts similarly large-scale purchases from American firms to build up its synthetic materials industry.

Soviet Exports

With expanding industrial production, the export lists of the Soviet Union grow longer each year. There are now several hundred different types of Soviet metal-cutting machines exported, many kinds of tractors and other farm machines, road-building machinery and heavy equipment for the metal, oil and power industries.

Soviet-manufactured goods of all kinds are displayed at world trade fairs and expositions and command the attention of buyers from many countries. Freighters leaving Soviet ports carry timber and wheat—the traditional Soviet export items—as well as iron, manganese and chromium ores, nonferrous metals, oil and oil products, coal, asbestos, mineral fertilizers and a host of other raw materials and finished goods.

Soyuzpromexport, one of the largest Soviet

organizations exporting raw materials, last year shipped abroad a total of 11 million tons of iron ore, more than a million tons of manganese and chromium ores, 11 million tons of solid fuels and hundreds of thousands of tons of fertilizer, among other exports. It has commercial relations with business firms in 36 countries.

Trade Agreements

Trade relations are arranged on a goods exchange basis for the most part. Agreements are long-term, for periods of three, four or five years. This allows for bilateral planning and provides safeguards against the inevitable hazards and accidents that may beset short-term agreements.

The Soviet Union now has trade agreements with more than 45 countries—all the socialist countries, almost all the West European countries, many of the Asian and African countries, and, on the American continent, with Canada and Argentina.

The presently operating agreement with Italy, that covers the period of 1958-1961, is typical. The agreement will more than double Italian-Soviet trade. It provides Italian firms with a stable four-year market for various machine tools and equipment for building, food and a number of light industries. In addition, the Soviet Union has contracted to buy Italian rolled iron and steel, cables, citrus fruits, staple fiber, artificial fiber yarn, chemicals and other goods.

Under the terms of the second five-year agreement between Finland and the Soviet Union, running from 1956 through 1960—the first ran from 1951 through 1955—Finnish shipyards are guaranteed a stable market for many hundreds of their seagoing, lake and river freighters. By the terms of the agreement, the Soviet Union buys from Finnish firms, machinery, lumber, paper and manufactured goods. This steady and profitable market is no small factor in keeping Finnish

factories busy and Finnish workmen employed.

The three-year agreement with West Germany for 1958-1960 provides for the purchase of German equipment for mining, metallurgy, chemical and plastics production; automatic machine tools; equipment for whalers and fish canneries; rolled iron and steel; chemicals and many other types of goods. In exchange, West Germany buys such Soviet raw materials as timber, cellulose, oil and oil products, grain, asbestos, manganese and chromium ores, ferroalloys, cotton, flax, hemp and tobacco.

The trade agreements with West Germany, Austria and Italy provide for a doubling of trade within a short space of time. The agreement with France for the period 1957-1958 envisages an even larger increase, a trebling of trade between the two countries by comparison with 1956 figures.

These long-term trade arrangements can unquestionably provide a powerful stimulus to a country's economy during periods of industrial slowdown. During the depression of 1929-1933, Soviet orders kept many industries operating in Germany, the United States and other countries. The present large Soviet orders placed with West German firms are undoubtedly having a beneficial effect on the West German economy.

In the early thirties nearly 40 per cent of all machines and industrial equipment exported by the United States was being bought by the Soviet Union. There is no question that large purchases which the Soviet Union stands ready to make now in the United States can have a favorable effect on the economies of both countries.

Exchange of Goods and Credit

As to payment for large purchases, the Soviet Union can pay with deliveries of raw materials and manufactured goods of interest to American industry. These include manganese and chromium ores, ferroalloys, platinum, palladium, asbestos, potassium salts, timber, cellulose and paper goods, chemical products, furs, machines and equipment. The Soviet Union is prepared to consider developing mining of iron ore for export to the United States, if American firms are interested.

Since American firms are more concerned at the present time with selling rather than buying, the Soviet Union is prepared, for the first few years, to buy more than it will sell, if the United States agrees to the usual long-term credit and installment payment arrangements normal in international trade.

An American-Soviet long-term trade agreement would have elements more significant than just the usual profit to the two countries immediately concerned. It would serve as a powerful stimulus to world trade. And even more important would be its beneficial effect on international relations.

Premier Khrushchev, in his letter to President Eisenhower, emphasizes this point with a comment attributed to Cordell Hull, Secretary of State under Franklin Delano Roosevelt, that trade and exchange contacts can be an antidote to war. "You will agree, I think," writes Premier Khrushchev, "that the world needs this antidote now as perhaps never before." ■



KAVKAZ FARM LIBRARY DISPLAYS LATEST BOOKS ON STOCKBREEDING UNDER SIGN: "LET'S OVERTAKE IOWA."

Kuban Farmers and Iowa

By Mikhail Sukhanov

IT IS three years ago this August that a group of Iowan farmers touring the Soviet Union paid a visit to the Kavkaz Collective Farm in the Kuban region. The American farmers were received with the traditional ceremony when they arrived—they were presented with a huge loaf of newly-baked bread and a salver of salt.

William Lambert, head of the American delegation, interviewed by a magazine upon his return home, said he understood that bread and salt symbolized heartfelt wishes for health and a long life. They got enough bread, the Iowan said, to feed an enormous family, and so much salt that they felt like deep-water sailors.

The delegation spent two days at the Kavkaz Farm looking at fields, livestock and dairy sections. They went out to the field camps and were much impressed with the comfortable quarters, canteens and sport facilities the farm provided for those who worked five to ten miles away from Kurgannaya, the farm's main village, during the sowing and harvest seasons.

Nikolai Tabakov, the collective farm chairman, recalls Ralph Olsen, one of the Iowans, commenting on the tall corn the farm grew. "If I were wearing a hat," Olsen said at the time, "I'd take it off to you people for this corn." Marion Stedd, a hog-breeder, spoke in high praise of the farm's white breed of hogs.

But the Kuban farmers, pleased as they were with the compliments, were much more interested in the critical comments the Iowans made. This was comment from people who knew their business.

Iowa farmers hold first place in the United States for dairy and meat production. Many of the suggestions the Americans made were worked into farm practice during the three years since their visit—automatic feeders, electric herdsmen, and the practice of letting the hogs roam free in fields sown to fodder crops, among other things.

A Challenge

When Soviet farmers last year pledged themselves to overtake the United States in per

SEED SELECTION IN FARM LAB PRIOR TO SOWING.



AGRONOMISTS, STOCKBREEDING SPECIALISTS, ECONOMISTS AND ENGINEERS OF KAVKAZ COLLECTIVE FARM.





COLLECTIVE FARMS' GROWING HERDS INCREASED THE KUBAN'S MEAT OUTPUT BY 37 PER CENT LAST YEAR.



POULTRY NETS A SIZABLE PART OF THE PROFITS.

capita production of meat, milk and butter in the near future, farmers in many parts of the country chose regions in the United States similar to their own to compete with. They read available statistics on American crop yields and livestock output. When farm delegations were exchanged, they listened eagerly to the experiences of their American counterparts and told about their own.

Soviet farmers have a deep respect for the achievements of the Americans because they know it took lots of hard work to earn the reputation of being the world's leading agricultural producer, but they also have confidence in their ability to match them.

The Kuban collective farmers set as their particular goal the high Iowan production level. The choice was partly due to sentimental reasons—the visit had left a very warm memory. It had its practical side, too. The Kuban region is a rich farm country, simi-

lar in its agricultural potential to Iowa.

Located in the southern part of the country, the Kuban region is famous for its high yields. Its black soil is rich, its climate is mild, with abundant rainfall during the growing season. Washed by the waters of the Black and Azov seas, watered by many deep rivers, and protected by the spurs of the Caucasian Mountain range, it has almost never experienced the destructive effects of drought. Under the warm skies, tea, tangerines, lemons, grapes and other fruits grow in rich profusion. More than a hundred crops are raised by the region's 500 collective and 130 state farms.

Top acreage until recently was given over to wheat, but with the new grain base created through the cultivation of new lands in the country's eastern regions, the Kuban has been shifting over to livestock production with very promising returns. The changeover marks the most profitable use of the land in the interest

of both the national economy and the local producers.

From the progress Kuban livestock breeders have already made this year, the goal of overtaking and perhaps surpassing Iowa farm production quotas hardly seems extravagant. The area sown to fodder crops has been greatly expanded to supply feed for the large herds planned for.

The Kuban increased its milk production within the year by 28 per cent, and its meat by 37 per cent. In 1957 its average milk production was already higher than Iowa's.

Iowa is still producing considerably more meat than the Kuban, but Kuban farmers have stepped up their pace very sharply. In 1956 they produced an average of 32 pounds of meat per acre; in 1957 they increased the figure to 60, and this year they expect to raise the figure to 70 or even 80 pounds.

Continued on next page

PIGS ARE LET OUT IN FIELDS OF FODDER CROPS.

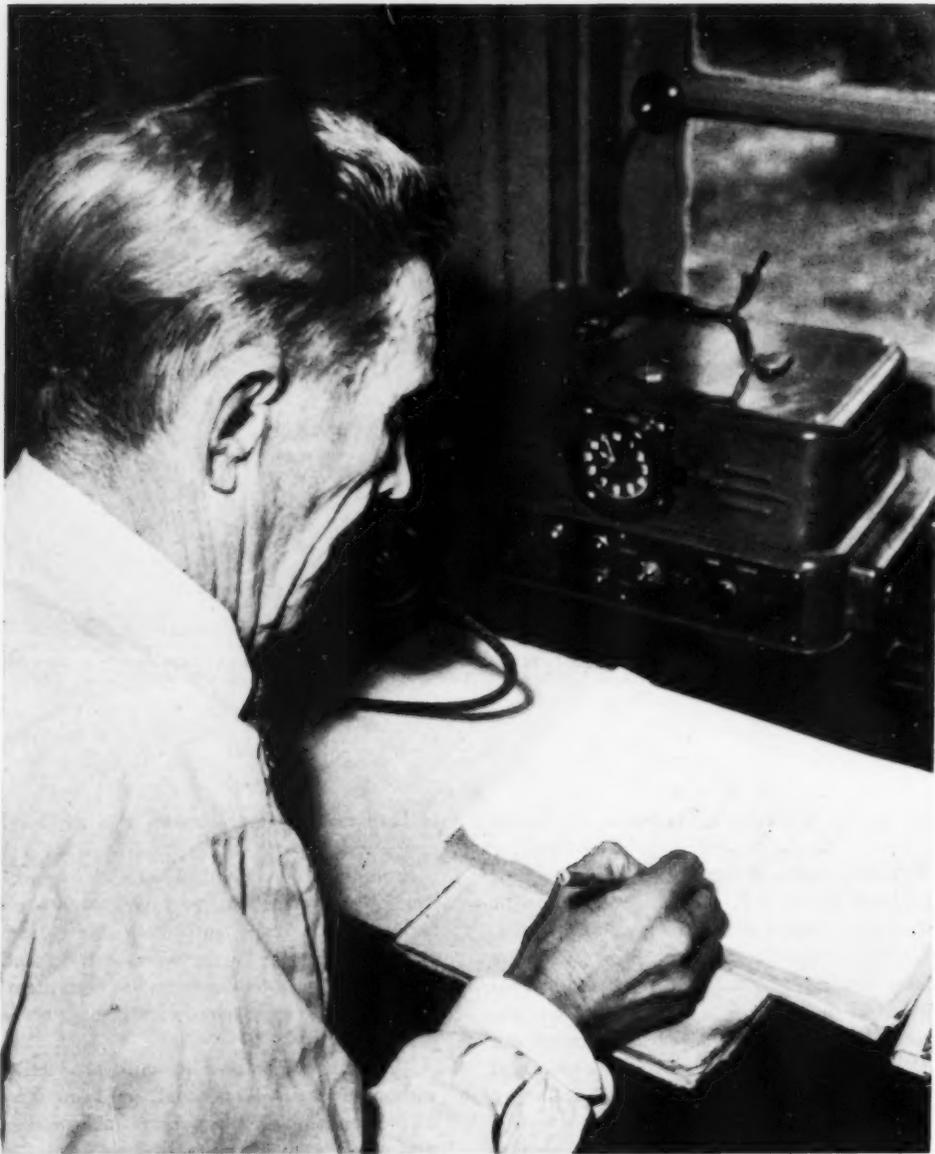


KAVKAZ FARMERS CHECK DELIVERY OF NEW MACHINES.



THIS IS JUST ONE OF THE FARM'S TRUCK GARAGES.





KAVKAZ FARM COVERS SCORES OF MILES, AND RADIO IS USED TO CHECK ON THE PROGRESS OF FIELD WORK.

The Kuban Farmers and Iowa

Continued

Three Busy Years

The Kavkaz Collective Farm has been moving right along with the rest of the Kuban in raising its productive potential.

This progress is true for the rest of the country, too. Productivity in agriculture has increased considerably not only for individual farms, but for whole regions and even republics. The progress made can be seen on every hand.

Following the decision of the Soviet Parliament to change the state-owned machine and tractor stations into sales and service agencies—up to then their machines and operators had worked the collective farm fields on a contract basis—the Kavkaz Farm bought 63 tractors and 61 harvester-combines from the local station, which was selling out its machinery. It also bought haymowers, plows, seeders, seedling planters and other machinery.

All this equipment cost the farm approximately three million rubles. The estimated income of the farm for the current year will be beyond 25 million rubles, so that the purchase is no heavy drain on this year's income, let alone the farm's capital assets.

Tractor drivers, combine operators, a mechanical engineer, an agronomist and zoo-technicians formerly employed by the ma-

TECHNICIAN VLADIMIR DENISENKO IS ON DUTY AT THE FARM'S POWER PLANT.



NIKOLAI TABAKOV, COLLECTIVE FARM CHAIRMAN, IS AN INVETERATE HUNTER.





THE FARMERS CAN PURCHASE PRACTICALLY EVERYTHING THEY NEED FROM THE WELL-STOCKED VILLAGE STORES.



CLASSES ARE OVER AT KURGANNAYA GRADE SCHOOL.

chine and tractor station readily joined the Kavkaz Farm. Now the farm has a total of 32 trained specialists.

Victor Gorban, former chief agronomist of the machine and tractor station, is now working on the farm in the same capacity. He is developing plans for improved cultivation and is gathering data for a soil chart. The farm's chief engineer, Andrei Kurakin, who also came from the machine and tractor station, is mechanizing work in the livestock division. Agnia Usoltseva, an experienced zoo-technician, is experimenting with improved cattle breeds.

The farm has been budgeting larger sums for capital construction. With 200 electric motors now in operation, it has expanded its power sources with a newly-built, 720-kilowatt power plant.

In the farm village of Kurgannaya, which the Americans admired for its wide streets and greenery three years ago, they would find many changes. Building has been going on apace. In 1957 alone, 220 collective farm families moved into newly-constructed houses.

A new two-story community center stands next door to the farm office building, and there is now an extension division of the Kuban Agricultural College in the village, with many young students like milkmaid Nina Sotnikova, tractor driver Vladimir Voroshilin, and hog-breeder Raya Derzayeva, completing the college courses in their specialties.

Long Distance Conversation

Last spring, Nikolai Tabakov and Charles Hearst, one of the Iowans who was the reason for a long-to-be-remembered birthday party when the Americans visited Kurgannaya, had an unusual sort of exchange of recollections.

On a radio broadcast, Tabakov spoke of the visit of the Iowan farmers, challenged them to a friendly competition in cattle raising, and invited them to visit Kavkaz again to see what progress had been made in the three years. Speaking on the program with him was one of the young Kavkaz hog-raisers, Lidia Ananieva, a recent graduate of the Kuban Agricultural College. She empha-

sized the value of this peaceful competition between American and Soviet farmers to raise more foodstuffs. "It's to everyone's advantage," she said.

Charles Hearst answered in an article published in the *Des Moines Register*. "I cannot think of any more splendid sphere for competition and for promoting good relations," he wrote in reply. ■

LIDIA ANANIEVA, HEAD OF A HOG-BREEDING SECTION, PARTICIPATED IN THE KUBAN-IOWA RADIO HOOK-UP.





THE ADVENTURES OF TOM SAWYER

Books by A



HOW I EDITED AN AGRICULTURAL PAPER



A TALK WITH AN INTERVIEWER



THE CELEBRATED JUMPING FROG OF CALAVERAS COUNTY

СИНКЛЕР
ЛЮИС

АРОУСМИТ

ОМАН

Перевод с английского

ГОСУДАРСТВЕННОЕ ИЗДАТЕЛЬСТВО
ХУДОЖЕСТВЕННОЙ ЛИТЕРАТУРЫ
МОСКВА - 1936



FRONTISPIECE AND TITLE PAGE
FOR SINCLAIR LEWIS' ARROWSMITH
ILLUSTRATED BY ALEXEI VASIN



DREISER'S AN AMERICAN TRAGEDY ILLUSTRATED BY VLADIMIR MINAYEV

by American Authors Illustrated by Soviet Artists

RIP Van Winkle and Tom Sawyer have many devoted friends in the Soviet Union, where Washington Irving and Mark Twain are widely read. Also popular among Soviet readers, especially young people, are Mayne Reid, Bret Harte and Jack London. The Soviet people know and appreciate the best literary works of all countries of the world, including those of the United States.

American classical novels and many books by contemporary American authors are published in huge editions. During the Soviet years works of American fiction and poetry have been published in a total of more than 77 million copies in 50 languages of the peoples inhabiting the Soviet Union.

Books by American writers have inspired many fine illustrations. Soviet artists have succeeded in capturing the spirit of the pioneers on the Western prairies and intrepid seafarers, southern farmers and Connecticut miners, pretty girls and stern scientists, who come to life on the pages of many wonderful books. Most Soviet illustrators find accurate and expressive means of conveying the appearance and traits of the literary characters.

Some of the illustrations for works by American authors are so eloquent that they have acquired independent artistic significance and have been successfully exhibited at art shows. *Continued on next page*



UPTON SINCLAIR'S NOVEL JIMMY HIGGINS ILLUSTRATED BY ANATOLI KOKORIN

Books by American Authors Illustrated by Soviet Artists *Continued*



JOHN STEINBECK'S *THE GRAPES OF WRATH* ILLUSTRATED BY LEV BRODATY

DEXTER MASTER'S ACCIDENT ILLUSTRATED BY PYOTR PINKISEVICH



ERNEST HEMINGWAY'S *THE OLD MAN AND THE SEA* ILLUSTRATED BY ALEXANDER KLYACHKO



ARTHUR MILLER'S *ALL MY SONS* WAS FIRST STAGED IN THE SOVIET UNION IN 1947. ITS PRODUCTION BY THE MOSCOW DRAMA THEATER WON A NATIONAL PRIZE.

American Plays on the Soviet Stage

By Georgi Zlobin, *Theater Critic*

SOVIET theater audiences see many more American plays, I venture to say, than Americans do Russian plays. Leafing through a program of Moscow theater presentations for a typical week, I found scheduled, alongside plays by Schiller, Tolstoy, Chekhov and Leonov, productions of *All My Sons*, *The Theft*, *Ladies and Gentlemen (Another Part of the Forest)* and *Uncle Tom's Cabin*.

At the beginning of this last season, five of the biggest Moscow theaters were each doing an American play. At the same time, Hemingway's *Fifth Column* was showing in Leningrad.

American plays have been popular with Soviet audiences for a long time. The Moscow Maly Theater staged *Anna Christie* and other Eugene O'Neill plays a quarter of a century ago. Before the war we saw the plays of Clifford Odets and Sidney Kingsley. I still have the newspaper clipping in which a Leningrad theater critic describes Clifford Odets' *Golden Boy* as a play "with a wealth of ideas, emotions and passions that carry the playwright's message of the essential goodness of people."

According to the Burns Mantle Theater Yearbook, *Deep Are the Roots*, the play by James Gow and Arnaud d'Usseau, was the Broadway hit of the first postwar season, with 289 performances. Presented in the Soviet Union, it was equally popular. It was produced by two theaters in Moscow and one

Continued on next page

LILLIAN HELLMAN'S *AUTUMN GARDEN*. ALL OF HER PLAYS HAVE BEEN VERY POPULAR WITH SOVIET AUDIENCES.





CHARACTERS APPEARING IN THE STAGE VERSION OF MAYNE REID'S NOVEL *THE HEADLESS HORSEMAN*, AS PORTRAYED BY ACTORS OF THE MOSCOW CHILDREN'S THEATER.

American Plays

Continued

theater in Leningrad at about the same time, followed by productions in other cities. Somewhat later the play was published here in the original and then translated into the Georgian, Kazakh, Estonian, Lettish and Ukrainian languages.

Lillian Hellman is probably the most popular of American playwrights with Soviet audiences. Almost all of her plays have been translated and staged. The first was *Watch on the Rhine*, which the Komsomol Theater in Moscow produced in 1945, under the

rather curious title *The Forellis Lose Their Peace of Mind!*

It was followed almost at once with a production of *The Little Foxes* by the Moscow Theater of Drama, and then by *Another Part of the Forest*, produced under the title *Ladies and Gentlemen* and directed by the very well known Nikolai Okhlopkov.

Autumn Garden was presented in a superb production by the Moscow Art Theater, with memorable performances by the gifted actor Ktorov as Crossman and Popova as the willful old lady, Mary Ellis.

Soviet theatergoers think of Lillian Hellman as a playwright in the Chekhov tradition. Her action seems always to be restricted to a world of broken hopes and lost illusions, but one senses a profound social significance

in the subtle, sometimes barely perceptible suffering of her characters.

Arthur Miller's plays are extremely popular. *All My Sons*, in a Vakhtangov Theater production in 1947, was the first of Miller's plays to be done here. The Moscow Drama Theater subsequently included the play in its repertory. Produced by Sudakov, it won a prize at a nationwide drama contest.

The Crucible was done by the Komsomol Theater of Leningrad under the title *Salem Trial*. In the judgment of critics, the production lacked dramatic impact and failed to convey the overtones of modern meaning implicit in the playwright's treatment of the 17th century witchcraft trials. A later production by the Lithuanian Academic Theater of Vilnius won general approval from critics and audi-



DREISER'S *AN AMERICAN TRAGEDY* HAS BEEN STAGED IN MANY OF THE SOVIET THEATERS SINCE 1934.



JACK LONDON'S *THE THEFT* ON MOSSOVIET STAGE.



JACK LONDON'S THE THEFT ON MOSSOVIET STAGE.



ences. The Moscow Art Theater is now preparing to produce *Death of a Salesman*.

We have had many successful stage adaptations of American books. Mark Twain's wonderful *The Prince and the Pauper* was adapted by Sergei Mikhalkov, and *Uncle Tom's Cabin* by Alexander Brustein. According to my far from complete figures, *Uncle Tom's Cabin* has been staged in some forty Soviet cities.

Theodore Dreiser's *An American Tragedy*, adapted for staging under the title *Law of Lycurgus*, had its Soviet premiere in 1934 at the Central Theater of the Soviet Army in Moscow. Since the war it has been staged in Moscow, Omsk, Vladivostok, Saratov and other cities. The latest production, so far as I can check, was one by the drama theater in the small city of Vladimir last year.

Among the most distinctive adaptations done since the war were Jack London's *Martin Eden*, by the Latvian State Theater in 1948, and the Moscow Satire Theater's production in 1949 of *Sack of Temptations*, based on Mark Twain's *The Man Who Corrupted Hadleyburg*.

A great many American plays have been translated into Russian in the past few years. They are published both in literary magazines and as play scripts for use by theaters. The magazine *Novy Mir (New World)* has translated Arthur Miller's *Death of a Salesman*, and the magazine *Inostrannaya Literatura (Foreign Literature)* ran a translation of *A View from the Bridge*.

Other American plays translated within the recent past include Lillian Hellman's *The Searching Wind*; Elmer Rice's *Counsellor-at-Law*, published as *Root of Evil*; James Gow's and Arnaud d'Usseau's *Legend of Sarah*; N. Richard Nash's *The Rainmaker*; Howard Teichmann's and George S. Kaufman's *The Solid Gold Cadillac*; Jerome Lawrence's and Robert Lee's *Inherit the Wind*.

Soviet periodicals publish a sizable amount of material on American plays and playwrights. Within the relatively recent past evaluative and critical articles have been done on Eugene O'Neill's *Long Day's Journey into Night*; William Saroyan's *Cave Dwellers*; George Bellak's *The Trouble Maker*; and *Career* by the young playwright James Lee.

American theater activity is covered fairly comprehensively in the magazine *Theater*. Its department "Theaters of the World" presents a periodic bird's-eye view of plays staged in other countries.

Soviet theater groups have performed on the stages of many countries and have been host to many foreign groups. We would also welcome the chance to see plays not only written by Americans but produced and acted by Americans, and our artists would like to perform in the United States. This kind of exchange could broaden the public's knowledge of the drama in both countries, acquaint us with the differences as well as the similarities in our interpretation and approach, and give us both a real insight into each other's culture. ■



SCENE FROM DUBOIS' HISTORICAL DRAMA, HAITI.

THE THEFT NOW RUNS IN SEVERAL SOVIET CITIES.





BORIS POLEVOI IS GREETED ON HIS WASHINGTON ARRIVAL BY JOSEPH POLOWSKY.

Soviet War Veterans Visit Washington

By Boris Polevoi

It was thirteen years ago that American and Soviet soldiers shook hands at the historic link-up of the two armies at the Elbe River in Germany. It was a memorable day, one commemorated in 1955 when a group of American veterans of the link-up visited the Soviet Union. Upon the invitation of the American Veterans of the Elbe River Link-Up, a delegation of the Soviet War Veterans Committee recently visited Washington. Boris Polevoi, Soviet writer who headed the delegation, gives his impression of this visit.

LINK-UP HANDSHAKES REPEATED. SOVIET AND AMERICAN VETERANS MEET AGAIN AS THE VISITORS ATTEND REUNION OF THE AMERICAN ELBE RIVER VETERANS GROUP.



AS soon as we got off the plane at the Washington airport, we were surrounded by a noisy, happy group of people welcoming us. While Alexei Maresiev, a member of our veteran's group, was exchanging greetings with our old friend Joseph Polowsky, whom we had met in Moscow when he visited with the delegation of American veterans three years ago, there was a general hubbub of excited talk around us, of cordial hand-shaking and of flower presenting. Then came the formal ceremony arranged by the American Veterans of the Elbe River Link-Up.

Representatives of the Elbe veterans had come from all over the United States to greet us in Washington. We met a textile mill foreman from South Carolina, a New York librarian, a Baltimore filling-station owner, a New York butcher, and many other friends we were glad to shake hands with.

I should judge that by political persuasion most of these people were miles removed from us. But there was a real tie and mutual sympathy that came not only from our allied effort during the war, but also from the profound realization that friendship between our two countries is the only way of preserving world peace. One was struck by the frequency with which this sentiment was expressed at the dinners, at the reception held by Soviet Ambassador Mikhail Menshikov, and at the two press conferences.

In Washington we made the acquaintance of Colonel W. E. Leonard, Director of Veterans Affairs of the District of Columbia. Speaking at a reception held on April 25, the day which commemorates the link-up, he moved listeners with the intensity of his feelings. He spoke, he said, "as a veteran, as a man who saw war"—of his deep concern for peace, one shared by veterans of both nations. He said he had invited the Soviet veterans to be his guests at home and that his daughters had baked a pie specially for them. It was a pie they had baked for friends, and it was eaten in an atmosphere of friendship and mutual understanding.

We were invited to a big-league baseball game played at Wash-

ton's Griffith Stadium. We five veterans had just taken our seats when baseball stars Mickey Mantle of the Yankees and Roy Sievers of the Senators came up to be photographed with us. They, too, were war veterans, they told us. The pictures were snapped on the field, with the players in their baseball uniforms. When the announcement was made over the public address system that Soviet veterans of the Elbe link-up had come to see the game, all the 28,000 spectators stood up and welcomed us most warmly for a full five minutes.

Included in our luggage for the trip to the United States was a large wooden box containing a bratina, a large ceremonial drinking bowl symbolizing friendship, for presentation to President Dwight D. Eisenhower. It was a gift from Soviet veterans of World War II and their families to the President in warm appreciation of the great contribution that American armed forces had made during the war.

On April 25 our Soviet delegation called at the White House and learned that the gift would be accepted for the President by his military aide, Col. Robert Schulz, and the bowl was presented to him.

Together with our American friends, we laid a wreath on the grave of the Unknown Soldier in Arlington Cemetery, with a military band playing the funeral march. Many of the bystanders came over to shake hands with us and to say a few words about peace and the need for friendship between nations.

When we left for home, we were seen off at the airport not only by the Elbe link-up veterans and Colonel Leonard, but by representatives of another veterans' organization. We were assured that the friendship struck up during those days when our armies fought together against a common enemy in World War II—the friendship cemented by the handshake on the Elbe—has not been forgotten in America.

The most gratifying thing about our visit to the United States, we all felt, was the warmth of our welcome, the very great interest shown by Americans in Soviet culture, science and engineering, and their profound wish for peaceful coexistence. ■

CEREMONIAL DRINKING BOWL SYMBOLIZING FRIENDSHIP, A GIFT FROM SOVIET WORLD WAR II VETERANS TO PRESIDENT EISENHOWER, IS ACCEPTED BY HIS MILITARY AIDE.





THE UKRAINIAN SUITE VESNYANKI IS ONE OF THE 13 NUMBERS ON THE PROGRAM PERFORMED BY THE MOISEYEV DANCE ENSEMBLE FOR AMERICAN AUDIENCES.

Soviet Dancers
Meet America

By IGOR MOISEYEV

Director, USSR Folk Dance Ensemble



THE COSTUMES IN EVERY DANCE DUPLICATE THE NATIONAL DRESS IN ALL THEIR INTRICATE DETAIL.

THIS REEL FROM THE SUITE OF OLD RUSSIAN DANCES IS FULL OF COLOR, LYRICISM AND GRACE.

OUR first performance at the Metropolitan Opera House in New York was an experience no member of our dance company is ever likely to forget. It was our first introduction to an American audience, and a more enthusiastic, more exciting one it would be hard to imagine.

For us the welcome was doubly gratifying since we had come to dance for American audiences with some misgivings. We really had no idea of what we could expect. We were afraid, for one thing, that Americans would not understand our dancing and perhaps might not take to it. And there was some justification for our feelings because of the lack of any real contact between our two countries over these past years. For ourselves, the lack of contact made it very hard for us to gauge the tastes and interests of Americans, what they would or would not understand of

Continued on next page





Soviet Dancers



our national art. But we were in for the most happy kind of surprise.

Responsive Audiences

From our first performance to our last, we were met with a cordiality which went far beyond our most hopeful expectations. And as important—for us as dancers even more so—a complete understanding of what we were attempting in our folk art. We felt that understanding in the response of audiences everywhere we danced, in the many newspaper reviews, in innumerable conversations we had with people in many American cities, in the fan mail we received that talked of “the traditionally beautiful and varied reflections in your dances of the life of the Soviet Union.”

It was an unexpected and happy surprise for us to find how much American audiences had in common with the Soviet people. We found the same warmth, the same openness and expansiveness, the same feeling for humor. It was a constant astonishment to us to see how similar the reactions were.

Our dance *City Quadrille* evoked the same spontaneous laughter in America as it would in any Soviet city. There was the same kind of understanding applause for the *Suite of Old Russian Dances*, the Moldavian *Zhok*, the Ukrainian *Suite Vesnyanki* with its fast *Hopak*, the same delighted chuckles for our comic *Two Boys in a Fight*.

There was not the slightest change we had to make in any of our dances so they would be understood and appreciated by American audiences. This natural and thoroughly spontaneous reaction was evidence not only of what our peoples had in common but of how much we could contribute to each other. I felt this in very personal terms.

American Folk Dances

Before I came to the United States, I, of course, knew something about the American dance, but my knowledge was hardly very detailed or specific. There was much I absorbed and learned as we traveled through the United States and much more I should have learned if our schedule had not been so overcrowded.

Now I certainly have a much clearer picture of America that I hope to use as a basis for further study and perhaps for the creation of a serious dance work sometime in the future.

American folk dances are greatly varied since they are conceived in widely separated parts of the country with different folk customs, traditions and ways of living. Like the folk dances of any nation, they can serve, it seems to me, as rich raw material out of which fine choreographic productions can be developed.

Creating the Stage Version

We used much the same basic raw material to build our dances. To create our *Hopak*, for example, we went to different parts of the Ukraine, watched the *Hopak* danced in village after village, noted the variations, chose a dozen or so for study. We took the typical steps and movements, generalized them and around them built the version which we staged.

I think that the same process of research and selection applied to American folk dances would produce some very exciting results. I talked to many American choreographers and they found the idea most stimulating. I even received several invitations to come again and work with them.



cers Meet America

Continued

And I do hope to return to the United States, especially to study American dances. We would like to include some of them in our permanent repertoire. Among our 160 dances we have quite a few from countries outside the Soviet Union.

Learning the Virginia Reel

We did try one American dance, the *Virginia Reel*. We learned it at a very pleasant gathering arranged for us in New York where we met many choreographers and lovers of the folk dance. First they danced it for us. Then a few of our people joined in.

As the dance proceeded, more and more of our group joined in, while the Americans dropped out to make room for them. Finally, only our dancers remained on the floor.

We staged the *Virginia Reel* two days later, immediately after our last number on the program, with no break for costume change. And so, an American dance was performed in Ukrainian national dress—and the audience reaction was wonderful.

Seeing Is Knowing

We in the Soviet Union are very much interested in things American. We know your literature, both classical and contemporary, stage many of your plays and study your art. All of this helps us to get a picture of American life. But without direct contact, it is necessarily an incomplete picture.

Even in some European countries which have closer contact with the United States there are certain misconceptions about American culture. I have met Europeans who told me, for example, that the United States did not have much in the way of theater. Amer-

Continued on page 33



A FAST VIRGINIA REEL WAS AN ENCORE FROM THE THIRD PERFORMANCE OF THE MOISEYEV GROUP TO THE LAST.

IN EVERY CITY THE DANCERS VISITED DURING THEIR TOUR, THEY MADE NEW FRIENDS AT INFORMAL GATHERINGS.





A LITTLE MORE PRACTICE AND HE WILL BE ALMOST SURE TO GET TO THE TOP OF A NEW YORK SKYSCRAPER.

Soviet Dancers



AUTOGRAPH HUNTERS ARE THE SAME IN EVERY CORNER OF THE WORLD.



VISITING SIGHTSEERS READY CAMERAS FOR ACTION.

AN AMERICAN CUSTOM IS QUICKLY ADOPTED.



GAIETY AND CONGENIALITY WERE INTERMINGLED DURING THE ENTIRE THREE-MONTH TOUR OF THE UNITED STATES.



ancers *Meet America*

Continued



AMBASSADOR MIKHAIL MENSHIKOV, IGOR MOISEYEV, IMPRESARIO SOL HUOK AND MME. MOISEYEV AT A PARTY.



THE DANCERS FOUND HONEYMOON FALLS INTERESTING.

IT WAS PLEASANT TO HEAR PETE SEEGER SINGING AMERICAN FOLK SONGS.



AN AMERICAN FAMILY GUIDED THE DANCERS ON A BOAT TOUR AROUND MANHATTAN.



Continued on next page

FOR
UP



MAIDEN'S DANCE FROM THE MOLDAVIAN SUITE—A SERIES OF COUNTRY DANCES BASED ON A STUDY OF FOLKLORE, AS ARE ALL OTHER DANCES PERFORMED BY THE ENSEMBLE.

Soviet Dancers

Meet America Continued



DANCE OF THE KAZAN TARTARS IS A LIVELY AND HUMOROUS PORTRAYAL OF THE CUNNING OF TWO VIVACIOUS YOUNG GIRLS WHO PLAY A TRICK ON TWO UNSUSPECTING MEN.

ican moving pictures were very good, they said, but unfortunately the films had harmed the theater art.

While I was in the United States I saw several plays and came to quite a different conclusion. As a matter of fact, I was very pleasantly surprised at the fine quality of American theater.

I consider *West Side Story* really good theater, done with beauty and with great skill. *The Diary of Anne Frank*, I thought, too, an extraordinarily moving production. I must also mention *My Fair Lady*, whose staging and technique, I feel, strike a very high artistic note.

On the other hand I expected too much of movies and was often disappointed. Mind you, I have no intention at all of dismissing American movies as nondescript. Such a splendid movie as *The Bridge on the River Kwai* is only one of many fine pictures which movie makers in the United States have turned out. But I agree with those American movie critics who say that many first-rate films are somehow lost in the flood of second-rate productions.

Friendship Tour

But this is by the by and the impression of a hasty, crowded but wonderfully stimulating visit which I hope will be the first of many—traveling both ways.

Ours was a tour of friendship and good will beneficial for both our people. We certainly learned very much about Americans, and I am sure that the Americans we met have now a better understanding of Soviet people. This is bound to happen if we widen our range of contacts—and a very good thing it would be for all of us. ■

THE CITY QUADRILLE IS AN EPISODE FROM THE CYCLE OF FOLK DANCES ENTITLED PICTURES OF THE PAST.



H-Power For Peace

An Unlimited Source of Energy

By IGOR KURCHATOV

*Director, Atomic Energy Institute,
USSR Academy of Sciences*

AT the close of the first half of our present century, science and engineering solved the problem of utilizing the energy locked in the atomic nuclei of uranium and thorium. But there is comparatively little of these fuels in the earth's crust. If all power plants the world over were to be converted so they could use uranium and thorium as fuel, at the present rate of increasing use of power, the earth's supply would be exhausted in one or two centuries. In about the same span of time the earth's reserve of coal and oil is also likely to be exhausted.

The great work of science and engineering in the second half of this century is to unite effort and knowledge to produce an ultimate source of power by controlling thermonuclear reactions.

What goes on in a thermonuclear reaction is an enormous release of energy as a result of nuclear fusion when hydrogen is transformed into helium. It is the process which takes place when a hydrogen bomb explodes. But to get a commercial source of power supply, this thermonuclear reaction must be controlled so as to proceed quietly and slowly.

Inexhaustible Fuel Supply

The thermonuclear reactors of the future will not be using ordinary hydrogen; their fuel will be heavy hydrogen. A thermonuclear reaction can be controlled most easily by use of a mixture of equal parts of deuterium, the hydrogen isotope with an atomic weight of 2, and tritium, the hydrogen isotope with an atomic weight of 3.

Although the amount of tritium to be found in nature is insignificant, it can be produced in sufficient amounts by bombarding lithium with neutrons. That, however, is expensive.

Of principal importance in the future will be reactors using pure deuterium. It is found in plain water and there is quite enough of it in nature—for every 6,000 nuclei of ordinary hydrogen there is one nucleus of deuterium. So far as its store of energy is concerned, a gallon of ordinary water is roughly equivalent to 400 gallons of petroleum.

Even assuming the most rapid growth of power demand, there is a sufficient reserve of deuterium in our earth's oceans to supply fuel for hundreds of millions of years.

In the next 15 years the coal and oil output of the Soviet Union will reach an annual total of a billion tons or more. Only 400 tons of deuterium could do the job that needs this vast amount of coal and oil.

Twenty years ago a few hundred tons of deuterium seemed like an immense amount to obtain. Before the war we had a difficult time getting hold of a few grams for use in our work with the cyclotron in Leningrad. It came from Dnepropetrovsk, where heavy water was being produced in a laboratory set up by the Ukrainian Academy of Sciences.

Today we have an abundant supply produced through a variety of methods. The most progressive method, one worked out by the Institute of Physical Problems of the USSR Academy of Sciences, is the deep-cold method by which deuterium is produced at a temperature of -250 degrees centigrade. Its cost as a fuel is less than one per cent that of coal.

Temperatures in the Millions

To produce a thermonuclear reaction, deuterium must be heated to 300-400 million degrees centigrade; a mixture of deuterium and tritium, to 40-50 million degrees. Only at these temperatures will hydrogen nuclei fuse at an intensity at which the energy released, including radiation losses, will be greater than that spent to heat the hydrogen.

But to heat hydrogen to a temperature of hundreds of millions of degrees, certain conditions must be met.

In ordinary gaseous deuterium at room temperature and normal pressure, molecules move at a velocity of about 3,000 miles an hour. Now suppose we collect this gas in an imaginary vessel capable of withstanding enormous temperatures and pressures. If we were to heat the gas to 100,000 degrees, its pressure would reach about 1,500 atmospheres, and the atoms of deuterium would disintegrate into positively charged nuclei and electrons. The gas would be completely ionized and become what is termed plasma.

The nuclei of deuterium in this state would be moving at a velocity of more than 60,000 miles an hour. But to overcome the very strong mutual electrostatic repulsion, the nuclei must move at still greater speed. At a temperature of 100,000 degrees, only two nuclear fusions will take place in a quart of deuterium plasma in a thousand years.

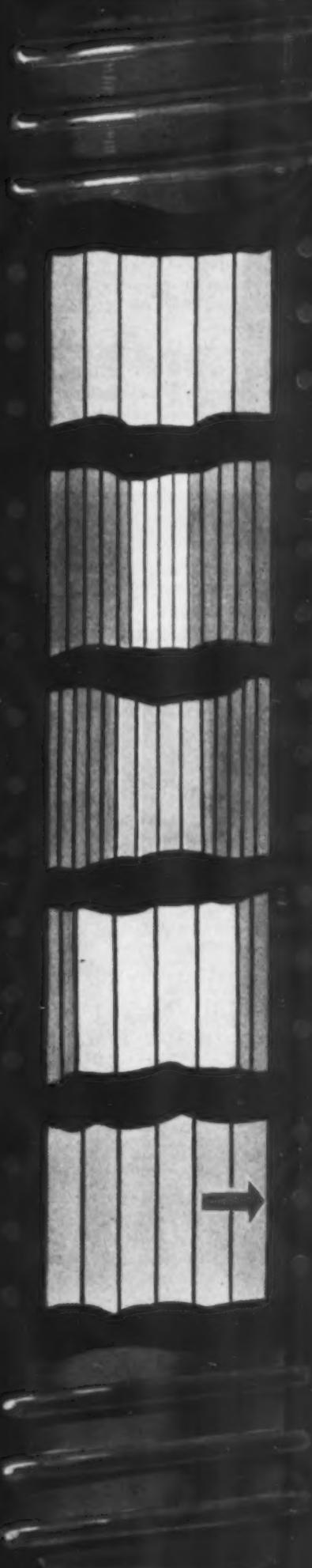
If, however, we were to increase the temperature to 100 million degrees, the nuclei of deuterium would speed up to a velocity of some 600 miles a second and would react with one another almost instantaneously. In a single quart of deuterium plasma the fantastic amount of 100 million kilowatts of power would be released.

At this point of our imaginary experiment we would still have to put in more energy than the fusions release. But it would be rather close to the conditions under which a self-sustaining thermonuclear reaction is possible.

Insulating the Reactor

The deuterium plasma heated to 100 million degrees would have an enormous pressure of 1.5 million atmospheres. We cannot even think of a thermonuclear reactor with such a pressure. To keep the gas pressure within controllable bounds, we must start with a very thin deuterium. Even if we start with

Continued on next page



A magnetic field is produced by a coil surrounding the chamber. Initially, the magnetic field is weak and the plasma is cold and diffuse.

The magnetic field is increased, and the plasma is compressed and heated. This process consumes 10 units of conventional energy.

With the field stabilized, nuclear reactions take place in the heated plasma, whose temperature and pressure are now increasing rapidly.

The magnetic field, pushed out by the expanding plasma, crosses the coil, producing 9.5 units of conventional energy in process.

As the plasma cools and returns to its initial state, the walls absorb the remaining energy. Thus, the cycle's efficiency is 85 per cent.

FOR
UN

H-POWER FOR PEACE

Continued

what would be considered practically a vacuum, the pressure of the plasma will reach tens of atmospheres due to the tremendous temperature.

At first glance the problem of building a thermonuclear reactor would appear insoluble, since we have no refractory materials capable of withstanding forces already present at a temperature of 3,000 degrees. And what complicates the problem is that the hot plasma must not be permitted to touch the walls of the chamber, because their rapid vaporization would immediately cool the plasma and quench the reaction.

Fortunately, plasma has properties which provide a solution to these problems. By making use of the principle that charged particles cannot move freely across magnetic lines of force, we can produce adequate heat insulation

to prevent the hot plasma from coming into contact with the walls.

The thermonuclear reactor of the future will have a hermetically sealed chamber with air pumped out before the reaction is started. Whatever air pressure remains will be in the neighborhood of a ten-millionth part of an atmosphere. The plasma will be "suspended" inside the reactor and kept away from the walls by the magnetic field.

To prevent the hot plasma from expanding, there is no need at all of walls of any material. Through the magnetic field keeping the plasma back, the mechanical force will be transferred to the coils which carry the field.

There is also another method of providing insulation. If a strong electric current is passed through the plasma, the magnetic field produced can act as the insulator.

To achieve this, the walls of the chamber must be made of thick conducting materials. If the current passing through the plasma is excited by impulse, the magnetic field sur-

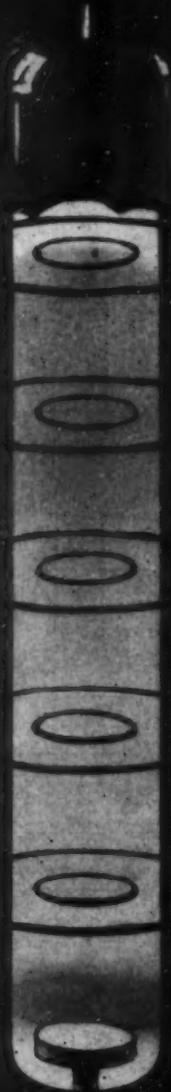
rounding the plasma cannot rapidly penetrate the metal of the walls. As a result, this magnetic field will not allow the plasma to come into contact with the walls of the chamber.

The principle involved here may be illustrated by the fact that a magnetic field produced above the surface of copper will penetrate it to a depth of only 10 centimeters in a second. Therefore it is technically possible to make such thick-walled chambers where the magnetic field of the current flowing through the plasma would provide heat insulation for approximately a second, the time required for the reaction to take place. In this case the pressure of the heated plasma will not be transferred to the walls by the impact of the molecules, as in cold gas, but will be absorbed by the magnetic field.

Insulation is by no means the only problem with which designers of thermonuclear reactors must grapple. There is the very complex problem of radiation.

We know that bodies subjected to high tem-

A magnetic field is created by a weak electric current passing through the discharge tube, but it is not strong enough to tear the plasma off the walls.



An outside coil creates a strong longitudinal magnetic field, keeping the plasma from the walls, but the current is too weak to heat the column.



With a strong discharge current, the field tears the plasma off the walls, compresses and heats it. But without the coil, the column becomes unstable.



peratures glow brightly and radiate much heat. If hydrogen were to radiate heat and light as intensively as solids, its radiation would instantly vaporize any material at a temperature of a million degrees. There is no way we have at present to prevent this evaporation by forced cooling.

Heated hydrogen, however, is transparent and it radiates heat in inverse proportion to the number of times it is more transparent than a solid. One meter of hot area in a reactor at a temperature of 50 million degrees will thus radiate no more intensively than a solid of the same dimensions at a temperature of only 5,000 degrees.

But that is still an immense stream of energy and the problem is one which will give designers much difficulty before it is solved.

Size of Reactors and Their Types

In any thermonuclear reactor, energy must necessarily be expended to sustain the work-

ing regime. The larger the reactor, the more energy it releases in proportion to energy expended. There is, therefore, a minimum size a reactor must have to enable it to produce more energy than it consumes.

For a reactor operating with a mixture of deuterium and tritium, the minimum size of the active zone is likely to be somewhere in the neighborhood of a meter; reactors operating on pure deuterium will be larger. Pure deuterium thermonuclear reactors will, therefore, be suitable for stationary power plants of large capacity.

Thermonuclear reactors will be used as a source of heat to make steam, which will generate electric power by means of the usual cycle through steam turbines and generators. There is also the possibility of direct production of electric energy by means of reactors without having to go through the intermediary heat cycle with its low efficiency.

This was suggested in 1954 by Gershel Budker of the Atomic Energy Institute of the

USSR Academy of Sciences. The basis for this possibility rests in the fact that in deuterium plasma more than two-thirds of the energy released is in the form of kinetic energy of charged particles. These particles are held back by the magnetic field, and their kinetic energy can be transformed directly into electrical energy.

Let us imagine, for example, that the plasma is held back by the outer magnetic field produced by the current in the coil encompassing the thermonuclear generator. If the field is slightly increased, the heated and expanding plasma would tend to push outward, expelling the field. The magnetic lines of force would cross the coil and generate an electric current in it.

Work by Soviet Physicists

Work on the development of controlled thermonuclear reactors was begun more or less simultaneously by scientists in the Soviet Union, Great Britain and the United States. The beginning of Soviet research was marked by Academicians Andrei Sakharov and Igor Tamm in 1950, when they suggested the first model of a magnetic thermonuclear reactor.

Since that time work has been moving along a number of lines, with several groups of scientists and engineers actively engaged in research. In a paper I read at an international gathering of nuclear physicists at Harwell, England, I described one of the lines along which our Atomic Energy Institute has been working.

At about the same time our Institute published a number of papers on work being done by a group of scientists led by Academicians Lev Artsimovich and Mikhail Leontovich. In these studies, rarefied deuterium was heated to a temperature of more than a million degrees by the use of a two-million-ampere electric current, and the emission of neutrons was observed. This research was further described in papers at a symposium in Stockholm on cosmic electrodynamics.

This coming September, the second international conference on the peaceful uses of atomic energy will be held in Geneva. The first conference did much to stress the need for unity of effort of scientists of all countries. It did not, however, discuss problems of controlled thermonuclear reactions. For this coming congress it will be a major item of discussion. Soviet nuclear physicists will describe work under way.

There has been little exchange by scientists of different countries on controlled thermonuclear reactions up to the present due to the fact that reactors can be used for military as well as peaceful purposes.

One can hardly expect that scientists in different countries will openly exchange information on controlled thermonuclear reactions so long as atomic and hydrogen weapons are not banned. We Soviet scientists consider this banning an urgent necessity.

The great work of science in the latter half of this century is to unite the efforts of science to achieve a virtually unlimited source of cheap energy. Soviet scientists are ready to work on this great project with men of all countries, including American scientists, whose achievements we rate very highly. ■

The column's stability is increased by the longitudinal magnetic field, but the plasma still touches the walls which are made of insulating material.

Metal walls increase stability of the column and cannot be penetrated easily by the magnetic field, which now keeps the plasma from touching them.





Brussels Fair

THE SOVIET PAVILION









AS YOU BEGIN YOUR TOUR OF THE PAVILION, YOUR EYES ARE DRAWN TO SCULPTURED FIGURES AND FRESCOS GLORIFYING LABOR, TO SPUTNIKS AND TO MODERN MACHINES.

By LEV PETROV

INTERPRETERS ANSWER QUESTIONS IN FRENCH, ENGLISH AND GERMAN EXPLAINING SPUTNIK'S TECHNICAL DETAILS.

AT the Brussels World's Fair they call the Soviet Pavilion the crystal palace. It is a luminous structure built of steel, aluminum and glass, 72 feet tall, 492 feet long and 236 feet wide. You ascend the broad stairs to a great open portico where 15 flags, one for each of the Soviet Republics, flutter in the breeze. Above the entrance, the metal letters URSS (the French abbreviation for Union of Soviet Socialist Republics), glint against the opaque glass.

You enter the huge hall bright with red and silver columns. The eye is drawn everywhere at once, to the brilliant frescoes glorifying labor, to the majestic sculptured figures of a worker and a farm woman, to the big machines, to the models of the first sputniks to be launched into outer space. And at the far end of the hall stands the giant figure of Lenin.

Displayed on the three floors of the Pavilion are eighteen major exhibits—samplings of every aspect of Soviet life.

Continued on next page





Brussels Fair

THE SOVIET PAVILION

Continued



Industry, Farming and Science

The largest is a picture of industry—metallurgy, chemicals, oil, electric power. Models, charts, and complete operating machines and installations show progress in engineering, development in automation, the industrial direction of the future. At every machine stand technicians ready to answer questions in three languages—French, English and Flemish—and to give each interested visitor a souvenir—a detail turned out by the machine he is looking at.

The Industry Exhibit spreads outside to the open air. Here is a completely mechanized



A LOT OF TIME HAS PASSED SINCE THE FIRST SOVIET SPUTNIKS WERE LAUNCHED, BUT THE PUBLIC'S CURIOSITY AND INTEREST IN THEM HAS BY NO MEANS DIMINISHED.

and operating coal mine, an installation for drilling mine shafts, another for sinking two oil wells simultaneously. This open-air exhibit always draws throngs of visitors even though it is some distance removed from the Pavilion.

The Agriculture Exhibit is a dramatic picture of the huge scope of virgin land cultivation, of mechanized farming, of rural electrification. Here is the scale model of a collective farm. A push of a button lights up barns, stables, machinery and the rest of the farm's equipment.

The Science Exhibit is an almost continuous display of great achievements. There

are the sputniks, of course, and pictures of the first dog space-traveler, and models of sputniks of the future. But there are also exhibits of comparable scientific achievements in astronomy, optics, automation, computing machine development and a host of other fields.

Education and Art

The most striking display in the exhibit on Soviet education is the model of towering Moscow University, a vertical, self-contained city with 40,000 rooms—dorms, classrooms, laboratories, lecture halls—big enough in area

to contain a town of some 50,000 population.

The unified educational system of the country is shown, its links from pre-school training through university, illustrating 40 years of progress in which mass illiteracy has been replaced by an annual enrollment of more than 30 million pupils in schools and two million students in colleges and universities.

The Art Exhibit seems like a haven of silence after the bustle of the other display areas. Visitors move slowly from one painting to another, exchange quiet impressions or sit for a while to rest and listen to the music of Tchaikovsky and Prokofiev, or to Russian

Continued on next page



THERE IS MUCH TO INTEREST STAMP COLLECTORS.

Brussels 58 Fair

THE SOVIET PAVILION

Continued

folk melodies played as harmonious background for the vivid imagery of the canvases.

Housing and Consumer Goods

In the exhibit on mass housing construction are displayed furniture, kitchen appliances, TV sets and completely furnished apartments. The greater number of visitors here are women. That is true also, and understandably, for the display of rich natural and artificial furs that shade from a startling lemon to the most delicate blue.

On the lower floor one of the centers of attention is a great 280-pound globe of carved chocolate, a masterpiece of the confectioner's art, surrounded by a tempting display of wines and table delicacies that may be sampled in the restaurant on the first floor.

Next-Door Neighbors

The achievements, wealth, talents and skills of the peoples of 50 countries are on view at the Fair. The participation of the two "giants," as the Belgian press refers to the United States and the Soviet Union, has given the Fair a special character and interest.

Our two countries are next-door neighbors at this world exposition, and—perhaps a hopeful forecast for the future—there is a free flow of visitors from one to the other, of Soviet people through the American Pavilion and the other way round. Comparisons are made, virtues and omissions in one or the other of the displays discussed, but completely without rancor. This is an interested and sympathetic exchange of reactions—competition of a desirable sort, both Soviet and American visitors seem to be saying.

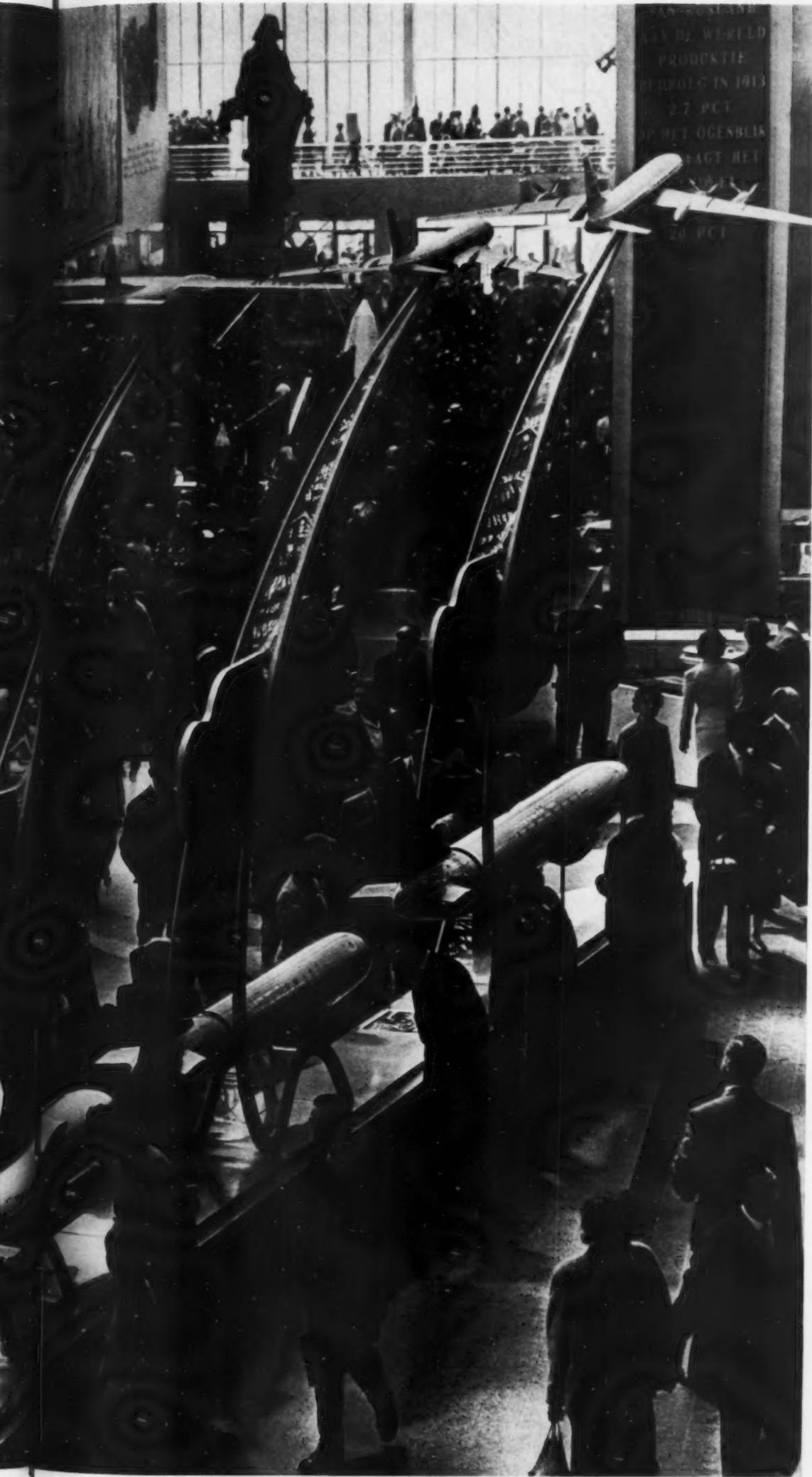
Alexei Ivanov, an electronics engineer from Leningrad, is impressed with American color television. Talking to the attendant at the display booth, he says: "We Russians still have some way to go to catch up with you people there."

Soviet film director Roman Grigoriev is very much taken with the American cirarama. "It creates a wonderful illusion of audience participation," he comments.

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NEW SOVIET JET AIRLINERS ARE ONE OF THE CROWD-STOPPERS.





David Belinkov and Gabr Bezalev, Israel: "Excellent Building machines."



An American girl Jackie Wellington, commented very briefly: "Not bad."



New Yorkers Le Baron and Doris Franke: "We liked books and music."



An American visitor, R. McKinney: "My wife and I liked it very much."

Another American, Raymond Gandy: "Marvelous, that's all I can say."



UNIVERSITY



The restaurant offers a broad choice of national dishes of various peoples inhabiting the country.



Chocolate cake dedicated to world peace invites this sample bite from a pretty feminine visitor.



The Art Exhibit shows the works of old masters as well as contemporary paintings and sculptures.

Onlookers spend much time at the Soviet furniture exhibit, including modern furnished home.

Brussels 58 Fair

THE SOVIET PAVILION

Continued

Natalia Solovyova, dress designer at the Moscow Fashion House, says of the American gowns: "They're a little too extreme for my taste—put me in mind of 1923 styles. But I did like a number of the less extreme designs, which I hope to present to Soviet women."

Young architect Alexei Knyazev commented on the design of the American Pavilion. "It's a fine design for display purposes, but I don't think the exhibits give as broad a picture of America as they could if there were more of them and if they were better grouped."

They Liked What They Saw

The Soviet Pavilion is host daily to Americans of the most diverse interests and occupations—tourists on a European vacation, newspaper correspondents, businessmen, engineers, soldiers and officers on duty in Germany.

Harold Stewart, president of an Oklahoma radio and television company, went through the Soviet Pavilion with two other Americans who are presidents of oil companies. They

were much interested in drilling installations, asked questions, took a bookful of notes, snapped photos, and crawled under and around and over the machines for a closer view.

George Samuelson, a California executive, wrote this comment in the Pavilion's guest book: "I haven't seen such excellent equipment in all my 45 years in the oil industry."

Dr. Raymond Henry of Stamford, Connecticut, is in Europe to see his son, who is in the army. He went through the medical exhibit at the Soviet Pavilion and was much impressed with our free public health system. He hadn't been aware of the extent of free services covering every phase of treatment and was much surprised to learn that a worker gets up to 90 per cent of his pay during illness.

W. Le Baron, a New York student now serving with the American forces in Germany, visited the Fair with his girl friend. They both liked the art exhibit especially. "Doris and I," said Le Baron, "spent a wonderful day. We came away with an armful of books by modern Russian authors and Russian folk music records."

R. McKinley, a Texas highway construction engineer, spent a lot of time looking over road construction machines, oil-drilling derricks, the big atom-smasher model. "It was a couple-of-hour trip to the Soviet Union," he said on leaving. "After seeing the Soviet Pavilion, I must get to see the country itself."

As you walk from one exhibit to another, you can hear comments on the various displays in the Soviet Pavilion. Some are complimentary, some critical. But on one thing everybody agrees, and that is that this is a good way for people to get to know more about each other. ■

BUILT OF STEEL, ALUMINUM AND GLASS, THE SOVIET PAVILION DESERVES TO BE CALLED THE CRYSTAL PALACE.





SOVIET-AMERICAN WRESTLERS' MEET. MERIYAN TSALKALAMANIDZE, SOVIET OLYMPIC CHAMPION, HOLDS DICK DELGADO, AMERICAN ATHLETIC UNION CHAMPION.

FRIENDSHIP IN ATHLETICS

By MIKHAIL PESLYAK

Vice Chairman, USSR Committee for Physical Culture and Sport

UNTIL very recently athletic contacts between our two countries have been limited, for the most part, to international matches. That has been unfortunate for more reasons than one. We are both of us sport-loving countries, with amateur athletes reckoned in the millions and fans in the tens of millions.

When our athletes have had occasion to meet, they have come away with a healthy respect for each other's athletic talents and sportsmanship. More than that, in athletic competition they have managed somehow to cut through national and political differences.

Last April I was in Tulsa, Oklahoma, with the Soviet wrestling team. It had been a hard and rough match, with a good deal of floor-pounding about equally distributed between the Soviet and the American contestants. But just as soon as the match was over, the two men threw their arms around each other's shoulders, slapped each other's backs, and in two different languages tried to compliment each other on good wrestling.

An elderly man came up to me and said: "I like that kind of thing!"

So do we here in the Soviet Union. That's why athletes and fans were very pleased that the agreement for cultural exchange was concluded between the United States and the Soviet Union. It provides for reciprocal visits

of basketball, track and field and wrestling teams and other sports exchanges this year and next.

I found, during the recent tour of the Soviet wrestling team in the United States, that American athletes were as pleased as we were at the opportunity to compete and were eager to expand the program.

Mr. D. Ferris, a veteran official of the USA Amateur Athletic Union, wrote in that vein to the USSR Olympic Committee. "I am happy to inform you," his letter read, "that the exchange foreseen by the agreement has evoked wide interest in our country and that our sportsmen are waiting impatiently to compete with Soviet athletes. We are confident that these exchanges will help to strengthen the friendly ties that now exist between sportsmen and sports officials of our countries."

Two Soviet sports delegations have already visited the United States, the wrestlers in April and the weightlifters in May. At about the same time, the American ice hockey team and the men and women's basketball quintets were playing in the Soviet Union. American gymnasts and marksmen participated in the World Meets held at Moscow this summer, and of course there was the mammoth track and field meet in Moscow in July.

This isn't a bad showing for the short time since the agreement was signed. It certainly

stacks up exceedingly well against the past ten years or so, when about all the sport exchange visible was the visit of the American weightlifters to Moscow and Leningrad in 1954, and trips both ways by a few individual athletes.

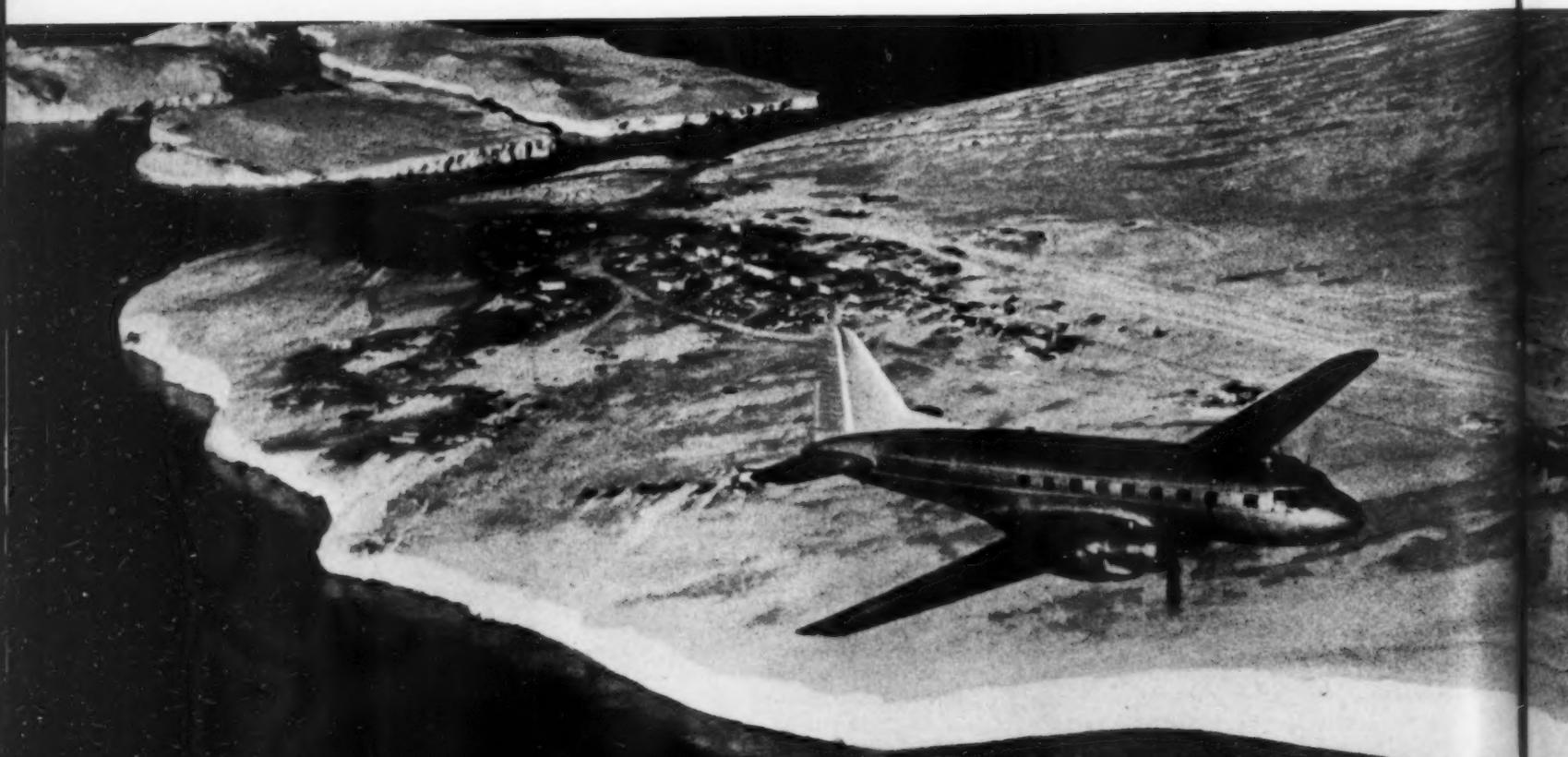
But despite these very meager exchanges, there was a real feeling of warmth—not to say interest—between Soviet and American athletes when they met at international games. I was at the 1952 Olympic games in Helsinki and the 1956 games in Melbourne, and I kept being struck by it time and time again. When Tommy Kono, the American weightlifter, ascended the dais of honor, the first to offer warm congratulations was his Soviet rival, Fyodor Bogdonovsky, and when the Soviet wrestler Meriyan Tsalkalamanidze won the Olympic title, the handclasp of his American opponent, Dick Delgado, was just as hearty.

In Melbourne, there were the long-to-be-remembered get-togethers of Soviet and American athletes to exchange ideas about sport, to share techniques, or just to have fun.

So far as fans go, the same interest, warmth and friendliness holds true. The Soviet wrestlers and weightlifters were delighted with the warm reception they got from spectators when they toured the United States. And the American athletes visiting our country receive a welcome as hearty as our music lovers gave your fine pianist from Texas ■



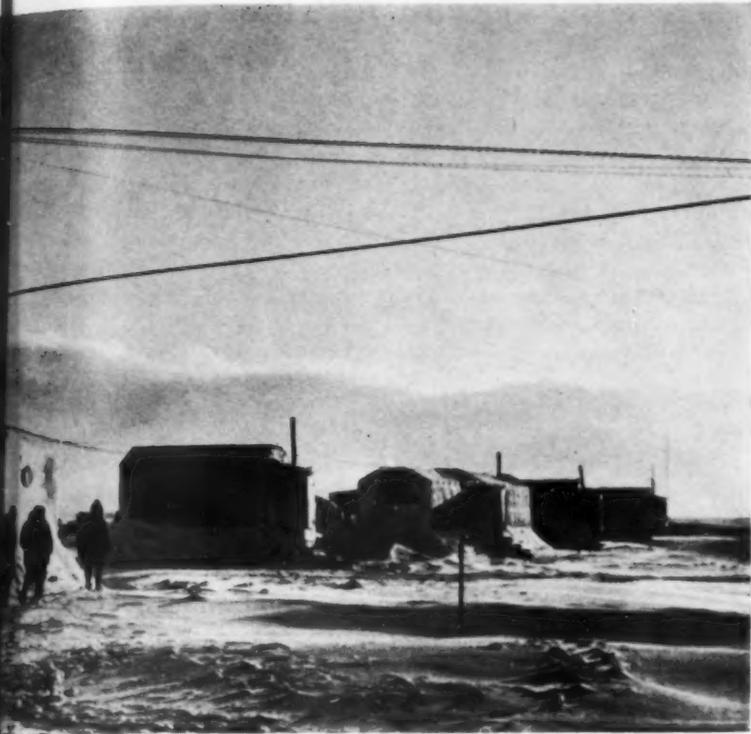
FROM ARCTIC TO A





By Vladimir Belousov

Vice President, Soviet IGY Committee



"NORTH POLE-6," A SOVIET ICE-DRIFT RESEARCH STATION IN THE ARCTIC OCEAN.

ANTARCTIC

MIRNY, THE MAIN BASE OF THE SOVIET SCIENTIFIC EXPEDITION IN THE ANTARCTIC.

WITHOUT fanfare and flourish, scientists of 52 nations participating in the International Geophysical Year have been quietly setting a pattern for world cooperation. At the Soviet and American Antarctic bases, Mirny and Little America, meteorologists of the two countries have been living together as colleagues and friends.

The American scientist Gordon Cartwright made a long stay at Mirny, and Soviet meteorologist Vladimir Rostorguyev lived at Little America. Now Morton Rubin and Pavel Astapenko are trading visits. Regular radio-telephone communication goes on between the polar observatories for the exchange of scientific information.

Mirny was host to a party from the American wintering expedition which arrived on the icebreaker *Berton Island*. The group was headed by Captain Ketcham, assistant to Rear Admiral Dufex, chief of the U.S. Antarctic Expedition. Philip Low, the famous Arctic explorer, has been a guest at the Soviet scientific base. The Australian physicists Keith Mazer and James Goodspeed have also visited to study the work done at Mirny.

These personal visits and regular exchanges of information have been going on with expeditions from dozens of countries, not only in the Arctic and Antarctic, but at many hundreds of stations everywhere in the world.

600 Soviet IGY Stations

Enlisted under the world IGY program are more than a hundred Soviet scientific bodies which direct the work of many thousands of researchers, technicians and observers. Some 600 special stations set up on the territory of the Soviet Union are carrying on observations in various fields to obtain data on phenomena affecting the earth and its atmosphere. More than 20 Soviet scientific expeditions are conducting studies from their bases in the Arctic and Antarctic, from the high peaks of the Pamirs and the Tien-Shans and from seagoing laboratories cruising the Atlantic, Pacific, Arctic and Indian oceans.

Scientific groups of the nations participating in this world scientific effort are researching from bases spread to cover the whole of our globe. The coordination of their investigations makes it possible to say that our planet is really being studied under a gigantic cooperative microscope.

The data collected by participating countries are filed with universal world centers set up in the United States and the Soviet Union for the duration of the geophysical year. The centers are in permanent contact with each other. All information is available to researchers anywhere in the world.

The close collaboration of the scientists of all countries is particularly important now, during the concluding stage of the IGY, when the preliminary results are to be summarized. At the universal center in the Soviet Union work has been under way with computing machines and

Continued on next page



AMERICAN SCIENTIST GORDON CARTWRIGHT MADE A LONG STAY AT MIRNY.



ANTARCTIC EXPLORERS—AUSTRALIAN PHILIP LOW AND RUSSIAN ANDREI KAPITSA.



SOVIET SCIENTIFIC STATIONS ARE ESTABLISHED IN VARIOUS POLAR REGIONS.



FROM ARCTIC TO ANTARCTIC

Continued

other instruments to collate and analyze the data accumulated. The material is being microfilmed and duplicated to make it readily available to researchers whenever and wherever they need it and for study by the Fifth Assembly of the Special International IGY Committee, which is meeting in Moscow this August.

IGY Research by Sputnik

A high point reached by the IGY program was the successful orbiting of artificial earth satellites. These cosmic laboratories provided invaluable information for studies that will be keeping scientists busy for a long time to come.

Preliminary study of the data received here from the Soviet sputniks reveals that the density of the upper layers of the atmosphere is some five to ten times greater than had been thought hitherto. Previous conclusions had been based on atmosphere models built around rocket measurement.

Sputnik observations also supplied new data on the outer section of the ionosphere at heights above 185-250 miles. The data was obtained by measuring diffusion of radio waves of various frequencies radiated by sputnik instruments at different altitudes.

For cosmic ray study, data recorded by Sputnik II indicates that from the minimum height of the orbit (140 miles) to an altitude of some 430 miles, the intensity of cosmic radiation increases by approximately 40 per cent. The intensity of fluctuation of the radiation was also recorded. With instruments located on the earth's surface, it had previously been impossible to record this type of data.

Sputnik II, with its dog as passenger, recorded pioneering information on the influence upon a living organism of weightlessness over an extended period, the effects of primary cosmic and solar radiation, and other such factors. The presently analyzed data shows that immediately after launching, the frequency of heart contractions increased approximately threefold. No symptoms of malfunctioning of the heart were indicated by the electrocardiogram records. During the period when the satellite was traveling in its orbit, the electrocardiograms showed that the heartbeat began to approximate that of the animal before flight. Despite the condition of weightlessness, the animal's mobility was moderate.

Thus we may conclude that the dog satisfactorily withstood both the launching and the flight in orbit. The information obtained from this experiment is of tremendous importance for working out a program of investigations with the aim of ensuring safe cosmic travel by human beings.

Seagoing Laboratories

Twelve large Soviet vessels are sailing the ocean lanes to collect data along routes prearranged by the IGY program. Soviet hydrographers have found that the warm Kuroshio Current in the Pacific has shifted 175 to 250 miles northward. The *Zarya*, a non-magnetic vessel, the only one of its kind in the world, has already studied the Baltic Sea and the Atlantic Ocean. Corrections are being made in magnetic charts based on the precise measurements made by the *Zarya*.

In the Southern Hemisphere, the research vessel *Vityaz*, sailing in the region of the Mariana and Caroline Islands, has traveled more than 30,000 miles in its 300 days at sea and has crossed the Equator several times. Its staff has been studying the northern and southern trade winds

and the equatorial countercurrents, and conducting geological, meteorological and biochemical research.

Geologists of the *Vityaz* followed a regular tack over the Mariana Deep and plumbed a record ocean depth of close to 36,000 feet. The ship's depth-finder discovered a submarine mountain whose summit is 820 feet below sea level. *Vityaz* biologists have dredged up some interesting specimens, among them a deep-sea fish whose mouth is six to eight times larger than its girth.

Oceanographic study is being carried on by the scientific expeditionary vessel *Lena* of the water and ice exchange in the strait between Greenland and Spitzbergen. The *Lomonosov*, another seagoing research laboratory cruising the Bering and Chukotsk seas, is studying the water exchange between the Pacific Ocean and the Central Arctic Basin passing through the Bering Straits.

Soviet scientists have flown to the most remote parts of the Franz Josef Land archipelago by helicopter to study and chart the waters in the face of bad ice conditions, heavy fog, and thick snowfall. On Hays Island, Soviet researchers have set up the northernmost scientific observatory to study the upper layers of the atmosphere by means of meteorological rockets equipped to record temperature and pressure of air during flight. The Hays Island station is completely electrified and has comfortable living quarters for stays of long duration.

The Frozen Continent Studied

In that barely explored region of our globe beyond the Arctic Circle, Soviet IGY groups have been conducting research from "North Pole—6" and "North Pole—7" ice-drift stations. Research groups are also flown to various points to establish radio beacons and drifting radio-meteorological stations.

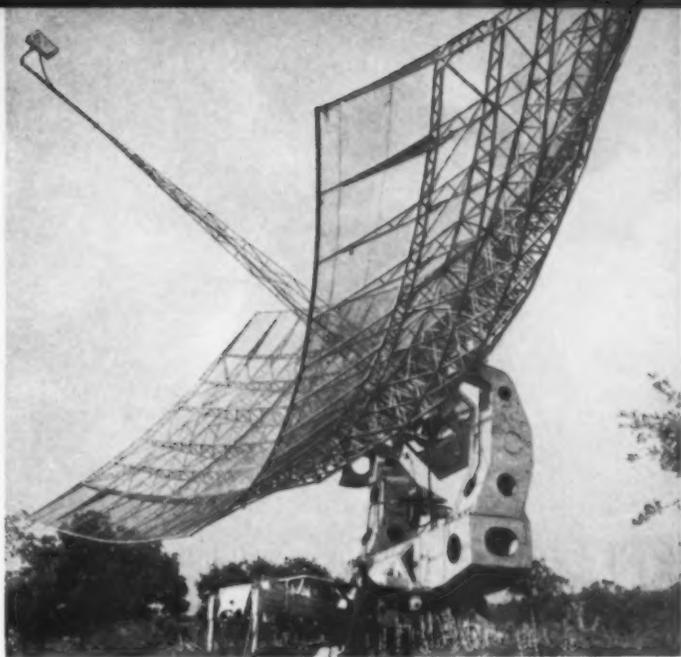
Expeditions floating through the ice between Greenland and Spitzbergen have been making important discoveries. Where the Nansen Sill was believed to be, they have found a submarine strait connecting the Arctic and Atlantic oceans.

In the South Pole, work of particular scientific interest has been going on at the main base at Mirny and its subsidiary stations, Pionerskaya, Oasis, Komsomolskaya and Vostok. Especially important work is being done at Vostok by virtue of its location in the region of the southern geomagnetic pole. All these stations were set up under extremely difficult and hazardous conditions, with staff and equipment sent out from Mirny on tractor-drawn sled trains.

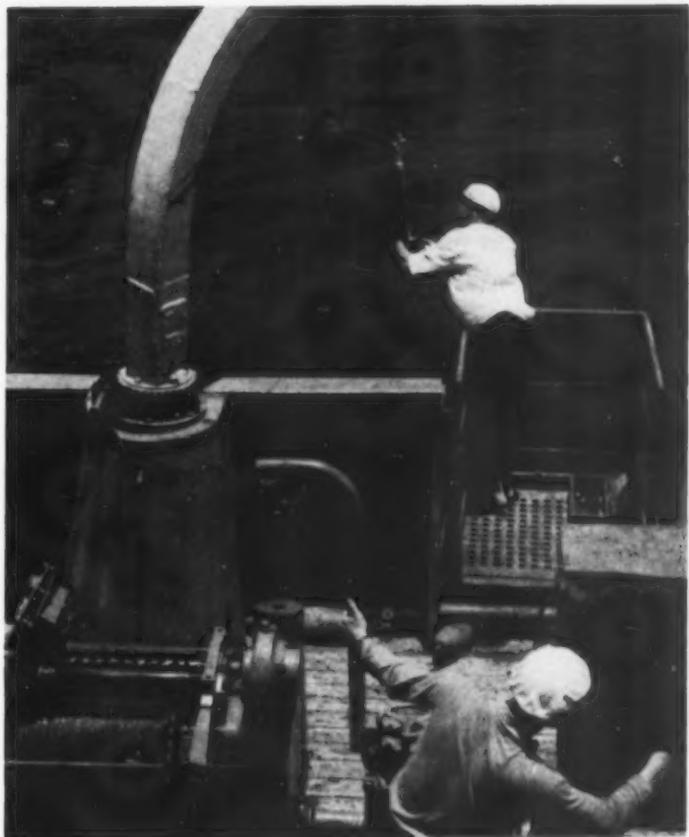
By setting up the Sovietskaya station in the region of the Pole of Relative Inaccessibility, at an altitude of more than 12,000 feet above sea level, Soviet scientists have fulfilled the last of their IGY commitments to establish Antarctic stations. The Sovietskaya station is studying the peculiarities of geophysical processes in the interior of the Antarctic.

Work done by these stations has cast doubts upon a number of previously accepted ideas about the Antarctic. There is reason to believe that the huge ice sheet of the Antarctic does not rest on solid land, but on individual mountainous islands. The Antarctic, then, would not be a sixth continent, but an archipelago.

This is a listing of only a few of the high points of scientific activity, and those of but one of the nations participating in this extraordinary world undertaking that combines the resources, the knowledge and the instrumentation of half a hundred countries. ■



RADIO TELESCOPE AT ONE OF THE 600 IGY STATIONS ON SOVIET TERRITORY.



THE SHIP VITYAZ HOLDS ONE OF THE 20 SOVIET EXPEDITIONS ON IGY PROBLEMS.

MIRNY KEEPS IN CLOSE CONTACT WITH FIVE OTHER SOVIET ANTARCTIC STATIONS. ALL DATA COLLECTED ARE FILED AT WORLD CENTERS AND MADE AVAILABLE TO RESEARCHERS.





IN ADDITION TO PURE THEORY, STUDENTS IN HIGH SCHOOL ARE TAUGHT THE MOST IMPORTANT CHEMICAL PROCESSES AND THEIR APPLICATION IN INDUSTRY AND AGRICULTURE.

SCHOOL and VOCATION

By ANATOLI YANTSOV
Academy of Pedagogical Sciences

SCHOOL STUDIES INCLUDE AGRICULTURAL SUBJECTS.



LEARNING TO USE A LATHE IN THE SCHOOL WORKSHOP.



EXTRACURRICULAR STUDY IN BOTANY CLASSROOM.



TO relate the school to life is the ever-present problem of the educator, and, by its very nature, an ever-changing one. As science and technology change the character of our life, new learning situations arise which the school must meet.

The curriculum of the Soviet school, one which is followed throughout the country, has three broad aims—to teach the child the natural and social sciences and the humanities; to give him a scientific and ethical world outlook; to provide him with an over-all grounding in practical work so that he may later choose his vocation wisely.

This third aim is covered under the head of polytechnical training, which is designed to acquaint the child with the most important branches of modern industrial and farm production, to teach the skills required to handle the most commonly used tools and materials, and to develop a sense of his relationship to socially useful labor.

It has been the feeling of Soviet educators that this aspect of the curriculum has not always kept pace with the very great changes that have been taking place in industry and agriculture and with the great spread of education. Thus, life itself necessitates a periodic reappraisal of what and how we teach, and we are constantly improving the school curriculums.

We have had three types of schools—the four-year, the seven-year and the ten-year school. By 1952 the seven-year school was universal and compulsory. That same year we

began gradually to shift over to compulsory and universal ten-year schooling, and in some of the republics to eleven-year schooling. Since 1956 ten-year schooling has obtained all through the country.

Educated Workers

The total number of boys and girls now in the eighth, ninth and tenth grades is close to seven million. This is six times as many as were enrolled in these grades at the end of the war. At many factories today there are whole shops in which all the workers are secondary school graduates. At many collective farms, too, whole sections are staffed by secondary school graduates.

The general course of study in the secondary school covers the native language and literature, a foreign language and literature, mathematics, physics, chemistry, biology, history, geography, drawing and drafting, singing and physical education. These are supplemented by extracurricular activities—amateur dramatics, orchestra, fine arts, ballroom dancing and similar out-of-class activities.

With Soviet industry and agriculture developing at the pace they have, there is an ever-increasing need for well-educated workers. The problem still to be solved, however, is how to train these workers with good general educational backgrounds for the more specialized requirements of industry and farming, how to combine a high level of general education with elementary vocational training.

This has been for some time now the central point for discussions held by the Academy of Pedagogical Sciences in various cities. Revision of the polytechnical curriculum in rural schools was the focal point of a conference in Krasnodar, a central city in the southern farm region. Conferences have been held in Novosibirsk and Moscow on vocational training in urban schools as related to general school studies.

Participants in these conferences were teachers, educational researchers, parents, industry and farm people. Recommendations made by these conferences were transmitted to the Ministry of Public Education for study and action. The changes that are being introduced into the curriculum stem from suggestions made by groups of this kind.

Revised Course of Study

Teaching of the natural sciences has been revised. Without lowering the general scientific level, more stress is placed on the study of physics, chemistry, biology and mathematics as they relate to the fundamentals of modern techniques and production, and more time is allotted to field trips and practical work.

In drafting, more emphasis is placed on technical and architectural drawing. The hours assigned to laboratory, shop, and to excursions to farms and factories have been increased.

Manual training, introduced in the lower
Continued on next page

WITH EMPHASIS ON POLYTECHNICAL EDUCATION IN THE SCHOOLS TODAY, THE DRAFTING COURSE HAS BEEN BROADENED TO INCLUDE TECHNICAL AND ARCHITECTURAL DRAWING.





FIRST STEPS IN LEARNING TO WORK INDEPENDENTLY ARE SKILLFULLY GUIDED IN THE LOWER GRADES.

SCHOOL and VOCATION

Continued

grades, includes shop work and work on school garden plots. A new subject for the senior grades is fundamentals of production.

In urban schools this course goes into the fundamentals of machine operation, basic electrical engineering and industrial production at a nearby factory. Rural schools study plant-growing, livestock breeding and the principles of farm mechanization and electrification. As part of their practical study, the children participate in the work of the farm or industrial plant.

The revised course of study provides for elective courses to permit students to develop individual abilities and to test their inclinations toward particular vocational areas.

In drawing up the revised curriculum the preliminary experience of the best schools was carefully studied. It was then tested experimentally in 500 secondary schools for a year, and only then introduced on a wider scale.

Present experience shows that the new curriculum, while maintaining the same high educational level as the old one, does a more effective job in polytechnical and vocational training.

Links in Educational Chain

Just as the Soviet elementary school prepares the child for secondary school, the general secondary school provides the back-

ground either for specialized secondary school or for college. The choice is determined only by individual preference and ability to pass the entrance examinations; money is not a factor, since all schooling through the university and professional level is free.

The number of students attending colleges and universities has grown steadily—from 730,000 to 2,000,000 since the end of the war.

Those who prefer to go to work after completing secondary school have every opportunity to go on to college after they have worked for a few years. As a matter of fact, their job experience gives them an advantage over those who apply for college entrance immediately after secondary school graduation.

With the general rise in the country's cultural standards and the great increase in the number of people who want to continue their schooling, the colleges and universities have had to raise their entrance requirements. Applicants are judged now not only by their secondary school and entrance examination grades, but also by the amount of practical working experience they have acquired.

Preference is given to applicants with job experience. Of the 430,000 college students who completed their first year last spring, 290,000 had enrolled after a few years of work. Educators feel that these students will do better work in their specialized training as a consequence.

Curriculum Experiments

Various other types of experimental secondary school curriculums are being tested now. In one group of 50 urban and rural schools,

upper-grade students are spending half of the school time on jobs and receive the prevailing wage for the type of work they do. Their course of study is 11 years instead of the usual 10, and upon graduating they receive, in addition to their diplomas, a category rating in one or another of the industrial trades.

In Krasnodar School No. 42, two new courses have been added to the regular curriculum—machine operation and electrical engineering. Students do their practical work in a neighboring industrial plant in the winter and switch to farm work in the spring and fall. The teaching staff has 14 instructors with technical background to supervise the practical work and to teach production and the natural sciences.

Rural schools in Stavropol Region have been doing some interesting curriculum experimentation. They have set up student work teams on a purely voluntary basis. Each team is assigned a plot of land which it farms under the direction of a teacher and a collective farm agronomist, with machinery provided by the farm. The first team was formed in 1955 at the Grigoropolis School and now has the use of six tractors with various farm tools, and is going in for experimentation with select seed.

Other schools in the region have followed suit and now almost 90 per cent of the eighth, ninth and tenth grade students are members of work teams.

It has been found that the opportunity given the student to apply his classroom theory to practical work at factories and farms facilitates his grasp of the subject. The experience gained while working is summed up in class and makes his studies more comprehensible. On the other hand, his theoretical training makes it possible for him to see beyond the superficial aspects of a job and prepares him for independent work when his schooling is over.

Creative experimentation with curriculum is the only way, Soviet educators are convinced, to relate school study to the changing realities of living. They see curriculum experimentation as a continual, never-ending process. ■

In the machine shop the boys can take equipment apart and get to know how things really operate.



1956—1958: *Two Years in the Lives of Graduates of a Moscow School*



1956

The self-satisfied look on Vladimir Novikov's face comes from relief at having passed the final exams.

This is Secondary School No. 166 in Moscow. Its course of study is typical for the country's general schools: the native language and literature, math, history, geography, science, a foreign language and literature, sports and fundamentals of production. The pictures on this and the following two pages tell what happened to a few of the students who graduated in 1956.



1958

After working two years as a lathe operator, he is planning to enroll at the Chemical Machine-Building College.





1956
 Among the school graduates that year were Liza Sibanova, Zina Soboleva and Albert Timofeyev.



ZINA HAS A JOB IN A COSMETICS FACTORY . . .



LIZA IS BACK AT HER OLD SCHOOL AGAIN . . .

1958

Albert is now a lathe operator, Liza a school-teacher and Zina combines work with study.



1956

Georgi Piyevsky is having a little trouble with his literature examination, but he passed both his machine study and shop courses with ease.

1958

His choice was clear-cut from his high school record. He enrolled at the Moscow School of Mechanics and is making radio work his specialty.





AND ALBERT WORKS AT A METAL PLANT. HE MAKES SURE THAT ZINA SPENDS ALL HER FREE EVENINGS WITH HIM.

1956

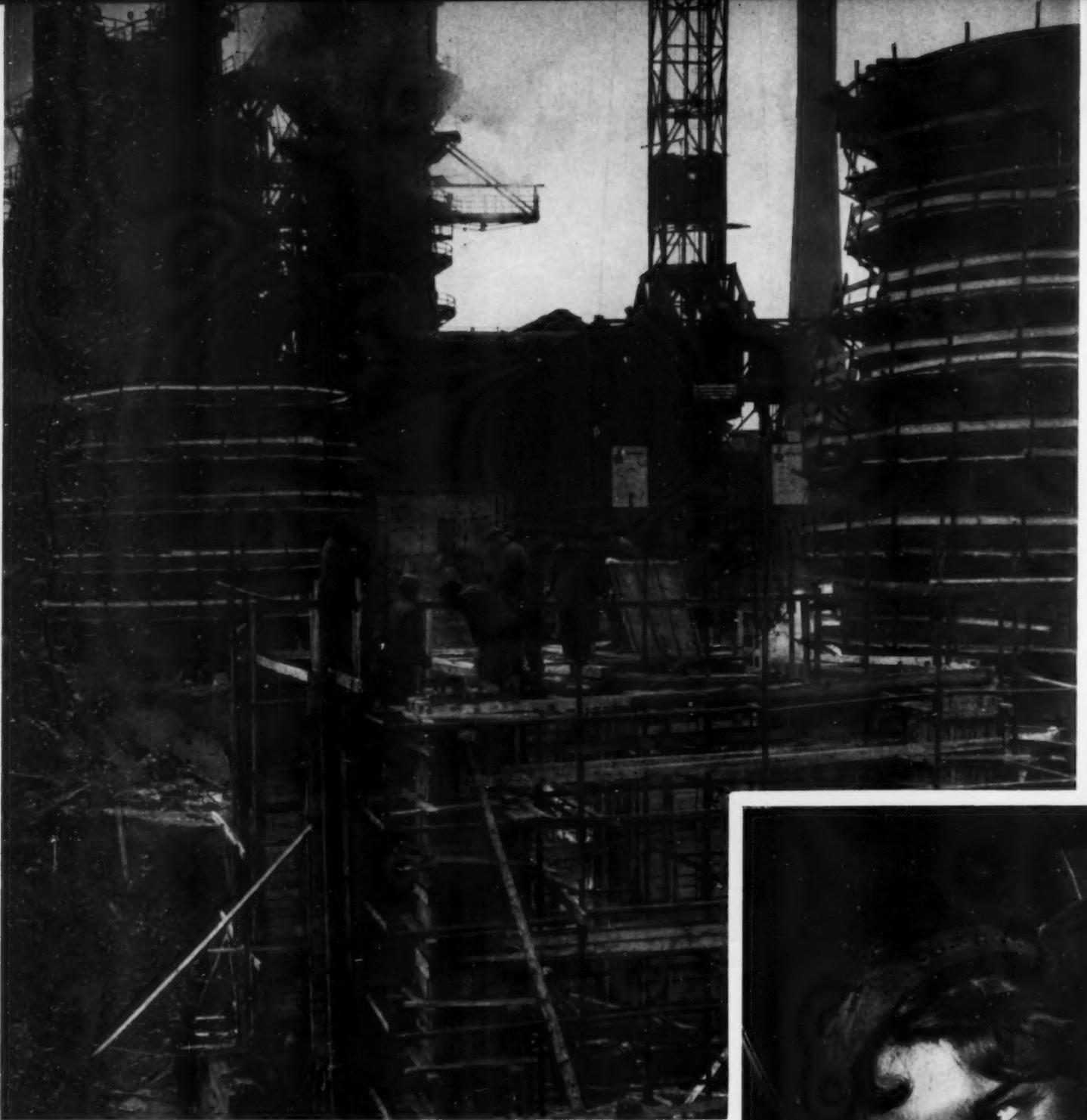
Oleg Rastorguyev always had a group of students around him asking questions about class work.



1958

He's still answering questions. Here on the grounds of the Building Exhibition he diagrams the solution to a complex problem for Valentin Glazunovsky. They are both enrolled at the Moscow Building Institute.





The Soviet iron and steel industry's expansion is reflected in the building of this blast furnace. It is at the Dniepropetrovsk plant where 2,000 new workers were hired in five months.

GROWING YOUNGER

EVERY DAY



By Boris Yurin

THE older steel mills in the Soviet Union are getting younger every day. A paradox, but true. The seventy-year-old Dniepropetrovsk Iron and Steel Mill, to cite one instance, has been undergoing a rejuvenating process these past months, a thoroughgoing modernization to boost its output.

Large-scale capital improvement is under way in the whole of the Soviet iron and steel industry. In various cities new coke batteries, blast and open-hearth furnaces, metal foundries and rolling mills are being built and old ones modernized.

During the January frosts the foundations were laid for seven blast furnaces. Soon they will be smelting as much pig iron as did all the furnaces built in the Soviet Union from 1929 to 1937. There will be nine new

coke batteries operating by the end of the year. Three open-hearth furnaces and seven rolling mills will start working soon after.

The interesting and characteristic feature of this big construction is that practically all of it is going on at operating plants. There is no need to post a sign at the mill gates that reads: "Work going on as usual during modernization." This is obvious in the smoking chimneys and the crowds of steelworkers who pour through the mill gates at shift changes.

This rejuvenation process is not confined to plant and structure. It is true of personnel also, evident in the preponderance of young faces that one sees in the steel mills. The industry has never had so many young people moving in on all levels.

The Dniepropetrovsk mill, during the first five months of this year, hired nearly 2,000 new workers, practically all young people, many of them fresh out of secondary school. A sizable number of these building workers, open-hearth and blast furnace men and rolling mill operators, are getting advanced technical schooling at the evening or correspondence divisions of the city's colleges attached to the mill.

Nineteen-year-old bricklayers Vasili Kirilovich, Alexei Bely, Ivan Shoot and Ivan Laptev started work at the plant last year after graduating from a building trades school. All four of them are going on with their schooling after working hours.

Part of the modernization process at Dniepropetrovsk, and of other mills as well, was to enlarge training and advanced education facilities. Young workers who have the required educational background of secondary school are urged to continue their schooling.

When workers enroll at the evening or correspondence divisions of the colleges, they are allowed time off with full pay to take entrance and term-end examinations. When they complete the course, they are guaranteed jobs of higher grade.

Ivan Pischchida is one of the many young Dniepropetrovsk steel workers who is taking advantage of his educational opportunities. After he was demobilized from the navy, he went to work at the mill, starting as a fitter. He is foreman in one of the equipment repair shops and is taking his senior year of study at the Metallurgy Institute.

Continued on next page

Presenting three young workers of Dniepropetrovsk. From left to right: Valentina Lisogor, a skilled welder who likes the profession she learned at

the mill; Dmitri Pralya, a recently demobilized soldier who is now an electrician; and Victor Gerasimchuck, a furnaceman studying for his degree.





At the end of the day shift, open hearth men Nikolai Frolov, Mikhail Grinberg and Vladimir Konashevich head for a shower before starting for their homes.

GROWING YOUNGER EVERY DAY

Continued

Dnepropetrovsk is a large industrial city and a railway junction for all parts of the Ukraine. It has, of course, theaters, motion picture houses and athletic parks. But the main center of social life for the young people is the mill Palace of Culture, with its lively round of activities—dances, concerts, lectures, amateur dramatics and craft activities.

Ballet is one of the popular interests of the young people at the mill. Acknowledged prima ballerina is mill engineer-economist Svetlana Kenis, who first became interested in the ballet while she was studying at the Metallurgy Institute. She got her dance training at the Dnepropetrovsk Student Club.

Svetlana Kenis, engineer-economist of the rail and girder shop, and Georgi Senchkovsky, teacher in the plant's evening school, presented the Adagio from Tchaikovsky's *Swan Lake* at a shop evening concert and received rounds of applause.



I saw Svetlana at a concert given by the mill's amateurs in the rail and girder shop. This concert also featured the jazz band, with mill engineer Lyubov Bibik singing a comedy song composed by technician Lev Chebyshev.

The mill's amateur dramatic group does some of the standard repertory plays with an occasional venture into a home-made product. One such was *At Our Side*, a play written by Arkadi Dnieprov, staff member of the mill newspaper, which was built around local material gathered from the life and experiences of mill steelworkers.

The leading roles were played by milling machine apprentice Svetlana Vatchenko, instrument maker Boris Kravchenko, deputy transport chief Pavel Volkhovsky, and fitter Victor Gubenko—all young people. Major acting honors, however, went to the single oldster, Pyotr Chubarov, deputy chairman of the plant's trade union committee, objective evidence that the older steelmen were far from ready to be put in the shade. And that, said Pyotr after the performance, goes for steel-making as well as amateur dramatics. ■



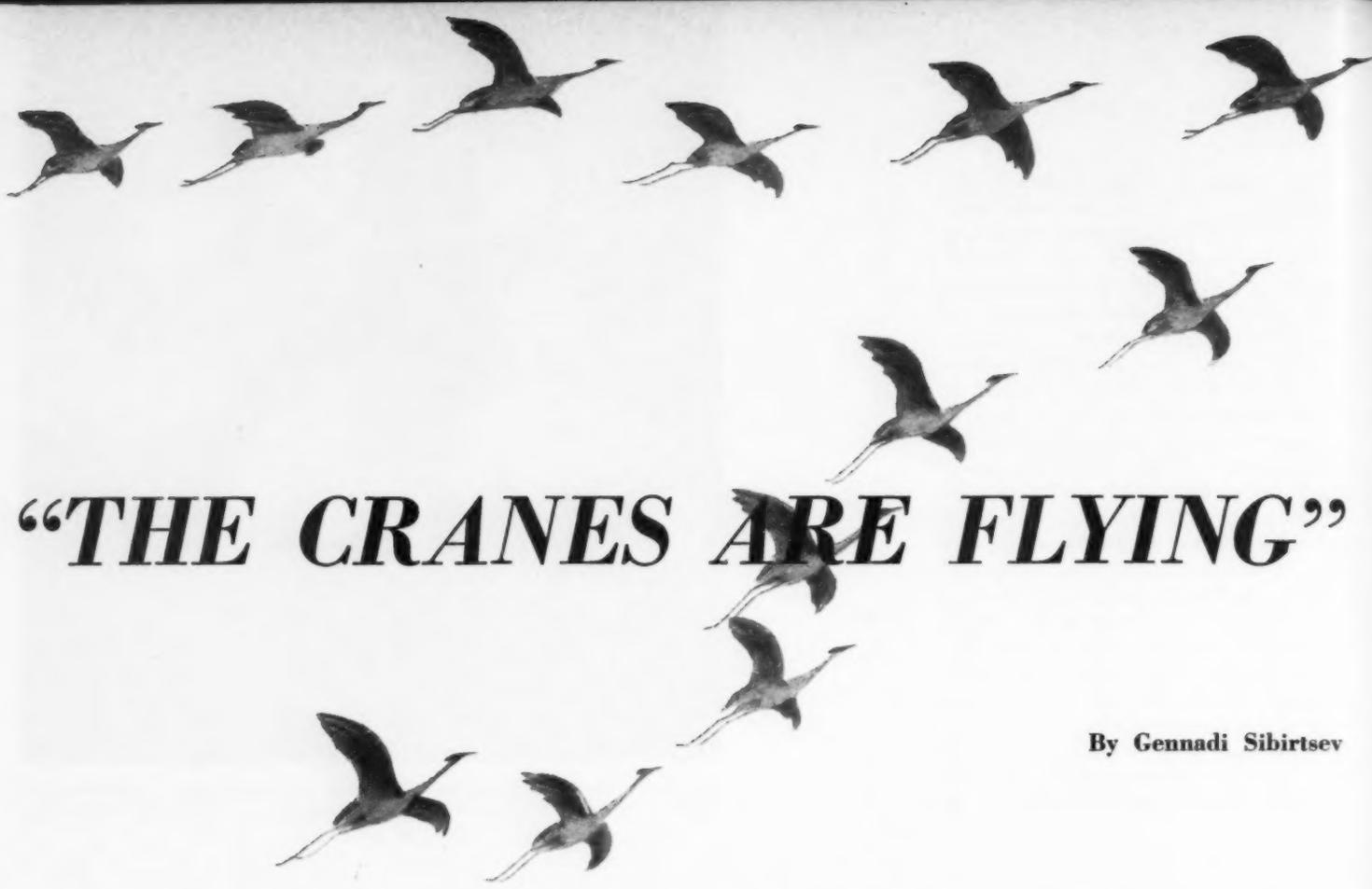
The Hopak, one of the most popular Ukrainian dances, is always included on programs of the plant's dance ensemble for concerts at the Palace of Culture.

These young people of Dnepropetrovsk plant organized their own jazz band. The soloist here is Lyubov Bibik, an engineer, who loves to perform the

comic song written by Lev Chebyshev, a technician whose hobby is composing music. The band enjoys wide popularity, both in the plant and the city.



FOR
UN



“THE CRANES ARE FLYING”

By Gennadi Sibirtsev

ONE of the most discussed Soviet motion pictures of the year was *The Cranes Are Flying*, awarded the Golden Palm at the International Film Festival at Cannes, France, last May. In winning the top award of the Festival, it elicited enthusiastic comment from foreign cinema experts and critics, too, one of whom termed it “the Russian film Sputnik.”

The film, an extraordinary beautiful and moving treatment of the effect of war upon the individual, was directed by Mikhail Kalatozov, and brilliantly photographed by Sergei Urusevsky. It stars Tatiana Samoilova as Veronica, and Alexei Batalov as Boris.

The time of the setting of the film is the Second World War. As the picture opens

Veronica watches a flock of cranes fly high over the quiet city in the early morning sky. She feels as though she were flying with them. Her heart is too light, too buoyant, to be anchored to the earth. She is 18, in love with Boris, wondrously happy.

They are preparing to marry when the war breaks out. Boris volunteers, the marriage postponed until the war ends. Before leaving for the front, Boris drinks a parting glass with his father, sister and his cousin, Mark, a gifted pianist whose draft into the army has been deferred. Boris waits until the last possible moment for Veronica, but she has been unable to make her way through the solid column of armored vehicles.

Boris leaves for the schoolyard which is the rallying point for the volunteers. A huge crowd mills about, volunteers and those who have come to see them off. The camera records grim, tense smiles, barely hidden tears, gay laughter. Impartially it records youth and love and the sorrow of parting and the cruel reality of war. Veronica searches desperately through the crowd for Boris. He searches for her. They do not meet.

Veronica has as keepsake Boris' last gift—a toy squirrel with a little basket of golden nuts. It is her treasure, this toy—symbol of the love she will store up for Boris until he comes back to her. Nothing can change that love, she feels; not the war nor parting—nor even death.

But war and a stray bullet are to test her pledge of eternal love. Boris is killed as he is trying to rescue a wounded comrade. Just before he dies he dreams of Veronica in a wedding dress, of himself and of his cousin Mark standing alongside.

Boris is the man true to himself, to his love, to his country in its time of trial and affliction. Mark is the man of outward charm and inward corruption, the man concerned with his own needs and his own small desires. And Veronica? Does she epitomize the people who are broken by war's horror or those who are just not strong enough to stand up and give battle?

Veronica was the subject for much of the discussion that went on about the motion picture and of most of the letters written in by viewers.

Veronica is carried out of her bombed house by Mark. Both her parents have been killed. She is weak, shaken by death all around her, brokenhearted by grief. She agrees to marry Mark, although there has been no official confirmation of Boris' death.

VERONICA, AFRAID OF AWAKENING NEIGHBORS, USES HER HANDS TO SET TOMORROW NIGHT'S DATE FOR SEVEN.



But Veronica finds no peace in the quiet life with her husband in the little town far to the rear. She feels that she has deserted the front line of battle for the safety of the rear, that in marrying Mark, a man she did not love, she betrayed not only Boris, who might still be alive, but herself also. It is love that she has betrayed.

She finds the courage to break with Mark. She lives on an illusion of hope—hope that Boris was not killed—that he will come back to her. She holds desperately to the thought that there was no official notification of his death.

As the film closes, the first troop train returns from the war. Veronica goes to the station. Again the excited crowd is milling about. She searches for Boris, and once again she does not find him. And once again the camera records smiles and tears and joy and the hopelessness of those whose men would never return. And once again the cranes fly against a brilliant blue, unending sky.

The Cranes Are Flying evoked widespread interest and much discussion. While critical of one or another element of the production, reviewers were lavish in their praise of the film as a whole.

So, too, for the audiences, indicated by the fact that the film ran to packed houses for many months. Nobody who saw it remained indifferent, and as is usual on occasions like this, letters poured into newspapers and magazines.

Much of the comment and discussion centered on the characterization of Veronica. G. Vnukovsky, a fitter who works in Kubinka near Moscow, writes: "I do not think that Veronica should be the heroine of this film. A person who is not true to her love is not a worthwhile human being."

A. Ponomaryov and B. Zamskov, two engineers from Novokuibyshevsk on the Volga, disagree. They wrote: "What happened to Veronica was hardly her fault. She was not prompted by philistine sentiments or the desire to use her husband's back as a shelter from the storm. She was spiritually broken. It was the war and its attendant horrors that was responsible."

A. Potapenko, a college student from Leningrad, takes much the same view. "Veronica never loved Mark. When she lost her parents she was so grief-stricken, so shaken morally, that she was indifferent to everything, even to death. Mark's depravity lies in the fact that instead of offering his moral support, he took advantage of her grief."

V. Shugarev, from Vinnitsa in the Ukraine, is critical of the direction. He says: "The film director failed to show Veronica's inner world, or explain the circumstances which drove her to act the way she did. And that, I believe, is the crucial point on which the whole character hinges."

But among the many thousands of letters there is scarcely one which did not make a point of the beauty of the film, its very penetrating insight into human behavior, its profound antiwar sentiment, and its outlook for a better, happier world—a world, as Z. Shcherbakova, a Moscow music teacher writes, "in which the cranes will always be flying in peaceful skies." ■



"HE WAITED LONG FOR YOU," GRANDMOTHER SAID, "AND THEN LEFT A TOY SQUIRREL FOR YOUR BIRTHDAY."



JUST BEFORE CRAWLING TO HIS DEATH IN EFFORT TO RESCUE A COMRADE, BORIS DREAMS OF HIS FIANCÉE.

IN THE WAKE OF THE BOMBERS, HERE IS WHAT WAS LEFT OF VERONICA'S FORMER HAPPINESS AND CHILDHOOD.



BASKET BALL USA - USSR



By Victor Kuprianov

IT WAS "tall men's" night on that drizzly April evening when the plane carrying the American basketball teams landed at Moscow airport for the first of a series of exchange games. Everybody who was anybody in Soviet athletics was there—players, coaches, and fans by the score. The outsize Americans dwarfed everybody present, although there were plenty of king-size Russians around.

Muscovites like ceremony. There were greetings all around—official and unofficial—and an impromptu speech of welcome by president of the USSR Basketball Association, Sergei Bessonov. Mr. Johnson, president of the USA Amateur Athletic Union, who accompanied the teams, had this to say in reply:

"My dear friends in the Soviet Union. We are delighted to have this opportunity to visit your beautiful city and country and to enjoy the fellowship and friendship of these games. We wish you success and look forward to your return visit to the United States. We have had some of your athletes visit us recently and we enjoyed their visit with us. Thank you for inviting us. We hope you will like our playing."

And Muscovites certainly did like their playing. Fans watched spellbound as the tall Americans sank balls into the baskets with that very special downward flick of the wrist, something very few Soviet players can do.

The Soviet men's team, which has always trailed the Americans, hoped to turn the tables this time. They counted on speed to neutralize the American height advantage, and on a skyscraper player by the name of Jan Kruminsh to keep their tally mounting. But that hope faded quickly. Result: a clean sweep of all six games by the U.S. men's team.

The American women's team started a little slow. They dropped the opening two games to the USSR national team which was able to avenge a setback at the world championship. But the American ladies made up for it by outplaying the other four teams.

All the games were played to capacity audiences. It was at these games that fans realized how little space a human can squeeze himself into if he has his mind made up to see crack basketball played.

Said Mr. Greims, president of the International Basketball Federation, speaking of the

fans: "The reaction of the crowd was very sportsmanlike. I was really gratified at the respect they showed the players."

The Americans had a packed schedule and not all of it was basketball. There was a lot they wanted to see and not enough time to see it all. But they managed to get in a good deal, nevertheless, and were met with cheers and warm greetings, both on the courts and by people in the streets.

The Americans made life a little difficult for people sitting behind them at places like the Bolshoi Theater, where they went to see the ballet *Don Quixote*. One bearded gentleman who must have suffered said wistfully during intermission: "Oh, for the good old days, when basketball players were the same size as other people."

The playing schedule of the Americans took them to Tbilisi in Georgia. The rush for tickets was so great that it was decided to hold the games in the open at the Dynamo Stadium. But the weatherman refused to cooperate and the rain came down in torrents. The crowds in the stands wouldn't budge, rain or no rain, and the Americans got a hearty round of applause when they agreed to wait the rain out.

It must have been this gesture of good sportsmanship that disarmed the weather gods. The clouds dispersed and the game got going after Mr. Womble, coach of the men's team, drew a laugh and a cheer when he marched around the stadium with a moistened finger lifted in the air to gauge the direction of the wind.

In the evening the American squad got a taste of real Georgian hospitality. Each player and official was presented with the traditional Georgian drinking horn filled to the brim with wine.

A drinking horn is a problem. You can't put it down because it won't stand. The only

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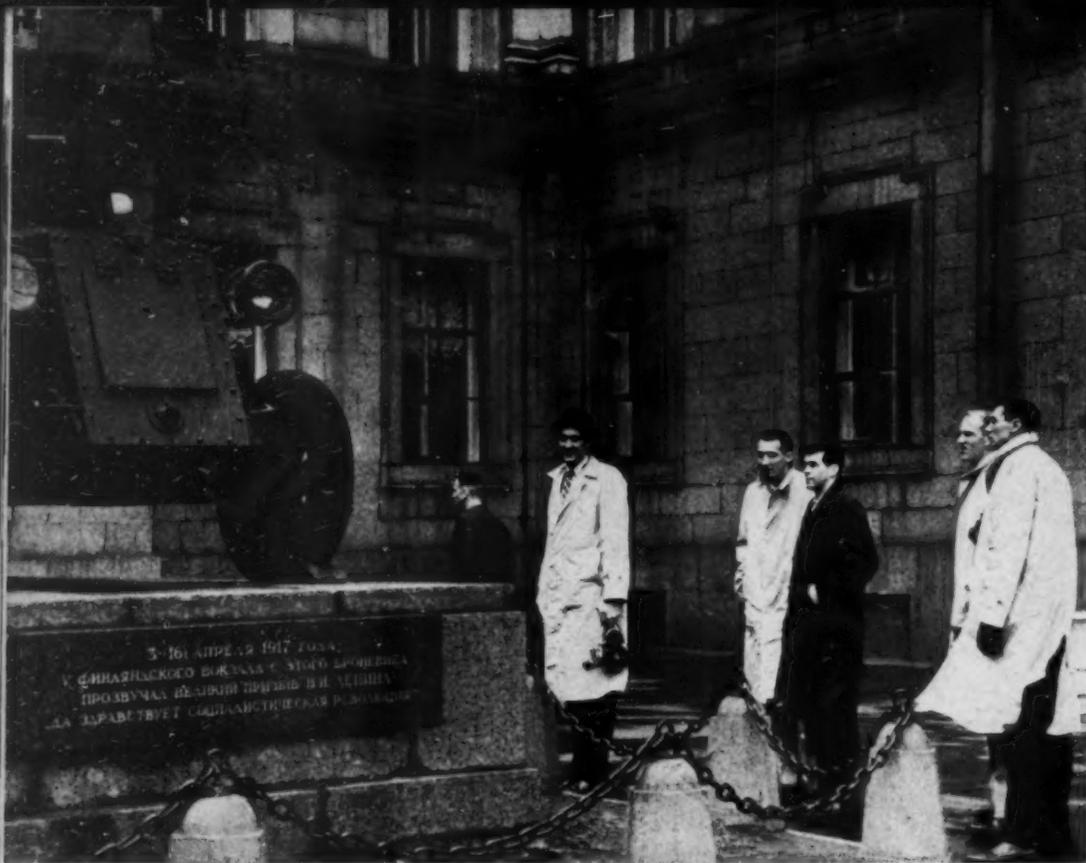
JUST BEFORE STARTING WHISTLE. OVERFLOW CROWDS PACK THE STANDS FOR ALL INTERNATIONAL CONTESTS.

THE COACHES AND SUBSTITUTES ON THE U.S. BENCH EAGERLY FOLLOW THE PLAY.



AUTOGRAPH FANS CROWD AROUND THESE AMERICAN GIRLS TO TRADE SIGNATURES.





A GROUP OF U.S. PLAYERS AT ENTRANCE TO THE MUSEUM OF THE REVOLUTION DURING A SIGHTSEEING TRIP.



TAKING PICTURES OF MOSCOW TO SHOW AT HOME.

THE WOMEN PLAYERS HAD A LONG LIST OF THINGS TO SEE, BUT THERE WASN'T ENOUGH TIME FOR EVERYTHING.



BASKETBALL USA-USSR

Continued

thing to do is to down the contents. The host, of course, fills it right up again. Warmed by the fragrant local wine, it didn't take long before the Americans were learning how to dance the fiery Georgian *lesginka*, and the hosts were rock-and-rolling. It was a fine evening all around.

Then back to Moscow for a sight of the big May Day parade, with a busy time for camera bugs, followed by a dash to Leningrad for more basketball and more sightseeing. One of the sights was a soccer game at the Kirov Stadium, where the visitors stopped the game until the crowd got through applauding.

The Americans were peerless basketball players and fine ambassadors of good will. Whatever the basketball score may have read, there were no losers at these games—everybody made friends.

Mr. Head, the women's coach, put it this way during the tour: "We certainly have been treated royally . . . People have been wonderful to us. We hope to be good representatives of our country, and before we leave to make many friends and to do a wonderful job in promoting better relations between our two countries."

The American players, both women and men, did all of that—and more. ■





DANCERS OF THE MOISEYEV ENSEMBLE IN THE UNITED STATES. See story on page 28.



