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SOVIET UNION SOVIET SCIENTISTS & SCIENTIFIC

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SOVIET UNION

Soviet Scientists and Scientific Organizations

146

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NOTE

This monthly publication contains information on the structure, activities, and personnel of Soviet scientific organizations, as reported from periodicals, books, and newspapers of the USSR. Reporting of events which have been covered adequately in official or public sources is not repeated in this publication.

Items contained in this report are full translation, excerpts, or abstracts as indicated at the beginning of each item.

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FPD: SOVIET SCIENCE

I. ACADEMIES OF SCIENCES

Republics

1. USSR

NEW MEMBERS OF THE KAZAKH ACADEMY OF SCIENCES

Alma-Ata VESTNIK AKADEMII NAUK KAZAKHSKOY SSR in Russian No 5, 1975 p 72

[Text] ACTIVE MEMBERS (ACADEMICIAN) OF THE
KAZAKH ACADEMY OF SCIENCESDivision of Chemicotechnological Sciences: Petr Ivanovich Polukhin (metallurgy and the technology of metals), Yevney Arstanovich Buketov (metallurgy), Bulat Akhmetovich Zhubanov (the chemistry of high molecular compounds).Division of Biological Sciences: Nikolay Dmitriyevich Beklemishev (immunology and and allergology).Department of Social Sciences: Karatayev, Mukhamedzhan (literature), Beysembayev, Serkbay (history of the CPSU), Tulepbayev, Baydabek Akhmedovich (history of the CPSU)

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Alma-Ata VESTNIK AKADEMII NAUK KAZAKHSKOY SSR No 5 1975 p 72

CORRESPONDING MEMBERS OF THE
KAZAKH ACADEMY OF SCIENCESDepartment of the Universe and the Earth: Abdulin, Aytmukhamed Abdullayevich (geology and regional geology), Bolgozhin, Shabden Abdul-Gaparovich (mining).Department of Physico-Mathematical Sciences: Sultangazin, Umirzak Makhmetovich (mathematics), Pomerantsev, Gleb Borisovich (nuclear physics, nuclear energy).Department of Chemico-Technological Sciences: Ni, Leonid Pavlovich (metallurgy), Ponomareva, Yelizaveta Ivanovna (metallurgy), Battalova, Sharban (chemistry).Department of Biological Sciences: Polimbetova, Fatima Abdulkhairovna (botany), Murzamadiyev, Atzhomaret (general biology), Tashenov, Kazis Tashenovich (general biology), Shigayeva, Mayya Khazhetdinovna (general biology), Rakhishev, Alshinbay Rakhishevich (human anatomy), Atchabarov Bakhiya Atchabarovich (hygiene, professional illnesses).

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Alma-Ata VESTNIK AKADEMII NAUK KAZAKHSKOY SSR No 5 1972 p 72

Department of Social Sciences: Aubakirov, Yakhiya Aubakirovich (economics), Abdil'din, Zhabaykhan Mubarakovich (philosophy), Akhmetov, Zaki Akhmetovich (literature), Dyusenbayev, Iskhak Takimovich (literature), Lizunova, Yevgeniya Vasil'yevna (literature), Akhanov, Kaken Akhanovich (Kazakh language), Sadvakasov, Gozhakhmet Sadvakasovich (Uigur studies), Baymakhanov, Murat Tadzhi-Muratovich (law), Sartayev, Sultan Sartayevich (law).

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2. USSR

YERZHANOV, Zh. S., Academician-Secretary, Kazakh Academy of Sciences

ACTIVITIES OF THE KAZAKH ACADEMY OF SCIENCES DURING 1974

Alma-Ata VESTNIK AKADEMII NAUK KAZAKHSKOY SSR No 5, 1975 pp 61-69

[Abstract] The Kazakh Academy of Sciences basically met all of its research obligations for 1974. In all 499 themes were studied, of which 115 were essentially or entirely completed, and 34 led to contributions to industry. Eighty-six monographs were published. In addition to technical and industrial projects, important work was done in botany, zoology, physiology, and the social sciences. The economic effect realized from introduction of Academy developments into industry amounted to more than 5.3 million rubles, or 30 percent more than for 1973. Notable contributors during 1974 were as follows:

Institute of Mathematics and Mechanics: theory of gravitational resilient instability and the formation of dome folding in the earth's crust; successful development of special problems in the stability of underground installations; a cycle of works on rock mechanics (awarded the 1974 Kazakh State Prize).

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YERZHANOV, Zh. S., Alma-Ata VESTNIK AKADEMII NAUK KAZAKHSKOY SSR No 5, 1975 pp 61-69

Institute of High Energy Physics: study of inelastic ion and proton interaction with the nuclei of a photoemulsion substance; establishment of a continuous increase in the mass of particle clusters generated in inelastic interactions at energies above 10^{12} ev.

Institute of Nuclear Physics: study of radiation damage to copper, nickel, and molybdenum irradiated with protons of energy 30 Mev and alphaparticles of energy 50 Mev, at temperatures of 100, 500 and 700 C°.

Institute of Geological Sciences: full report on the Mugodzhar Metal Ore Deposit; generalized report on the Kazakhstan Cenozoic (geology and geomorphology); compilation of engineering-geological and geomorphological maps for the whole of Kazakhstan (these supply data useful for the proposed diversion of Siberian rivers into the Aral Sea); and preparation of a classification scheme for the ore formations and industrial-genetic types of lead and zinc deposits in Kazakhstan. In hydrogeology, a study was made of the hydrogeological conditions of Kazakhstan, in connection with the Tugay variant of the diversion of Siberian rivers; the laws of formation and the prospects of utilization of underground water resources of the mining regions of Central Kazakhstan were established.

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YERZHANOV, Zh. S., Alma-Ata VESTNIK AKADEMII NAUK KAZAKHSKOY SSR No 5, 1975 pp 61-69

Institute of Chemical Sciences: data obtained on regulation of conjugate vapor-phase oxidation in the synthesis of a number of valuable monomers; development and introduction of several innovations for industrial use, including intensification of the cyclone melting process in obtaining defluorated phosphates, and the use of the kerosene-gas oil fraction derived from Kazakh oils.

Institute of Metallurgy and Beneficiation: synthesis of previously unknown compounds (ferrites and hydrosilicoferrites of sodium, calcium and some other metals); vacuum refining of tin.

Institute of Soil Science: compilation of a 1:2,500,000 soil map covering all of Kazakhstan.

Conclusion: The Kazakh Academy of Sciences contributed significantly to republic and national research during 1974, laying stress on technological progress, cultural construction, education of scientific workers, planning and coordination of research, and the reinforcement of the scientific material-technical base. One significant weakness is the serious lag in the output of scientific publications.

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3. USSR

SAMSONS, V. P., Chief Scientific Secretary of Presidium of the Latvian Academy of Sciences

ACTIVITIES OF THE ACADEMY OF SCIENCES LATVIAN SSR IN 1974

Riga IZVESTIYA AKADEMII NAUK LATVIYSKOY SSR in Russian No 4, 1975 pp 13-26

[Abstract] Serious and thorough discussions were conducted at meetings of the scholarly councils of the Institute of Microbiology imeni Avgust Kirshenstein, the Institute of Organic Synthesis, the Institute of Biology, and bureaus of the Division of Chemical and Biological Sciences based on resolutions developed in the field of molecular biology and molecular genetics. Vice President of the Latvian Academy E. A. Jakubaitis spoke on the automation of scientific research. Some of the reports given in 1974 are as follows: connection between strength and deformation properties and the biochemical content of compositional biopolymer materials (Institute of Polymer Mechanics); regulation of structure and function of biomembranes and its application to agriculture (Institute of Organic Synthesis); hydrochemical and hydrobiological conditions of the Baltic Sea (Institute of Biology); modification of cellulose to introduce it to the macromolecule of reactive groups (Institute of Wood Chemistry); biosynthesis of organic acids from n-alkanes (Institute of Microbiology); and finite automaton theory. The Physics Institute imeni P. N. Lebedev and the Institute of Physics of the Latvian Academy combined research efforts on the nature
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SAMSONS, V. P., IZVESTIYA AKADEMII NAUK LATVIYSKOY SSR No 4, 1975 pp 13-26

of interaction of laser emission with free and bonded electrons. Multiphoton processes in hydrogen atoms were examined using methods of perturbation theory. The Physical Engineering Institute successfully completed a number of studies on complex magnetic fields in the presence of ferromagnetic media and electromagnetic processes in semiconductor transformers. J. Dzintaris, V. Savchenko, and V. Samsons prepared three monographs on the participation of Latvian workers in the struggle against the Nazi occupiers during WWII. A. Tseplitis published a monograph entitled "Analysis of speech intonation." B. Laumane wrote an article "Fish Nomenclature in Lettish," which won the J. Endzelin Prize for 1974. Developments of the Institute of Physics have been patented in many capitalist countries, such as MHD pumps and dosimeters, devices for pumping liquid metals. Scientific institutions and enterprises of the Latvian Academy of Sciences have taken specific quotas for 1975, including methods of mass production for machinery, quantitative analysis of organic plastics, testing and manufacture of new drugs from abroad, artificial aeration and its effect on purification of polluted waters, and so forth.

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II. MEDICINE AND HEALTH

Republics

4. USSR

DEMIRCHYAN, V., chief of the Division of Science, Ministry of Health Armenian SSR, Yerevan

CONTROL OF MEDICAL RESEARCH IN ARMENIA

Moscow MEDITSINSKAYA GAZETA in Russian 29 Jan 75 p 3

[Abstract] Public health organs in the past few years have concentrated strongly on the problem of controlling science. The Armenian SSR, with its developed network of scientific institutions, is a good example of this trend.

There has been a significant regrouping of forces in the Armenian medical service. This has included a reduction in the number of subdivisions by 16 percent in the past three years alone. This result was achieved by enlarging laboratories and divisions, by altering the specialties followed by some services, and by liquidating small, scientifically weak institutions. In this way, by using the Institute of Labor Hygiene and Occupational Diseases as a base and combining it with a number of divisions from the Institute of Epidemiology, Virology and Medical
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DEMIRCHYAN, V., MEDITSINSKAYA GAZETA 29 Jan 75 p 3

Parasitology and with some problem laboratories for radiation hygiene and hygienic normalization, a large new scientific center was created--the Institute of General Hygiene and Occupational Diseases. Outstanding Armenian scientists and specialists have been asked to evaluate the work of all scientific research institutions whatever; this has led to the delivery of the corresponding reports at sessions of the College of the Armenian Ministry of Health. Continuous improvement in the working conditions of research workers has been noted. Thus the Institutes of Cardiology, Health Resort Sciences and Physiotherapy, and also the Central Scientific Research Laboratory of the Yerevan Medical Institute have all received new buildings in the past few years.

One main objective is to achieve competent planning and coordination of all scientific research work: this means strict scrutiny of research subjects and careful rejection of unpromising ones. In this connection, the first steps have already been taken by improving the links between main institutes and republic institutes. Research projects undertaken by local scientific institutions as a rule must be examined and confirmed by problem commissions appointed by the main institutes; the latter also hear reports on finished research projects and extend methodological help where needed.

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DEMIRCHYAN, V., MEDITSINSKAYA GAZETA 29 Jan 75 p 3

Weaknesses must be noted. Although the "main-and-republic" dual system of institutes has already demonstrated its viability, an important link is missing--namely, the appropriate service of the Armenian Ministry of Health--for the main institute, able enough to evaluate research as such, is in no position to direct the republic institute in the organizational sense. Some negative criticism also must be directed to the introduction of medical innovations into daily practice. The long-term plan for such introduction is a sort of guideline which cannot be translated into reality by the branch divisions and boards of the Ministry, which have no specific authority for this. Definite authorities should be set up to exercise the functions of control and coordination in science.

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5. USSR

SOYUNOVA, M., Deputy Minister of Health Turkmen SSR

MEDICAL WORKERS' DAY

Ashkhabad TURKMENSKAYA ISKRA in Russian 15 Jun 75 p 3

[Abstract] The protection of motherhood and medical care for expecting mothers and infants, is one of the main tasks of the Soviet medical services. The Soviet state pays much attention to improving working conditions for women, caring for their health and wellbeing, and protecting their motherhood. More than 1.5 billion rubles were paid in 1973 for maternity leave, delivery, and infant care, and unwed mothers. Since November 1974 many thousands of families in the Soviet Union have received state financial help for children if the family income is less than 50 rubles per family member. There are about 11 million children in the Soviet Union attending preschool organizations, such as nurseries and kindergartens. This enables working mothers to combine work with motherhood and to participate in the upbringing of children. In Turkmen SSR there are 65,000 such organizations. In addition there are seasonal nurseries and kindergartens.

To provide proper care for expectant mothers and to help women with gynecological problems, the Turkmenian SSR has expanded the network of maternity wards and maternity consultation centers. More than 100 million rubles were spent
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SOYUNOVA, M., TURKMENSKAYA ISKRA 15 Jun 75 p 3

in 1974 for construction of the maternity ward at the city hospital in Krasnovodsk, for organization of the maternity consultation centers in Takhta settlement, and for starting the construction of the 120-bed city hospital in Bakharden. In addition to the Central Hospital imeni N. I. Pirogov in Ashkhabad and three oblast and two city maternity hospitals, there are 34 other rayon hospitals in Turkmen SSR which provide consultations and care for expecting mothers, as well as for women requiring gynecological help. Furthermore, there are five separate maternity sections of large rayon hospitals, 37 rural hospitals, 86 consultation centers, 162 kolkhoz maternity wards, and 1035 medical stations staffed with doctor's assistants and midwives. The Ministry of Health Turkmen SSR also pays much attention to training midwives-gynecologists, setting up special wards for expectant mothers with complicated pregnancies, organizing departments caring for the gynecology of infants, and early detection of hereditary diseases. The most recent form of medical services in Turkmen SSR is mobile consultation units for women.

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III. ACTIVITIES OF SCIENTIFIC ORGANIZATIONS

6. USSR

YEZHELEV, A., "Izvestiya" correspondent, Leningrad

ANTHROPOID ADAPTATION TO COLD CLIMATES

Moscow IZVESTIYA in Russian 3 Apr 75 p 6

[Abstract] Human adaptation to rigorous climates is of interest to Soviet medical scientists, who are attempting to supplement the information obtained from industrial settlements, explorations and the like, with data from direct experimentation. Doctor of Medical Sciences L. Firsov, head of the Laboratory of Primate Physiology of the Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences USSR, was interviewed about an acclimatization experiment with chimpanzees.

Five chimpanzees were transferred from a testing laboratory for apes to a small island in Lake Yazno where they were left "on their own" during the summer season for three consecutive years. The island is at latitude 56°10' north in Pskovskaya Oblast, the climate is severe, and during the third year the weather was especially bad. The animals were able to forage for all the food they needed and required no other human assistance. At the end of their stay they were in excellent health. Their behavior was carefully studied during the periods on the island; this differed 1/2

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YEZHELEV, A., IZVESTIYA 3 Apr 75 p 6

considerably from their behavior in artificial conditions, the animals showing much more ingenuity in problem-solving, the use of "tools", and the like.

It is believed that the "resettlement" of primates, apart from its theoretical interest, will supply valuable information on human adaptation in connection with physiology, disease-control, performance, and so forth.

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7. USSR

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AKMAL'KHANOV, Sh. A., Director of the Uzbek Scientific Research Institute of Livestock Breeding

UZBEK SCIENTIFIC RESEARCH IN LIVESTOCK BREEDING

Moscow ZHIVOTNOVODSTVO No 10, 1974 pp 22-26

[Abstract] The Uzbek SSR, though one of the principal suppliers of Soviet cotton and fiber, finds its most important branch of agriculture in livestock breeding. The important Uzbek Scientific Research Institute of Livestock Breeding (UzNIIZh) has been busy for over three decades developing new breeds of animals and fowl, working out methods for feeding and care, and doing research in various other areas, such as artificial insemination and the biochemical bases of increased productivity. The Institute now employs 59 doctors and candidates of science and has laboratories equipped for intensive research in this field. Its research is complicated by the necessity of securing the adaptivity of animals to the peculiar Uzbek climate. Among the Institute's prominent researchers may be mentioned. E. Yu. Karchevskiy (development of cattle breeds adapted to hot climates), U. N. Kasyrov and I. Kh. Khidirov (new meat-producing breeds), I. A. Tapil'skiy and A. A. Yuldashev (transformation of local Kurdish sheep breeds into meat- and wool-producing breeds), and T. P. Pyanovskaya and B. A. Belenko (new swine breeds).

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8. USSR

MISHINA, N., Special Pravda Correspondent, Dnepropetrovsk

RAINMAKERS

Moscow PRAVDA in Russian 13 Jun 75 p 6

[Text] The season of summer work with an actively influencing clouds has begun at the Experimental Meteorological Training Field of the Ukrainian Scientific Research Hydrometeorological Institute.

At the headquarters of the Institute, situated alongside the new building of Dnepropetrovsk airport, the Institute's workers planned a program of investigation for today.

"It is known that we cannot produce rain unless there is a suitable cloud," remarked Ye. Ye. Korniyenko, in charge of affairs concerned with the physics of clouds and active influence on them. His remark reminds one of a dialogue from a comedy by Aristophanes when one of the heroes asks: "But, have you even once seen when Zeus produced rain without the help of clouds?"

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MISHINA, N., PRAVDA 13 Jun 75 p 6

"But I feel that today we will have some action." Yevgeniy Yevgen'yevich is scrutinizing the sky in which a red hot sun is burning, "There is a formation which is sufficiently promising."

The Il-14, a laboratory plane, is travelling in accordance with regulations for visual flights: low altitude from which the Earth's landscape and distant clouds are simultaneously seen.

Over many years of experiments in which clouds were treated with high frequency electric charges, solid carbon dioxide, and later with silver iodide, specialists already have learned how to make rain. By the way, artificial precipitation is of considerable assistance in extinguishing forest fires. The problem here is considerably broader. It is in the fact that active influence on atmospheric processes should be applied to more rationally utilize natural resources and develop of a scientific foundation to conserve nature and improve the environment. These are the investigations which are being conducted at the special meteorological training field.

"We are now flying in its zone," Korniyenko explains. "It is as if it were a huge laboratory table with an area of 10,000 square kilometers over which a dense
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USSR

MISHINA, N., PRAVDA 13 Jun 75 p 6

network of observation stations, posts, and several hundred precipitation measuring gauges are scattered. A steppe zone of the Ukraine in which there is frequently a shortage of moisture has been specially selected for the training field. Thus, our experiments are useful to the field of science as well as to the kolkhoz fields.

"In the course of many years of experiments was there any success in making discoveries?"

"I would not care to name to loudly some of the laws which have been discovered," he said. "In the past, for instance, attempts to extract rain from small clouds were made, figuring that heavy clouds would themselves release considerable amounts of rain. A conclusion has now been reached that it is more expedient to work with large cumulus rain clouds. We are now approaching such a cloud."

A command was heard: "Prepare the generator for seeding."

It was necessary to determine how to approach the huge cloud. Originally small clouds were dusted with the reagent from above; this, however, created a condition which was even dangerous for the plane. A rather clever decision was adopted. We are now flying in a circle under the cloud. Warm air currents rising from earth
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MISHINA, N., PRAVDA 13 Jun 75 p 6

intercept the silver iodide jet spray and the cloud, acting like a dust pump, soaks up the reagent's small crystals. These are structurally similar to ice, with the result that water vapors being misled settle on the bait, the additional icy nuclei.

Within 20 minutes the whirling top of the cloud withered, became fibrous, and slowly began to settle. Its lower border, clean and even at the beginning, seemed to disintegrate, and large drops of rain began to drum the wings and fuselage.

Korniyenko is trying to overshoot the noise of the motors and rain. Streams are flowing down the glasses of the illuminators. Several grams of silver iodide are sufficient to release thousands of tons of water from a medium size cloud. The talk is about the beneficial effect on the national economy from such active interference.

Undoubtedly there is an effect. As yet, however, it is not possible to cite exact data. The investigations have not as yet been completed, and to establish the extent of human influence on a background of natural modifications is a highly complex task.

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MISHINA, N., PRAVDA 13 Jun 75 p 6

If one is to resort to theatrical analogues it means that the specialists are trying to clarify the role played by natural forces in this rain and the role of experimenting stage managers. Let us say that it is possible to find two absolutely identical clouds, and that for comparison purposes one will be seeded and the other one, the control, left undisturbed. True, it is possible to create theoretical models using the language of formulas describe the elements, and with the help of an apparatus of mathematical statistics establish their laws. Experiments are being conducted at laboratories on special installations: cloud chambers, thermal barometric chamber, and aerometric tubes. Radar, laser probing, and sputnik meteorology are at the disposal of the scientists.

It is the end of the fifth hour of the flight. The scientists tirelessly observed each cloud within their field of vision and used instruments to determine time, altitude, temperature, and velocity. To learn how to control the elements is not a simple matter. Twice as much water than is carried by all of the rivers of our country is annually carried through the air over the USSR. In addition, the investigators when planning the strategy for an attack on a cloud remember the dictum: "Sow a wind and reap a storm." This dictum serves as a warning against incautious intrusion into the natural environment. And if nature's flaws are to be corrected, such correction must be done with caution and intelligence.

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9. USSR

ALEKSANDROVSKIY, A., Kiev

MEDICAL EXPLORERS IN IMMUNOLOGY

Kiev RABOCHAYA GAZETA in Russian

[Abstract] The Kiev Scientific Research Institute of Tuberculosis and Thoracic Surgery imeni Academician F. G. Yanovskiy has its clinics located in Batyyeva Gora. There are 14 clinics, all working on major problems of modern medicine. Among these problems are improved methods of cardiac and pulmonary surgery, and treatment of lung diseases. Immunology plays an important role in the solution of these problems. One of the physicians working at the heart surgery clinic is Nina Ivanovna Kondrashova, who recently defended her candidate dissertation on new methods of detecting antibodies in a patient's blood and acquired heart defects. Kondrashov's methods have been used to determine the suitability of a patient for surgery at a particular time and stage of disease. If the indications are positive, the surgery is delayed. The Institute's Immunology Section is headed by Doctor of Medical Sciences Yekaterina F. Chernushenko. Repeated studies at the Institute have found allergic reactions to some antibiotics due to the formation of antibodies in the patient's body. This is particularly true of streptomycin. For this reason, treatment often starts with very small doses, with a gradual increase to permit acclimation of the body to them.

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USSR

ALEKSANDROVSKIY, A., RABOCHAYA GAZETA

Many institutes in the Ukraine are studying various chemicals for their allergenic effects. Transplantation of organs is another important part of immunology. Immunosuppressants must be developed further to facilitate the body's acceptance of alien organs and tissues. There are 30 transplant antigens, and with their varied combinations this adds up to some 27,000 different forms. Immunology has become a major science which serves the elevated goal of preserving human life. It is necessary for specialists of the most diverse medical profiles.

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10. USSR

GRIBANOV, A.

"Construction for the Institute of the Automobile Industry"

Moscow PRAVDA in Russian 27 Jun 75 p 2

[Text] A complex of new buildings for the Scientific Research Institute of Technology of the Automobile Industry is under construction in the bottom lands of Moscow's Proletarskiy Prospekt.

"The production of automobiles is increasing at a highly rapid rate," states K. P. Ivanov, director of the Institute and Lenin Prize laureate. "Our plants are already assembling more than two million automobiles a year. An improvement of the technological processes is becoming an urgent necessity. The collective of the Institute is now working on this problem."

The organization of more than 50 laboratories in the new buildings is planned. Investigations of the technology, organization, and supervision of production will be developed in greater depth. The tempos with which the attainments of science and technology are introduced into production will be accelerated. Experiments for the

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GRIBANOV, A., PRAVDA 27 Jun 75 p 2

purpose of the creation and application of new metalloplastic materials prepared by the powder metallurgic method, particularly parts which require no lubrication, will be broadened. Improvement of the process of precision casting with the object of reducing its cycle by a third at a minimum is contemplated. The use of aluminum instead of copper-brass radiators will make possible the economy of thousands of tons of metals which are in short supply. The search for new ways to further improve such parts as cylinder heads, universal joints, camshafts, and springs will be broadened. The creation of equipment for processing of products with the help of an electronic ray, friction, and ultrasound is planned. It is the goal of the investigators to improve the quality, reliability, and longevity of our country's automobiles, and principally to improve working conditions.

The laboratories are being outfitted with the latest technical equipment. An automated information service will provide necessary information in seconds.

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11. USSR

G. ARTAMONOV

"SAILING DIRECTIONS" IN THE SEA OF INFORMATION

Moscow KRASNAYA ZVEZDA in Russian 15 May 75 p 4

[Abstract] There are two main levers to raise all economic construction to a new level: acceleration of scientific-technical progress and improvement of the mechanics and methods of management. Every 3-5 years the number of scientific-technical periodicals doubles. Bibliographies and abstract journals were created to aid in locating the latest information in a particular field. VINITI [All-Union Institute of Scientific and Technical Information] publishes about a million abstracts per year. But since there are so many abstracts to peruse and they do not appear in print until at least 6 months after publication of the original article, this work is laborious. Microfiche is now aiding in the reduction of the size of information, perhaps facilitating access to large amounts of data. The USSR is the only country in the world which has a system of scientific-technical information, including 10 all-union information offices, over 80 branches, 60 territorial ones and 15 republic ones.

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12. USSR

THE INSTITUTE OF APPLIED MATHEMATICS AND MECHANICS

Kiev VESTNIK AKADEMII NAUK UKRAIN'SKOY SSR in Ukrainian No 5 May 75 pp 3-5

[Abstract] The Presidium of the Ukrainian Academy of Sciences discussed a paper presented by Academician Yu. O. Mitropol'skiy on 9 December 1974 on the activities of the Institute of Applied Mathematics and Mechanics. He had noted that members of the general session had heard from Acting Director of the Institute of Applied Minerology and Metallurgy A. M. Bogomolov, and Academician V. S. Mikhalevich, head of the Presidium Commission, on the activities of the Institute. The Presidium received a number of the basic research findings in mathematical physics and differential equations; theory of probability and mathematical statistics; applied mathematics and mechanics; computational mathematics; and economic cybernetics. Data obtained in thermal physics was transmitted to the Institute of Electric Welding of the Ukrainian Academy of Sciences, the Donetsk Polytechnical Institute, and the Donetsk Metallurgy Plant for simulating different aspects of electric slag welding of metals and optimum control of the technological process.

Among those participating in the session of the Presidium were Academicians Boris Ye. Paton, G. S. Pisarenko, and K. M. Sitnik.

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USSR

NO AUTHOR GIVEN, VESTNIK AKADEMII NAUK UKRAIN'SKOY SSR No 5, May 75 pp 3-5

Applications of various solutions were in the fields of nonlinear boundary-value problems in mathematical physics concerning problems of thermal physics, power engineering, applied hydrodynamics, metal welding, and methods of analysis for transient and evolutionary types of problems. Methods of mathematical analysis of data flows were developed into automatic control systems; these were used at the Yenakiyiv'skiy, Zhdanov and Donetsk Metallurgy Plants, the Berdyans'kiy Petroleum Refinery, and the Donetsk Oblast Vehicular Transportation Control Division. The Institute is determined to systematically review scientific reports on the state of incorporation of new results in industry and to make recommendations for further research work.

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FPD:SOVIET SCIENCE

IV. CRITICISM AND COMMENTARY

13. USSR

NIKOLAYEV, I. I.

THE ONENESS OF NATURE AND A SINGLE SCIENCE

Review of: C. P. von WEIZSACKER. DIE EINHEIT DER NATUR. STUDIEN, Munchen, 1972, 491 S.

Moscow VOPROSY FILOSOFII in Russian No 11, 1974 pp 158-161

[Text] C. P. Weizsacker is an outstanding figure among physicists. In admitting philosophical basis of the development of the theoretical natural science, he constantly turns his attention to philosophical problems of science. Weizsacker not only sees the conflict of ideas in this field, but he also consciously takes part in it. He openly speaks of the unsatisfactoriness of neo-positivism as a "methodology of the modern science," and he comes out against its adherents. In the first place he criticizes the "antiphilosophical" position of neo-positivism, objectively and chiefly directed against dialectical materialistic method of analysis of the scientific theoretical cognition. But he does not understand the essence of this opposition and builds his criticism of the neo-positivism essentially on a passive defense of the idealistic philosophico-gnosiological traditions (in particular 1/14

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of the philosophy of Plato), considering it the surest way to overcome the neo-positivist "swoops" on philosophy. This opposition to neo-positivism, correct from the viewpoint of the subjectively set up purpose, but objectively unstable, being devoid of a constructive Weltanschauung foundation, often leads to the incorrect, superficial appraisals of the individual positions of Marxist philosophy, which shows the ignorance of Marxism and in particular, of the latest Marxist elaborations of methodological problems of the scientific cognition. At the same time the critical stand taken by one of the well known modern physicists in respect to neo-positivism is rather noteworthy. Weizsacker, not limiting himself to the analysis of individual positions of modern physics, raises general problems, and builds a peculiar scientific-philosophical conception, whose links turn out to have both Weltanschauung, and methodological, and specifically scientific aspects. The book forms an integral whole, despite the fact that it unites individual articles and lectures written and delivered at various times (beginning from 1936) on various occasions and for different audiences. Notwithstanding any special subject to which each of 22 articles was devoted (to the analysis of the language of physics, idea of linguistic relativity, interpretation of quantum mechanics, cybernetical models of good and evil, interpretation of Platonic dialogues, quantum theory of natural science, etc.), it touches, from various sides and at various levels, to this or that 2/14

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extent, upon three fundamental problems of the author's conception: interrelation between philosophy and science, possibility of building a single science, and its conjecturable limits.

The Weizsacker's approach to the first problem is characterized by its emphasis not so much on the modern as on the classical philosophy. Even though the book reflects the author's definite attitude toward philosophy of science, positivism, "neo-Marxism", existentialism, but all this, as a rule, are incidental remarks. On the other hand, to classical philosophy, and in the first place to Plato, Aristotle, and Kant, are devoted special sections of articles and the concluding, fourth part of the book. This is a deliberate orientation, brought about, on the one hand, by dissatisfaction of the author with the "scholastic" and neo-positivist philosophy, which, in his opinion, proved to be incapable to understand the philosophical and genuinely methodological foundations of the modern science, and on the other hand, by his conviction that the specific character of philosophical investigation (in particular in the field of philosophical problems of the development of theoretical natural science, which, in the opinion of Weizsacker, should imitate philosophy) calls for a systematic and unavoidable "return to the sources." True, the ideas of Weizsacker about the tasks of philosophy are Platonic and often simply naive: he

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takes one--nondeterminative side of philosophical investigation--the statement of the question of the essence of the phenomena, ignoring the Weltanschauung and social-class content of philosophy. Philosophy, in the opinion of Weizsacker, is similar to a series of "childish questions," making us each time to reveal its entire content. For example, such as: "What is it this child is playing with?-- It is a ball. --What is a ball? -- According to senses it is a given sphere. --What is a sphere? --A mathematical idea, --What is an idea? --Real, true, only one. --What is only one?--Read Parmenides! (p 145).

Science by itself does not realize its most fundamental concepts. Thus it is "characteristic of the modern physics that it does not actually ask what is the matter, and of biology that it does not raise the question what life is, and for psychology, that it does not ask what is soul, but these terms as needed are used to vaguely describe the domain in which investigation are to be carried out" (p 287). Therefore, with regard to the "normal" course of science we can rightly apply the famous thesis of Heidegger: "Science does not think". However, the essential, radical shifts in science are obligatorily related to a new comprehension and criticism of fundamental conceptions. On this stretch of road a rather young science is in need of philosophy having a thousand-year "experience of going against

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the stream of the naive thinking, the experience of putting a question: "And what is it I am actually doing?" (p 37). In this case one has to come down the chain of notions back to the first "inventors" of the most fundamental of them and which have been "borrowed" by science. As a result, it turns out that one cannot properly comprehend, for example, the quantum mechanics, without having first understood Plato (see p 378).

The notions about "backwardness", "being out of date", and "obsolescence" of the ideas of the great philosophers of the past are being rapidly cleared away upon sufficiently deep inquiry into today's problems of science. Connected with new times, the progress in natural sciences and the growth of historical consciousness, etc., "is paid for by a definite narrowing of the formulation of questions, to be more precise, by a progressive forgetfulness of the existence." But whoever, today, for example, in physics, "asks about foundations, he rediscovers the same structures, which had been already discovered by Greek philosophy even though from a different viewpoint" (p 440). At the same time we should not be unduly surprised by a "slow" progress of philosophy. "Taking into account many hundred thousand years of the existence of man and the exceptional complexity and subtlety of problems brought to light by philosophy--a single Plato for a millenium--this is already a great thing" (p 282).

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It goes without saying that the selection of "philosophical teachers" of science by Seizsacker is rather subjective. We do not see among them either Hegel, or Leibniz, or Spinoza. The revolutionary upheaval enacted in philosophy by K. Marx and F. Engels remained outside the author's field of vision. Nevertheless the very attempt at a scrupulous study of the heritage of philosophy (even of its restricted volume) for the purpose of the substantiation of science of our times, by Weizsacker, turns out very fruitful. Of special interest is a most minute analysis of the Plato's "Parmenides" and the comparison of ideas contained in this dialogue with the ideas of ethology and quantum mechanics (see articles: "The Parmenides and Graylag Goose" and "The Parmenides and Quantum Mechanics").

Of the moment (especially against the background of positivist methodologism) is also his giving emphasis to the critical function of philosophy. Weizsacker repeatedly defines philosophy as the "unremitting will to formulate the problem", as "realization of our ignorance", a "step toward surprise", a "criticism of the fundamentals", etc.

As the most important task of philosophy Weizsacker considers the substantiation of the methods of science and their rightness. In this connection he subjects to a

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convincing criticism the empiricist platform of positivism. The "Empiric Galileo" is a historical myth, since the general laws of science, in the strict sense of the word, cannot be derived from the available particular experience. The principal error of "fundamental empirism" (in contrast to quite rightful "empirism as a description" of the science) Weizsacker sees in the futile search for the absolute truth. "It is not that the experience... proves the truth, but only for an individual case". It is rather otherwise: "the experience proves the general, but not with certainty. In each separate case we... simultaneously admit the truth of the general" (p 125). The most common perception rendered by the words ("the table is round") is already conceptually expressed. The particular manifests itself here through the general. It is a common human ability to perceive the general (form --the starting material of scientific cognition. Science only develops this capacity in some specific respect, says Weizsacker.

In the same manner as it is not possible to confine science within the limits of what is "directly given," the philosophical analysis of science cannot be restricted to a simple description of its methods. In this Weizsacker sees the shortcoming of the modern philosophy of science, whose representatives "are looking for the unity only in the method." Meanwhile the fundamental principle in science is not the

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method but the object - "substance", which is the purpose of its study. "...Important breakthroughs are always achieved, wherever, someone, fascinated by a reality, which he sees before him, and which he cannot disregard any more, develops a method that was never used by any one before." (p 301).

Nature is the object of the study by natural science. Nature is older than man, and man is older than natural science. While approaching the idea of the oneness of man and nature from the viewpoint of their historicity, we must consider the natural science with all its conceptions as a work of man, and man, with all his cognitive possibilities, as a "child" of nature. We obtain a peculiar gnosiological circle, to penetrate which is possible only by first going round its both halves.

From the viewpoint of methods, subjects and social character, the key role in the structure of science is played by physics, because of its ability for reliable theoretical predictions of the results of experience and technological transformation of the world. For this reason the idea of the oneness of nature induces us to look for the expression of this unity in the first place in physics. In this connection, Weizsacker raises a question which aroused lively discussions in our literature:

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is it possible to achieve a complete unity in physics by means of the construction of a single, all-embracing theory? If so, then under what conditions its creation is possible? Inasmuch as such a theory will encompass the entire physics, this will confront us with the famous Kant's question: how at all physics is possible as a science? The question of physics acquires a specifically philosophical content. To solve it, Weizsacker takes the traditional path of methodological doubt. Considering the logical establishment of absolutely certain and unquestionable judgements, he thinks that as starting basis we should accept that which we always accept by the very fact of our existence. This is the recognition of the objectifiable experience, i.e. that thanks to which one can "learn from the past for the future." Whereupon, are considered not the individual experiences, but "the structure of that what is happening, which is necessary to that individual experiences would be at all possible" (p 217). In considering that upon objectification of judgements is based both physics and conceptual thinking in general, Weizsacker puts forward the following hypothesis: "Whoever will be able with sufficient power of apprehension to investigate under what conditions the experience is at all possible, he should be able to show that from these conditions already follow all general laws of physics. Physics derived in precisely this way would be the supposed single physics" (p 217). To these conditions belongs, according to Weizsacker, the entity of time, with all its basic modi: variable and in principle known past, present, and indefinite and partly

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dependent on our will future. The single physics should be thus based in contrast to Kant's conception, not on the unity of a transcendental apperception but upon the unity of time.

Not limiting himself to a general discussion, Weizsacker outlines a concrete program of the completion of physics, and considers that its final realization is the matter of the near future (of the order of a few decades). For this purpose it is necessary in his opinion, to unify in the first place five fundamental theories of the modern physics: quantum theory, relativity theory, theory of elementary particles, statistical thermodynamics, and cosmology. The quantum theory, in the opinion of Weizsacker, is closest to the conditions of possible experience, and therefore, it is precisely from it (and not from relativity theory, as was considered by Einstein) should be derived the remaining theories. This will be possible after a corresponding modification of quantum mechanics and its transformation into an abstract theory of the change of any object, based on the logic of temporal statements.

One of the principal conceptions which are considered by Weizsacker as a means of unification of the abstract quantum theory, "cybernetical biology", "cybernetics of truth", etc., is the conception of information. Information is, on the one hand,

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objective, and on the other hand, in the same way as probability, relates to the subject, and quantifies knowledge.

At the same time Weizsacker approximates the conception of information to the conception of form, and the latter to the Plato's "ideas". His further discussions about the conception of information leads him to rather mystical than constructive conclusions. Questionable is, for example, his argument that the limits of physics should be the limits of conceptual thinking in general. He himself asks the question whether such limits exist? If not, then will not the creation of the one and only, "limiting" science mean the end to any cognition? Examining these problems, Weizsacker notes that the "whole reality" never keeps completely within scientific interpretations. Conceptual thinking depends each time upon conceptually inexpressed (in the given case) premises. Each attempt at making more precise the language of science is associated with the necessary use of the ambiguous, "inaccurate" natural language. In contrast to general grounds of experience, the number of particular and individual experiences is innumerable, etc. But all this is not an answer to the question raised by himself.

Of interest are the warnings of Weizsacker against scientific "fetishism". He writes, in particular: "If men must defend something of importance, and if they wish
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to be listened to in this world in which the social status of science is almost unshakable, then it is important that they be scientists. But often, having become them, they invent science even there where it does not exist, for it is impossible to turn into science the beautiful, those deep insights, those real spiritual riches, which are in our possession. On the other hand, you must be scientists, otherwise you will not be heard and will not be recognized. After all, we can quite well play this game, it is rather beautiful game, and I have nothing in particular against it. All I would like to say is that they are committing a great error, not noticing that they play for the play itself, not seeing in the science the curtain behind which there begins the reality" (p 300).

The reality is thus richer than scientific constructions having hypothetical character. Even though from the proposed single abstract physics one can derive all particular laws, it does not spell the completion of the "concrete" physics, since a direct derivation from single principles of any specific theses will prove very cumbersome and inexpedient. There are also no safeguards against changes in the conditions of the possibility of experience. Finally, one cannot exclude the possibility of a completely different type of experience--the nonobjectified one.

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The traditional domain where the objectifications are excluded from the very outset is religion. Hence Weizsacker shows interest in the phenomenon of religion, primarily in the oriental one (Buddhism, Zen, and Yoga), which enunciated mystical experience in the comprehension of the Only one. In the opinion of the author the recognition of the possibility of meditative experience does not constitute a departure from the rational thinking. But this is a sheer mysticism, groundlessly declaimed in the book of Weizsacker. His conception contains many questionable theses and is not supported by any arguments. We certainly cannot agree with assertion that he is "above" materialism and idealism. Actually it amounts to an eclectic combination of the elements of various philosophical systems, where frequently an objective idealistic tendency predominates. Improper are his attempts to overcome the "limitations" of the theory of reflection by a "theory of concordance, to reconcile science with religion, etc. Nevertheless, based on an extensive historico-philosophical and special scientific material his book has made an interesting attempt at analyzing the problem of the oneness of Nature in all the diversity of its aspects and to work out an original program for the construction of a single science.

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It is well known that already K. Marx had suggested the idea that "the natural science includes the science of man in the same measure as the science of man includes the natural science, and this will be a single science". [K. Marx and F. Engels. Iz rannikh proizvedeniy (From the Early Works). Moscow, 1956, p 596.] A disclosure of the concrete meaning of this thesis constitutes a task which still faces the Marxist investigators. What are the paths and forms of the future unification of science? Which science should perform the leading integrating function? What is the specific role and place of philosophy in this process and in the framework of the supposed single science? Weizsacker's book gives us an ample material for reflection upon this kind of problems and deserves therefore to be most earnestly discussed.

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V. AWARDS, CONTESTS, APPOINTMENTS, AND PERSONALITIES

14. USSR

I. G. GALUZO

Alma-Ata VESTNIK AKADEMII NAUK KAZAKHSKOY SSR in Russian No 5, 1975 p 78

[Text] The Presidium of the USSR Academy of Sciences has awarded the 1975 Ye. N. Pavlovskiy Gold Medal to Prof. Illarion Grigor'yevich Galuzo, Academician of the Kazakh Academy of Sciences and Honored Scientist Kazakh SSR, for a group of works dealing with the natural foci of diseases.

I. G. Galuzo is an outstanding scientist-parasitologist and a talented student and developer of the ideas of Academician Ye. N. Pavlovskiy. For 30 years he has been developing both the general positions of the doctrine of the natural foci of animal diseases and particular problems of wide practical significance in the medical-veterinary service. He has made an enormous contribution to parasitology, especially with his 5-volume work "Bloodsucking Ticks of Kazakhstan", for which he was awarded the title Laureate of the State Prize USSR.

At the present time he is working on the problem of toxoplasmosis and besnoitiosis in animals. In his 1974 monograph "The Life Cycle of Toxoplasma", I. G. Galuzo generalizes his many years of study of that grave and widespread disease of man and animals--toxoplasmosis.

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15. USSR

Y. A. KHOLODOV

Moscow NAUKA I CHELOVECHESTVO [SCIENCE AND MANKIND] IZDATEL'STVO ZNANIYE [ZNANIYE Publishing House] in Russian 1975 p 12

[Text] Yuriy Andreyevich Kholodov was born in 1931. Neurophysiologist, Doctor of Biological Sciences. Was born in Moscow. In 1954 graduated from the Biological and Soil Faculty of Moscow State University. From 1954 to 1958 was active in the Faculty of Physiology of Higher Nervous Activity of Moscow State University, and from 1958 to the present has pursued studies at the Institute of Higher Nervous Activity and Neurophysiology of the USSR Academy of Sciences except for 1960 when he worked in the Institute of Biophysics of the USSR Academy of Medical Sciences. His basic area of scientific studies is the study of the impact of electromagnetic fields on the central nervous system. Kholodov's Candidate (1959) and Doctoral (1967) theses were dedicated to these problems. Some 90 scientific articles of his have been published and three monograph: The Impact of Magnetic and Electromagnetic Fields on the Central Nervous System (1966), Magnetism in Biology (1970) and Man in the Magnetic Spiderweb (1972). Yu. A. Kholodov is a member of the Section of Bionics of the Scientific Council on the Complex Problem "Cybernetics" of the USSR Academy of Sciences.

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16. USSR

V. G. KUZ'MIN

Moscow MEDITSINSKAYA GAZETA, 4 Oct 74 p 4

[Text] Vitaliy Georgiyevich Kuz'min was released from his post as rector of the Chita Medical Institute, retaining the position of head of the Chair of Infectious Diseases of that Institute. Vil Ivanovich Akopov was named rector of Chita Medical Institute; he is head of the Chair of Forensic Medicine of the Institute.

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17. USSR

A. S. Litvak

Moscow MEDITSINSKAYA GAZETA in Russian 21 May 75 p 1

[Excerpt] ...Head of a chair of the Stavropol' Medical Institute Doctor of Medical Sciences Prof Aleksandr Samoylovich Litvak was awarded the title Honored Scientist RSFSR by decree of the Presidium of the Supreme Soviet RSFSR for his service in medicine and his long and fruitful pedagogical work.

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13. USSR

M. N. LIVANOV

Moscow NAUKA I CHELOVECHESTVO [SCIENCE AND MANKIND] ZNANIYE Publishing House, in Russian 1975 p 12

[Text] Mikhail Nikolayevich Livanov was born in 1907. Neurophysiologist, Academician. Was born in Kazan. In 1931 graduated from the Biological Faculty, Kazan State University. From 1932 to 1947 was head of a laboratory in the Moscow Brain Institute. From 1945 to 1948 taught at the Moscow Pedagogical Institute imeni V. I. Lenin. From 1947 to 1961 managed a laboratory at the Institute of Biophysics of the USSR Academy of Medical Sciences. From 1951 to the present has been head of the Laboratory of Electrophysiology of Conditioned Reflexes of the Institute of Higher Nervous Activity and Neurophysiology of the USSR Academy of Sciences. Since 1961 has been head of the Department of Memory Problems of the Institute of Biophysics of the USSR Academy of Sciences.

In 1936 M. N. Livanov defended his Candidate's thesis and in 1942 he defended his Doctoral thesis. In 1962 he was elected Corresponding Member of the USSR Academy of Sciences and in 1970 he was elected Academician. He is the author of more than 100 scientific articles including three monographs.

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M. N. LIVANOV, NAUKA I CHELOVECHESTVO, 1975 p 12

The basic scientific interest of M. N. Livanov, the crystallization of which was influenced by the views of his mentor, the well-known Russian electrophysiologist, A. F. Samoylov, have been concentrated on studies of the electrical activities of the brain. M. N. Livanov is one of the founders of electroencephalography in the USSR and the creator of a number of new directions in the investigation of the activities of the central nervous system. Here belong the study of higher nervous activities of man and the animals in the process of utilization of electrophysiological methods, electrophysiological studies of the effect of a penetrating radiation on the central nervous system, the studies of the functional significance of the spatial synchronization of biopotentials of the brain ensuing in the utilization of electroencephaloscopic methods and the application of electroencephaloscopic technology for an implementation of a "controlled experiment". The theoretical studies of M. N. Livanov and the methods elaborated by him have found a practical application in medicine and biology.

M. N. Livanov is deputy academician-secretary of the Division of Physiology of the USSR Academy of Sciences, a member of the Committee for Awarding Lenin and State Prizes USSR, and a member of the board of the All-Union Physiological Society.

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19. USSR

G. S. POSPELOV

Moscow IZVESTIYA AKADEMIYA NAUK SSSR, TEKHNICHESKAYA KIBERNETIKA in Russian No 4, 1974

[Text] Prof. Germogen Sergeyevich Pospelov, deputy chief editor of "Izvestiya Akademiya Nauk SSSR, Tekhnicheskaya Kibernetika", Doctor of Technical Sciences, and State Prize laureate, has reached his sixtieth birthday.

Since the 1950s his name has been intimately associated with development of the theory of automated control. His profound research on problems of aircraft landings has been of great significance. The results which he obtained in this area have become a part of normal flight practice; they appear in all textbooks and manuals on the theory of automated flight control.

G. S. Pospelov's second significant period of scientific research has been associated with developing the theory and solving a number of important practical problems relating to large technical and organizational systems. Pospelov was one of the first in our country to realize the promise of the research of such systems. Thanks to his efforts, the USSR has created scientific collectives which are now working fruitfully toward the realization of complex automated control systems for various purposes. Prof. Pospelov is by right considered one of the founders of systems-programming methods used in national economic planning.

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G. S. POSPELOV, IZVESTIYA AKADEMIYA NAUK SSSR, No 4, 1974

His broad scientific outlook and engineering expertise have always enabled him to arrive at bold and correct solutions to complex scientific-technical problems.

Over a period of many years, G. S. Pospelov has been active in pedagogical work, serving as professor at the Air Force Engineering Academy imeni N. Ye. Zhukovskiy, and the Moscow Aviation and Moscow Physicotechnical Institutes. The numerous researchers he has trained are now working successfully in automatic control theory, operations research, large systems theory, and many other departments of engineering cybernetics.

The editorial staff of our journal warmly congratulate Germogen Sergeyevich Pospelov on his anniversary and wish him many more years of productive service to the country.

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20. USSR

COMPETITION FOR THE UKRAINIAN STATE PRIZE IN SCIENCE AND TECHNOLOGY (1975)

Kiev PRAVDA UKRAINY 17 Jul 75 pp 3, 4

[Text] The Ukrainian Committee on State Prizes in Science and Technology (Ukrainian Council of Ministers) announces that the following are admitted to competition for the 1975 Ukrainian State Prize in the field of science and technology:

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1. Eduard Ivanovich Grigolyuk; Yaroslav Stepanovich Podstrigach; Grigory Vasil'yevich Pyashko; Yaroslav Iosifovich Burak; Bogdan Ivanovich Kolodiy; Zoya Il'inichna Goryacheva; Lev Petrovich Karasev; German Nikolayevich Semovskikh. "Development and Introduction of Optimal Regimes of Zonal Tempering of Welded Seams in Shell-Type Structures." Presented by the Institute of Mathematics, Ukrainian Academy of Sciences.

2. Aleksandr Ignat'yevich Bondar'; Vasilii Ivanovich Omel'chenko; Anatoliy Grigor'yevich Shabotenko; Grigoriy Ivanovich Korniyenko; Yuriy Tarasovich Mitulinskiy; Sergey Kondrat'yevich Lesnichiy; Artur Savel'yevich Odinokiy. "A system of Automatic Control of the Aerodynamic Profile of Gas-Turbine Engine Vanes." Presented by the Zaporozh'ye "Motorostroitel'" Production Association imeni 50-Letiye Vel. Okt. Sots.

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3. Lidiya Ivanovna Bepalova; Petr Nikolayevich Volgin; Stanislav Sergeyeovich Zabara; Aleksandr Borisovich Kitner; Gennadiy Nikolayevich Kukanov; Yefim Zyamovich Zazur; Tat'yana Iosifovna Mikhaylova; Georgiy Ignat'yevich Muzychenko; Apollinary Fedorovich Nezabitovskiy; Yuriy Stepanovich Pavlenko. "The Engineering, Organization of Series Production, and Introduction into the Economy of Electronic Computers for Use in Pattern Work (the EMRT-2 and 'Kashtan' Machines)." Presented by the Production-Technical Association for Electronic Computers and Control Equipment, Ministry of Instrument Building, Automation Equipment and Control Systems.

4. Mikhail Aleksandrovich Krivoglaz; Adrian Anatol'yevich Smirnov. "A Cycle of Studies in the Theory of Imperfect Crystals." Presented by the Institute of Metal Physics, Ukrainian Academy of Sciences.

5. Mitrofan Vasil'yevich Pasechnik; Vadim Pavlovich Vertebnyy; Aleksandr Ivanovich Kal'chenko; Ivan Yegorovich Kashuba; Anatoliy Leonidovich Kirilyuk; Vladimir Vasil'yevich Kolotyy; Ivan Aleksandrovich Korzh; Nikolay Sidorovich Nazarov; Grigoriy Sergeyeovich Padun; Vladimir Aleksandrovich Pshenichnyy. "Discovery of New Shell-Type and Isotopic Effects in the Interactions of Neutrons with Atomic Nuclei, and the Collection of Data for Nuclear Reactors." Presented by the Institute of Nuclear Research, Ukrainian Academy of Sciences.

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6. Andrey Mikhaylovich Kabakchi; Valeriy Panteleymonovich Gordiyenko; Vitaliy Yevgen'yevich Krizhanovskiy; Igor' Petrovich Lopatin; Vyacheslav Vasil'yevich Pokrovskiy. "Combined Scientific-Technical Development and Introduction into Production of Industrial Equipment for Radiation Modification of Polyethylene Products." Presented by the Institute of Physical Chemistry imeni L. V. Pisarzhevskiy, Ukrainian Academy of Sciences.

7. Abramovich Grigoriy Blokh. A monograph, "Organic Accelerators in the Vulcanization of Rubber." Presented by the Dnepropetrovsk Chemicotechnological Institute imeni F. E. Dzerzhinskiy.

8. Ivan Grigor'yevich Pidoplichko. "Scientific Preparation and Establishment of the Central Science and Nature Museum of the Ukrainian Academy of Sciences." Presented by the Division of General Biology, Ukrainian Academy of Sciences.

9. Mina Ayzikovna Dovgopol'skaya; Yuriy Aleksandrovich Gorbenko; Zoya Sergeevna Kucherova; Anna Zakhar'yevich Gurevich; Yevgeniya Dmitriyevna Isral'yants; Stepan Petrovich Sal'nik; Yevgeniy Vasil'yevich Iskra; Yelizaveta Pavlovna Kutsevalova. "Research, Development, and Introduction into Shipbuilding and Ship Repair of New Effective Anti-Incrustation Paints and Schemes for Underwater Coatings." Presented 3/13

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by the Institute of Southern Marine Biology imeni A. O. Kovalevskiy, Ukrainian Academy of Sciences.

10. Yuriy Vasil'yevich Semenchenko; Tat'yana Nikolayevna Agafonova; Ivan Sidorovich Soloninko; Tat'yana Vladimirovna L'vova; Valentina Vasil'yevna Nazarenko. A monograph, "Colored Stones of the Ukraine." Presented by Kiev State University imeni T. G. Shevchenko.

11. Aleksey Alekseyevich Nesterenko. A cycle of works, "Development of Industry in the Ukraine." Presented by the Institute of Economics, Ukrainian Academy of Sciences.

12. Boris Pavlovich Sokolov; Pavel Pavlovich Dyga; Pyetr Fedorovich Klyuchko; Anatoliy Alekseyevich Yanchenko; Nikolay Yevtikhievich Dzyuba; Nikolay Ivanovich Zherdiy; Yelena Ivanovna Logvin; Stepan Grigor'yevich Treshenko; Vasiliy Zakhar'yevich Tur; Mikhail Ivanovich Khadzhinov. "Development, Seed Farming and Introduction of Varieties of Simple Hybrid Corn." Presented by the All-Union Scientific Research Institute of Corn.

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13. Fedor Petrovich Trinus; Petr Vladimirovich Rodionov; Lora Dmitriyevna Protsenko; Petr Yakovlev'ch Sologub; Aleksandra Georgiyevna Fadeicheva; Nadezhda Yakovlevna Skul'skaya; Miroslava-Lyudmila Ivanova Tarnavskaya; Svetlana Vladimirovna Nikolayeva; Avgust Mikhaylovich Garin. A cycle of works, "Combined Research in Cancer Chemotherapy." Presented by the Kiev Scientific Research Institute of Pharmacology and Toxicology, Ukrainian Ministry of Health.

14. Vasilii Pavlovich Komisarenko; Aleksandr Grigor'yevich Rezinkov; Igor' Vasil'yevich Komisarenko; Yaroslav Grigor'yevich Bal'yon; Vadim Maksimovich Gordiyenko; Aleksandr Vasil'yevich Shevchenko. "Synthesis, Experimental and Clinical Study of Chloditan and Its Use in the Treatment of Itsenko-Cushing Disease and Tumors of the Adrenal Cortex." Presented by the Kiev Scientific Research Institute of Endocrinology, Ukrainian Ministry of Health.

15. Fedor Mikhaylovich Bagnenko; Bogdan Vasil'yevich Gudz'; Sergey Yuri'yevich Darda; Leonid Nikiforovich Korshun; Viktor Ivanovich Koshkald; Boris Nikiforovich Mordanenko; Leonid Alekseyevich Polivko; Grigory Il'ich Siganevich; Leonid Stepanovich Sidoryuk; Valentin Nikolayevich Trubach. "Development and Introduction of a Series of Measures to Perfect the Line-Position Method of Outfitting Ships for Export." Presented by the Kherson Shipbuilding Plant.

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16. Vadim Grigor'yevich Kononenko; Yuriy Aleksandrovich Bobrykin; Sergey Vasil'yevich Yatsnenko; Stanislav Anisimovich Maznichenko; Viktor Alekseyevich Stel'makh; Nikolay Nikolayevich Ivashchenko; Nikolay Nikitovich Golodov; Gunar Nikolayevich Brikmanis; Petr Fedorovich Petryakov; Aleksey Ivanovich Fedchenko. "Research, Development and Introduction of High-Productivity Processes and Machinery for Pulsed, Reject-Free Industrial Metal Cutting." Presented by the Khar'kov Aviation Institute.

17. Valeriy Filippovich Zlobin; Leonid Antonovich Kazberch; Nikolay Nikolayevich Meleshko; Arkadiy Borisovich Menaker; Leonid Alekseyevich Samsonovich; Aleksandr Ivanovich Semenenko; Anton Ivanovich Simandlya; Avksentiy Ivanovich Shevchenko; Valeriy Yevgen'yevich Yakovchuk. "Development and Introduction of New High-Efficiency Technological Processes and Equipment for Mass Production of Cylinder Liners Which Will Assure Increased Reliability and Service Life of Internal Combustion Engines." Presented by the Kiev "Kiyevtraktorodetal'" Production Association.

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18. Grigoriy Afanas'yevich Gulyy; Anatoliy Dmitriyevich Zanizdra; Boris Viadimirovich Kostirkin; Mikhail Ivanovich Nalegach; Aleksandr Valdimirovich Obratsov; Vasilii Nikolayevich Stepanov; Gleb Aleksandrovich Trofimov; Anatoliy Konstantinovich Tkachenko; Vladimir Ivanovich Shchekin; Lev Aleksandrovich Yutkin. "Development and Introduction into Industry of a Family of Pulsed High-Productivity Electrohydraulic Installations for Removing Core Sand Mixes and Molding Sand from Castings." Presented by the Planning-Design Bureau of Electrohydraulics, Ukrainian Academy of Sciences.

19. Nikolay Nikolayevich Bagrov; Petr Borisovich Krupnik; Anatoliy Artem'yevich Gusyakov; Amfian Grigor'yevich Furmanskii; Aleksandr Petrovich Pilipenko; Nikolay Stepanovich Klimov; Kirill Andrainovich Petrov. "Development and Introduction of the MKh-7301 (ROMS-1) and ROMS-2 Single-Pole Radio-Frequency Mass Spectrometer." Presented by the Physicotechnical Institute of Low Temperatures (Ukrainian Academy of Sciences) and the Sumi Electron Microscope Plant imeni 50-Letiye VLKSM.

20. Viktor Ivanovich Korol'; Vasilii Dmitriyevich Krinitsyn; Valentin Moysyevich Lesnikovskiy; Yevgeniy Stepanovich Mamonov; Anatoliy Ivanovich Manskiy; Vladimir Yefimovich P'yuk; Vasilii Timofeyevich Sivakov; Vladimir Mikhaylovich Timofeyev; Osip Ivanovich Tikhonov; Nikolay Ivanovich Chernyak. "Development and 7/13

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Introduction into Industrial Production of the 'Shtrikh' Copying Machine." Presented by the Kiev Division of the Central Scientific Research Institute of Communications.

21. Lev Dmitriyevich Yupko; Vitaliy Nikolayevich Bytkin; Ruvim Semenovich Bershteyn; Vadim Grigor'yevich Gordynskiy, Vasilii Ivanovich Grin'; Vadim Alekseyevich Sirom'yasskiy; Igor' Alekseyevich Platov; Mikhail Yur'yevich Fayans; Vyacheslav Petrovich Tregub. "A Series of Measures for Developing and Introducing New Technological Processes and Modernizing Equipment in Agglomeration Plants Which Will Assure High Technological-Economic Indexes." Presented by the Ukrainian Ministry of Ferrous Metallurgy.

22. Yuriy Vladimirovich Naydich; Valentin Nikiforovich Yeremenko; Irina Aleksandrovna Lavrinenko; Galina Alekseyevich Kolesnichenko; Vladislav Sergeyevech Zhuravlev; Vladimir Afanas'yevich Kondratskiy; Yaroslav Feodosiyevich Motsak; Mikhail Spiridonovich Pivovarov; Vladimir Trofimovich Globa; Mikhail Samoylovich Aymbinder. A cycle of works, "Research of Contact Phenomena in Liquid Metal; the Development and Introduction into Industry of Technological Processes of Soldering and Metal Spraying of Nonmetallic Materials." Presented by the Institute of Problems of Materials Study, Ukrainian Academy of Sciences.
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23. Yakov El'konovich Nekrasovskiy; Iosif Yakovlevich Dashevskiy; Vasilii Terent'yevich Matsyuk; Aleksandr Fedorovich Ostapenko; Anatolii Mikhaylovich Parfenchuk; Valentin Nikitovich Poturayev; Vladimir Semenovich Rakhutin; Gennadiy Yakovlevich Stepanovich; Vladimir Alekseyevich Tret'yachenko; Aleksey Stepanovich Shuklin. "The Development and Introduction of a Special Pneumatic Cylinder Coupling Device for Use in Ukrainian Coal Mines." Presented by the Ministry of the Coal Mining Industry Ukrainian SSR.

24. Stanislav Fedorovich Shinkorenko; Georgiy Ivanovich Pili'nskiy; Klavdiya Ivanovna Tishchenko; Vladimir Girgor'yevich Litovka; Veniamin Vasil'yevich Krutiy; Garri Nikolayevich Goncharenko; Valentin Lukich Tarasenko; Vasilii Il'ich Chernyy; Aleksey Ivanovich Grishechkin; Ivan Gordeyevich Belokopytov. "Design, Construction and Introduction of a Complex of New, High-Efficiency Machines for Manganese Ore Beneficiation at the Chkalov Works of the Ordzhonikidze Mining-Beneficiation Combine." Presented by the Scientific Research and Planning Institute for Beneficiation and Agglomeration of Ferrous Ores ("Mekhanobrchermet").

25. Mikhail Mikhaylovich Aleksandrov; Igor' Vladimirovich Volkov; Vladimir Aleksandrovich Zavarikhin; Stanislav Ivanovich Zakrevskiy; Boris Yevgen'yevich Kubishin; Aleksandr Nikolayevich Milyakh; Eduard Migranovich Esibyan. "Development 9/13

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of a Theory of Induction-Capacitance Converters, and the Creation, on the Basis of Such Converters, of Stabilized Current Systems for Power Supply to Electrotechnical and Electronic Equipment." Presented by the Institute of Electrodynamics, Ukrainian Academy of Sciences.

26. Aleksandr Ivanovich Borisenko; Aleksandr Ivanovich Rolik; Vladimir Aleksandrovich Troitskiy; Aleksandr Ivanovich Yakovlev. "Development and Introduction of a Production Technology for Electrical Machines on the Basis of Magnetodielectrics." Presented by the Khar'kov Aviation Institute.

27. Vladimir Ivanovich Beshpalov; Anatolii Nikolayevich Lebedev; Fedor Adamovich Solov'yev; Emmanuil Isaakovich Gurevich; Valentin Petrovich Ros'; Vladimir Trofimovich Vasil'chenko; Boris Fedorovich Lebedev; Vladimir Yakovlevich Sosnovskiy; Nikolay Ivanovich Sokolenko. "Development and Introduction of a Progressive Technology for Assembly and Welding Operations, along with All-Round Mechanization, for the Installation of Metal Structural Elements in the World's Largest Blast Furnace (the No. 9 of the Krivoy Rog Metallurgical Combine)." Presented by the "Krivorozhstal'konstruktsiya" trust.

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28. Vyacheslav Pavlovich Alferov; Vladimir Ivanovich Ana'yev; Anatoliy Ivanovich Biryukov; Aleksandr Fedorovich Gayevoy; Otar Mchedlov-Petrosyan; Vladimir Sergeyevich Plakhotin; Ivan Yeremeyevich Shaykin; Anatoliy Fedorovich Cherkashin; Vasilii Vasil'yevich Yeremenko. "Creation and Introduction of New Effective Techniques and Highly Productive Technological Processes for Preparing Items for Large-Scale Prefabricated House Building." Presented by the Khar'kovskaya Oblast Board of the Scientific-Technical Society of the Construction Industry.

29. Valentina Inkolayevna Burakova; Rimma Yeregrafovna Vasil'yeva; Grigoriy Todifovich Volkov; Vladimira Stansilavovna Orishchuk; Inna Mikhaylovna Zimina; Ivan Nikiforovich Mel'nichuk; Velimir Petrovich Polishchuk; Nikolay Nikolayevich Reznik; Yaroslav Ivanovich Serednyak; Yaroslav Vasil'yevich Khom'yak. "Theoretical Principles and Practical Methods of Optimizing Main Highway Networks to Secure Effective Disposition of Local Highway Networks (Ukrainian SSR)." Presented by the Kiev Highway Institute.

30. Yuriy Arsen'yevich Michinskiy; Anatoliy Arkad'yevich Sokolov; Stanislav Grigor'yevich Vashev; Petr Naumovich Zhurakhovskiy; Anatoliy Ivanovich Zaytsev; Aleksandr Nikolayevich Vlasenko; Aleksandr Vladimirovich Shchekotikhin;

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PRAVDA UKRAINY 17 Jul 75 pp 3, 4

Boris Vasil'yevich Abramov; Vladimir Nikolayevich Gerasimov. "Development and Introduction of a Series of New Technical Means for Improving the Quality of Repair Work and Increasing the Service Life of Recapped Automobile Tires." Presented by the State Automotive Transport Scientific Research and Planning Institute.

II

TEXTBOOKS FOR HIGHER EDUCATIONAL INSTITUTIONS

1. Mikhail Ul'yanovich Belyy. "Atomic Physics" (Izd-vo Vishcha Shkola, Kiev, 1973).
2. Lev Ivanovich Antropov. "Theoretical Electrochemistry" (Izd-vo Vysshaya Shkola, Moscow, 1969).
3. Dmitriy Nikitovich Topchiy. "Agricultural Buildings and Installations" (Izd-vo Stroyizdat, Moscow, 1973).

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PHAVEN UKRAINY 17 Jul 75 pp 3, 4

The foregoing were presented by the Ukrainian Ministry of Higher and Special Secondary Education.

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In publishing the foregoing list of works admitted to competition for the 1975 Ukrainian State Prize in science and technology, the Committee appeals to the collectives of scientific and scientific-technical societies, scientific institutions, enterprises and higher educational institutions, as well as to the general public, to discuss the works listed and communicate opinions regarding the quality of the works and the competence of the authors to the Committee.

The names of the works and author-groups appear here essentially as submitted, without alteration. They will be given in further detail following public discussion.

Any responses and remarks, as well as the reports of public discussion of works and authors, should be sent to the Committee on Ukrainian State Prizes in Science and Technology, Ukrainian Council of Ministers, u. Kirova 12/2, Room 214, Kiev 252008, before 15 October 1975.

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VI. OBITUARIES

21. USSR

E. I. BUGRIMOV

Moscow ZHIVOTNOVODSTVO in Russian No 7, 1974 p 94

[Abstract] Yevgeniy Ivanovich Bugrimov, renowned zootechnician, candidate of Agricultural Sciences, former Deputy Director of the Zootechnical Office of the Ministry of Livestock Breeding, from 1954 until 1963 holder of a responsible post within the apparatus of the CPSU Central Committee, and former Vice-Chairman of the State Procurement Committee of the USSR Council of Ministers, died at the end of May 1974.

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22. USSR

N. N. BURLAKOV

Moscow ZHIVOTNOVODSTVO in Russian No 2, 1974 p 91

[Abstract] Nikolay Mikhaylovich Burlakov, Corresponding Member of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin, manager of a department of the All-Union Scientific Research Institute of Agricultural Economics, and member of the CPSU since 1941, died on 25 September 1973.

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23. USSR

UDC 576.858(092)Dossier

YE. M. DOSSER

Moscow VOPROSY VIRUSOLOGII in Russian No 3, 1974 pp 381-382

[Abstract] Yevgeniya Mikhaylovna Dosser, head of the Measles Laboratory at the Moscow Scientific Research Institute of Viral Specimens, died on 11 March 1974.

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24. USSR

G. N. KARAPETYAN

Moscow MEDITSINSKAYA GAZETA in Russian 18 Jul 75 p 4

[Abstract] Prof Grigoriy Nikolayevich Karapetyan, senior associate of the First Moscow Order of Lenin and Order of Labor Red Banner Medical Institute imeni I. M. Sechenov and CPSU member since 1919, has died.

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25. USSR

UDC 612.43(092)Kolpakov

M. G. KOLPAKOV

Moscow PROBLEMY ENDOKRINOLOGII in Russian No 3, 1975 pp 119-120

[Abstract] Prof Mikhail Grigor'yevich Kolpakov, Doctor of Medical Sciences, head of the Laboratory of Endocrinology of the Institute of Cytology and Genetics of the Siberian Department of the USSR Academy of Sciences, and head of the Complex Laboratory of Endocrinology and the Study of Biorhythms of the Institute of Clinical and Experimental Medicine of the Siberian Affiliate of the USSR Academy of Medical Sciences, died on 2 November 1974.

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26. USSR

V. YE. LASHKARYOV

Kiev VISNIK AKADEMIYI NAUK UKRAYINS'KOY RSR in Ukrainian No 1, 1975 p 111

[Abstract] Prof Vadim Yevgenovich Lashkaryov, noted Soviet physicist, Academician of the Ukrainian Academy of Sciences, Doctor of Physicomathematical Sciences, and the first director of the Institute of Semiconductors of the Ukrainian Academy of Sciences, died at the age of 72. His obituary is signed by the Presidium of the Ukrainian Academy of Sciences, the Physics Division of the Ukrainian Academy of Sciences, and the Institute of Semiconductors of the Ukrainian Academy of Sciences.

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27. USSR

S. N. LASTOCHKIN

Moscow ZHIVOTNOVODSTVO in Russian No 9, 1974 p 90

[Abstract] Prof Stepan Nikitich Lastochkin, professor of the Cattle Faculty of the Moscow Veterinary Academy and member of the CPSU since 1945, died in July 1974.

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28. USSR

B. V. LIPIN

Ordzhonikidze TSVETNAYA METALLURGIYA in Russian No 3, 1975 pp 161-162

[Abstract] Boris Vladimirovich Lipin, Candidate of Technical Sciences, docent of the North Caucasus Mining and Metallurgical Institute, and deputy editor-in-chief of the journal "Tsvetnaya Metallurgiya," died on 15 February 1975.

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29. USSR

U. S. MUSABEKOVA

Baku AZERBAYDZHANSKIY MEDITSINSKIY ZHURNAL in Russian No 3, 1975 pp 82-83

[Abstract] Prof Umnisa Suleymankyzy Musabekova, head of the Chair of Eye Diseases of the Azerbaydzhan State Medical Institute imeni N. Narimanov, Honored Scientist Azerbaydzhan SSR, and Corresponding Member of the Azerbaydzhan Academy of Sciences, died on 15 November 1974.

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30. USSR

UDC 061.75

YU. I. POLOVINKINA

Moscow SOVETSKAYA GEOLOGIYA in Russian No 6, 1975 pp 151-154

[Abstract] Yuliya Imnarkhovna Polovinkina, Doctor of Geological-Mineralogical Sciences, CPSU member since 1941, Lenin Prize laureate, and scientific associate of the All-Union Scientific Research Geological Institute (VSEGEI), has died. Her obituary is signed by A. V. Sidorenko, A. D. Shcheglov, N. P. Laverov, P. M. Tatarinov, A. I. Zhamoyda, D. V. Rundkvist, A. P. Markovskiy, K. N. Paffengol'ts, N. I. Nakovnik, V. L. Masaytis, S. V. Moskaleva, A. S. Ostroumova, V. V. Zhdanov, S. A. Muzylev, M. L. Lur'ye, Z. G. Ushakova, and T. N. Ivanova.

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31. USSR

G. V. RAYEVSKIY

Kiev AVTOMATICHESKAYA SVARKA in Russian No 7, 1975 p 78

[Abstract] Georgiy Vladimirovich Rayevskiy, State Prize laureate, Doctor of Technical Sciences, and leader of a department of the Institute of Electric Welding imeni Ye. O. Paton, died on 23 May 1975. His obituary is signed by the Institute of Electric Welding imeni Ye. O. Paton and the board and editorial staff of the Journal "Avtomaticheskaya Svarka."

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32. USSR

UDC 616-002.5(092)

A. N. SAKHAROV

Moscow PROBLEMY TUBERKULYEZA in Russian No 4, 1975 pp 91-92

[Abstract] Aleksandr Nikolayevich Sakharov, Candidate of Medical Sciences, scientific associate of the Moscow Tuberculosis Scientific Research Institute of the RSFSR Ministry of Health died on 20 June 1974. His obituary is signed by the collective of the Institute.

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33. USSR

UDC 616.97(092)Shcherbakova

A. K. SHCHERBAKOVA

Moscow VESTNIK DERMATOLOGII I VENEROLOGII in Russian No 7, 1975 p 92

[Abstract] Prof Anna Konstantinovna Shcherbakova, head of the Chair of Dermato-Venerological Diseases of the L'vov Medical Institute and Doctor of Medical Sciences, died on 9 January 1975.

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34. USSR

M. YU. TSYNKOV

Moscow ZHIVOTNOVODSTVO in Russian No 7, 1974 p 95

[Abstract] Prof Mendel' Yudkovich Tsykov, Doctor of Agricultural Sciences, head of the Department of Milk-Production Technology of the All-Union Scientific Research Institute of Livestock Breeding (VIZh), died.

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35. USSR

V. I. ZHADIN

Kiev GIDROBIOLOGICHESKIY ZHURNAL in Russian Vol 10 No 4, 1974 pp 131-133

[Abstract] Prof Vladimir Ivanovich Zhadin, Doctor of Biological Sciences and Honored Scientist RSFSR, head of the Department of Hydrobiology and Malacology Division of the Zoological Institute of the USSR Academy of Sciences, died on 9 February 1974. His obituary is signed by V. Ya. Pankratova, M. B. Ivanova, and A. F. Alimov.

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36. USSR

S. A. ZYKOV

Moscow DEFEKTOLOGIYA in Russian No 1, 1975 pp 95-96

[Abstract] Prof Sergey Aleksandrovich Zykov, Doctor of Pedagogical Sciences, Honored Teacher RSFSR, and head of the Division of Training of Deaf Children of the Scientific Research Institute of Defectology of the USSR Academy of Pedagogical Sciences, died on 21 November 1974.

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VII. FOREIGN SCIENTIFIC COOPERATION

38. USSR

FRENCH MINISTER OF HEALTH VISITS THE USSR

Leningrad Leningradskaya PRAVDA in Russian 1 Jun 75 p 1

[Text] Yesterday the French Minister of Health left Leningrad for Paris, having visited the USSR as a guest of the Soviet Government.

Minister S. Veil visited scientific research institutes and medical institutions and met with a number of scientists in various cities and republics of the USSR. She was received by First Deputy Chairman of the Council of Ministers USSR K. T. Mazurov.

In a memorandum signed yesterday afternoon by Minister Veil and USSR Minister of Health B. V. Petrovskiy, it was noted that the French official's visit was devoted to discussing problems of developing cooperation to be achieved on the basis of an intergovernmental agreement between France and the Soviet Union in medicine. During the visit the results thus far achieved by cooperating in medicine and public health were examined. The direction to be followed in those areas of research chosen for French-Soviet cooperation, the two ministers noted, will serve the interests of both nations and open new and extensive prospects for scientists.

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39. USSR

MEETING AT THE ACADEMY OF SCIENCES USSR

Moscow PRAVDA in Russian 23 Apr 75 p 3

[Text] A delegation of scientists and specialists of the Republic of India, in the Soviet Union for the launch of the first Indian Earth Satellite, visited the Presidium of the USSR Academy of Sciences on 22 April 1975. In the course of the conversation, USSR Academy of Sciences President M. V. Keldysh congratulated the guests on the success, the launch into near-earth orbit of the satellite "Ariabata." The leader of the delegation, Director of the Indian Government Organization of Aerospace Research Prof S. Davan expressed to Soviet scientists and technicians his profound gratitude for aid in launching the Indian science into aerospace orbit. On the same day was held the signing of an agreement between the USSR Academy of Sciences and the Indian Government Organization of Aerospace Research on further development of collaboration in the coming years.

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VIII. NEW ORGANIZATIONS

40. USSR

GIRGENS, G.

NEW SOLAR-ENERGY RESEARCH CENTER

Moscow IZVESTIYA in Russian 12 Apr 75 p 5

[Text] The Institute of Problems of Materials Science of the Ukrainian Academy of Sciences will set up a "heliocenter", to be located in the maritime settlement of Kartsiveli.

Two 15-meter parabolic mirrors will maintain a temperature regime as high as 3,000°C. Scientists working in the program have already prepared an extensive research schedule associated with the use of concentrated solar energy. In a number of experiments, superpure materials will be used, plant seeds will be irradiated, and various problems in the areas of thermophysics, energetics and biophysics will be attacked.

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41. USSR

ZAYNUTDINOV, Sh., Non-Staff Correspondent

MAN AND CLIMATE

Moscow IZVESTIYA in Russian 12 Mar 75 p 3

[Text] In Tashkent a new scientific center has appeared--the Scientific Research Institute of Human and Animal Physiology, organized on the basis of a similar division of the Uzbek Academy of Sciences. Its associates will be employed in studying the effect of the hot climate on life processes occurring in the organism of men and animals, development of recommendations on effective protection against the abundant sun, which are necessary not only for physiologists, but also for architects, builders, and designers of machinery and clothing.

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IX. CONFERENCES

42. USSR

FEDOROVICH, B.

A LOOK UNDER THE ROOF OF THE WORLD

Kiev PRAVDA UKRAINY in Russian 3 Jul 75 p 4

[Text] An international conference of geophysicists of the Soviet Union, India, and Italy, organized by the Interdepartmental Geophysical Committee of the Academy of Sciences USSR and the Kiev Institute of Geophysics of the Academy of Sciences Ukrainian SSR, was held in the capital of Ukraine. The object of the conference was to develop concrete plans for further joint geophysical explorations of the Pamir-Himalayan mountain chain belt the interior regions of which as yet remain an unsolved riddle to geologists. The work will be carried out in accordance with the UNESCO international geodynamic project, and is to be a continuation of the so-called unique Himalayan seismic experiment conducted last year on the Pamirs by Soviet geophysicists.

The sounding of the interior regions of the highest mountain system on the globe will be accomplished by the deep seismic probing method developed by Soviet scientists. The method is based on utilizing the energy generated by powerful artificial

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earthquake explosions induced, as a rule, by several tons of explosive materials. The exploratory seismic waves are considerably more effective than the traditional seismic prospecting waves. Not only are they capable of exploring the upper part of the Earth's crust, but capable also of penetrating the interior regions of the planet by many tens of kilometers. The waves when refracted by the most solid layers of mountain rocks, revert and are registered by highly sensitive seismographs, thereby providing information regarding deep geological structures.

The initial attempts of the participants in the Soviet-Indian geophysical expedition to peek under the roof of the world produced interesting results. The echo of the peaceful Pamir explosions was heard at a record distance of 500 kilometers in the area of the Indian city of Srinagar (Kashmir), the Central Asiatic republics of our country, and Afghanistan and Pakistan. Scientists succeeded in establishing that the borderline between the Earth's crust and the upper mantle of the Earth in the territory that was under investigation is situated at a depth which fluctuates in the unusually wide range of 30 to 70 kilometers.

However, is such detailed decoding of the characteristics of the geological and tectonic structure of the earth's interior regions, the Pamir-Himalayan mountain belt in this case, of any scientific and practical importance? Undoubtedly yes. It will

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help in the purposeful planning of the work of geophysicists and also in the correct orientation of the geologists who will follow in their tracks. Secondly, it will make it possible to scan geological history and draw closer to the final cognition of the general laws which govern not only the formation of separate analogous regions, but also the present outer configuration of the Earth as a whole.

The initial step in the joint efforts of the scientists will involve the shooting of the Trans-Himalayan seismically-explored profile about 1,000 kilometers in length, and which will successively traverse the Pamir-Himalayan mountain system from North to South within the territorial limits of the Soviet Union, Afghanistan, Pakistan, and India. Further, this profile, in accordance with the agreement between the Academies of Sciences of India and USSR and the Indian Council for Industrial and Scientific Research, will be extended to the southern terminus of the Hindustan Peninsula. Deep seismic probing of the entire coastal part of India, in the shallow water zone of the Continental shelf to the Arabian Sea and Bengal Bay will also be conducted.

The time is not far off when the treasures which are now hidden under the difficulty accessible roof of the world will serve to develop the economies of many countries.

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43. USSR

KIEV SYMPOSIUM ON X-RAY PHOTOELECTRON SPECTROSCOPY

Kiev PRAVDA UKRAINY in Russian 10 Jun 75 p 3

[Text] The International Symposium on X-ray Photoelectron Spectroscopy was held in Kiev for six days. Physicists from England, East Germany, the USSR, Finland, West Germany, Sweden, and other countries, participated.

V. V. Nemoshkalenko, chairman of the organization committee and Corresponding Member of the Ukrainian Academy of Sciences, reported to the RATAU (Ukrainian News Agency) correspondent that it is possible, with the use of X-ray photoelectron spectroscopy, to study the spatial disposition of atoms and the electron links in very thin layers of matter--something before impossible with any other method. This is particularly important in verifying theoretical models of new materials, in solving certain problems in chemistry (for example, catalysis), and also in the physics of the surface of a solid body.

The Ukrainian Academy of Sciences organized an excursion for the benefit of the participants to the Institute of Metal Physics where theoretical and experimental studies are being made and equipment devised for use in X-ray photoelectron spectroscopy.

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44. USSR

PETROVA, A.

SOCIETY OF HEMATOLOGISTS AND TRANSFUSION SPECIALISTS

Moscow MEDITSINSKAYA GAZETA in Russian 25 Apr 75 p 3

[Abstract] The new All-Union Scientific Society of Hematologists and Transfusion Specialists held its first session, which attended by various specialists, the medical community of Moscow, and 180 representatives from various Union republics; the session was opened by Deputy Minister of Health USSR A. G. Safonov.

The session heard a report by Soviet Minister of Health B. V. Petrovskiy, who discussed the present status and future of hematology and transfusiology, and the prime medical objective of the conquest of cardiovascular, oncological, viral and other diseases. The 1975 Soviet medical budget, he pointed out, amounts to 11 billion rubles. Since 1926 Soviet institutes of hematology and transfusion have risen in number from 1 to 278. At this moment particular stress is being laid on the creation of transfusion departments at large hospitals, and there are now more than 2,000 of these. During the past decade the volume of available donor blood increased by 150 percent, though specialized branches of medicine are still not fully satisfied. The aim is to reach 40 unpaid donors per 1,000 population and to

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PETROVA, A., MEDITSINSKAYA GAZETA 25 Apr 75 p 3

increase blood dose to 400 ml. Freezing and prolonged storage of erythrocytes and other blood cells in liquid oxygen is one very promising development; this has led to the creation of special cryogenic apparatus and the establishment of special frozen-blood clinics in a number of cities. One important task is to find new blood preparations with marked therapeutic properties, and also immune preparations with specific action.

Corresponding Member of the Academy of Medical Sciences USSR O. K. Gavrilov discussed Soviet progress in molecular biology, especially molecular hematology stressed five years ago by I. A. Kassirskiy, the aim of which is to influence the molecular structure of the blood and to eliminate the causes of hematological illnesses

Professors G. Ya. Rozenberg and P. S. Vasil'yev dealt with blood substitutes and preparations. Professors L. G. Bogomolova, D. M. Grozdov and I. S. Kolesnikov discussed the imposing role of the blood service during World War II.

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PETROVA, A., MEDITSINSKAYA GAZETA 25 Apr 75 p 3

Other specialists delivering reports at the conference included Prof V. A. Agranenko, Prof N. T. Terekhov of Kiev, Prof T. V. Golosova, Candidate of Medical Sciences O. A. Stolyarova of Kirov, Prof F. E. Faynshteyn, Doctor of Medical Sciences Yu. N. Tokarev, and Doctor of Medical Sciences Z. D. Fedorova of Leningrad. Organizational problems were discussed by Prof. D. M. Grozdov, editor of "Problems of Hematology and Blood Transfusion."

A managerial staff for the newly-created society was elected; this included 83 leading specialists from all Union republics. O. K. Gavrilov was elected chairman.

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45. USSR

POMBERSHTEYN, K., Sochi

INTER-VUZ CONFERENCE ON ACUPUNCTURE

Moscow MEDITSINSKAYA GAZETA in Russian 5 Feb 75 p 3

[Text] The inter-vuz conference devoted to questions of acupuncture was held in Gor'kiy and attracted the attention not only of physicians of various specializations, but also of physicists, cyberneticists, physiologists, and mathematicians who came from 56 cities of the country. In the more than 60 reports of scientists and practitioners, much attention was given to the theory of acupuncture, its mechanism of action on the body, and questions of improvements in acupuncture technique. Reports showed that in cardiology, acupuncture was found effective in non-ischemic cardialgia, cardiac arrhythmia, cervical osteochondrosis with cardiac pain, coronary atherosclerosis, and hypertensive diseases. Acupuncture was found effective in pulmonology and bronchial asthma. Physicians shared experience of successful acupuncture in gastroenterology in treating stomach and duodenal ulcer, dyskinesia of the gastro-intestinal tract, solaritis, pancreatitis and in hiccoughing and hyper-salivation. In neurology, acupuncture was effective in diseases of the PNS:

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neuritis of the facial nerve, prosalgia, contraction of facial muscles, neuralgia of the trifacial nerve, lumbo-sacral radiculitis, coccyx symptoms of vertebral osteochondrosis, and also in spastic paralysis. In ophthalmology, it is used to treat pigment degeneration of the retina, postneuritic atrophy of the visual nerve, recurring iridocyclitis and other diseases. Participants of the conference stressed the need for expanding the creative contacts of scientific laboratories and clinics of the country, combining efforts of various specialists in a complex development of acupuncture.

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46. USSR

SECOND AZERBAJDZHAN CONFERENCE OF NEUROPATHOLOGISTS AND PSYCHIATRISTS

Moscow MEDITSINSKAYA GAZETA in Russian 29 Jan 75 p 3

[Abstract] The Second Azerbaydzhan Conference of Neuropathologists and Psychiatrists has been held in Baku; it was jointly conducted with the Presidium of the Board of the All-Union Scientific Society of Neuropathologists and Psychiatrists, the Central Scientific Research Institute of Forensic Psychiatry imen' V. P. Serbskiy, and the Scientific Research Institute of Clinical and Experimental Neurology of the Georgian Ministry of Health.

More than 600 neuropathologists, psychiatrists and other specialists from Azerbaydzhan, Georgia, Armenia, Moscow, Leningrad and Kiev participated. Various subjects were taken up, including the organization of psychoneurological aid to the population, schizophrenia, vascular pathology of the brain, and epilepsy. Various measures were devised for improving psychiatric service in Azerbaydzhan. Reports on basic scientific problems were delivered by Ye. V. Shmidt (Academician of the Academy of Medical Sciences USSR; vascular pathology of the brain), G. V. Morozov (Corresponding Member of the Academy; schizophrenia), and P. M. Saradzhishvili (Academician; epilepsy). The well-known psychiatrist A. D. Zurabashvili (Georgian Academy of Sciences) received an honorary diploma. Prof A. A. Abaskuliyev was elected chairman of the Azerbaydzhan Scientific Society of Neuropathologists and Psychiatrists.

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X. EDUCATION

47. USSR

AKHMETOV, R. (Tass). An Interview.

NEW FACULTIES FOR RETRAINING ENGINEERS

Moscow VECHERNYAYA MOSKVA in Russian 23 Jun 75 p 2

[Text] New faculties will be opened in 12 of the leading Moscow, Leningrad, and Novosibirsk vuzes on 1 October. Such was the decision adopted by the Ministry of Higher and Secondary Specialized Education USSR in connection with the execution of the decree issued by the Council of Ministers USSR "Concerning the Organization of Specialized Faculties for Retraining Cadres for the New Perspective Directions of Science and Technology."

Prof A. I. Bogomolov, a member of the Ministry's Board, comments on the objectives and specifics of training at these faculties:

"The precipitous development of science and industry is accompanied by the emergence of new scientific-technical directions, and correspondingly a growth in the need of cadres capable of working creatively in contiguous areas which form the base for the origin of these directions.

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AKHMETOV, R., VECHERNYAYA MOSKVA 23 Jun 75 p 2

"These specialized faculties will assist in the practical solution of problems connected with the training of the necessary specialists. Students with higher education, successful in production and solution of technological problems, and, naturally, with adequate experience (not less than three years) will be admitted to these faculties. The term of study with separation from industry will be up to one year; without separation--up to two years. The specialized faculties, differing from the system of advanced training which serves to broaden the professional outlook of the engineer, will provide the graduate with knowledge and experience which will enable him to work in new and more complex spheres of science and technology.

"The plan is to attract outstanding scientists, great specialists of scientific research institutes, project-designing organizations, and industrial association for the reading of lectures at the faculties.

"Among the schools of higher education in which it was decided to open these faculties are Moscow State University imeni Lomonosov; MVTU [Moscow Order of Lenin and Order of Labor Red Banner Higher Technological School] imeni Bauman; the Moscow Physicotechnological, Engineering-Physical, and Energy Institutes; Novosibirsk State

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AKHMETOV, R., VECHERNYAYA MOSKVA 23 Jun 75 p 2

University; and the Leningrad Polytechnical and Technological Institutes. Training in the newest branches of science and technology such as biomechanics, designing and utilizing automatic devices and manipulators, and the development of the latest medical apparatuses and their application in practice will be conducted at these faculties. Another cycle of occupations is linked with the theoretical and methodological attainments of the country's science.

"We intend to expand and improve this form of education," Bogomolov emphasized in conclusion. "In accordance with the needs of the national economy new faculties will be opened in the future, and retraining cadres in new specialties will continue."

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XI. MISCELLANEOUS

48. USSR

YAROSHEVSKIY, M. G. (Editor)

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Moscow CHELOVEK NAUKI, Izd-vo Nauka in Russian 1974, pp 389-390

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YAROSHEVSKIY, M. G., CHELOVEK NAUKI, 1974 pp 389-390

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YAROSHEVSKIY, M. G., CHELOVEK NAUKI, 1974 pp 389-390

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YAROSHEVSKIY, M. G., CHELOVEK NAUKI, 1974 pp 389-390

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49. USSR

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50. USSR

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51. USSR

SHUL'GINA, Irina Viktorovna

ANALIZIS NAKLADNYKH RASKHODOV V NAUCHNYKH UCHREZHDENIYAKH [Analysis of Overhead Expenses in Scientific Institutions] in Russian "Finansy" Moscow 1974, 80 pp

[Excerpt] Annotation

The book examines the essence and structure of overhead expenses and in particular their development in scientific institutions. The author propounds the methods of the analysis of overhead expenses applicable to individual functional types of works and expenses for management, maintenance and repairs of buildings and installations, maintenance and repairs of equipment, and others; speaks of the degree of influence of the scientific-technical progress on dynamics of expenses; and proposes a method of estimating overhead expenses based on developed norms of outlays.

The book is intended for economists, financiers, planners, and accountants of scientific institutions and organizations.

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SHUL'GINA, Irina Viktorovna, ANALIZIS NAKLADNYKH RASKHODOV V NAUCHNYKH UCHREZHDENIYAKH, 1974, 80 pp

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52. USSR

GOL'DANSKIY, V. I., and others, editors

BUDUSHCHEYE NAUKI, Mezhdunarodnyy Yezhegodnik [The Future of Science. International Yearbook] in Russian "Znaniye" Moscow 1974, 400 pp illa.

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GOL'DANSKIY, V. I., BUDUSHCHEYE NAUKI, 1974, 400 pp

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- M. Steenbeck (German Democratic Republic)--Social Heredity and World of the
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- V. P. Yakimov, Doctor of Biological Sciences--The Object of Study--the Homo
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53. USSR

MEL'NIKOV, Nikolay Vasil'yevich, Academician

GORNYYE INZHENERY (VYDAYUSHCHIYESYA DEYATELI GORNOY NAUKI I TEKHNIKI) [Mining Engineers. Outstanding Activists of Mining Science and Technology] in Russian, 2nd supplemented edition "Nauka" Moscow 1974, 271 pp

[Excerpt] Annotation

Against the background of a narrative of the most important achievements and long-range tasks of Soviet mining science and technology and book deals with principal stages of production and scientific biography of outstanding Soviet mining scientists and organizers of the mining industry, viz.: A. A. Skochinskiy, A. M. Terpigorev, L. D. Shevyakov, G. I. Man'kovskiy, I. N. Plaksin, A. O. Spivakovskiy, Ye. F. Sheshko, A. F. Zasyad'ko, and others. Using the abundant factual material and his personal recollections the author produced interesting life-sketches of leading activists of Soviet mining science and technology.

In the second part of the book, the author propounds his reflections on the subject and content of mining science and on the peculiarities of the training and work of mining scientists and engineers, and speaks of the Urals mining school of experience.

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MEL'NIKOV, Nikolay Vasil'yevich, GORNYYE INZHENERY, 1974, 271 pp

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MEL'NIKOV, Nikolay Vasil'yevich, GORNYYE INZHENERY, 1974, 271 pp

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54. USSR

PROKHOTSKIY, Grigoriy Trofimovich and KHRYPCHENKOV, Vasilii Georgiyevich

EFFEKTIVNOST' RABOTY NAUCHNO-ISSLEDOVATEL'SKIKH ORGANIZATSIY [Effectiveness of Work of Scientific Research Organizations] in Russian "Nauka i Tekhnika" Minsk 1973, 192 pp

[Excerpt] The book expounds basic principles of planning scientific research and experimental design work as a factor of the enhancement of the effectiveness of scientific elaborations. It examines problems concerning the improvement of elaborations and introduction of the new automated control systems and appraisal of the economic effectiveness. A great deal of attention is devoted to the mode of financing scientific research and experimental design work under new conditions of management.

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55. USSR

YAROSHEVSKIY, M. G. (Editor)

MEN OF SCIENCE

Moscow CHELOVEK NAUKI, Izd-vo Nauka in Russian 1974, pp 5-6, 391-392

[Text] The present collection was assembled from the records of reports delivered at the Symposium on Problems of the Biographical Treatment of the Creative Individual, held in Moscow in the spring of 1972. This symposium was organized by the Institute of the History of Natural Science and Technology (USSR Academy of Sciences) and the Commission on the Complex Study of Artistic Creativity (Scientific Council of the USSR Academy of Sciences on the Complex Problem, "History of World Culture").

The attack on these problems was occasioned by the lack of established scientific-practical principles and methods for study of the personality and activity of the scientist. Writings of the biographical genre are very popular with Soviet readers. They are of great informative and educational value. In a situation in which science is being converted into a direct productive force in society, interest is drawn toward the biography of scientists, the analysis of their creative path, and the discovery, in this connection, of those factors upon which their role in social progress depends. The personality of the scientist can be understood either in

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YAROSHEVSKIY, M. G., CHELOVEK NAUKI, 1974, pp 5-6, 391-392

scientific concepts or in artistic models. The two means certainly differ; but they are, at the same time, very intimately associated.

The acute importance of this theme, as it concerns "world view", is widely appreciated. The disputes heard in capitalist countries concerning this subject reflect the antagonistic character of those contradictions which have arisen between the achievements of the modern scientific-technical revolution, on the one hand, and the social conditions standing in the way of development of the essential forces of the whole human personality and the possibilities of its knowledge and self-knowledge, on the other.

A whole complex of problems is involved in developing the biography of the creative personality: these are philosophic, sociological, historical, psychological, ethical, pedagogical, and so on. It is at this point that the interests of a great many different disciplines converge. For that reason, the field of all-round research on the principles and methods of biographical writing is of interdisciplinary character. But, for all this uniqueness of this approach from varied points of view, each with its own intellectual and methodological apparatus, Soviet researchers representing those points of view are held together by a communality of

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YAROSHEVSKIY, M. G., CHELOVEK NAUKI, 1974, pp 5-6, 391-392

ideational and methodological positions. All inevitably regard science as a socio-historical system whose forms of activity, structure and dynamics have been conditioned by the laws of social development discovered by Marxism. Counterbalancing idealistic historicism, the Marxist view of social relations maintains the primacy of material existence, and of the life pattern of individuals as historical (rather than private) beings. Science is a derivative of the historical process, just as is knowledge verified by social practice, and as is the acquisition of that knowledge. Correspondingly, the scientist in all his characteristics can be adequately understood only as the result of the objective nature of science itself. Social conditions, therefore, emerge in the biography of the scientist not as the external background against which his discoveries and his errors take place, but rather as something which has determined the movement of his thought from the distant past. Outside the socio-historical approach, more than one of the root problems of scientific biography remain simply insoluble.

The meaningfulness of biographical research, as is well known, depends not on the nearness of a chosen subject to our own era, but rather on the method of analysis employed, the position from which the subject is examined: it is precisely this position which corresponds to the demands of our time and which is able to advance

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the solution of our present problems. It is just in this sense, to take one example, that a study of the creativity of Plato or Democritus, may very well assume extreme importance: this is attested by the history of modern philosophy and natural science, and by the extraordinarily bitter ideological disputes of the present era. This is not surprising: according to a well-known dictum of Lenin's, the struggle between the two lines of thought represented by the names of Plato and Democritus is not going to disappear.

In addition, the longer the segment of the historical process subjected to examination, the less likely are the general laws of that process to emerge. For that reason, biographies representative of all periods in the development of science, but especially the modern period, represent one of the very greatest tasks of scientific historical research.

The authors of the present collection not only represent a number of different fields, but express varying points of view as regards the methods and perspectives of biographers of scientists. This lends to a number of the articles an element of discussion or controversy which, in the hope of the contributing writers, will advance present work being done on the problems of scientific biography, reveal new

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aspects of those problems, and further positive research of the personality and work of the scientist by scientific and artistic means.

The numerous planes of the problems discussed, together with their interconnection, have produced a familiar conditionality in the structure of the collection.

The contributing authors devote this collection to the memory of Naum Iosifovich Rodnoy, one of the initiators in calling the symposium referred to earlier and an outstanding student of the problems of scientific biography.

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XII. ORGANIZATIONAL BRIEFS

1. USSR

AZERBAIDZHAN STATE MEDICAL INSTITUTE IMENI NARIMANOV

Moscow MEDITSINSKAYA GAZETA in Russian 13 Jun 75 p 4

K. Kafarov -- assistant of the Chair of Child Surgery

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2. USSR

MOKEYEV, Yu., Correspondent, Vladivostok

BIOLOGICAL AND SOIL INSTITUTE, FAR EASTERN SCIENTIFIC CENTER OF THE USSR ACADEMY OF SCIENCES

Moscow PRAVDA 15 Mar 75 p 6

[Text] Co-workers of the Zoology Lab of the Biological and Soil Institute of the Far Eastern Science Center of the USSR Academy of Sciences have refined the propagation, numbers and form of life of mammals from the Chukotsk tundra to the southern regions of the Primorya seashore. The scholars' path lay through Kamchatka, Sakhalin and the Kuril Islands. It was found that the region is inhabited by 102 species of mammals. More are concentrated in the broad-leafed forests of the Primorye seashore region. The scientists worked out recommendations for efficient use and conservation of the far-eastern fauna.

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3. USSR

CENTRAL SCIENTIFIC RESEARCH LABORATORY (TsNIL)

Moscow MEDITSINSKAYA GAZETA in Russian 6 Jun 75 p 3

G. Voloshin--head of the Department of Medical and Biological Cybernetics, Doctor of Technical Sciences.

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4. USSR

INSTITUTE OF PEDIATRICS, USSR ACADEMY OF MEDICAL SCIENCES

Moscow MEDITSINSKAYA GAZETA in Russian 13 Jun 75 p 3

Prof M. K. Oskolkova -- leader of the Division of Functional Diagnostics

N. N. Vul'son -- senior scientific associate.

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5. USSR

LENINGRAD INSTITUTE FOR THE ADVANCED TRAINING OF PHYSICIANS AND EXPERTS, MINISTRY OF SOCIAL SECURITY RSPSR

Moscow MEDITSINSKAYA GAZETA in Russian 21 May 75 p 3

Prof M. Voytenko -- prorector for educational and scientific work.

1/1

6. USSR

VIKTOROV, A., Non-staff "Izvestiya" correspondent

MAIN ASTRONOMICAL OBSERVATORY, USSR ACADEMY OF SCIENCES

Moscow IZVESTIYA in Russian 1 Apr 75 p 3

[Text] The Main Astronomical Observatory of the Academy of Sciences USSR has successfully run tests on a new installation for a horizontal long-focus telescope to be used in lunar observation.

"The new method of observation," stated N. Bystrov, Candidate of Physicomathematical Sciences, scientific associate of the Observatory, and designer of the equipment, "offers the possibility of obtaining photographs of the moon on fine-grain sensitive and contrast film, with later determination of the center of mass of the earth's satellite with respect to the stars.

At the Pulkovo Observatory a special pavilion will be set up to house the telescope with its appurtenances. Following this, regular lunar observations with the new equipment will begin.

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7. USSR

2ND MOSCOW MEDICAL INSTITUTE IMENI N. I. PIROGOV

Moscow MEDITSINSKAYA GAZETA in Russian 13 Jun 75 p 3

N. I. Nisevich -- Academician of the USSR Academy of Medical Sciences, head of the Chair of Children's Infections of the Pediatric Faculty.

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8. USSR

2ND MOSCOW MEDICAL INSTITUTE

Moscow MEDITSINSKAYA GAZETA in Russian 6 Jun 75 p 3

Prof S. Gasparyan -- head of the Chair of Medical and Biological Cybernetics

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9. USSR

2ND MOSCOW MEDICAL INSTITUTE IMENI N. I. PIROGOV

Moscow MEDITSINSKAYA GAZETA in Russian 21 May 75 p 3

Prof V. Kupriyanov -- head of the Chair of Normal Anatomy, Academician of the USSR Academy of Medical Sciences

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10. USSR

SCIENTIFIC RESEARCH INSTITUTE OF THE "URALELEKTROTYAZHMASH" INDUSTRIAL UNION

Moscow PRAVDA in Russian 4 May 75 p 3

[Text] The Scientific Research Institute of the "Uralelektromash" Industrial Union in Sverdlovsk Develops, studies, and tests high-voltage and other type electrical equipment. A laboratory to check out high-voltage switches was created at the Institute. In the photos: engineers V. Morozov and V. Bepal'ko are testing a pulsed voltage generator; the pulse generator is adjusted in the new laboratory.

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11. USSR

TASHKENT INSTITUTE FOR THE ADVANCED TRAINING OF PHYSICIANS

Moscow MEDITSINSKAYA GAZETA in Russian 6 Jun 75 p 3

I. A. Khudoyarov -- docent of the Chair of Stomatology.

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XIII. EASTERN EUROPE

1. HUNGARY

ERDELYI, Elek, Mrs. and FRIED, Judit

SOME ASPECTS OF THE OPERATION OF TEAMS IN RESEARCH INSTITUTIONS

Budapest TUDOMANYSZERVEZESI TAJEKOZTATO in Hungarian Vol 14 No 2, 1974 pp 324-333

[Abstract] The factors affecting division of work within a research team, the decision-making process related to the work of a research team, and leadership aspects of a research team were discussed. The study described was made on the basis of a questionnaire completed by ten research teams operating in four different types of research institutions. The results showed that generally there is no division of work among the members of a team and that each member participates in every phase of the work, although some specialists concentrate on work of their individual qualification and expertise. Decision making is generally a democratically performed classical management operation, where the team as such has a greater power than any member of the team. However, the team leader has a greater authority than any team member and the specialists have a greater say in areas specifically within their

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ERDELYI, Elek, Mrs. and FRIED, Judit, TUDOMANYSZERVEZESI TAJEKOZTATO, Vol 14, No 2 1974 pp 324-333

field of competence. Leadership in a team varies in quality; generally it is best if the leader is a senior researcher with a distinguished scientific career behind him. But there is no objective yardstick to evaluate the quality of leadership. In Hungary, the typical research team consists of 5-10 scientists.

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2. HUNGARY

ROZSA, Frater, Dr, National Institute of Neurology and Mental Diseases

SIXTH DANUBE SYMPOSIUM ON PSYCHIATRY

Budapest IDEGGYOGYASZATI SZEMLE in Hungarian Vol 28 No 6, Jun 75 p 288

[Text] The main theme of the symposium was the course and therapy of schizophrenia. The program of the scientific lecture session was supplemented by a round-table conference and general discussion session on child psychiatry. Chairman of the symposium was Dr Jovan Ristic (Belgrade); its vice-chairman was Dr Persic; its secretary was De Jakulic.

On the first day of the session, following the inauguration ceremony, reviews of Berner and Gabriel (Vienna), Hahn (Zurich), Kuehne (Halle), Hofmann (Vienna), Milekic (Belgrade), and Lechner (Graz) summarized the nosological, symptomatological, and course problematics of schizophrenia as well as the characteristics of the atypical forms. They analyzed the problem of the so-called defect, or by a better term, the final condition. The lectures following the reviews discussed borderline cases, old-age schizophrenias, and atypical schizophrenias. The lecture of Frater and E. Kornyei, entitled "Atypical Schizophrenias," was delivered in this session.

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HUNGARY

ROZSA, Frater, Dr., IDEGGYOGYASZATI SZEMLE Vol 28 No 6, Jun 75 p 288

The second day of the symposium was devoted to child psychiatry. Following the reviews by Spiel (Vienna), Christozov (Sofia), and Miklos Vargha, brief lectures were delivered on the prognosis of endogenous psychoses, acute psychotic states, and the like. The lectures were followed by a round-table conference, attended, on behalf of Hungary, by Miklos Vargha and Janos Szilard. On the afternoon of the second day, the reviewers and lecturers analyzed the prognosis of schizophrenia (Gastager of Salzburg) and its therapy (Temkov of Sofia). Gaszner (Pecs) reviewed the accomplishments in the field of atropine coma therapy. The lecture of Linczenyi entitled "Data on the Psychotherapy of Schizophrenia" was delivered at the session dealing with the psychotherapeutical and social-therapeutical aspects of schizophrenia. Veer and Tringer (Budapest) discussed "Analytical Approach to the Neurosis Factor."

The third day of the symposium was devoted to general discussions. All session chairmen summarized and evaluated the lectures delivered in their sessions, and posed questions which were intended to "stimulate debate." The position of the symposium emerged after a lively debate:

a) Schizophrenic "disposition" is not predestined; it is a possibility: the function of endogenous and exogenous environmental factors is interaction, resulting in the clinical syndrome.

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ROZSA, Frater, Dr., IDEGGYOGYASZATI SZEMLE Vol 28 No 6, Jun 75 p 288

- b) There is no justification for assuming the existence of a schizophrenic "defect" as an irreversible state. It is therefore preferable to use the term "final state," which indicates the stabilization of the disease.
- c) Methods of active treatment modify the course of schizophrenia. It became possible to discharge patients, the duration of the average hospitalization shortened, and the percentage of severe final states decreased. At the same time, relapses became more frequent.
- d) General and long-term follow-ups indicated the significance of sociotherapy in rehabilitation.

The form of discussion used permitted lively exchange of views and turned out to be productive. The success of the scientific program was enhanced by a faultless simultaneous interpretation facility, for which both the symposium sponsors and the lecturers expressed their thanks to the interpreters.

During the closing ceremony of the symposium, Professor Ristic announced the resolution of the executive committee, according to which the next Danube Symposium on Child Psychiatry in 1976 will be held in Vienna. The main theme will be "Circle Interventions in Psychiatry."

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3. HUNGARY

DR SANDOR BABOS

Budapest MAGYAR ALLATORVOSOK LAPJA in Hungarian Vol 30 No 5, 1975 p 370

[Abstract] Dr Sandor Babos, veterinary parasitologist, retired chief staff scientist of the Research Institute of Animal Health of the Hungarian Academy of Sciences, died 24 December 1974. Babos, Candidate of Veterinary Medical Sciences, was born 24 May 1919 in Budapest. He studied at the Veterinary University between 1947 and 1951 after military service in World War II, where he sustained injuries. After a stint at the Department of Parasitology at the Veterinary University under Professor Sandor Kotlan, in 1952 he joined the Research Institute of Animal Health of the Hungarian Academy of Sciences, where he worked until his retirement for poor health in 1974.

He continued to act as an advisor to the Institute after his retirement. He was a founding member and president of the Hungarian Association of Parasitologists. He authored about 40 scientific papers on parasitology. His special interests were helminthology and acroentomology. His candidate thesis dealt with lung parasites in Hungarian leporida. He also wrote a monograph on the tick fauna of central Europe. He realized that science must be combined with social consciousness, and he put this principle in practice. He was buried 22 January 1975 at Farkasret [Budapest] cemetery; the eulogy was given by Dr Istvan Nemeth, deputy director of the Research Institute for Animal Health.

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4. HUNGARY

BUZA, Laszlo, Dr, and SZAKOLCZAY, Jozsef, Dr

MIHALY SZALAY

Budapest MAGYAR ALLATORVOSOK LAPJA in Hungarian Vol 30 No 5, 1975 p 371

[Abstract] Mihaly Szalay, director of the Fish Breeding Research Institute in Szarvas, died unexpectedly at the age of 54. He was born 9 September 1920 in Veszprem; he attended secondary schools in Veszprem, and the Agricultural Academy in Keszthely. After obtaining his diploma in 1941, he worked at the Economics Academy in Debrecen as an assistant professor under Professor Csukas. In 1942 he became associate professor at the Agricultural College in Kolozsvar [Cluj]. He served in World War II and was a prisoner-of-war. After his return from war prison in 1947, he joined the Agricultural Academy in Keszthely as professor. At the same time he enrolled at the University of Veterinary Medical Sciences but could not graduate because of illness. Between 1950 and 1953 he was staff scientist at the Fish Breeding Research Institute, between 1953 and 1957 head of the Fisheries Department of the Ministry of Agriculture, between 1957 and 1968 at the Department of Fish Breeding of the Research Institute for Small Animal Breeding, and since 1968 head of the Fish Breeding Research Institute in Szarvas. He established an experimental fishery in Szarvas. He was liked by all and an outstanding personality in Hungarian fishery science and research.

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5. HUNGARY

BERENCSI, Gyorgy, Dr

DR FERENC SZONTAGH (1919-1975)

Budapest ORVOSI HETILAP in Hungarian Vol 116 No 22, 1 Jun 75 p 1262

[Abstract] Ferenc Szontagh, Dr, professor, MD, director of the Gynecological and Obstetrical Clinic of the University of Medical Sciences in Szeged, died on 15 April 1975. He obtained his medical degree at the University of Sciences in Pecs, in 1943. His career included positions at the Institute of Anatomy at the University of Sciences in Pecs (demonstrator), Institute for Pharmacology and Pathophysiology (assistant professor), Obstetrical and Gynecological Clinic in Pecs (associate professor), and Gynecological and Obstetrical Clinic at the University of Medical Sciences in Szeged (professor, department head). He was dean of the Faculty of General Medicine for three years and assistant president for two years. He was a member of many professional organizations, both in Hungary and abroad. He received many honors, including the title of "Outstanding Inventor," and the Gold Medal of Labor. He published about 200 scientific papers, and wrote several books. He was a distinguished educator, liked by colleagues, patients, and students. His specialty was reproductive and gynecological endocrinology, and the physiological and pathological aspects of pregnancy. His death was unexpected, and his memory will be cherished by all who knew him.

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6. POLAND

NEW REGULATIONS IN POLAND ON SCIENTIFIC DEGREES

Budapest TUDOMANYSZERVEZESI TAJEKOZTATO in Hungarian Vol 14 No 2, 1974 pp 361-364

[Text] A law promulgated in Poland on 12 April 1975 on scientific degrees and scientific titles modifies the law promulgated on 12 March 1965 in several respects. According to the new regulations, organizational units of higher education institutions, the scientific research institutes of the Polish Academy of Sciences, and those organizational units which are not institutions but conduct scientific research provided that they are high-level scientific centers for a scientific discipline and all scientific educational institutions may grant scientific degrees. Those institutions qualified for granting scientific degrees (including research centers) will be included in a listing to be prepared by the minister in charge of scientific higher-educational, and technical affairs on the basis of recommendations by all ministers concerned, after consultation with the scientific secretary of the Polish Academy of Sciences, and the Committee for Scientific Qualification. The list will also designate the scientific degrees which a given institution may grant. The resolution for granting the qualified lecturer degree must be approved by the Central Committee for Scientific Qualification.

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TUDOMANYSZERVEZESI TAJEKOZTATO, Vol 14 No 2, 1974 pp 361-364

The qualification of extraordinary university professor and ordinary [full] university professor may be granted to individuals who have no scientific degrees or titles but who can demonstrate outstanding achievements in scientific research, applied research, or technical research, or who are qualified to perform scientific research or educational work in a field normally assigned to a professor.

The scientific titles are granted by the State Council upon the recommendation of the chairman of the Council of Ministers. The following submit recommendations for granting a title to the chairman of the Council of Ministers:

The institution of higher education or the minister supervising the institution of research or education concerned, in the case of an individual employed in such an institution, or the faculty council or another organ of the institution of higher education on the recommendation of the scientific council of the organ;

The scientific secretary of the Polish Academy of Sciences, in the case of an individual employed at an academic research institution, on the recommendation of the scientific council of the institution;

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The minister supervising the scientific research institution or the institution involved with scientific research, in the case of an individual employed in the institution, on the recommendation of the scientific council of the institution;

The minister in charge of scientific, higher-educational or technical matters, in agreement with the scientific secretary of the Polish Academy of Sciences, in cases not covered by the foregoing.

A modification of the decree provides that a Central Committee for Scientific Cadre Qualification must be established, which will operate under the chairman of the Council of Ministers. The chairman, deputy chairmen, secretary, and members of the Committee will be nominated by the chairman of the Council of Ministers, in agreement with the ministers responsible for institutions of higher education and scientific research institutions.

The following are the tasks of the Committee:

1. In the field of granting scientific degrees:

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TUDOMANYSZERVEZESI TAJEKOZTATO, Vol 14 No 2, 1974 pp 361-364

--To comment on recommendations made by ministers and the scientific secretary of the Polish Academy of Sciences in connection with the granting of scientific degrees by organs of institutions of higher education, independent scientific research and educational institutions, and the like;

--To decide in appeals against resolutions of faculty councils in cases dealing with doctoral degrees;

--To decide in appeals against resolutions of faculty councils and scientific councils in cases dealing with the granting of qualified lecturer's degrees;

--To conduct periodic reviews of the activities of units authorized to grant scientific degrees.

2. In the field of granting extraordinary and full professor degrees and evaluation of qualifications required for granting the docent degree:

--To formulate opinions on recommendations for granting extraordinary and full professor degrees.

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TUDOMANYSZL. VEZESI TAJEKOZTATO, Vol 14 No 2, 1974 pp 361-364

--To formulate opinions on the appointment of individuals without the degree of qualified lecturer to jobs requiring a docent degree.

3. To issue instructions about the procedures and formalities involved in granting scientific titles.

4. To initiate surveys assessing the development of scientific cadres. The law, promulgated on 17 February 1960, dealing with the Polish Academy of Sciences, has also been modified in several respects. Henceforth, the Presidium of the Academy will decide about the establishment of scientific research establishments. Concurrence of the chairman of the Council of Ministers is now required for the establishment of a scientific institute.

The qualification of extraordinary or full professor may be granted to an individual who has the degree of extraordinary or full professor. The qualification of docent may be granted to an individual who

--Has a qualified lecturer's degree;

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--Has the degree of doctor of sciences and has at his credit scientific achievements in areas covered by the scientific research institution concerned or in related areas;

--Although has no degree of doctor of sciences or tenure in a scientific research or academic institution but who has achieved such accomplishments in a scientific or professional sphere which qualify him for performing the work of a lecturer.

The law, promulgated 17 February 1961, dealing with scientific research institutions, is also modified in several respects. Thus,

--The functions of the institutions now include the formulation of opinions on scientific research projects and application studies in areas laid down in the bylaws of the institutions;

--The functions of the institutions now include the performance of services related to the operations of the institutions, scientific research activities, and development activities, training of specialist cadres, publishing activities, and tasks which are covered by the scope of the institution.

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TUDOMANYSZERVEZESI TAJEKOZTATO, Vol 14 No 2, 1974 pp 361-364

The establishment of a research institution is decreed by the chairman of the Council of Ministers on the recommendation of the minister concerned. To establish an institution, there is the need for approval from the minister in charge of scientific, higher-educational, and technical affairs, the scientific secretary of the Polish Academy of Sciences, and the minister of finance. The chairman of the Council of Ministers, with the approval of the scientific secretary of the Polish Academy of Sciences and the minister of finance, may issue approval to the appropriate minister for the establishment of institutions with the concurrence of the minister in charge of scientific, higher-educational, and technical affairs.

The regulations governing the establishment of an institution determine the name of the institution, the location of its headquarters, the scope and subject area of its activities, and its organizational status. (Based on an item published in DZIENNIK USTAW (Warsaw), 1973, No 12, pp 130-134.)

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7. POLAND

UDC: 616.14(438)

BOGORELOV, Ya. D. (Moscow)

HEALTH CARE OF THE POLISH PEOPLES REPUBLIC

Moscow ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII in Russian No 10, 1974 pp 38-40

[Text] Poland's health care is of a governmental type and in terms of its organization is no different than the health care of other socialist nations.

Poland's health care service is supervised by the Ministry of Health and Social Welfare. According to the new structure, since 1 March 1973 it is comprised of a minister's office, administrative-management bureau and 10 department (medical aid and rehabilitation, social aid, sanitary inspection, medical education and science, personnel and social problems, capital investments, medical techniques and pharmacy, economics, international collaboration, and the like).

In some places health care supervision is done by volvode and povyat departments of health and social welfare of the appropriate peoples' councils.

Medical aid to the urban and rural population was organized according to the sector principle. The treatment and prevention sector encompasses a territory with a population of from 3-5,000 in cities and from 3-6,000 inhabitants in rural areas.

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POGORELOV, Ya. D., ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 10, 1974 pp 38-40

In 1972 there were 680 hospitals in Poland, with a total of 212,604 beds; this constitutes 64 beds per 10,000 persons (38 per 10,000 persons in 1946), including 10.5 beds for therapy, 12.0 for surgery, 5.4 for children, 7.5 for OBGYN, 4.0 for infectious diseases, 4.2 for tuberculosis, 1.3 for VD, 11.8 for psychiatry, 1.2 for neurology, 1.5 for laryngology and 1.2 for ophthalmology. The operational indicators of hospitals have been greatly improved.

The average number of use-days of beds rose from 296 in 1960 to 311 in 1972, while the hospitalization stay decreased from 16.1 days in 1965 to 15.5 in 1972. In 1960 where a doctor averaged 9.8 beds and a nurse averaged 4.7, whereas in 1972 a doctor averaged 7.7 and a nurse 3.9.

In 1972 there were 507 obstetrics homes, 64 tuberculosis sanatoriums, 35 work recovery sanatoriums, 5,819 polyclinics, 2,775 health centers, 1,625 physician, nursing and paramedic points, 2,221 midwife points. There are currently 420 first aid stations in Poland.

Industrial health care has been widely expanded in Poland. In 1972, the number of plant and interplant polyclinics rose to 2,463 (1,619 in 1955). Industrial health institutions employ 2,300 dentists, 7,100 nurses, and 2,600 medical lab workers.

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POGORELOV, Ya. D., ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 10, 1974 pp 38-40

The country has reduced the morbidity rates of diphtheria, whooping cough, tetanus, typhoid fever, polio, and tuberculosis. But measles and infectious hepatitis morbidity remain just as high (see Table 1).

In 1960 to 1971, the sick-day index with respect to the total number of work days rose from 3.43 to 4.83, while the average number of sick-days per 100 employed rose from 1061.8 to 1477.1. Of late sick-day rates in connection with tuberculosis are dropped a great deal, but have risen for industrial trauma and respiratory diseases.

Medical aid to women and children is rendered by specialized sections of hospitals and outpatient clinics, obstetric homes, and female and pediatric consultations.

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POGORZELOV, Ya. D., ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 10, 1974 pp 38-40

Table 1. Morbidity of Several Infectious Diseases in Poland per 10,000 individuals (1950-1971)

Disease	1950	1955	1960	1965	1970	1971
Typhoid fever	29.1	22.7	11.7	3.3	1.3	1.1
Dysentery	6.6	25.8	20.2	22.7	20.4	37.7
Diphtheria	96.6	138.4	21.6	1.3	0.1	0.1
Scarlet fever	355.1	153.5	172.0	132.9	118.7	84.9
Measles	159.4	317.6	286.0	395.6	382.8	561.6
Whooping cough	88.6	236.2	324.6	76.5	30.5	18.3
Polio	1.4	8.9	1.0	0.06	0.06	0.05
Infectious hepatitis	--	72.8	257.7	298.9	215.3	244.5

Polish law guarantees women broad rights. According to a new law (Jul 72), the paid sick leave was increased from 12 to 16 days for the birth of a first-born and to 18 days for the birth of other children. The pregnancy and birth benefits pay 100 percent of wages. Since Jan 72 the number of sick-leave days for dependent children has risen from 30 to 60 per year. A mother using this right receives a grant

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POGORZELOV, Ya. D., ZDRAVOOKHRANENIYE ROSSIYSKOY FEDERATSII, No 10, 1974 pp 38-40

of 100 percent of wages. In Poland, as in other European social countries, there are one-time grants in the birth of a child and family bonuses for workers' wages.

Due to the intensive development of higher and middle medical education in Poland, the problem of medical personnel is being successfully solved. The number of such personnel grew considerably in the years 1946-1971 (see Table 2).

The training of physicians and druggists in Poland is done at 10 medical academies (institutes): in Warsaw, Bialystok, Gdansk, Cracow, Lublin, Lodz, Poznan, Szczecin, Wroclaw and Zabz. In the 1972-73 academic year there were some 23,600 students in study and in 1972 the number of graduates was 3,702.

Training of secondary medical personnel is done in 16 specializations at 276 schools where, in the 1972-73 academic year there were some 53,700 pupils. The output of middle medical schools in 1972 was 10,500 persons.

The specialization of physicians, dentists and druggists is selected on a voluntary basis. It is selected after a certain specialization experience has been acquired. There are specialist I and II grades for physicians, dentists and druggists who have passed theory and practice examination. Furthermore, persons who have a II degree specialization can begin to master a narrower specialty in some fields of medicine.

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FPD:SOVIET SCIENCE

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POGORELOV, Ya. D., ZDRAVOOKHRANENIYA ROSSIYSKOY FEDERATSII, No 10, 1974 pp 38-40

Table 2. Number of Medical Personnel in Poland per 10,000 population
(1946-1972)

Specialization	1946	1950	1960	1970	1972
Physicians	7,732 (3.2)	9,200 (3.7)	28,708 (9.6)	49,278 (15.0)	53,000 (16.0)
Dentists	1,581 (0.7)	2,370 (0.9)	9,316 (3.1)	13,591 (4.1)	14,600 (4.4)
Druggists	2,414 (1.0)	3,817 (1.5)	7,924 (2.7)	12,269 (3.7)	13,400 (4.0)
Paramedics	644 (0.3)	633 (0.3)	6,650 (2.0)	4,846 (1.5)	4,700 (1.4)
Nurses	6,064 (2.5)	18,361 (7.3)	61,907 (20.7)	102,842 (31.2)	112,700 (34.0)
Midwives	6,311 (2.6)	6,920 (2.8)	9,199 (3.1)	12,094 (3.7)	12,900 (3.9)

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POGORELOV, Ya. D., ZDRAVOOKHRANENIYA ROSSIYSKOY FEDERATSII, No 10, 1974 pp 38-40

A specialization of the 1st degree encompasses 30 disciplines, a 2nd degree--55 disciplines, and the narrow specialization--some 25 disciplines.

The Polish pharmaceutical industry produces most of the drugs required and purchases some abroad on the basis of international agreements. Drugs are still paid for a 30 percent of cost. Pensioners and persons with chronic ailments receive free drugs. There are 2,716 drugstores in the country (12,200 thousand persons per drugstore) and 3,084 drug offices, whose staff was 24,445 persons in 1972.

In 1973 health care funding was 40.9 billion zlotys, i.e., 8.8 percent of the state budget.

Health care questions occupy a significant place in the overall program of the country's social and economic development. Cardinal problems have been reviewed often at meetings of the Polish Politbureau and the Polish government. In fulfillment of the decisions adopted at the 6th Congress of the Polish Communist Party (1971), the Polish government approved a complex program for the Development of health care and social welfare in Feb 73 which extends to 1990.

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POGORZLOV, Ya. D., ZDRAVOOKHRANENIYA ROSSIYSKOY FEDERATSII, No 10, 1974 pp 38-40

Due to the expansion of the network of medical institutions, by 1990 in Poland each 10,000 Poles will have 71 beds in general and clinical hospitals; 20.0 in psychiatric ones; 25 beds in homes for the aged; and 40 beds in children's nurseries.

Future growth in health care is closely connected with the expansion of training of medical personnel. By the end of 1990 the number of physicians is anticipated to be 74,000 (20 to each 10,000 of the population); dentists to 21,000 (5.6); nurses and midwives to 220,000 (59.0).

Much attention is given in this program to questions of environmental protection, the creation of the appropriate conditions for resort cures and rest for workers, the increase in the sanitary condition of the country, the improvement of working conditions for clerks and industrial workers, and so forth.

The new rise in the whole system of the country's health care will be promoted by the Polish National Health Care Foundation. Some 25 percent of its funds are earmarked for the construction of institutional construction to treat social diseases, cancer and cardiovascular ailments. The remaining 75 percent of this fund will go to the building of hospitals, specialized institutions, first aid stations and other health care institutions.

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ROMANIA

VADUVA-POENARU, I. and DONTU, GRIGORE-OCTAVIAN

EXPERTS FOR MAJOR TECHNOLOGICAL AREAS

Bucharest STIINTA SI TEHNICA in Romanian No 12, Dec 74 pp 6-8

[Abstract] The article focuses on the need for training personnel for the fine mechanics and optical industry. By 1980 this sector will have obtained an increase of 2.5-3 times over the level for the 1971-1975 period and the annual rate will be 23.5 percent in comparison with the 15 percent anticipated for the machine building branch. The authors point out the statement made by Prof Traian Demian, head of the Chair of Fine Mechanics at the Bucharest Polytechnical Institute, who indicated that training developed in two sections: engineers, covering the whole area (including processing equipment and measurement apparatus) and assistant-engineers, specializing in measurement apparatus and metrology. Some of the results of research are being applied at the Bucharest Precision Instruments Enterprise, Romanian Optical Industry, Sibiu Balanta Enterprise, Bucharest Computer Enterprise, and other units. The significance of this sector is also proved by the comparison between the output involved and the outputs of other important sectors of the machine building industry where one kilogram of processed metal is valued between 9 and 90 lei while in the fine mechanics sector the level is 600 lei/kg of processed metal up to 5,000 lei/kg.

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PPD:SOVIET SCIENCE

9. ROMANIA

UDC 616.6 (092) Burgele

TEODOR BURGELE

Moscow UROLOGIYA I NEFROLOGIYA in Russian No 1, 1975 pp 90-91

[Article by A. Ya. Pytel']

[Text] Member of the Academy Teodor Burgele, eminent Romanian surgeon and urologist, head of the surgical and urological clinics of the Medical and Pharmaceutical Institute in Bucharest, commemorated his 70th birthday on 12 February 1975.

He was born in Yassakh in 1905. In 1927, he completed his studies at the Medical Faculty of the University in Yassakh. In 1930 and 1931, he undertook specialization in urology at clinics in Vienna. In 1931 he began to work at the Urological Clinic of Bucharest University, which, at that time, was directed by the famed surgeon N. Khortolomey. From 1952 to the present he has directed the surgical and urological clinics at Bucharest Medical and Pharmaceutical Institute. From 1955 to 1971 he was rector of this Institute and from 1972 he has been Minister of Health of the Socialist Republic of Rumania.

In 1959 T. Burgele was elected an active member of the Academy of Medical Sciences SRR and in 1967, a member of the Academy of Sciences SRR. He is the father

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of a large school of surgeons and urologists. Many of his former students and associates are presently directing chairs in institutes and major surgical hospitals of Rumania.

T. Burgele is chairman of the Society of Rumanian Surgeons, active member of the International Society of Surgeons, International Society of Urologists, International Nephrological Society and the European Society of Dialysis and Kidney Transplant. He is an honorary member and also corresponding member of many foreign scientific medical societies, including the Paris Surgical Academy, the Paris National Medical Academy, the Society of Surgeons of Italy and others. He is a member of the editorial committees and editorial boards of the Soviet journals "Urology and Nephrology" (Moscow), "Experimental Surgery and Anesthesiology" (Moscow), "Urologia Internationalis" (Basel), "Urologiya" (Trevizo), "Agressologie" (Paris), "Zeitschr. Experiment Chirurgie" (Berlin, German Democratic Republic), "International Urology and Nephrology" (Budapest), "Chirurgia" (Bucharest), "Archives de l'Union Med. Balkanique" (Bucharest).

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T. Burgele is the author of 180 original works, including 10 monographs, devoted to clinical and experimental surgery, urology and nephrology. He has repeatedly published his works in our Journal: "Early Diagnosis of Tuberculosis of the Urogenital System" (1959, No. 3), "Early Post-Operative Septicemias in Urology" (1962, No. 1), "Errors in Diagnosis and Therapy of Acute Renal Insufficiency" (1969, No. 4), "Pathogenesis of Nephrogenous Arterial Hypertension" (1973, No. 2) and others. Among his major works, it is necessary to note especially the following monographs, which show his great influence upon the development and improvement of urology and experimental surgery: "Emergency Assistance in Urology" (Bucharest, 1955, in the Rumanian language), "The Kidneys During Shock" (Bucharest, 1962, in the Rumanian language, translated into French in Paris, 1967, see the review in our Journal 1962, No. 6), "Injuries of the Urinary Bladder During Traumatism" (Bucharest, 1965, in the Rumanian language), "Risk During Surgical Interventions on the Urinary Bladder and Ureters During Operations in the Abdominal Cavity and Lesser Pelvis" (in collaboration with P. Simich, 1967, Bucharest, in the Rumanian language, translated into the Russian language, Bucharest, 1972, see review in our Journal 1973, No 6), "Errors and Dangers in Urology" (Bucharest, 1st Edition, 1969, 2d Edition, 1971, both editions in the French language, see review in our Journal, 1970, No. 6), "Tuberculosis of the Urogenital Organs" (in collaboration with K. Blazha and I. Temeliyesku, Bucharest, 1969, in the Rumanian language).

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Through his research, T. Burgele has made a great contribution to the study of surgical shock and problems of control of it, the elucidation of functional adaptation in urology; he created an experimental model of tuberculosis of the urinary bladder. He has made special contributions in the development of methods of therapy of disturbances of urination after injuries of the spinal cord. He created an original method of electro-stimulation of the neurogenic urinary bladder by means of surgical connection of electrodes of the stimulator to the erector nerves (his monograph, written in collaboration with V. Ikim, was published in Bucharest in 1963 in the Rumanian language and in 1970 in the English language in "Handbuch der Urologie," Vol 13/2. Berlin, see review in our Journal, 1964, No. 1).

T. Burgele has been in our country many times. When visiting Moscow, he always visits the city's urological clinics and, participating in conferences of clinics, he injects much that is new and important in the study of vital problems of contemporary urology. He was a participant in the 4th All-Union Conference of Urologists (Moscow, 1961), at which he presented interesting speeches concerning the etiology and pathogenesis of pyelonephritis, and concerning ileocysto-plastic surgery.

The editorial board of the Journal "Urology and Nephrology" congratulates Teodor Burgele on his glorious jubilee date, wish him health, long life and new successes in scientific and public work.

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