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USSR Report

KOMMUNIST

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USSR REPORT

KOMMUNIST

No 9, June 1986

[Translation of KOMMUNIST, the Russian-language theoretical and political journal of the CPSU Central Committee published in Moscow (18 issues per year).]

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Author(s) :

Editor(s) : I.T. Frolov (editor-in-chief),
E.A. Arab-Ogly, B.S. Arkhipov,
Yu.N. Afanasyev, N.B. Bikkenin,
K.N. Brutents, Ye.I. Bugayev,
R.K. Vid, V.I. Kadulin,
Yu.L. Molchanov, L.K. Naumenko,
Ye.Z. Razumov, N.N. Sibiryakov,
P.N. Fedoseyev

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EDITORIAL -- GREATEST ACHIEVEMENT OF CONTEMPORARY MARXIST-LENINIST THOUGHT.
ARTICLE 4

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[Text] Lenin's words to the effect that "Our state is strong with the consciousness of the masses. It is strong when the masses know everything, can judge of everything and undertake everything consciously," are well-known ("Poln. Sobr. Soch." [Complete Collected Works], vol 35, p 21]. The dialectics of our social development is such that as it advances toward communism the power of the consciousness of the working people steadily grows and becomes an increasingly important factor of social progress.

The entire policy of CPSU is imbued with a deep understanding of this historical dialectics. As was emphasized at the 27th Party Congress, "All of our plans will be useless if they leave the people indifferent, if we are unable to awaken the labor and social activeness of the masses, their energy and their initiative. To turn society to the new tasks and channel the creative potential of the people and of each labor collective to their implementation is the prime condition for the acceleration of the country's socioeconomic development." Reaching a new qualitative status of society presumes the further strengthening of socialist ideology in the awareness of the Soviet people, the total assertion of the moral principles of socialism, the development of general communist principles and a spirit of collectivism and comradely mutual aid, exposing the broad population strata to the achievements of science and the values of culture, ensuring their increased participation in their creation, and molding a comprehensively developed, active, and complete individual. A number of new problems and tasks of theoretical and practical-political nature arise in the area of ideological upbringing, science, education, cultural building, literature and the arts. The 27th CPSU Congress provided a creative answer to them. What does it consist of?

Close Ties Between Ideology and Life and Between Words and Actions

The main basic fact is that the congress organically linked the problems and tasks of ideological education with the concept and strategy of acceleration as a concentrated expression of the objective needs and trends in the development of socialist society. That is why the congress raised so sharply the question of strengthening the ties and unity between ideology and life.

"Ideological activities," the CPSU program stipulates, "must be marked by their close connection with social practice, depth of ideological and theoretical content, complete and accurate consideration of the realities of domestic and international life and the increased spiritual demands of the working people, closeness to the people, truthfulness, substantiation and concreteness."

This means that, essentially, the assertion of the new style of ideological activities, in which it is precisely life itself and specific practical experience that become its main source and motive force, which determine its content and form. That is why the inseparable unity between word and action is the most important feature of this new style. It is the merit of the 27th Congress that it asserted this style as a necessary prerequisite for the implementation of the strategy of acceleration.

We are faced with the tremendous task of qualitatively restructuring socialist society within a short time, thereby increasing the attractiveness of the humanistic ideals of socialism through their greater practical implementation. This cannot be achieved if a realistic view of things is not asserted in all things, if errors and shortcomings are concealed, or if real contradictions in its development are glossed over. At this turning point no easing up in our assessments can be tolerated. This was strictly discussed at the congress and a serious accounting set for ideological workers. The congress emphasized that the slowdown in socioeconomic development was the consequence of major errors not only in economic management but also in ideological work. Purposeful educational work was frequently replaced by far-fetched and hasty campaigns alienated from life and its vital problems and practical tasks, turning propaganda work into abstract education and pointless verbosity. The gravity of life's contradictions was frequently ignored. No realism was displayed in assessing the actual situation in the economy and in the social and other areas. A certain shortcut to technocratic approaches caused significant social harm. The gap between words and deeds adversely affected the moral atmosphere in society. Vestiges of the past and other negative trends were enhanced in the awareness and way of life of a substantial segment of the population.

The 27th CPSU Congress openly indicated to the party and the people the difficulties of our development and charted a firm course toward radically improving and restructuring all ideological and ideological-education work.

Man is the main resource of our society. Strengthening the ties between Marxist-Leninist ideology and life means strengthening its humanistic meaning and purpose. This precisely is the main result of the congress' resolutions in the field of ideology, as it was in the economic and social areas.

Work with people is the core of party ideological activities. Today the country urgently needs people who not simply agree with the need for a change but also accept it as their personal commitment, without waiting for change to occur somehow by itself, without their participation, but instead show initiative and are ready to assume responsibility, briefly people who can adopt a new style in their work and way of thinking.

We suffered and continue to suffer major losses from a recently developed tendency to promote "convenient" people, who please everyone and are mindlessly obedient, a tendency which has nothing in common with developing conscious discipline. As the result of a conscious or subconscious "averaged" approach to education, which erected a number of hindrances to the development of the creative initiative and talent of cadres, a certain type of people developed, who clung to the old, who pretended to accept yet opposed change and who, in the end, were simply no longer able to change.

The main purpose of the reorganization of ideological education and economic management and the management of science, education, culture, literature and art is to look for people, tirelessly to identify creative talents and giftedness, support them truly, and create favorable conditions for their development.

In ideological work to proceed from life means closely to study reality, to bring to light the problems and contradictions which appear within it and to find the means to solve them. To this purpose, history has given us an irreplaceable ideological-theoretical instrument: Marxism-Leninism. We must see to it that turning to Marxist-Leninist theory in solving the vital problems raised by life become a need, a custom for our cadres and for every Soviet person. The congress called for persistently developing in cadres a taste for theory and the ability to master Leninist methodology in the study of social processes.

However, even the best ideas do not by themselves automatically develop a complete and active outlook unless they are accompanied by the sociopolitical experience of the masses. "The new society draws energy from and ensures the effectiveness of socialist ideology in the interconnection between progressive ideas and the practice of building the new society," the congress emphasized.

The development of the social consciousness is a complex, comprehensive and dialectically conflicting process. Although it reflects life, it also influences it significantly and, in the course of building socialism and communism, becomes a necessary prerequisite for its progressive change. All that occurs in society is filtered first through the minds of the people. The objective laws of the advancement of socialist society can be developed to their fullest extent only when they are scientifically known and become a manual for action for the broad toiling masses.

Strengthening the link between ideology and life and ensuring the true unity between progressive ideas and practices in building the new society is possible only if we are guided by this real dialectics of social life and social consciousness, on the one hand, and the material and spiritual areas of life, on the other. In order to change consciousness we must change life. Furthermore, we must involve the individual in the active process of its advancement, in the process of creative change.

The purpose of ideological education is to promote the unification and organization of the working people and to harness them in solving the vital problems of socioeconomic development. Today life urgently raises the problems of social justice, order, discipline, struggle against bureaucratism,

production standards, socialist community life and human relations. As the congress emphasized, it is necessary to undertake incomparably more firmly and energetically practical accomplishments directly related to and shaping the consciousness and feelings of the people. We must do everything possible to improve the availability of housing, food, high-quality goods, skilled medical aid, cultural recreation, etc. This will not "reduce" the role of ideology in the least. Conversely, it will enhance it. High-level ideology is measured not by the extent to which it planes over reality but by its closeness to life, to the very foundations of human existence and to its practical efficiency.

Communist upbringing is inseparable from the struggle against manifestations of ideology and morality alien to socialism. Violations of labor discipline, theft, bribery, black marketeering, parasitism, drunkenness, hooliganism, private-ownership mentality and toadiness are all nutritive grounds for views and moods alien to our social system. The party ascribes prime importance to the systematic and persistent elimination of such phenomena.

Everyone must firmly realize that no concessions will be made in this area. A new confirmation to this effect is the decisions taken by the party and the government to step up the struggle against unearned income. At the same time, the party will not allow distribution relations and the problems which arise in that connection to turn into grounds for social demagoguery and equalitarian trends. We must show the greatest possible concern for upgrading and strengthening the prestige of honest and highly efficient work, suitably rewarded materially as well as spiritually. Labor is the main source for the material and spiritual wealth of society. It is the main criterion of the person's social reputation, his sacred obligation and the foundation for the communist upbringing of the individual. It is only on this basis that the collectivistic, humanistic, active and efficient morality of the builder of communism can be firmly asserted.

In ideological education each word, appeal and slogan must be based on real practical, political, economic and social tasks. Hence the party's call for less words and more actions in ideology. "A word," Lenin wrote, "also means action" (op. cit., vol 11, p 59). However, it will become part of our life positively, rather than negatively, only when the truth contained within it is not a mere admonition.

Truth is always specific. It finds its way to the mind and heart of the person if it is consistent with his real life problems. In ideology, as in all other areas of activity, the party directs us toward being maximally specific and precisely taking into consideration the interest of classes, social groups and individuals. We must eliminate the "gross" approach to ideological education, which, unfortunately, has become customary, in which huge "volumes" of figures occasionally replace specific individuals with great variety of abilities, needs, value orientations and collective and personal interests. Socialism does not depersonalize people. The socialist society is interested in variety, in the free development of the creative forces and talents of the man imbued with high humanistic ideals. That is why depersonalization, which, essentially, puts on the same plateau dedicated working people, who deserve great social recognition, and philistines, who are

the bearers of antisocialist morality, is particularly intolerable in a live area such as education.

The main feature of CPSU ideological activities, which determines its specific nature, is its class-oriented, its party approach to all phenomena in spiritual life. Our social values and moral ideals are not dropped down from the sky. They are dictated by the objective needs of social progress and formulated by the working class in the struggle for its economic and political liberation. That is why their further strengthening, based on the objective conditions of the working class, the toiling, collectivistic and revolutionary class, is a prerequisite for the even greater strengthening of communist ideology in the consciousness of all Soviet people.

At the same time, there are various ways leading to the high social standard set by the progressive detachments and the best members of the contemporary working class. The party's course of maximally specific ideological work implements and develops Lenin's idea that people in specific types of work and professions will not accept communism in precisely the same way as others, but in their own way, through their own science, skill and profession.

In this connection, the congress emphasized the major significance of individual work with people, as a most important form of ideological-theoretical and political upbringing. To this day, lecturers and propagandists frequently address themselves to space, seemingly to all but essentially to no one. Propaganda must have a strict target. "Society," the Central Committee political report to the congress reads, "means specific individuals with their specific interests, joys, dramas and concepts of life with its real and imaginary values." Life is complex, and in frequent cases underdeveloped and naive concepts may conceal a real positive content; conversely, some high-sounding sentences may mean nothing other than the desire to shout louder than others or to adapt oneself to the "spirit of the time." The ability to single out everything that is objectively positive in the "lifeline" of the individual and to give it a conscious shape is what is most necessary in individual education work. Here as well there can be no ready prescriptions for all cases. In this case the educator needs profound knowledge of social and individual psychology, intelligence, tact, empathy and the ability to engage in a dialogue.

The importance of the individual approach to education is also dictated by the fact that bourgeois ideology, unable to find objective grounds in the interests of classes and social groups in socialist society, chooses the individual, his mentality and ordinary consciousness as its main target of influence. Under contemporary conditions, bourgeois and anticommunist propaganda have become drastically intensified. Global anticommunism has broadened the area of "psychological warfare" even further, shying at no means in its efforts to lead isolated individuals astray from the course earmarked by the congress.

We have no right to assume a defensive position in the ideological struggle. The congress emphasized the need for waging an aggressive struggle against bourgeois ideology and morality, anti-Soviet provocations and imperialist ideological subversion. The CPSU deems it its task to tell the people the

truth about real socialism and the domestic and foreign policy of the Soviet Union, actively to disseminate the Soviet way of life and aggressively and verifiably to expose its antipeople, inhuman and exploitative nature. The party will develop in the Soviet people a feeling of high political consciousness and vigilance and the ability to assess social phenomena and to defend the ideals and spiritual values of socialism on the basis of clear class-oriented positions.

Progressive and scientific ideology performs a unique role in society. It points the real way to the implementation of the social ideals, emancipates the individual from a philistine attitude toward reality and all types of prejudices and petty interests; it allows man to link his personal life with the interests of the entire nation and to coordinate his objective with the ideals of social progress.

The slogan of ideological work is to study, propagandize and organize. This slogan must govern all activities of mass information media--the press, radio and television. At the present stage, their role in the life of socialist society increases substantially. The mass information media are also a mirror of our life, reflecting accomplishments, contradictions and shortcomings. They are also an efficient weapon in the struggle against conservatism, indifference, and stagnation. The combination of these two qualities--reflection and reality--makes the press, radio and television universal means of party ideological work and a most important institution of socialist democracy as well as an efficient instrument in the communist upbringing of the working people.

Today the efficiency of all mass information media and their concentration on solving the specific problems of accelerating the country's socioeconomic development become increasingly important. An analytical and civic-oriented approach, the ability to raise questions sharply, to criticize in specific terms, to seek ways of solving the problems affecting the people, to avoid embellishing accomplishments and simplifying difficulties is necessary for this area of ideological work to be successful.

The high pace of change and transformation, typical of our present daily life, calls for the need to upgrade the pace at which we interpret events and harness the people's initiative for the implementation of the most relevant tasks. All of this, as the 27th Congress emphasized, requires a significant restructuring of the work of mass information media, giving priority to features such as efficiency, depth, substantiation of publications, and their quality; these are characteristic indicators of acceleration in the activities of the media themselves.

The comprehensive approach, applied in a state of close unity and interconnection among all its forms and directions, is a prerequisite for success in ideological education. The molding of a scientific outlook, a conscious attitude toward labor and public property, the assertion of communist morality, and patriotic, internationalist, legal and atheistic education are the main components of the spiritual foundations of a harmoniously developed and socially active individual. The 27th CPSU Congress

specifically defined the place of science, public education, literature and the arts in solving this problem.

Multiplying and Efficiently Utilizing the Intellectual Potential of Soviet Society

The power of the resolutions of the 27th CPSU Congress rests on their scientific nature which, precisely, determines their practical political efficiency. The congress raised to a new level the significance of theory and science in building communism, thus continuing the outstanding Leninist traditions.

Science is an important factor of social progress. Its role increases in developing production forces, advancing social relations, creating essentially new types of equipment and technology, upgrading labor productivity, developing the subsoil and the world's oceans and outer space, and preserving and improving the environment. The party directly relates to the development of science its strategy of socioeconomic acceleration, for the new quality of our national economic growth is nothing other than the all-round intensification of public production on the basis of scientific and technical progress, the structural reorganization of the economy on the basis of scientifically weighed criteria, and the drastic enhancement in the efficiency of the management system through the utilization of the latest achievements in the social, natural and technical sciences, the implementation of creative inventions, the reconstruction of technological processes and technologies, the scientific organization of labor and the active updating of ways and means of work in all areas of constructive activities.

All of this sets new tasks to all areas of science. It also requires a corresponding reorganization of theoretical approaches, a renovation of the ways and means of solving specific problems and the perfecting of the conceptual and methodological scientific arsenal.

The profound and comprehensive study of reality and the conflicts arising in the course of its development, the integral approach to solving the most crucial problems of our time, the strict application of general concepts to the solution of specific problems, the strict consideration of all objective and subjective factors of the sociohistorical process, and the organic combination of a most sober realism with the aspiration toward high communist ideals are features of the style of theoretical activities promoted by the party, and the conceptual foundations for the new work style.

The combined application of all structural components of Marxist-Leninist theory is the conceptual and methodological foundation of such a work style. It provides a key to the integral, the comprehensive understanding of the variety of processes occurring in the development of society and nature. As the CPSU program notes, "Dialectical materialism remains the essential, the tried basis of scientific and social knowledge. It must be developed creatively further, and successfully applied in research and social practice." Only thus do major summations and a profound and comprehensive study of closely interrelated political, economic, scientific and technical, social, cultural-spiritual and psychological aspects of acceleration become possible.

The congress sharply raised the question of eliminating a certain alienation of social sciences from the problems of life, which had developed lately, and of extensively directing them toward the specific requirements of practical work and the assertion of the new style of theoretical activities, proceeding from life and in related to life, rather than based on abstract speculations and scholastic theorizing.

The task of accelerating the country's socioeconomic development and enhancing all aspects of building socialism, related to production intensification and a radical turn in the acceleration of scientific and technical progress, demands decisive changes in the social study of the laws governing our society, the dynamics of its socioclass and intraethnic relations, the interconnection between mental and physical labor, the development of democracy and self-management and the improvement of the mechanisms of planning and management and the processes of shaping the new person. Close attention must be paid to the study of international problems and, above all, to laws governing the development of the socialist community, the processes of intensification of the general crisis in capitalism and the global problems of our time--the problems of peace, disarmament, elimination of the backwardness of liberated countries, ecology, resources, food, demography and others--in their systematic interconnection and interaction, and the criticism of anticommunism and anti-Marxism and of bourgeois and revisionist concepts.

Scholasticism, which is engaged in an endless "refinement of concepts," dogmatism and mindless repetition of abstract truths instead of undertaking the specific and creative application of scientific knowledge; alienation from reality, and unsubstantiated projections are all major shortcomings in the social sciences, reflecting the gap between words and deeds, something which has lately turned into one of the main hindrances of our progress. Equally dangerous is creeping empiricism, which avoids the broad formulation of questions and which "sums them up" after they have been solved through practical experience and lost all urgency. Such "theories," presented to industry, planning and management as "practical recommendations" for already achieved and outstripped results discredit science and undermine the faith of planning and economic bodies, other departments and practical workers in it. The elimination of such shortcomings will require further intensification of research in the area of dialectical materialism and the perfecting of its category and logical apparatus on the basis of the study and summation of conceptual and methodological problems which arise in the course of the development of scientific knowledge and social practice. We must remember that the principles of dialectical materialistic methodology are not some kind of speculative predetermined truth. They are based on the scientific study of reality and become valid only when scientifically applied.

Theoretical thinking presumes the handling of general methodological principles, concepts and categories. If it is not firmly organized on the basis of scientific methodology, it tends to borrow concepts from the ordinary consciousness or from a system of philosophical ideas alien to real science. In such cases one easily becomes trapped by imperfect general theoretical concepts. How not to recall in this connection Engels' words: "...Those who abuse philosophy the most are precisely the slaves of the worst vulgarized vestiges of the worst philosophical doctrines" (K. Marx and F. Engels, "Soch."

[Works], vol 20, p 525). This is especially relevant today when, as the CPSU program notes, "the course of global developments raises many global problems" and when "scientific thought must provide accurate answers to them." The extrapolation, for example, of ecological-mathematical models to the present complex political picture of the world and the substitution of time-tested scientific-sociological conclusions with fashionable abstract-technological views can only create unproductive discussions which draw the attention away from vital practical problems and encourage utopian searches in areas in which Marxism set efficient guidelines a long time ago.

In science itself, confused methodological views can lead to the temptation of restoring long-forgotten idealistic and metaphysical confusions already substantively criticized in public debates, or make a fetish of individual scientific models and urge the aspiration to present them as universally applicable. This does not advance scientific knowledge.

Science is an integral entity. The properly organized interaction among its individual areas and trends is a mandatory prerequisite for radically upgrading the efficiency of research and its social role. The party's policy in science is based on the integral dialectical-materialist concept of its development at this new crucial stage in history. One of the most important conditions for this development is the close cooperation among the social, natural and technical sciences.

The further strengthening of the unity between the social sciences and practice also presumes the intensification of the philosophical-sociological and moral-humanistic interpretation of areas and problems of human activity which have long been considered as being either purely natural scientific or technical. This applies to major changes in the natural environment, which could bring about irreversible ecological consequences, to research in medicine and human biology (gene engineering, for instance), and the development of new production and technological processes which directly affect the nature of human work and the development of man's personality. All such problems are being identified today as being truly social, demanding for their solution a broad humanistic approach exclusive of any restrictions imposed by science or technocracy.

The antagonism between humanistic and scientific ideals, typical of contemporary bourgeois science, is alien to science in a socialist society. Natural science and the technical branches of knowledge, on the one hand, and the social sciences and the humanities, on the other, are reciprocally complementary and enriching. Today no real humanism is possible without the utilization of the latest achievements of the natural sciences and technology. However, in themselves, such achievements can be not only socially sterile but can even be harmless without their human dimension, without the sociohumanistic interpretation of the trends of scientific and technical progress.

The social and moral responsibility of scientists for the immediate practical results of their discoveries and inventions and their more remote consequences increases in geometric progression as the power of modern science grows. In science, as in all areas of social life, social criteria must have priority.

Whenever social science categories are ignored (man, society, in the final account), and when the scientific and technical approaches impose their will on the social environment, when scientists and engineers undertake to make practical use of new natural phenomena which they have not entirely clarified, ignoring their social and ecological consequences, or treating them lightly (or even slighting them deliberately), extreme situations, fraught with tragic conflicts and tremendous material and moral damages, become inevitable. Through the entire logic of their implementation and existence in the contemporary world, major scientific and technical accomplishments raise social consciousness to newer and higher categories, the extent of which can be judged by many of the events surrounding us. Thus, one should see in the nuclear power industry, the territorial distribution of water resources and the implementation of nature-transforming plans not only most complex technical and economic tasks but also social phenomena which are quantitatively and qualitatively correlated to the scale of the entire society. This also applies to the future use of gene engineering and biotechnology.

All of this proves that a humanistic culture and the moral orientation of the scientist are not a "ballast," the purpose of which is to "correct" the results of a scientific study, but a necessary internal regulator of scientific knowledge which, if ignored, leads to losses and errors as substantial as violations of scientific logic and the methodology of knowledge.

The only possible criterion of moral-humanistic regulators of Marxist-Leninist science is the class- and party-oriented approach to all phenomena in social reality. Party-mindedness, in its Marxist-Leninist understanding, presumes a scientific and objective approach to knowledge and, therefore, the need to seek and ability to find and openly to proclaim the truth, however bitter and mercilessly critical it may be; it means to combine research continuity and the purity and inviolability of basic theoretical principles with their constant creative enrichment and orientation toward the formulation and solution of new problems. Party mindedness means the conscious expression of the interests of the working class with the needs and tasks of its revolutionary struggle for the victory of socialism and communism. To the extent to which such interests coincide with the objective laws of social development and of the progress of all mankind the party-mindedness of Marxist-Leninist theory coincides with the scientific approach, the aspiration toward truth and real humanism.

This is the inviolably objective foundation on which the integration among the social, natural and technical sciences develops and intensifies, dictated both by social needs and by the development of knowledge itself. Such integration must become a conscious and creative alliance among social and natural scientists and technicians.

The 27th Congress formulated an overall program for providing the economic, social and organizational prerequisites for scientific and technical activities, emphasizing the role of scientists, engineers and designers as generators of new progressive ideas and developments which determine the technical standards of the production process. The congress emphasized that

the CPSU comprehensively supports bold scientific research, competition of ideas and trends and fruitful debates.

The party encourages an atmosphere of creativity in all areas of life. Such an atmosphere is particularly necessary in science. As we know, mental work demands a tremendous stress of human effort. A scientific environment needs a healthy moral environment. Scientific work becomes most efficient wherever creative searches and developments are accompanied by collectivism, purity and sincerity of relations, democracy and a critical perception of accomplishments and strict self-evaluation.

In accordance with the tasks which face the scientists regarding the reconstruction of the national economy, the 5-year plan calls for strengthening the experimental and production base of science. No less than one-half of all capital investments will be channeled into the construction of scientific projects. Substantial improvements will be made in equipping scientific organizations and higher educational establishments with modern instruments, systems, means of automation and computers, materials and preparations needed for scientific research. The party is systematically pursuing a line of comprehensively strengthening the material and technical base of science and creating conditions for the fruitful activities of all scientific workers. The congress also emphasized that the country has the right to expect of the scientists discoveries and inventions which will ensure truly revolutionary changes in the development of equipment and technology. It emphasized the prime significance in the development of basic research which enhances the quality standards of public production. It has been deemed expedient to intensify the technical trend in the work of academic institutes.

Strengthening the ties between science and production and establishing the type of integration among science, technology and production which ensures the efficient and fast development of scientific ideas concept to extensive practical use is a radical task in scientific and technical progress today. The 27th CPSU Congress demanded of all scientific organizations to upgrade research and development standards and the extent of their practical utilization. Intersectorial scientific and technical complexes have been and are being created, including powerful head institutes including academic ones, design-engineering organizations and experimental-industrial production facilities. Steps are also being taken to enhance the work of scientific research institutes and design bureaus. More efficient use must be made of the potential of VUZ science.

The party congress paid particular attention to problems of perfecting the economic mechanism in science. The CPSU Central Committee political report called for closely linking the material incentive of scientific collectives and individual workers with their actual contribution to the solution of scientific and technical problems.

In formulating its strategy for the development of science, the party proceeds from the fact that science exists not for its own sake but for that of man. Here as well, in properly assessing the contribution of science to laying material foundations for upgrading the well-being of the people, we must also bear in mind its cultural and educational potential. The entire system of

public education, the general education and vocational schools and higher and secondary specialized training must play a most important role in the utilization of this potential.

A school reform is under way in the country. It is based on the creative development of the Leninist principles of a unified labor polytechnical school and is aimed at enhancing even further the educational standards and upbringing of young people, improving their training for independent labor and ensuring a gradual transition to universal vocational education. This task is not exhausted by instilling knowledge. The school must teach the young generation how to think and act creatively, as demanded by society, and to mold active citizens of the socialist fatherland, raised in the spirit of the ideals of communism.

Dissatisfaction with the pace and degree of implementation of the steps contemplated in the reform was expressed at the party congress. The reform must include a more thorough study of the scientific principles of modern production and of the leading trends in its intensification. It is particularly urgent to encourage student computer training.

Another urgent task in the development of society at the present stage is the restructuring of higher and secondary specialized training. The published CPSU Central Committee project on the basic trends of this reorganization develops a detailed strategy in this area, as defined by the 27th Congress. The task of radically improving the professional and general conceptual training of specialists demands, as is the case with all other areas of our life, the decisive elimination of extensive development and the negative consequences that this entails. The plan notes that the current organization of higher education does not contribute to the development of independent creative thinking and the mastery of new generation technology by the specialists. The gap between the level of specialists' training and the requirements of social practice has broadened. A decisive turn is necessary from mass general training to an increased individual approach and the development of the creative capabilities of future specialists, based on their independent work and on active means and methods of training. The mandatory participation of students in scientific research and real design and engineering-technological developments must become one of the basic means of developing analytical and creative thinking.

The new quality of specialist training must be attained on the basis of the closest possible integration between higher and secondary specialized education and production and science, and its faster development in terms of the technical reconstruction of the national economy. At the same time, the CPSU Central Committee plan sets the exceptionally crucial task of intensifying the social and conceptual trend of education and enriching its ideological-theoretical and humanitarian content, as the base for molding high civic and moral qualities in the individual. Today's specialist must be noted for his initiative, responsibility, the need steadily to update and enrich his knowledge and the ability daringly to accept innovative decisions and actively to promote them. The main content of the party's policy in science and public education is to mobilize the entire intellectual potential of the country in solving the problems of accelerated socioeconomic development.

Role of Culture in the Acceleration

The 27th Party Congress noted that in the contemporary complex and contradictory world the spiritual progress of society assumes particular importance. Today it is among the most crucial human problems and is assuming ever more clearly a political meaning. Like a sensitive instrument, culture indicates the attitude of the social system toward man and of man toward the system and brings to light the needs of the system for a specific type of individual. Cultural progress was and remains the mandatory attribute of socialism. The socialist, internationalist and multinational culture of the land of the soviets, which largely determines the moral health of society and its dominant moral and psychological climate, is a true means of revealing all capabilities and talents and perfecting the spiritual world of the individual. Today this is not only a humanistic objective but also a necessary prerequisite for the acceleration of the country's socioeconomic progress.

Culture carries within itself the experience of past generations. It guides the individual within the system of historical coordinates of global civilization and, at the same time, helps the people to develop and active civic stance. It contributes to the growth of their creative initiative, without which socialist society cannot function efficiently. However, man is both the object and subject of culture, being its creator. Human activities embody the immortality of real culture and ensure its constant renovation.

"To upgrade the level of social maturity and to build communism means steadily to upgrade the maturity of consciousness and to enrich the spiritual world of man." This is one of the most important theoretical conclusions of the 27th CPSU Congress, based on the almost 70-year old history of real socialism, clearly oriented toward the implementation of the practical assignments of the present and the immediate future. It is the contemporary embodiment of the humanistic dialectics which links individual with social factors.

In their speeches and reports, the delegates to the congress discussed the place and role of the spiritual sphere in raising Soviet society to a qualitatively new status. It is of essential importance for such problems to be considered not alongside the main and the strategic tasks of the socioeconomic development of the country but as their inseparable component. This underscores the unbreakable unity between material and spiritual culture and the close interaction among the various factors of spiritual life.

The party considers the spiritual progress of society the most important component and mandatory prerequisite for economic and social progress, and its cultural policy a necessary component of the strategy of acceleration. It is only on the basis of a general culture that the political culture of an individual can be structured, and thus creating ideological and psychological prerequisites for molding qualities, such as readiness to assume responsibility and the ability to make independent decisions under extraordinary situations, which gives people confidence during periods of sharp historical changes.

A communist outlook develops on the basis of the dialectical interconnection between progressive ideas and the practice of building the new society. It is

precisely this unity that strengthens in the person a feeling of personal involvement with social change. This involvement presumes a theoretical and a practical-spiritual knowledge of the world (see K. Marx and F. Engels, op. cit., vol 46, part I, p 38) and, consequently, an emotional attitude toward it. This approach becomes particularly relevant when an understanding of each poignant feature of the time and its changing nature becomes necessary. Supported and sharpened by the power of artistic culture, such understanding becomes vivid and graphic and its efficiency can only increase.

The aesthetic principle ennobles the individual, inspires labor, embellishes life and helps us not only to understand but also to feel the scale of changes occurring in the country. Emotional maturity and emotional knowledge are twin sisters of creativity and opposites of social injustice, parasitism, and a petit bourgeois attitude toward the riches of culture. They are also an efficient medicine which build up immunity against any lack of humanity, be it open militarism, refined attacks mounted by the supporters of "psychological warfare" on the mind or the "artistic" aggression of "mass culture."

The increased interest shown by the Soviet people in the treasures of domestic and world art and in the history of their country are indicative of the enrichment of their spiritual needs. The involvement of millions of people in technical and artistic creativity, the increased number of hobby clubs and a dedicated participation in the restoration of historical and cultural monuments prove that spiritual demands are becoming increasingly less consumer-oriented; their socially constructive features are becoming increasingly clear and the development of culture, the preservation of historical relics, in particular, are becoming the concern not only of state bodies but the entire people.

It would be a great grave to consider all such good changes merely as the "automatic" use of the advantages of the socialist way of life. Planned and proportional development, which is the universal law of socialism, applies to all social areas. Purposeful efforts are needed to establish an optimal correlation between economic and social-cultural progress, in accordance with the conditions of the specific historical stage. The violation of this requirement and the lack of proper attention paid to social problems were among the reasons for the negative phenomena which were discussed at the 27th CPSU Congress. This was expressed in underestimating the problems of the material aspect of the sociocultural area and the use of the residual principle in the allocation of resources for its development. We must now draw proper conclusions from the negative lessons of the recent past.

The course of acceleration of the country's socioeconomic development requires also the acceleration of spiritual progress, the maximal use of the creative potential of the people and improvements in the way of life and a meaningful utilization of the leisure time. The main task of CPSU cultural policy is to provide the broadest possible opportunities for bringing to light the capabilities of the people and enriching their spiritual life. For that reason concern for the aesthetic education of the working people with the help of the best creations of domestic and world artistic culture, contributing to the fuller and deeper mastery of spiritual and material culture and active involvement in artistic creativity become the party's programmatic

stipulations. This explains the party's concept of developing a nationwide program for aesthetic upbringing.

With acceleration, upgrading the role of literature and art in social life becomes a natural feature. This assigns particular responsibility to the masters of culture. Through their creativity they must strengthen the moral health of the Soviet people and contribute to a psychological restructuring aimed at surmounting inertia, stagnation and conservatism. The party-mindedness of literature and art in its lofty Leninist understanding becomes a prerequisite for success in this field. In instilling in the minds and feelings of the people the idea of beauty, the progressive workers in culture have always struggled against social evil and obscurantism. Under socialist conditions, particularly during the current period, the aesthetic mastery of reality and creativity based on the laws of beauty, coincides more than ever before with understanding reality and creativity based on social justice and the objective laws of history.

The artistic interpretation of our crucial time is urgently necessary. We know that whatever type of objective need may arise in society, the people who can satisfy it also appear. This has always been the case and has always taken place, sooner or later. Under socialist conditions, however, we cannot rely on the spontaneous development of such an important process. The communists, Lenin said, must systematically guide this process and shape its results (see "V.I. Lenin o Literature i Iskusstve" [V.I. Lenin on Literature and the Arts]. Moscow, 1967, p 663).

Under contemporary conditions this means above all surmounting the negative phenomena which have hindered the development of Soviet society, uprooting bureaucratism, inertia and sluggishness in culture and providing opportunities for daring creative searches. Our time demands of the artist to consider our complex and contradictory reality with the penetrating and interested look of the citizen, a look not muddled by habitual stereotypes and group prejudices.

The new is already here. The man of the 21st century is being molded today. To consider, assert and make universally accessible this new development and to identify and evaluate anything which hinders our progress is the noble mission of the real artist.

Soviet art can fulfill its purpose only by combining high idea-mindedness, art and a national approach with a quality such as truthfulness. Truth is a necessary criterion of real art and a mandatory prerequisite for its effective and beneficial impact on the hearts and minds of people. That is why such great attention was paid at the 27th CPSU Congress to literary-artistic criticism, which must protect the truth and be the spokesman for public opinion rather than for group or narrow professional interests. No area should be out of bounds, for criticism must precisely be honest and active. It must be a necessary tool in the hands of society in order to influence the very fine and complex realm of social activities and face the future.

As was pointed out at the congress, the guidance of cultural life requires tact, understanding the nature of creative work, love of literature and art and respect for talent. However, exigency is needed as well. The Soviet

people are not silent consumers of a specific "product" of culture. They are interested participants in the spiritual progress of socialist society.

The 27th CPSU Congress clearly defined the main criterion for the party assessment of the work of the writer or painter. Lofty thoughts and feelings in themselves do not define the social significance of one personality or another (that applies even more to workers in culture), but also social actions, i.e., social facts, Lenin wrote (see op. cit., vol 1, p 424). Today as well, the value of a work of art depends not on loudly proclaimed statements or the author's choice of a vital topic but on the extent to which the ideological trend and skillful artistic execution of this work can serve the implementation of strategic tasks set by the party and the extent to which the noble role of Soviet art in the nationwide project becomes a social fact.

The very scale of acceleration of the country's socioeconomic development, creates a favorable atmosphere and prerequisite for the acceleration of the spiritual progress of society. A number of important decisions made in the postcongress period have become specific manifestations of the implementations of our programmatic objectives in the cultural area. The situation in the spiritual life of society was exigently and critically analyzed at the CPSU Central Committee conference on problems of the theater and at the recently held congresses and plenums of creative associations, and ways were earmarked to improve Soviet culture, so that it may fulfill its lofty social purpose more successfully.

The acceleration of the country's socioeconomic development expands and complicates even further the tasks of socialist culture and increases the responsibility of Soviet workers in literature and the arts not only to their people and the people's future but also to the future of today's many-faceted and explosive world. Naturally, this as well is a legitimate process, for Soviet culture is increasingly manifesting itself as a powerful factor in the spiritual progress of mankind, as the prototype of the future culture of communism, as a prerequisite, in Lenin's words, "for the further growth of civilization..." (op. cit., vol 45, p 380).

The increased significance of ideological education, mass information media, science, education and culture are inseparably related to the most important law of socialism: the increased leading role of the Communist Party. This process introduces a great deal of new features in the very theory of the party and in understanding its role in perfecting socialism and helping it to achieve a qualitatively new status on the way to communism. The means and methods of party work are becoming substantially enriched under the conditions of the accelerated socioeconomic development of the country. The 27th CPSU Congress creatively summed up the new trends and processes characterizing the stage of radical changes in society and formulating new and exceptionally strict requirements concerning the party's entire comprehensive activities. This will be the topic of our next and final installment.

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FOR A NUCLEAR-FREE WORLD AS WE APPROACH THE 21ST CENTURY

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[Article by A. Dobrynin, CPSU Central Committee secretary. Article based on a report submitted by the author at the Second All-Union Conference of Scientists on Problems of Peace and Prevention of Nuclear War, 27 May 1986, Moscow]

[Text] The Soviet people and our party highly value the contribution of scientists not only in mastering the secrets of nature but also their general efforts aimed at protecting mankind from the dangerous utilization of the achievements of science and, particularly, in the prevention of war. In recent times M.S. Gorbachev, CPSU Central Committee general secretary, has repeatedly addressed himself to problems of the role and place of science and scientists in safeguarding peace and life itself on earth, emphasizing the importance of their activities aimed at creating a nuclear-free world in the 21st century, a world free from the threat of nuclear war and nuclear weapons. He discussed this subject in his correspondence with noted world scientists and their organizations and at meetings with them. Let us recall his answers to the appeal of the "Union of Concerned Scientists," and to the letter of Professor M. Marua, head of the International Life Institute, his message to the participants in the Congress of Workers in Science and Culture in Defense of the Peaceful Future of the Planet and his meetings with a delegation of the congress of Nobel Prize winners and B. Lown, chairman of the international movement of Physicians of the World for the Prevention of Nuclear War.

Never before has science played such a tremendous role in society. Never before have the fate of civilization and, essentially, problems of the life and death of mankind, depended on it to such an extent. Scientists have brought to life tremendous constructive forces as well as tremendous forces of destruction.

No one has the right to stand aside in deciding on the way such powerful forces will be used. Nor does anyone have the right to claim monopoly in deciding the fate of human society. The most outstanding scientists since Einstein's time have stated that scientists have no right to reject responsibility in such matters.

I

Major changes are taking place in our country in the course of the implementation of the resolutions of the 27th CPSU Congress. They affect above all economics, management and the sociopolitical area. Naturally, they also affect Soviet foreign policy, which is structured in accordance with the realities of a rapidly changing world. Even those who have no sympathy for the USSR cannot deny that Soviet foreign policy has become exceptionally dynamic and flexible, profoundly creative and largely innovative.

The Soviet people are deeply satisfied by the fact that it was precisely our country which formulated a radical program for rescuing the world from nuclear weapons by the end of this century. The 15 January 1986 statement by M.S. Gorbachev, CPSU Central Committee general secretary, the foreign policy initiatives contained in the Central Committee political report to the 27th Party Congress and the proposals made by the USSR after the congress have instilled, as we know, new hope in the hearts of the people in other countries as well, allowing them to contemplate the future with greater optimism or, if you wish, with less pessimism.

We have no right to underestimate the forces of those who try to block a turn for the better in the development of world relations, so that mankind could enter the next century without the oppressive fear of nuclear catastrophe. However, we are confident that this turn can and must be made. The Soviet proposals earmark the main stages in leading human civilization away from a most dangerous situation in which it found itself in the 1980s.

The comprehensive plan proposed by M.S. Gorbachev on 15 January provides an opportunity for the full and comprehensive elimination of nuclear weapons the world over, under strict international control. This applies to the elimination of chemical weapons and their stockpiles and industrial production facilities, as well as banning the development of nonnuclear armaments based on new physical principles, the destructive capabilities of which are similar to other types of mass destruction weapons. Today such initiatives have been broadened with suggestions on reducing armed forces and conventional armaments in Europe, from the Atlantic to the Urals.

The historical significance of the new Soviet initiatives is obvious. These suggestions are realistic. Their purpose is not to achieve some sort of unilateral advantages for the Soviet Union. They are consistent with the basic interests not only our country and our allies and friends but also the population of the United States and the other NATO countries, and the peoples the world over.

In today's situation, only madmen could deny the fatal consequences of a nuclear catastrophe. Strange though this may seem, this is making some people carefree: no one, they claim, would allow a nuclear war to break out, for the people are not suicidal. This is a grave error. The current arms race creates an entirely new situation: it mercilessly shortens decision making time, increasingly shifting this process to machines and equipment, thus, step-by-step, denying state leaders the right to judge, discuss and think. Technology, even if repeatedly tested, as confirmed by the destruction of the

space ship Challenger, the explosion of the Titan and Delta missiles, the accident at the nuclear power plant at Chernobyl and many other similar cases, may occasionally break down. However, in some situations, such an "occasional" breakdown may also mean a breakdown "once and for all." Is taking such a risk acceptable?

We also hear the following: the threat of universal nuclear destruction is the main stabilizing factor in the contemporary system of international relations, allegedly exerting the necessary restraining influence on contemporary political leaders, forcing them thoroughly to weigh each step and avoid thoughtless actions. Therefore, the supporters of such views think, nuclear disarmament would inevitably increase international tension and the number of conflicts involving the use of conventional weapons. Hence the conclusion that, allegedly, "historical logic" and "common sense" require the preservation of existing nuclear arsenals.

Such views cannot withstand a comparison with the lessons of history. Armaments have never played a "pacifying role" by themselves. No single new weapon has ever put an end to war but has only made it more destructive. Scientists are as well aware of this as are politicians.

Naturally, no single military invention of the past has threatened the very existence of mankind. This threat appeared only with the appearance of nuclear weapons. Where is the guarantee that in a grave crisis it will always be an effective restraining factor and would prevent something irreparable? Such guarantees neither exist nor could exist.

Let us also recall that throughout the entire "nuclear age" the Western countries have by no means been noted for political caution and restraint. The United States has repeatedly tried to make use of nuclear weapons for purposes of military-political blackmail. This has sometimes put the world on the brink of nuclear war. The fact that in the four decades after the war a nuclear war has not broken out is by no means thanks to the "restraining" force of nuclear weapons. It has been the result of the role played by the reason of politicians and, to an even greater extent, the efforts of the Soviet Union and the other peace-loving countries and the upsurge of the mass antiwar movement.

A world oversaturated with nuclear warheads (in the 40 years after the war their number increased from 2 to 50,000) and of their means of delivery, such as missiles, airplanes, nuclear submarines and navy vessels can be justly compared to a madman who is standing on a powder keg and playing with fire. Under such circumstances peace can be neither reliable nor firm.

The development of new armaments by one side motivates the other to take corresponding steps, based on the worst possible scenario in the development of events. In turn, this influences the side which initiated that specific round in the arms race. It is thus that the vicious circle is closed. The arms races gains its own inertia and distorted development logic, taking all of us closer to the line beyond which it could become uncontrollable and irreversible. With every single round the military confrontation rises to a new and much more dangerous level. The military-strategic balance is

disturbed. The Central Committee political report to the 27th Party Congress noted that "...the current level in the balance of nuclear potentials of the opposite sides is excessively high. For the time being, it exposes each one of them to equal danger. However, this is only for the time being. The continuing nuclear armament race will inevitably increase this equal danger and may raise it to a level in which even parity will no longer be a factor of military-political restraint."

It is our profound conviction that the nuclear arms race does not ensure international stability. Conversely, it contributes to steadily increasing the danger of nuclear conflict. This becomes particularly obvious if we consider the qualitative aspect of the arms race. It is a senseless pursuit of a "miracle weapon," a futile pursuit yet fraught with nuclear catastrophe, the more so since hopes for such a "miracle" could encourage some leaders to engage in adventuristic actions and attempts to attain strategic superiority. Furthermore, the fast changes in military ordnance objectively lead to the appearance of the types and systems of weapons which could make control over armament limitation and reduction inconceivably difficult and even impossible. This could increase even further fear, suspicion, hostility and mistrust in the contemporary world. The "Strategic Defense Initiative" (SDI) program which is being implemented by the Reagan administration, presents a great threat to safeguarding peace and maintaining a stable military-strategic balance. If we are to believe the advocates of "star wars," Washington needs this "space shield" only in order to block the threat of a first strike by the Soviet Union, to strengthen stability and even to save the world from nuclear weapons. However, the entire world, including those who are involved in the making of American foreign policy, well know that it was precisely the Soviet Union which unilaterally assumed the obligation not to be the first to use nuclear weapons and made this obligation an integral part of its military doctrine; the same obligation was assumed by the People's Republic of China. Had the United States, seconded by France and Great Britain, followed suit, the question of a first nuclear strike would have been largely dropped from the agenda.

Nor can the effort to present SDI as a means of strengthening strategic stability withstand criticism. The case is precisely the opposite. The development of a "space shield," behind which American strategists hope to gain the potential for launching with impunity a disarming nuclear strike, would result in a radical disruption of the existing balance of forces, the total destruction of the foundations of strategic stability and the accelerated race of offensive and defensive weapons.

This conclusion is confirmed by Washington's military programs for the immediate future. While loudly proclaiming that the creation of a space defense system would make offensive nuclear weapons "obsolete" and "ineffective," the United States does not lose its interest in them. On the contrary, in undertaking the implementation of its space program, the Reagan administration is continuing to perfect all components of its strategic nuclear triad, particularly emphasizing an increase in so-called "antipower" capabilities, i.e., means aimed at dealing a first disarming strike.

No, it is not concern for stability or the desire to eliminate the nuclear threat hanging over mankind that is the driving force of the SDI program. This program is a clear example of the latest thoughtless "escape into technology" in the hope of regaining a lost superiority. It is being instilled in the minds of the American public that this is a line of ensuring absolute security for the United States. Need we prove, however, that by no means is there a technical solution to all problems and that even the most advanced technology cannot design a perpetual-motion machine or violate the basic laws of physics. Weapons have never brought peace, however complex and expensive they may have been.

Let us recall that a large group of Soviet scientists were among the first to make an extensive analytical assessment of the American "star wars" program. In their "appeal to all scientists throughout the world," of April 1983, the Soviet scientists particularly pointed out that "there are no efficient means of defense in a nuclear war and that their creation is virtually impossible." The document also emphasized that "actually, the effort to create a so-called 'defensive weapon' against the strategic nuclear forces of the other side, as proclaimed by the U.S. President, will inevitably develop into the appearance of yet another element which will increase the American 'first strike' potential. It is no accident that the practical actions of the U.S. administration are currently focused on accelerating precisely the development of this potential. Such a 'defensive weapon' can in no way benefit a country subject to a sudden concentrated attack, for it would be clearly unable to protect the overwhelming majority of the population." The creation of a large-scale antimissile defense is more advantageous precisely to the attacking side which tries to reduce the power of a retaliatory strike. However, it too would be unable totally to prevent such a retaliatory strike.

As we know, today this view is shared by many thousands of scientists in all countries, including a large number of scientists and specialists in the United States, the FRG, France, Great Britain, Japan, Australia and Canada.

The Soviet Union is against the arms race in space not because it fears its inability of keeping up with such an imposed rivalry. More than ever before, today our country has sufficient knowledge, mature experience and resources in order optimally to block the next American thrust to superiority. The Soviet answer to the development of a broad antimissile system with space-based elements by the United States, as M.S. Gorbachev pointed out in referring to developments achieved by our scientists, are effective, less expensive and may be completed within a shorter time; it is not mandatory in the least for such a response to take place in outer space. For example, the studies and reports by the Committee of Soviet Scientists in Defense of Peace and Against Nuclear Threat lists a wide choice of possible measures and means of counteracting space weaponry. However, we systematically oppose the arms race in space, above all because we perfectly realize its dangerous consequences.

The SDI supporters use an argument aimed, in particular, at the scientific public, by claiming that this program will ensure a new breakthrough in technology and stimulate the development of scientific thought. However, is it not the purpose of human intelligence, including scientific thinking, to be able to anticipate the consequences of actions and to prevent them, should

they prove to be fatal? Can progress in science and technology be achieved only if they are subordinated to military objectives? On the contrary, it is precisely peaceful objectives that provide the greatest possible scope for scientific research and the use of its results for the good of man. That is why the Soviet position is not reduced merely to exposing plans for "star wars" and proving their fatal nature. It includes the important alternative and constructive element discussed by M.S. Gorbachev at his meeting with the delegation of the congress of Nobel Prize winners, emphasizing that we favor an essentially different way of accelerating scientific and technical progress.

As to space research, the USSR has suggested the creation of a suitable world organization, which would be the center for coordinating efforts in this universal undertaking. This applies to basic scientific research and the launching of interplanetary ships to Mars, for example. It is also a question of applying the results of space research in biology, medicine, study of materials, weather forecasts, study of the climate and the environment, and others. Finally, it is a question of developing through joint efforts a new space technology which could be used in the interest of all nations.

II

Limiting and reducing nuclear armaments, preventing an arms race in outer space and converting to real disarmament measures are the main real and reliable instruments for strengthening strategic stability and reducing the threat of war. An honest and businesslike agreement must be reached on specific steps to reduce and, subsequently, remove the threat of nuclear war. Agreement must be reached before it is too late.

As we know, the joint Soviet-American declaration which was adopted on the basis of the results of the Geneva meeting between M.S. Gorbachev, CPSU Central Committee general secretary, and U.S. President Ronald Reagan, stipulated that a nuclear war must never be unleashed and that it can have no winner. In acknowledging that any conflict between the USSR and the United States could have catastrophic consequences, the two sides emphasized the importance of preventing any war between them, whether nuclear or conventional. They also declared that they will not aspire to gain military superiority and agreed on accelerating the talks on nuclear and space armaments.

The Soviet Union is doing and will continue to do everything it can for the "Geneva spirit" to be embodied in specific agreements. The 15 January statement by M.S. Gorbachev clearly proved the readiness of the USSR to adopt even the most radical solutions for the nuclear disarmament problem. What happened? The Reagan administration made not even a symbolic goodwill gesture in response.

Furthermore, by the end of May President Reagan announced that the United States was no longer to observe the Soviet-American legal agreement of restricting strategic offensive armaments--the provisional 1972 agreement and the Salt II Treaty of 1979. As the Soviet government's 1 June declaration states most clearly, it will not impartially watch the United States violate

agreements in the area of limiting strategic offensive armaments. The American side should have no illusions whatsoever concerning its ability to gain military advantages for itself at the expense of the safety of others.

The fact that in recent months the international community witnessed the aggression against Libya and other manifestations of the strategy of U.S. "neoglobalism," and that the intensity of anti-Soviet rhetoric on the banks of the Potomac has risen once again could hardly be considered accidental. This campaign is immoral and its subversive nature is clear to us. Efforts are being made to use it to discredit Soviet proposals in the field of nuclear disarmament. A malicious anti-Soviet campaign was launched in a number of NATO countries, in the United States above all, on the occasion of the Chernobyl accident. Yet this accident proved once again the urgency of the need to take efficient steps in the banning and elimination of nuclear weapons. It shed light on the inevitable fact of our time, clearly proving that man has brought to life and created forces against which, should they be aimed at destructive purposes, he may prove to be helpless.

Along with fanning the hysteria on the subject of the Chernobyl accident, the U.S. right-wing circles mounted a misleading propaganda campaign on alleged violations by the Soviet Union of its obligations, including the 1972 treaty on limiting anti-aircraft defense systems.

What was the reason for the latest intensification of anti-Soviet rhetoric?

If the purpose of this blackmail is to force the Soviet Union to change its position concerning the objectives and objects of Soviet-American talks in Geneva on nuclear and space armaments, and to grant unilateral concessions to the detriment of its own and international security, such hopes are absolutely futile.

If the U.S. administration is hoping to accustom the public to the idea that the implementation of its military programs, including the positioning of armaments in space, is inevitable, regardless of talks, it is assuming the greatest possible responsibility to the entire global community, which justly considers the Soviet-American dialogue in Geneva on nuclear and space armaments an exceptionally important opportunity for eliminating the threat of universal global catastrophe.

Fortunately, by no means are all problems of world politics decided in the White House. A new approach to the problems of war and peace is being formulated and is asserting itself under our own eyes. It is consistent with the interests of each nation individually and the entire international community as a whole. Increasingly becoming aware of the fact that "global civilization has entered a critical period in its development, people from different countries, sharing different views and convictions, come to the logical conclusion that the time has come to end their subordination to the element of the nuclear arms race and to develop a new type of political thinking.

What is the base for such a new thinking? The interdependence of survival--the inseparable unity of historical destinies of all countries in the world in

the face of a possible nuclear conflict--is of radical importance. This interdependence determines the need for a qualitatively new approach to the problem of national security, an approach which is also one of the distinguishing features of the new type of political thinking. Security in the world today is based on what is known as fear of inevitable retribution. It is not the Soviet Union which canonized this means of ensuring safety, which, in the final account, is unreliable, but which was forced to follow the same path under the conditions of the unrestrained arms race imposed by the United States, to catch up with the United States and, subsequently, to maintain military-strategic parity. Nevertheless, the USSR has never considered this situation normal. It has invariably favored a lowering of the level of military confrontation while observing the principle of equality and identical security. For the nature of today's weaponry leaves no single country the hope of protecting itself through military-technical means alone, by creating even the most powerful defense, let us say. By this very token the concepts of national and international security have become indivisible. "Security," the Central Committee political report to the 27th CPSU Congress emphasized, "as referred to relations between the USSR and the United States, can be only mutual and, if we consider international relations as a whole, only universal. The higher wisdom is not to be concerned exclusively with oneself, and even less so to the detriment or the other side. Everyone must feel equally secure, for fear and concern in the nuclear age trigger unpredictability in politics and in specific acts."

The new type of political thinking presumes a qualitatively higher level of foreign policy flexibility and readiness to make sensible compromises with one's partners in the talks. Unfortunately, such readiness is quite frequently absent in many political leaders in the West, in the United States above all. It is not that they refuse in general to talk with the Soviet Union or reject any dialogue in general. However, all too frequently they consider that a "dialogue" is an ideologized monologue, amazingly similar to the indictment of a prosecutor in court, "talks" as the imposition of the American view and "agreements" as the unconditional surrender of the Soviet side.

This approach has its vicious logic--the logic of military-political blackmail, the logic of discussion "from a position of strength." Under contemporary conditions, however, a policy based on the intransigent defense of unacceptable positions on the onset, a policy deprived of flexibility, cannot be successful.

Finally, the new type of political thinking presumes the existence of a multidimensional approach to the solution of problems of international security. Stable progress in the military area would contribute to essential changes in the economic area, to progress in the political area and to improving the situation in the humanitarian area. It is no accident that the 27th CPSU Congress considered the problem of a comprehensive international security system as complex, as covering all basic areas of global politics: military, political, economic and humanitarian. This approach is based on the sober realization of the fact that a truly reliable security for all can be achieved by eliminating the reasons, the sources of mistrust, tension and hostility in the contemporary world.

Such are the basic parameters of the new type of political thinking. The speed with which they will be applied in the practice of international life will largely determine the destinies of mankind not only in this but also in the next century. Naturally, it takes a certain amount of courage to reject customary views and concepts. However, such courage is already becoming political reality, for there are forces in the world whose foreign policy is based on this new type of thinking or else which are actively striving to attain it.

The unilateral moratorium on all nuclear explosions, which was recently extended by the Soviet leadership yet one more time to 6 August of this year, is indicative of this new type of thinking and practical action. The Soviet leadership once again called upon the American state leaders to reach an agreement on banning nuclear tests.

Naturally, the process of shaping and asserting the new style of political thinking is quite complex. Fierce clashes, sharp discussions and painful differences are inevitable in such cases. Nevertheless, in the face of a nuclear apocalypse, mankind is beginning to realize the simple truth that in order to survive, in the field of international relations it must proceed not on the basis of narrowly conceived interests, which pit us against one-another, but of interests and aspirations shared by us all.

Naturally, the aspiration of mankind to restructure the system of international relations on a democratic and just basis, to ensure real safety for all and to help economically lagging countries in jointly solving global problems is still far from its practical implementation. However, as Goethe said, our wishes already contain the anticipation of our ability to achieve them. A possibility is already part of reality. A social science and a policy which refuses to take into consideration this major dimension of social reality, becomes not a science but dead scientism, and not policy but blind empiricism.

III

Scientists can and must do a great deal for turning into a reality revolutionary changes in the way of thinking and the approach to problems of war and peace. This is a vast and very important area of activities for scientists in all areas. Scientists are the natural bearers of reason, which is the greatest force available to mankind, a force which can ensure universal survival and security.

The representatives of Soviet science have already played an important role in identifying and analyzing major problems of international relations, international security, war and peace, and disarmament. In recent years, as a result of the active efforts of a number of USSR Academy of Sciences institutes, a contemporary Soviet school of foreign policy and military-political research was developed, which authoritatively asserted itself in the international arena as well. Active cooperation in serious research and interpretation between our leading scientists in the area of world politics and economics and in the natural sciences proved to be very fruitful and was

manifested with particular clarity in the activities of the Committee of Soviet Scientists in Defense of Peace and Against the Nuclear Threat.

Specifically, the Soviet scientists thoroughly studied the set of climatic, ecological and biological consequences of nuclear war, the scientific and technical, military-political and economic aspects of shifting the arms race to space and the problem of a nuclear weapons freeze. The studies made by the Soviet scientists of such problems enjoy deserved reputation at home and abroad. The Scientific Council on the Study of Problems of Peace and Disarmament of the USSR Academy of Sciences came out with a series of important works on the political, legal, economic and social aspects of the armament limitation and disarmament. The results of the joint activities of Soviet researchers and their foreign colleagues within the organization of the Physicians of the World for the Prevention of Nuclear War and the Pugwash Movement of Scientists met with great international response.

However, even more profound works on international and military-political problems, extending to a broader range of questions, are greatly necessary. In his October 1985 address to the French parliament, M.S. Gorbachev spoke of the sad capability of the human mind, that of falling behind rapidly changing realities in life. He also noted that today we pay particular attention to bridging this gap and making our concepts, including those in the areas of foreign policy and military affairs, entirely consistent with the new realities. The initial results, quite significant at that, of such efforts are already obvious, as seen in the 15 January 1986 declaration, the documents of the 27th Party Congress and the subsequent Soviet proposals.

The process, however, is continuing and will go on, for life will keep changing and ever new realities will appear. That is why the party and the government expect the publication of new important works by Soviet scientists, particularly those engaged in the study of international relations and foreign policy and military-political problems. Life itself calls for upgrading this entire scientific area to a qualitatively higher level.

It is a question, above all, of the major tasks which face Soviet science and the scientific public in the light of the concept of the all-embracing system of international security formulated by the 27th CPSU Congress. As we pointed out, it is a question of combining different yet interrelated elements and of taking a series of steps aimed at the aggressive strengthening, so to say, of mankind's defensive mechanism, thus creating increasingly reliable guarantees against the outbreak of war in the future and for developing a system which would encompass all parts of the world and all activities--military, political, economic and humanitarian--which, put together, are like floors in the edifice of international relations.

Hence the particular importance of the intensified scientific study of political processes and interrelated socioeconomic factors on a broad international level and on the local scale, i.e., the scrupulous study of specific national and regional forms of development of such political processes. Today, with the growing dynamism of all international life, the skilled and, let us emphasize this, the timely assessment of new still developing trends related to such threats or opportunities, assumes vital

importance. It is a question of radically changing the situation in each of these main areas and efficiently correlating them. Naturally, this is above all a political task. However, it is also scientific. Its solution presumes a comprehensive and creative approach rather than merely the efforts of specialists in a specific branch of knowledge. What are the problems here, which require scientific development and substantiation?

In the military-political area, obviously, our attention should be focused on solving the totality of problems in blocking all channels for the growth of the arms race and the development of armed conflicts.

This applies, first of all, to the standards of behavior practiced by governments, including their military activities. Second is the problem of lowering the military potential, and limiting and eliminating means of warfare. Third is that of settling local conflicts which carry the threat of developing into a global war.

Naturally, these are problems on different levels. However, they are organically related within a single entity. In the first case, it is a question of the direction of the political course and of the very possibility of relying on nuclear weapons and other mass destruction armaments as policy instruments; of implementing the principle of non-first use of nuclear weapons, rejecting the use of force in general in intergovernmental relations; and of the various ways of shaping an international climate of confidence. Each one of them has become, through the development of life itself, a topic for profound scientific work.

This also applies to the broadest and most important problem of dismantling the physical machinery for waging war. Here as well we are facing a number of problems which require immediate scientific study. They include, in particular, problems of interdependence between offensive and defensive nuclear and conventional armaments, priority in political efforts aimed at limiting or banning some types of weapons, the question of what is to be considered reasonably adequate in reducing the levels of military potentials, combining global with regional solutions in drafting measures for banning and destroying the various types of mass destruction weapons, problems of verification of arms limitation agreements, the significance and consequences of ending nuclear tests, and others. What makes this even more important is that the militaristic circles as well as the supporters of the arms race, who serve them yet hide behind scientific prestige, have created around such problems mountains of fabrications and myths. The struggle against them, and for clearing and improving the intellectual atmosphere in the world is a most important task for scientific workers.

The range of problems related to halting material preparations for nuclear war is a broad field of application of the efforts not only of specialists in the area of international relations but of natural scientists as well. They can and must make their contribution to solving this most important problem by developing, for example, the technical aspects of problems such as the destruction of nuclear weapons, the total elimination of chemical weapons and industrial facilities for their manufacturing, and verification of the observance of corresponding agreements. Together with those scientists who

deal with problems of global politics and economics, natural scientists are scheduled to play a major role in formulating the features of converting a war economy to civilian production. It would be useful to make a mathematical model of a stable strategic situation under conditions of a lowered level of nuclear confrontation.

Finally, there is the question of local conflicts. Here as well we are facing a number of problems requiring a deeper study. This includes political doctrines, such as the notorious "strategy of neoglobalism" of the United States, which is essentially aimed at fanning local conflicts for the sake of revenge. There also are problems caused by religious and tribal discord, which frequently play an essential role in outbreaks of conflicts. Naturally, the formulation of constructive alternatives on which an efficient political settlement could be reached in the interest of the peoples of the specific area and of universal peace is particularly important.

The Soviet concept of a comprehensive system of international security organically includes the economic area. It presumes the creation of a comprehensive system of international economic security which, together with disarmament, could become a reliable foundation for international security in general.

The extensive and comprehensive development of related problems is of great value. In particular, the answer to the following question is quite important: How can the problem of the foreign debts owed by the developing countries be solved? Another question is that of the specific content we invest in the concept of a new world economic order? Another very important problem for the future is, what are the priority areas in which we could channel the funds released as a result of disarmament? The duty of the Soviet scientists is to formulate a thorough comprehensive model of international economic security. This is another field of scientific work.

Today, let us particularly emphasize, Soviet science faces a task of major basic significance: to provide a profoundly substantiated scientific base for comprehensive interconnection between all of these problems and the main objective: ensuring a durable guaranteed peace. The interconnection in this case is real, it exists objectively. All that is needed is properly to perceive and identify it on the basis of facts, taking all trends into consideration and comparing and analyzing them.

For example, many of the economic problems we are discussing go beyond their strictly economic bounds and emerge today on the global, the universal level. This involves the problem of preserving the human habitat, finding new sources of energy, fighting economic backwardness and hunger, developing outer space and the world's oceans, and many others.

All of these are global problems which, naturally, require global answers. We can confidently say today that both technically and economically, contemporary civilization has reached a level of development in which all or at least most global problems can be efficiently solved in the life of this and the next generation. However, whereas the material prerequisites to this effect already exist or are being created under our own eyes, matters in the military

and political areas are different. Clearly, as long as the danger of thermonuclear war remains, which threatens the loss of all human civilization, the question of the practical possibility of solving the global problems of mankind, however crucial they may be, remains in question.

It is quite obvious that progress in solving such problems will require, above all, tremendous investments on the part of all countries within a global program for action. A true global community can obtain and use such substantial funds only if essential changes are made in the area of disarmament and in reducing military expenditures. This is one side of the problem.

There is another side as well. It is clear that the most efficient and, possibly, perhaps any type of solution of global economic problems can be attained only by investing national efforts on an international scale, through the collective efforts of all members of the global community of nations--socialist, and developing and developed capitalist countries. Naturally, such cooperation presumes the elimination of elements of discrimination and diktat in economic relations, normalizing the international situation and lowering the level of military confrontation.

The humanitarian area. It is hardly necessary to prove that the idea formulated by the Soviet Union of creating a comprehensive system of international security is aimed at solving the most humane of all problems confronting contemporary mankind: preventing war and securing the prime and natural human right, that of living under conditions of peace and freedom. However, an inverse relationship exists here as well: the solution of many problems in the humanitarian area depends, both directly and indirectly, on the establishment of truly civilized and correct standards of international intercourse and cooperation. This is a necessary prerequisite for a stable peace and for the restoration and intensification of detente.

Civilized international relations are not limited to relations between governments. They presume the productive cooperation among parties, social movements, men of science and culture and mass information media, the development of tourism and increased contacts among individuals and organizations.

Why do we ascribe such importance to the humanitarian area in the matter of strengthening international security? Let us consider its components:

Cooperation in the dissemination of the ideas of peace and disarmament has always been important. Today, however, in the nuclear missile age, one could say that this becomes a categorical imperative;

Upgrading the level of overall objective information is a direct path leading to the strengthening of reciprocal understanding and increasing trust among countries and peoples. Here as well the representatives of all possible branches of science have a broad field of activity, a kind of virgin land the development of which brooks no postponement. Recent facts have indicated with particular clarity how actively and purposefully disinformation can be used, coupled with what is described today as information imperialism, in torpedoing

the peaceful initiatives of the members of the socialist community and promoting the policy of "neoglobalism." This is understandable, for the policy of the arms race is incompatible with truthful information. The war business and the manufacturers of false and slanderous campaigns work hand in hand.

Eliminating genocide and apartheid is the imperative of the time, not only because this malignancy is a shame for civilized society but also because it is a constant source of regional conflicts, as we were reminded once again by the very recent armed sallies mounted by Pretoria against the "frontline" states.

The strengthening of existing and search for new forms of cooperation in the areas of culture, science, the arts, education and medicine are of substantial and increasing importance. They have a direct impact on shaping the world's moral and political climate.

The Soviet Union ascribes the greatest possible significance to the problem of human rights as an essential factor of peace and international cooperation in this area. All that is needed is to free it from hypocrisy and speculative thinking. Paradoxical though it might seem, it is those who are promoting the growth of the arms race who are also acting as the main "supporters" of human rights. Anti-Soviet slanderous campaigns, relying on a lethargic ignorance of problems of human rights in our country, have become one of the favorite means of world reactionaries in intensifying international tension.

But what does eliminating speculative thinking from this problem mean? It means not only rebuffing demagogues but also constructively developing this problem. Naturally, this involves many difficulties. The different social systems have different criteria of human values and different approaches in assessing one democratic institution or another, as well as different concepts of democracy as a whole. Aware of all such distinctions in basic views, our party does not exclude but instead presumes international cooperation in this area. The task is to find efficient and realistically attainable forms of such cooperation and defining its limitations and criteria, which would exclude interference in domestic affairs, and would guarantee the observance of universally acknowledged standards of intergovernmental relations.

International activities in the humanitarian area must also take into consideration differences in the political institutions of countries with different social systems, national traditions and the specific conditions of the development stage reached by the individual countries. This is another problem which requires a comprehensive approach and a combination of high professionalism with a broad vision of the world.

Yet another important group of problems exists, and I would like to draw the attention of our scientists to the need for its further scientific development.

The foreign policy strategy of the CPSU is based on the essential view that it is impossible to stop the swift changes taking place in the world, and even more so to turn them back, to "rewrite" history, so to say.

The contemporary world is increasingly both interdependent and largely integral. For it is a question today of the survival of mankind. Consequently, the problem is that social progress is objectively linked with the task of preventing nuclear catastrophe and safeguarding peace.

The political conclusion is clear: objective prerequisites have developed in which the confrontation between capitalism and socialism can take place exclusively in the form of peaceful competition and peaceful rivalry. However, many serious matters appear in this connection, involving our social science. The Soviet scientists must further develop and intensify the Marxist-Leninist theory of the global revolutionary process and social progress, as applicable to the conditions of the nuclear age, and intensify the concepts governing the competition between the two systems.

In this respect, the 27th Party Congress provided a new exceptionally important formulation. It stated that "the main trend in the contemporary struggle is that of creating proper and truly human material and spiritual living conditions for all peoples, ensuring the habitability of our planet and the thrifty attitude toward its resources. This applies, above all, to the main resource--man himself, his possibilities. It is precisely in this area that we suggest a competition with the capitalist system. A competition under the conditions of a lasting peace."

In this light, the proper formulation of the problem of relations with capitalism is of essential significance. We have our own idea of the historical destinies of the capitalist system. As a state, however, we do not set ourselves the task of overthrowing capitalism in other countries. This is also based on our readiness for peaceful coexistence with it. Naturally, at the same time we expect and demand of the other side that it acknowledges the right of socialism to exist and delete from its policy the use of "crusades" and "cold wars."

Finally, there is the Third World, which accounts for more than half the earth's population. The processes taking place in it have a direct effect on the international situation. Can we say that our social sciences have fully mastered these processes, and that everything in this area is already clear? I believe that here as well researchers have a number of new tasks.

The main problem is the way in which the developing countries are advancing along the path of social progress, the path of eliminating their dependence on imperialism without skipping objectively unfinished development stages. This includes problems of relations between industrially developed capitalist and developing countries, occasionally described as "North-South;" the possibility of shifting some military expenditures to development purposes; progress opportunities involving relations between developing countries themselves (the so-called "South-South" relationship).

Therefore, a new political thinking does not mean in the least any abandonment of the class-oriented analysis of the problems of war and peace. It presumes, however, the combination of our ideals, as Marx said, of real humanism with the democratic and peaceful aspirations of all social strata who take up the defense of the interests of mankind and the salvation of civilization.

The cooperation among scientists from different countries in the struggle against the nuclear threat, a cooperation which has been strengthening in recent years, is of tremendous importance. Such cooperation has already helped to educate many millions of people. As we know, problems such as the global consequences of nuclear war, a "nuclear winter," the prevention of an arms race in outer space, the threat of an accidental outbreak of nuclear conflict and others have become targets of extensive studies not only by Soviet scientists but also by a broad range of scientists in other countries, including the United States. On the basis of contacts between Soviet scientists and many foreign public organizations, such research has become international and, in a number of cases, has enabled us to formulate the position of the global scientific public which can effectively influence the course of events.

By multiplying their efforts, scientists from all countries must remain in the vanguard of the fighters for peace and the prevention of nuclear war and for mankind's happiness and its future.

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STRATEGY OF ACCELERATION: THEORY AND PRACTICE

ALLIANCE BETWEEN SCIENCE AND PRACTICE

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[Article by Academician A. Nikonov, VASKHNIL president, USSR Gosagroprom deputy chairman]

[Text] The importance to the entire country of ensuring the accelerated development of agroindustrial production is obvious. Under these circumstances, the role of science increases immeasurably.

Essentially, intensive agriculture means more advanced and productive means of production (strains, hybrids, livestock breeds, machines, greater soil fertility, etc.), more advanced technologies and forms of production organization, and a flexible and efficient economic management mechanism. This can be provided, above all, by science. The physical implementation of its accomplishments is the inner content of intensification.

It is a question of a kind of breakthrough leading to a qualitatively new condition of the agroindustrial complex. This requires essentially new ideas and developments. The task of science in this case is to forecast development, to offer a basic study and suggestions for the solution of crucial problems and provide practical workers with efficient complete projects. As was emphasized at the 27th Party Congress, the country has the right to expect of scientists discoveries and inventions which ensure truly revolutionary changes in the development of equipment and technology. This sharply raises the question of the intensification of scientific research and of turning science into an actual catalyst of progress. In each one of its areas today thought is given to the possible contribution of science to solving the problem of acceleration and how can acceleration of science itself be manifested. Naturally, this is also a problem for VASKHNIL scientific institutions.

The very nature of the problems confronting the agrarian economic sector today presumes the need not for partial fragmentary improvements and suggestions but for large-scale comprehensive developments which would determine the corresponding level of output and anticipate its further qualitative upsurge. A leap in the development of essentially new equipment and technology is possible only through the achievements of basic science. It is only on this level that one can properly assess the long-term development of applied

research. Scientists must provide efficient solutions to practical problems. However, this is simply impossible without theoretical substantiations.

Yet it is precisely on this level that we have fallen substantially behind. The theory of reproducing the fertility of the soil under contemporary intensive farming system must be developed on an accelerated basis. Practical experience calls for surmounting stagnation in the formulation of the theory of chemical fertilization. With the expansion of farming the significance of solving theoretical problems of upgrading the stability of agrobiogeocenosis (the simultaneous preservation of the fertility of the soil and crop productivity under various types of adverse influences) increases. More extensive studies are needed on the genetic foundations of biotechnology and immunology. Major work is needed in the area of economic theory and, above all, a profound study must be made of the two forms of ownership in the light of the ideas of the Leninist cooperative plan and the tax-in-kind, in accordance with their contemporary development trends, which is of great importance. These are merely a few of the key problems, the simple enumeration of which underscores the urgent need for a new level of studies, basic research above all.

In which priority areas is research taking place?

Above all, they include scientific support for intensive farming techniques. It is important to exclude in such work one-sided approaches or the exaggerated role of one factor or another. We have learned from the sad experience of trying to solve all problems with a single campaign and with a single measure. This may frequently be necessary but should not be overestimated. The underestimating of the systemic approach inevitably leads to simplification and stereotype and the inefficient utilization of resources. The task now is for each zone and sector to have its overall intensive technology in which all components would be optimally correlated. It is here that, more than anywhere else, we must combine biological, technological, organizational and economic factors, which would enable us to make fuller use of the genetic possibilities of plants and the bioclimatic potential.

The academy, its zonal institutes and other establishments are engaged in this type of work and cases can already be cited of efficient scientific support of intensive technologies. In particular, such type of research is being successfully carried out by the Kolos Scientific-Production Association in Omsk Oblast, the Stavropol Scientific Research Agricultural Institute, the Ukrainian Scientific Research Farming Institute, and the Lipetsk and Ivano-Frankovsk Oblast Agricultural Experimental Stations. Here efficient and specific recommendations have been issued on protecting the soil from water erosion and plants from diseases, weeds and pests. Optimal deadlines for agrotechnical measures have been developed and fertilizer doses have been differentiated according to natural conditions, the features of the crop or strain and the soil agrochemical characteristics. However, such accomplishments are still obviously insufficient.

We consider as the main objective of scientific developments the concentration of intensive technologies on the efficient and effective utilization of the land. The implementation of this task calls for the radical restructuring of

research in soil science and farming. We must comprehensively substantiate steps for rebuilding soil fertility and determining the role of various components (organic and chemical fertilizers, crop rotation, fallow land, etc.) and means to regulate them. Such intensified developments are required for each zone and farm, and for the present and the future. It is important to anticipate and substantiate changes in the role of each of the fertility factors and their correlation and interdependence in terms of the various stages of current agricultural intensification. Only then we shall avoid frequently encountering problems unexpected by science and practical work. Such developments must be advanced to levels suitable for practical utilization.

Enhancing the level of agricultural intensiveness is inconceivable without reclamation. Under our specific conditions, virtually the entire land needs one kind of improvement or another. The main thing at the present stage is to increase the yield of reclaimed land. This is the target of the restructuring of the investment policy, in which priority is given to the reconstruction of the system, industrial crop development, social construction in the reclaimed areas and the application of a comprehensive approach.

It is equally important to upgrade the level of farming on reclaimed lands. This requires a specific farming system. Unfortunately, such a system has not been developed everywhere and we realize that this is the direct obligation of the VASKHNIL institutes. Each hectare of such lands must be used for the cultivation of crops on the basis of intensive technologies, making extensive use of second crops and crop programming.

Another urgent problem confronting the scientists is that of developing new means and methods for the economical utilization of water. The proper solution of this problem requires intensified scientific research. A corresponding program has been drafted to this effect: In conjunction with the institutions of the USSR Academy of Sciences, USSR Gosagroprom, the USSR Land Reclamation and Water Resources and other departments, VASKHNIL has undertaken the study of changes in soil productivity based on the use of various types of reclamation systems, perfecting its methods and formulating steps to improve the economic mechanism of the utilization of nature.

Intensive farming presumes the extensive utilization of chemicals. However, for the time being chemization has still not become an active component of the uniform system of managing the reproduction of soil fertility and its protection under intensive farming. The scientific collectives spend great efforts to prove the need for more fertilizer but lesser work on their efficient utilization. Insufficient work has been done on problems of the comprehensive use of chemization (and chemical fertilizers and pesticides). Scientific and practical workers are currently concentrating on their solution.

Successful scientific support of intensive technologies in crop growing greatly depends on selection workers. Properly organized selection and seed growing could increase yields by up to 30 percent. Strains introduced in their time by outstanding scientists, such as V.N. Remeslo, P.P. Lukyanenko and V.S. Pustovoyt, greatly contributed to the intensification of farming.

The scale of selection under contemporary conditions has increased substantially and some results have been achieved. During the 11th 5-Year Plan 707 new strains and hybrids of grain crops were created and more than 300 were zoned. Particularly valuable among them are strains of intensive winter wheat, early-ripening corn hybrids, created under the guidance of VASKHNIL Academician G.S. Galejev, and a number of new promising strains for oleaginous, leguminous, industrial, fruit, vegetable and other crops, suggested by scientists from our institutes.

However, selection work is still severely lagging behind contemporary requirements. Genetically reliable resistance of zoned strains and hybrids to drought, cold and other adverse factors, and immunity from diseases and pests, fungi and rust in particular, have not been developed. Problems of production quality, recovery of water and nutritive substances and resistance to salinity must be urgently solved. We are short of strains for the irrigated areas. The lagging behind world standards in the development of highly efficient grain and oleaginous hybrids is being surmounted sluggishly. Few fast-ripening wheat strains have been developed for Siberia and other areas with a short warm season, a fact which was justifiably criticized at the 27th Party Congress. The activities of selection centers are being energized. The All-Union Crop Growing Scientific Research Institute imeni N.I. Vavilov has developed the Genofond Automated Information System, on the basis of which every year selection centers will receive from 80 to 100 donors of most important biological and economically valuable features. A number of fast-ripening strains, which can ensure more stable crops, are being tested by the state. However, not everything depends on the strain. The incomplete system of seed production is a major obstacle on the way to high yields, manifested in the poor specialization of seed production facilities and the sluggishness of their retooling. The organization of strain substitution is also suffering from shortcomings. Suggestions related to the specific solution of all such problems have been drafted.

The scientists face equally complex problems in terms of the scientific backing of intensive technologies in animal husbandry. In a number of republics and oblasts it has already been developed on a sufficiently high level. Many farms and livestock breeding establishments have herds with a milk production of 5,500-7,000 kilograms per year. Intensive breeds and lines of cattle, hogs, sheep and poultry have been developed. A program is underway for genetic improvement of the dairy herd on the basis of the Holstein-Frizian breed. However, the overall level of intensiveness of animal husbandry and the extent of utilization of the genetic potential of the animals are being improved too slowly. Under conditions governed by a rigid limitation in resources and scarcity of cadres, the burden of extensive development is becoming increasingly heavy. The study conducted by a group of VASKHNIL scientists indicates that in order to reach the levels set by the Food Program for 1990, given the current level of intensiveness, additional capacities (buildings, equipment, etc.) costing a total of 21.7 billion rubles, 98.1 million tons of fodder units and labor equaling 4.2 billion man/hours will be necessary. Directing even a certain percentage of these resources toward upgrading the quality of feed, the reconstruction of livestock farms and improvements in selection and breeding would enable us to reach these objectives much more efficiently.

The slow conversion of this sector to intensification is accompanied by a lag in the most promising areas of scientific research. The main guideline in technological development was the creation of large animal husbandry complexes. This made it possible to handle larger herds and ensured a substantial lowering of labor outlays. However, this worsened feed production and increased costs. We must develop technologies which combine mass with individual methods of caring for the livestock and the maximal utilization of its potential. In developing such an approach it is also important to sensibly combine small with medium-sized and large farms.

New requirements have also appeared concerning the organization of livestock breeding. In the future as well, the genetic potential of the animals should not be such as to hinder the growth of productivity in the sector. We must drastically increase the number of embryo transplants in dairy cattle breeding, and use more extensively the system of large-scale selection with the help of contemporary genetic methods and computers. Such a system has already been mastered in a number of republics in the country, such as Latvia, and has proved its efficiency. Suffice it to say that its use enables us to double or triple the genetic improvement of the cattle compared with traditional selection methods.

Obviously, improvements in the breeds should be sustained by improvements in the feed base. Particular attention should be paid to meadows and pastures, the intensified utilization of which has long become urgent: although they stretch over more than 300 million hectares in the country, so far they account for no more than 30 percent of the fodder. We must ensure the faster growth in the production of green, coarse and fresh feeds, leguminous crops, oleaginous crops and rape and lupine grass and drastically increase the production of oil cake, groats and rich mixed feeds, and upgrade the share of barley and corn in the feed balance. We must adopt intensive technologies in the cultivation of such crops. Improving the structure of perennial grasses and mastering already developed intensive technologies for their cultivation would enable us to increase the amount of protein from such crops by 25-30 percent without expanding the area, and substantially to improve the quality of hay, haylage and silage. Currently the scientific establishments are working on the creation of an overall system of feed production along the entire technological chain, the purpose of which to provide the necessary protein in animal rations.

With agricultural intensification, the problem of the more energetic utilization of biological factors arises in its entire magnitude. The broadening of genetic possibilities of plants and animals increasingly depends on successes achieved in biotechnology, which opens new research horizons. Scientists have developed plant regeneration methods. In the area of selection, cellular engineering enables us not only purposefully to improve the resistance of plants to adverse factors but to accelerate it as well. It is with the help of such methods that the All-Union Selection-Genetic Institute (ODESSA) developed the first high-productivity strains of barley, resistance to lodging, drought and a number of diseases. Their development is twice as fast as in the past. The VASKHNIL and Agroprom laboratories developed very valuable strains of wheat, triticale, potatoes, clover, alfalfa and other crops using the haploid method.

Biotechnological methods also helped to accelerate the improvement of livestock breeds. This particularly applies to the already mentioned embryo transplants. Extensive use is being made of the possibility of expanding gene-engineering. The development of biotechnological methods for obtaining feed protein and other produce from industrial waste is of great importance. Increasing use is being made of biological and microbiological plant protection means: in 1985 they were applied on an area in excess of 33 million hectares. This enabled us somewhat to reduce the scale of chemical treatment of plants and crops. The task now is to develop highly efficient integrated plant protection systems.

New methods are actively entering traditional farming. In particular, the accumulation of biological nitrogen becomes very important. The use of tuber-plant bacteria is very efficient. Scientists are continuing their efforts to develop their most active strains through research involving leguminous and other types of crops. The development of a technology for the production of such preparations makes it possible to increase yields in a number of most important farm crops by 15-20 percent, and to lower the need for nitrogen fertilizers by approximately 30 percent.

Engineering studies are of great importance in the scientific support of the agroindustrial complex. Intensive technologies in crop growing and animal husbandry formulate essentially new requirements concerning the equipment--its reliability, comprehensiveness, economy and ease of handling. We must already now develop essentially new machines and mechanisms which will be used by the end of the century and formulate a strategy for the mechanization and solution of the power problem for the foreseeable future. Scientific research institutes in the agrochemical, reclamation and zootechnical areas are being involved in the development of energy-saving technologies. Research is being developed to replace petroleum products with nontraditional recoverable energy sources.

Ecology is a particular aspect of our activities. It is becoming increasingly important today. The increased scale of economic activities intensifies the pressure on the environment and frequently leads to its impoverishment and spoiling. This applies to the soil, water, air, flora and fauna. Scientists can make a great contribution to the protection of nature and to ensuring normal conditions for human activities.

Today we face the urgent task of reducing to a minimum erosion processes in all their manifestations and in all areas. The destruction of the soil cover is as threatening to mankind as the exhaustion of mineral raw material resources. As a consequence of erosion, every year tens of millions of tons of humus are washed off fields and pastures and agricultural production is substantially reduced. That is why any new developments and new technology must have a soil-protection aspect. An entire set of measures has been formulated to reduce the damage caused by wind and water erosion, applied on an area in excess of 50 million hectares. However, this is merely an insignificant part of the land which is threatened: in our country 70 percent of the arable land is located in areas subject to erosion. For the time being, soil-protective crop rotation is being still developed too slowly; the planting of field-protection wooded areas is carried out on a small scale and

because of poor and improper care those already existing are not fulfilling their functions. Modern scientific and technological development has already made possible to convert from isolated antierosion methods to the development of integral optimized arrays based on the landscape-geographic principle.

We are concerned by the present low quality of reclamation and engineering developments. Consequently, secondary salinization and swamping of the soils and the destruction of their structure and their microflora take place over considerable areas. Water losses are substantial and the harm caused to nature is equally great. Repairing the damage is not always possible.

Let us admit that the use of fertilizers and pesticides is not always coordinated with environmental protection. The scientific institutions will pay greater attention to studies aimed at the development of new types of fertilizers, which would be absorbed by the plants more completely and cause lesser harm to nature, and of ecologically efficient methods for their application. At the same time, as we pointed out, it is important to make fuller use of organic substances and biological factors for improving the fertility of the soil and plant protection.

In the majority of cases, ecologically advantageous decisions are efficient economically as well. The use of multipurpose machinery is an example of this. Such machinery improves labor productivity and lowers outlays of fuels and lubricants. It also reduces the scattering, packing and, in the final account, the destruction of the soil. This is extremely important under contemporary conditions. Already now about 13 standard hectares of different operations are conducted per hectare of arable land. Reaching higher levels in commodity output while retaining the existing technologies would improve this indicator by a factor of 1.5. The intensive use of the soil will increase correspondingly. A search is in progress for essentially new working elements and their combination, which could combine technological operations.

The solution of ecological problems affects all sectors of the agroindustrial complex. The task of developing efficient methods for control and protection of the environment is a general one. This provides a tremendous field of activities for scientists in all areas of knowledge.

The 27th Party Congress faced economists with major tasks. In terms of the agrarian economic sector, they were concretized in the CPSU Central Committee and USSR Council of Ministers decree "On Further Improving the Mechanism of Economic Management in the Country's Agroindustrial Complex." Some of these problems are urgent. Others are based on long-term developments. The efforts of the respective VASKHNIL scientific institutions are concentrated on their solution.

A great deal of work lies ahead in connection with restructuring the management of the agroindustrial complex. Although somewhat differentiating between the formal and the actual socialization of socialist production, we can say that so far the legal reorganization of this management has been only formal. Now a movement in depth is being initiated. We must master the new mechanism and apply different levers. The functions of the new authorities on

all levels must be refined, so that the old departmental lack of coordination may not be repeated in the Gosagroprom. Such fears are not groundless.

One of the most topical problems is converting to the standardized planning method. This is an old idea. The economic scientific institutions must now formulate immediately, this very year, proper methods and, on this basis, together with the agroprom authorities, set substantiated economic standards. However, they must not become restrictive to the enterprises but stimulate independent and efficient work and prevent irresponsibility and carelessness.

Land registration is one of the main task. It must unconditionally apply to each individual farm. We must assess the other components of the resource potential as well. In the immediate future, together with economic workers, the scientists will develop a system of economic rather than simply technological standards, which should cover all aspects of the reproduction process.

In standardizing planning it is important as of now to be aware of the problems which may arise, particularly in connection with the existence of a large number of economically weak farms. As a rule, their land is no worse than that of their neighbors, and in some cases they have just as much equipment and capital assets. Obviously, a special operational system should be developed for such farms as a "triggering impetus," for a specific period of time, and additional resources should be allocated on the basis of specified standards.

Perfecting price setting is an urgent problem. Practical workers expect specific and substantiated suggestions on ensuring permanent rather than sporadic parity between agriculture and the other economic sectors and a substantiated correlation between prices and credit-financial levers. Without this it would be difficult to implement the stipulation of the 27th Party Congress on the comprehensive development of true cost accounting and converting kolkhozes and sovkhozes to a self-financing system.

Nor should we forget long-term developments. Scientists are already developing an economic mechanism for the agroindustrial complex for the 13th 5-Year Plan, consistent with the intensive type of economic growth, which would creatively embody Lenin's idea of the tax-in-kind as applicable to contemporary conditions. It would be erroneous to see in this merely a specific form of the type of economic management applied during the NEP. This system includes the most important principles of socialist economic management: optimal combination of centralized with decentralized management principles, unity between individual and public interests and material incentive for high labor results.

The conversion to standardized methods meets these principles. However, we must go further. It is important to find ways of gradual transition to planning through economic levers on a contractual basis. We must broaden the area and improve the efficiency of economic contracts. They must be not formal, as is currently the case, but become the basis of planning and regulate the activities of both enterprises and management bodies. This approach alone can ensure the harmonious unity of interest of economic

subdivisions and society as a whole, instead of the subordination (frequently arbitrary) of the first to the second. This erects a certain barrier to the unjustified interference of superior bodies in enterprise economic activities and will create conditions for their real rather than merely declared autonomy.

It is extremely important to accurately interpret the current economic interrelationship among the units of the agroindustrial complex, for so far they are poorly oriented toward end results. Another ripe problem is that of strengthening the interconnection between agriculture not only with the processing but also the capital-asset generating sectors. So far the kolkhozes and sovkhoses have no real levers with which to influence industrial enterprises. Frequently the voice of those who use the equipment is ignored. In other words, the problem of intensifying the influence of the consumer on the producer has not been solved and remains exceptionally topical.

A great deal must be accomplished by the scientists to perfect the material incentive mechanism. The enterprises are insufficiently interested in an economical approach to their assets and the correlation between labor productivity and wages is still far from optimal. We must consider how the wage and bonus systems themselves could include the faster growth of labor productivity.

We already mentioned the need for a more intensive theoretical study of the two forms of ownership. In this case it is a question of eliminating the underestimating of kolkhoz ownership and substantially reinterpreting our understanding of its role and links with state ownership. Kolkhoz activities suffer from many shortcomings and shortcuts. However, as practical experience indicates, in this case the economic management mechanism is still more advanced than in the sovkhoses. Here resources are used better and the feeling of ownership is more developed.

A survey of managers of enterprises within the agroindustrial complex in the LiSSR and the Moscow, Vladimir and Kurgan oblasts, recently conducted by VASKHNIL, provided interesting results. In answering the question of what is needed today--a radical restructuring of the current mechanism or partial improvements of the same--for the first time the majority of sovkhos directors rather than kolkhoz chairmen were in favor of a radical restructuring. This is no accident, for sovkhos activities are more strictly regulated. Here cost accounting and intrafarm democracy are less well-developed.

It would be expedient, in our view, for the features of economic management which have proven justified in the kolkhoz sector to be applied more daringly in the sovkhoses as well. Perhaps sovkhos management should become elective. At the same time, the economic management mechanism in the kolkhozes must be made more meaningful.

The conversion of enterprises to real cost accounting will increase their possibilities in terms of the social reconstruction of the countryside. However, this alone is insufficient. Steps should be considered contributing to strengthening the role of industrial and servicing organizations within the agroindustrial complex in rural nonindustrial construction, strengthening

their ties with the local soviets and broadening the rights of the enterprises themselves in solving social problems. It is important for the targets and sizes of investments to become more closely related to the efficiency of economic activities and for the transition from residual to parity allocation of capital investments for social and cultural purposes to become reality.

The development of an efficient economic mechanism will necessitate experimentation. Economic scientific research institutes are increasing their contribution to the preparations and implementation of the same. Greater attention will be paid to the continuing study of results and the prompt formulation of suggestions and for improving conditions for their implementation. In this case hasty conclusions and slowness are equally harmful.

The current reorganization cannot fail to affect science itself. The system of comprehensive scientific support of agricultural production in each oblast, kray and republic is being refined. Preparations are under way for the creation of VASKHNIL scientific centers and the network of scientific-production associations is being broadened. At the same time, comprehensive target programs and finished scientific products are being concretized and the areas of work and the institutes and their subunits are being restructured. Let us point out that shortcomings in the financing and coordinating of scientific research have not been totally eliminated. Frequently cop performers are selected formally, regardless of their real possibilities in completing projects. In turn, the head organizations still lack sufficiently powerful levers to control research conducted in accordance with comprehensive programs. More work is needed to reduce the number of cop performers and relieve the zonal institutes so that they may concentrate on solving regional problems. Extensive work has already been done in this respect after the 27th Party Congress.

A total of 22 technological centers have been created for the timely and qualitative solution of problems related to intensive technologies, on the basis of zonal scientific research institutions. The area of their activities and standards, based on intensive technologies, and the specific organizations participating in comprehensive research have defined.

The respective centers play a great role in promoting selection work. Currently 53 such centers operate in various parts of the country. We believe that as a whole the organization of this type of scientific centers is promising. Here good conditions are provided for joining efforts with the institutes of the USSR Academy of Sciences. Under contemporary conditions such cooperation is particularly important and yields tangible results. Thus, scientists from the Siberian Scientific Research Crop Growing and Selection Institute and the USSR Academy of Sciences Siberian Department of Cytology and Genetics are working intensively on the development of new highly productive and high-quality spring wheat strains. One of them--Novosibirskaya-67--has been accepted and is being cultivated in Siberia on some 2 million hectares. Thanks to the cooperation among scientists from the USSR Academy of Sciences, Moscow State University and VASKHNIL, problems of developing virus-free potato and fruit seeds are being solved successfully. Sixty-five potato strains, zoned for the RSFSR, the Ukraine, Belorussia and Estonia, have been improved.

Fast methods for diagnosing viruses have been developed. VASKHNIL and the Academy of sciences are fruitfully cooperating in using gene and cellular engineering in selection.

We shall also broaden the practice of developing intersectorial scientific and technical centers, for production intensification and acceleration are impossible without the development of integral production systems covering all parts of the agroindustrial complex involved in making any given product. It is important to make fuller use of VUZ scientists by broadening the ties between scientific collectives of teaching institutes and scientific research centers, including them in general plans and work programs and developing training-production and training-scientific associations.

The establishment of Gosagroprom provided good prerequisites for eliminating the lack of coordination in the management of the most important areas of scientific research and for intensifying the integration between science and production. The activities of scientific research institutes and experimental stations are being directed not only toward issuing recommendations and making suggestions but toward end results--upgrading the efficiency and increasing the stability and rhythmical nature of the production process and increasing returns on investments. Naturally, we also need publications and dissertations. However, they are the intermediary products of scientific work. So far, many scientists have been very successful precisely in writing monographs and articles instead of addressing themselves to practical needs. For example, between 1981 and 1985 the Soil Institute imeni V.V. Dokuchayev produced only one scientific development of national importance, which was included in the application plan. The effect of the utilization of the institute's recommendations has not exceeded 1.7 rubles per ruble of outlays, which is lower by several hundred percent compared to other scientific research institutes.

Today it is important to have closer direct contacts between science and the enterprises. Despite some changes in this area, the gap between the requirements of economic practice and the suggestions submitted by our institutions remains wide. In order to eliminate it we shall drastically expand the network of scientific-production associations. We must not allow the development of formalism and limit the work to a change in labels. As practical experience indicates, the real reconstruction of the work creates favorable conditions for accelerating the testing of the results of research in experimental farms, increases the interest of the personnel in the practical application of the achievements of science and enables us to concentrate material and financial resources on the most topical problems. Such associations have the possibility of setting up economic incentive funds.

Efficient work is being done by the Dnepr Scientific-Production Corn Growing Association. The technology used here in growing corn for grain with the participation of scientists was introduced in 1985 on an area of 3.2 million hectares. The influence of the association is particularly noticeable in increased farm output in Dnepropetrovsk Oblast. In 1983-1985 an intensive technology for corn growing was mastered here by 102 kolkhozes and sovkhoses and applied on 76,000 hectares, as a result of which average yields increased by 12 quintals. Equally noteworthy is the practical experience of the

Moldavian scientific-production associations, the Truck Gardening and Viticulture NPO imeni R.R. Shreder (Uzbek SSR) and the Don NPO in Rostov Oblast.

Accelerating the development of projects in the fields and livestock farms of experimental-production farms plays a great role. More than 400 such farms operate as part of the VASKHNIL scientific-production associations and institutes. Their facilities are used in perfecting technologies, introducing and increasing the production of seeds for higher-yielding strains and crop hybrids and livestock and poultry breeds and the solution of many other practical science problems. Unfortunately, so far not all experimental farms can be considered models for kolkhozes and sovkhoses and we are trying to correct this situation. A frequent error is the following: such farms are asked to produce ordinary commodities for sale, although their purpose is to supply kolkhozes and sovkhoses with high-grade seeds and purebred young cattle.

The application of new developments is of decisive importance in providing scientific support for acceleration. Currently this is the weakest area. Many problems must be resolved on the scientific level. It is equally true, however, that many efficient developments do not find extensive practical use for many years or sometimes not at all, although funds and years of scientific work were invested in them.

We must make an effort to make innovations practically usable and to train farm and propaganda specialists in the extensive dissemination of new methods, technologies, machines, plant strains, etc. The information provided must be extremely brief, precise and clear. It must provide the essence of innovations and their efficiency and, above all, describe application methods, possible difficulties and ways of surmounting them.

The well-organized work of the three partners--science, production and management--is very important in applied work. Management must be in charge of planning and organizing the application of developments, their specific financing and material and technical support. The enterprises themselves must do the main work in the direct application of innovations. It is important to increase the responsibility of managers and specialists for this aspect of the work.

For the time being, scientists owe a great deal of work to practical workers. In turn, the practical workers as well, must address themselves to science. We must not forget the mandatory truth that scientific developments are needed and can be efficient only after simple, basic farming problems have been resolved, indicated by the good peasant common sense, and if irresponsibility has been eliminated. Here as well a great deal depends on farm managers and superior management units.

Experience in mastering intensive technologies has indicated that their proper application leads to high returns on investments and improved production quality. Last year such technologies made it possible to harvest an additional 16 million tons of grain. However, not all farms were able to obtain the addition they were hoping for. The necessary requirements were not

always met. High cadre skills, precise knowledge of plant physiology and the strictest possible technological discipline were not secured everywhere. A study has shown that up to 70 percent of production shortfalls were the result of various technological violations.

We have no right to ignore the fact that intensive technology is efficient only against a background of high production standards, within the framework of an efficient farming system. No results can be achieved without this. What can fertilizer contribute to acid, eroded or weed-covered soils? Nothing other than losses and high costs. Naturally, the scientific research establishments alone cannot solve the problem of applying integral intensive technology. We must bring into action the tremendous forces of specialists directly employed at the enterprises. Their ratio for the country at large is more than 20 people per scientific worker. More than 3,000 practical specialists have scientific degrees. It is their direct obligation to develop the technology in all its details, such as to make it applicable to the conditions of the individual farms. The scientific workers must provide supervision and develop technology in experimental and base farms, engage in authorship supervision and provide scientific-methodical aid to kolkhoz and sovkhoz managers and specialists. On the one hand, we need more active and specific work on intensive technologies; on the other, we must master them comprehensively.

It is a question of developing and applying intensive conservation technologies not only in agriculture but in all sectors of agroindustrial production where technological unity exists and where the end product of one sector is the raw material of another. We can no longer be satisfied with the current situation in which agriculture feels a scarcity of feed protein while in the dairy industry no more than one-half of the byproducts of butter and cheese manufacturing are used. On the one hand, we have a shortage and on the other, substantial losses. This means a double economic loss which also involves environmental pollution. In this connection, we cannot ignore the question of drastically increasing the use of low-waste and wasteless technologies. However, the development of such technologies requires, above all, the removal of technological, organizational and economic barriers. That is why it is so important today to increase reciprocal interests and improve reciprocal understanding and interaction among scientific workers in related sectors and economic managers. A profound psychological restructuring is necessary. Existing stereotypes and ways of thinking must be eliminated. This greatly applies to scientific workers as well. Scientists must become the defenders of public and not of departmental interests.

Today we have a severe cadre problem. For a number of reasons, in recent years work in agrarian science has become nonprestigious. There are no competitions for postgraduate studies and, consequently, for new talented youth in science. Therefore, serious steps must be taken to provide moral and material incentives for scientific work.

The tasks which face agrarian scientists are of unparalleled scope. This requires the radical restructuring of scientific research and its organizations. The demands of the present dictate the need to mobilize all forces and facilities, to engage in persistent and painstaking work and make

extensive use of contemporary methods, such as the accelerated mastery of biotechnology, mathematical programming, computers, systems analysis and all accomplishments of scientific and technical progress in science. The main tools of the scientist are intensive, sharp and comprehensive thinking and research. Major problems must be developed and broad summations reached. Research and development must be systematically implemented on a broad scale and practical requirements must be firmly faced.

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WIDER USE OF OPTIMIZATION METHODS IN THE NATIONAL ECONOMY

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[Article by Academician L. Kantorovich (deceased), Dr of Economic Sciences M. Albegov and Dr of Economic Sciences V. Bezrukov]

[Text] The efficient management of the socialist economy plays a major role in the acceleration of our country's socioeconomic development. This is an exceptionally complex scientific and practical task. The public ownership of means of production and the possibility of managing the national economy from a single center in the interest of society as a whole and of all of its citizens provide exceptionally favorable conditions for the scientific management of the economy. However, in practice, efficient management involves a great deal of difficulties, the existence of which is largely determined by the tremendous scale and complexity of the structure and interconnections in a modern economy and the variety of possible management decisions.

National economic management includes not only the planned formulation of objectives and basic trends in its development but also coordinated management of the activities of individual units, such as sectorial and territorial bodies, associations and enterprises. We must also ensure the interconnection, efficiency and effectiveness of decisions made on different management levels and the balancing of the economy. The creation of such a management system in our country has no precedent to draw on.

The need to improve the management of the socialist economy intensified in recent years in connection with the worsening of production relations, increased requirements concerning the dynamism of the economy, the drastic acceleration of scientific and technical progress and the need for the fast utilization of its achievements. This problem was most urgently formulated at the 27th CPSU Congress.

In a complex project such as the socialist economy, high efficiency can be ensured only on a strictly scientific basis. This is inconceivable without the use of computers and mathematical methods. "The complex and comprehensive nature of contemporary problems," the CPSU program notes, "requires intensified integration among social, natural and technical sciences."

It is no accident that the USSR was the first country in which methods for mathematical modeling of the economy were applied. Public ownership of the means of production objectively creates the essential possibilities of a planned organization of production on the scale of the entire country and the coordinated approach to the entire set of economic problems which appear on different management levels. The use of such opportunities formulates specific requirements concerning economic science in terms of the development of scientifically substantiated methods for economic decision making, based on mathematical computations, and the choice of optimal variants in the utilization of production resources. This task has no analogue in global economic practice. Naturally, this does not mean that mathematical methods and computers are not used in the capitalist countries in solving economic and management problems. However, this is done on the basis of the overall orientation of the individual companies and corporations toward "automatic regulators," which are characteristic of the Western economy (stock exchange, the market and others), for they lack the social foundation for the formulation of optimization problems on a large, not to mention national, scale for the formulation of problems of economic-mathematical modeling of the unified national economic complex.

The broad scale economic-mathematical models developed in our country are consistent with the very nature of the socialist economy, for they deal with the optimization not of isolated projects but their with their totality, from the viewpoint of the objectives of the entire system and the interests of the national economy as a whole.

It is of essential importance that the study of models combined with economic results based on the plan provides means for a scientifically substantiated elaboration of economic indicators. For that reason, economic-mathematical models and methods have proved fruitful not only in the area of planning computations but also in the development of basic theoretical problems of the socialist economy, which made it possible to intensify and concretize the understanding of basic political economic categories, such as consumer value, social usefulness and social and necessary labor outlays. The study of economic-mathematical models enabled us substantially to increase our understanding of practically important methodological problems, such as assessing the efficiency of capital investments and the location of production facilities. The formulation of a number of problems related to planned price-setting and proving the thesis of the indivisibility between the national economic plan and prices were major economic-mathematical accomplishments. In particular, the need was determined of computing the rental part of the price, which led to a drastic change in concepts on the value of the output of extracting sectors and most important national economic resources, such as the land, forests, water and minerals, previously considered simply as the gifts of nature.

The development of problems of the logic of planning, combining national economic with local optimality criteria and correlating outlays with results became the scientific foundations for the concept of orienting all economic activities toward achieving the highest possible end results, which has now become determining in theoretical and practical planning. The concept of the unified economic mechanism of our society has now become essentially

formulated. It combines all forms, ways and means of managing socioeconomic processes, with the leading role of centralized planning, and ensures maximal national economic efficiency and production intensification.

The initial successful attempts at making practical use of optimization models on the enterprise level were made as early as the 1940s. However, the intensive development and extensive practical utilization of optimizing computations began only in the 1960s, with the development of computers. A great deal has been accomplished since then in the scientific developments of such methods and their practical utilization: major scientific institutes were created, skilled cadres were trained and many sectors and enterprises were supplied with modern computers. The efficient use of mathematical methods in industry, construction, agriculture and transportation became possible, both in terms of the individual enterprise and in solving problems of territorial, sectorial and national economic planning and management.

The utilization of optimizing models for current planning and daily management in a number of economic sectors yielded significant results, such as motor vehicle dispatching, which reduced the number of empty runs, system scheduling, successfully used in construction, calendar planning in machine building, and efficient assigning of consumers to suppliers within the Gosplan system, which reduced transport costs by tens of million of rubles.

Work on long-term optimal planning in the development, location and specialization of production facilities in the individual economic sectors was undertaken at the start of the 1960s by a number of scientific institutes (USSR Academy of Sciences TsEMI, USSR Academy of Sciences Siberian Department IEOPP, USSR Gosplan SOPS, and some sectorial institutes). Such work was done in the construction materials industry, and the electrical engineering, instrument making, fishing and other sectors. The developed models enable us to determine the best possible type of specialization of the enterprises and to select among the possible choices for the reconstruction of existing and building new projects those which meet national economic needs at the lowest possible cost. Today there is virtually no sector in which optimization computations have not been made at different times or to varying extents. Practical experience indicates that the implementation of optimization tasks enables us to save up to 10-15 percent of outlays compared with plans drafted by traditional methods, and substantially to improve plan balancing and to accelerate scientific and technical progress in the sector.

The use of economic-mathematical models also led to revising a number of traditional approaches to price-setting. Thus, the very first computations for optimizing the structure of the country's long-term fuel-energy balance, which were made in the middle of the 1960s, revealed shortcomings in the fuel price-setting system: sometimes the price of a specific type of fuel in the area where it originated was higher than at the place of delivery and prices of higher-grade fuels turned out below those of the lower grade fuels.

For example, in the Tsentralnyy Rayon in the European part of the USSR, the cost of high-sulfur fuel oil (per energy unit) exceeded that of natural gas and the cost of high-sulfur coal mined in the Moscow area was higher than the better-grade Donetsk coal; in turn, the cost of coal mined in the Donetsk and

Moscow basins was higher than that of natural gas and fuel oil. The results of the computations enabled us to eliminate many essential shortcomings in fuel prices with the introduction of the new wholesale prices in 1967. This work was continued and perfected subsequently.

Computations for optimizing the development of the fuel and energy complex in the country are a typical example of the possibility of using models in planning intersectorial complexes. Thus, the model developed by the Siberian Energy and High-Temperature Institute, and the VGPINII Energy Network Planning, together with the USSR Gosplan GVTs enables us already today to compute in a few hours' time, based on USSR Gosplan assignments, variants in the development of the country's long-term fuel-energy balance and, in a few days, to analyze the results in forms suitable for subsequent planning in all sectors within the complex and on the territorial level.

A variety of models for an intrasectorial balance have become firmly established in the practice of plan computations for the entire national economy on a long-term basis. In particular, the USSR Gosplan Main Computer Center makes intensive use of the Central Problems Complex. Studies in the theory and methods of socioeconomic forecasting, extensively used today in drafting the comprehensive program for scientific and technical progress, for example, were of major importance. Increasing use is being made of the methods of target program planning, the basic stipulations of which were formulated and developed in the course of economic-mathematical research. Corresponding models were applied, for example, in supervising the construction of the Baykal-Amur Mainline. Models for planning the structure of territorial production complexes, formulated by the USSR Academy of Sciences Siberian Department Institute of Economics and Organization of Industrial Production, were repeatedly submitted to practical tests.

The use of the first part (and, recently, the second part) of an automated planning computation system (ASPR) of the USSR Gosplan and the gosplans of union republics was a definite step in the more extensive practical use of economic-mathematical methods and models. Currently more than 5,000 different economic planning problems are being solved by the USSR Gosplan alone, using the computer of its Main Computer Center and the minicomputers in its various departments. It is true that the bulk of them are problems of so-called direct processing of data received by the USSR Gosplan from ministries and departments in the course of the formulation of national economic plans. However, a significant number of problems based on economic-mathematical models suggested by scientists are also being solved.

Despite achievements in theory and successful practical use, economic-mathematical modeling as a whole lags behind current requirements which demand the extensive application of the results of practical development. For the time being, such methods have only been tested and adopted. The task is to ensure their full utilization by management bodies. Such work cannot be based only on the enthusiasm of individual scientists or personnel of planning agencies, ministries and departments. They cannot be used for more than individual projects and models in a single enterprise or sector.

A number of examples may be cited of developments which were completed decades ago and for which experience in practical use has been gained but which have been applied on an isolated basis and the results of which have accounted for a small share of what their development on the necessary scale could have yielded. Scientists have proposed dozens of measures, each one of which could have yielded major national economic results. Unfortunately, to this day most of them have remained virtually neglected.

Thus, as early as the end of the 1940s, the Leningrad Railroad Car-Manufacturing Plant imeni Ye.I. Yegorov applied mathematical methods for the efficient sizing of materials, which reduced waste by one-half. Subsequently, such work was continued by various collectives and successfully applied at enterprises in different sectors (machine building, metallurgy, light industry, timber processing), yielding significant results, described in various publications. The first monograph on this topic came out in 1951. Nevertheless, to this day such developments have not been applied on the proper scale. Yet their full implementation would enable us to save on materials within the shortest possible time and virtually without capital investments totaling hundreds of millions of rubles per year.

Work on the efficient placement of orders for pipes and rolled metal for the USSR as a whole was initiated on the initiative of the USSR Academy of Sciences Siberian Department Institute of Mathematics in 1962. Let us point out that the very formulation of this problem, basically possible only under the conditions of a planned socialist economy, called for solving a problem of linear programming of unique dimensions. The application of this model enabled us substantially to increase the overall productivity of rolling mills, shorten the length of transportation and improve consumer deliveries. This work applied to specific types of metals and yielded annual savings of up to 80,000 tons of rolled goods. However, neither the Gosplan nor the Ministry of Ferrous Metallurgy took the necessary steps to ensure the systematic use and extensive application of such developments, essentially because of interdepartmental lack of coordination and insufficient planning-economic indicators.

This work was subsequently continued with the participation of the Ukrainian SSR Academy of Sciences Institute of Cybernetics. In 1980 the VNIIT developed an organizational-economic program for the efficient placement of orders and for loading rolling mills, approved by the management of the USSR Gosplan and Gosplan, the Ministry of Ferrous Metallurgy and the Ukrainian SSR Academy of Sciences Presidium. In the first stage of its use, savings amounted to several hundred thousand tons of pipes. However, this program as well is being implemented sluggishly although its full implementation could yield an additional amount of 1-2 million tons of pipes and rolled metal per year and substantially improve overall metal procurements.

A method for selecting an efficient structure for the machine-tractor fleet of kolkhozes and sovkhoses, consistent with local natural conditions and the structure of areas in crops was developed as early as the 1960s, which would make possible to save more than 20 percent of capital investments (USSR Academy of Sciences Siberian Department Institute of Mathematics, together with the Siberian VIM). The same method can be used also to provide objective

economic assessments of efficiency and define efficient areas for the use of new agricultural machinery. Based on the program and other similar methods, a computation was made on the fleets of agricultural machines needed in the different natural-climatic zones. This work, however, remained virtually ignored, for even on an experimental basis the former Goskomselkhoztekhnika did base its deliveries on the computations and the former Ministry of Agriculture remains simply indifferent to it.

Starting with 1960, suggestions were submitted on improving the structure of purchase prices of farm commodities, based on differences in natural conditions, as reflected in rental payments, using optimizing computations and evaluations. Their implementation would have contributed to the intensification and efficient deployment of agricultural production, cooperation and equalization of the economic status of farms operating under different natural conditions and could have been of essential significance in the implementation of the Food Program. These suggestions were supported by computations carried out by the USSR Academy of Sciences Siberian Department and were submitted to the leadership of the Ministry of Agriculture and repeatedly reported to the State Committee for Prices, where the question of experimenting with this system of economic relations in agriculture in a union republic or any given oblast in the RSFSR was discussed. However, the State Committee for Prices and the former Ministry of Agriculture showed no interest in them. The lack of consideration of such methodology leads to the appearance of so-called insoluble problems. Thus, a problem of this nature is discussed in the article by N.T. Glushkov "Perfecting Price Setting in the APK" (PLANOVOYE KHOZYAYSTVO, No 9, 1985): with a single price for concentrated fodder and a zonal differentiation of purchase prices of feed grain crops, it is naturally more profitable for farms in the south to feed cattle unprocessed grain and for farms in the north to deliver more grain and purchase concentrated fodder.

The lack of interest shown by enterprises and departments in the use of complete, tested and very efficient developments is the result, above all, by shortcomings in the existing economic mechanism and, specifically, as was noted at the June 1985 CPSU Central Committee conference, the lack of an "anti-outlay mechanism" which would literally penalize careless economic managers and those who like to extract more resources and capital investments from the state and return less to society. Here is a typical example: in 1981 (during the first stage of the second part of the ASPR), the number of sectorial optimization problems solved by the USSR Gosplan was substantially below the 1977 figure. The point is that the initial information for optimizing tasks can be provided only on the level of a ministry or all-union industrial association. During the stage of experimental computations no such information was submitted to Gosplan. However, as decisions on the amounts of allocated resources are being made on the basis of results of Gosplan optimization computations, ministries no longer provide corresponding information, for the optimal plans are stressed and, in this connection, sectors engaged in optimization developments turn out to be in a "worse" situation than those applying traditional methods.

Since the use in management practice of economic-mathematical models, the purpose of which is, by their very nature, to seek the most efficient

planning-management decisions, and the identification of all available possibilities, it requires the radical restructuring of the management of enterprises and associations and the rejection of planning on the basis of the achieved level. "The solution of new economic problems is impossible without the profound restructuring of the economic mechanism and the creation of an integral, efficient and flexible management system, which enables us to utilize the possibilities of socialism more fully," the Central Committee political report to the 27th Party Congress noted.

The pace at which economic-mathematical methods are applied is also affected by occasional scorning of economic analysis and computations. Frequently important decisions are made arbitrarily, sometimes despite results of economic studies. Unlike the situation in technology, in economics mistrust in science has still not been surmounted. The importance of a proper choice of economic indicators is being underestimated and the possibility of their scientific formulation and computation with the help of economic-mathematical models is virtually ignored. Yet a number of examples can be quoted on the way errors in the choice of an economic indicator lead to losses which substantially exceed any damage caused by errors in technical designs. Thus, as the result of the fact that the plan for cotton purchases was set in Uzbekistan in terms of tons and that the implementation of the plan included a significant amount of low-grade unginned cotton, the production of fibers dropped although cotton procurements increased. Correspondingly, the areas under cotton were expanded and labor, irrigation and other costs increased.

We must develop respect for and interest in economic computations and upgrade the economic standards of cadres. This can be achieved by substantially improving the economic training of students attending technical and agricultural VUZs and management cadres, and intensifying the professional training of specialists in the economic-mathematical professions and the use of computers in economic computations. Economists, particularly those working in economic-mathematical modeling, the dissemination of economic knowledge and the creation of high-quality popular science publications in this area, must participate more actively in such work.

Studies involving the use of economic-mathematical methods are concentrated within a relatively small circle of scientific research organizations, as a result of which a significant percentage of economic scientists have mastered modern economic tools very poorly (or not at all). Problems of the political-economy substantiation and interpretation of concepts and categories used in the structuring of economic-mathematical models, remain virtually unstudied.

Academic science must increase methodical guidance and coordination of developments in the area of automated control systems (ASU) and applied economic-mathematical modeling, which is today practiced in many scientific research institutes and design organizations of ministries and departments and is not always on the necessary scientific level. We must also consider the possibility of opening special cost accounting subunits in the large economic-mathematical institutes, the main task of which would be to do practical work on the most important projects.

The lack of experience in the application of a number of existing models and scientific recommendations, without which there improvement and adaptation to existing economic practice would be impossible, is becoming a hindrance in the development of the science itself, frequently leading to studies dealing with abstract elaborations quite remote from reality. Furthermore, the uncertainty that even a highly efficient development will be applied and actually used, rather than become another dead weight discourages researchers. This inevitably leads to lowered requirements concerning the quality of the work and its completeness.

Equipping many sectors and enterprises with automated control systems and powerful computers plays an essential role in the utilization and dissemination of mathematical methods in the national economy. However, unfortunately, such hopes have proved mostly unjustified. There has been an enthusiasm for the purely technical aspects of the work and a certain fetishizing of computers and underestimating the complexity of the economy as a centrally controlled system and the role which cost accounting and related categories and the existence of conflicting interests plays in it. Hence the insufficient attention paid to economic analysis, the human factor and the incentive mechanisms.

The development of ASU has largely followed the simplest yet ineffective way: computers are essentially used for routine planning and bookkeeping operations and only a small percentage of their possibilities have been used for really upgrading production efficiency on the basis of perfecting management, i.e., they have been used more to assist than to improve management.

Optimization and other major problems have still not assumed their proper role in the work of ASU although, as acknowledged by most organizations, it is precisely they which yield the best actual results.

The system used in accounting for the work of the ASU contributes to the continuation of shortcomings. For example, the number of applied projects is an important indicator. Obviously, it is easier to increase it by solving simpler problems. The cost accounting system which, as a rule, calls for the fast submission of results, does not always encourage the solution of complex problems or a set of problems which need preliminary research. ASU work is assessed quite arbitrarily, on the basis of the accepted method, and does not reflect the actual results; nor does it create any interest in completing the most efficient projects. That is why the simplest information, accountability and computation projects submitted to production facilities have proved to be the most profitable. Naturally, to a certain extent they contributed to the study of the economic process and were of some use. Under the conditions of the current economic mechanism, this situation was also liked by the managements of some enterprises and departments, for it did not require any restructuring in the organization of production management, or efforts to amend plans and eliminate related responsibilities. However, the use of substantial ASU allocations has shown that such work is being given proper consideration and that it is growing and developing successfully.

Control and study of ASU work was further hindered by the fact that the heads of enterprises and departments, who are properly familiar with basic

production operations, turned out, as a rule, to be less competent in such new areas. The ASU was like a separate "shop" with its own plans, standards and rating of activities. It was difficult to understand the work of this "shop," and its fast development required the work of a number of personnel who frequently lacked the necessary knowledge and training.

All of this could not fail to affect the results of the application of ASU and, to a certain extent, to lower the interest in such an unquestionably important and necessary work and to undermined the confidence in it.

The development of automated control systems and the extensive application of economic-mathematical models should take place within the overall efforts to perfect management and the economic mechanism. The complexity and difficulty of this work demand the use of all modern decision-making methods and modern computers and information equipment. The skillful combination of all available scientific and technical achievements in the area of management is required and this is the only approach which can help us to attain the expected results. This calls for painstaking scientific and organizational work, a clear idea of the objectives and interest in reaching them, extensive experimentation and objective and comprehensive scientific analysis of results.

This work presumes close contact between party and state bodies and between practical workers and scientists, for the complexity of such tasks does not allow us to expect a successful solution without serious scientific work.

Naturally, scientists do not have ready-made prescriptions for all situations encountered in practical work, for the number of scientific research projects is insufficient in terms of providing detailed recommendations. Nevertheless, the accumulated scientific knowledge leads us to trust that with intensive work, methodical unity and extensive experimentation the problem of radically perfecting national economic management can be solved and that significant economic results may be achieved in the immediate future through the extensive utilization of the achievements of scientific and technical progress, computers, office equipment and a drastic reduction in the time needed for putting new developments to practical use.

The use of mathematical methods in economics is one such essential innovation. Their application demands the radical restructuring of planning operations and new developments (unlike the field of technology, here the experience of the capitalist countries cannot be fully used); it requires increased reliability and enrichment of standardization and basic statistical work, trained cadres and the lifting of some psychological barriers. Even in the case of physical and technical computations, in which mathematics has been used for centuries, the use of computers did not develop immediately and turned out to be a rather complex operation. Naturally, in economics, where such traditions do not exist, the use of computers and mathematical methods has led to incomparably greater difficulties.

A broad advance in this area will require the adoption of major organizational steps with proper forces and facilities. For example, in designing very complex technical systems special scientific collectives are set up, working

on the basis of a single plan under the guidance of chief designers. This ensures the structural integrity of the project. Such work takes place in closest possible touch with state management bodies. The complexity of the economic management mechanism is substantially greater than that of any technical systems. Nevertheless, so far it is being developed without coordination. This calls for the formulation of a state program for the development and application of methods of mathematical modeling in national economic planning and management, within the framework of the overall projects of restructuring management and the economic mechanism.

The end purpose of such a program could be the creation of a unified set of interrelated models for the entire national economy, as well as systems for forecasting and planning centralized and decentralized economic management, which provide extensive possibilities of efficiently displaying individual initiative on the part of working people and managers in specific economic levels and areas.

Let us immediately stipulate that it is neither possible nor necessary to attempt to describe in detail the structure and definitive all-encompassing system of national economic models. Obviously, such a model should appear on the basis of a set of individual models and tasks, developing the methods to achieve them, including practical testing and doing further work on the basis of such experience, followed by extensive dissemination and development of vertical and horizontal interconnections in the course of their implementation.

At the same time, we should not believe that perfecting management on the basis of mathematical methods and obtaining practical results in the national economy through their use would be possible only after the formulation of a comprehensive management model based on this system. In reality, each successful step along this way (a model for a specific sector, enterprise or technical process) yields some positive results, which makes it twice as important. First, it leads to the tangible advancement of management of specific economic projects, thereby obtaining positive economic results; secondly, it makes a real contribution to the structuring of an overall national economic management system and to the method applied in such management.

In addition to the methodical and organizational unity of such work, the need for a program is also determined by a number of features which cannot be fully reflected or eliminated with a different organization of the work.

Perfecting the formulated models involves a conversion from the development of individual models to interrelated model systems, which enable us to analyze the most important development problems. In the area of long-term planning, this includes the possible variants in the development of the national economy and corresponding economic growth rates; relating the indicators of the overall development of the national economy with development indicators of individual economic sectors and industries; establishing interrayon proportions of national economic development, etc. All of these models or systems, which are themselves complex, must be combined within a single entity in order to formulate comprehensive balanced suggestions for the plan for the

long-term development of the national economy. Hence the need for a comprehensive description of systems of models on different management levels and for different planning stages.

The use of mathematical models (this particularly applies to optimization models in current planning) does not always merely facilitate management but, in a number of cases, "complicates" the work because it requires restructuring. Therefore, their application frequently meets with a certain resistance.

Many optimization problems, as a rule the biggest and most promising, naturally apply to several departments, such as producers and consumers and related production facilities. The formulation, knowledge and implementation of such optimization problems require the simultaneous and coordinated participation of several departments. Usually, this is difficult to achieve even in simpler cases.

The use of models contributes to the identification of internal reserves of enterprises and sectors and offers the possibility of their comprehensive control over activities and efficient utilization of resources. For that reason, for example, automated systems are virtually not applied in trade. However, the efficiency of control does not contradict in the least granting greater economic independence and promoting initiative; conversely, it is rather a necessary prerequisite to this effect.

This means that in a number of cases customers requesting work based on mathematical models and ASU cannot be the direct organizations in which they are being applied, but management bodies or competent commissions representing the interests of the national economy as a whole and able to eliminate departmental barriers.

As experience in the use of ASU indicates, the incomplete results of their potential effect is sometimes caused by insufficient information on the part of enterprise and association managements on the ways of using one type of model or another, assigning development priorities in solving one problem or another and in selecting the proper "architectural structure" of their entire set. In many cases such work is considered auxiliary, a dues paid to fashion. Furthermore, a necessary prerequisite for success in this project is the active participation of a wide range of rank-and-file specialists (technologists, designers, production organizers) and management personnel, for the application of the new management system frequently changes the functioning and management of the project to such an extent that only a manager with a good overview of the project and its connections with other entities who can assess results or make decisions. That is why the use of optimization models must be combined with training enterprise managers and specialists in modern management and cadre training methods.

It would also be desirable and useful to combine economic experimentation in individual economic sectors with the simultaneous implementation of optimization models. The idea of the economic experiment in an RSFSR oblast or union republic should be seriously discussed, for such a project (on a lesser scale) reflects the main aspects of the functioning of the entire

national economy. In such experimentation models of interdepartmental coordination and automated systems and models in managing the nonproduction area, etc., could be tested.

The following appear as the primary tasks in the development and application of optimization models in economic practice: above all, the fastest possible application of models for current and long-term planning in sectors in which the necessary conditions have been created (models have been tested, information is available, etc.). Clearly, in the case of other sectors, after proper development and practical testing, a system of models could be drafted for use in drafting specific projects for the 13th 5-Year Plan and subsequently periods.

Developments in the area of current planning by sectorial and territorial management bodies must be significantly increased. Such work is more serious and demands greater efforts than in the case of long-term planning. However, its implementation enables us, on the one hand, to test and correct models on a day-to-day basis and, on the other, to obtain economic results directly in the course of the application process.

Furthermore, much greater attention should be paid to the creation of facilities for the use of existing models by consumers. Service programs require more efforts than are currently being applied. In such cases models can be made usable on a dialogue basis, maintained in operational condition and state of readiness for the purpose of immediate calculations as needed.

The accelerated conversion of our national economy to the track of intensification presumes the extensive use of contemporary management methods. Here a one-sided approach, overemphasized in one aspect or another, is inadmissible. We must not consider that the use of powerful computers in management will automatically solve economic development problems. It is only the comprehensive advancement of the system of economic relations, which will create in planning and economic managers the organic need for the use of economic-mathematical models in finding optimal economic solutions that will enable us to raise to a new qualitative level work on current and long-term economic management and show substantial progress in the accelerated socioeconomic development of the country, a task which was set at the 27th CPSU Congress.

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NEW WAY OF THINKING AND WORKING

ASSERTING JUSTICE, EXACTINGNESS AND EFFICIENCY

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[Article by G. Kolbin, Ulyanovsk CPSU Obkom first secretary]

[Text] The socialist system, which is based on relations of equality among the members of society, is the embodiment of social justice which, combined with collectivism and comradely mutual aid, gives the Soviet people confidence in the inviolability and reality of their rights, enhancing them spiritually and morally.

The principle of social justice, as the foundation for the socialist way of life, becomes particularly important at the present stage of socioeconomic development--the stage of a sharp turn in the life of the party and the people and of comprehensive assertion of an atmosphere of practicality, creativity and principle-mindedness. As we know, it was the April 1985 CPSU Central Committee Plenum that marked the start of the beneficial comprehensive and difficult process of qualitative renovation of all aspects of society. The high political and moral charge of this work was acquired at the 27th Party Congress, which is justifiably described as a congress of strategic decisions.

Each period in time has its own tasks and demands. Inevitably, time leaves its mark on work standards, rules and methods, renovating and changing them. Ensuring the restructuring and radical changes in our entire activities and, above all, in party work, is today a matter of prime importance. The essence of this restructuring is the struggle for man, for the process of renovation passes, above all, through the human mind and heart. Arming the party members and all working people with a clear understanding of the meaning and objectives of the reorganization and awakening them to specific and energetic actions are the most important and responsible tasks today. The party bodies and the party members they head must play a determining role in their implementation.

By considering as their primary objective concern for upgrading the party's prestige among the masses and strengthening its unity with the people, they must do everything possible for the people to have infinite faith in the CPSU and properly to understand and practically support its policies. The party committees must develop the type of atmosphere in the life and work of their "subordinate" territories such that even the most hardened skeptics will not

question the irreversibility of such a policy. Should any illegal actions or violations of justice cast aspersions on the party organizations and harm the cause, the party committee must thoroughly analyze the reasons for this situation, identify the specific culprits and quickly correct the situation.

In the struggle for man, for the growth of his activeness in the economic, political and social areas, the personal example of the party member and, even more so, the party leader, plays a tremendous role.

Lenin wrote that the quality of party leadership is determined "not by the size of the power but by the strength of the authority, the strength of the energy, the greater experience, greater comprehensiveness and greater talent" ("Poln. Sobr. Soch." [Complete Collected Works], vol 7, p 14). In this case, a very important circumstance must be borne in mind: the assertion of social justice is not a philanthropic but a political activity for the party worker. He must always remember that he is the organizer and educator of the masses and that the people around him judge the work style and moral tone of the party body he represents and the party as a whole on the basis of his personal qualities, his specific actions and steps, his attitude toward successes and shortcomings.

The party manager is responsible for everything in his assigned work sector. He has the right and obligation not simply to lead but also to educate the people, to submit suggestions on rewards and punishments, or on releasing from their positions party, soviet, trade union, Komsomol and economic personnel. The stricter the party leader is toward himself, the more exacting he has the right to be toward others. The Leninist view of justice presumes the systematic assertion of high reciprocal exigency. Today the oblast party committee is pursuing a firm line of asserting great party exigency in its work and in the activities of city and rayon party committees, and party committees and buros of primary and shop organizations, and of increasing its exigency toward every party member. To be strict in the party sense means to be concerned with the strict observance of party and state discipline, the standards of party ethics and communist morality and, at the same time, invariably show humaneness in determining the means of influencing culprits. Strictness does not mean in the least that on every occasion the harshest, the strongest penalty must be applied should a party member violate the norms of party life.

Why conceal it, we frequently come across people who loudly demand the harshest disciplinary measures toward individuals who committed some violation, inconsistent with the degree of culpability, and persistently insist on imposing strict penalties. How to act in such cases? We believe that the best way is to use persuasion, logic and proof which would confirm the justice of the steps which were taken and which were consistent with the degree of culpability of the individual. Frequently it suffices for a subordinate or a fellow worker in the organization to be told that his action and improper behavior were noted and are disapproved of, for the person to mend his ways. Sometimes, this is not enough. In that case, therefore, stricter measures of influence must be applied, sufficient to make a person who defames the honest and pure title of party member, to realize that punishment is inevitable. In each such case one must always keep his feelings

under control and be absolutely fair. However angry one may be at someone for his improper behavior, he should not display any prejudice toward him.

The uncompromising but fair assessment of each case of violation of party and state discipline is the right and duty of the party managers: the secretary of the primary party organization, party committee, raykom, gorkom and CPSU obkom, and the buros of these party committees to which, as a rule, the party members elect the most tested and most practical and fair people, raised in the spirit of a party-oriented attitude. Today we can confidently apply this to the majority of party committees in our oblast organization. However, exceptions occur as well. In such cases, the oblast party committee does not hesitate to draw organizational conclusions. Such conclusions were drawn, for example, in the case of I.V. Kistanov, first secretary of the Inzenskiy Party Raykom, who permitted himself to threaten and persecute individuals he disliked. The same was applied to the former first secretary of the Tsilninskiy CPSU Raykom, who was relieved of his position.

In applying strict fairness in party work, the oblast party committee tries to select from its huge arsenal of methods of influence those which can yield best results and reduce to the strictly necessary minimum the number of penalties. It is indicative that in the past 2 years the CPSU obkom has not inflicted a party punishment to anyone.

A punishment, if one thinks about it, is an extreme form of expressing and collectively criticizing a party member. Furthermore, we must bear in mind that of late the educational importance of a party punishment has been weakened. In my view, it is precisely this that indicates a lowering of exactingness. There have been many so-called planned reprimands issued by some party organizations, essentially relieving the guilty party member of real responsibility or of compensating for the harm or material and moral losses he has caused. Today we face those who violate the standards of our morality and our laws with the following demands: first, return to the state everything you have illegally appropriated (including an apartment or a garden plot, etc., obtained illegally), then listen to the party's assessment of your action. People both return things and listen. The requirement of the double responsibility of the party member to the state and to the party is now part of the CPSU statutes. All of us must observe this requirement most strictly.

In order to speak of justice and to fight for justice we must have the moral right to do so. Such a right belongs to those who have not defamed their good reputation either through their thoughts or their actions. In the opposite case, appeals for justice turn into a mockery of justice. That is why of late the leading personnel of the Ulyanovsk Oblast party organization have adopted the rule of introducing order in everything beginning with themselves.

It has become the rule to hold closed meetings of buros of party committees, in which members of the buro and the elected aktiv frankly express critical remarks, noting the strong and weak sides of a given official, impartially assessing the results of his activities, taking into consideration the assignment of obligations and the limits of personal responsibility of every individual. A mandatory prerequisite for an efficient discussion is the creation of an atmosphere of confidentiality and frankness, in which everyone

can express his opinion without fearing that he would be interrupted because of "impudence" or later remembered for his "dissidence."

One such meeting of the CPSU Obkom Buro was held immediately after the 20th Accountability and Election Party Conference. In determining the tasks for the pre-congress and post-congress periods and deciding how each one of us should work, we agreed that particular responsibility for the implementation of the planned steps falls on the leaders: the party obkom first secretary and the chairmen of the oblast executive committee, oblast trade unions council and oblast people's control committee. It is precisely they who must set the tone in the work, "draw fire on themselves," undertake to solve the most difficult problems and teach their subordinates through their own example how to work.

It was at that point, after assessing some positive qualities in the work of those present, that the buro members voiced remarks concerning individuals' shortcomings. Here, for example, is what was said about one of them: "The impression is created that he is unable to find by himself solutions to one problem or another, such as to ensure desired results. The people are annoyed by his constant grumbling on the subject of shortcomings and the lack of suggestions on specific work problems, such as how to change matters for the better, who should undertake such projects, how to carry them out and what role should he play."

The remarks were impartial but fair. This was acknowledged by all buro members and by the person to whom they were addressed. By criticizing one-another on a principle-minded basis, in an atmosphere of reciprocal respect and well-wishingness, the party comrades are guided by the aspiration substantially to change for the better the work of the oblast party committee, its apparatus and the other oblast bodies, and clearly to define the limits of collective and personal responsibility, for it still frequently happens that the leader will take credit for overall positive results, claiming that he too participated in their achievement. He does not mention the influence he had on the state of affairs, on changing the work style and on improving its results. Yet people who are unwilling to abandon the old ruts are still accepted by those around them unconditionally, as dependents who hide behind someone else's back and shift concerns for the reorganization to others.

If the party bodies wish to be totally principle-minded and demand that others work in a new fashion, they must help the people to understand the essence, the spirit of the changes, to realize their irreversible nature and, occasionally, to give them a push. The party committees must help in the restructuring energetically and specifically. They must not deal in abstract considerations in the hope that the others will get their meaning, such as, "see for yourselves what is what." In such cases results will be slow in coming!

For example, Ulyanovsk Oblast has work on solving the problems of the Food Program steadily, ever since the program was passed, reporting to the working people and to superior authorities on the implementation of the assignments of the plan for agricultural production. Nevertheless, no tangible changes occurred in food supplies. After the April 1985 CPSU Central Committee

Plenum, we revised the criteria in assessing the implementation of the Food Program. We formulated strict demands for the implementation of the state assignments for the production of all types of agricultural commodities and adopted, as the final indicator of such work, the criterion of the steady improvement in supplying the oblast population with food products. We publicly announced that the obkom first secretary and the chairman of the oblast executive committee were personally responsible for the solution of this problem. A change in the work was achieved quickly. The construction of greenhouses, refrigerated warehouses, vegetable storage areas and fish breeding projects was developed extensively in the oblast.

The letters received today by the central and oblast bodies and statements at various meetings show that the people note with satisfaction the positive changes in supplying the population with food products; they point out, for example, the fact that throughout the winter of 1986 trade in potatoes, vegetables, fruits, eggs, butter and other daily products was uninterrupted in the oblast. Availability of meat products is being attained through a variety of means, the principal among which is for the volume of animal husbandry output to exceed the plan for its centralized state deliveries. The strict observance of this practice excludes the repurchasing of cattle from the population by the kolkhozes, as a result of which the amount of meat purchased by the population through the consumer cooperative increased by 50 percent. Meat production in the public farms as well significantly increased, thus correspondingly increasing local sales.

Therefore, the truly businesslike and exacting attitude toward the solution of one problem or another yields good results which are sensed by the people and suitably appreciated. In such cases managers do not have to seek any particularly convincing comparisons or cite the most profitable indicators to substantiate a conclusion on the actual improvement in the activities of the party or economic body, enterprise or establishment they head.

Urging oneself and others toward real rather than fictitious reorganization in the work means daringly changing assessment criteria, considering results and continually comparing accomplishments with what remains to be done to ensure the full and definitive solution of problems raised by reality. The solution of each such problem must be faster than the speed at which it grows.

It is no secret that currently many citizens are turning to party and soviet bodies with requests for improving housing conditions. A just response to such requests and a sensitive and responsive attitude mean not simply seeing the people at the proper time, listening to them carefully and politely explaining to them the situation. This is not enough, for what a person needs is not merely an explanation, although accompanied by convincing references to objective difficulties, but real proof that concern is being shown for his needs. That is why in our oblast we are now emphasizing the taking of additional practical steps which will ensure achieving end results of tremendous social significance: providing a separate apartment or individual house for each family by the year 2000. We must say that the pace of housing construction in the oblast has been quite high of late. During the 11th 5-year period annual deliveries of completed housing increased from 613,000 square meters to 780,000. However, the waiting line for housing was not

shortened. In discussing the steps taken by the CPSU in accordance with the stipulations of the 27th Congress for solving the housing problem, we set ourselves the task of increasing the annual volume of completed housing to 1 million square meters. We intend to reach this level in no more than 2 years. This approach to the housing problem reflects, we believe, the very essence of reorganization of the work and proves the possibility of similarly solving other problems for the sake of social justice.

An urgent practical requirement, which was clearly formulated at the April 1985 CPSU Central Committee Plenum, is the rejection of the ivory-tower work style and shifting the emphasis to the practical organization of the work. The mere retelling of this requirement, words, would change nothing. In order to urge on the real reconstruction and give the people the possibility of understanding and feeling the entire force of the beneficial influence of the new approach to the work, we decided that in our oblast managers can be summoned by various oblast, city and rayon authorities only twice weekly (Tuesdays and Thursdays). We use Saturday for ideological and specialized training. On that day we also carry out various sociopolitical projects. The purpose of such restrictions is to put an end to time-wasting meetings and come closer to reality. We have also tried to enhance the practicality of out-of-town assignments and not to allow the people to take random trips, for the sake of traveling and merely creating the appearance of great activities. Today the personnel of the party obkom apparatus are setting the example of a sensible approach to such assignments. The main feature of their trips is to be able to check personally the accuracy of information already received concerning positive or negative phenomena in the work of a given collective and to establish whether such an individual case is characteristic of other organizations as well. Naturally, according to the circumstances, they must also formulate the necessary steps and discuss their expediency with workers and specialists, with a view to disseminating more broadly anything useful and eliminate anything unsuitable faster.

For example, the trip to the plant for heavy-duty one-of-a-kind machine tools, was aimed at assessing the results of the experiment in organizing sectors with uninterrupted (round-the-clock, without days off or holidays) operation of the equipment, not only to assess it but to do everything necessary to spread this type of progressive experience to other enterprises. In this case the consultation with party, technical and economic managers, which took place at the end was most effective. It was precisely a consultation, rather than a conference, at which there were no reporters or scheduled speakers. Instead, there was a free and informal exchange of views on the very important topic of how to apply a valuable initiative in the daily practical work of this plant and other collectives, for in the course of the experiment the use of the advanced equipment was increased by 34 percent and other equipment and production areas were released. Above all, with such a work system the physical and moral obsolescence of the equipment increases, as a result of which it must be replaced with new-generation machinery faster. Shortly afterwards, the organization of sections and shops operating on the basis of this system was undertaken in all other plants in the oblast.

Another useful visit was the one paid to the aviation industrial complex, the youngest in the oblast, which was just beginning to stand on its own feet.

There as well the tasks of the functioning of the newly created subunits and upgrading the technical standards of production facilities under construction were considered collectively. The discussion brought to light major faults in the designs, and other problems which had been previously neglected.

A meeting was recently held at the Krasnoye Pole Kolkhoz in Karsunskiy Rayon, where the report submitted by the board and its chairman on the work done was discussed with the participation of party obkom personnel. Naturally, accountability meetings had been held in that farm before. However, never before had sharp questions been asked such as why had the kolkhoz been operating at a loss for such a long time and what was preventing it from working at a profit? Here as well a positive program for action was formulated jointly and ways were found which will help radically to change the situation in that farm this very year. The overall creative atmosphere of the initiated reorganization, the active assistance of the party bodies and the fair requirement set to everyone on the fulfillment of official obligations helped the people pull themselves together.

Each one of these trips to various organizations proves to us the accuracy of the now established work style and its high efficiency. All of this is thoroughly covered by the local press. As one can easily understand, the purpose of it is for the new approaches to the solution of topical problems to become familiar to as many people as possible, for the reorganization affects all work sectors.

For example, the exigency toward the activities of groups of deputies at places of residence had substantially declined in recent years. Frequently the main criterion in assessing their work was merely the regularity with which deputies met with the rayon's population and the reports they submitted to them which were, as a rule, dry and meaningless. Actually, there is no particular need to report, for anything that has been accomplished will be noted, as it were. The purpose of meeting the population at places of residence is to determine the moods of the people, to find out the type of help they need and the nature of their expectations. After completing a project the deputy must consider what to take up next. It is precisely this type of approach to the work that is a real manifestation of true party concern for the people.

When doubts appeared as to whether formalism had developed in the work of the deputy groups, the obkom buro decided to send an obkom secretary to attend one of the reports submitted to the voters. The meeting was held in one of Ulyanovsk's microrayons. It took place in a courtyard, where a stand had been erected. The study of the activities of the deputy group and a discussion with the voters who had attended the meeting confirmed our doubts and convinced us once and for all that the activities of deputy groups and all work at places of residence had to be decisively reorganized.

It is exceptionally important that all members of the elected party, soviet, trade union and Komsomol aktivs without exception become active promoters of social justice and pioneers in the struggle for the implementation of the party's plans. To this effect the regular training of the aktiv is practiced in the oblast. Today we put strict demands on the party activists in terms of

upgrading the practical results of their work. As a rule, seminars are organized for members of the CPSU obkom immediately after the regular plenary meeting, so that they will not be summoned especially for that purpose once again and thus distracted from the implementation of their direct obligations. The main features of such training are to help every member of the oblast committee to realize his role and personal duty in solving problems of accelerating the socioeconomic development of the country. Essentially, this also means providing ideological support for the implementation of the party's strategy.

We are pleased by the changes for the better which have appeared in the work of many obkom members. Until recently disproportions in the development of town and country, and lagging in building social and consumer projects were a constant target of criticism in the oblast. The situation today has changed noticeably. Plans for the completion of such projects are being implemented on a priority basis. The Glasvulyanovskstroy organizations have doubled their volume of construction in the countryside. We consider this a real manifestation of the increased level of political maturity and the initiated restructuring of his work by N.A. Vikhlevshchuk, CPSU obkom member and chief of Glasvulyanovskstroy.

V.I. Omelyanchik, today first deputy minister of automotive industry, did not rely on others in the past, as general director of the AvtoUAZ Association, in solving the specific problems of enterprise reconstruction and development. Aware of the limited possibilities of contracting organizations, with the support of the Ministry of Automotive Industry, he set up a construction trust at the association. This made it possible to resume work on some previously halted production projects; intensive reconstruction and technical retooling of production facilities is in progress. Housing construction has more than doubled.

The personnel of the Machine Building Plant imeni V. Volodarskiy did not wait for an outsider to become concerned with the new production equipment for the enterprise. They organized a special design bureau and a production facility for the manufacturing of revolving automated lines. The plant is already well supplied with such lines. The pace of housing construction, carried out by the plant itself, is increasing with every passing year. This ensures the high-growth rates of output and has solved the manpower problem. The plant no longer advertises for workers with all types of skills. Yu.F. Polishchuk, plant director, deserves great credit for improvements in production activities, housing and solving the cadre problem. As CPSU obkom member, he displayed persistence in meeting the target, personal initiative and high party training.

Not everyone is mastering such qualities with equal success. The aspiration to have a "reserve capacity" for the implementation of the plan and to conceal possibilities for upgrading production output is excessively durable in many managers. This may seem to be dictated by concern for the collective: if the plan is fulfilled stably there will be a bonus. Essentially, however, such reserve is kept to compensate for personal lack of organization and possible errors which, in the final account, are quite costly to the state.

Most frequently, getting rid of habits which took years to develop is no simple matter. CPSU Obkom member S.T. Kvasha, director of the Dimitrovgrad Automotive Units Plant, which is a subdivision of the VAZ, found the reorganization of his work extremely difficult. Even work under the conditions of the large-scale economic experiment did not influence this manager and make him more active. This enterprise, which was quite well equipped technically and with its own developed instrument-making and machine-tool building facility, operated at 20 percent below capacity.

The ice has now broken and S.T. Kvasha has joined in the reorganization. To achieve this, however, all possible means and methods of influence had to be applied. It was only when the question was raised at a meeting of the party obkom buro, to the effect that unless party member S.T. Kvasha were to change his approach to the work and stop managing this huge collective in the old way he would lose the right to remain in his position as director and as member of the Leninist party, that he reorganized his work.

The emphasis in the work of the oblast party organization with cadres has now shifted to ensuring an individual approach to the people. The records of the leading personnel are being systematically updated. We realized that this is a strong educational measure. However, one must use it cautiously and sensibly, without gaps or rushes. The collective discussion of references should be such as to help the person to have a second breath, to be charged with the desire to work in a new and better way, spiritedly. It is bad if a manager leaves such a meeting in a state of depression. A person must have faith in his own strength and possibilities and in the fact that the difficulties he faces are surmountable and his shortcomings can be eliminated. The updating of files, the entire preparatory work to this effect and the discussion itself also help people to drop feelings of conceit and other shortcomings which sometimes afflict managers.

Of late managers have been reporting on the implementation of their official obligations at meetings of the obkom buro and secretariat and of all other oblast party bodies. All of this helps to strengthen discipline and work results. The open admission by party members, managers in particular, of their errors is of great help in this respect. Such admissions take care of accusations leveled at them, which still take place. In this case, the flood of petitions and complaints usually dries out. This also motivates the people to undertake more energetically to eliminate shortcomings in their work and amend their improper behavior. Above all, this is good education. This practice has a great preventive effect. It protects cadres from all sorts of temptations to violate the party statutes or Soviet laws.

Unfortunately, the trend of working in a new fashion has by no means been clearly established everywhere; yet demands on the party member-managers on meeting their obligations have become strict and principle-minded, as required by the party. Thus, whereas today the party committees in the oblast are firmly getting rid of people who cling to the old and customary work style and directly point out to officials their errors and shortcomings, frequently the soviet bodies assume an expectant position of occasionally displaying inadmissible tolerance and universal forgiveness of unsuitable personnel. Naturally, removing a manager who has not justified the trust placed in him is

no simple matter. A principle-minded solution of cadre problems in general is an exceptionally responsible matter which involves, furthermore, a great deal of nervous stress.

That is why occasionally soviet and even trade union managers in the oblast avoid making principle-minded decisions on cadre problems, shifting this difficult work to the party committees. Should it become necessary for them to fire a failed manager, they do this peacefully: they claim that the official himself had requested a transfer a long time ago and was finally now being released.

Such was precisely the case in strengthening the management of the executive committees of soviets in Radishchevskiy, Sengileyskiy and many other oblast rayons.

In asserting social justice and promoting the same discipline for all and order in all work sectors, the Ulyanovsk Party Obkom tries to identify and make practical use of any valuable method of educational influence. We held plenums with the oblast party committee on work with cadres and a meeting of the oblast's ideological aktiv, where tasks on shaping social consciousness in accordance with the requirements of the 27th CPSU Congress were discussed; practical science conferences were held on the topics of "words and actions," and "criticism and self-criticism as mandatory prerequisites in accountability and election meetings." We also use a form of work such as the discussion of problems which may be of oblast-wide significance at party raykom and gorkom plenums. Here are items discussed at such plenums: "On Measures to Strengthen Party and State Discipline and the Need to Intensify the Struggle Against Favoritism and Other Negative Phenomena;" "On Cases of 'Selective' Principle-Mindedness in Work and Assertion of Justice;" and "On the Lack of Party Strictness and Reciprocal Exigency and of Urgent Assignments in Strengthening Party and State Discipline."

The oblast party committee practices the proven method of announcing ahead of time to the oblast working people and the entire population the agendas of planned party committee plenums, aktiv meetings and soviet sessions. We try to guide the molding of public opinion on the essence of the topics on the agenda. Special sections in the press deal with separate and particularly important aspects of such problems; this way the overwhelming majority of readers become involved in the search for the most efficient solutions.

For the third consecutive year, the obkom secretary, department heads and managers of oblast organizations receive weekly information on public opinion on one problem or another. Steps are also being taken to change subjective views which may appear on the basis of fabrications and disinformation. Such views are refuted with the help of the mass information media. If necessary, the nature of the work is changed and errors are corrected.

We frequently come across cases such as the following: differences of opinion appeared on the subject of the urbanization and landscaping of Ulyanovsk. Some citizens actively supported the implemented measures; others opposed them and disputed them no less energetically. This was dictated by the common aspiration of making V.I. Lenin's native city--Ulyanovsk--better, more

beautiful and more attractive. The oblast party committee deemed it necessary to consider at a bureau meeting the problems which had appeared in connection with the discussion organized by the oblast newspaper ULYANOVSKAYA PRAVDA of problems related to making the homeland of the leader an area of high standards and model order. Members of the reading public, party and labor veterans, scientists, historians and production frontrunners were invited to attend. The discussion was focused on finding an equitable solution of the problem, in the course of which everyone, regardless of position and title, expressed his views. Errors were openly acknowledged and unsuitable claims were rejected. All of this contributed to developing and unified view on a problem of great importance to all of us.

In speaking of the systematic struggle for the honest and pure image of the party member, as one of the mandatory conditions for the radical reorganization of party work, it is important to bear in mind the fact that the predominance of personal over social interests in the way of life of some of our comrades in the organization is sometimes quite strong. It is influenced by the legacy of the past and petit bourgeois surroundings, a certain amount of family pressure, and the connivance and lack of principles which have developed in some collectives. It is precisely all of this that creates the microenvironment in which such a rather nonparty quality is shaped. We consider it absolutely just to be very strict toward managers who are party members and who, while demanding of their subordinates to give priority to the public above private interests, do not follow themselves this rule at all times. The oblast party committees have begun to delete the names of such people from the rosters of promotion reserves and to use them for ordinary work.

"From each according to his capabilities and to each according to his work" is a principle of socialist justice. That is why our laws and official regulations stipulate levels of salaries and benefits, which are based on the individual's contribution to the common project. If a worker fails to make his state-required contribution, he violates the principle of fair relations with society and the people around him.

In frequent cases, particularly in activities in which, unlike material production, the amount of invested labor cannot be computed with mathematical precision, workers become accustomed to receiving benefits not according to labor which they owe society but according to position. This is highly unfair. If, furthermore, an official were to abuse his official position and "gain" personal benefits not stipulated for any position, the result is not simple discontent but the open indignation of the working people and triggers a flood of letters and complaints to various bodies.

The rather harmful custom of giving and receiving gifts, which was widespread in the recent past, is an old but absolutely treatable disease. According to Vladimir Ivanovich Dal, to make a gift means to give something to someone free of charge. Until recently, however, the wrong practice existed in our life according to which making a gift entitled someone to a gift in return, of roughly equal value. Naturally, this was taken into consideration in making a gift. On the surface, the whole thing appears quite proper. A party, soviet or economic manager (as though unaware that financial discipline was being

violated) would urge a kolkhoz or sovkhoz to buy an expensive gift, allegedly not for himself but for a colleague, a partner in the competition. Essentially, he was cheating, knowing perfectly well that he was bound to receive a gift in return. Such connivance means contributing to the development of greed and undermining morality standards. We took a number of organizational steps toward people making gifts at the expense of the state in Tsilninskiy Rayon, publicized this in the press, bluntly pointing out the true nature of such gifts. This faulty gift-making practice came to an end in the oblast.

The oblast party organization is essentially relying in the struggle against abuses of official position, favoritism, private-ownership mentality and greed, which are alien to the nature of socialism, on developing in every person a deep respect for honest and dedicated work, and on developing sensible needs and an irreconcilable attitude toward attempts at illegal enrichment at the expense of society. We are steadily becoming stricter toward officials and managers on all levels in the elimination of conditions which trigger distorted phenomena in our lives. A great deal remains to be done in this respect. The steps taken by the party and the government to increase the struggle against unearned income demand of us to act more decisively and uncompromisingly. The implementation of these steps is as socially important and must yield the same type of tangible results in improving the life of society as the struggle for strengthening discipline and against drunkenness and alcoholism.

We at the very start of the 12th 5-Year Plan. However, even the first 5 months since it began are a substantial amount of time in our life which is gathering speed. It is sensible, therefore, to look at the initial practical results of changes in ideological and economic activities carried out by the oblast party organization. Let me say, without false modesty, that in first 5 months of this year the growth rates of industrial output in the oblast doubled compared with the 1985 level, averaging 9 percent; in construction the growth rates of contracting work reached a 12 percent increase. The production of animal husbandry goods is increasing at a faster pace. The sales plan is being implemented despite at significant drop in income from the sale of wine and hard liquor. The steps taken to strengthen labor discipline and promote public order are also having their influence: the crime rate is steadily dropping and so are working time losses.

The oblast party members are very proud of the high assessment of this work included in the CPSU Central Committee political report to the 27th Congress. This assessment encourages their active aspiration to engage in creative work and new active efforts for the acceleration of the country's socioeconomic development and, on this basis, for achieving a new quality status in Soviet society.

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In My Opinion ... Letters to the Editor

FAULTS IN DISSEMINATION OF PROGRESSIVE EXPERIENCE

MOSCOW KOMMUNIST in Russian No 9, Jun 86 (signed to press 11 Jun 86) pp 66-67

[Letter to the editors by Candidate of Historical Sciences V. Izmozik, Leningrad]

[Text] In my opinion, the question of drastically upgrading the responsibility of press organs for their articles, particularly in the publication of materials on progressive experience and the achievements of some collectives and the successes achieved by their managements must be raised sharply.

We know that before printing critical materials, as a rule, the facts they present are thoroughly checked. Naturally, this is absolutely fair. Yet in terms of publications which present a so-called positive aspect, it seems to me that by no means are such efforts being made. Otherwise the press would not have published data which embellished the actual situation and apply a "classical gloss" on the image of a manager or an entire collective.

Unfortunately, we still come across cases in which we are first informed of the progressive experience, the splendid work done by an enterprise and the outstanding qualities of its manager (such information is even used for propaganda purposes), and only later, most frequently in another printed publication, we are amazed to find out that the actual situation by no means coincides with the first description. Let me cite a specific example borrowed from very respected journals and newspapers which, in my view, as a rule publish meaningful, interesting and convincing articles.

An essay by Moscow journalist Kira Lavrova, titled "All About Kirtbaya" was published in the journal EKO, No 3, 1981 (pp 123-137). It was literally a paeon to I.A. Kirtbaya, the then manager of the Zapsibelektrosetstroy Trust. But then, first on 12 July and then on 19 October 1982, IZVESTIYA presented an entirely different picture of this manager as head of the Nadymelektrosetstroy Trust. The USSR People's Control Committee became interested in his activities, as a result of which this official was strictly punished and relieved of his position for negligence, waste of resources, figure padding, whitewashing and other violations of state discipline. Could it be that this person changed so quickly with his new position? No. "I. Kirtbaya," the

dewspaper wrote, "had long developed the conviction that state funds could be used as one's own." Generally speaking, look before you praise!

In its issue No 11 for 1984, that same EKO, published selected materials on cooperation between the Pavlodarskiy Traktorny Zavod imeni V.I. Lenina Association and a group of consultants. There were statements by enterprise managers, General Director Yu.A. Luzyanin, in particular. On page 11 he listed the impressive successes achieved by his association during the 11th 5-year period: increased volume of output by 18.4 percent, sales up 10.3 percent, etc. A great deal was said on the good-quality machines produced by the plant. The only thing which shed a doubt was a small table on page 62 which showed that the share of superior quality goods was, respectively, 2.9 and 6.6 percent for the first halves of 1983 and 1984. These figures, however, were lost in a long list of achievements. I believe that a person such as myself, familiar with the work of this association only on the basis of this material, would have been amazed to read in PRAVDA (3 January 1986, p 2) a report on the Pavlodar Oblast Party Conference which, among others, stated that "the enterprise is continuing to produce obsolete equipment and has been dragging out a conversion to the production of a new tractor model." Ten days later, the newspaper again criticized the Pavlodar people in a note entitled "Virgin Land Workers are Waiting for the Harvester."

In its 11 February 1986 issue, LENINGRADSKAYA PRAVDA published on page 2 an article on the experience of the Leningrad Machine Building Association imeni Ya.M. Sverdlov. The conclusion in the article mentioned unsolved problems but said nothing of the results of the work done in January. Several days later (15 February) I read in IZVESTIYA's economic survey (p 1) that "...the assignment on the production of metal-cutting machine tools was not met (in January 1986--author). The main culprits here include the Leningrad Machine Tool Building Association imeni Ya.M. Sverdlov...." Other enterprises were named as well but, the question is, would the prestige of the association have suffered had LENINGRADSKAYA PRAVDA, in describing the reorganization of its work aimed at the production of the latest equipment, noted the fact that the monthly planned remained unfulfilled? This may have been precisely based on long-term strategy, for we are aware of the experience of the Ivanovo Machine-Tool Building Association, which failed to fulfill its plan for the production of obsolete machine tools for a number of years but which, at the same time, had organized the production of processing centers which enabled it to present itself confidently on the world market. But when such a fact is concealed and not explained, it renders poor service to the reputation of the plant and to the readers.

Here is a similar example. In its 23 November 1985 issue, on page 2, SOTSIALISTICHESKAYA INDUSTRIYA carried an article by V. Platonov, director of the Karachayevo-Cherkess Autonomous Oblast Cement Plant. He described the literally fantastic successes achieved by the plant: "Since the beginning of the 5-year plan absenteeism has declined by a factor of 20 and cadre turnover by a factor of 4.... The work features of many machine units...are the best in the sector.... Labor productivity at the enterprise today is the highest in the sector. We have already fulfilled our 5-year plan." All that remained was to share the joy for the brilliant successes achieved by the collective and its young manager. Several weeks later, however, I read in SOVETSKAYA

ROSSIYA (12 February 1986, p 1) the thoughts of Hero of Socialist Labor, rotary furnaces machine operator at the Serebryakovo Cement Plant P. Mordvintsev about the Karachayevo-Cherkess Cement Plant: "...How can it fulfill the plan ahead of schedule if to this day, for the entire 15 years of use of high-efficiency equipment, the plant has still not managed to reach planned capacity? Its hourly productivity is below the sectorial average....; today's equipment is operated at 87.7 percent of planned efficiency. Nevertheless, I failed to note any concern either at the plant or the ministry."

In a few years, under the new director, the plant may have achieved a great deal, but concealing such essential unfinished projects and exaggerating accomplishments create disbelief in the actual successes.

Most unfortunately, a similar case was found in your journal as well. KOMMUNIST No 6 for 1985 had an article by Yu. Potemkin, the then general director of the MELZ, titled "Collective's Rights and Responsibilities," which described successes. Only 8 months later, however, an entirely different assessment of the work of the association and its general director was given at the Moscow City Party Conference. In an article titled "Exigency," the newspaper ARGUMENTY I FAKTY (No 7, 1986, p 5) reads as follows: "...In recent years, Comrade Potemkin has stopped assessing the situation self-critically.... As a result, only after he had brought the enterprise to the point of a 'heart attack,' was he dismissed."

Today, when we are fighting shortcomings so firmly, the need to disseminate truly progressive experience becomes increasingly greater. However, success will largely depend on the ability of press, radio and television workers to make their audiences believe them and to prevent even the slightest falsehood.

Falsehood in a publication, even most insignificant, is like a cancer cell and, like a cancer cell, can cause the death of the entire organism and reduce to naught the propaganda effect of an article or even convert its positive charge into a negative one.

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NEW ASPECTS IN ENGINEERS' ECOLOGY TRAINING

Moscow KOMMUNIST in Russian No 9, Jun 86 (signed to press 11 Jun 86) pp 67-69

[Letter to the editors by Professor Dr of Technical Sciences V. Zaytsev]

[Text] In my opinion, energetic efforts must be made to eliminate the paradoxical situation which has developed in our country in the training and use of cadres in the area of environmental protection.

To this day no agreement can be reached among industrial enterprises of ministries (users of specialists) and cadre administrations (their clients). The former claim that there is a shortage of specialists; the latter simply do not ask for specialists for lack of vacancies. The deeply rooted error that literally anyone with higher or even secondary training can handle problems of environmental protection and efficient utilization of natural resources substantially hinders the work. Need we be amazed that most environmental protection services are staffed by unsuitable people?

Furthermore, many economic managers do not ascribe proper significance to the so-called auxiliary production facilities, such as installations for the treatment of wastewater, gas and dust tapping systems, and so on, concentrating their full attention on the "main" shops. I remember how the chief engineer of one of the largest enterprises in Vladivostok, a very competent specialist in his field, answered without hesitation, when asked how galvanized sewer-water is treated at the enterprise, that such water is subject to biochemical treatment, and even volunteered to show the treatment systems. He was totally amazed when he discovered that this was impossible, for facilities for biochemical treatment are merely an intermediary system before the wastewater is dumped into the sea. The chief engineer may not have been familiar with the details, but the principle of treating galvanized wastewater should have been familiar to him, not to mention the fact that he should have had a skilled specialist-consultant in this matter.

A significant share of the blame for this situation falls on the higher educational institutions, which are rather lethargic in upgrading the quality of student training and their specialization and expansion of relations with industry (training and retraining cadres, conducting scientific research, assisting in ecological surveys, etc.). Today a new kind of specialist is needed to ensure the comprehensive solution of intersectorial regional

problems of the rational utilization of natural resources and the protection of the environment from industrial pollution.

It is becoming increasingly obvious today that a close interconnection exists between industrial and natural processes. A merger is taking place among areas of human economic activities, the human habitat and the surrounding environment, merging into unified systems and developing according to their specific and still insufficiently studied laws. A new scientific trend has developed--industrial ecology--to study the condition, forecast changes and control the development of such systems.

The subject of industrial ecology is to achieve unity between material production, industrial above all, man and other living organisms and their habitat, or the ecological-economic systems. Industrial ecology is based on the systemic approach, taking into consideration the entire variety of economic, technological, social, geographic and other relations between human economic activities and the environment.

The training of specialists in industrial ecology was undertaken in 1983 at the Moscow Chemical-Technological Institute imeni D.I. Mendeleev, for it is precisely chemical-technological processes that are the core of the efficient utilization of natural resources and the protection of the environment from industrial pollution.

In addition to general engineering and general chemical subjects, students specializing in industrial ecology intensively study the foundations of general and industrial ecology, including ecological analysis and, naturally, familiarity with economic sectors which especially pollute nature, such as the chemical industry, ferrous and nonferrous metallurgy, and the production of construction materials. Great attention is paid in training specialist to the ecological-economic assessment of enterprise activities, foundations for designing and organizing low-waste and wasteless technological processes, production facilities and territorial-production complexes, and the ecological expert evaluation of industrial production facilities. The students study in detail environmental quality control, methods for the efficient utilization of air and fresh-water resources (including the latest means of treatment of gaseous effluents and wastewaters), and the processing, treating and burial of industrial and consumer waste.

Particular attention is paid to developing the ecological thinking of specialists and their practical skills. From the very first year, lectures and talks given by the greatest specialists in environmental protection in the country and the efficient utilization of natural resources are regularly given to the students. The department of industrial ecology pays close attention to student practical work, which includes seminars, practical laboratory training, course projects, scientific research, ecological study of enterprises and formulation of pertinent recommendations during work trips, expeditions and practical training.

Industrial ecology is a new rapidly developing scientific sector, the purpose of which is to protect the environment and to ensure the efficient and comprehensive utilization of raw material and power resources in the national

economy as part of the following cycle: prime raw material resources-production-consumption-secondary raw material resources and, finally, the development of a technological recycling of substances, similar to biogeochemical circulation in natural ecological systems.

Today we have extensively undertaken the practical solution of existing contradictions between nature and human economic activities. For that reason, we must pay most serious attention to the stipulation in the CPSU Central Committee draft on "Basic Directions in the Reorganization of Higher and Secondary Specialized Education in the Country:" "the ecological training of future specialists and their orientation toward the efficient and comprehensive utilization of nature must be intensified." Unquestionably, we must increase the training and improve the use of professionals in this area (engineers-technologists-ecologists) and organize an efficient system for upgrading the ecological knowledge and standards of the broadest possible range of specialists, above all of those engaged in the planning, designing, building and operating industrial projects, particularly in energy-intensive and ecologically complex economic sectors.

The topical and urgent nature of solving problems related to environmental protection are obvious to many. However, understanding the importance of the tasks set by the party and the government is one thing and the knowledgeable undertaking of their solution, something entirely different.

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PRODUCERS OF DEFECTIVE GOODS MUST PAY THE COST OF REPAIRS

Moscow KOMMUNIST in Russian No 9, Jun 86 (signed to press 11 Jun 86) p 69

[Letter to the editors by V. Kuznetsov, repairman at the Automotive Plant imeni Leninskiy Komsomol]

[Text] In my opinion, any defects in the equipment we receive must be corrected by the manufacturers. Let us take as an example machine tools with numerical control, which we receive from the Krasnyy Proletariy Plant. Theoretically, they are better than the previous models. In fact, however, their low quality and frequent breakdowns occasionally reduce such advantages to naught and entail costly maintenance.

I operate a lathe with numerical program control which, all other conditions being equal, should be more productive than a general-purpose lathe. Six months ago, when I began to use it, on the basis of a Komsomol assignment (until then, for more than a decade, I had operated a turret-type lathe in that same machine-repair shop), I believed this to be the case. I became accustomed to the new lathe quite quickly, for the most complex aspect, which is shaping the parts, is done by the numerical program control. A major advantage of this lathe is the ease with which it can be reprogrammed.

However, why is it that cadre workers are not all that willing to use it and why does a Komsomol draft become necessary? The reason is simple: machine-tools with numerical program control have proven to be extremely unreliable. They break down all too frequently. This does not attract the people.

For example, repairs on my lathe took more than 1 out of the 6 months. It was either the electronic or the mechanical systems, particularly the blade holders, that would fail. Yet, this was a brand new machine! Nevertheless, in a way I was lucky, for in frequent cases such machine-tools turn out to be even worse.

It is my view that if the enterprise is given the right to make the manufacturer pay for the repair of a new machine-tool, the machine-tool builders would be encouraged to improve their output. Naturally, someone may raise objections. For example, Krasnyy Proletariy is not always to blame. It is frequently let down by the Gomel Machine Tool Building Plant, which supplies it with defective blade holders. Nevertheless, this is not a

convincing argument, for our AZLK (Moskvich Association) does not give car owners the excuse that it has more than 200 suppliers of parts, should repairs become necessary, which includes vehicles under guarantee.

Naturally, the main thing is to improve the quality of the parts, so that the need for constant repairs will not arise. I believe that making enterprises which make unreliable goods pay the cost of repairs is one of the simplest ways to achieve this.

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MAJOR RESERVE OF RESOURCE-CONSERVATION TECHNOLOGIES

Moscow KOMMUNIST in Russian No 9, Jun 86 (signed to press 11 Jun 86) pp 70-71

[Letter to the editors by Candidate of Technical Sciences V. Oguyenko, chief of powder metallurgy and gas-heat coating, Kolomenskiy Zavod Production Association]

[Text] In my opinion, greater attention must be paid to the practical organization in the use of powder metallurgy on the regional and intersectorial scale.

I have noticed a relatively relaxed attitude toward this resource-saving technology over the past decade, and a "splash of activeness" in the 11th 5-Year Plan. Nevertheless, the scale of its application remains way below the desired level.

What is the reason for this? Could it be low economic efficiency? To the contrary, labor productivity per 1,000 tons of parts made of powders is several hundred percent higher compared to the metal cutting method. This also relieves 190 workers and 80 metal processing machine-tools and saves 2,000 tons of raw metal or castings. Here there is virtually no production waste, for 95-98 percent of the metal is used. Furthermore, it is only with such a progressive technology that unique porous (for repeated gas filtration and treatment of liquids), antifriction (used, among others, in the production of reliable slide bearings which require no lubrication), and refractory and other materials can be produced. Such parts extend the service-life of machines, enable us to lower their weight and to develop new prototypes which can successfully operate at very high or low temperatures, handle superhigh loads, in an aggressive environment, and others.

Could it be that no long-term research and development is taking place? Naturally, this is not the case. The personnel of 200 organizations of 48 ministries are engaged in perfecting processes for the production of metal powders and materials and goods made of them; the works of the Ukrainian SSR Academy of Sciences Institute of Problems of Material Studies, the Central Scientific Research Institute of Ferrous Metallurgy imeni I.P. Bardin and the Metallurgical Institute imeni A.A. Baykov have convincingly proved the usefulness of their technical developments.

Cadre difficulties are diminishing. Engineers-technologists specializing in "Powder Metallurgy and Powder Coatings" are being trained in Moscow, Kiev, Perm, Minsk and Tomsk. Nevertheless, good specialists are scarce but then where else are they not? What is most needed is always scarce.

What is preventing the mass use of powder metallurgy, which M.S. Gorbachev described, among others, as a "priority technology" at the 11th SED Congress? The main reason is that this problem is intersectorial and cannot be solved with the old organizational methods.

During the 11th 5-year period, several ministries and departments simply distributed the USSR Gosplan assignments among their numerous plants. They strictly indicated that funds for the creation of powder metallurgy sections should come from the enterprise technical development fund. Reality proved, however, that the production of items made of metal powders by small sections supplied with underproductive, obsolete and poorly mechanized equipment, was quite expensive. If a plant's management turned to Soyuzglavmashkomplekt with a request for new equipment, the answer was, "if you are planning reconstruction, the problem must be solved by the ministry." In turn, the ministry said: "We have no such equipment. All stocks are allocated by the USSR Gosplan through Soyuzglavmashkomplekt." This closed circle was very difficult to break. Even when representatives of the plant themselves went to the enterprise producing such an equipment, looked at the catalogues describing its specifications, found what they needed and suggested that direct ties be established and an official contract for procurement be drafted, the answer was: "No way. Everything must go through the Gosplan."

Unfortunately, quite frequently the necessary equipment is simply not being made. As a result, the powder metallurgy plants in Brovary and Moscow and some others have had to design and produce using primitive facilities, test and finish the equipment needed for the production of baked items. Many complaints have been filed against the press equipment produced at the Pinsk and Chinkent plants of the USSR Ministry of Machine Tool and Tool Building Industry.

Naturally, the sectors include specialized enterprises which have organized the production of items made of metal powders. However, they are unable to satisfy the needs of the plants which find it unprofitable to organize their own production, and are frequently issued strict instructions by their ministries not to accept orders from "outsiders." Meanwhile, a number of party documents, above all the materials of the 27th CPSU Congress, have pointed out that specialization must be actively developed and intersectorial production facilities established in order to put an end to economic management based on barter and to departmental restrictions.

A successful attempt to make use of the advantages of concentrating production facilities was made in Belorussia. The first scientific-production association was created in Minsk. It included a powder metallurgy scientific research institute, two specialized design-technological bureaus with experimental production facilities and a large plant in Molodechno. The NPO is under the direct jurisdiction of the Belorussian SSR Council of Ministers, can treat with the USSR Gosplan and Gossnab and solve important problems

directly with the heads of sectors and can supply items made of metal powder to republic enterprises regardless of departmental affiliation. This 5-year period more than 38,000 tons of such items will be produced, which will save tens of thousands of tons of rolled metal. The development of new materials and technologies will save the national economy more than 100 million rubles. NPO research is combined with engineering developments for the benefit of specific plants in various areas, which it helps in mastering a progressive technology (including the production of items). During the 11th 5-year period, more than 100 enterprises in the country applied 137 complete development projects. The length of the "research-application" cycle was reduced to an average of 1.9 years.

Clearly, we must establish similar scientific-production associations in other oblasts, regions and industrial centers. A number of problems, however, arise: Who, for example, should be their superior? What should be done for technological operations to be performed not with morally obsolete but with the latest equipment, etc.? In particular, the presses manufactured at the Pinsk plant for press-forging equipment of the Ministry of Machine Tool and Tool Building Industry are inadequate in precision manufacturing of items with a complex shape, which are precisely what many consumers need. Numerous other difficulties exist as well. In particular, the work of some associates engaged in solving a common problem, such as ensuring the practical application of scientific developments and ideas, is planned along the line of "science;" the work of others is considered "scientific services;" and of others again, it is classified as "production work." Different systems are applied in accountability, and wages are based not on the nature of the work but on position.

The following paradoxical situation has appeared: state standards have been set for the powders and for controlling their properties. Yet there is no technology for the manufacturing of items made of such powders. What should be the guiding parameters of a designer who has decided to use such items as part of his machine? How is he to assess their durability, strength and resistance and to determine the reliability of his creation as a whole? Should it be according to scientific laws? But if any sort of breakdowns begin to occur at the plant, the authors could always say "experimentally I was able to achieve this" or else "obviously, you received a poor shipment of powders." Should he base it on technical specifications? Specifications vary according to the equipment applied by the individual enterprise, although the same type of materials may be used.

Let us also consider the following: according to extensive experimental data, outlays for rebuilding worn-out parts through gas-heat powder coating account for 10-30 percent of the cost of new parts, and the service life of repaired assemblies is longer compared to new parts. If we consider that one-third of the entire metal used in the national economy goes for the production of spare parts and repair and rebuilding operations, one can imagine the immense field of activities which opens in the area of powder and coating technologies. However, here as well difficulties exist. Currently there are virtually no regulations governing the service life of equipment. As a result, the increased service-life of an assembly with expensive coating may remain unused.

As we know, the 27th Party Congress approved the main way to be followed in the development of intersectorial scientific and technical complexes, which would include powerful head institutes, including academic ones, design-engineering organizations and experimental-industrial production facilities. Today such an intersectorial Powder Metallurgy Scientific and Technical Complex exists.

This gives us hope that the time will come when the word "application," which today presumes the virtually forced introduction of something into a hostile environment, will disappear from our vocabulary. A related planning system will be applied for each new item along the "research-design-manufacturing-series" cycle. The work will be done not from the top to the bottom but on a parallel basis, at different sectors or, in other words, horizontally, and feedback will exist among all units. If a designer has any difficulty he will go to the scientist who will immediately join him in finding a solution. Should a technologists develop the latest process for manufacturing materials and items made of metal powders, he would consider, together with designers, how to use them. A worked-out and tested technology will be disseminated by territorial and sectorial technical information centers, and the interested enterprise will be offered experimental batches of parts for testing with machines produced by it, after which orders for such items will be placed.

Naturally, such a path is not covered with roses. We must consider the structure and define the functions, rights and interrelationships within such a complex and review current methods for planning, price setting, rating production standards and providing incentives. However, no other solution is possible, for no acceleration is possible by following the old way.

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EVERYTHING WITHIN MAN--EVERYTHING FOR MAN

MAN'S CAPABILITIES AND NEW TECHNOLOGY

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[Article by USSR Academy of Pedagogical Sciences Corresponding Member V. Zinchenko, head of the department of ergonomics, Moscow Radio Engineering Institute, G. Kovalenko, deputy chief of the Machine Building Administration, GKNT; and V. Munipov, deputy director, All-Union Scientific Research Industrial Aesthetics Institute]

[Text] The theoretical summations and conclusions of the 27th CPSU Congress on the role of man and the human factor in the acceleration of the country's socioeconomic development on the basis of scientific and technical progress encourage us to reinterpret the tasks and the theoretical and applied potential of the sciences dealing with man and labor activities. The party is directing these sciences above all toward the development of the active nature of man as opposed to passive contemplation, which is alien to our social interests.

The Central Committee political report to the congress, the party program and other documents have repeatedly emphasized the need for increasing the social orientation of the economy and the creation of advanced equipment yielding high economic and social results. In this connection, the question of a closer link between intensifying the creative content of labor and upgrading its standards and setting standards governing the creation of machines, equipment, instruments and other similar items, fully consistent with the increased requirements of the workers, has arisen. In other words, the practical assertion of concern for the person as a priority objective of socioeconomic development urgently demands of designers, technologists, economists and specialists in the area of standardization and heads of enterprises and planning workers to become personally involved in the creation not only of industrial and economic technology but also of models of such technology which would relieve man from performing some functions, a technology which will not suppress man but will equip and ennoble him. The successful implementation of comprehensive activities related to converting labor into a prime vital need would be hardly possible without the participation of such specialists.

Let us consider the very old yet eternally new aphorism: "Man is the measure of all things." How is it possible that for thousands of years there has been

a steady updating of the world of objects created by man, while man himself remained and continues to remain their measure? What does proportionality between the world and man and between man and the world mean? The explanation is that man himself changes, acting not as a fixed measure of objects and the surrounding world but as a steadily developing, dynamic and changing measure of the mastery and change of the surrounding world and of himself. At each historical stage, the symmetry between man and the world is not given but defined. It can be determined with greater or lesser difficulty. This fully applies to the world of technology and production in which man spends his working life and activity. According to Marx, the history of industry is an open book of essential human forces. It is the history of their development, in the course of which new labor tools and means were created, occasionally changing the customary forms of all types of human activities in labor, studies, management, science and even aesthetics. This precisely is the social meaning of all technological revolutions, including the computer revolution. Changing forms of activities is an activity itself, highly serious and responsible. It affects the individual, the person and society as a whole. What does this imply?

The new forms of activity influence the mentality and awareness of man. They not only influence but change and, furthermore, shape and build them. The mechanism of such influence is related to the fact that the new external means of activity, labor above all, not only increase labor productivity but also formulate new and frequently excessive demands of man, involving his functional-technical, cognitive and emotional-will areas, motivations, possibilities and capabilities, i.e., in the broader meaning of the term, the inner means of human activities.

Of no less importance is the fact that, in turn, man begins to formulate increasingly strict requirements concerning labor tools, means and conditions. This necessitates the coordination, the harmonizing of internal and external means of labor activeness. Not only the history of industry but, to an even greater extent, its present condition shows that harmonizing labor tools and inner means of human activities occasionally becomes a very painful process. This has adversely affected labor efficiency and the health and development of the individual. The difficulty of such coordination is by no means always balanced by the development of new generations of machines. Frequently difficulties worsen. Compensations have included professional selection based on quite rigid criteria, lengthy professional training and updating equipment with a view to "adapting" machines to man. In other words, the cost of societal technical progress is frequently quite high.

The relationship between man and machine is by no means always characterized by the term "high-level contact." Such a contact is more the target rather than the starting point. Reaching an accurately formulated objective is more a social than a technological problem. It cannot be solved without high standards of designing in industry, in which basic knowledge of man and human activities are an inseparable part. Its solution also requires high methodological standards and, in particular, the elimination of the old adaptation-homeostatic approaches to organizing the interaction between man and machine (adapting machines to man and adapting man to machines, achieved through gradual and systematic approximations). Finally, the solution of this

problem also requires a proper social orientation in the human (humane, rather) aspects of scientific and technical progress and an accurate social orientation of the prospects of man in the age of the scientific and technical revolution.

This means that the creation of new equipment and technology is not only an engineering but also a moral problem. The designer of new equipment creates it for use by others, for which reason he must not take himself as a standard or as the "measure of all people." In the light of this, the task of harmonizing man with machine could be formulated only within the context of the broader problem and the social program of achieving a harmony between the individual and society.

It would be erroneous to think that may mean complicating or even overcomplicating the problems which must be solved by the developers of new equipment. It is a consequence of the extraordinarily objective difficulty which has developed at the present time in the world of labor and technology, which is increasingly becoming a sociotechnological world.

One of the promising trends in strengthening the social orientation of technical progress is ergonomic support in creating and operating machines, equipment, automated control systems, management systems and other industrial items, based on the comprehensive consideration of the human factor (ergonomics deals with the interdisciplinary study of man under the specific conditions of his activities related to the utilization of technical facilities). Ergonomic support is an inseparable part of the overall process of designing equipment from its very start. A number of problems involving the consideration of the human factor in production are solved with the help of sciences, such as physiology, hygiene, labor psychology and practical scientific activities, such as labor safety and organization. However, as the operational complexity of machines, equipment and control systems increased, the insufficient consideration of the human factor, based on the adaptation of man to already developed equipment, became increasingly clear and the need for the participation of workers in these areas of knowledge, and practical experience in its creation was realized.

Ergonomic support is related to designing machines and equipment based on the profound study of the activities of the person for whom they are designed. For example, in designing the Don combines, the application of such solutions provided significantly greater ease and safety for the combine operator in entering and leaving the cabin, better visibility from the driver's seat, convenient location of the main controls, minimal handling efforts and their classification by functional characteristics with a view to facilitating the work, easy accessibility of assemblies and units for purposes of technical servicing and repairs, reducing the noise-level to 84 decibels and vibrations on the driver's seat by one-half compared with the series-produced combine (this was achieved by designing a seat with improved vibration-proof features). Work on perfecting the ergonomic properties of this highly efficient combine is continuing.

Here is another example: as computers develop, their functions are increasingly changing from data input, processing and retrieval to a dialogue

with man. It turned out, however, that many computer programs were poorly adapted for this function (the ability for dialogue is not included in software requirements). Comprehensive attention is being drawn to the inconvenience of using existing computer software systems. Whereas previously the purpose of the programs was to control the computer, now, as was aptly stated by a scientist, the purpose of the machine is "to implement our own programs." In other words, whereas previously the emphasis was on the development of instruments, now the attention is directed at human labor. This has necessitated the development of a system adapted to man. It is taken into consideration in this case that the language of the system must be easy to understand. The system must react quickly and relieve its users from unnecessary operations. It is called upon to distinguish among the different types of people with whom it is dealing and to help rather than manipulate them. The possibility of providing the user with proper advice is still the most important feature of perfecting interacting computers, expert systems above all. Ergonomics makes a substantial contribution to the solution of such problems as well.

Ergonomic support is most efficient in organizing the respective research and development along two simultaneous directions--starting from the requirements of man regarding the technology and its operating conditions, and the requirements of technology toward man. It is important not only to adapt technology to man but also actively to develop the abilities of man himself in accordance with the requirements of technical progress.

The comprehensive solution of problems of ergonomic support in the development and operation of equipment is practiced, for example, in the aerospace industry and civil aviation. Thus, an ergonomic study of the structure of the activities of every member of the crew was made in designing the Il-86 airplane, as a result of which the functions of the crew and the technical means were reformulated and those among the crew members themselves, reassigned. New and advanced means of information and controls of the aircraft were developed; instrument panels were redesigned on the basis of the possibilities of the person to receive and process information and to control cockpit and technical facilities. All of this made it possible to reduce the size of the crew, simplify the work, lower the amount of work of the individual crew members and improve flight accuracy.

Determining the optimal ergonomic solutions of technical projects at earlier stages in their development and, on this basis, reducing additional work and flight tests became possible in civil aviation as a result of the use of sets of instruments which objectively recorded and assessed the psychophysiological and professional characteristics of flight crews and controllers.

Ergonomic support in the development of aerospace technology is expanded in civil aviation with a system of professional selection for training in flying and control skills and the application of a special pilot-training method. In turn, this has yielded high economic results by reducing the dropout of students and ensuring their differentiated training.

Equally substantial results were obtained in the automation, electronics, instrument-manufacturing and many other industrial sectors where ergonomics

has become a structural component of scientific and technical policy and where corresponding services were set up for the utilization of its achievements. The experience of some of them indicates that the comprehensive solution of problems of ergonomic support in the creation and operation of machines, equipment and other industrial items increases their efficiency by as much as 20 percent, lowers the time needed for the professional training of specialists by 20-30 percent and reduce the number of accidents, breakdowns and catastrophes in production and transportation by a factor of 2-3.

The practice of designing machines, equipment, automated control systems and other industrial goods in accordance with the possibilities and features of the man handling them indicates that the straight combination of knowledge of man acquired by the various sciences related to the consideration of the human factor in technology, is by no means always possible. This is understandable, for in reality man and technology are not a combination of disparate elements but a single entity. All of us have become accustomed to terms such as "man-machine" system, "sociotechnical system," "automated system," and so on. However, by no means do we always realize that the way from development to "establishing this type of integral system" (Marx) and its efficient functioning can be quite long. Substantial help in shortening it could be provided with interdisciplinary studies based on the comprehensive interpretation of the human factor, providing the scientific foundations for an overall consideration of ergonomic standards and requirements governing the designing and operating of the equipment.

The purpose of ergonomics is to optimize the material aspect, tools, conditions and processes of labor, and to upgrade its attractiveness and the satisfaction it gives. Its main target is the "man-machine" system. Man, machine and environment are considered in ergonomics as a complex entity in which the leading role is assigned to man. It is also a scientific and design discipline, for which reason it includes the formulation of methods for systems analysis, assessment and designing expedient variants of human activities, external means and internal methods, ways of considering the human factor in modernizing existing and creating new equipment and technology and the technical means used in professional training.

The development of ergonomics reflects the needs of public production by synthesizing the achievements of socioeconomic, natural and technical sciences with a view to upgrading efficiency and, at the same time, developing working conditions worthy of man. The solution of problems on such a social scale is possible only on the firm foundations of the general theory of labor activities and overall view of man as its subject. The purpose of ergonomics is to make a specific contribution to the development of said trends in contemporary social science.

From its very start ergonomics has had a clearly set social orientation. At the dawn of the Soviet system, the Russian scientists V.M. Bekhterev and V.N. Myasishchev formulated the first meaningful ergonomic concept, which they named "ergology" or "ergonology." According to V.M. Bekhterev, the purpose of this science was to solve the triple problem of increasing labor productivity, safeguarding the health and developing the personality of the working people.

The radical distinction between ergonomics and the sciences on the basis of which it appeared is that it makes extensive use of philosophical, sociological and psychological concepts in shaping and structuring activities, their basic types and forms, main laws of development and internal connections with the human consciousness and personality. Activity in ergonomics is the beginning, the content and the completion of analysis, design and evaluation. The design process begins with the study of professional activities in which shortcomings in their organization and in the interaction between man and equipment are identified. The requirements of a given type of activity concerning the technical means which make it possible and the physical, psychophysiological, psychological and social qualities of the person are defined. Technical facilities with which man is in direct contact and which he handles are subjects of ergonomic assessment. In the formulation of criteria and methods for professional selection, the study is aimed at determining personality features which substantially influence labor efficiency and quality.

Ergonomics not only uses concepts which were developed by the humanities dealing with activities but also develops them in terms of solving the problem of optimizing the "man-machine" system. This makes it possible successfully to eliminate the existing practice of considering individual data on man's possibilities and features. What is important is not knowledge of the functional possibilities of perception, thinking (decision making), and acting by the working person but also his activities as a whole. That is why contrary to the adaptation-homeostatic approach, modern ergonomics develops the constructive, projecting or systems-active approach. What does this mean?

Although the concept of "labor activeness" has been universally familiar for decades, all sciences dealing with labor (other than labor sociology) have dealt with the study of actions and operations understood in their narrow technological meaning. The question of what binds them within an integral labor activity which is always greater than the sum (or sequence) of its parts was ignored. It was no accident that many definitions have been used in describing activities (such as conscious, purposeful, thought-out, target-setting, individually oriented and socially significant).

In order to plan a truly integral activity we must exceed the limits of its operational, algorithmic and, in a certain sense, narrow-technological understanding and enter the area of the psychology of the mind and the personality of the individual, the area of motivations, relations, interests, emotions and concepts, the area of joint and cooperative human activities or overall labor. Awareness and personality are shaped precisely in the course of the individual's overall activities which they subsequently influence. That is why the organization of the overall activities of the subject is also the most important means of shaping his consciousness and personality, which have a determining influence on the efficiency and quality of labor. This influence is immeasurably stronger than that of factors of the production environment, for instance, and frequently compensates for adverse labor conditions.

The question of labor efficiency and quality, in the assessment of which little attention is paid to labor's social aspects, must be reformulated from

the positions of the systemic-active approach. We are currently insufficiently guided by external efficiency and quality indicators, such as strictly defined indicators of quantity of output, accuracy, and speed, and more general ones, such as the energy used by the subject in his activities or external comfort. Special indicators must be formulated to characterize the process of activity itself. They include freedom of choice and formulation of goals, means and forms of results; correlation between cognitive and emotion-value and strictly performance components; correlation between personal meaning and social significance of the labor process and results; influence of activities on functional conditions (intensiveness, fatigue, monotony, stress, etc.) of the working person and on his health and personality. Taking this into consideration, the quality of labor should be understood as an integral feature of a given type of activity, in which the indicators of quality and quantity of output are considered in terms of the raw materials and time needed for such output, the psychological and physiological "cost" of labor efforts and the health and development of the individual. In terms of this formulation, an attempt was made to broaden the range of technical-economic definitions of the quality of labor by including indicators characterizing the social and psychophysiological aspects of human activities. In this case both objective and subjective characteristics were taken into consideration. Naturally, the unanswered question is that of the comprehensiveness and measurability of such characteristics, should a conversion to quantitative assessments of the quality of labor become necessary. As to its efficiency, from the ergonomic viewpoint, labor activeness may be considered the more efficient the more completely the active capabilities and essential forces of man become part of it. It is no secret that it is precisely such activities that give man maximal satisfaction. Subjectively, this represents the attractiveness and meaningfulness of labor.

Noteworthy in this connection are the results of sociological and ergonomic studies which have shown that it is only an insignificant amount of the knowledge and skills acquired in higher and secondary specialized schools that are applied in labor. Therefore, upgrading the meaningfulness and attractiveness of labor is a truly virgin land of reserves for upgrading labor productivity and quality.

Another pressing question is that of broadening the generally accepted interpretation of labor conditions. They cannot be reduced merely to a production environment, work place, etc. They must also include the meaningfulness of labor activities, the complexity of tasks, the extent of their variety, and the concentration of labor efforts on the various functional systems and structures of activities. An important role in this connection belongs to the influence of a variety of emotional factors affecting the efficiency and quality of labor, above all labor in which intellectual processes dominate. This opens great possibilities, as clearly determined by Western managers, who have written quite cynically of the need to harness not only knowledge and skills but also the emotions of the working person, for the human potential becomes virtually unlimited if a person dedicates his entire body and soul to fulfilling a production assignment.

With increased frequency specialized and popular science publications are beginning to use the term "unmanned technology," which allegedly excludes man

from the production process and thus solves all problems of the human factor through technology. In practice, however, the situation is entirely different. The amount of servicing personnel is drastically reduced in the case of flexible production systems (GPS). However, the role of man in this case is increased rather than reduced. The person is responsible for the normal operation of the system, breakdowns within which result in high economic losses. The GPS substantially changes traditional concepts of labor activity. Man performs essentially the functions of a systems designer and programmer and provides the technical servicing of such systems. The nature and content of the designer's work change radically. The fast renovation of output steadily formulates new problems which must be solved quickly. Practical experience indicates that by no means are all people able to withstand a high nervous-mental stress caused by the maximal mobilization of the intellectual potential and a feeling of extreme responsibility for each individual operation. That is why the GPS do not reduce to a minimum ergonomic problems, as some specialists believe, but create a large number of new ones, which are as yet to be realized and then solved.

This fully applies to robotics and, in the future, to artificial intelligence systems. The development of such systems is indeed one of the greatest accomplishments of science, design and technological experience. However, as Academician K.V. Frolov accurately notes, as we develop them we must also take into consideration contemporary economic, social, ergonomic and ecological requirements. He especially emphasizes the difficulty of problems requiring a solution in the course of designing machines, mechanism, equipment, etc. (see KOMMUNIST, No 6, 1986, p 40).

This approach, however, has not as yet become universally accepted. Today it is still not entirely realized that ignoring ergonomic requirements is an indicator of low standards of designing, manufacturing and operating equipment.

Technocratic approaches to the development of the production process were seriously criticized at the 27th Congress. The technical restructuring of production, the congress emphasized, should have a clear social orientation. The problem formulated in the strategy of acceleration is development for the sake of man and with the help of man.

The creation of inefficient machines and equipment, inconvenient in terms of control and servicing, entails major social consequences. The working people, the young in particular, are unwilling to work on tractors, combines and other machines unless normal conditions for safe and attractive labor have been provided.

Meanwhile, the equipment which is being developed and produced, let us say for the timber industry and forestry, for example, frequently does not meet such conditions, although it may free the individual from labor-intensive work. Thus, the TT-4 tractor produced at the Altay Tractors Plant does not have the necessary visibility from the cabin and its design is such that it does not protect the tractor driver from being hit by a falling tree. Most controls are located inconveniently and the efforts they require exceed recommendations by a factor of 1.5-4.5. The driver's seat is inconveniently located. The

roof of the cabin is not padded; necessary accessories are lacking (there is no rear-window blower, no footboard for getting in and out of the cabin, etc.). All of this is the result not of a technocratic approach but of an irresponsible attitude shown by the designers concerning the working conditions of the mechanizer (for the sake of fairness let us say that many of these shortcomings were eliminated in the updated design of the tractor).

Designers of the number of construction and road machinery are not "far behind" the designers of equipment for the timber industry. For example, the design of the cabin of the E-304 excavator does not provide conditions for comfortable and safe work: a safety frame and means of protection from atmospheric effects and dust are lacking; access to and from the excavator is inconvenient; noise and vibration levels are above admissible levels; the operator's seat is not adjustable. It is not supplied with shock absorbers and the upholstery is unhygienic; the efforts needed to push the pedals are much greater than they should; the control levers are not optimally located. The list of such shortcomings could be extended further.

In an open letter addressed to the ministers of tractor and agricultural machine building and of construction, road and communal machine building, the workers raised a question which describes with extreme clarity the attitude toward ergonomics shown in these sectors: "What amazed us most of all was that the arm of the crane is located behind the cabin, although the operator does not have eyes in the back of his head." This was said on the subject of the T-330 industrial tractor, produced by the Cheboksary Plant for Industrial Tractors and on the subject of tractor-mounted attachments produced at the Sterlitamak Construction Machinery Plant.

The work of some models of turning, grinding and drilling machine tools, as studies have indicated, is characterized by a significant difficulty and stress and carried out under adverse conditions which, in the final account, lowers the efficiency of machine-tool operators. In a large number of cases improperly located (excessively high or low) working area and controls force the worker to spend considerable amounts of time in an uncomfortable position. This is typical also of some universal machine tools with numerical controls, in which some control elements are difficult to access. The efforts needed, based on the frequency of utilization, significantly exceed recommendations. In frequent cases the density of metal dust in the air at the work places of machine tool workers exceeds admissible concentrations.

Domestic ergonomics has gained substantial experience, reflected in the new organizational quality control systems developed in a number of sectors (known, as we pointed out, as systems for ergonomic support in equipment design and operation), drafted and published manuals, standards, reference works, textbooks, and numerous monographs on the subject of ergonomics. This experience, however, as confirmed by the cases we cited and many others, is by no means used in all industrial sectors; in many of them it is applied sporadically. Unless experience is mastered, as we know, it is lost. To a certain extent, this is an alarming symptom of weaknesses in the humanities training of students at technical VUZs and secondary specialized technical schools.

The Basic Directions in the Reorganization of Higher and Secondary Specialized Education, the draft of which was published recently, should include, in our view, the thorough training of students in the science of labor and labor activity. The study of the humanities is particularly necessary in higher technical training. The technical VUZs in our country train specialists in the development of sociotechnical and man-machine systems. Let us note that the words "socio" and "man" come first while "technical" and "machine" come second. The former, however, is not supported by the curriculums. For the time being, MIREA alone has a department of ergonomics and is offering courses on "Foundations of Ergonomics" and "Social Psychology" in all departments. Such departments and problem and sectorial laboratories must be created in many other VUZs and specialization in ergonomics must be introduced. It would be hardly possible to solve the problems discussed in this article without training ergonomists at technical VUZs. On the basis of personal experience the students must understand the nature of the human factor, feel the resistance of the "human material" and understand the possibilities and limitations of human perception, memory, thought and, finally, action. All of this is needed, above all, by the developers of new equipment, the future captains of industry. Upgrading the competence of technical specialists in the area of the human factor is a major prerequisite in upgrading the prestige of the engineering professions. Nor should we underestimate the possibilities of VUZs in undertaking basic ergonomic studies in the course of which total interdisciplinary cooperation would be quite possible.

As a result of the insufficient development of ergonomics and the poor utilization of its accomplishments substantial possibilities of upgrading labor productivity and improving production quality remain unused and the efficiency with which man-controlled items and systems in industry, agriculture and transportation operate considerably below their capacity.

With a view to surmounting the lagging in this important matter, the USSR State Committee for Science and Technology sponsored in 1985 a collegium on "Further Development and Extensive Utilization of the Achievements of Ergonomics in the National Economy." The meeting of the GKNT collegium was preceded by extensive preparatory work with the participation of USSR ministries and departments, councils of ministers of union republics, the USSR Academy of Sciences, the AUCCTU, the Academy of the National Economy and the All-Union Council of Scientific and Technical Societies. An interrelated set of organizational, scientific-methodical and economic measures was drafted. The main role in their implementation was assigned to ministries and departments and their organizations and enterprises which are developing consumer equipment and goods. It is precisely they who must ensure the further development of ergonomics as a structural component of scientific and technical policy and use its latest achievements in upgrading production efficiency, perfecting the consumer qualities of industrial output and improving labor conditions. In order to solve these problems, it was decided to organize a system of ergonomic support in industrial sectors in 1986-1987. The function of head institute on problems of ergonomics was assigned to the All-Union Scientific-Research Institute of Industrial Aesthetics. In accordance with the GKNT decree, an ergonomics program was formulated and coordinated with the interested ministries and departments, aimed at intensifying the social orientation of technical progress and, on this basis,

enhancing the human factor in the production process. The implementation of a union-wide scientific and technical program should contribute to substantially reducing the volume and, in the future, totally eliminating the production of machines and equipment which create labor conditions harmful to human health, and which make labor monotonous, unattractive and uncreative. Ergonomic support in the development and operation of equipment will make it possible to solve more efficiently in contemporary production an important economic problem: using equipment to its maximal potential. The successful implementation of this program will be greatly determined by the scale and level of training and upgrading the skill of ergonomics specialists.

The residual principle of financing projects, related to a consideration of the human factor in the development of equipment, must be eliminated with a view to ensuring the extensive utilization of the achievements of ergonomics in industry. Savings in ensuring high consumer qualities turn into tremendous operational losses. Essentially, this is a question of economy of convenience and human mood and health and, in the final account, labor efficiency and quality. We cannot tolerate the fact that a designer, who has increased the power of a tractor without improving the working conditions of the tractor driver is paid a higher salary than the author of a vibration-proof drill, which has protected thousands of people from severe disability by not only preserving their ability to work but their high productivity as well.

It is important as of now to prevent the production of machines, equipment and other industrial commodities inconsistent with progressive achievements in the science of labor. Upgrading the ergonomic standard of equipment should be considered the most important obligation and standard in the work of all production, design and scientific collectives.

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CONCERN FOR THE PERSON

Moscow KOMMUNIST in Russian No 9, Jun 86 (signed to press 11 Jun 86) pp 82-85

[Article by Hero of Socialist Labor Ya. Peters, chairman of the Pobeda Kolkhoz, Slavgorodskiy Rayon, Altay Kray]

[Text] The attentive students of the materials of the last party congress, its resolutions, the Central Committee political report and the delegates' speeches, point out the tremendous importance which the party forum ascribed to social problems. A number of delegates discussed problems of rural social and cultural development. I liked the outstanding speech by Twice Hero of Socialist Labor V.Ya. Gorin, chairman of a Belgorod Oblast kolkhoz. Asked "What does rural sociocultural life mean?" He gave a complete meaningful answer: "It is not simply schools, hospitals, barbershops and workshops. It is the living environment of the rural worker, on which his health, mood, knowledge and culture depend. It is also essentially the human factor which determines all of our successes and shortcomings. Therefore, we should adopt a party-oriented attitude toward it as well!"

The delegates to the congress applauded these words. I too liked them. The accuracy of this statement is confirmed by the experience of our collective.

Solving social, cultural and ordinary daily problems in accordance with the requirements of the contemporary rural worker is not easy matter. In our kolkhoz this took 20 years and not everything planned has been completed. As of now, however, we can say with legitimate pride that the working and living conditions in our kolkhoz are comparable to urban conditions. Let me particularly emphasize that all that we have today in the social area was achieved essentially through our own efforts.

Twenty years ago, the kolkhoz territory included five villages located from 5 to 20 kilometers away from the central farmstead, totaling 300 families. Most of the houses had been built before the war and were quite dilapidated. The villages had no clubs, kindergartens or public baths. They were even short of drinking water. Entire kolkhoz families began to leave their familiar Kulunda, particularly after an unparalleled wind erosion spread over many thousands of hectares of cultivated land at the beginning of the 1960s, and after the memorable black storms, when hurricane winds lifted the topsoil off the ground.

The only thing which could have stopped this migration, which was debilitating the farm and stop others from leaving was to create normal living and working conditions. That is why the first concern of the board and all kolkhoz members was the construction of social and housing facilities in Nikolayevka and Kamyshi, where the population of three villages considered as having no future was resettled. Andrey Freze, a graduate of a construction technical school, became the kolkhoz's construction brigade inspiration. He joined the kolkhoz as worker organizer. Initially, the collective of construction workers he organized consisted of 20 members. Two years later, it numbered nearly 100 people, who had mastered the skills of stone masons, plasterers, carpenters and masons. It was precisely these people who, in less than 20 years, built housing with all amenities, industrial buildings, and sociocultural projects worth 15 million rubles. We are also justifiably proud of the kolkhoz consumer house, which includes a food store, canteen, clothes sewing workshop, workshops for the repair of electrical household appliances and the reception center of the rayon consumer services combine.

Today's children see their native village in a way entirely different from that of their parents. Let me quote at this point a composition by a fifth grader, a young resident of Nikolayevka village. Here is what she wrote:

"I love my native village, where I was born and where I live. In the past our village had only one street. Now it has five and all of them are asphalted. In the past the houses were uncomfortable, small, made of clay and reeds. There was little greenery. Today our village has comfortable and beautiful houses. Trees, shrubs and flowers, embellishing our village, grow in the front gardens. There is a house of culture, a consumer house, stores and a secondary school. Beautiful flower beds, young birches and spruce have been planted in the school yard.

"In the center of our village is a victory park with a glory memorial, perpetuating the memory of our heroic fellow-villagers who fell in the Great Patriotic War.

"The lake behind the village is used to irrigate the fields and provide water to surrounding villages. Birches used for firewood and other trees grow not far from it. The fragrance of willow-trees in bloom spreads far and wide. Our village is particularly beautiful toward the end of May. Everything is in bloom: apple and cherry trees, currants, bird cherries and lilacs. Bees and bumblebees are buzzing over the flowers. The fragrance of the flowers wafts over the village. Our village is beautiful in the evening, under the setting sun. The purple gleam of the sunset lights up trees and homes. This makes the village look red. I love my village very much and would like it to become even greener and more beautiful."

I find this simple and warm composition very precious. I believe that it needs no comment. Let me add the following: in the past 15 years, 70 out of each 100 students who complete the Nikolayevka secondary and Kamyshi eight-grade schools settle in their kolkhoz for life. One of them is Yegor Yegorovich Yergardt, delegate to the 27th CPSU Congress, bearer of the Order of Labor Glory and head of a tractor crop-growing brigade.

We believe that the living, working and recreation conditions, which have been improving with every passing year, played a decisive role in keeping the young people in the kolkhoz. This is the foundation for most efficient educational work. The education of the new person, the future master of the land, begins at the Cheburashka Kindergarten, managed by party member Natalya Abramovna Fink, the "main mama." Together with her assistants she does everything possible for the young to be strong, happy and industrious. The kindergarten has its own "field," where the growing generation is learning how to grow its crops. The children carefully grow radishes, carrots and cabbages, and care for saplings. An older group, preparing to attend school, is already quite well familiar with the cultivation of grain and the work which their parents and elder brothers and sisters do in fields and livestock farms.

The kindergarten personnel also see to it that the children are raised in an atmosphere of moral purity. For example, should an educator see that a child becomes frequently restless or depressed, he will not ignore the fact. Could there be discord in the family? Could it be that someone at home was rude to the child? At that point, the kolkhoz women's council, headed by its chairman Tamara Georgiyevna Gordiyenko (who is also head of the kolkhoz trade union committee) comes to the aid of the educator. Educators and activist women invariably identify the root of the evil. Should their advice be ignored, the parents are summoned by the trade union or party committee. It is thus that not only parents but the kolkhoz public as well are concerned with the life of every child.

Highly skilled teachers welcome the children in a splendidly equipped school, with special classrooms, a sports hall and training workshops. In addition to their graduation diploma, the students are also issued certificates of completed training: tractor driver for boys and machine milking operator for girls.

We are firmly convinced that the kindergarten, the school, the house of culture, the sports hall and the stadium and well-organized consumer service, trade and medical facilities are specific kinds of production subunits of the farm, the work of which tremendously effects our crops and livestock productivity.

The health of our kolkhoz members is a subject of special concern to the kolkhoz board and the public organizations. Good health is the basis for a good mood and great industriousness.

At a recent conference in Barnaul, a sovkhos director asked me whether it was not too much of a luxury to have four physicians and seven nurses for a population of slightly less than 2,000 of our two villages? I asked him in return: "How many days a year does the average worker in your sovkhos spend on sick leave and how many days is he absent from work for that reason?" The director shrugged his shoulders and said that he had not kept track. "Find out and come see us. Let us compare," I suggested. He did and we compared. It turned out that working time losses caused by illness in his sovkhos were nearly twice that of ours.

However, this was not all, we told our guest. Before our kolkhoz had its own polyclinic, more than 700 of our kolkhoz members took more than 1,000 working days for preventive examinations at the rayon hospital. About 3,000 working days were wasted in trips to the rayon polyclinic for a visit to specialists. And how could we compute the number of times during which mothers with their small children would take the bus to see a pediatrician? And what about the feelings of a gravely ill person and his relatives, when at best it would take one-and-a-half to 2 hours for the first-aid ambulance to come from the rayon center? Therefore, this was not luxury but a most urgent human and economic requirement--our four physicians, seven nurses and first-aid ambulance.

At each ceremonious meeting, in addition to production frontrankers, we mandatorily mention workers in our education, training, culture and health care "shops," and the best students who have distinguished themselves during the summer work quarter. Well-furnished apartments are offered to the personnel of such services by the kolkhoz.

Kliment Arkadyevich Timiryazev said: "The standards of fields have always gone hand-in-hand with the standards of man." These words of the great scientist are particularly relevant today. Today every rural manager must see to it that the standards and the mind of every farmer improve with every passing year. This too is a prerequisite for better yields and greater livestock productivity.

Still, much better results could have been achieved. Alas, we cannot do everything ourselves. I know from bitter personal experience that the most difficult part is not to build but to obtain the necessary building materials. To this day virtually my entire working time as chairman is spent on such efforts. I am not speaking of our kolkhoz procurement workers. I cannot relax if they are not away on some assignments. It is a good thing that we have our own main construction material--the kolkhoz brick-making plant, which not only makes construction possible but also produces bricks which are sold or traded for other materials. A great deal of other items we procure from elsewhere around the country. We buy or trade. I.A. Bekker, my deputy in charge of procurement, once said the following:

"You know, I have a cherished dream: see what a great deal is produced by our industry! Spare parts are produced for each item. Each state construction project has centrally issued materials, equipment and others. According to my own observations and talks with other procurement workers, however, I know that materials are frequently stored in warehouses and kept there for future use, justifiably or not. If someone would only pass a law which would allow us to exchange such materials among plants, kolkhozes, sovkhoses and other organizations and issue information bulletins which would clearly indicate supply and demand. This would tremendously accelerate the "economic blood circulation" in our huge economy. Just consider: the bulletin would be received by the kolkhoz and we could read the following: I have thus and such a timber and I need thus and such spare parts. Here is the address, the telephone number and telex address. I would send a cable and that would take care of it."

I think that Ivan Aleksandrovich's dream should also be the one of planning and procurement organizations in the country. Still, despite the great difficulties of rural construction, they can be surmounted with our own efforts. Our kolkhoz makes capital investments in construction totaling 1 million rubles a year. We are currently building an enclosed sports-health recovery complex, polyclinic, prophylactic facility, sports stadium and swimming pool. This 5-year period the complex will be completed. We are also building housing.

However, building the house of culture, the sports stadium, the polyclinic, the service house and our own general store which, incidentally, is as good as the one in town, and a kindergarten is not enough. As is the case with production work, we must always be concerned with the fruitful and qualitative work of these institutions. We persistently look for cadres to staff the kolkhoz's sociocultural services. We are looking for really conscientious workers in culture and for sports coaches.

Some farm managers believe that the chairman of the rural soviet should worry about the work of cultural establishments. But let us look at the truth in the eyes: What can the rural soviet do considering its more than modest budget? For example, our farm spent more than 60,000 rubles to repair the house of culture and to buy costumes and instruments for amateur performances.

With every passing year an increasing number of people are becoming involved in amateur performances, both young and middle-aged, and the number of people practicing various sports is increasing. We are pleased to note that less and less people spend their time drinking. Discipline is tightening up, labor productivity is increasing and so is the level of good mood per 100 hectares of farmland (although this "indicator" is still not included in the figures of the Central Statistical Administration). The time may come, however, when statistics will begin to include this factor as well. Meanwhile, we are already taking it into consideration in our collective.

The party congress called upon us, party members, to face decisively the social requirements of the rural population. This appeal has met with the warmest possible response among my fellow-villagers and all Soviet people. They see in it a real manifestation of party concern for improving the living conditions of every working person and his family. The labor collectives of town and country can and must make their contribution to this nationwide project. They have great possibilities and reserves, as confirmed by local experience.

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Man of the New World: Concerns, Ideals, Values

'WILLFUL' VAGIN AND HIS STUDENTS

Moscow KOMMUNIST in Russian No 9, Jun 86 (signed to press 11 Jun 86) pp 86-91

[Article by V. Kovalenko]

[Text] A local official rang up Vagin, chairman of the Kolkhoz imeni Lenin, Koverninskiy Rayon, Gorkiy Oblast, and complained, half seriously and half jokingly, that Bachurin, Vagin's protege for promotion, who now heads the Kolkhoz imeni Kirov, had not behaved quite tactfully with the rayon balance commission. Told that conversion to a collective contracting system had to be done as fast as possible, his answer was that he was not in a hurry to do so for the sake of appearances. Such conversion required, above all, proper economic conditions. Briefly, he almost accused us of economic ignorance.

"What have I got to do with it?" asked Vagin astonished.

"You, Mikhail Grigoryevich, as member of the rayon buro,..." the other man stumbled, "in a word..."

"Should urge him?" Mikhail Grigoryevich prompted.

"Yes, in all likelihood."

"Essentially, however, was Bachurin right or wrong?"

"Generally speaking, essentially, he was right, but..."

"Then this should only please you. It proves that we were right by recommending him for the position of chairman. You can lean only on what stands firm. As far as tact is concerned, I shall mention it to him."

"But is it worth it?" was the unexpected question. "If he is reliable..."

Vagin put down the receiver and started thinking. Times change and so do people. When he became chairman, the rayon management did not agree with him all that easily. The moment he expressed his opinion in answering a request, he would be immediately classified as being obstinate and even accused of political immaturity.

During the first year of his chairmanship, he was issued a strict reprimand which was entered in his party membership card.

What happened was this. A commission arrived from the rayon with the instruction to plow the clover under. In this kolkhoz, however, clover was the only crop which could have given a little bit of strength to the soil, exhausted from long years of lack of fertilizer or proper care. An order is an order and the plowing was started. However, the dust from the car taking the commission away had still not settled on the ground when the tractor drivers turned off their engines and formed a tight circle around the chairman, asking what to do. In the final account, they decided that whatever may happen they would not plow the clover under.

A cold spell descended several days later and snow covered the fields. It was no longer possible to plow the clover under. It was then that the strict reprimand was entered in CPSU member Vagin's file, to teach him not to be willful, as a raykom buro member said at that time.

However, when spring came the clover grew so well in the kolkhoz of "willful" Vagin, that no single rayon manager thought of ordering that it be plowed under (the more so since a difficult situation was developing in the rayon with the fodder). That year the kolkhoz averaged 50 quintals of excellent clover hay. This supplied fodder to the cattle owned by the farm and privately, and some was shared with neighbors, who had not displayed such sensible "willfulness."

"Well, Mikhail Grigoryevich, you were born with a silver spoon in your mouth: you kept both the clover and your party card," he was told by one of his improvident colleagues.

This, however, was not in the least a matter of good fortune or luck. Life itself had shaped the firmness in the character of party member Vagin, his resolve and ability to defend his viewpoint and his daring. He had had to work since childhood. Then came the war. He received his baptism of fire at Stalingrad. He fought in the ranks of the Guards Tank Kantemirovskaya Order of Lenin Red Banner Division, going all the way to the Elbe and Prague. Captain Vagin earned four combat orders for military valor.

After his demobilization, he worked as raykom party instructor, completed the Gorkiy Agricultural Institute as a correspondence student, became chief agronomist of a kolkhoz and director of a machine-tractor station, and took post-graduate courses by correspondence. He drew attention as an active and knowledgeable worker and was asked to work at the RSFSR Ministry of Agriculture, where he headed the industrial crops department. He was even given an apartment in Moscow. What else could he want? After a few months, however, he went to the see the minister and blurted: "Please release me, this is not for me." And since he requested this on the ministry level, rather than from any other position, he was allowed to go in peace.

Therefore, there was nothing to worry about Vagin's character and practical experience when he finally took over a neglected farm. He enhanced the kolkhoz. The experience of his collective has been the subject of essays,

articles and even books in which interested readers will find a great deal of useful and instructive information on agronomy and zootechnology. A great deal of interesting materials may be found in solving social problems and the organization of labor. Many readers would be probably amazed at the results which the farm achieved under Vagin's chairmanship. Briefly, they are the following: grain crop yields increased from 6-7 quintals to a stable 30-35 (and sometimes even 40) quintals. As a rule, they are double the rayon average. Other crop yields increased sharply as well. Here are other figures: the 3,775 hectares in arable land, and the auxiliary industries are yielding a steady profit of 3-4 million rubles annually.

Somehow, however, the obvious fact that in the course of the struggle for high indicators Vagin had to surmount more than simply adverse weather conditions or puzzle over problems of fodder, fertilizers and equipment, is omitted in the publications which describe in detail his management methods and ways of solving farm methods. He has been frequently forced to oppose thoughtless orders and groundless decisions and resist bureaucratic pressure on a principled and firm basis. This was clearly apparent in the case of the unplowed clover and in many others. It is worth noting that in such occasionally difficult struggles, he has always had the unanimous support of the kolkhoz members, which is something particularly valuable and noteworthy.

Such was the case, for example, with the expansion of auxiliary industries, the income from which brought money for the purchase of new equipment, fertilizers and mixed-breed cows, for building a new settlement at the central farmstead and lay paved roads.

Kolkhoz women painted furniture, semi-finished wooden furniture was shipped to furniture factories, and the production of carpentry goods was undertaken, not only for kolkhoz construction projects, built at the rate of 1 million or more rubles per year, but also for other construction sites. A clothing shop began operations at full capacity. As a local wit said, this was like killing two birds with one stone: lots of brides and grooms at home and lots of manpower in the fields. He was right, for as many as 50 marriages are celebrated every year in Kovernino village, children enter kindergarten at the proper age, and hundreds of auxiliary industry workers take to the fields to mow the hay or harvest the crops. There are enough people for mowing, hay stacking, flax pulling, and harvesting potatoes and fodder beets. Vagin's people do not leave behind even a single bit of straw, it is said in the rayon. Meanwhile, until quite recently, sometimes their neighbors were unable to harvest many hectares of flax, root crops and potatoes before the winter.

During one of our long talks, Vagin energetically said:

"A kolkhoz chairman may have the wisdom of Solomon but he is nothing without the support of the people and without their advice. What is the main product of a manager, whatever his rank? It is to make the only accurate decision in a specific situation. This decision, however, can be reached only with the help of his cochairmen. The more closely one listens to them the better one's decision will be and the more confident one will be in addressing superiors. This too is important."

As proof, he cited the following fact: In 1972 the rayon leadership suggested to the kolkhoz to build a dairy complex for 1,600 cows, offering very advantageous conditions: millions of rubles in loans and one of the best construction organizations in the oblast as contractor. Vagin summoned the board and invited the party committee members. Different views were expressed. Some said that one should not look a gift horse in the mouth. Others questioned the expediency of building such a large complex, saying that the kolkhoz would be totally unable to feed such a large number of cows, given the fertility of fields and meadows at that time. There was absolutely no guarantee that a proper feed base could be organized by the time the complex was finished.

At that point, Vagin submitted the matter for discussion at a general meeting. The majority of kolkhoz members voted against the complex. Such construction, the resolution stated, "was inexpedient at that stage."

At the same time, however, the meeting instructed the board to ask the superior organization for a contractor to build four houses with a total of 100 apartments. The reason was that many boys and girls, who had left for the city, wanted to come back if housing were available, for meanwhile they had married and were living in hostels. The building of such housing would bring needed manpower back to the kolkhoz.

Kolkhoz Chairman Vagin and party committee secretary Kitayev informed the rayon's management of the decision. They were taken strictly to task for failing to understand the importance of industrializing animal husbandry as quickly as possible. However, the party obkom, to which Vagin addressed itself, took a different view: the kolkhoz was assigned a housing contractor and 1 year later 112 young families settled in apartments with all city comforts.

As to the development of animal husbandry, 2 years later the kolkhoz builders built a good mechanized cow barn for 400 head and made capital repairs of all the small farms, which they mechanized as best they could. The crop growers set up along each farm a grazing area which can be used continuously from the end of May to the first snowfall. In the final year of the 5-year period the kolkhoz reached the highest output in the oblast of 4,710 kilograms of milk per cow.

That is what Vagin recalled when, for the eleventh time, the Kolkhoz imeni V.I. Lenin was awarded the Red Challenge Banner of the CPSU Central Committee, USSR Council of Ministers, AUCCTU and Komsomol Central Committee, for work results achieved in 1985 and the 11th 5-Year Plan. This time the banner was awarded in perpetuity.

The fact that 15 years before that the kolkhoz members had considered the building of housing their prime task had quite remarkable consequences, a kind of demographic explosion. The number of able-bodied people increased from 400 to 1,200. The "average kolkhoz member" became amazingly younger: from almost 50 he turned into a strong 29-year-old youngster.

This "explosion" was the result of yet another decision passed by the general meeting which was preceded by a kolkhoz-wide referendum. I read the following in one of the minutes of a board session held 10 years ago: "submit for discussion the question of benefits to kolkhoz mothers with three or more children and to young families. Hold before the general meeting a discussion of the board's suggestions in brigades, livestock farms and auxiliary industry shops." The kolkhoz members' suggestions: mothers who have a second child will be given 6-month paid leave; 1-year leave will be given on the birth of a third child and 18 months on the birth of a fourth. A four-children family would live rent-free, the kolkhoz would pay the children's kindergarten tuition, and the father's wage would be raised by 20 percent. New families would be given apartments, a one-time aid of 300 rubles and a 1,000 ruble loan to furnish their apartment.

The suggestions were adopted and became the law of kolkhoz life, determining the fate of hundreds of young families for many years in the future.

Many other questions are submitted for discussion by the entire collective. For example, conversion to a shop-management structure was discussed in all economic subunits, for which reason it was carried out painlessly and yielded major social and economic results. On another occasion, an extensive discussion was held on conditions for converting to collective contracting in brigades and livestock farms. Such discussions at the lower levels of kolkhoz democracy, as Vagin describes them, make the decisions of general meetings particularly powerful and effective.

"Metaphorically speaking," Mikhail Grigoryevich said with deep conviction, during our recent meeting, "kolkhoz democracy is the second tillable stratum! If we were able to increase the fertile stratum from 10-12 to 22 centimeters, accomplishing what it takes thousand of years for mother nature to accomplish, it was only thanks to the tremendous increase in the fertility of our second 'tillable stratum,' the creative intellect of the kolkhoz farmers, livestock breeders, brigade leaders and specialists. Their awareness of the absolute fact that they are the only rightful owners of the kolkhoz has increased their strength tremendously. I am deeply convinced that if the power of the creative potential included in the kolkhoz's model statutes would be applied 100 percent in all kolkhozes throughout the country, as of now output per hectare would become much higher. However, this is possible only if the farm is headed by a creatively thinking manager."

But where could such people be found for all kolkhozes? Vagin is firmly convinced that they can be found at home. All that is needed is to put an end once and for all to the irresponsible formalistic approach to candidate chairmen recommended to the kolkhoz members. The mandatory rule must be the extensive preliminary study of the views of the kolkhoz members. Also, those who recommend the person must assume full responsibility. If this were practiced, the case of the Mir Kolkhoz, Koverninskiy Rayon, Gorkiy Oblast, would not have taken place. Until 1977, the kolkhoz was frontranking in all indicators and was competing against the farm headed by Vagin on equal terms. Unfortunately, however, its experienced and talented chairman was replaced and as a result of which the once profitable farm ended up 500,000 rubles in debt.

It was only 6 years later that, finally, the manager the kolkhoz members had requested for a long time, Mikhail Vasilyevich Tararin, was finally assigned to the farm. In literally 3 years, once again, the kolkhoz gathered strength and last year earned almost 3 million rubles. That is what having a talented chairman means! With the same people and with the same land, in 3 years he was able to regain what had been lost in 6 years and to increased it.

As member of the Union Kolkhoz Council, Vagin recently saw disturbing data on the rate at which kolkhoz chairmen were being replaced throughout the country. On 1 April 1985, of the 26,213 chairmen 12.8 percent had held that position less than 1 year; 12.9 percent, 1-2 years; 28 percent, 2-5 years; 22 percent, 5-10 years; and 24 percent, more than 10 years.

These were bad figures: only 46 of 100 chairmen had held that position 5 or more years. Yet we know that even a very successful chairman needs a minimum of 5 years to master this unique skill. In some rayons in Gorkiy Oblast, in the last 5 years all or three-quarters of chairmen had been replaced, for which reason rural affairs in those rayons were in bad shape.

"When, finally," Vagin asked, "shall we realize that the personality of a kolkhoz chairman has a tremendous influence on the lives of hundreds and hundreds of people, on the fate of fields and livestock farms and, on a national scale, also on the fate of the Food Program! In our kolkhoz, over the past 5 years the party members have made their contribution to strengthening the rayon corps of chairmen: based on our recommendations, three chief farm specialists were appointed chairmen of lagging farms: Pavel Klyuganov, Mikhail Bachurin and Ivan Bobkov. They went to work confidently and, naturally, not without our assistance. We help everyone with advice, equipment, cash, seeds and feed. Currently the other strong farms in the oblast are beginning to sponsor the weaker ones. Such sponsorship by leading over lagging farms must most actively promoted on a national scale. The following could be tried: chairmen of advanced collectives may work for awhile in sponsored kolkhozes, after appointing a deputy chairman to take their place. This would reduce to a minimum the possibility of appointing as kolkhoz chairman the wrong person. In a few years, this will give us a stable cadre of chairmen. We must always remember that those whom we select for such an extremely responsible position in the countryside should be purposeful and persistent to the extreme! This is the only way for a chairman to solve even a most difficult problem, arbitrarily triggered, with minimal losses, for such arbitrary decisions have been frequently made in recent decades. What is noteworthy is that not one of them has seriously damaged the leading farms headed by party-oriented and principle-minded managers. Metaphorically speaking, they mounted an active defense against voluntarism in economic management, again and again by proving that they were right. The main thing was that they were able to withstand the pressure with the full support of the kolkhoz members who agreed with the line taken by the chairman. Those who relied on the collective sensibly and courageously, involving it in self-management, virtually always came out the winners in supporting principle-minded views.

Mikhail Grigoryevich Vagin's students, who have worked in his farm as chief specialists, persistently follow in their teacher's footsteps. Lavrentiy

Kirillovich Voronov, Koverninskiy Party Raykom first secretary, describes them as follows:

"Their characters are different but in one aspect they are like blood brothers: they defend their viewpoint on a principled basis, to the end. They always seek the advice of the people and the situation in their kolkhozes becomes noticeably improved. Today all the 'sick' farms they took over are working profitably. Their growth rates are simply joyful. One can feel Vagin's training! Honestly, when such people criticize me and other rayon managers at conferences, we feel, to put it meekly, rather uncomfortable. Sometimes it is hard to restrain oneself but, if one does, if one can overcome one's ambition and listen, one clearly understands that Vagin's people are criticizing not for the sake of their own benefit but for the good of all. Actually, you can see that for yourself. A small conference will be held at the raykom in about 30 minutes, on the sowing campaign and the implementation of the milk plan."

I did see it for myself: at that conference Vagin's people were the "troublemakers" in the best meaning of the term.

Ivan Ivanovich Bobkov, former chief agronomist at the Kolkhoz imeni Lenin, a most softly spoken person, frequently accused by Vagin for spinelessness, spoke sharply of the work of rayselkhozkhimiya in the sowing campaign:

"I fail to understand why the selkhozkhimiya personnel, instead of applying dehydrated ammonia under the corn crop are now applying it on the clover, at the fields of farms closer to the rayon center. Where are you looking, comrade RAPO managers?! This is a real disgrace! The clover can wait until June but in the spring sowing a field without fertilizer, without dehydrated ammonia is a crime to the land!"

The raykom first secretary fully supported this critical remark and demanded that most urgent steps be taken.

Pavel Anatolyevich Klyuganov, Kolkhoz imeni Kutuzov chairman, and Mikhail Mikhaylovich Bachurin, Kolkhoz imeni Kirov chairman, spoke out at the conference in equally plain and sharp terms. Both had been well trained by Vagin, the former as chief engineer and deputy chairman, the latter as chief dispatcher and deputy chairman as well.

I later visited the kolkhozes headed by Vagin's people. It was pleasing to hear words of gratitude and love for their teacher, from the mouths of men hardly considered sentimental. I could see with my own eyes the great changes which had taken place in these farms. I thought: yes, we could go far along the way of acceleration as planned by the 27th Party Congress, had every chairman of a progressive farm trained not three but even one such manager as the students of "willful" Vagin.

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SOCIAL POLICY, DEMOCRACY, SELF-GOVERNMENT

THE STATE, THE LAW AND THE PERSON

Moscow KOMMUNIST in Russian No 9, Jun 86 (signed to press 11 Jun 86) pp 92-101

[Article by Academician V. Kudryavtsev, member of the USSR Academy of Sciences Presidium and director of the USSR Academy of Sciences State and Law Institute, and Dr of Juridical Sciences Ye. Lukasheva]

[Text] One of the basic ideas which runs through all the decisions of the 27th CPSU Congress is upgrading the efficiency of the human factor, developing the creativeness, interest and initiative of Soviet people and humanizing all realms of life of Soviet society.

Orienting the person toward reaching his full creative potential in solving the topical problems of attaining a new qualitative status of our society is closely related to the further advancement of the socialist state and law and the entire political system, and strengthening legality and the legal foundations of state and social life. All of this formulates new requirements relative to political-legal considerations and determines the need to consider governmental and legal institutions through the lens of human interests and needs and their humanistic and moral trends.

The problem of perfecting the socialist state and law has been the subject of great theoretical and practical attention. However, there have been frequent turns aimed at purely structural changes in state-legal institutions, which have rarely taken the main thing into consideration: the level and status of social consciousness, the moral and psychological climate of the society and the gravity of life's contradictions. This largely explains the fact that the potential inherent in the nature of socialist state and legal institutions is still not used to its fullest extent. They are still not reorganizing their work at a speed consistent with the congress' stipulations. Yet the successful growth of the sociopolitical activeness of the masses, which are the main component in the socialist self-government by the people, is impossible without this.

In studying ways of perfecting the state, law and legality, Soviet legal science proceeds from the fundamental Marxist-Leninist ideas of the inseparable link between the political and legal life of society and the practical activities of the person, as follows:

The state and the law are not some kind of frozen political-legal structures but the dynamic result of human social activities, in the course of which man not only creates state-legal relations and respective institutions but also transforms his own nature; for man is not an abstract being. He is "the world of man, the state and society" (K. Marx and F. Engels, "Soch." [Works], vol 1, p 414);

Under socialism state and law exists for the sake of man; their purpose is to express the most important interests and satisfy the needs of all members of society and to ensure the harmonious combination of social with private interests; hence the need for a comprehensive humanistic orientation of state-legal institutions which must be based on the moral categories of social justice, responsibility, civic-mindedness, honesty, conscience and goodness;

The essential features of the Soviet state and law and their consistency with the interests and needs of socialist individuals are of essential importance in the political and legal development of the Soviet person and in promoting within that person an interested, responsible, conscious and active attitude toward attaining the objectives of building socialism and communism;

A principle which is inherent in socialism is that of reciprocal responsibility between the state and the individual; this inalienable feature of socialist democracy is codified within the system of juridical rights, freedoms and obligations; such reciprocal responsibility is one of the prerequisites for securing social justice and asserting the moral foundations of the socialist way of life.

The theory of the building of communism, which includes the study of state-legal relations, can be perfected on the basis of the profound and comprehensive knowledge of the laws of human behavior in society, which is a prerequisite for accurately formulating the strategic and tactical tasks in the scientific management of society, developing the state and law, strengthening legality, perfecting Soviet democracy and ensuring the increasingly fuller observance of the principle of socialist self-government by the people. The starting point in solving difficulties and contradictions which exist today in the state-legal area and determining the ways of surmounting them, is the person, his needs, interests and readiness to understand and accept change and the sociopsychological and moral condition of society at large.

Such problems are today the focal point of attention of juridical science.

The party congress noted shortcomings in the social sciences. The main among them is a certain remoteness from the problems of reality, equally inherent in juridical science. Its elimination requires a reorganization of legal thought, elimination of dogmatism and scholasticism, and directly turning to the complex and conflicting processes which occur in the governmental and legal life of society and in the area of social consciousness.

We know that a number of legislative acts, which today govern the most important areas of social relations, are inconsistent with the requirements of the current stage in social development. Any type of law which falls behind

the corresponding needs of reality entails high social costs. Such a lagging, however, has either not been noticed and assessed promptly or else the jurists have lacked the daring and civic-mindedness to defend in the respective state bodies suggestions which would improve legislation.

The decisions of the 27th CPSU Congress demand of us to surmount the inertia in legal thinking and to undertake the study of the real contradictions of state and legal development in socialism and its study from the viewpoint of the interests and needs of the Soviet people.

I

The CPSU believes that at the present stage the strategic line to be followed in the development of the political system of society is to perfect Soviet democracy, ensure the increased implementation of socialist self-government by the people on the basis of the active and participation of the working people and their collectives and organizations in solving problems of governmental life. It is in this light that the CPSU considers the development and strengthening of the Soviet socialist state, the increasing development of its democratic nationwide nature and the creative enhancement of the human factor as key problems of its policy.

The soviets of people's deputies, which are the main link in the socialist self-government of the people, play a prime role in solving such problems.

In recent years the party and the government have taken a number of steps to enhance the role of the soviets and to broaden their rights. To this day, however, their rights and possibilities are not being exercised to the fullest extent. It is this that affects the mental inertia of soviet personnel, the inefficiency of their executive bodies and the underestimating of the role of representative democratic institutions. The desire of many managers to solve problems "in closed session" or even "through paper work" has not been eliminated.

It is no accident that many decisions sometimes remain on paper only for long periods of time. The study of the reasons for this situation indicates that in 1985 in some soviets less than one-half of the items to be considered at sessions were drafted with the participation of the deputies; the rest were drafted by regular executive committee personnel who never left their offices. This type of work style took years to develop, and its elimination will require time, persistence and kinds of knowledge and habits.

The result of the formalism of soviet sessions and the insufficiently energetic work of deputies and permanent commissions is that proper attention is not paid to all social needs of the population, needs which must be met by the local authorities. Contacts between deputies and voters are sometimes sporadic. In many places no joint or personal responsibility is assumed by soviet personnel for all that occurs on the territory of a given soviet.

The activities of the soviets are most directly related to the population's daily life. Any omissions and blunders in their work become immediate focal

points of public opinion, develop an adverse sociopsychological climate and undermine the reputation of the local soviets in the eyes of the population.

Enhancing the role of the human factor requires not only finding new forms of creative activeness on the part of the masses but, above all, improving the efficiency of the soviets themselves. It is on this level that jurists are conducting their research and development projects, aimed at achieving the following:

Improving further electoral practices (search for optimal means of combining territorial with production principles in establishing elective power bodies, improving the mechanism for the promotion, discussion and evaluation of the practical qualities of candidates for deputies and more adequate representation of all population strata within the soviets);

Improving the work of soviet sessions on all levels; this involves broadening the range of problems they consider and solve, discussing problems on a more practical basis and ensuring the comprehensive assessment of draft resolutions, extending the length of sessions, developing more flexible forms of session work (informing the population extensively, considering draft soviet resolutions by labor collectives, broadening the practice of on-site sessions, covering the work of sessions by the press, and combining plenary with sectional sessions), enhancing the reputation of soviet resolutions and ensuring that the population is extensively informed about them;

Making deputies' work more efficient, upgrading their responsibility, improving the practice of questions asked by deputies and enhancing the efficiency of the permanent commissions of the soviets on the basis of their active and responsible implementation of governmental functions; upgrading the analytical and control activities of permanent commissions;

Broadening the rights and autonomy of soviets in handling material facilities, comprehensively strengthening their material and financial base, and perfecting the legal mechanism of the influence which local soviets can exert on activities of enterprises under superior jurisdiction, located on the territory of a local soviet;

Upgrading the efficiency of institutions based on direct democracy, referenda, social discussions of draft bills and other resolutions, rural rallies, town meetings, etc., in which every citizen directly participates in the management of governmental affairs.

The purpose of the suggestions and recommendations of scientists, aimed at perfecting the activities of soviets, is to contribute to the development of the social activeness of the citizens, upgrading the demands addressed to deputies, improving control by the voters over their activities, and ensuring that the worthiest people, who can successfully manage governmental affairs, are elected to the soviets.

The present crucial period in the life of Soviet society formulates new and significantly stricter requirements toward state management bodies--ministries, departments, main administrations and other units. The

acceleration of socioeconomic development and scientific and technical progress, economic intensification and the elimination of the difficulties and negative phenomena which had appeared in recent years are difficult and responsible tasks which must be carried out mainly by the state apparatus; this would be impossible without radically improving its organization and functioning and without strengthening its ties with the masses.

A number of steps aimed at perfecting state management were taken in our country in recent decades. However, by no means were all such steps profoundly thought-out and scientifically substantiated; many of them did not rely on socioeconomic development forecasts. The comprehensive approach to the restructuring of management was replaced by partial improvements which could not yield real results. The increased difficulty in solving socioeconomic problems was linked mainly to the need for setting up new units and structural subdivisions of the administrative apparatus and increasing the size of the personnel. Whereas in 1936 the country had 18 all-union and union-republic people's commissariats, by 1946 it had about 40 ministries; by 1984 their number had doubled. More than 18 million people were employed in the administration of the state. Not only was the number of ministries and departments multiplying but within each one of them the number of deputy managers with decision-making rights had increased.

The increased number of decision-making units worsened departmental separateness, hindered the solution of intersectorial problems and weakened coordination. The machinery became excessively cumbersome, operating through a number of levels and units and its organizational structure became excessively complex. The result of all of this was inertia and stagnation in activities, which did not contribute to the prompt awareness that the economic situation had changed and which, in the final account, lowered the pace of national economic growth. Departmentalism and parochialism, which became widespread, hindered the comprehensive solution of economic problems; a formalistic attitude toward the work, paper shuffling, red tape and bureaucratism began to replace specific practical management. Some departments were literally drowned in paper. Thus, in 1985 the Ministry of Tractor and Agricultural Machine Building issued to its enterprises 140,000 official papers and received from them 520,000 documents. In 1984 and in the first 9 months of 1985 the Gorlovkhimstroy Trust received 6,215 telephone messages and 3,718 incoming documents (not including a huge number of decrees, orders, instructions, etc.). The reduced responsibility of managers for their assignments lowered the initiative and activeness on the part of labor collectives and citizens, reduced their participation in production management and red tape displayed in dealing with complaints, petitions and suggestions submitted by the working people were the inevitable result of such management. Perfecting economic management is not only an economic and political but also a moral task, related to perfecting the humanistic principles in production management, always directed at the individual.

The program stipulations of the 27th CPSU Congress demand of the jurists a study of the means and factors for enhancing the activities of individuals as participants in public production. The following should contribute to this:

Broadening the independence of enterprises and associations on the basis of total cost accounting; in this connection, making changes in the functions of ministries and departments, relieving them from many daily management problems of subordinate enterprises, which now account for the bulk of their work;

Expanding economic management methods, including the principle of material incentive, commodity-monetary relations, on a socialist basis, the influence of financing and credits and the systematic restructuring of the price system;

Relieving the upper management echelons of petty ordinary matters; enhancing the role and activeness of local (territorial) power and administrative authorities;

Relieving the management apparatus of fictitious or extraneous functions and of functions which they cannot perform with proper efficiency or else which can be performed without the participation of governmental bodies or with their minimal participation;

Reducing petty legal regulations governing various activities of citizens and organizations; eliminating existing phenomena of bureaucratic administration; simplifying the procedure for decision making by management authorities; reducing the number of positions and officials with whom decisions must be cleared; streamlining the accountability system;

Transferring to the public domain some functions currently performed by state bodies, such as to citizens' meetings at home (in town and country) or to their elective public bodies, labor collectives and other self-governing organizations of working people; encouraging the development of initiative from below and population activeness and independent efforts;

More efficient and effective participation of labor collectives and individual citizens in management, particularly on the level of enterprises and sociocultural establishments; considerably expanding the principles of self-government in labor collectives and in residential areas;

Increasing openness in state management (extending the list of reports and information subject to mandatory publication; establishing a firm procedure for access to unclassified departmental materials by members of the public, the press and scientific institutions.

II

The further development of socialist democracy and the political system of Soviet society, and the strengthening of the state are inseparable from perfecting the legal foundations of state and governmental life and the steady observance of socialist law and order. This presumes, first of all, upgrading the quality and efficiency of legislation; secondly, the precise and firm observance of the laws and other legal acts and the existence of impeccably operating mechanisms which ensure such observance.

Soviet legislation and the practice of its application have a direct effect on the interest of every person in all areas of social relations: economic,

social, political or personal. The Soviet legal system is intensifying and broadening its humanistic orientation, giving priority to the rights and interests of the person and perfecting the legal mechanisms which secure them. The CPSU program notes that "the party will continue to promote the expansion and enrichment of the socioeconomic, political and individual rights and freedoms of the citizens and the creation of ever more advantageous conditions and guarantees for their full exercise." The implementation of this task will increase the confidence of every individual in the realistic nature of social opportunities and the fact that his interest will be protected.

However, major problems exist in this area. Today we justifiably speak of comprehensively strengthening discipline and organization, increasing the responsibility of the individual to society and enhancing his moral positions. Lofty personal qualities are developed not through sermons or exhortations. They are shaped in the course of the actual practical activities of the people within the entire system of labor, recreation and daily life. That is what makes the proper organization of economic, organizational and legal mechanisms directly included in human practical activities so important.

Soviet legislation must play an active role in shaping the moral qualities of the person and enhancing his feeling of responsibility. Unfortunately, by no means does everything in our legal life contribute to this purpose. Here again we must mention the imperfection of the legal regulations governing the economic activities of enterprises and distribution relations, which are today the epicenter of sociomoral processes.

Breakdowns in material and technical procurements, unrhythmical production, pursuit of gross output, the stockpiling of huge above-norm reserves in warehouses, production of substandard goods and account padding are the result of the imperfection of the economic mechanism. They make the application of scientific and technical achievements difficult and hinder the retooling of the production process on the basis of new equipment and technology. All of this turns into billions of rubles of losses to society. The moral costs are even higher. The poorly organized mechanism which regulates economic relations distorts the moral consciousness of the working people and dulls the feeling of individual responsibility for actions which conflict with the social interests. The practice of collective guarantees and reciprocal forgiveness becomes widespread and personal benefits assume priority.

No truly communist attitude toward labor is possible until impeccable order in production has been organized and conditions have been created for every person to work with total dedication and a feeling of high responsibility for assignments. This is possible only with the help of an efficient economic and legal mechanism which will ensure social labor discipline, the production of high-quality goods and fair distribution relations.

USSR Academy of Sciences State and Law Institute is currently participating in the drafting of a number of new laws, such as the Law on State Economic and Social Planning and the Law on National Economic Management; the regulation on the socialist enterprise and the production association and the economic code. The concept of the management of economic processes, formulated at the 27th CPSU Congress, will contribute to passing laws which will comprehensively take

into consideration the interest of society and the individual and the enhancement of their reciprocal responsibility.

Jurists are actively engaged in the efforts to streamline legislative control of distribution relations and the legal guarantee of the principle of social justice in labor relations. A problem to be solved is defining the type of flexible forms of wages and systems of material and moral incentive which could take into consideration, on a differentiated and accurate basis, the labor contribution of every person and would exclude the possibility of equalization and unjustified benefits and privileges conflicting with the moral principles of our society.

Equalization and neglect of the actual labor contribution of an individual to the public production process are the result of the improper actions of some economic managers. Studies have revealed that in some enterprises one out of two labor discipline violators has received material incentives and one out of four has been the recipient of moral incentives. The undifferentiated application of legislatively regulated payments according to labor violates the sense of social justice and morally disorients the individual.

Let us also mention other violations of the principle of justice in distribution relations. Some sectors have been granted a not always legitimate "priority" status; there are multiple systems governing wages and allocation of public funds, according to which equally skilled workers working under relatively similar conditions earn different wages. For example, disparities in the wages of grade six jack-hammer operators, lath turners and milling workers may vary by 30-40 percent among enterprises. Given such circumstances, should we be amazed at the high manpower turnover? Wages should be regulated by scientifically standardized legal acts which would exclude departmentalism and parochialism.

The broad-scale economic experiment conducted in our country presumes the setting up of special funds at the disposal of the enterprise manager, particularly for the purpose of awarding material incentives to good workers. However, even after the conversion of enterprises to the new working conditions a number of regulations, and instructions were issued substantially limiting the manager's rights. Thus, V.A. Aranovskiy, general director of the Tyazhstankogidropress Association, wrote that in accordance with the regulation on the economic experiment, bonuses of up to 50 percent and, in some cases, as high as 75 percent of the wage rate (salary) could be paid after the state plan has been fulfilled. However, the structural subdivisions of the main administration and the PO began to make their own decisions, as the result of which the incentive fund was kept on its previous level.

The strict implementation of the basic principle of socialism "to each according to his work" calls for upgrading the efficiency of legal steps to protect socialist property, strengthen control over the measure of labor and consumption and wage irreconcilable struggle against unconscientious behavior and abuse of official position. Violations of the principle of social justice adversely affect the overall moral and psychological atmosphere and weaken interest in labor results not only on the part of individual workers but entire collectives, distorting the system of social guidelines and

impoverishing the scale of moral values. The CPSU Central Committee decree "On Steps to Intensify the Struggle Against Unearned Income" and the USSR Supreme Soviet Presidium Ukase "On Intensifying the Struggle Against Extracting Unearned Income," which will become effective as of 1 July 1986, include a broad system of measures aimed at further strengthening state and public control over the measure of labor and consumption and upgrading the prestige of honest labor.

The struggle against unearned income is consistent with the interest of millions of honest working people who, in the course of the discussion of the new draft of the CPSU program, expressed in their addresses to central and local authorities, just indignation on the subject of such distorted phenomena which violate the principles of the socialist way of life.

The elimination of unearned income is a most important political, socioeconomic and educational task. Soviet jurists--scientists and practical workers--have a great responsibility in solving it. They are called upon to ensure the steady implementation of the new legislative act and to engage in educational work which would enhance the socialist legal awareness of the citizens and create an atmosphere of intolerance of individuals who subsist on unearned income, the inevitability of the punishment of those who violate the laws and condemnation for violations of morality rules.

The topical task of the jurists is to determine the reasons for the insufficiently high effectiveness of a number of laws. We know, for example, that the Law on Labor Collectives and of upgrading their role in the management of enterprises, establishments and organizations is still not functioning at full capacity and that the laws applied to collectives are not sufficiently applied. Let us also recall laws aimed at the implementation of environmental protection measures, the preservation of historical and cultural monuments and others. They have still not justified the hopes put in them. This is due less to the insufficient general cultural standard of a certain segment of the population and the illegal actions of officials, who violate legal standards, but to the imperfect nature of a number of laws which define with insufficient clarity measures of responsibility for violating the laws and which sometimes do not even call for specific penalties. The pollution of waters and water reservoirs with sewage, exceeding the admissible standards for the release of harmful substances in the atmosphere and the inefficient utilization of natural resources remain widespread phenomena. This is frequently due to the fact that direct interests of enterprises involving the implementation of plans clash with the need for corresponding expenditures for environmental protection, which do not bring any profit to the specific enterprise, although they are needed by society at large. We believe that the implementation of environmental protection measures by enterprises must be taken into consideration in the comprehensive assessment of the results of their economic activities.

Respect for the law is not only a political-legal but also a socioethical phenomenon. It directly affects the interest of millions of people. The strict and inviolable observance of Soviet laws and other legal acts has a tremendous impact on shaping the moral categories of socialism, feelings of social justice and civic responsibility, honesty and conscientiousness, a

spirit of creative activeness and communist principle-mindedness. A firm socialist legal system cannot be ensured without enhancing the cultural and moral standards of the people. It is no accident that the 27th CPSU Congress closely linked the country's socioeconomic development with the assertion of lofty moral values and standards in our life.

The party congress called for the strict implementation of the laws of the Soviet state, for firmly preventing any efforts to circumvent them and for holding strictly liable individuals guilty of violating the laws. "We must," M.S. Gorbachev said at the congress, "enhance the activeness of the working people, of one and all, in constructive work for surmounting shortcomings, abuses and any painful phenomena and violations of our legal and moral standards." Strengthening socialist legality is above all a matter for the toiling masses themselves.

One of the basic tasks of the socialist legal system is to safeguard the rights, freedoms and legitimate interests of the Soviet citizens. This must be an object of the constant concern of state bodies, public organizations and officials. The elimination of negative phenomena which conflict with it, and which are the result of the inadequate political standards of some officials, moral deafness and the syndrome of "official invulnerability" is the urgent task of the present.

The 27th CPSU Congress emphasized the need to wage a decisive struggle against such faulty phenomena as bureaucratism and a callous attitude toward individuals. This, in particular, explains the increased flow of complaints received by its state and party bodies. However, no major change has been achieved in this area as yet. The number of letters and complaints addressed to superior bodies has not declined. This is not only the result of specific shortcomings in the work of the apparatus but also the imperfect nature of the very system of handling complaints, inattentive attitude toward them, and wrong and unsubstantiated answers to citizens' addresses. Formalism and red tape not only trigger an adverse reaction in the people and create distorted feelings but also turn out to be very costly to society: a great deal of time and money are spent in the consideration of some complaints. In addition to everything else, this undermines the authority of the law.

We know that the overwhelming majority of complaints are still being considered administratively. Several years ago the USSR Academy of Sciences State and Law Institute developed a concept of a legislative act on the procedure for appealing in court improper actions committed by officials, the need for which is based on the USSR Constitution. The high degree of efficiency with which some complaints are considered by the courts has been confirmed by long practical experience. For example, the courts grant some 50 percent of citizens' petitions for being reinstated in their jobs.

Some members of the state apparatus object to broadening the realm of the judicial consideration of cases, claiming that this will add a considerable additional burden to the work of the courts. Naturally, the volume of work of the courts will increase. At the same time, however, this will reduce the size of the administrative apparatus which is currently especially engaged in the consideration of complaints. It will substantially reduce the flow of

complaints addressed to the central authorities. Furthermore, the political effect of this measure is unquestionable: the possibility of the struggle against bureaucratism, unconscientiousness, parochialism, abuse of official position and other negative phenomena will increase.

Studies made by scientists indicate that the citizens are still insufficiently exercising the great rights and possibilities granted to them by the USSR Constitution such as, for example, the right to submit to state bodies and public organizations suggestions on improving their activities and to criticize shortcomings in their work (Article 49 of the USSR Constitution). This calls for the need to strengthen legal education and upgrade the legal standards and awareness of the law by officials and individual citizens.

According to the USSR Academy of Sciences State and Law Institute, about 25 percent of all violations of the law are caused by the imperfection of legislative acts--their incompleteness, vagueness and contradictoriness. However, in the case of the remaining three-quarters as well other factors enter into play--economic, organizational and financial--to which must be added the insufficiently high standard of legal awareness of citizens and officials. This makes important the comprehensive approach to perfecting the legal foundations of state and public life--improving the quality of laws, developing a legal awareness, enhancing the level of law enforcement activities by law enforcement bodies, closely related to the activities of public organizations. As stipulated in the CPSU Central Committee political report to the 27th Party Congress, "The people in any settlement must feel the concern of the state for their tranquillity and inviolability. They must be confident that no single delinquent will avoid deserved punishment." The legal, substantiated and just decision of a court, a prosecutor or a militia authority strengthen faith in the fairness of Soviet law and the inevitability of the strict punishment of those who violate its provisions. We believe that greater attention must be paid to upgrading the role and prestige of courts, the bar and other legal institutions to which the people address themselves with their daily needs and concerns.

Extensive work awaits the Soviet jurists to improve Soviet legislation and make it consistent with the crucial needs of social development and the strengthening of socialist legality. Any legislative act and its application must invariably take into consideration the entire complex system of human relations. The jurists must be oriented not only toward immediate but also longer-range results and actively assert in their daily practice the standards and principles of socialist morality. Relying on the person, paying attention to him, and ensuring the comprehensive and broadest possible involvement of the working people in the solution of governmental and public affairs is a necessary prerequisite for the further strengthening of socialist legality, development of Soviet democracy and acceleration of socioeconomic progress.

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CONTEMPORARY WORLD: TRENDS AND CONTRADICTIONS

LENINIST ANALYSIS OF IMPERIALISM AND CONTEMPORANEITY

Moscow KOMMUNIST in Russian No 9, Jun 86 (signed to press 11 Jun 86) pp 102-113

[Article by Academician Ye. Primakov, written on the occasion of the 70th anniversary of the publication of V.I. Lenin's work "Imperialism as the Higher Stage of Capitalism"]

[Text] In studying the most complex processes and phenomena of our time, to this day, many decades after V.I. Lenin's death, the CPSU turns to his conclusions and evaluations. The reason for this goes far beyond a simple respect for tradition. Furthermore, this is not only a manifestation of gratitude to the great teacher, whose works enabled all post-revolutionary generations of party theoreticians to develop and mature. No scientific and, consequently, accurate assessment of the current status and future of social development is possible without Lenin's ideas and methodology.

This fully applies to "Imperialism as the Higher Stage of Capitalism," this brilliant work which Lenin wrote 70 years ago and which is an outstanding model of a truly dialectical approach to the analysis of social phenomena. The greatest possible theoretical significance of this book is confirmed, above all, by the fact that, based on the works of Marx and Engels, Lenin described the set of qualitative changes occurring in the development of capitalism by the turn of the 20th century, reaching the most important conclusion of the transition of capitalism to its higher stage--imperialism--and profoundly and comprehensively identifying its features: production and capital concentration which lead to the formation and domination of monopolies, the merger of industrial with bank capital, the development of a financial capital and a financial oligarchy, capital exports, and the economic division of the world among monopolies and its political division among the great powers.

It was through the combination of these new features that Lenin brought to light the main and determining factor--changes in the economic base of bourgeois society, manifested by monopoly rule.

By studying capital exports as one of the most important features of monopoly capitalism, Lenin brought to light the complex nature of the global capitalist economy and its division into an exploiting center and exploited periphery.

Having proved that the conversion to monopoly capitalism means a gigantic step toward production socialization and that "private economic and ownership relations are the cover which is no longer consistent with the content and which must inevitably decay" ("Poln. Sobr. Soch." [Completed Collected Works], vol 27, p 425), Lenin defined the historical position of imperialism as the final stage of capitalism, concluding that "it is the eve of the social revolution of the proletariat" (ibid, p 308).

The book "Imperialism as the Higher Stage of Capitalism" is of great methodological importance to us. By enriching the method of dialectical materialism, Lenin proved that monopoly capitalism, which developed on the basis of free competitive capitalism and is its direct extension, converts all the basic features of the latter into their opposite.

It is a particularly important fact that Lenin organically linked the theoretical study of the imperialist stage of capitalism with the tasks of the revolutionary struggle. The practical political significance of his work is that it clearly depicted the future of the struggle of the working class for liberation from capitalist oppression and for building a society free from exploiters; it exposed the true reason for imperialist wars and contributed to the mobilization of the working class and the working people in the struggle for a just peace.

Events fully confirming the accuracy of Lenin's analysis occurred in the world since this brilliant work was written. The Great October Socialist Revolution won; the general crisis of capitalism began, socialist revolutions were made in a number of countries in Europe, Asia and Latin America, a world socialist system appeared, the imperialist colonial system collapsed under the strikes of the national liberation struggle waged by the peoples, under conditions of radically changed correlation of forces in favor of socialism, and contradictions within capitalism became drastically aggravated.

At the same time, quite naturally, some new trends and processes, which were merely in their embryonic stage or did not exist at all 70 years ago, began to appear in the course of historical developments. The brilliance of Lenin's thoughts was manifested in the fact that they provided a key to understanding the new developments and that they were and remain a methodological instrument absolutely necessary in the study of capitalism at the beginning the end of the 20th century.

This is confirmed yet once again, most clearly, in the approach taken by the 27th CPSU Congress to the study of the contemporary world and its trends and contradictions.

I

The development of the capitalist production method was one of the main ideas of Lenin's work "Imperialism as the Higher Stage of Capitalism." This applies not only to its more flexible aspect--production forces--but also to production relations. We know that the law of consistency between production relations and the nature and level of production forces, discovered by Marx, predetermines the qualitative, the radical change in production relations in

the conversion from one production method to another. In his study of capitalism, Lenin proved that, without losing their exploitative nature, production relations definitely change within the capitalist production method itself. It is precisely on the identification of the legitimacy of such processes that Lenin based his conclusion on the existence of stages in the development of capitalism and the fact that by the turn of the 20th century capitalism had entered its higher stage--imperialism.

Lenin's formula that the trend toward the decay of capitalism at its higher stage does not exclude its immeasurably faster overall growth compared to the past is closely related to the idea of the internal development of production relations. As a production method capitalism retains to this day its ability to adapt to new conditions. The logic of the competitive struggle, inherent in capitalism, greatly contributes to this fact.

As the result, unable to prevent its inevitable exit from this historical arena, by changing forms of ownership and its exercise (such as increasing or reducing the share of state ownership, or setting up mixed state-monopoly ownership), further production and capital internationalization and restructuring the economy and the economic mechanism, capitalism is still able to provide major opportunities for economic development, some of which are based on the utilization of the achievements of science and technology. It is entirely clear that without the flexibility of production relations within the capitalist production method, the growth of production forces under capitalism would have been hindered incomparably more than is currently the case.

We know that the revolutionary change in production relations in the transition from capitalism to socialism is the direct result of the struggle waged by the working class. This struggle also plays an important role in changing the structure of economic relations within contemporary capitalism. In this case the influence of the main offspring of the working class--the world socialist system--and the daily stubborn struggle waged by working people for their rights within the capitalist countries themselves exert their influence.

The working class in the developed capitalist countries formulated a democratic alternative to the reactionary phenomena, processes and trends within contemporary capitalism. The struggle waged by the working people for democratic changes in the economy is becoming one of the factors which the captains of the capitalist world cannot ignore. As a result, they are frequently forced to retreat and to use means of social maneuvering in a number of areas. In this cases, on the one hand, a political stratification develops within the "upper levels" of capitalist society; on the other, the permanent aspiration of the big bourgeoisie and its governmental representatives to take social revenge, which is carried out whenever circumstances become favorable, intensifies.

"In its imperialist stage," Lenin wrote, "capitalism leads to the comprehensive socialization of production. It squeezes, so to say, the capitalists, despite their will and awareness, into some kind of new social order, a transitional order from total competitive freedom to total socialization" (op. cit., vol 27, pp 320-321). The limits of the change in

production relations within the system become apparent; the contradiction between production, which becomes increasingly social, and appropriation, which remains private, become aggravated. Therefore, the intracapitalist process of development of production relations, according to Lenin, can be assessed only from the dialectical viewpoint. On the one hand, the efforts of the capitalist system to adapt itself to the new requirements in the development of production forces lead to such a change. On the other, said change takes place through the intensification of contradictions within the capitalist production method, accelerating its decline as a social system. Exceptionally important in this connection is the concept emphasized by M.S. Gorbachev in the CPSU Central Committee political report to the 27th Congress to the effect that contradictions not only express the sentencing of the old world and of anything which hinders progress but are also a source, a motive force of social progress.

On the basis of Lenin's methodology, the 27th Party Congress considered the state of contemporary socialism in its entire complexity and with no simplifications whatsoever. One of the conclusions contained in the CPSU Central Committee political report to the congress is that "the present stage in the general crisis as well does not carry with it the absolute stagnation of capitalism. It does not exclude the possibility of its economic growth and mastery of new scientific and technical trends. It "allows" the preservation of its specific economic, military, political and other positions and, in some sectors, even the possibility of taking social revenge and recovering previous losses."

The Leninist idea of the complex and conflicting dynamics of capitalism was reflected in the congress' conclusion: "Contemporary capitalism, the exploitative nature of which has not changed, is greatly different from what it was at the beginning and even the middle of the 20th century." In what sense is it different?

Lenin proved that the concentration of production and the growth of monopoly from it are the foundations of the higher stage in the development of capitalism. "...Production concentration created by the monopolies is the general and basic law" of imperialism (see op. cit., vol 27, p 315). By the end of the 20th century this process has acquired new features, essentially under the influence of the scientific and technical revolution and the further progress of production internationalization.

The increased level of monopolization under contemporary conditions is manifested essentially in the fact that the monopolies have become huge economic complexes, encompassing many production and service sectors, including some key ones. The facts confirm, for example, that between 1950 and 1983 the share of the total number of corporations operating in the U.S. processing industry increased within the overall volume of output of this group of sectors from 25 to 35 percent and its total capital from 35 to 45 percent. It is precisely these indicators that eloquently prove the continuing process of production and capital concentration.

By the end of the 20th century some new features have been added to capital centralization as well. The largest companies in the capitalist world are

turning into targets of absorption. During the first half of the 1980s alone some 140,000 U.S. companies went bankrupt and 2,000 quite large companies, with a capitalization of roughly \$20 million each were absorbed by their competitors.

Methods of indirect control of financial capital are being simultaneously developed and applied on an ever growing scale by the large monopoly associations, which form the nuclei of financial groups which take over officially independent companies. Increasingly, indirect control takes place through monopoly domination in the realm of scientific research and experimental design developments (NIOKR) and the marketing of the goods produced by allegedly independent enterprises which, through the subcontracting system, turn the large companies into customers and clients of the goods produced by small companies, etc. For example, the largest petroleum concerns in the United States own networks of petroleum and gas storage facilities and main pipelines, without which thousands of "independent" companies are unable to reach the market.

The scientific and technical revolution as well formulates new requirements concerning the structure and size of output and the ways and means of ensuring scientific and technical progress. In recent years, for example, small and medium-sized enterprises, which can react more flexibly and efficiently to changes in demand and to adapt to the new technology, have assumed particular importance in the developed capitalist countries. They are formed not only by large monopoly associations but also by relatively small companies which, as a rule, are under the indirect control of big business. The creation of such enterprises in science-intensive production areas is particularly important. They include the so-called "venture" enterprises, which assume the riskiest tasks in looking for scientific and technical breakthroughs in specific promising area.

The faster growth of small and medium-sized enterprises, typical of capitalism of the 1980s, however, does not mean in the least that small-scale enterprise is strengthening to the detriment of large-scale companies, as claimed by some bourgeois economists. Actually, this represents the dissemination of forms and dimensions of enterprises which financial capital finds most adequate, based on the requirements of the efficiency of specific production requirements. Let us add that in the new sectors some enterprises of this kind may become the "core" of new powerful monopoly associations.

The intensive emergence of this process beyond the national boundaries and the formation, as noted in the political report to the 27th CPSU Congress, of multinational monopoly capital is a major feature of the concentration and centralization of production and capital at the end of the 20th century. We know that Lenin paid great attention to the development of the internationalization of capital, proving that at the higher stage of capitalist development this process takes place above all through the mechanism of capital exports and, on this basis, the formation of international monopolies.

The activities of contemporary multinational corporations (TNK) and multinational banks (TNB) introduce qualitatively new features in

internationalization processes. The domination of financial capital is achieved through the expansion of multinational monopoly capital, which combines, for the time being, essentially on a national basis, the power of the largest industrial monopolies with the power of international banks and encompasses all basic features of the declining phase of capitalist development.

Contradictions in public reproduction, new trends in the social division of labor within the world capitalist economy and economic relations within its center--the United States, Western Europe and Japan--and between its center and its periphery and, in the periphery itself, of the global capitalist economy can no longer be understood today without the study of multinational capital. Today we can no longer reach reliable conclusions on the nature of the processes of the growing differentiation among the liberated countries and the socioclass structure and its changes, and properly assess the real deployment of political forces within them without a thorough study of TNK activities.

This study indicates that they are strengthening their positions and, sometimes, also establishing their domination in progressive technological sectors, which is considered the main prerequisite for their competitiveness. A significant and, in frequent cases, the predominant share of NIOKR are concentrated within the largest TNK. At the same time there is a strengthening in the position of companies operating in technologically advanced sectors. They have somewhat reduced the position, role and significance of multinational corporations in the energy and other raw material sectors. Characteristically, whereas in the capitalist world the share of TNK in industrial output accounts for more than one-third of the total, it accounts for more than one-half in foreign trade and for about 80 percent in patents issued for new equipment and technologies.

The ability of contemporary capitalism to adapt to a certain extent to NTR conditions is manifested to the greatest extent through changes in the capitalist economic mechanism.

The first major change in the economic mechanism of capitalism took place at the turn of the 20th century, when production and capital concentration led to the formation and domination of monopolies in industry and banking and the appearance of financial capitalism or, in other words, the conversion from free competitive to monopoly capitalism. The large capitalist enterprise began, as Lenin said, to organize the procurement of raw materials, their processing and the marketing of finished goods systematically, taking extensive factors into consideration, and on the basis of changed social relations (see op. cit., vol 27, p 425).

The next essential change in the capitalist economic mechanism took place in the middle of the century, when the bourgeois state, the economic role of which sharply increased above all in the area of regulating and redistributing the national income in the interest of protecting the system of monopoly domination, assumed particular significance. In recent years, through direct and indirect taxation, the central governments have concentrated in their own budgets approximately one-third of the national income in the United States

(in excess of \$1 trillion) and about 40 percent in Western Europe (about \$1.5 trillion), which provides them with a broad base for active state-monopoly control in the economic area.

The development of contemporary capitalism is manifested in the further change of the economic mechanism. Thus, reliance on strengthening state control over the economy was replaced at the beginning of the 1980s with conservative concepts of "deregulation," which gave priority to private-monopoly activities. Despite the extensively publicized concepts of "kicking the state out of the economy," by and large the economic function of the state did not decrease although it is changing its forms, as a reflection of the objective needs of the self-preservation of capitalism in the course of the intensification of its general crisis, and is an important qualitative feature of imperialism of the 1980s.

The current changes in the economic mechanism of state-monopoly capitalism also greatly contributed and are contributing to the profound restructuring of the economies of the capitalist countries. Such restructuring is characterized above all by the following interrelated processes: increased attention paid to scientific research and development, manifested, in particular, in the share of specific outlays for NIOKR in the gross national product of the leading capitalist countries (despite its increased militaristic trend in the United States and some other imperialist countries); the significant and faster growth of science-intensive sectors; the drastically accelerated process of conversion to new technology in traditional basic sectors (with modernization and reconstruction of production capacities as the decisive lever); and the accelerated development of resource-conservation trends in scientific and technical progress.

All of this proves that, for the time being, the capitalist economic system still retains a certain self-development capability. We should emphasize, however, two aspects in this connection: first, this development itself is exposed to periodical breakdowns consisting of intensifying cyclical and structural crises which are becoming increasingly interrelated. Second, increasingly adaptation to the requirements of the scientific and technical revolution is blocked by private appropriation and the exploitative nature of the capitalist production method.

II

Historical experience irrefutably proves that the development of capitalism by the end of the 20th century is organically related to its self-rejection as a social system. To begin with, such development inevitably lays the material foundations for the new social system--socialism--which will replace capitalism. Secondly, to an increasing extent it clashes with the solution of tremendous universal problems, the most important of which is mankind's survival. Thirdly, capitalist development neither eliminates nor weakens its inherent internal contradictions while, at the same time, it creates contradictions which are sometimes even worse than the old ones.

The main feature in the definition of imperialism as the final stage in the development of capitalism is production socialization which it triggers on a

gigantic scale. Production cooperation and centralization, the elimination of discoordination among individual economic units, significant changes in the nature of commodity-monetary relations, increased interconnection between the material and the so-called nonproduction areas, and the conversion to new technological production methods and other processes which characterize production socialization taking place within the global capitalist economy, are the direct material preparations for socialism. "Socialism," Lenin noted in his work "The Threatening Catastrophe and How to Struggle Against It," "is now looking at us through all the windows of contemporary capitalism; socialism is directly taking place in virtually each major measure which is a step forward, based on this latest capitalism" (op. cit., vol 34, p 193).

The most important indicator of the fact that the contemporary development of capitalism is following a generally declining path is its clearly limited capability of turning the achievements of the scientific and technical revolution to constructive purposes. The retained possibility of using the results of the scientific and technical revolution is most directly related to the intensified role of militarism and the increased scale of war preparations, particularly in the United States. This connection is intensifying and can be followed by changes in a most important indicator, such as the increased share of military expenditures within the NIOKR. This share in the overall outlays of the state for science in the mid-1980s reached nearly 60 percent in the United States, 50 percent in Great Britain and about 33 percent in France ("World Armament and Disarmament. SIPRI Yearbook," London, 1985, p 288).

The results of the scientific and technical revolution are used for military purposes in different degrees in the individual capitalist countries. Militarism is used to a different extent also as a means of boosting the economy. However, the strengthened positions of the monopolies, which are trying to earn superprofits in the military business which they find exceptionally profitable, and through military-political actions, the purpose of which is to secure the imperial interests of the leading capitalist countries, are characteristic of the capitalist world as a whole. That is why today efforts to achieve military superiority over the socialist states with a view to "throwing off" socialism plays a particular role among the features of capitalism at its highest and final stage of development.

One of the most important manifestations of the antipeople's nature of the capitalist system was the direct cause and relation tie discovered by Lenin between the growth of capitalism into its imperialist stage and the outbreak of World War I. Toward the end of the 1930s and beginning of 1940s, using the power of its assault detachments--fascist Germany and militaristic Japan--imperialism hurled mankind into World War II. Under conditions in which, at the cost of tremendous efforts, the USSR and the members of the socialist community were able to achieve military-strategic parity with the United States and its NATO allies, world wars have stopped being inevitable, although imperialism is constantly continuing to create the threat of such wars.

At the present time the antipeople's nature of the capitalist system is most directly manifested in the arms race generated by American imperialism. The militarization of the U.S. economy and politics and that of many other

capitalist countries has had as its consequence a nuclear confrontation between two opposite sociopolitical systems, endangering the existence of all human civilization. Organically linked with militarization, which parallels the development of contemporary capitalism, is the growth of international tension and the outbreak or aggravation, reaching threatening levels, of regional international conflicts. The arms race triggered by imperialism not only limits the productive utilization of the results of the scientific and technical revolution in the developed capitalist countries but also forces the rest of the world to commit itself to unproductive expenditures. It is diverting huge funds which could have been used to solve very urgent human problems and to accelerate the socioeconomic progress of all groups of countries, particularly former colonies and semicolonies.

A situation in which a huge part of the production apparatus and raw material resources, the best scientific and engineering minds, the most skilled manpower and huge funds are removed from the production area and used to create armaments which can destroy all mankind provides the most obvious proof of the decay of capitalism, of a production method and system the development of which has converted all of this into the realities of the present.

The militarization of the economy and militarism as a whole are caused by capitalism. This unquestionable concept, however, is not identical with the concept that capitalism could not exist without them. Naturally, capitalism will neither suddenly nor, even less so, abandon militarism by itself. However, radical changes in the correlation of forces in the world, the active peaceful course of the socialist countries and the increasing struggle against imperialism waged by the broad popular masses could force the ruling circles in the imperialist countries to take some steps toward lowering the level of militarization.

The conclusion reached by the 27th CPSU Congress was that capitalism is currently facing an unparalleled interweaving, reciprocal intensification and increase in all of its contradictions. Let us reemphasize that not one of the antagonisms inherent in capitalism is eliminated in the course of its development. The new forms which some such contradictions acquire do not make them any less acute. Let us take as an example the contradiction between labor and capital. The steady unemployment in the capitalist world with its upward trend has become its most outstanding manifestation. Under the contemporary conditions of capitalist development, the unemployment problem has gone far beyond its initial limits, when it was mainly related to cyclical crises and depressions. Today post-crises revivals do not solve this problem, which is becoming increasingly grave.

It is important to note that the aggravation of the unemployment problem under capitalism is not determined by the growth of production forces per se, as bourgeois scientists frequently claim, but by the steps which are deliberately taken by state-monopoly capitalism, to encourage it. The absolute number of totally unemployed in the developed capitalist countries has already reached 40 million. Naturally, this figure is substantially higher for the nonsocialist world as a whole. One of the direct reasons for the unprecedented level of unemployment is the conservative course followed in state economic and social policy in the United States and the majority of

other leading capitalist countries. Since the purpose of this course was to lower inflation at all cost, the growth of unemployment became its first consequence. The second result of the lowering of inflation is the freezing of real wages of the working class in the 1980s in some countries (United States and FRG) or reducing its growth to a minimum in other.

Nor can modern capitalism break the vicious circle of interimperialist contradictions. Imperialism, Lenin emphasized, characterizes "the development and increased frequency of relations among nations, the breakdown of national boundaries, and the creation of an international capital unity and unity in economic life in general, in politics, science, etc." (op. cit., vol 24, p 124). However, this is constantly counteracted by the rivalry among interests and the struggle among "state financial capital," and "national (or rather, state) imperialisms" (op. cit., vol 27, pp 95-96).

Under the conditions of the existence of the two opposite systems it may appear that a "subjective" factor may have begun to act in favor of easing interimperialist contradictions. The CPSU program notes that in an effort to create a common front in the struggle against socialism and against all revolutionary and liberation movements and to weaken the international solidarity among the working people, the imperialist countries are trying to coordinate their economic, political and ideological strategy. This is achieved through the NATO mechanism and the annual summit conferences of the "big seven." The other instruments which shape the international system of state-monopoly economic control pursue the same objective.

The centripetal forces in the imperialist world, which developed in the military-political area with the confrontation between the two systems, led to the fact that interimperialist contradictions no longer inevitably turn into wars between imperialist countries. Another influential fact has been the unquestionable military superiority of the United States over its rivals. This, however, has not eliminated the gravity of interimperialist contradictions, economic in particular, for steps taken to consolidate the forces of state imperialisms as a rule clash with their interests.

The effect of the law of uneven development has brought about the intensive redeployment of forces within the system of imperialist countries. Although the United States remains the main imperialist center, and its basic economic and financial power and leader in scientific and technical progress, enjoying unquestionable military hegemony, its share in the global capitalist economy has declined in the last decade. The share of two other centers of imperialist rivalry--Western Europe and Japan--has increased. The CPSU Central Committee political report to the 27th Congress states that in the next decade new capitalist "power centers" will emerge. Unquestionably, this will lead to the further increase in the array of contradictions and to their closer interweaving and aggravation.

"Unquestionably," the CPSU Central Committee political report to the congress notes, "the confrontation between centrifugal and centripetal trends, resulting from changes in the correlation of forces, will continue within the imperialist system. It is unlikely to expect that the existing set of economic, military-political and other common interests of the three 'power

centers' may be split under the real conditions of the contemporary world. However, within the limits of this complex, Washington should not expect the unquestionable obedience to American diktat by its allies-competitors, even less so to the detriment of their own interests."

The United States is applying increasing pressure on its partners. U.S. state-monopoly capitalism is trying to put on the service of its own interest international trade-economic, credit-financial, scientific and technical and other relations. The high interest rates in the United States have triggered grave monetary upheavals in the capitalist world and have had a most adverse effect on the economies of the Western European and the other U.S. allies. Furthermore, the United States has essentially forced foreign capital, which rushed to the other side of the ocean in huge amounts, to finance the structural reorganization of its economy, the growing federal budget and balance of payment deficits, the huge national debt and military preparations. By pursuing a most zealous protectionist policy, the United States is continuing to destabilize global capitalist trade.

This proves that the development of multinational monopoly capital does not equate the loss of autonomy of national imperialisms and their blending within a single "global trust." As Lenin proved, this cannot be achieved because of interimperialist contradictions, conflicts and upheavals which cannot be eliminated (see, for example, op. cit., vol 27, p 98). Furthermore, the growth of multinational monopoly capital itself contributes to expanding the scale and depth of such upheavals.

A new, complex and flexible set of contradictions within contemporary capitalism--between imperialism and the developing countries and peoples--plays a special role in contemporary capitalist contradictions. So far imperialism has been able to keep most of these countries within the orbit of its exploitation, tying them to the imperialist center through new strings of economic, financial, technological and food dependency and preserving the neocolonial structure of the international division of labor. The multinational corporations control 40 percent of the industrial output of the liberated countries, one-half of their foreign trade and more than three-quarters of their raw material exports. However, the TNK are investing in the "peripheral" countries far fewer funds than they take back to the imperialist center. It is thus that the imperialist countries are largely financing their own economic development through the TNK operational mechanism.

Capitalist loans have become today one of the key elements in the system of neocolonial exploitation of the liberated countries. Now, when the debt owed by these countries to monopoly banks and imperialist countries has reached \$1 trillion, it has become clear that their involvement in the credit-financial relations of global capitalism not only ties them to the imperialist center even more strongly but also allows the latter the real opportunity of intensively interfering in their domestic affairs. In order to obtain new funds, the countries which find themselves financially trapped must agree to accepting adverse conditions of so-called stabilization programs of the International Monetary Fund, reduce or totally eliminate control over the influx and activities of foreign capital, etc.

Today, however, we can no longer speak of the developing world as a homogeneous mass of countries, for within this group a process of differentiation is taking place, which has brought about its significant stratification. Economically, this is expressed in the fact that as a result of the effect of the law of uneven development, a number of countries have appeared which are outstripping in terms of growth rates the bulk of the developing countries and, at the same time, are beginning to play an increasingly important role in the social division of labor within the global capitalist economy. In the 1980s, this included countries with a fast growing export economic sector. It may be considered that some within this group of countries and the big developing countries with a multisectorial economy are reaching the next level in their relations with the capitalist "center"--from unilateral dependence to asymmetric interdependence. However, does this smoothen contradictions within the capitalist world and could it be classified as a simple indicator of the utilization of reserves by capitalism? Naturally, it cannot. These countries, which have retained all exploitation features, are adding to the capitalist world an entire system of new contradictions.

As in Lenin's work, the documents of the 27th Congress emphasize in their analysis of contemporary capitalism its internal contradictions, which are the mechanism of intensification of the general crisis of capitalism under contemporary conditions. "The problems and crises experienced by the capitalist world appear the legitimate result of internal antagonist contradictions of the old society," was the congress' conclusion.

This conclusion is directly related to the question of solving contradictions between countries belonging to the two different systems. As the 27th CPSU Congress indicated yet once again, our party proceeds from the fact that it would be useless and inadmissible to decide the fate of capitalism through the "export" of revolutions or "revolutionary wars," or by "encouraging" the revolutionary process.

Lenin formulated the idea of peaceful coexistence among countries belonging to the two opposite political systems. This idea included not only the rejection of war as a means of solving disputes between these countries but also constructive cooperation between them in various areas. The 27th CPSU Congress developed Lenin's idea of peaceful coexistence as applicable to the contemporary situation of the nuclear confrontation between the two systems. The congress noted that today objective conditions have appeared for the confrontation between capitalism and socialism to occur only and exclusively as peaceful competition and peaceful rivalry. Consequently, it is a question not merely of excluding war from the life of society but also of abandoning the intransigent power forms of policy, replaced by restraint and a cautious international behavior by the countries. The CPSU program stipulates that the CPSU considers inadmissible projecting ideological contradictions between the two systems to the realm of intergovernmental relations.

Naturally, peaceful competition and peaceful rivalry include expanding relations in all areas--economic, scientific and technical, political, cultural and others. One of the purposes of the multiplication of such relations is to solve the crucial problems of mankind.

To realize this and act correspondingly in world politics means to meet the challenge of the age. For itself, socialism is ready to everything it can radically to change the international situation for the better and assert peaceful coexistence as a law governing intergovernmental relations, as an international order. It does not have to abandon either its principles or its ideals in order to attain this solutions, which is the only sensible one today and, furthermore, the only objectively possible one.

The class approach of the CPSU to the trends and phenomena of international life is implemented in the formulation and support of USSR programs for peaceful coexistence among countries belonging to the two opposite sociopolitical systems. The first state of the whole people and the socialist world and its working class and party armed with its ideology, are doing everything possible to safeguard mankind's future.

The crucial nature of global developments means, above all, that the world as a whole must acquire new features. Previously unknown, economic, political and scientific and technical, domestic and international factors are beginning to operate. The qualitative leap in human production forces also leads to a qualitative leap in the means of destruction and in military affairs. For the first time in the history of mankind the physical possibility and direct threat of the destruction of all life on our planet has appeared. Under these circumstances, in terms of civilization, time and space lose their ordinary features. Mankind finds itself the prisoner of a random accident, the hostage of nuclear weapons and other means of mass destruction of people.

The threat of mankind's self-destruction is not created by the competition between the two systems. It is imperialism and its fierce opposition to social progress and efforts to halt the progress of history and the aspiration to gain social revenge on a universal scale that is creating it, by virtue of its exploitative nature.

That is why the Leninist theory of imperialism and its creative application and development are today a necessary prerequisite for solving the extremely important problem of gaining a deep understanding of the objective dialectics of the contemporary conflicting yet interdependent and largely integral world.

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PAGES FROM HISTORY

THE MOST JUST WAR

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[Article by Dr of Philosophical Sciences D. Volkogonov, deputy chief of the Main Political Directorate of the Soviet Army and Navy]

[Text] The victory won by the Soviet people and their armed forces in the Great Patriotic War was one of the outstanding events of our age, a profound characterization of which was included in the CPSU Central Committee political report to the 27th Party Congress. The farther into the past the harsh war years go, the more outstanding the universal historical significance of this victory appears to all mankind. The defeat of the assault forces of imperialism rescued the peoples of the world from the terrible threat of fascist enslavement. At the same time, the victory of the Soviet Union proved most emphatically the advantages of socialism and its tremendous economic, sociopolitical and spiritual possibilities.

To the Soviet people, whose peaceful life was interrupted 45 years ago, on 22 June 1941, as a result of the treacherous attack mounted by Hitlerite Germany against our country, the war became a profoundly just and sacred cause. This was a fierce blood shedding struggle against the fascist aggressors, for the salvation of the near and dear, the home and the very right to life.

It was precisely the just nature of the great patriotic war and the advantages of the Soviet social system that provided the political, economic, social and spiritual prerequisites for the crushing defeat of the imperialist aggressor and the full victory won by the Soviet people and their armed forces. As early as 1916, before the victorious proletarian revolution in Russia, V.I. Lenin wrote that we must not exclude the aspiration of imperialism to defeat the socialist state. "In such cases, war on our side would be legitimate and just. It would be a war for socialism, and for the liberation of the other peoples from the bourgeoisie" ("Poln. Sobr. Soch." [Completed Collected Works], vol 30, p 133). This conclusion stems from Lenin's theoretical analysis of the social nature of modern wars.

The Social Nature of the War

We know that the aggressor who attacks his victim always tries to prove the "forced" nature of this step and to substantiate its "historical justice" and "legitimacy." As early as the 18th century, the Prussian King Friedrich II made a statement which entered history as a model of political cynicism: "If you like someone else's province and have sufficient power, occupy it immediately. The moment you do that you will always find a sufficient number of jurists who will prove that you had all the necessary rights to occupy this territory...." The Prussian king still has many followers. In October 1983, when thousands of American marines landed on the tiny island of Grenada, the head of the U.S. administration immediately said: "We had no choice but to meet the request for aid of the Caribbean countries. We were forced to protect American citizens on the island and to help its people restore democracy." No more and no less: they were forced to "protect and help!"

Therefore, justifications for the policy of open piracy have largely remained the same as a century ago. Today, however, they can be easily exposed. The social nature of a war, actual or being prepared, can be accurately defined with the help of time-tested Marxist-Leninist methodology. "Clarifying the nature of a war," Lenin pointed out, "is a necessary prerequisite for the Marxist in order to determine his attitude toward it" (op. cit., vol 26, p 27). This can be achieved only by analyzing domestic and foreign policy, for according to Lenin "war is politics through and through" (see op. cit., vol 32, p 281), pursued by specific classes. Ignoring this basic methodological principle in the study of a war, any discussion about it becomes no more than a meaningless "exchange of words" (ibid., p 82).

The social nature of war, Lenin pointed out, "is determined by the type of policy which is continued through war" (op. cit., vol 34, p 196). By launching a treacherous attack on the USSR, the objective of German fascism was to enslave the Soviet people, seize its land and create prerequisites for "Arian domination of the world." The implementation of this monstrous objective threatened all mankind with huge social regression. Operation Barbarossa, which the fascist fuhrer approved, directly called for the physical destruction of the Russian, Ukrainian and Belorussian peoples. Hitler cynically stated at the March 1941 conference of the Wehrmacht leadership: "It is a question of a struggle for destruction.... Cruelty itself in the East is a benefit for the future." Genocide was proclaimed the objective of the Third Reich and the Nazi party. The Hitlerite ideal was a "world order" in the guise of a militaristic terrorist regime extending to all nations on earth. As to the Soviet people, their objectives in the war were extremely clear and supremely just: to defend their freedom and right of life, to defend socialism and to defeat the aggressor.

During the Great Patriotic War the party raised the slogan of "Our cause is just. The enemy will be defeated. Victory will be ours!" This essentially expressed Lenin's idea that "belief in the justice of a war and awareness of the need to sacrifice one's life for one's brothers enhances the spirit of the soldiers and allows them to withstand unparalleled hardships" (op. cit., vol 41, p 121). The party appeal had a tremendous moral and political

significance in the spiritual mobilization of the masses in the struggle against fascism.

The assessment of the social nature of a war is profoundly dialectical and could change with changes in the content, objectives and composition of the opposing sides.

At its initial period, World War II was unjust and imperialist in nature not only for Hitlerite Germany and its satellites but also for the Anglo-French coalition. As early as 1939, the Comintern Executive Committee gave it a clear social assessment: "This war is the extension of a long imperialist rivalry within the capitalist camp.... Such is the true meaning of this war, which is unjust, reactionary and imperialist." From the moment they declared war on Germany, the governments of Britain and France did actually nothing to defend their Polish ally, which became the first victim of fascist aggression. All their thoughts were related to channeling Hitler's greedy aspirations in an easterly direction and to serving their own great-power interests. The "funny war," which was waged at that time by Britain and France, was essentially an extension of the "Munich policy." At that time, as S. Welles, the then deputy secretary of state of the United States, acknowledged, the representatives of the big financial and commercial circles in the Western countries, including the United States, were "firmly convinced that the war between the Soviet Union and Hitlerite Germany could only benefit their own interests. They claimed that Russia would inevitably be defeated and that communism would thus be eliminated" (S. Welles. "The Time for Decision." New York, 1944, p 321).

It was only after the treacherous attack which fascist Germany mounted on the Soviet Union that the nature of World War II radically changed. It became a just war, a war of liberation for the entire anti-Hitlerite coalition which developed subsequently. As the aggressors were being expelled from Soviet soil the war turned into a war of liberation for other nations and states.

The liberation war waged by the Soviet Union contributed to the upsurge of the resistance movement, headed by the communist, in many countries occupied by the Hitlerites. Suffice it to recall the scope of the national liberation war in Yugoslavia, where, as early as 22 June 1941, immediately after the news that Hitlerite forces had invaded the USSR was received, the CP of Yugoslavia Central Committee issued an appeal pointing out that the struggle waged by the Soviet Union was also the struggle of the peoples of Yugoslavia, and called upon its compatriots to mount a nationwide armed uprising. The great liberation mission of the Soviet Armed Forces in Central and Southeastern Europe created favorable external conditions for the growth of the national liberation, patriotic and antifascist struggle in these countries into a struggle against internal reaction and the exploiting classes, and for reorganizing life on the principles of social justice and democracy.

The just objectives of the war of liberation fought by the Soviet people and their armed forces, which made a decisive contribution to the defeat of the strike force of world imperialism, provided a powerful social impetus to the national liberation struggle of the peoples of colonial and dependent countries. As a whole, the defeat of the aggressor meant something far

superior to a simple military victory. Trends of the development of the struggle for social and national liberation were powerfully manifested on its basis throughout the world.

For many years the bourgeois ideologues have tried to instill in the world public, above all in the new generations which entered life in recent decades, a distorted image of the social aspect of the last war. Thus, G. Willing, the reactionary West German historian, slanderously claims in his book "The Second World War. Reasons and Grounds," that "Hitler was forced to start a war against the Soviets, for they had long been formulating plans for moving west; Germany merely wished to block these attempts" (G. Willing. "Der zweite Weltkrieg. Ursachen und Anals." Druffel, 1983, p 81). Obviously, the author is not bothered in the least by the historical fact that throughout its existence the Soviet Union had never launched a war and that in the course of conducting its mission of liberation it was strictly guided by the lofty principles of internationalism and respect for national sovereignty. The speculations of our class opponents concerning the notorious "export of revolution," allegedly carried out by the Red Army, are absolutely abstract and groundless. It is clear to any realistically thinking person that a revolution cannot be brought in from the outside. Revolutions "ripen in the process of historical development and break out at a time determined by an entire series of internal and external causes" (V.I. Lenin, op. cit., vol 36, p 531). "Internal reasons" are always objective, related to profound class objections to the policy of reactionary and antipeople's regimes. As to "external reasons," at the outcome of World War II they were directly related to the brilliant victories of the Soviet forces in the truly titanic battles against fascism. Victory became the turning point in global development, which was manifested in the establishment of the world socialist system which, in the course of time, became the main force of social progress. This, in the final account, was a manifestation of one of the fundamental laws of the historical process--the decisive role of the people's masses.

War of the Whole Nation

One of the most important laws of the revolution is the defense of the socialist fatherland. We are well familiar with Lenin's stipulation that "a revolution is worth anything only if it knows how to defend itself..." (op. cit., vol 37, p 122). This reflects the objective need of securing revolutionary gains through military means. As historical experience proves, whenever this truth has been ignored or insufficiently considered, a revolution has invariably failed.

The defense of the socialist fatherland, however, does not involve the use of military means alone. It is based on the entire potential of the society and the state: socioeconomic, scientific and technical, moral-political and strictly military. The experience of the last war proved that the homeland can be defended and the aggressor crushed only if all of these different potentials are coordinated and directed from a single political center.

The Communist Party and its Leninist Central Committee were and remain such a political and organizing center in our country. Both during peaceful socialist building and during the Great Patriotic War the party has acted as

the guiding force of the Soviet people. The defense of the socialist fatherland--mobilization of the masses, military building, and organizing the resistance to armed aggression--were carried out by the party which, as Lenin said, becomes a fighting party in times of war (see op. cit., vol 14, p 8).

These features, which characterize the defense of socialism, were maximally manifested in the Great Patriotic War. A patriotic war is synonymous with war waged by the whole nation, when all forces of the toiling masses are mobilized in the defense of their homes and native land. A socialist society alone can achieve such a mobilization. Our party was guided by Lenin's instruction that "if matters have come to war, everything must be subordinated to the interests of the war, the entire internal life of the country must be subordinated to the war and not even the slightest hesitation on this account is admissible" (op. cit., vol 41, p 117). The party concentrated all of its efforts on organizing the resistance to the enemy and to defeating them at the front, to the mobilization and restructuring of the rear, the development of a partisan movement on territories temporarily occupied by the fascist aggressors and to the establishment of an anti-Hitlerite coalition.

The nationwide nature of the war was manifested above all in the fact that the country's entire population rose to the armed struggle against the fascist aggressors. Many millions of people directly participated in this war, fighting in regular army and navy units, in the people's militia and the partisan detachments. From the beginning of 1941 until May 1945 the overall size of the armed forces nearly tripled, totaling 11.4 million people. The party paid particular attention to training army and navy command cadres. During the first month of the war alone, 650,000 reserve officers were mobilized and new schools and courses were established. Throughout the war about 2 million officers were trained in the military academies, schools and various courses, who became the backbone of the military structure. During those harsh times the officer corps raised in a spirit of infinite loyalty to the people, the party and the ideals of socialism, was a model of fulfillment of civic and military duty. The nationwide nature of the war was also expressed in the extensive raising of detachments and formations of the people's militia--a tried revolutionary method. Millions of people joined the ranks of these patriotic formations, and millions more were ready at any time to reinforce them. In accordance with the decision of the State Defense Committee, universal military training was organized in the country; throughout the war its centers trained some 10 million people. It is no accident that this most just war was described by the people as sacred. It is only a sacred war that could trigger a most profound upsurge of all physical and moral forces of the people aimed at defeating the enemy.

The nationwide nature of the Great Patriotic War was also vividly manifested in the scope of the partisan movement. From the very first days of fascist occupation, detachments of people's avengers appeared behind enemy lines. More than 1 million Soviet patriots joined partisan units. The ground literally burned under the feet of the aggressors.

The nationwide nature of the war was most vividly manifested in the mass heroism displayed at the front. The innumerable exploits committed by the Soviet troops defending the socialist fatherland, and their unparalleled

courage and ability for self-sacrifice for the sake of victory shaped in the awareness of the people the enduring concept that "military" and "hero" are very closely related concepts in the case of soldiers and officers of a socialist army.

Heroism was displayed as a breakthrough or in the form of mass daily efforts and hard military work. Each offensive operation involves, above all, extremely great efforts: thousands of kilometers of roads covered, crossing rivers under fire, going through swamps, mounting fierce attacks and surmounting inhuman fatigue and, finally, suffering thousands of casualties.... Many are the unknown heroes among the Soviet soldiers, who gave all their moral and physical efforts for 1,418 days and nights of war, without whom the common victory would have been impossible. This was truly mass, daily, nationwide heroism.

The deep awareness of the just nature of the Great Patriotic War waged by the Soviet people against fascism created the necessary spiritual and conceptual bridgehead from which the people defined their attitude toward the war, their social and military duty and their obligations as citizens of the socialist state.

The exceptionally important task of the further unification of our entire people around the Communist Party, mobilizing the spiritual strength of the people for achieving final victory over the enemy and turning the country into a single military camp was the exceptionally important task which was resolved through ideological-political means during the war. It was this that ensured the nationwide nature of the struggle against the enemy and the fight for victory. History knows of no other example of such a monolithic unity of the people and cohesion around the country's political leadership. The social consciousness was dominated by the party's call: "Everything for the front! Everything for victory!" The political and ideological stipulations of the VKP(b) Central Committee were aimed at maximally concentrating the efforts of all Soviet people on the struggle against fascism and inflicting upon it total military defeat. The revolutionary and combat traditions of the Russian and Soviet people were extensively used in mass political work. The flame of patriotic feelings burned higher than ever before. Soviet patriotism, the deep sources of which, as M.S. Gorbachev noted in the CPSU Central Committee political report to the 27th Party Congress, are found in the socialist "social system, in our humanistic ideology," were manifested as the conscious class understanding of the idea of love for the socialist homeland and the need for its armed defense, embodied in the actions of millions of people, who dedicated their entire strength and their most precious gift, their lives, to the salvation of the fatherland.

During the war the party paid particular attention to ideological activities in the armed forces, maintaining the moral spirit of the fighting masses on the highest possible level. Party political work in units and ships reached a high level of maturity. Based on Lenin's concept to the effect that "wherever greatest concern is shown for political work among the troops...there is no slackness in the army, its ranks and spirit are stronger and its victories greater" (op. cit., vol 39, p 56), the party systematically implemented in the armed forces a set of ideological steps. Measures taken to improve the

structure of the party organizations, to upgrade the role of the frontline press, the dissemination of progressive experience, and support of the high offensive thrust of the forces and many other steps contributed to the stable political-moral condition of the personnel and to mass heroism displayed by the troops in the battles for the homeland.

Some 3 million party members died in battle during the war. The power of the inspiring example set by the party members and their personal courage and heroism played a tremendous role at the front. It was precisely thanks to them that the struggle against fascism became a war of the whole people and that victory was won.

Lessons for the Present and the Future

As we study the nature of the last war, we can see how topical its lessons are not only for the present but for the future as well. This future, judging by the plans and specific military preparations of Western militaristic circles, could turn out to be so threatening that unless the necessary steps are taken as of now, events may simply get out of any sensible control. Imperialism, which was the culprit for the two world wars, which cost tens of millions of lives, the new draft of the party program emphasizes, is creating the threat of a third world war in which human civilization could perish. That is why the study of historical experience is always important in making forecasts. This becomes particularly important when such a future is threatened, as it is today, with a new, even more terrible war. The conclusions, results and lessons of the past, enriched by more than 40 years of experience in the struggle in defense of peace, indicate that the progressive forces have all the possibilities of erecting reliable barriers on the path of the chariots of war. The implementation of these opportunities, which is of vital importance, is sanctified by the profoundly just nature of the struggle for rescuing human civilization from its doom.

This struggle can succeed by uniting the efforts of many peoples and states against the threat of nuclear catastrophe hanging over the world. For it is actually as a result of the activeness of the militaristic circles that today mechanisms for the destruction of all mankind have been created and brought to a state of high readiness. A book written by American political experts entitled "Eagle Defiant" notes that the Pentagon's long-term strategic objective which it is preparing to reach is "waging a victorious nuclear war against the Soviet Union." The authors emphasize, however, that it is obvious today that the desire to implement such a program is equivalent to suicide (see "Eagle Defiant," Boston, 1983, p 96).

A mechanism to block this threat and to prevent planetary genocide is necessary for the sake of the future and the preservation of civilization. Essentially, a circumstance has developed in which a basic universal safety can be ensured only through joint efforts, which requires a corresponding mechanism for defense from the threat of nuclear war. The fact that this is possible is confirmed by the experience of the last war.

As we know, in the course of the war the members of the anti-Hitlerite coalition pursued different objectives. Although for many years which

preceded the outbreak of World War II Western politicians actually boycotted Soviet suggestions of creating a system of collective security in Europe, the aggressive actions of Hitlerite Germany forced them to change their positions. In the face of the growing menace of a global fascist expansion, they were forced to make a coalition with the socialist state.

The experience of undertaking joint actions by a large group of countries against a menace threatening all mankind is exceptionally topical. Furthermore, today the size of the threat and the gravity of the consequences of a possible global nuclear war have increased immeasurably. That is why the creation of an "antinuclear" coalition, if one may describe it as such, would be of exceptional importance. In the face of a universal planetary threat, the social, political and ideological differences of countries and systems should not prove to be an insurmountable obstacle on the path of joint actions to restore detente as one of the specific forms of peaceful coexistence. It is precisely on the platform of antiwar strategy that the Soviet initiatives on the creation of a comprehensive system of international security, the total elimination of nuclear weapons by the end of this century, the nonextension of the arms race in space, the refusal to be the first to use nuclear weapons, and so on, could become acceptable. Naturally, banning nuclear weapons and their elimination at the very onset of the nuclear age, as the Soviet Union suggested in its time, would have radically changed the situation, and the world would not have been today under the threat of total annihilation. However, the possibility of collectively listening to the voice of reason is still present.

Today's reality of international life, the level of military-technical systems reached, and the severity of the consequences of a possible war have intensified the interconnection between the defense of socialism and the fate of the world. Under present-day circumstances, the defense of socialism has become the most important prerequisite for the struggle for the preservation of all civilization on earth. The dialectics of the class and universal aspects in this matter is manifested in the unity, in the objective coincidence of the interests of the peoples of the socialist countries and the overwhelming majority of the population on earth. Increasingly the people are realizing the inevitable truth that today those on whom the fate of war and peace depends are faced not simply with a choice between victory and defeat but between life and death. That is why the real struggle for peace is not a kind of abstract form of pacifistic condemnation of war "in general." It is above all the exposure of the true culprits of the terrible danger threatening mankind. It is a struggle against those who are blocking the peace initiatives of the socialist countries and who are unwilling to abandon the criminal idea of solving the main contradiction of the age by nuclear force.

The powerful defensive and restraining potential of socialism imperatively reminds the lovers of military adventures that a crushing response will immediately follow any attempt to destroy the enemy through nuclear weapons. That is why security today means not a feverish growth of the military potential or pursuit of illusory superiority but ability to prevent a nuclear cataclysm. Today no task could be more important or just. Some realistically thinking members of the ruling U.S. class have come close to understanding it. Thus, American Senator Charles Percy believes that "Our planet is too small to

isolate the other superpower. Our own interests require interaction with the Soviet Union on a broad range of problems" ("United States-Soviet Relations." Part 1. Washington, 1983, p 2). Unfortunately, such realism is by no means displayed by all the men in power in Washington.

The conclusion stemming from the study of the nature and content of World War II is the following: if a constant source for the outbreak of wars exist, based on the exploitative system, proper conditions must exist for creating the specific reasons for such a war. One of them is the existence of a certain material and military superiority on the part of the aggressive side, which the latter usually tries to increase with the help of the surprise factor. The superiority which the imperialist states had at the beginning of the 1940s over the first socialist country in history in terms of the volume of material and military output and human resources allowed international reaction to exert a dominating influence on the course of international affairs and, in the final account, to unleash a war.

Taking this circumstance into consideration, the CPSU and the Soviet state did everything possible to deprive the potential aggressors of decisive military-economic advantages. As the new edition of the party program emphasized, the fact that the Soviet Union attained military-strategic parity "was a historical accomplishment of socialism," which deprived the militaristic circles of the possibility of blackmailing the USSR and shaping at their own discretion the nature of global developments. A situation arose in which the leading circles in the West had realistically to reinterpret the new correlation of forces and to conclude that observing the principle of equal security and reciprocal consideration of the legitimate interests of both sides alone could offer real guarantees for safeguarding peace. This objective causal relation between the balance of strategic power of the confronting states and the level of their security became one of the basic laws governing social development at the end of the 20th century. This realized objective law is the principle of equal security of countries belonging to different social systems.

Naturally, in itself a strategic balance, as history confirms, has not always restrained the attacking country. The aggressor has tried to obtain additional advantages with the help of surprise, technical innovations and political combinations. In the past, such steps were frequently successful. The situation has radically changed today, however. In a nuclear war the aggressor will be forced to pay such an inadmissibly high price that it is only someone bent on suicide who would decide to unleash it. The dialectics of today's historical moment is such that a durable peace can be safeguarded only on the basis of restraint and balance.

We should not ignore the fact that the continuation of the arms race unleashed by the United States and the shifting of military preparations to space would develop a qualitatively different military-political situation in the world and question the very possibility of reaching an agreement on control over nuclear armaments. The continuation of the arms race on earth, not to mention its spreading into outer space, the resolution of the 27th Party Congress on the CPSU Central Committee political report reads, "would accelerate the already critically high pace of stockpiling and improvement of nuclear and

other types of weapons, as a result of which even parity will no longer be a factor of military-political restraint."

As a result of the truly maniacal aspiration of American ruling circles to achieve superiority over the socialist world at all cost an externally paradoxical situation has developed: Washington's military possibilities are growing without any increase in its ability to achieve its political objectives through military power. Nevertheless, the overall security threshold is becoming increasingly lower and, considering the political adventurism inherent in militaristically thinking American politicians, they could cross it even more easily.

Actually, the situation which has developed today is one in which in the face of the militaristic challenge of forces which continue to look at the world only through the gunsight, the only reliable material guarantee in safeguarding peace is the ability of real socialism to keep up the parity, the balance of strategic forces. That which the Soviet Union was unable to accomplish before the war (history had given us too little time to accomplish this), it was able to accomplish 4 decades later. The ability of the USSR to maintain a strategic balance on a global scale creates a situation in which talks on arms control become the only sensible alternative to a destructive war, for the stockpiling of weapons beyond a certain limit no longer has any decisive military significance: life on earth can be destroyed only once and not twice or three times.

A comparison between the current world situation and the last war raises with merciless urgency the following question: Are the forces which chart the political course in Washington able to learn, in the final account, to live under conditions of equality and parity? So far, they have displayed their inability to reconcile themselves with the reality and the irreversible nature of change. The fact that the Soviet Union has achieved strategic parity is accepted across the ocean in a political context as a national tragedy. The new realities, which are natural in our complex and constantly changing world, are interpreted by American public consciousness as a kind of "challenge," a "threat" to the American way of life and thinking itself. As A. Haig, the former secretary of state, writes in his book "Caveat," the United States should not forget that "it has the right" to interfere in the affairs of any country should this be "advantageous to the free world." It is only American global leadership hysterically writes this retired general-diplomat, that can secure peace (see A. Haig, "Caveat," New York, 1984, pp 31-32, 226). People with such an outlook (and there are many of them in power in Washington) are totally unable to accept the idea of a global balance as a foundation for stability, restrain and accord. Yet, sooner or later, they will have to accept it, for there is simply nothing else.

The most just war, which is what the Great Patriotic War was, and its results and consequences left an ineradicable imprint on all processes occurring in the contemporary world. The profound and objective reasons which triggered World War II, however, have not disappeared to this day. They are rooted in the last exploiting system on earth and linked to the existence of antagonistic classes and the policy of monopoly capitalism. It is precisely capitalism in its imperialist stage that is "the main source of aggressive

wars," the new edition of the CPSU program notes. This does not mean in the least, however, that the outbreak of a new war is fatal. Limiting and blocking the man-hating policy of the "hawks" in the imperialist camp and of forces which allow the possibility of unleashing a suicidal thermonuclear conflict, is accomplished through a variety of means, through the systematic peaceful course pursued by the Soviet Union and the fraternal socialist countries, the antiwar movement, which has reached a truly global scale today, and the steps taken by soberly thinking state leaders in the nonsocialist world, who are aware of the vital need for peaceful coexistence, the preservation of detente and attaining confidence. The only real way to peace is not arming or "further arming," but honest practical talks and agreements based on the principle of equality and identical security.

The Soviet Armed Forces hold an important position in the mechanism of the defense of peace. Remembering the lessons of the past war, they are constantly in a state of high-combat readiness. The Soviet Union has never threatened anyone. However, no one will ever be able to dictate his will to us. No one should doubt that we shall be able to defend our gains. Immediate retribution will befall any aggressor. One of the origins of this resolve and political will of our state is the imperishable experience of the most just of all wars--the Great Patriotic War.

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BOOK REVIEWS AND BIBLIOGRAPHY

FRUITFUL COOPERATION BETWEEN SOVIET AND POLISH SOCIAL SCIENTISTS

Moscow KOMMUNIST in Russian No 9, Jun 86 (signed to press 11 Jun 86) pp 124-126

[Review by Dr of Philosophical Sciences B. Grigoryan and Dr of Philosophical Sciences N. Lapin of the books "Teoreticheskiye Problemy Stroitelstva Sotsializma" [Theoretical Problems of Building Socialism]. Nauka, Moscow, 1986, 239 pp; and "Kritika Nemarksistskikh Kontseptsii Sotsializma" [Critique of Non-Marxist Concepts of Socialism]. Mysl, Moscow, 1986, 318 pp]

[Text] The considered and respectful attitude toward reciprocal experience and its practical application provides a tremendous opportunity for the development of the members of the socialist community. Its joint study carried out by social scientists from the socialist countries helps to bring to light anything valuable and progressive such experience contains. The Soviet-Polish Commission for Cooperation in the Social Sciences makes a substantial contribution to the intensification of creative contacts between Soviet and Polish scientists. A scientific conference on "Theoretical Problems of Building Socialism" was held at its constituent meeting, which took place in Warsaw, in May 1984; a conference on "Critique of Non-Marxist Concepts of Socialism" was held in Moscow a year later, in June 1985. The reports and statements of the participants in the conference were published in a two-volume set in Russian and Polish. Their authors include noted Soviet and Polish philosophers, economists, sociologists, literary experts and others. Thanks to this, this discussion of the complex problems of building socialism and the critique of contemporary bourgeois and revisionist concepts is one of a comprehensive interdisciplinary nature.

The works under review provide a study of the topical problems of upgrading the efficiency of socialist social production, perfecting the socialist way of life, molding and enhancing the socialist awareness of the working people and ways of surmounting vestiges from the past in the human consciousness. A number of debatable problems are discussed as well, such as the nature and criteria of completing the transitional period from capitalism to socialism, the nature of contradictions in the process of building socialism, the common and the specific features in the content and methods of reorganization of the social structure and consciousness in the individual socialist countries, the role of labor and culture in the development of the socialist individual,

freedom and human rights under socialism, and others. Their consideration gives a political and theoretical relevance to these works.

In surmounting the superficial approach to assessing the levels of building and development of socialism in a given country shown in the past, the Soviet and Polish authors of "Teoreticheskiye Problemy Stroitelstva Sotsializma" note that the criteria indicating the completion of the transition from capitalism to socialism are comprehensive in their nature. They include not only the level of development of material production but also qualitative transformations in all basic areas of social life--economic, social, political and spiritual. In this case the tasks of the different stages are frequently combined: the transitional period goes on in some areas while in others the problems of the subsequent, the specifically socialist stage are being solved. Two types of contradictions operate simultaneously during the transitional period: antagonistic and nonantagonistic. In a number of cases some contradictions become superimposed on others, which could aggravate nonantagonistic ones and distort their nature. With the completion of the transitional period antagonistic contradictions disappear while nonantagonistic ones remain.

The Polish authors discuss in their articles the complex and grave problems of contemporary social development in Poland: they include a special study of the process of socialist reorganization in the countryside, the problem of the maturity of objective and subjective factors of the socialist revolution and others. The Polish social scientists bring up the significance of economic cooperation between Poland and the USSR and the other socialist countries, and the role of cultural interconnections in the rapprochement between the peoples of Poland and the Soviet Union.

The idea that the labor and political activeness of the masses is a key problem in the economic and social progress of socialist society runs throughout a number of articles by Soviet and Polish social scientists. This is a problem which cannot be solved once and for all. It must be reformulated with each new generation which enters life, in accordance with the specific historical period and the features of the various population groups. Its specific solution presumes perfecting management and the economic mechanism and intensifying the socialist self-government of the people.

The work currently being done in the USSR and the other socialist countries for the further development of socialist society and the fuller utilization of its tremendous potential and essential advantages is the prime and fundamental prerequisite for the establishment of the most mature and highest forms of democracy, equality and social progress and the growth of the attractiveness of the socialist way of life. However, under the circumstances of the psychological warfare mounted by imperialism against socialism, the propaganda activities of our ideological workers and their efficiency in exposing hostile ideology and disseminating accurate concepts concerning the theory and practice of building socialism become particularly important in the contemporary struggle for the minds of the people and for a socialist outlook and concepts of life.

The most influential anticommunist bourgeois and revisionist concepts are analyzed by Soviet and Polish social scientists in the book "Kritika Nemarksisitskikh Kontseptsii Sotsializma." Their criticism is addressed above all at the theoretical and ideological concepts which gloss over the essential difference between the capitalist and socialist social systems,, misinterpret the various aspects of the economic and cultural life of real socialism and show the desire to "purge" socialism from its characteristic features and to impose upon it pseudosocialist forms of social life. In this connection the authors discuss extensively the superficial and distorted concepts of socialism spread by bourgeois propaganda. Particular attention is paid to the various falsified concepts of socialism the purpose of which is to hinder the dissemination of the ideas of scientific socialism.

The concepts of freedom and "pluralism," which play the role of "center of gravity" in bourgeois and revisionist philosophy and sociopolitical thinking and their "updated" interpretations actively promoted today by supporters of neoconservative ideology, are especially analyzed in the work. Faced with the fact of the incompatibility between true human equality and the omnipotence of capital and with the growing influence of the ideas of freedom, the contemporary monopoly bourgeoisie is doing everything possible to promote the elitist principle of freedom, invented for the purpose of abandoning universal social equality. In defending its class interests, the bourgeoisie is proclaiming the concept of "freedom" which it conceives as the unlimited economic and political domination of capitalism.

The authors describe the class nature of an attribute of contemporary bourgeois democracy, such as ideological and political "pluralism." Neoconservatism uses the "pluralistic" ideology of classical liberalism to serve its own objectives.

The ideological and political "pluralism" presented by bourgeois propaganda as the possibility of "free" expression of the will of all population classes and strata is used to conceal the political domination of monopoly capital and to criticize spiritual and social life in socialist society. In reality, the experience of the building of world socialism confirms not only differences in solving the common problems of socialism according to the national and historical features of the individual nations but also the inordinate wealth and variety of specific forms of economic, cultural and spiritual life in socialist society.

The critical analysis of gnosiological "pluralism," according to which all human concepts about the world and social life are relativistically interpreted as subjective visions and viewpoints lacking an objective content and significance, found in the book, is of interest. It is on this basis that the possibility of the existence and knowledge of universally significant laws and principles of sociocultural life and the scientific substantiation of the ideals of social progress, of the communist ideal above all, are denied. The existence of several approaches to and viewpoints on a single problem is improperly likened to the existence of a variety of truths.

The authors expose the ideological speculations of the neoconservatives, based on the distorted interpretation of the real originality and certain autonomy

of various historical and natural cultures. The neoconservatives either question or else totally reject the possibility of a cultural rapprochement among peoples. On the basis of cultural, ethnic and political "pluralism," they reject universal ideals, values and standards which can ensure the cooperation among peoples and countries in solving the vital problems of our time. The authors describe the way in which, under the banner of the struggle against ideological and political extremism and radicalism, the bourgeoisie opposed any kind of anticapitalist social movement. Even the defense and assertion of universal values, such as peace, democracy and the right to work and education are interpreted through the means of "pluralistic" ideology as "violations" of individual freedom and basic foundations of human existence or, in other words, of the socioeconomic and ideological foundations of capitalist society.

The specific study of the problems and tasks of ideological work under contemporary Polish conditions included in the book is very topical. The Polish social scientists combine in their articles a critical analysis of common anticommunist concepts of bourgeois ideology with a consideration of the specific theoretical and ideological elaborations formulated and used by the enemies of socialism within the country and abroad at a time of crisis and which, despite the defeat of antisocialist forces, remain ideologically threatening. They represent a set of typical means practiced by our ideological foes to discredit all possible aspects of the socioeconomic and cultural activities of socialist society. The authors sum up the instructive experience gained in the struggle against hostile and antisocialist trends.

The contemporary stage of the ideological confrontation nationally and in the international arena requires a new approach and a skillful coordination of joint efforts, aiming the wedge of Marxist criticism at the most influential bourgeois and revisionist concepts, and the high professional training of propaganda cadres. It is important to ensure the truly efficient and aggressive nature of joint ideological activities. This, as reality proves, can be achieved when the criticism of the ideological enemy is comprehensive, taking into consideration the experience of the fraternal parties, within the context of the positive propaganda of the cultural and spiritual values of socialism and improvements in and qualitative renovation of all of its aspects on the basis of the creative development of the Marxist-Leninist outlook. This largely applies to the two works under review, which are unquestionably a substantial contribution to the development of all such problems.

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ABOUT MAN AND THE LAND

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[Review by USSR Academy of Sciences Corresponding Member A. Yablokov of the book "Razdumya o Zemle" [Meditations on the Land]. Editorial collegium: A.N. Kashtanov (editor in chief), T.S. Maltsev, V.A. Kovda, et al. Preface by D.P. Griбанov and R.G. Yanovskiy. Compiled by Yu.P. Kovyryalov, I.K. Lisseyev and S.A. Nikolskiy. Agropromizdat, Moscow, 1985, 271 pp]

[Text] "Meditations on the Land," is the title of a book which may appear to deal with a strictly specialized problem: the interdisciplinary study of farming problems. The book not only analyzes the ways of accelerating the pace of development and upgrading the efficiency of agricultural production but also deals with the moral-ethical problems of human activities involving the land. We believe it important to draw today attention to this rather unusual book not only of specialists and managers of the agroindustrial complex but also the wide range of party and soviet personnel. The work includes 15 different articles, whose authors are agrarian scientists, biologists, philosophers, economists, and party workers, who consider the present and future of agriculture, the destiny of man on the land and the role of the land in social production, and the ways of harmonizing relations between man and nature.

The need to turn to philosophy in the study of agricultural activities developed a long time ago. Individual aspects of such activities were studied, socioeconomic problems and problems limited to the "nature-society" topic above all. Such aspects were frequently given a philosophical trend and a conceptual meaning. Studies of this nature are extremely topical, for today the problem of ensuring food for the population on earth and the threat of the destruction of mankind in a global thermonuclear war or the possibility of the death of mankind as the result of an ecological catastrophe has become firmly established among the other global problems of our time. One person dies of hunger on earth every second. This equals more than 25 million people every year. This is the fault of imperialism. However, even the elimination of private property and of exploitation, under socialist conditions, do not automatically lead to the establishment of a harmony in relations between man and nature. This topical problem was discussed at the 27th Party Congress. A great deal was also said at the congress on the subject of solving the

production problem in our country. Agricultural production is not increasing in many areas; land fertility is declining and cattle productivity remains low; scientific crop rotation and soil conservation technologies are being sluggishly applied, etc. What can the scientists do to help our society to solve these problems and to contribute to achieving a radical change in the agrarian sector, so that during the 12th 5-year period population food supplies can be improved noticeably? One of the main objectives of the authors, the preface to the book emphasizes, "is to indicate to the broad readership that farming, as an object of study, is improperly considered separately from the national economy as a whole, on the one hand, and nature, on the other; that agricultural problems must not be locked within their own circle but be solved by the broadest possible range of specialists in the agrarian and other sciences" (p 5).

The book consists of two parts. The first, entitled "Land, Man and Outlook," convincingly proves that a more profound understanding by man of himself, his development and his attitude toward the world surrounding him and other people contributes to the better understanding of the land as the main social resource and wealth. Conversely, contemporary ideas of the use of the land and of the land itself, this most important part of the "natural-historical body" of the planet (V. Dokuchayev) formulate new requirements toward man himself as the one who changes the land. In both cases substantial changes in outlook occur. In his article "Farmer, Agronomy and the Fate of the Land," with which the book opens, honorary VASKHNIL Academician Twice Hero of Socialist Labor T.S. Maltsev writes: "...It is within the possibilities of man to farm the land in such a way that its fertility is not diminished...but is increased for the sake of future harvests and future generations" (p 14). It is not the "law of diminishing fertility" which prevails in agriculture but a dialectical unity between "growth-diminishing fertility" depending on the direction which man gives to this process. To stimulate the accumulation of organic matter is the main element in soil fertility, achieved through a variety of means, the most important among which T.S. Maltsev considers the plowless cultivation system, which may be applied in a variety of ways according to specific natural conditions. The same type of farming strategy is discussed also by F.T. Morgun, first secretary of the Poltava Obkom, CP of the Ukraine, in his article "On the Wisdom of the Farmer and the Laws of Nature," and by VASKHNIL Academician A.I. Barayev, in his article "Perfecting Regional and Zonal Farming Systems," in which he warmly supports the idea of soil-protecting farming systems. Plowless cultivation models natural processes. "...Many slanted fields," the authors say, "have been literally saved from water erosion by plowless cultivation. The question is why wait? Life itself indicates the proper way and demands urgent steps to ensure the salvation of our chernozems" (p 149). Inertia in work and thinking, incompetence, departmental approach and unwillingness to court trouble if one could otherwise subsist peacefully, are all features which hinder contemporary agricultural production. The other authors as well agree with these conclusions, which are consistent with the assessment of the situation in agriculture provided at the 27th CPSU Congress. An important advantages of the soil protecting farming system in many parts of the country is the fact that it reduces to a minimum or totally eliminates the need for toxic chemicals.

The historical experience of Soviet peasantry and the wisdom of the grain grower are what are seen, above all, in many of the articles. The general conclusion is the need to established harmonious relations between man and nature, mandatory in terms of the progressive development of human society.

The authors try to look into the future and to predict the development of agriculture. Here they discuss the important topic of interconnection between the study of problems of agriculture and the laws of the biosphere.

The many-sided nature of contemporary agricultural theory and practice has been reflected in the second part of the work: "Socioeconomic Problems of Farming." This part extensively deals with the scientific studies made by specialists in the area of economic theory. Topical methodological problems of the economic assessment of natural resources are considered and a critical analysis is provided of the existing concepts of applying an optimizing methodology in the economics of the utilization of nature. USSR Academy of Sciences Corresponding Member V.A. Kovda, considers the preservation and improvements of the quality of the soil cover, under the conditions of agricultural production intensification, a task of prime importance. Here as well, as in the other articles, we come across the thought of the urgent, of the truly vital tasks of optimizing the interrelationship between man and nature by modeling biogeochemical natural cycles in agriculture.

Also formulated is a contradiction encountered by the process of agricultural production intensification. This includes the increased genetic vulnerability of cultivated strains as their genetic homogeneity increases, and the declining stability of ecological stresses of cultivated species as we increase the amount of fertilizer and apply other agrotechnical measures which intensify growth an many other processes. In the past, technical progress in agriculture meant application of crop rotation, use of chemical fertilizers and more powerful equipment. Today increasing emphasis is put on the elements of the equipment and technology which enable us to increase yields while reducing destructive chemical, mechanical and other influences on the soil cover. Combined with "traditional" steps to upgrade soil fertility, such as fallow land, for example, intensive technologies protect the soil and double or triple the crops. "Today," the authors note, "the plowed stratum is so scattered and packed by the wheels and threads of machines in a number of fields that it can no longer 'breathe,' and becomes more impermeable. Under these circumstances neither good seeds nor even the most generous doses of fertilizer can be effective" (p 244). Nor should we forget the need to develop intensive technologies, consistent with the specific nature of soil and weather features of the various areas. The technological foundation for the stability of farming lies in the zonal and regional soil cultivation systems. In addition to reclamation, zonal farming systems (soil-protection farming above all) are the main way leading to high and stable crops.

Such is the range of the main problems discussed in the book. Naturally, we have not mentioned all of them, which would be impossible in a review. The book is worth reading by those interested in problems of development agriculture and in the general problems of the interrelationship among man, nature and society.

Nevertheless, the book is not free from shortcomings. They include a certain stylistic difference among articles, ranging from dry academic to newspaper-polemical. The publication of excerpts from works of natural science classics which, unquestionably, improves the book, could have been expanded with comments which would clarify their contemporary meaning. The reference-bibliographic part also leaves something better to be desired. However, these like some other shortcomings and omissions should not conceal the main factor: this is a successful initial attempt at including agricultural science and practice in interdisciplinary research on the philosophical-methodological level. Life itself, intensive changes in scientific knowledge and in the thinking and practical activities of the people urgently demand of the scientists to leave the quiet of their academic and university offices.

Equally imperative is the demand addressed to agricultural production specialists more daringly to identify the dialectics of natural-historical and economic processes which determine the way of development of agricultural production. It would be a good thing for this book to become a harbinger of a new trend in the joint work of philosophers and natural scientists.

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