V. I. LENIN AND THE PROBLEM OF MODERN TECHNICAL-SCIENTIFIC PROGRESS

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The giant of the dialectical thought and revolutionary action, Vladimir Ilich Lenin, had a significant influence on the most important processes of the modern world. He had made an invaluable contribution to the formulation and analysis of the social problems of the development of science, and to the forecast of the technical-scientific progress.

The problems of the contribution of science and technology to the material goods production were of interest to Lenin as an eminent scientist and thinker. The problems of the role of science and technology in the social life were of interest to Lenin the sociologist, and especially to Lenin the politician, who was allotted by history the leadership of the first state of workers and peasants.

V. I. Lenin emphasized that communist construction is unthinkable without an advanced science and technology. He visualized science and technology as an enormous force which must be at the service of the working man. The Lenin genius considered the future decades through the prism of the alliance between the proletariat and the advanced science and technology; he saw in this alliance the realistic means by which the underdeveloped Russia could be transformed into a flourishing socialist and industrial power.

Already during the first few years of the Soviet power, V. I. Lenin created a strong system of socialist organization of science in the USSR. The basic concepts of this creative process were: 1) the subordination of science to the interests of the working class, of the urban and rural workers; the proletarianization of science; 2) the subordination of the social organization of science to the tasks of building socialism and communism; 3) the transfer of scientific and technical ideas and also of the material-technical infrastructure of science to general national ownership; 4) the recognition of the high functions of leadership in the science field by the Soviet State and the corresponding legal validation; 5) planning of the development of science in the general system of the plan of the national economy; 6) financing by the State of scientific-technical investigations; 7) development of international scientific relations, the legal protection of the interests of Soviet scientists abroad; 8) implementation in science of the high ethical standards of the interrelations between scientists in the spirit of communism; 9) the observance of the principles of internationalism in the scientific activity.

The principles of the new organization of science in the USSR substantiated by V. I. Lenin were the basis of the technical policy of the Communist Party of the Soviet Union and of the Soviet State.

The Leninist idea of the organization of science in the USSR had a very creative influence on the development of science in all Soviet Republics, including the Ukraine. In December 1919, V. I. Lenin wrote the draft of the resolution of the Central Committee of the Russian Communist (Bolshevik) Party "On Soviet Power in the Ukraine" in which the Central Committee of the Russian Communist Party considered it an obligation of all party members to cooperate through all available means to eliminate all the impediments hindering the free development of the Ukrainian language and culture.*

During the difficult years of the Civil War, the Ukrainian Academy of Science was created (1919), which last year marked its half-century anniversary. In "Outline of the Plan of Scientific-Technical Works" (1918), V. I. Lenin entrusted the Academy of Sciences of the USSR with the high-priority task of studying systematically the productive forces of the country; in particular, the "rational selection of industrial development sites in Russia, from the viewpoint of closeness to raw materials and minimization of manpower losses

*V. I. Lenin, Works [in Russian], Vol. 30, p. 142.
during the transition from raw material processing to all successive stages of processing complex products right up to the stage of obtaining the finished product."

After the establishment of Soviet power in the Ukraine, the Academy of Sciences of the Republic started to solve similar tasks. The brotherly relations between the Russian and Ukrainian scientists initiated by Lenin become stronger each year. They were demonstrated with a new vigor during the "Lenin Days" of Ukrainian science in Moscow in January 1970.

V. I. Lenin left to mankind a rich theoretical inheritance — Leninism. Lenin's teaching had and continues to have a creative influence on the understanding of those revolutionary changes which took place in science and technology during the 20th Century.

The Theses of the Central Committee of the Communist Party of the Soviet Union "the 100th Anniversary of V. I. Lenin's birthday" state that Lenin was the first thinker of this century who recognized in the achievements of the natural sciences contemporaneous with him the start of a grandiose scientific revolution, who succeeded to uncover and to generalize from a philosophical viewpoint the revolutionary sense of the fundamental discoveries of the great investigators of nature. He gave the most brilliant philosophical interpretation to the new scientific data in the period of acute "crisis of principles" in the leading fields of natural sciences. The idea formulated by him that matter is inexhaustible became the general principle of natural sciences knowledge.

From the mathematical, physical, and chemical sciences data, V. I. Lenin succeeded to uncover some general tendencies which are still active in the development of the modern science.

The most important of these are the following:

1. Tendency of man's reason to penetrate the secrets of the structure of matter. The 20th Century was marked by the discovery of the elementary particles of matter, the organic properties of the micro-particles, the disintegration of atomic nuclei, the discovery of quasars, the development of the theory of relativity and the explanation of relativity effects in the universe, the investigation of live matter at the subcellular and submolecular levels, the understanding of the laws governing the chemical synthesis of matter and of the information processes, etc.

The penetration and understanding in depth of the material phenomena and processes — this is an objective law of the development of knowledge which is confirmed by the increasing differentiation of the modern science, the development of new scientific fields. Modern mankind knows over 2000 scientific disciplines, the differentiation of knowledge increases steadily. The objective basis for further differentiation of science resides in the necessity of obtaining deeper knowledge, in the transition to deeper and deeper levels of comprehension of the essence of matter. Besides the division, the differentiation of science, there is also an opposite tendency of synthesis, unification, integration. The differentiation and integration of sciences can be used as a concrete example of existing and mutually complementing elements of a contradiction. Characteristic for our century is the rapid quantitative accumulation of knowledge, the increase of the general intellectual force of mankind. Complementing this quantitative process, a building up of the quality of disciplines, their continuous renewal and minimization takes place, indicating the tendency toward an optimization of the scientific knowledge.

The rapid quantitative and qualitative increase of scientific disciplines generated among the idealistically thinking western scientists the concept of "the saturation of science," the exhaustion of its cognitive possibilities.

The gnoseologic roots of the "saturation of science" concept consist in the one-sided and hypertrophied reflection of various aspects of development of the modern knowledge. For example, the continuously increasing specialization of scientists is considered by the bourgeois philosophers as a fundamental inability of all sciences to move into the depth of matter. The finite and limited character of the cognitive potential of one or another scientist, are elevated by the authors of the "saturation" theory to the rank of fundamental limitation and over-saturation of all sciences. The information overload of one scientist or another is directly translated into the over-saturation and exhaustion of the cognitive possibilities of the science itself.

The concept of science saturation has also social roots. The fundamental inability of the economic bases of capitalism to solve rationally the problems of technical-scientific revolution, the narrowness of