

# **TECHNOLOGY FALAFEL. AN ACTIVE HUMAN FACTOR IN THE HUMAN INFORMATION TECHNOLOGY SYSTEM**

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## **Annotation**

The article titled "Active Human Factor in the Information Technology System" addresses some of the most pressing issues of today, such as the role of humans in the information world, the concept of information technologies, and the issues of their rational use. It is emphasized that technologies are increasingly becoming an integral part of the productive forces of society, with particular attention given to the importance of the human factor and its active involvement in this process.

**Keywords:** Information technology, philosophy of technology, human factor, technological process, technological system, electronic security, environmental, anthropological, information society, privacy.

Technology as a special field of human activity has always attracted the attention of thinkers. The term "philosophy of technology" was introduced by the German philosopher Ernst Kant (1806-1896) in his book "Fundamentals of the Philosophy of Technology" published in Germany in 1877. In our century, famous Western thinkers Friedrich Dessauer (1881-1963) (Germany), Lewis Mumford (1895-1990) (USA), Jose Ortega de Gasset (1883-1955) (Spain), Martin Heidegger (1889-1976) (Germany), Oswald Spengler (1880-1896), Jacques Ellul (born in 1912) (France), Carl Jaspers (1883-1969) (Germany) and others. One of the founders of the philosophy of technology in Russia was the Russian engineer Pyotr Klementievich Engelmeier (1855-1942). "General problems of technology" (1899), "Philosophy of technology" (1912-1913) and others can be indicated.

As an independent philosophical discipline, the philosophy of technology began to develop in the mid-20th century. It was during this period that the impact of technology on society became widespread, and questions related to the phenomenon of technology, its specific role in human and social life, were identified as philosophical, meaning-forming. Western scientist O. Spengler, in an extremely dramatic tone, considers the modern era to be approaching the "time of the last catastrophes": "the mechanization of the world," he emphasizes, "has entered the most dangerous stage of overexcitation." everything organic becomes a victim of the expansion of technological organization, the artificial world displaces and poisons the natural world.

civilization, which is faced with global environmental pollution, depletion of natural resources, the threat of nuclear disaster, and much more. Thus, the purpose of the

philosophy of technology is: a critical philosophical analysis of existing problems, an assessment of the results of technical activity, possible prospects for its development in connection with the development of society as a whole, material well-being, and changes in it are reflected in the spiritual image of man. According to the American philosopher H. S. Kolimovsky, "the philosophy of technology is the philosophy of our culture. This is the philosophy of man and civilization, which has found itself in a dead end, under the threat of specialization." Realizing that it has chosen the wrong path in communicating with nature, a period of "fragmentation and dispersion" begins.

Today, the main issues of the philosophy of technology are: What is the nature and essential features of technology? Are there limits to technical growth and how is the development of technology related to the fate of our culture? How are the values of technogenic civilization and the humanitarian and spiritual foundations of human society related to each other? Thus, the unusually broad problematic area of the philosophy of technology is: clarifying the concept of technology, studying its historical development and analyzing its structural features, identifying the specific features of technical knowledge and its connection with fundamental sciences, searching for a new concept of technology. - a mediated dialogue between man and nature, modeling global technical, economic and natural systems, developing criteria for assessing the technological development of society, etc. Currently, socio-ethical problems associated with the computerization of society are also coming to the fore, changing not only the spheres of production and education, but also the form of organizing human life, the style of relations between individuals. We can quote the words of Ernst Kant, the founder of the philosophy of technology, who based his concession on a central anthropological criterion: "The content of the sciences is the process of research, in general," he writes, "nothing other than the return of man to himself."

The main characteristics of technology, which are identified in various studies and determine the cultural-historical approach presented in the problem area of philosophy, are classified as follows. A technical artifact, from the Latin "artifectum" literally means "artificially created". In this sense, technology is a specially manufactured, created by a person (craftsman, technician, engineer), which "first" was created according to the laws of nature to "exist". However, it represents the so-called "secondary" nature and is used in the practical activities of people. At the same time, technology embodies and implements certain plans, ideas, knowledge, experiences, skills, without which the creation and activation of "artifacts" is impossible. This does not seem paradoxical. It is possible, but from this point of view, even a product of biological culture grown in a test tube is an artifact, that is, a technique. This also raises ethical issues related to genetic engineering, cloning (from the Greek klōn - branch, offspring) - the artificial creation of living beings.

Technology is an integral part of the productive forces of society. Modern technology acting as productive forces is divided into the following sectors: production technology, transport and communication technology, scientific research technology, military technology, educational process technology, culture and life technology, medical technology, profession. technology, management technology, production equipment, transport and communication tools, and they, in turn, are divided into active and passive technology.



Passive technology includes: integrated production systems (primarily in the chemical industry); industrial buildings; technical structures of land communications, railways, bridges, canals, irrigation and drainage facilities, and technical means of information dissemination (telephone, radio, television, etc.).

The active part consists of equipment (tools), which are divided into manual tools, mental expressions, and tools used in human life activities (glasses, hearing aids, etc.); machines (industrial, transport, military); consists of machines, equipment for managing technological, production and socio-economic processes, etc.

Technology, in accordance with the stages of historical development, is distinguished by various technological methods of connecting man and technology. The first stage is characterized by such a method of connecting man and technology in the technological process, in which man is the material basis of the technological process, labor is manual in nature; manual labor tools only extend and strengthen the working organs of man.

In the second stage, the machine becomes the basis of the technological process, labor becomes mechanized, and the person complements the work of the machine (mechanized device) with his own labor organs, being only its technological element.

The third stage of the technological method of connecting man and technology is characterized by a type of free connection between man and technology, labor is automated, a person ceases to be a direct link in the technological chain, receiving conditions for the creative use of his abilities. This stage is associated with the widespread introduction of computers and computer networks together with advanced means of communication. The computer is a unique means of automating intellectual activity. If previous means of automation applied only to the sphere of material production (they facilitated the work of hands, not the intellectual activity of the brain), then computer and information technologies have had a direct impact on the intellectual sphere, their capabilities have increased incomparably.

The world of technology as an independent reality is opposed to nature, the world of art, linguistic reality, all living things and, finally, to man. But technology is also a certain way of human existence. Technology is needed by man as a means of satisfying one or another need, that is, physical strength, energy, protection, etc. From this point of view, technology is a "means", but it is a means that in our time is connected with the fate of civilization. What is a modern person without technology? Let's imagine what will happen to us if all technical achievements disappear at once. It is from this point of view that technology has an independent, sometimes relatively independent existence. The origin of technology is inextricably linked with technology and its development.

technology (from the Greek *tekhnē* - art, craftsmanship, skill) was first introduced into science and discussed. In modern times, ideas about technical engineering have been formed. In the late 19th and early 20th centuries, technical sciences were created, and the philosophy of technology emerged as a special reflection of technology (from the Latin *reflexio*: to turn back - to reflect on one's own actions and laws, to understand, to know oneself). The philosophy of technology attracted special attention of thinkers in the middle of the 20th century, when a number of philosophers began to associate the crisis of our civilization and culture with technology. According to M. Heidegger, modern technology put man and nature at its service, turned them into "forms", as Heidegger

said, turned man into one of the types of raw materials, turned it into a process of processing.

Nature is destroyed, and people are degraded, because they become simple functional elements and material of a soulless machine. Heidegger does not believe in solving the problems created by technology, he calls on man only to understand that he has already become the source of technology and has turned nature into its supply. H. Skolimowski writes: "Technology has become for us such a universal and all-encompassing physical and spiritual support that even when we realize how it destroys our environment, our natural and human life, this is only our first reaction. It is to think of another technology that will fix all this." As if in answer, but with a different question, we hear from the German philosopher Karl Jaspers (1883-1969): "To believe that the task of overcoming technology can be accomplished at all with the help of technology means opening a new way to the problem. However, the question arises: how does a person who is subservient to technology, in turn, dominate?"

*Technology as a special engineering method of using natural forces and energy.* Although technology has always been based on the use of natural forces, it is only in modern times that nature, in particular, is viewed as an inexhaustible source of materials, forces, energy, and processes, described in science as natural phenomena. "Second" or "New" nature consists in serving man by creating technical structures. The main thing in their creation, as in ancient times, was no longer experience, although scientific knowledge was partially used there, but forces were considered special (technical creativity, engineering - processes and energy) conscious adaptation of nature to human needs and activities has been achieved.

If in antiquity and the Middle Ages, the creativity of technicians was understood as "craft", the implementation of artificial activity, the removal from the latent state of the eternal changes of various "fusions" (nature) inherent in the universe, modern engineering is also aimed at the entire complex of economic and environmental sciences, knowledge of the basics of system design, ergonomics and design, etc.

Until recently, technology was considered only as a certain aspect of the organization of production processes: from the individual activity of a worker, a craftsman, to the simple collective activity of a team, workshop, enterprise, to a complexly organized, strictly hierarchical system. Social activity - "Megamachines", according to Mumford, has a long historical development path from the labor armies of the pharaohs to modern industrial production. It was associated with methods of processing, manufacturing, changing the state, properties, and form of raw materials, materials, or semi-finished products.

In a narrow sense, technology includes production equipment, the time required for production, and the skills of the worker. All of this is recorded in a document called a "technological map".

In the last few decades, the situation began to change dramatically. The implementation of large national and international technical programs and projects in groups of industrialized countries has made it possible to realize that technology has been significantly updated as a reality. Researchers and engineers have found that technological processes, operations and principles, as well as science, technology, engineering, design, production conditions developed as stable forms in a certain culture



and country, on the one hand, and social and cultural processes that meet the requirements of time - on the other hand, means that there is a new relationship.

For example, the development and production of semiconductors, computer or rocket technology, as well as other complex technical systems, depended on the level of development of scientific research, engineering, and design achieved in a particular country. The nature of the organization of labor, the availability of necessary resources, the relationship between the priorities and goals of society, the quality of raw materials and products produced, market needs and characteristics, domestic and international conditions, and many other factors began to be called technology in a broad sense.

Technology is understood as a set of general characteristics, labor activities, which are characteristic of a certain socio-cultural formation, subject to very specific socially significant instructions. The creation of complex technical systems necessitates the emergence of systems engineering as a special type of modern engineering activity. In systems engineering, there is also the development of new knowledge and knowledge of a higher conceptual level related to the theory of structural changes in complex systems. In systems engineering, the full range of activities from the acquisition of scientific knowledge to its use in engineering practice is recognized. Systems engineering also includes all types of design, construction, commissioning, organization of the development of production technology, scientific and technical coordination, management, as well as its electronic support, chemical technologies, engineering and economic research, in a broad sense it is understood as the development of means of communication between man and machine.

By concentrating all their efforts to solve military, national, economic and other problems, the state and society achieve their goals by creating new technologies, complex technical systems, technologies that are often dangerous for the stability of natural processes. All this, knowingly or unknowingly, has led to various disastrous consequences, contributing to the emergence of a number of crises - ecological, anthropological, threatening the survival of man himself and others. Man has become a kind of "planetary scientific and technical god", but at the same time he has become a devil who destroys everything, threatens all life on Earth and, over time, disrupts the existing planetary mechanisms, possibly destroying everything. All this requires a socio-cultural and philosophical-methodological understanding: a dilemma may arise: is technology a blessing or, on the contrary, a lack of freedom, a danger, a threat to existence? "Technology is not evil," writes M. Heidegger, "but its essence is mysterious. The essence of technology as a mission to reveal the secret is danger." Danger requires caution and the use of technology in accordance with natural possibilities, new ideas emerge.

Informatization or digitalization of society as an irreversible stage of social development involves not only increasing the efficiency of all social production, but also changing the skills and professional activities of people, the education system, the balance of individual rights and freedoms, the entire way of life of society. Informatization or digitalization of society is a process that is not only interconnected, but also completely integrated with social, technological, economic, political and cultural mechanisms. It represents the process of gradually increasing the use of information technologies for production, transformation.





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