

BOOK REVIEW

Productive Forces of Design: The Basis of Post-Industrial Development

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In the first paragraph of the abstract, the author writes that the monograph presents a new economy, in which the company's economic activity and a set of relations are considered not only at the stages of production, distribution, exchange and consumption, but also at the design stage, which determines the post-industrial development. Consider the content of the concept of the new economy.

For the first time in world practice, the author introduced and developed the concept of the productive forces of computer design: a set of designers (designers, analysts, technologists) and computer-aided design tools. The productive forces of computer-aided design allow a) designing digital models of intermediate (parts, units, assemblies) and final products, b) analyzing and simulate structures, c) carrying out the technological preparation of production, d) designing composite materials with the required parameters of consumer functions.

The productive forces of computer-aided design allowed for the implementation of the goals of post-industrial development, which, according to the author, are the design and production of complex high-tech varieties of types of products that meet the country's strategic needs. Varieties differ either functionally (by the number of consumer functions), or parametrically (by the parameters of consumer functions), or by program control (without human participation) by satisfying needs. Thus, development is determined by the development and production of an assortment of complex high-tech types of products that have the required consumer properties.

The author associates the fulfillment of the objectives with two factors: the presence of the productive forces of computer-aided design and the design of the types of parts made of composite materials. Computerization of the design leads to an instantaneous exchange of information and the replacement of tons of design documentation with a single flash disk. Computerization makes it possible to fulfill the age-old dream of mankind: programmatic management of the satisfaction of needs (without the participation of man). The use of composites provides the ability to design varieties of products - intellectual property carriers, the required consumer properties and meet the required parameters.

The author introduced and substantiated the principles of the organization of the computer-aided design process (universalization, parallelism, optimization, innovation, continuity), which constitute the theoretical basis of the design organization.

The author has shown that the productive forces of computer-aided design have introduced fundamental changes to the model of the productive forces of K. Marx, whose tools of labor were universal CNC machines that caused the replacement of the working machine. The labor of the worker is replaced by the labor of the technology mediated by the program. The author has developed the organization of the production process of intermediate and simple products in time.

The international organization of design based on the principles of universalization, innovation, optimization leads to the international division of the designer's mental labor in stages and objects and the division in objects production capital of individual countries and regions into the design of stages and varieties and the production of intermediate products, carriers of intellectual labor property with the required consumer functions and the required parameters.

The international cooperation of design organizations and industries of individual countries and regions, based on the principles of parallelism and continuity leads to the formation of international design and production families producing parametric and functional parametric types of final products, carriers of intellectual labor property, satisfying functional and parametric requirements. Competition between families determines the development of industry in the world.

The production costs and product cost are determined. The distribution of incomes between business entities is considered. A mechanism has been developed for the development of the productive forces of design and production through the renewal of intellectual property in the process of designing and accumulating capital in the process of production and distribution of income.

From the foregoing it follows that the author has shown how the productive forces carry out the economic activity of society at the stages of design, production and distribution.

From the foregoing it follows that the author has shown what productive forces carry out economic activity at the stages of design, production and distribution. The foundation of the new economy is laid. The examples given in the monograph convincingly prove the theoretical propositions developed by the author. The examples given in the monograph convincingly prove the theoretical propositions developed by the author.

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