DESIGN AS PROFESSIONAL DESIGN AND ART ACTIVITY TYPE

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ABSTRACT

In the present work various interpretations of the term "design" are analyzed, the design as a type of professional design and art activity is considered, design creativity is analyzed.

Keywords: design, design activity, design and art activity, creativity, design process.

INTRODUCTION

The analysis of design creativity faces a peculiar crossing of thinking processes, creativity and design. In this regard there is an opportunity to track the relations between the specified categories, having presented them as the areas interpenetrating and integrating each other with the uniform type of procedures set by the nature of design creativity. With a research objective of the main directions of professional activity of the designer, and with that impact which is exerted by this activity on formation of design thinking to us it is necessary to get acquainted with some definitions of this term, to designate a role and the place of art design in structure of design.

In understanding of the modern consumer, the design most often corresponds to contents "beautifully" or "aesthetically", is never more rare - "conveniently" or "comfortably" and almost as it is "constructive" or "reliable". It follows from this that the typical consumer of design services rather superficially imagines a design essence, proceeding in the interpretations of this term from knowledge of life.

The big Soviet encyclopedia gives such definition: "Design (from English design - to project, draw, conceive, and also the project, the plan, the drawing) - the term designates a new kind of activity on design of objective world".

S. Mikhaylov and L. Kuleeva characterize design as design and art activities of the person for development of industrial products with high consumer and esthetic qualities, activities for development of the subject environment, comfortable for the person, - inhabited, production, welfare [6, with, 10].

Most of researchers of design adhere to rather close point of view. L. Bezmozdin considers design as "the creative activity directed to formation in industrial products of special characteristics thanks to which optimum compliance of the subject and ware environment to material and spiritual needs of the person" is provided [2].

Within our research we will connect design with the professional design activity directed to formation and transformation of the subject and spatial environment.

MAIN PART

E. Fandeeva isolates two subjects of design process which are in a subject - the subject relations:

- the consumer who first of all treats a design activity product from the point of view of its appearance;
- the designer who treats a design activity product as to design process [8].

Thus, the subject of design can be considered the person, both the designer, and the consumer, and subject to design - the subject and ware environment.

In our opinion, each of participants of design process is in dependence from each other, and it is possible to claim that they mutually influence both result of design activity, and process. As a result of such interaction at the designer the special type of thinking is formed.

One of criteria for evaluation of quality of a design product is appearance, visual and esthetic qualities of a subject. Most of consumers substitute the concept "design", concepts "beautifully", "aesthetically", "harmoniously". However with such concepts, first of all, muralists and masters of arts and crafts operate.

Certainly, the problem of search of an image, visual and esthetic qualities of the projected subject and spatial environment are very important for design process. It should be noted that most of theorists of design (V. Runge, Y. Manusevich, S. Mikhaylov, L. Kuleeva, E. Chernyshova [10, 11], A. Grigoriev, etc.) on the first place put functionality and utility of a subject.

Y. Goryunova considers that functional requirements establish compliance of a product to utilitarian needs of the person, i.e. abilities of a product to successfully perform all the main function that depends on technical perfection of a product and an opportunity effectively to carry out all necessary operations on its service and control of process of operation. Demands of universality of a product, i.e. performance by a product of additional functions in the set conditions of consumption are often made [4].

Function of performing design art is not limited only to its utilitarian properties. Certainly, function is "work which performs or is intended to carry out a product" [3]. However, this work can play various role: semantic, sign or valuable. In this context the interrelation of function and a form is extremely important. As a matter of fact, the sheaf "a form - function" is fundamental for understanding of an essence of design and result of design activity. This communication is many-sided and has many levels sometimes contradicting each other. It is possible to note the fact that the esthetic shape of a subject to design time is also functionally significant factor. The form in this case is understood as the external visually perceived qualities of an object: characteristics of planimetric perception, plastic ratio of proportions of parts of an object, influence of a design on appearance, etc.

As it was already mentioned above, one of criteria for evaluation of design is convenience, comfort. The answer to a question what the convenience essence consists in, the ergonomics give. V. Runge and Y. Manusevich designate ergonomics as "the scientific discipline which is in a complex studying functionality of the person in labor and household processes, revealing regularities of creation of optimum conditions of highly effective activity and high-performance work" [7, page 21]. The purpose of ergonomics call to increase in efficiency and quality of personal activity in the "person-subject-object of activity-medium" system (PSOAM) at simultaneous preservation of health of the person and creation of prerequisites for development of his personality. It is only worth adding to this definition that the ergonomics include questions of design of the equipment taking into account psychophysiological opportunities of the person.

Projecting a subject or Wednesday, the designer uses knowledge of ergonomics as a form-building element. At all individual distinctions people have a number of common features taking into account which they can be divided into various groups of consumers on age, physiological and occupation characteristics.

The tool executed without knowledge of anatomy and kinematics of the person will be inefficient, will create inconveniences, threat to health of the consumer. The inconvenient working chair creates discomfort, tiring a back and slowing down working process. The computer mouse or the keyboard which is not "basic" under needs of the expert causes irritation and desire to acquire new, more corresponding profession. The accounting of ergonomic aspects is the integral component of design process.

It is possible to carry to the ergonomics elements influencing efficiency of product use of design activity also such factors as illumination of space, impact of color on mentality of the consumer, intuitive recognition of sign system, etc. The ergonomics are directly connected with psychology of the consumer, and, in particular, - with perception psychology that connects ergonomics with appearance of a product. Characteristics of a form and plasticity, a proportion and scale, tsveto-impressive features, appeal and even weight of the offered product, in many respects depend on extent of "ergonomic intervention" in design process. Respectively, we can speak about a formula "function + convenience = beauty", as about one of esthetic components of design. The ergonomics directly exert impact on convenience, and respectively, and process of product use.

Process of operation of a product of design activity assumes use of system of stereotypes of thinking in relation to a subject with a certain function that attracts formation of intuitive and clear sign system. Moreover, the new products of consumption created on the basis of this sign system begin to form stereotypes of technology of use; and the products which are beyond these stereotypes cause a feeling of inconvenience, discomfort and "bad design".

As in our research we consider development of professional design thinking, we cannot ignore such party of design of a design product as the production technology or production. So, in A. Bazilevsky's research it is possible to meet determination of technology as "sets of methods of processing, production, change of a state, properties and a form of material in the course of production" [1, page 15]. A. Bazilevsky notes that it follows from this that the technology is one of specialized forms of development of activity. For a research of interrelation of morphology and technology in design it is especially important to note that the technology is, first of all, a certain process whose methods depend on the used basis - material. Properties of material exert direct impact on a product design that, in turn, influences appearance and consumer demand.

We can note that increase of a role of technology in the middle of the XIX century, during scientific and technical and industrial revolution, caused emergence of design as special kind of activity, separated design from other types of technical and art activity. Mass industrial production caused the new principles of design, changed design process, created new standards of design, production and consumption. There were new principles of a shaping which resulted from development by designers of new production technologies and their transfer to technological level of a shaping therefore, in our opinion, and the design thinking as a special type of creative, art and technical thinking began to be formed in the professional circle of designers.

Mechanical production made many household items available to those social groups of the population to which they were earlier inaccessible. Here one more aspect influencing design morphology - economic is shown. Creating the project of a certain product, the professional designer considers not only economic efficiency of production and sale of products, but also, and in not smaller degree, economic efficiency of consumption (operation) of design products [8].

When developing a product the designer tries to obtain decrease in expenses of the consumer in the course of use of the thing acquired by it. Increase in efficiency of consumption depends on reliability and durability of a product, on its non-failure operation in operation, and also on cut in expenditure of the consumer on the energy necessary for functioning of a product, on these or those types of expendables and the components replaced on a condition of operation which service life is limited.

The conveyor allowed to create the objects available even to low social groups of the population; broadened spheres of consumption, lowering the level of their esthetic qualities. Thus, the circle becomes isolated, and we come back to appearance of a design product as to important aspect of consumer demand again. Esthetic requirements assume compliance of a product to spiritual needs of society and the person,

to public and personal esthetic ideals, the developed style direction, fashion and tastes. They give to a product great consumer value. These properties are quite notable, but are difficult measurable.

- L. K. Tsareva [9] considers the whole complex of esthetic indicators:
- information expressiveness of a form is a possibility of a product to reflect in the sign form various social and esthetic representations, including compliance to style and fashion;
- rationality of a form extent of identification in the form of a product of the carried-out function, a material and constructive basis, manufacturing techniques, a way and convenience of its operation;
- integrity of composition is an organization of volume and spatial structure, harmony of its parts and details, constructibility, plasticity, color;
- perfection of production execution of a product and stability of goods is a quality of processing of visible surfaces of a form, purity of the carried-out joints, their compliance to a design plan, clearness of performance of inscriptions, logos, etc.

Except these criteria of quality of design products, A. K. Tsareva allocates also indicators of safety of consumption which characterize degree of security of the person from influence of dangerous and harmful factors, and the ecological indicators of quality defining impacts of a product on the environment in the course of its consumption.

Proceeding from it, we allocate the following complex of components of design:

- functional and utilitarian,
- visual and esthetic, figurative,
- ergonomic,
- technological, technical,
- economic,
- ecological.

In this research we will rely on the determination of design stated by professor Zhdanova N. S. according to whom "Design" is a specific field of activity on development of the subject and spatial environment, and also life situations for the purpose of giving to results of design of high consumer properties, esthetic qualities; optimization and harmonization of their interaction with the person and society [5]. Proceeding from this definition, the purpose of design is "inclusion of products of the equipment in the world of human culture by creation of cultural samples of industrial products and complexes of things, to promote formation of the harmonious subject environment for the person" [5]. Specifics of design are that its object is the part of the real world which is exposed to the analysis for the purpose of knowledge and the subsequent its transformation. That is not only the fragment of the environment, a subject or process of activity of the person, but also the idea can be exposed to judgment and transformation that finds reflection in conceptual design.

Depending on specifics of a form of specialization of design activity, a subject of design, the purposes and methods of the project work and its end results, it is possible to allocate several main types of design:

- Industrial (industrial) design creation of samples of the products of functional purpose made in the industrial ways. Results of industrial design provide production and household needs of the person. It is possible to carry two groups of products to objects of industrial design production including objects of mechanical engineering, machine-tool construction, vehicles, arms, etc., and also the group including consumer goods household appliances and household appliances.
- Graphic design creation of examples of design on the basis of graphics. In graphic design there is a visualization of information intended for mass distribution by means of polygraphy, cinema, television, and also graphic elements of the subject environment and products. It is possible to carry printing products, visual communications, advertising, packing, the corporate style and other objects displayed to objects of graphic design including, by means of computer graphics.
- Architectural design design of objects and constructions of mass appointment, ordinary residential, public and production buildings and open city spaces. The architectural design is continuation and the assignee of such ancient art form as architecture. Objects of architectural design are production buildings, mass dwellings and engineering constructions. The architectural design is considered the highest form of design of the environment.
- Environmental design formation of shape, style and figurative characteristics of an environmental object or system. The environmental design appeared on a joint of architecture, arts and crafts and scenography. It can include elements graphic, architectural, industrial and other types of design. Objects of environmental design is the urban environment, interiors, life situations and events, the interactive environment based on computer technologies.
- Design of a suit development of esthetic, style and functional and constructive solutions of industrial and man-made products of clothes, footwear and accessories. Objects of suit design are all variety of suits, its accessories and elements.

CONCLUSION

Thus, despite relative youth of design as professions, this kind of activity plays very important role in life of modern society. The design cannot be referred to the narrow field of activity of the person specializing only in a certain aspect of production of full range of services in the modern consumer market. Activity of the designer, and in particular the designer of the environment, includes art and scientific, design and materials research, social and economic and psikhologo-analytical activity. The design is on a joint of science, art and production, turns process of production into analytically predictable act of creation of the market of consumer services of modern "consumer society".

SUMMARY

Proceeding from the analysis of the works directed to a design research (Y. Nazarov, S. Mikhaylov, L. Kuleeva, V. Runge, Y. Manusevich, E. Chernyshova, A. Grigoriev, etc.) and professional design experience, we can assume that professional design activity consists of theoretical and practical activities. It is possible to refer scientific and technical, ergonomic, materials research knowledge to a theoretical part of design activity. A practical part includes such aspects as special art skills, possession of design technologies and tools, including information technologies. Each of these kinds of activity demands formation of a special type of thinking which result of integration, in our opinion, and is formation of design thinking.

REFERENCES

- [1] Bazilevsky, A. A. Tekhnology and shaping in design culture of design: influence of technology on morphology of industrial products: Arts PhD thesis / A.A. Bazilevsky. Moscow, 2006. 161 pages.
- [2] Bezmozdin, L.N. In the world of design / L.N. Bezmozdin. Tashkent, 1990. 313 pages.

- [3] Big Soviet Encyclopedia: 3rd prod. M.: Soviet encyclopedia, 1972. 9 Vol. 487 pages.
- [4] Goryunova, Y. A. Phenomena of design in culture of society: PhD Thesis / Y.A. Goryunova. Moscow, 2003. 136 pages.
- [5] Zhdanov, N. S. Methodological bases of development of subject and spatial systems / N. S. Zhdanova. Magnitogorsk: To the MAGICIAN, 2012. 182 pages.
- [6] Mikhaylov, S.M., Kuleeva, L.M. Design bases / S. M. Mikhaylov, L. M. Kuleeva; 2nd prod., repr. and edited M.: Union of Designers, 2002. 240 pages.
- [7] Runge, V.F., Manusevich, Y. P. Ergonomics in design of Wednesday: studies. grant / V. F. Runge, Y. P. Manusevich. M.: Arkhitektura-S, 2005. 328 pages.
- [8] Fandeeva, E. M. Disigh, its role and the place in culture: PhD Thesis / E.M. Fandeeva. M, 2005. 122 pages.
- [9] Tsareva, A. K. Suns in shop / A.K. Tsareva. Saransk, 1990. 112 pages.
- [10] Chernyshova, E.P. Onto-gnoseologic analysis of symbolical reality: PhD Thesis: 09.00.01 / E. P. Chernyshova. Magnitogorsk, 2002. 152 pages.
- [11] Chernyshova, E.P. Sociocultural value of design: philosophical and culturological analysis / E.P. Chernyshova//Architecture. Construction. Education. 2013. Page 92-96.