

History of Emergence and Development of Industrial Design

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Annotation: This article describes the history of the development of industrial design. Today, industrial design is a complex interdisciplinary design and artistic activity that combines technical and humanitarian knowledge, engineering and artistic thinking, and is aimed at forming an objective world on an industrial basis in a very wide “contact zone” with a person.

Keywords: design, industry, construction, aesthetics, model, stylization, functionality, consumer, conceptuality.

Industrial design, which is a branch of design, is a field of artistic and technical activity, the purpose of which is to determine the formal qualities of industrially produced products, that is, their structural and functional characteristics.

Industrial design is the main group in the field of application of designer labor (tools and mechanisms), which includes machine-building products, vehicles; household goods - consumer goods (dishes, household appliances, audio and video equipment, electric units, mechanisms, children's toys, furniture). They are the most common field of design activity today.

The term "Industrial Design" originated with the German architect Walter Gropius, who founded the revolutionary Bauhaus school of industrial design in Weimar, Germany, in 1919 (Figure 1).



Figure 1. Bauhaus school.

The first industrial design association was founded in 1849 in Sweden. Then similar associations began to appear in Germany, Austria, Norway, Denmark, and Finland. Nineteenth-century designers sought to create new, practical forms for machines and manufactured goods.

In the 60s of the 18th century, national exhibitions of trade and production began to be organized. The first such exhibitions were held in London in 1761-1767. In Paris (1763), Dresden (1765), Berlin (1786), Munich (1788), St. Petersburg (1828) and others.

In the organization of the interiors of industrial buildings, the production feature was determined first of all. The interior structure is determined depending on the environment, and its constructive solution is selected. In the

process of organizing the industrial interior, special attention is paid to the workplace of the worker: to the range of colors in its lighting, to the range of production tools. The workplace should be comfortable in all respects and provided with the most optimal conditions for production work. In the course of its development, the design gradually began to appear on the streets of the city. First in the form of cars and kiosks, later in commercial vehicles and phone boxes (separate) rooms.

The rapid development of industrial production with pictures became important for the emergence and development of the design of world industrial exhibitions. At these exhibitions, the products and works of art created on the basis of the technique were brought to the attention of many people as works of art.

Designers tried to modernize products, improve their appearance and minimize production costs. At that time, the main attention in the industry began to be focused on the production of consumer goods. The greatest demand of that time was the need to produce goods that sell quickly and bring good profits.

By the early 1920s alone, the United States was at a very high technological level. Serial products made from new cost-effective materials were in great demand among the broad strata of the mass consumer. Along with advertising and packaging, the appearance of the manufactured product has become increasingly important to meet consumer demand. In contrast to Europe, where structural reforms were always primarily considered from a social point of view, in the United States the market factor was in the first place. It was at the end of the 1920s that the large-scale expansion of production capacity, which did not match the purchasing power of the population, led to the global crisis.

In order to actually support the economy, the US government has tried to increase the incentive to buy by design, to encourage the consumer as much as possible. During the crisis, manufacturers began to pay more and more attention to product design:

- primarily as a means of dealing with their direct competitors,
- later as a way to restore the economy.

In search of a formal style, American industrial designers came up with a streamlined shape that meant speed. Along the way, Raymond Lowe's streamlined design for the Gestetner copier was a huge success, and American designers followed suit, designing household items using the streamlined style. The theory of simplified form, based on the use of round, smooth-surfaced forms, often with a drop shape, appeared and became widespread, especially in transport technologies: shipbuilding, air transport, automobile industry.

By the 1930s, simplified forms were used by designers for decorative purposes in all areas of consumption, which helped manufacturers to increase the competitiveness of products, and the annual renewal of the appearance of products helped to increase the aesthetic life of products, as well as sales. .

The types of design developed in the 1950s and 1960s and their underlying theories greatly influenced German design. In recent years, Oliy Shaping in Ulm has presented many designer products based on these theories, especially for the training of designers. On the one hand, this school is a continuation of the Bauhaus ideas and practices, and on the other hand, it was a model united by many centers of design education in the world. This school was founded in 1951 by Max Bill. In his vision, Max Bill followed the concept of clean, functional design. The shapes are more rigid, the decors are partly less original, the product is mainly functional, and the shapes mostly refer to right angles.

In France, the field of design has a stable tradition in the development of artistic design ideas, and in creating a harmonious object environment with the help of architecture and design, in comprehensively rethinking the world of things, the school of Le Corbuse played a huge role.

Industrial design is based on the combination of art and technology. Its mission is to create an attractive appearance for various industrial products, from simple items and furniture to all types of vehicles (cars, trains and planes).

Industrial design consists of three main pillars: technology, art and marketing. The scope of industrial design is wide ranging from home appliances to high-tech scientific products. The main task of industrial design is to increase the ergonomics and aesthetics of work equipment, household appliances, complex technical mechanisms, various types of transport.

In the development of industrial design, technological issues such as labor cost in product production, reduction of mechanical elements, multitasking of individual product elements, and simplification of product production are solved. As a creative process of product creation, design is based on materials and technologies.

The material chosen as a means of conveying design ideas must have certain characteristics and meet a number of requirements:

- functional;
- technological;
- aesthetic;
- ecological.

Along with furniture, children's toys are especially popular in the designer's work. The toy must be comfortable and safe for the child to play with, it must meet strict hygienic requirements, it must be industrially produced, that is, it must be cheap, it must not cause negative reactions in the child and others are also taken into account.

There are two interrelated concepts in industrial design: form factor and style.

Priorities for industrial design can arise precisely in connection with architecture and interior design.

As a general conclusion, it should be noted that the origin of industrial design is partly connected with architecture. But it differs in that architecture focuses on space, while industrial design focuses only on objects.

Among the main tasks of industrial design:

- to understand what the external appearance of the object includes;
- understanding how functional the thing is;
- it is extremely important to determine the features of its structure.

An industrial designer sometimes has to combine different skills, first of all, the capabilities of an engineer-designer and an artist.

It is well known that the need for industrial design entered the field of design with the advent of mechanical engineering. At the time, some people believed that the quality of products made by the flow method on machines was inferior to that of professional craftsmen. There were also fears that handmade items would lose their originality and destroy the owner's sense of harmony. Therefore, manufacturers began to try to add decorative elements to their products. Today, almost every industry has a wide range of different products.

In addition, according to psychologists, it is necessary to take into account that the large number of choices requires a lot of stress from a person, including emotional stress. After all, the main task of today's design industry is to compare and analyze many components of the subject, various features.

Today, when designing industrial products, the designer deals with such concepts as fashion or the lifestyle of potential consumers of the product. Also, in the design, the issues of sale of household goods come to the fore, as a result, the design often has a clear commercial character. However, in the design of objects, industrial use (agricultural equipment, machine tools) is still dominated by technical requirements: ergonomics, productivity, economy and environmental safety. These factors cannot be ignored, because the production environment formed with the participation of these objects should be comfortable for people. Thus, the uniqueness of modern industrial design is closely related to the nature of the created products.

Industrial design, together with its ergonomics, also requires analyzing the consumer quality of the created product and dealing with marketing issues. Based on the analysis process and results, the usability of the created product will be reconsidered. This process continues after the initial batch of the item has been released. In-depth marketing analysis at all stages of design is a unique feature of design. One of the characteristics of modern design is the ability to adapt to situations, quick actions such as making changes to forms based on immediate consumer requirements. In addition, design has scientific design methods and special knowledge that can be used to solve problems in all situations. Among them, ergonomics, that is, the science that studies the psychophysiological and functional uniqueness of a person, occupies the main place.

Designers working in this field should have the knowledge of graphic designer, designer, and technological engineer. Only such accumulated knowledge allows us to embody creative ideas and create interesting things, original products without compromising their functionality. In the art design process, the designer develops a basic idea, develops a concept, and then works with sketches to present a product layout.

Today, industrial design is widely used in various industries, from woodworking to metallurgy. In general, a wide range of services provided by professional industrial designers can range from designing home appliances to creating car concepts. The main task at the current stage of the development of industrial design is to create a memorable and at the same time ergonomic appearance of the product while maintaining its technological and functional qualities.

References:

1. Industrial design: design and production. Ulrich K. Moscow-2007.
2. N.V. Bryzgov., E.V. Zherdev. Promyshlennyy design: history, modernity, futurology. Uchobnoe posobie. — M.: Izdatelstvo "MGXPA im. S.G. Stroganova» MOSCOW, 2015.
3. History and theory of design. Lyubov Smirnova, 2014
4. Baudriyar J. System Veshchey. — M.: Izdatelstvo "RUDOMINO" MOSCOW, 2001.
5. Султанова М. Landshaft loyihasini yaratishda landshaft dizayni va bino uyg'unligi //Общество и инновации. – 2021. – Т. 2. – №. 12/S. – С. 49-54.
6. Mannopova N. et al. Teaching Methods And Innovative Process In The Field Of Design //Turkish Online Journal of Qualitative Inquiry. – 2021. – Т. 12. – №. 4.
7. Muhayyo S., Ruzibayevich R. F. DESIGN SOLUTIONS AND DEVELOPMENT CHRONOLOGY IN THE CONSTRUCTION OF BUSINESS CENTERS //Emergent: Journal of Educational Discoveries and Lifelong Learning. – 2021. – Т. 2. – №. 11. – С. 1-8.
8. kizi Sultanova M. F. The role of tour bases in the development of tourism in Uzbekistan //International Scientific and Current Research Conferences. – 2021. – С. 1-5.

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9. Mannopova N. R., Saidyusupova M. F. Art schools at the composition and color solutions //Scientific progress. – 2021. – Т. 2. – №. 6. – С. 1919-1921.
 10. Маннопова Н. и др. Influence of “thematic parks” to the development of tourism in Uzbekistan //Общество и инновации. – 2021. – Т. 2. – №. 12/S. – С. 122-131.
 11. kizi Salomova F. L., Matniyazov Z. E., Mannopova N. R. Methods of Using Ethnographic Elements in Furniture Design //EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION. – 2022. – Т. 2. – №. 5. – С. 166-170.

