

STYLIZATION IN INDUSTRIAL DESIGN

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Abstract. *Stylization is one of the basic techniques involved in the creation of forms in design, which helps designers to achieve professional goals like beauty and applicability, that is why it is reasonable to be analyzed. The aim of this article is to describe the essence of stylization and to explain its importance in the process of designing a product.*

Keywords: *development, generalization, form, simplification, aesthetics, impression*

Introduction

Any object of the environment can be redone if there is imagination and the ability to notice the characteristics of this object. Careful study of nature, constant analysis and synthesis of the properties and features of the depicted objects serve as the necessary basis on which the human imagination develops. According to S.L. Rubinstein, "imagination is inextricably linked with our ability to change the world, effectively transform reality and create something new" [1,2]. Everything that surrounds us now is the embodiment of design thought. Furniture, dishes, and even the computer on which this article is written. Design is rapidly developing, getting into more spheres of human life.

The object created by the designer, on the one hand, must meet aesthetic requirements, and on the other hand, provide the required functions.

The development of design

During the Renaissance, a car could be designed by a person who was both an engineer and a mechanic, and an artist and an inventor in one person. A characteristic feature of that period was the inextricable connection of technical creativity with artistic creativity, which determined the peculiarities of the formation of the entire subject environment of that era.

In the XVII-XVIII centuries, at the time of the birth of scientific and technological progress, man learned to facilitate his work; he figured out how to produce a larger quantity of goods in a smaller unit of time. Pure art, separated from technology, began to be considered a kind of activity that rose above everyday life and was governed by "divine" inspiration, while technical activity, engineering began to be regarded as something ordinary, utilitarian [3].

Today's society has finally separated art and technology. If an artist could design flying machines in the time of Leonardo da Vinci, today it is difficult to imagine an artist creating modern aircraft. Now it is the work of a whole team of people representing completely different fields.

Design Goals

The famous phrase of K. S. Stanislavsky: "What is inconvenient, in most cases it is ugly" [4] leads us to the conclusion that the category of beauty (the main category of aesthetics) affects the quality of the functionality of a technical object! And so, the main requirement for each created object is an organic combination of beauty and benefit, in which benefit comprehends beauty, and beauty spiritualizes benefit.

The designer, introducing emotionality and controlling perception, is the connecting unit that links engineering and artistic activities. The measure of the designer's involvement in the engineering process is determined by the level of complexity of the object. However, by applying innovative technologies and materials, creating new forms of objects and environmental compositions, design

always solves the problem of harmonization and aestheticization. The main task of the engineer and designer is to convey to the consumer the meaning of the product, expressed in form, design and a clearly understood control system. Sometimes the designer sacrifices technology to create unique samples (for example, Rene Lalique perfume bottles (Fig. 1)). " [5-6].



Figure 1. Rene Lalique perfume bottles

Stylization

Stylization as one of the artistic methods (techniques) is the most important way of reflecting the objects of reality in the process of creative processing, modification of these objects with the greatest artistic generalization (Fig. 2)

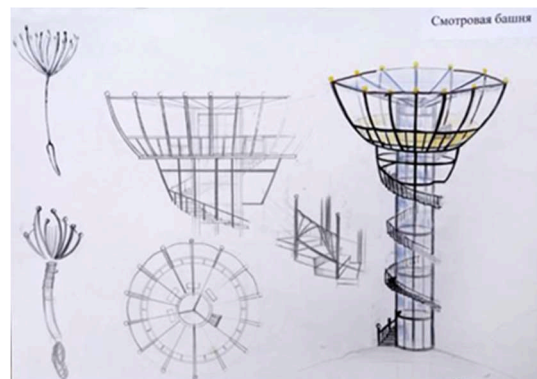


Figure 2. Stylization of natural forms

Here are the definitions of this term given in the dictionary:

Stylization- 1. The designer's conscious use of signs of a particular style when designing products (often used in styling)

-2. direct transfer of the most obvious visual signs of a cultural sample to the thing being designed, most often in the field of its decor (plastic, color graphic, color-textured, textural);

-3. creating a conditional decorative form by imitating the external forms of nature or characteristic objects. The main operation of stylization is the formalization of plastic motifs, their simplification or complication to achieve a common semantic or decorative accent [7].

Thus, the main operation of stylization is simplification, generalization of volumetric-plastic, coloristic, graphic motifs, their organization to achieve the desired semantic and decorative impression, stylistic expressiveness.

Researcher of primitive art styles V.B. Mirimanov, analyzing figurative rock carvings, identifies two types of geometrization of images: curvilinear (bend) and rectilinear (break).

For these types of stylizations, the following characteristics are inherent

- the first type is softness, curvilinearity, bending, plasticity (bio morphic);
- the second type is rigidity, straightness, fracture, "chopping" (crystallomorphism).

In industrial design, two types of stylizations have manifested themselves in the design of, for example, brand names and logos (Fig. 3)

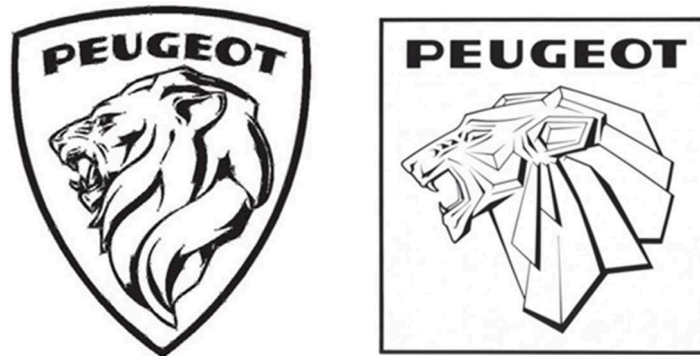

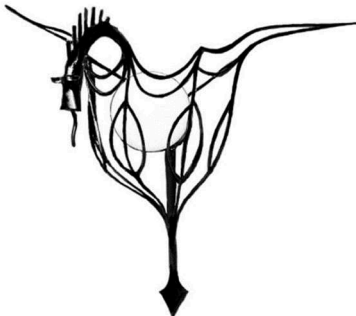



Figure 3. An example of the lion stylization in the Peugeot logo: on the left – biomorphic (1960); on the right - crystallomorphic (1965)

Knowledge of the peculiarities of material processing is a complex of various information about the system of socio-cultural, psychological, formative, technological, aesthetic and some other factors that directly affect the process of stylization. Therefore, each element of the stylized form, each bend, line, proportion, deformation, spatial or color-texture characteristics reflect to some extent the impact of all these factors, their activity and significance in the stylization of a given object of the surrounding reality. In estimating the quality of design, visual perception assessment methods are used, which make it possible to appreciate the levels of visual comfort, since the formation of emotionally and visually comfortable environments is the main purpose of design. In industrial design, the type of stylization is influenced by the manufacturing technology of the object. As an example, various metal processing technologies can be cited: casting involves soft styling, laser cutting — rigid. Thus, the process of stylization in design is influenced by functional, technical, and aesthetic factors. Functional are related to the purpose of the thing, the specifics of its operation; technological are expressed in technologies, materials, and technical equipment; aesthetic are related to the artistic expressiveness of design objects. Stylization involves the transformation of an object and can be studied in quantitative and qualitative units. The quantitative characteristic is expressed in relative units of deformation of the real sample and its stylized version. The measure of stylization in relative coefficients obtained based on the study of visual perception processes is presented in Tab. 1, which made it possible to distinguish the following levels of image stylization: figurative, stylized, and abstract.

Levels of image stylization

Stylized figures		
		
0-1 Realistic art	2-3 Industrial object	4-5 Graphic design
relative diffraction coefficient		

The deformation coefficient increases with decreasing recognition of the sample. The measurement of deformation coefficients using the TRA (Temps de Retard de l'attention) program developed by the authors made it possible to measure the deformation of the sample in relative units and determine (at the level of visual perception assessment) the following:

- For images of realistic art (artistic images), the deformation coefficient varies from zero to one conventional unit. These images are extremely close to the real sample and are not deformed.
- For the design of industrial objects (subject design), the deformation coefficient varies from two to three conventional units. The image is recognizable, the visual features of the sample are expressed and highlighted in it, there are no minor insignificant characteristics.
- Graphic design (graphic design, logo design, signs) is characterized by extreme minimalism. At this level, the maximum deformation coefficient of the sample is observed - from four to five conventional units [4].

Conclusions

In the process of cognition of the surrounding reality, a person not only contemplates, but also changes the world, transforms it with the help of imagination, therefore, the main function of imagination is the transformation of the surrounding reality. One of the methods that helps designers transform environmental objects is stylization. This principle is understood as an operation of generalization, simplification and emphasizing the features of the shape of objects using a number of conditional techniques. "generalization" is the determining factor in the course of stylization.

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