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U FINANSIRANJU ČASOPISA UČESTVOVALO
MINISTARSTVO NAUKE, TEHNOLOŠKOG RAZVOJA
I INOVACIJA REPUBLIKE SRBIJE



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THE AESTHETIC FACTOR AS A FORMATIVE ELEMENT IN INDUSTRIAL DESIGN, FROM THE ASPECT OF INDUSTRIAL AESTHETICS IN THE FASHION INDUSTRY

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Abstract: *Formative elements of industrial design, i.e. design factors, represent components of its content, where together with the form of the design, they form an indivisible whole. Besides the aesthetic component, the other formative elements are not visually precisely defined, therefore an analysis is needed to determine their value. In the modern science and theory of industrial design, new knowledge and changes are constantly incorporated into the essence, in the value and in the meaning of certain formative elements of industrial design, where the interdisciplinary approach in creative activity is emphasized. With the development of mass production and consumption, the satisfaction of aesthetic factors in industrial design has an increasing importance. Also, with the development of the social standard and the general culture, the need for the design to be more and more attractive automatically opened up. The aesthetic characteristics that are most acceptable to people are: Compliance of the form, harmony, proportions of the dimensions, the unity of the product, the choice of color etc. Styling – Styling indicates the way in which something is made, designed or executed. Styling is a method and direction in design, in which designers impose inappropriate shapes on certain products, thus, in an unnatural or artificial way, they try to only seemingly change the shape of the objects, in order to get the impression that it is a new product. Fashion is a collective social phenomenon, but when it comes to industrial design, it is short-lived. It has a growing importance for certain categories in industrial design and is used as a tool for successful design. The influence and significance of fashion in industrial design cannot be neglected and has a decisive influence on the placement, and therefore on the existence of producers.*

Keywords: Industrial design, Fashion, Clothing, Styling, Industrial Aesthetic, Factors of industrial design.

ESTETSKI FAKTOR KAO FORMATIVNI ELEMENT U INDUSTRIJSKOM DIZAJNU, SA ASPEKTA INDUSTRIJSKE ESTETIKE U MODNOJ INDUSTRIJI

Apstrakt: *Formativni elementi industrijskog dizajna, odnosno faktori dizajna, predstavljaju komponente njegovog sadržaja, pri čemu zajedno sa formom dizajna čine nedeljivu celinu. Osim estetske komponente, ostali formativni elementi nisu vizuelno precizno definisani, pa je potrebna analiza da bi se utvrdila njihova vrednost. Sa razvojem masovne proizvodnje i potrošnje, sve veći značaj ima zadovoljenje estetskih faktora u industrijskom dizajnu. Takođe, sa razvojem društvenog standarda i opšte kulture, automatski se otvarala potreba da dizajn bude sve atraktivniji. Estetske karakteristike koje su ljudima najprihvatljivije su: Usklađenost forme, har-*

monija, proporcije dimenzija, jedinstvo proizvoda, izbor boje i sl. *Stajling* – *Styling* označava način na koji je nešto napravljeno, dizajnirano ili izvedeno. *Stajling* je metoda i pravac u dizajnu, u kojem dizajneri nameću neodgovarajuće oblike određenim proizvodima, pa na neprirodan ili veštački način pokušavaju da samo prividno promene oblik predmeta, kako bi stekli utisak da se radi o novom proizvodu. Moda je kolektivna društvena pojava, ali kada je u pitanju industrijski dizajn, ona je kratkog veka. Ima sve veći značaj za određene kategorije u industrijskom dizajnu i koristi se kao alat za uspešan dizajn. Uticaj i značaj mode u industrijskom dizajnu, ne može se zanemariti i presudno utiče na plasman proizvoda, a samim tim i na postojanje proizvođača.

Ključne reči: Industrijski dizajn, Moda, Odevnje, Stajling, Industrijska Estetika, Faktori industrijskog dizajna.

1. INTRODUCTION

Formative elements of industrial design, i.e. design factors, represent components of its content, where together with the form of the design, they form an indivisible whole. Besides the aesthetic component, the other formative elements are not visually precisely defined, therefore an analysis is needed to determine their value.

In the modern science and theory of industrial design, new knowledge and changes are constantly incorporated into the essence, in the value and in the meaning of certain formative elements of industrial design, where the interdisciplinary approach in creative activity is emphasized.

Formative elements simultaneously represent components that include the totality of the subject, such as form and content, which actually condition the final form of the subject.

Every created work in industrial design can be analyzed in terms of its form and content, related to today's time, that is, to industrial civilization, to mass production and consumption. At the same time, the comparative opinions of scientists and aestheticians, who deal with the content of the created work, should be taken into consideration.

In the modern theory of industrial design, different classifications and different terms are applied for its formative elements, and changes and development will always lead to a certain progress, to penetration into the essence of modern design, or to an even more modern quality.

In that sense, the formative elements of industrial design can be observed within the following classification of four essential formative elements in industrial design, and they are: 1. Function 2. Aesthetic factor 3. Human factor 4. Economic factor.

2. AESTHETIC FACTOR

With the development of mass production and consumption, the satisfaction of aesthetic factors in

industrial design has an increasing importance. Also, with the development of the social standard and the general culture, the need for the design to be more and more attractive automatically opened up. The aesthetic characteristics that are most acceptable to people are: Compliance of the form, harmony, proportions of the dimensions, the unity of the product, the choice of color and so on.

All these features, aligned with each other, create a positive impression on the consumer. All these elements of aesthetic appeal, should be confirmed not only by individual opinions and attitudes, but also by a larger group of users, which means that people possess similar abilities to observe the aesthetic values of the product.

Aesthetics as a philosophical discipline perceives and analyzes the beautiful in the created work. Aesthetics, by way of analysis investigates the basic prerequisites and criteria of artistic assessment, then analyzes the creation, the experience, as well as the general meaning, value and essence of a work. Although the scientific approach to aesthetic appreciation can be subjective, there is the fact that each person approaches with their own different experiences and values [1].

The assessment of aesthetic values as an individual judgement, conditioned the realization of certain scientific and systematic researches, where individuals declared for certain examples. In doing so, certain analyzes are obtained, with a precise structure of aesthetic indicators, whose data are applied in further research, as well as in practice, such as: Increase in productivity, quality of products, increase in placement, etc.

The term nice or beautiful, they always had a relative meaning. When determining and forming an opinion about a certain form, for a final judgment about its aesthetic quality, conscious motives that depend on the general culture of an individual or society act on a person, but unconscious, i.e. intuitive motives may also appear during its interpretation. Conscious motives are formed when, after comparing or weigh-

ing several different objects, but also after some reasonable assessment and reflection, we finally draw conclusions about the beauty of a form or object.

In this way, a certain taste and feeling for the properties and values of a certain object is formed. Unconscious motives appear when one acts intuitively, without thinking, based on immediate conclusions. Each era had its own established style for the beauty and beauty of certain objects, both in design and in other areas of creativity [2].

This attitude towards design and art, was present until the advent of the machine and the beginning of industrial civilization, when the taste that dominated until then moved away from the ruling class and approached the taste of the wider society. From the moment when the products lost their unique character, i.e. they started to be produced industrially, then the ruling class gave up and gave up the privilege of determining and dictating taste, as well as influencing the formation of aesthetic concepts in art and design.

The aesthetic factor as a formative element of design can be expressed best if presented as a concept of unity.

In the Renaissance period, it is emphasized that beauty represents the harmony of all parts in a work of art, which mutually constitute the unity. With that, the work of art or a designed object will be complete and they will contain the necessary elements that we have already mentioned: Harmony, unity, balance, harmony, color, etc., but now they will also have functionality as an element. In that way, the designed object itself will represent something more, i.e. it will function as a whole [3].

But it should be emphasized that the aesthetic factor and aesthetics in industrial design, have a different approach in relation to other areas of creativity, in a different sense. Namely, the aesthetic concept in design is limited by visual means such as: touch, sound, etc., and they are considered as a strictly intellectual process, which dominates in relation to the artistic characteristics of the object. So, all the elements with the help of which the aesthetic experience of the object is acquired by the person (color, choice of materials, etc.), are determined in a logical way. Such determination is caused by social, technical, intellectual and other factors.

3. INDUSTRIAL AESTHETICS

In parallel with the new understandings of functionalism, which were expressed in the Bauhaus movement after the First World War, design is gaining a greater scientific basis and in terms of aesthetics. In

France around 1905, the esthetician Paul Souriau who was a French philosopher known for his works on invention theory and aesthetics, represented the theory of rational beauty, which represents a kind of compromise in the perception between the beautiful and the functional in design. So, studying the aesthetic content of industrial design, a new science of beauty was developed, called industrial aesthetics.



Figure 1: Paul Souriau (1852–1926) studied at the École Normale Supérieure (France), then defended a thesis entitled “Theory of Invention” in 1881. In this thesis, he argues that inventions are not the result of a rigorous scientific process but rather arise as inevitable deterministic consequences of the inventor’s environment.

The French esthetician Jacques Viénot was one of the great figures of the industrial aesthetics movement and in 1951, he was the founder of the Institute of Industrial Aesthetics. Viénot set the basic framework of industrial aesthetics. He was engaged in designing furniture, that is, he was engaged in the meaning of color in the working environment. In doing so, he advocated for the functional warm-green color, when it is applied to the machine. It was confirmed that, this warm-green color affected productivity and influenced the better mood of the workers, as well as the upbringing and formation of the taste of the workers themselves. But it was established that such a color had a pleasant effect on consumers [4].

In fact, in the field of industry, certain new aesthetic rules, canons and legalities are created, which should be observed, in order to obtain an aesthetically valuable industrial product.

Such canons or laws in industrial aesthetics are:

- The law of economy
- Law of style
- Law of unity and harmony



Figure 2: By the time Jacques Viénot became the figure head of Industrial Aesthetics after the Second World War, he had already acquired substantial experience in the decorative arts field. During his time as head of *DIM* (6), a leading decoration company in Paris during the 1920s, Jacques Viénot met many artists and personalities from various countries.

- Law of harmony between applicability and appearance
- Law of evolution and relativity
- Law of taste - feeling of pleasure
- Law of complete satisfaction
- Commerciality Act
- Law of honesty - morality
- Integrated Arts Act.

The law of economy supports the thesis that, with minimal investments of material resources in the work, and with invested labor, the maximum effect can be achieved. In the designer's work, this condition is the most difficult to satisfy, because it can easily lead to a disturbance in the balance or harmony between the useful and the aesthetic on the part of the designer.

The law of style, in fact, should contribute to that, the design can express a certain style and a certain "line of time" in which that design occurs. This means aesthetics and form, which do not last forever, which change under certain influences. Therefore, a design should be introduced that will correspond to the understandings of the time and the environment in which that design was created [5].

The law of unity and harmony indicates the harmony of the object in its environment, whereby all design elements are connected in a certain whole, which achieves an appropriate plastic effect of the form.

The law of harmony between applicability and appearance should be expressed in such a way that,

in an object and in its form, aesthetic and practical requirements should be satisfied in an equal way, including: Function-utility-usability (applicability).

The law of evolution and relativity refers to industrial aesthetics and design that do not represent and do not give the final result and appearance of the object. Here we mean the constant changes that should be present in the development of technology, in the taste and understanding of design, in the habits and needs of people in terms of design, but also in the needs of society as a whole. The aesthetic value should be the result and expression of the overall progress and development, of all the changes that occur during the evolution of science, then of technology, but also of society as a whole [6].

The law of taste is such a canon where, industrial aesthetics should explain, to what extent it is necessary, all the necessary design elements to be expressed in the design, so that they can correspond to the established taste, that is, to the established aesthetic understandings. The feeling of satisfaction that it is felt by a person from an object, represents the achievement of a certain value. That value can be reached in: The choice of material, in the choice of details, the choice of color and the achievement of a complete look. Most often, such values can be perceived by someone who has already formed a taste for the beautiful, or rather for the aesthetically valuable [7].

The law of complete satisfaction, is experienced when the object works together with its function and other qualities. In this way, the object expresses likability and acts on all human senses, that is, hearing, touch, smell, etc.

Law of commerciality - the commercial law in design should be understood when the object in itself should have values, then pass well on the market, that is, to have an economic justification.

The law of honesty (morality) is a rule that applies to work, that is, to designing as an honest act and creative work, i.e. honesty in the shaping process, starting from the choice of the material, and all the way to the finished product.

The Law on Integrated Arts implies industrial aesthetics, that is, artistic content combined with the structure of the product.

Industrial aesthetics as a science, was established in Europe, specifically in France, Belgium, Italy, where emphasis is placed on aesthetics and design. The process itself requires a scientific approach and the use of knowledge from several scientific disciplines, so

later as a phenomenon, industrial aesthetics was introduced as a branch of science itself.

4. STYLING AND FASHION

At the time of the World Economic Crisis in the USA in 1930, a new variant of rational aesthetics and industrial design as a whole appeared, which was called styling, whose influences have been retained to this day.

Styling – Styling indicates the way in which something is made, designed or executed.

Styling is a method and direction in design, in which designers impose inappropriate shapes on certain products, thus, in an unnatural or artificial way, they try to only seemingly change the shape of the objects, in order to get the impression that it is a new product.

However, the designers did it all smartly, and this was done in addition to more successful placement and higher profit. The styling was criticized by followers of the Bauhaus school, who advocated pure principles in industrial design and the application of human components in design. In one period, by the Bauhaus school, only strictly commercial motives of styling were accepted to a certain extent. The styling contains shapes that can be applied to a wide range of designed objects, starting from a simple lighter to a car. At the same time, wrong information about the product, its quality and its true values is placed intentionally or unintentionally. By doing so, in a way, that object is given a certain elevation and edge, and that edge is interesting to those who like false glitter. This approach to design is theoretically and historically advocated by merchants and corporations, which achieve high profits, but have a strong harmful influence on the formation of the true taste and true culture of the wider strata of the population [8].

Fashion is a collective social phenomenon, but when it comes to industrial design, it is short-lived. It has a growing importance for certain categories in industrial design and is used as a tool for successful design. The influence and significance of fashion in industrial design cannot be neglected and has a decisive influence on the placement, and therefore on the existence of producers. Fashion and the needs of fashion are the most dominant factor in the areas of the textile industry. Namely, according to the fashion trends in the textile industry, the quality is usually determined in terms of how much that artistic - aesthetic aspect will be integrated into the fashion trends in other areas, such as: Designing furniture, designing machines, designing of household equip-

ment, designing ceramic products, ornaments and the like. Many economic, sociological and psychological factors, in recent years, have influenced fashion as an aesthetic content of design, to appear in those areas for which it was almost incomprehensible to apply fashion. Fashion plays an increasingly significant role in industrial design, which is evidenced by the inhomogeneity of product users in society. Specifically, certain layers of society that are distinguished by their own qualities, such as higher social status, level of education, various cultural layers with taste, they impose their taste on the rest, and thus the rest begin to imitate the members of such social layers. Fashion as a phenomenon in society is accepted especially by the so-called superior class, which tends to emphasize the differences in relation to other layers of citizens, that is, fashion appears and moves starting from the upper layers towards the lower levels in society. Industrial design therefore accepts fashion as an element of aesthetic content and applies it to the widest range of consumers [9].



Figure 3: The styling contains shapes that can be applied to a wide range of designed objects, starting from a simple lighter to a car. At the same time, wrong information about the product, its quality and its true values is placed intentionally or unintentionally.

The concept of originality is necessary to contain every creative work. Originality usually implies an aesthetic quality, which is in a certain way new and previously unknown. A new design, in order to be noticed in an increasingly crowded market, must stand out from the overall cluttered mass of products. There is a tendency to create an apparent originality, when only the exterior of a product changes, while its content remains the same. In such cases, one cannot talk about something new and original [10]. The term original is often associated with the term individual-

ity, where the designer brings a part of himself, he creatively translates his view of things, brings talent and way of expression. There is a tendency to create an apparent originality, when only the exterior of a product changes, while its content remains the same. In such cases, one cannot talk about something new and original. The term original is often associated with the term individuality, where the designer brings a part of himself, he creatively translates his view of things, brings talent and way of expression. There is a tendency to create an apparent originality, when only the exterior of a product changes, while its content remains the same. In such cases, one cannot talk about something new and original. The term original is often associated with the term individuality, where the designer brings a part of himself, he creatively translates his view of things, brings talent and way of expression. When we talk about industrial design, individuality must be subordinated to rationally defined and objective requirements by the production process and the market, and the end result is teamwork. Original content in industrial design must be understandable and clear to a wider range of users and it should not create wrong conclusions about the basic features and qualities of the products. Originality in industrial design, as one of the elements of aesthetic quality, should be measured. It should be functionally integrated into the other formative elements of the design, in order to cause positive effects, to respond to social conditions, needs and opportunities of consumers [11].

Aesthetics is a feature of the design, as part of its structure, not just a manual intervention on the exterior. Aesthetics is the result of a conscious design process, with the intention of devising a new solution. Such a solution results from multiple interrelationships and characteristics between the context and the form, more specifically between its exact intended determination and meaning, in correlation with its appearance [12].

There are three relationships between context and form:

1. Direct relationship between context and form

When we talk about the direct relationship between the context and the final form, which represents pure creation, i.e. creativity, there is no defined goal, so there is no possibility of external control either. This is why it is considered that such a direct relationship between context and form is practically impossible when it comes to design.

2. Mental image of the context - meaning and form

To define the purpose, it is necessary to create a mental image of the context (meaning) and the defined final form. This established relationship allows a certain control of the process as far as the criterion of individual assessment allows, but it still introduces the danger of insufficient, bad and crooked definition, and consequently, wrong interpretation.

3. Formal image of context (meaning) and form.

Because of the great material and social significance of the design product, this relationship is sought to be introduced, as a supplement to the mental image of the context and the final form, together with a formal image of the context and the final form.

The formal image should include all laws, norms, standards that would guarantee the quality of the requested solution. In the direct relationship of context i.e. meaning and form, in the unconscious or as we said purely creative process, there is no possibility of misunderstanding, because no one but the author creates the image of the context (meaning) of the work. Analogous to that, often times the final image of the design can be neither right nor wrong. In conscious projection, it is shaped according to the created mental image, which is almost always wrong. From here comes the need for a control system that should contain the largest number of factors that will be taken into account, when reaching the final solution.

5. CONCLUSION

Formative elements used in industrial design are quite significant at determining the final appearance of a product, in all disciplines of industrial design, which is applied in modern industrial production.

Regardless of whether it's about: Interior design, design in the field of mechanical production, whether it is design in the fashion industry, the designer in modern production somehow ignore pure artistic aesthetics and pure artistic form, and therefore gives preference to aesthetic forms, which can be industrially mass produced.

The character of the conscious and the unconscious in designing, can explain the difference between pure art and design, that is, the difference between profit and design.

Because of the nature and character of his work, the designer corrects his mistakes every day. Knowing the formative elements in industrial design helps him a lot in this, where the aesthetic factor plays a special role.

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