

Chapter 77

Research of the Beauty of the Laws of Product Forms

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Abstract Everybody likes beauty when shopping. First, people need functions. Second, people pursue beauty of different forms. How to produce forms that satisfy people's psychological demands, and research consumers' need of beauty, elaborate on a beautiful law of form and hold the main stream of design is the main content of this paper.

Keywords The beauty of laws · Personal charm · Form · Elements · Relationship

77.1 Introduction

As a famous Chinese saying goes, “beauty” can only be sensed, but not explained. In fact, however, “beauty” can be explained specifically with words. The creation of the visual beauty of product forms owns a certain number of laws. The standards for the judgments of beauty involve many factors, but have a certain logic relationship. The beauty of laws is also the logic of visual image; the visual image in disorders is not beautiful. The beauty of laws is decided by the nature of human beings and also is a common standard of all human beings for the basic recognition on beauty. However, a unique beauty is decided by the difference between individuals in aesthetics. Unique beauty is a difference between individuals in pursuing beautiful things, and also a diversification of the creation of the beauty of product forms. Just as the beauty of music, the reason why it is called by people as

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music is that sounds can meet the demands of human beings on the beauty of the laws of sounds and also there are rhythms among different sounds that are not disordered. On the contrary, the sounds will be called as noises. However, different people like the different styles of music at different levels, giving an expression to the demands of individuals on the difference of musical beauty [1].

Human is part of nature. Therefore, the aesthetic orientation of human beings is influenced by nature.

If product forms are thought by people not to be beautiful, this suggests that the creation of product forms is in shortage of the beauty of laws and the beauty of rhythms, and also there are problems in product forms internally. If product forms can meet the pursuit of people on laws and also have the characteristics of the beauty of laws, people will still like them differently. This is an embodiment for the difference in the aesthetic demands of people on the creation of production forms [2]. Therefore, it is necessary to give a full consideration to both internal and external factors in the process of designing product forms. Only in such a way, the products, which meet the aesthetic demands of people, can be created in the world.

The creation of the beauty of product forms is an effective combination of the beauty of the laws of the internal causes of products with the unique beauty of the external causes. Therefore, to create the beauty of the laws of products, it is necessary to meet the basic demands of human beings on beauty. First of all, it is necessary to take the visual elements of product forms into account. If a product form comprises of only one visual element, the element is simple, and therefore, it is necessary to give a full consideration to the inherent characteristics and aesthetic feeling of this element. The beauty of simplicity will not give rise to a visual confusion. It is not only the beauty of the laws in visual sense, but also an embodiment for the beauty of the laws. However, if a product form comprises of multiple visual elements, it is also necessary to give a full consideration to the relationship between the visual elements, namely the beauty of the relationship between the elements of a product form. This is just like music, which owns not only the beauty of sounds, but also the beauty of tunes. The beauty of sounds is like the beauty of the elements of a visual image. This is also very applicable to the simple visual elements. The beauty of the tunes is like the beauty of the relationship between the elements of a visual image. It is necessary for any music works to own unique rhythms and rhymes, thus giving a reflection to the beauty of harmony of music. In the meantime, it is necessary to pay attention to the mutual relationship between different elements in the arrangement and combination, making it supported with a series of rhythms and rhymes. Hence, a beauty of harmony can be generated for the whole visual image [3]. The wonderfulness of music can be felt by people only if music is with rhythms and rhymes, and then, people can be enchanted by it and attain an enjoyment in spirit. Therefore, in the creation of music, it is necessary to not only pursue the beauty of sounds and the beauty of the relationship between different sounds, but also attach high importance to the characteristics of different sounds, know how to create the rhythms, rhymes and artistic conception, and put forth effort to researching the sense of hearing of people. A visual image, which comprises of a great number of visual

elements, also goes in this way: it is necessary to not only pay attention to the characteristics of visual elements and also lay a stress on the relationship between different elements, thus making visual image harmony as a whole and generating rhythms and rhymes as well as a whole visual artistic conception, etc. [4].

77.2 The Beauty of Elements

The beauty of a visual image that is composed only by one element can be reflected by the self-image of the element. It is necessary to emphasize that the beauty of elements is also a state of the beauty of product form, because regular order keeps consistent with the laws of beauty in itself. What the random form of a single accidental and natural regular visual element expresses is a kind of natural beauty, which is random, vivid and rich in human feelings and also includes an accidental beauty; what the rigorous form of a single irregular visual element relying on tools expresses is a regular beauty, which is formal and solemn and includes the beauty of manual work and high technologies. In life, a morphological beauty of the elements needs to be selected for expressing the beauty of the forms of some products sometimes. Next, the specific examples of product design will be used for giving a further introduction. For example, the designs of voice box and pot are shown in Figs. 77.1 and 77.2.

The forms of the above two products comprise of a single three-dimensional ellipse, respectively. And the forms give a reflection to the beauties of laws and rigorousness. This kind of beauty is fully reflected in its single and pure modelling form. Its overall visual image is nature to be harmonious and consistent and generates no mixed and disorder visual sense. This integral characteristics expression completely abides by the laws of beauty. The form is composed by curves, and the elements of the curves are with no sharp edges. Therefore, it shows a soft and beautiful visual sense and brings people a mellow and full sense and a relaxed feeling with no pressure. Also, it can be easily accepted by people, generating an inclusive but no rejection feeling. In addition, the composition of this

Fig. 77.1 Voice box



Fig. 77.2 Pot

elliptic form also gives an expression to a strong visual sense as well as a weight sense. The beauty of this three-dimensional elliptic form that is composed by simple curves is a kind of beauty of simple curves and can naturally give an expression to the form of a three-dimensional figure. It is so beautiful because of its orders.

In the designs of two products, as shown in Figs. 77.1 and 77.2, a single and regular curve element is utilized to the very point, making the inherent morphological characteristics of the elements of curve shown obviously, and bringing people a soft, beautiful and quality visual experience. Therefore, these designs are not only elegant, but also moderate. The whole product forms convey regular visual experience with laws and rigorousness, and also, a single visual image promotes the characteristics of the beauty of product form displayed with a different key point, thus demonstrating a natural and harmonious consistency and letting people feel comfortable. Harmony has a certain number of laws to follow, and naturally laws are beautiful, and vice versa. Such a single design makes it easy for people to avoid the disordered and mixed visual sense, and also the key points are highlighted skilfully, making the products extremely remarkable among the multiple products with the same functions. Therefore, this kind of elliptic geometrical form is simple, practical and generous and owns the characteristics (fashion and elegance) of the modern industrial products. The designs of the curves, on the basis of satisfying the practical functions, also give the best expression to the laws of the simple visual beauty.

77.3 The Beauty of the Relationship Between Elements

The beauty of a product visual image that is composed by multiple elements can give a good reflection to the beauty of the relationship between the visual elements composing product. In other words, there has to be a certain constitutive

relationship between elements. The beauty of the relationship between elements is also a state of the beauty of product form and can be commonly seen in the design of product. To make a research on the beauty of the relationship, it is necessary to comply with the senses of rhythm and rhyme visually, makes a distinction between the primary and secondary points conveyed by vision and give an expression to the laws. In the process, it is necessary to keep in minds that disorders are prohibited. Then, all sorts of visual elements in a product form can be in a harmonious coexistence, thus creating visual experience in the beauty of the relationship. This is because that no disorder complies with the laws of beauty in itself.

The relationship between different elements is diversified. In combination, the most important is to give a full consideration to the rhythm, rhyme and primary and secondary points that are produced in these elements. That is, it is necessary to grasp the laws of beauty, so as to make product form harmonious and ordered without chaos. In the following, the compositions of the beauties (i.e., the beauty of repetition, the beauty of gradual change and the beauty of proportion) of three relationships will be listed, for the purpose of giving a brief introduction to the beauty of the relationship between elements.

If a product form is composed by the same elements, the beauty of repetition will be reflected, and the relationship between elements is repeated.

For example, the whole shape of the cushion for the pan, as shown in the left of the Fig. 77.3, is composed by the multiple, single and identical forms (approximate to a diamond) rotated around the centre of axis. Also, the relationship between the visual elements is repeated, and a new three-dimensional form (flower shape) is composed after combination. The flower shape after the whole composition presents consistency as a whole, in which the laws of beauty are grasped skilfully. Overall, it is in an order state without any chaos. Therefore, the principle



Fig. 77.3 Cushion

of beauty is followed, and also the beauty of repetition is embodied. The form presented in the multiple identical diamond and three-dimensional elements after a newly repeated arrangement, and combination is no longer the simple geometric beauty of a diamond, but a newly flower image, which is beautiful, sweet and close to nature, and makes people feel beautifully in visual sense. Therefore, it allows people to naturally love it (as shown in Fig. 77.3).

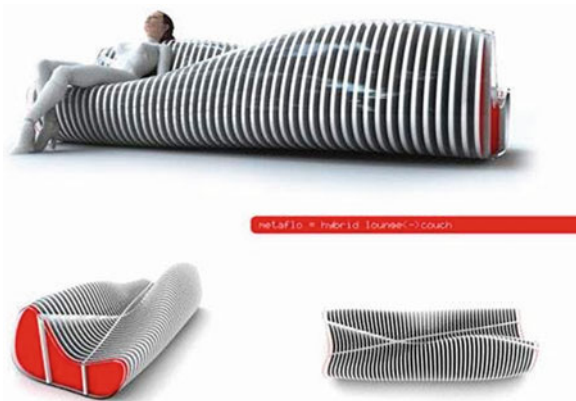
However, if the elements are composed by multiple single diamonds, they will look simple, earnest and have laws to follow from the visual sense. Therefore, after a repeated combination, the three-dimensional form of this flower will make people generate greater aesthetic feeling, vividly giving an expression to an elegant and dignified visual beauty. Therefore, it can be seen that what the design of the cushion for the pan expresses is the beauty of repetition.

If a product form is composed by multiple elements with gradual change, the beauty of gradual change will be reflected, and the relationship between elements changes with a gradual step.

For example, from the design of the sofa, as shown in Fig. 77.4, it can be known that the whole form is composed by multiple curved surfaces; there are changing relationships between different surfaces, and this make people generate a low and high rhythm from the visual sense. Also, the curved surfaces are kept in orders harmoniously in combination and also arranged according to certain rhythms. Therefore, it looks not messy from the visual sense, meets the laws of beauty and gives an expression to the beauty of gradual change between elements. Ultimately, a practical sofa product is composed by the multiple curved surfaces with a gradual change relationship. The skilful utilization of such a gradual relationship makes the form of the sofa variable and full of unique characteristics as a whole. Thus, it is specially beautiful and fashionable when giving a reflection to the senses of rhythm and rhyme (as shown in Fig. 77.4).

In the design of product form, the beauty of elements and the beauty of relationship between elements are not only the internal causes, but also a basic understanding of the beauty of the laws of product form. However, to create

Fig. 77.4 Sofa



increasingly more product forms that meet the aesthetic demands of people, it is still necessary for the designers to give a full consideration to the different demands of people (external causes). That is, it is necessary for product form to meet the unique beauty of different groups of people. As long as the differences of the unique beauties of different people are fully known, the creation of the beauty of product form as well as the diversification of product form can be accomplished.

The beauty of laws is actually the basic laws of creating the beauty of product forms and the specific application of the creation of unique beauty and product form beauty. The beauty of laws is a fundamental for human beings to pursue beauty and also an embodiment of the basic ability to create beauty. The creation of the beauty of laws is also a fundamental for the design of product form, and the unique beauty is the embodiment and diversification of the design of product form. To create the product forms that meet the psychological demands of consumers, it is necessary to give a full consideration to the needs on unique beauty at the premise of meeting the beauty of laws. The creation of product form is an internal cause deciding whether the product is beautiful or not; the aesthetic subjects of product form are external causes. As long as external and internal causes can be effectively combined, the creation of the beauty of products can be accomplished.

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