

# The Principles for Modern Product Design

Haorong Su<sup>1</sup>, Ning Hao<sup>2</sup>

<sup>1</sup>*Institute of Art and Fashion, Tianjin Polytechnic University, Tianjin, China*

<sup>2</sup>*Institute of Art and Fashion, Tianjin Polytechnic University, Tianjin, China*

*Email: esuhaorong-ok@163.com*

**Abstract:** Now, the social life rhythm speeds up, the working pressure increases, the product competition is intense unceasingly, the energy appears in the crisis, and the environment encounters the varying degree of the destruction. In this case, consumers start to transform the demands of the product modeling idea, thus this requests designer's design idea to carry on the corresponding change to adapt consumers' demands. This article, through summarizing the existence information and the design idea, analyzes the consumers' certain design expectation, adding my own imagination which designs for the future. At last, I have written this article. My goal to write this article is to embark the viewpoint from the angle of consumers' psychology and demand to the future product modeling design. I hope it will be helpful to the future design, thus, it will meet the expense need which the consumers will change.

**Keywords:** Brief; Form and function; Detailed work, Energy conservation and environmental protection; Green design

## 1. Simple design

### 1.1. The description of sample in design

When we speak about simplicity, we will certainly think about simple, in fact, simplicity does not mean simple. Simplicity is the designer's reasonable ideas on products' form and function which need research and analysis of various factors basing on people-oriented and real life. We also can say that it is a simple and comfortable ways to express the depth content, and an inclusive, simplify idea. Famous designer named Tianzhi Liang think that simplicity need remove extra things on Life and design, never too much. The simplicity accommodates different elements, including elements of local culture, or personal taste and so on.

### 1.2. Simple design in product design

#### 1) *Simple form*

Product modeling reflects the product's internal functional structure, which affects people's understanding and use of product features, which closely relate with the processing and assembly. In the simple design, correctly handling of the product's shapes is very important, Designers need merge a high degree of simple shapes with a set of natural, rich dynamic language, which makes the product build a close relation with its own technology and culture<sup>[1]</sup>. It is the way for designer to merge his own design ideas with the function perfectly. That's to say, don not increase the cost of production and processes only for a good shape. Simple form itself possesses persuasive and for users to accept and use easily. Today's products are gradually moving to a fresh style of rustic simplicity, which abandons the traditional cumbersome decoration, replaced by simple geometric shapes and smooth lines, with innova-

tive designs and decorative details to create a simple fashion style. For product design, the simple design is the simple structure, parsimonious materials, perfect shape and pure surface and so on. We know that taking many are complex, abandoning many are mostly simple, and choosing suitably can be the simply and friendly.

#### 2) *Simple function*

For certain products, designers should investigate and analyze to selectively delete some of useless features, simplifying the product structure, reduce the process and cost, also can indirectly reduce the energy consumption. Nowadays, the mobile phone functions to play games, watch movies and other in real life applications are seldom, Computers, DVD and others are better than mobile phone, under the principle of simple functions, you can modify these for consumers to use comfortably and happily.

#### 3) *Simple materials*

Material is the product of the skin, all the attributes of the product to be materialized through the material. At present, due to the rapid development of science and technology, human has created many new materials (such as the polymer composite materials, nana materials, etc.), which make the whole family of material became colorful. But some of the factors we should be considered in the choice of the material:

- (1) Do not select too many materials in a product;
- (2) Should try to choose renewable, easily degradable materials or recycled materials on Earth;
- (3) Materials processing methods should be simple and straightforward, low energy consumption, light pollution, etc.

### 1.3. The meaning of simple design

With the development of the times, simple design has a

new concept, "green design". Now modernist design put more emphasis on environment and humane. The use of materials with a high degree of innovation and exploration, Less cumbersome and more pure, Less conspicuous and more comfortable, Less ornate and more concise, Less whimsical and more practical function. It makes product more suitable for human to use, Make the product more fluid lines, and more features, it can be better to meet human psychological and physiological needs.

## 2. Attention to detail, keep function and form serving for the needs together

### 2.1. Attention to detail

With living standards rising constantly, people's demands are not limited to product durability and functionality, sophisticated appearance has become the main aspects in product design. Good shape like a good car, the first time it can be able to attract your eyes. Grade level of a product often depends on the details. Products not only depend on beautiful overall shape, brilliant color and excellent skills, the consideration of details is also very particular, which is mainly reflected by the shape, structure, functions, etc. design products should integrate and attention to shape, structure, mode of coordinated operation. Deal with the overall design well basing on the details and details serves the overall design, the overall design can reflect the details, but do not painstakingly describe the details too much, or produce scrupulous feeling.

### 2.2. Brothers function and form in unity

#### 1) *The meaning of function and form*

All the products designed and manufactured are to meet the various needs; Of course it includes the aesthetic and functional demand. In commercial society and economical market the value of goods is its first use function like house, car, computer, and so human needs is the key factor to decide product's function and form. Strictly speaking, Form of the product is also a function called beautiful function. It makes the product have a psychological function to meet the user's mental demand. From broad functionality, Product Design has the third function, which is symbol of power. In the community, certain products users indicate their status by a particular product design or show a spiritual, psychological view by special product design<sup>[2]</sup>. In other word, when people meet the demand of using functions, also like a symbol of aesthetic features and functionality to meet the more advanced psychological demand. Such as luxury cars symbol the user's strength economy and social status .New solar concept car shows that users may be an environmentalist or green organization members, etc. Because humans no longer satisfied with a simple purpose of use, they need more and higher requirements for the scale of the human body, safety, mental feeling, which requires designers to design different products according to different needs<sup>[2]</sup>.

#### 2) *The deep concept of function and form*

Human to the full functional requirements of the product should have two layers of meaning The first layer of meaning is a function of the minimum product requirements, and many other demands of complex functionality and Second implication is that people on the product functional of different requirements, or differences, individual needs. Now consumer demand is diversity in market, the companies can not share the market in long-term relying on a single style product. Designers must understand the market, design appropriate products according to different consumer needs, but it also can be said that the diversification of products to meet consumer demand for personalize. As the demand in Japan, the car tends to be small, lightweight, portable, technology, and in China, people tend to like luxury cars. In short about the product's form and function, form determines function or function determines form, in the present economical market, function and form should be mutually united, and service the diversity needs together.

## 3. Attention to green design

### 3.1. The concept of green design

Green design, also known as eco-design, need to consider the impact on resources and the environment fully when we design products, when designers consider the product's features, quality, development cycle and costs, also need to optimize relevant factors in order to reduce the products and their manufacturing process's impact on the environment, finally, Make the products meet the targets of environmental protection requirements.

Now the natural environment of human is constantly deteriorating so protection of natural resources, energy conservation, maintain a good living environment, and create green design to reconstruct the ecology of human homes, has become a very pressing issue to maintain the sustainable development for human society. Last century, GM company use the Abolition of the planned system, this frequently changing car appearance can really drive sales and meet a considerable part of the fashion-conscious consumers need, but it greatly increased consumer's spending, and resulted in great waste of the Earth's limited resources. Environmental protection has become legislation today, as a designer, must have to avoid this design philosophy, respect for green design, energy conservation, and protect the planet.

#### 1) *Constitution of green design*

Green design elements include three areas:

- a) Material selection
- b) Design for disassembly
- c) Recyclable design.

#### 2) *Material Selection*

This aspect includes what materials should we use. Choosing less pollution materials as much as possible or it is best to choose what can be destroyed by certain process

which has little or no pollution to environmental, if the materials can not be recycled.

*3) Product design for disassembly*

Designer need to make the structure be easily demolished, repaired, and can be recycled after the end of the product.

*4) The recyclable products design*

Avoid using disposable materials, use removable and recycled materials as much as possible.

### **3.2. The significance of green design**

Now, human face many problems about rapid population growth, natural resource shortages, and serious environmental damage, etc. Uncontrolled exploit natural resources caused a serious crisis to our environment. Factory waste, emissions, car exhaust and others seriously pollute our living environment. The garbage produced in daily life can also cause great damage to the environment. Product design without attention to green design and blindly pursuit of style, function, low cost, etc. will give designers or companies a huge loss in long-term.

Sustainable development needs Green Design which really relates to the immediate interests of everyone, and the contribution to the whole human society and the impact would be immeasurable.

In short, Fast step of life, crowded city life make people be weary of elaborate decoration, and pursuit the simple design style and the development of individual makes people do not tend to pursuit of the same and energy and environment make people pursue friendly green design and so on. Following these design principles is necessary if companies want to win in market competition.

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