

# Research on Product Design from the Perspective of Psychology

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## Abstract

By expounding the role of psychology in design, combined with real life cases, this paper proves that psychology plays a significant role in design. Design is to serve people. If we grasp the design psychology and analyze people's motivation psychology, we can meet people's needs with the greatest accuracy. Achieve the effect of designing and serving people. Through the guidance of design psychology, design meets people's psychological needs and conforms to design ethics, and then guides people's behaviors that are not easy to explore and pay attention to in their daily life. Design should be insightful and sensitive to the things around you. In this way, we can make a good design.

## Keywords

Product design; Design psychology; Design ethics; People-oriented.

## 1. INTRODUCTION

Bid farewell to the era of handicraft industry, the great changes brought by science and technology have had a series of effects. People's emotions and feelings are also undergoing earth shaking changes. When designing for different groups, such as children, the elderly and the disabled, only by fully understanding their psychological needs and combining design ethics can we design the most appropriate products. However, creativity in the new era, people's demand is increasing. While meeting the functions, we should also have unique creativity and products that meet people's emotional and physiological needs, which is what designers pursue. Seize people's psychological state, follow the changes of science and technology, and constantly create and improve products that are more suitable for people and meet the human spirit. It requires advanced vision and keen judgment to determine the direction of future design. This is our social responsibility as designers.

## 2. PROBLEMS OFTEN FACED IN DAILY LIFE

### 2.1. Bad Design

People often make mistakes when using some products. For example, they don't know whether the door is pushed or pulled, and which side of the water heater is hot water or cold water. People often attribute these mistakes to themselves. But it may be those bad designs, not people's own mistakes. This belongs to the design psychology. The visibility of the product is not shown. A good product design should provide strong visibility and directly provide users with obvious clues on the operation. When using the product, you can understand and use the product at a glance without supplementary instructions and other special logo illustrations.

### 2.2. Design Problems

In design, people often face two major problems: function and decoration.  
past times:

From the mass and mechanized production of the arts and crafts movement and the impact of the first industrial revolution, the design industry has been greatly impacted and changed. Design focuses on function, abandons decoration, and manufactures and designs mass production for the public. Art Nouveau movement awakens people's consciousness that life should pursue function and make product design aesthetic. However, the development trend of the world is irresistible. The industrial revolution continues to develop. From Germany to France to Austria to northern Europe, they began to achieve their own design through the power of Industrial Science and technology, make use of it and even make it to the extreme. For example, the view put forward by Corbusier that "housing is a human living machine" has evolved into the period of modernism, which has influenced so far. At this time, people maximize the function but retain the simple beauty, It is famous for Rice's "less is more". In postmodernism, more and more emphasis is placed on organic, green, recyclable and sustainable development.

Now?

Excessive Functionalism: function is essential in design. With the development of science and technology and the emergence of AI, people have more and more expectations and desires. Users hope that the product can have multiple functions or omnipotence at the same time, but in order to meet users' requirements for functions, designers increase the size and complexity of the product, but increase the difficulty of use and operation, and the readability of the product is weakened. This is called the limiting factor of not considering design in design psychology.

Blind pursuit of appearance worship: for example, for products created in full accordance with market demand, designers have excessive pursuit and admiration for the appearance and decoration of products. However, this product will be easily replaced with the development of the times.

Find the best balance between the two, not only meet people's main needs, but also have the beauty of design, in line with the contemporary social environment, so that the design can be successful.

### **3. HOW TO GRASP THE SCHEDULING OF DESIGN PSYCHOLOGY IN PRODUCT DESIGN**

For product design, from the perspective of psychology, the importance of user feedback is self-evident. At the same time, there are visibility (i.e. preset use), limiting factors, conceptual model, etc., which are very important in design. Only by mastering the psychology of users can we have evidence to follow and apply the medicine to the case, so as to design the most suitable products for this kind of users. Products are not the best, only the most suitable. Mastering psychological skills can help businesses design better products.

#### **3.1. Hunger Marketing**

In the era of no material scarcity and scarcity, people are more eager to pursue scarce things, and more and more businesses and designers are keen to make hunger marketing strategies. When there is a great demand and resources are tight, most consumers are more willing to pay for this product, even at a higher price. In terms of users' psychological needs, in the process of loss and gain, the pain caused by loss is far greater than the happiness felt by gain. Although happiness can't last long, people are always reluctant to lose it. This is the use of people's consumer psychology.



**Figure 1.** "Hunger marketing"

(picture source:[https://www.sohu.com/a/400644263\\_120562360](https://www.sohu.com/a/400644263_120562360))

For example, the cow bone powder shop at the gate of the school is popular and will be sold out at 5 or 6 p.m. I wonder why I don't do more. There are many customers who can make more profits at night. Later tests proved that when the purchase restriction is set, the number of customers willing to buy will increase by more than half on average. If you go late, customers will be more eager to get it. This is the psychological hunger marketing adopted by businesses. The same is true of design. When brand design launches a new product, it is quickly sold out.

### **3.2.The Feeling Brought by Design May Be Environmental Impact (Grasp the Psychological Direction of Feeling)**

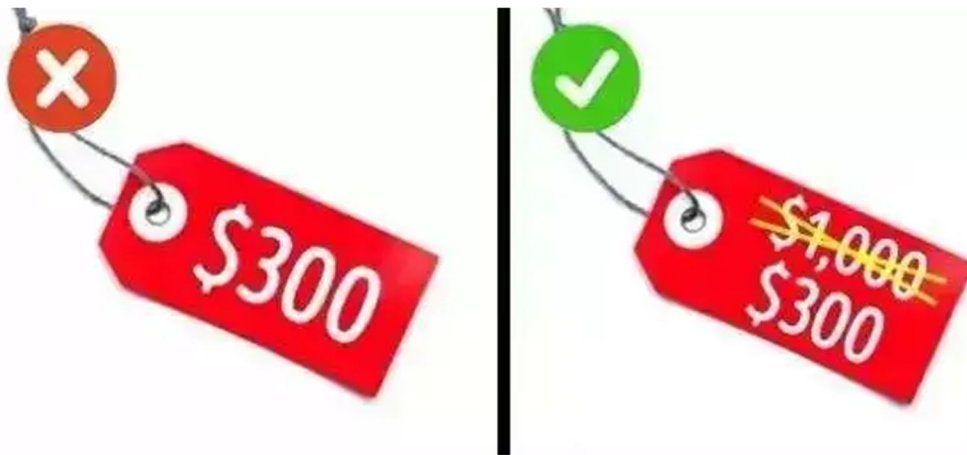
Haraya's "design in design" wrote that our behavior will be affected by five senses. For example, when playing music from different countries in a grape Hotel, when playing French music, the sales of French wine can easily exceed that of other wines. Some customers say they buy wine because they like music. Users' behavior will be affected by these five senses: hearing, smell, vision, taste and touch. The corresponding body organs of these five senses are ears, nose, eyes, tongue and skin. In fact, it is not limited to five kinds. The feeling of gently touching with your fingers is completely different from that of patting the table with your palm. Different environments will also affect users' views on design, so they decide to buy or not to buy.

### **3.3.Limited Edition Commodities of Various Major Brands - Psychological "Anchoring Effect"**

More and more brands create their own limited edition products. Most of these products are very expensive, but they are still active in the market, but why put a limited edition there?

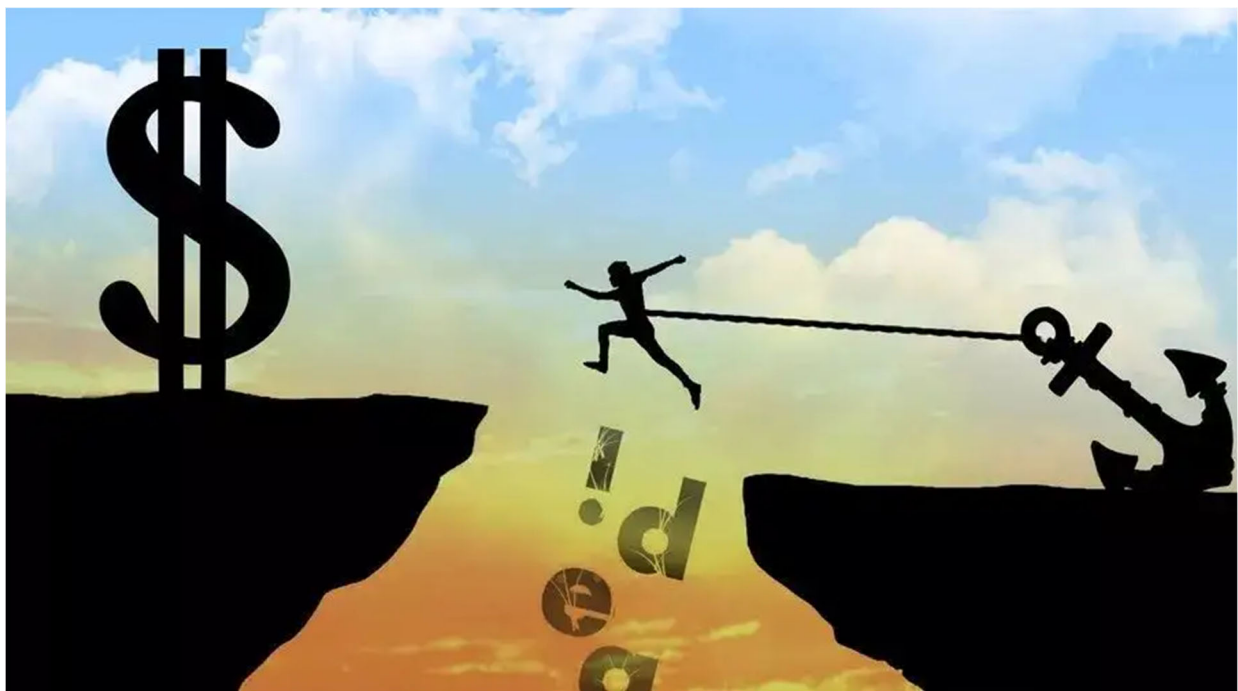
Usually, the price of limited edition goods is relatively expensive, which gives users the feeling that the grade and force of the store have been improved instantly, but consumers may not really understand the design connotation of the product, but users will feel that the quality of the product is directly proportional to the price. This is the "anchoring effect" in psychology. Limited edition products are not for sale, but to establish a high-end brand image. Although it is not the main force of sales, with its comparison, other products will highlight and appear cheaper, and the sales volume will naturally rise. This is the so-called "anchoring effect", which means that when people make judgments, they are easily dominated by the first impression or first

information, just like the anchor sinking into the seabed, which labels people's thoughts and psychology.



**Figure 2. "Price anchor"**

(picture source: Procurement has to understand the "anchoring effect")



**Figure 3. "Anchoring effect"**

(picture source: [www.sohu.com/a/258869739\\_488514](http://www.sohu.com/a/258869739_488514))

For example, Starbucks also applies the "anchoring effect" in psychology to the cup type setting. The common cup types in Starbucks market include medium cup, large cup and super large cup, and "small cup" is rarely seen. This phenomenon is to hide the "price anchor" and guide the user's selection goal to large cup or super large cup. It shows that when there is a difference between cup type comparison and price, users tend to be guided by the design, which is the function of reference when designing products. Merchants use the cup shape of "medium cup, large cup and super large cup" to imperceptibly and consciously guide users to make choices.

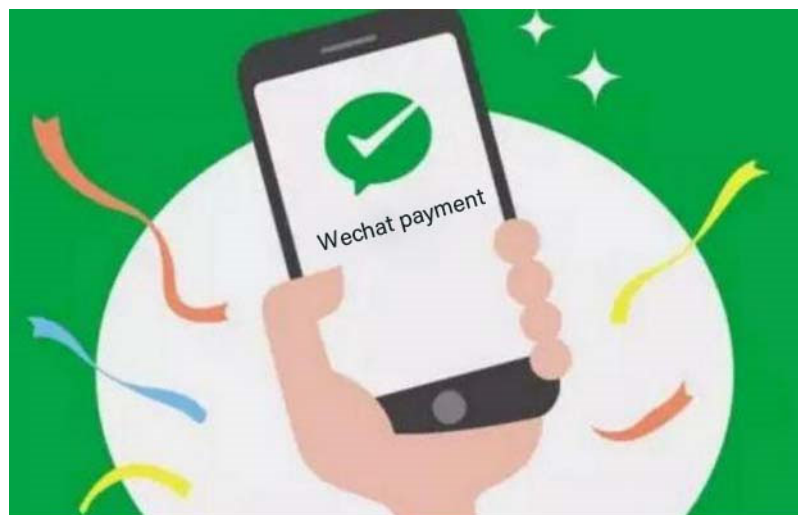


**Figure 4.** "Price anchor"

(picture source: [www.sohu.com/a/258869739\\_488514](http://www.sohu.com/a/258869739_488514))

### 3.4. Delete the Logo to Reduce "Pain"

People feel heartache every time they think they have run out of money, but if they don't have a particularly strong sense of price, they can appropriately reduce the heartache. For the same reason, such as card swiping payment and now more convenient wechat payment, or secret free payment, all reduce the cost of consumption and achieve more convenient consumption and purchase. When we don't directly see the fact of spending money, it's effortless to buy things. At the same time, let's "chop our hands" less pain and pressure. Increased consumption to achieve the purpose of design.



**Figure 5.** "mobile payment"

(picture source: [news.pconline.com.cn/918/9182537.html](http://news.pconline.com.cn/918/9182537.html))

### 3.5. Different Colors of Products - Color Psychology

When designing products, color is also an indispensable factor. Different colors can play different psychological roles and bring different effects. For example: product color matching - shrinkage and expansion of color: in people's psychological cognition, the feeling of cold color is quiet, visually contracted, and things with the same size will feel smaller. However, warm



colors give people a warm feeling and expand visually. The same things will feel bigger. At the same time, the brightness also determines the psychological size. Products with higher brightness will be larger, and vice versa.



**Figure 6. "Color psychology"**  
(picture source: <https://baijiahao.baidu.com>)

Careful observation of life shows that the colors of many products have been designed. For example, most of the colors of refrigerator and air conditioner are white, instead of warm colors such as yellow and red. On the contrary, they will choose cold silver, white or ice blue, which makes people feel very cool. This takes advantage of the psychological role of color.

### 3.6. Guidance of Design Psychology to Users:

When reading the book "design in design" by Japanese Muji designer haraya, an impressive design is the example of "square toilet paper". The design is that Sakamoto changed the paper barrel of toilet paper from the previous round to the shape of toilet paper with a square paper tube. The design idea is that when using the square paper cylinder, the pulling will make a click sound due to the resistance. When the user is inconvenient to use through the reverse design, it will arouse the awareness of energy conservation. In addition, in the process of storage and handling, the square paper cylinder is different from the gap generated when the circular paper cylinder is arranged, which saves space. This design not only guides users from the perspective of psychology, but also has more powerful functions in physical logistics.



**Figure 7. "Modeling psychological guidance"**  
(picture source: [https://www.sohu.com/a/147859224\\_568939](https://www.sohu.com/a/147859224_568939))

#### 4. IN THE FUTURE, HOW TO MAXIMIZE THE USE OF PSYCHOLOGY IN PRODUCTS AND INCREASE DESIGN ADVANTAGES?

"The degree of product use experience can largely determine the use stay and visit time of new users. If the sense of experience is high, the natural conversion rate will increase, and the retention will be higher. This is the embodiment of practical value.". How to enhance the trust of users and consumers in products, the renewal, improvement and re creation of products are the ways and methods to increase the trust of users in products. The trust and dependence of users on products can also determine their consumption power.

Nowadays, the product experience design is very popular. People book online without spending money to experience. Using the free consumption design psychology, they first guide customers to place an order and try to consume, and then have an opportunity to make the product face users and fit customers. If it is easy to use, users will keep the psychology of not wanting to lose and will leave it. Therefore, the role of psychology can better reflect its importance in product design.

However, in the future, mastering design psychology may be able to roughly grasp the economic development and guide the development. If we grasp the psychology of consumers and the psychology of the public and give design guidance, it will produce huge benefits and economic benefits, which is also an important influence of design psychology on the economy.

#### 5. CONCLUSION

Design is broad and closely related to life. Design serves people and users. Therefore, design is people-oriented and meets people's needs, whether it is the tools used, the transportation, the house of life, or the art of appreciation; Whether it is daily needs or under different specific conditions, it is a behavior designed by people to achieve human goals. Design is essential in our life. Since design is inseparable from people, it is human beings who actively operate design and serve people at the same time, the importance of psychology is self-evident. It is very interesting and profound for us to understand what is design psychology, what is function and decoration, what people's real needs are, and how to guide and change people's design and behavior through psychology. When people pay more and more attention to human emotional psychology, the position of design psychology becomes more and more important. In the future design, only by using these psychological knowledge and applying it to product design and other design can we design products suitable for users and meet people's needs.

#### ACKNOWLEDGMENTS

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