Research on the mode design of household products based on unconscious design concept

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Abstract: Household products are items that are closely related to people's daily life, clothing, food, housing and transportation. This research will discuss the methodological guidance and practice path in household product design, and gradually clarify the research points from the overview, status quo and case analysis, consider product design from the perspective of unconscious design concept, and redefine household product design by the mode design. At the same time, we can draw nutrients from the excellent works of Naoto Fukasawa, and analyze how the unconscious design concept is applied to the details of design, how to realize the value externalization and sublimation of mode design, and what social role should designers serve to users.

Keywords: mode design, household products, unconscious design concept, Design Affair

1. Introduction

"Unconscious design", also known as "intuitive design", is a design concept proposed by Japanese designer Naoto Fukasawa. Mr. Liu Guanzhong founded "Design Affair" and explained its essence and methodology. Mode design can be understood as a perspective derived from the theoretical system of "Design Affair". The trendy products that have emerged in recent years have a certain progressive significance and pioneering effect on the development of mode design, and the application of mode design to people's life can produce positive guidance and long-term significance, but there are still many challenges in the practice process. For example, research on human unconscious behavior and potential needs, innovation of product existence form and usage, the influence of environmental factors on human-machine mode, and how to achieve "human-machine-environment" coordination, this research will be carried out according to the following steps and methods (Figure 1).
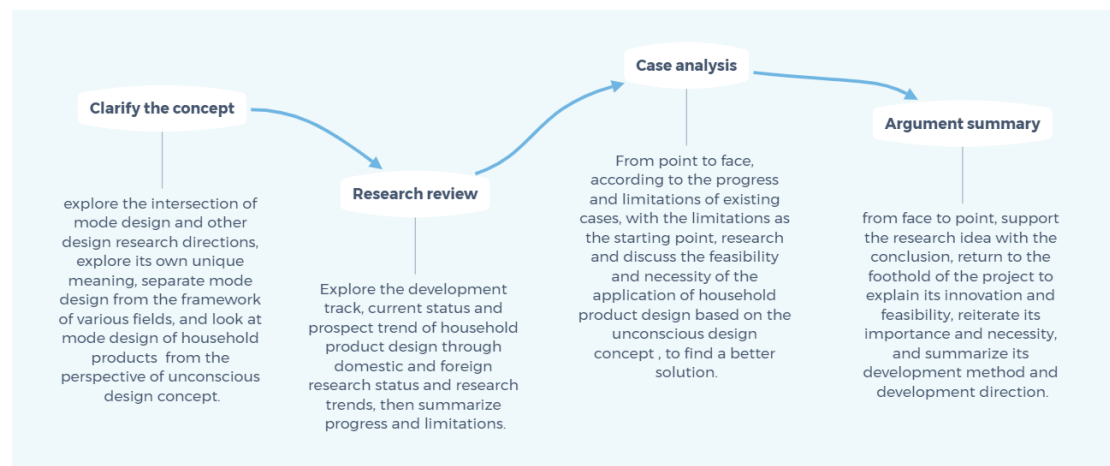

Figure 1: Research steps and methods.

2. Unconscious design and product mode design

2.1 Interpretation of unconscious design

"Unconscious design" is also known as "intuitive design", that is "transforming unconscious actions

into visible things". For example, involuntarily checking the time in class, stretching your arms involuntarily after sitting for a long time, and involuntarily putting your clothes on the chair when you go to a restaurant for dinner, these behaviors are all unconscious behaviors and occur frequently in people's daily life.

Unconscious design is to transform users' unconscious behaviors into design concepts by observing people's unconscious behaviors, so that the design can follow people's experience or behavioral habits, users can use products without thinking and optimize user experience. "Unconscious" does not mean that people don't really participate consciously, but it means that people may have some kind of potential demand, but they cannot specifically describe this demand or are unaware of this demand.

2.2 Essentials of product mode design

Mr. Liu Guanzhong founded "Design Affair" and explained its essence and methodology. Mode design can be understood as a perspective derived from the theoretical system of "Design Affair". "Mode" refers to the way of "affairs" in the relationship between people and things. The mode design should focus on "affairs", exploring "reasons", and then creating "things".

The mode design is based on the discovery and improvement of unreasonable lifestyles, making people - products, people - environment more harmonious, and then creating a newer, better and more reasonable lifestyle. In the design thinking, products are only an intermediary to realize people's needs, and its meaning lies in how to better serve people's real needs and find the best way for people to communicate with products.

Mode design is different from conventional design. Conventional design is often an improved design, the focus of mode design is the connection between people and products at the mode level, as well as the structural interconnection of the product itself to achieve its functional purpose. In other words, the focus of mode design is the connection between people and the product. This connection has been determined when the product is produced and accepted by people. For example, in the design of bicycles, the conventional design focuses on whether the color of the bicycle is pleasing to the eye, whether the structure is firm and reasonable, whether the safety is reliable, etc. , The focus of the mode design is whether there is a better posture or method to ride a bicycle, whether the bicycle can have a better structure to make people more comfortable to use, etc. Mode design is marked by innovation, it is a new exploration and rediscovery of human life in innovative ways. Products produced by mode design often give people a novel, interesting, and refreshing feeling.

3. Summary of the development of unconscious design and household product design

The trendy products that have emerged in the country in recent years have a certain progressive significance and pioneering effect on the development of mode design. For example, the emergence of shared bicycles changed people's travel modes such as short-distance transportation and transfer connections. Recently, the street lights placed on the streets of Wuhan to wirelessly charge mobile phones have changed the battery life of mobile phone. All kinds of mobile payment, online operations, online shopping, online food ordering have changed people's lifestyles in all aspects of food, clothing, housing and transportation. The popular RV in the beginning of the 21st century has been continuously updated and has created a lifestyle that integrates living and travel. The innovation of household products is no exception. More and more intelligent and humanized household products are accepted by people. In addition, scholars from China University of Mining and Technology started from the concept of unconscious design in the article "Research on Product Design Based on Unconscious Behavior — Taking Lamps as an Example" [1], researched and proposed a product design process based on unconscious behavior. Scholars from Hubei University of Technology "Research on the Creative Design of Household products Based on the Interaction Concept" calls on designers to learn to use the concept of interaction to achieve product design innovation, and maximize the charm of home creative design [2]. A scholar from Hunan University publish an article "Thinking Caused by Unconsciousness" and call on designers to lead a more pleasant way of life and awaken the true emotions in people's hearts [3].

Freud can be said to be the theory founder of the unconscious. In his psychoanalytic theory, human spiritual consciousness is divided into conscious, preconscious and unconscious. Unconscious behavior is a kind of instinctive behavior made by people without careful thinking and judgment. It usually comes from the accumulation of life and is deeply integrated into life [4]. American cognitive psychologist Norman divides design into three different dimensions in his book "Emotional Design": instinct, behavior

and reflection. He believes that there is no consciousness at the level of instinct, that is, an unconscious behavior [5]. The concept of unconscious design first came from Japanese designer Naoto Fukasawa, who advocated "transforming unconscious behavior into visible things". A series of works designed by Mr. Naoto Fukasawa put theory into practice very well. His designs always observe every detail in our life very carefully, and change the fixed way of using the product from a peculiar angle, so that it can attract enough attention of consumers and stand out among many design products of the same type. This also reflects the essence of Mr. Naoto Fukasawa's "unconscious" design [6].

In addition, Japanese designer Kenya Hara put forward the idea of "Redesign", it's inner pursuit is to return to the origin, re-examine the design around us, and explore the essence of design in the most approachable way. Starting from nothing is a kind of creation, but to defamiliarize what is known is even more a kind of creation. This coincides with the theme of this research "Mode Design". Defamiliarizing the known things, and then appearing in the public view in a subtle form, and more acceptable [7], this is the highest point of design based on unconscious design concept [8].

All in all, at present, there are many scholars who use the theoretical ideas of the unconscious design concept, but there is a lack of research and innovation in the design of household products. The depth, breadth, and adhesiveness of research can be further improved, and there is still much room for expansion in research content and direction [9].

4. Case analysis of Naoto Fukasawa's representative works

CD player (Figure 2). This wall-mounted CD player can play music with just a single pull, which ingeniously connects users' senses of hearing, vision, and touch, and users can enjoy wonderful music without extra movements. Hanging it on the wall is not obtrusive, like a work of art. Mr. Naoto Fukasawa cleverly combined people's unconscious behavior and psychological experience in the process of interacting with music players and fans to produce a "chemical reaction", while creatively subverting the traditional human-computer interaction mode of the CD player, making the use mode of the product more suitable for the environment and "human nature", just like it "grows" from here.

Figure 2: CD player.

Figure 3: Tea bag.

Tea bag (Figure 3). Although it is only a small design of tea bags, it contains the designer's most

detailed observation of tea drinking. The color of tea leaves from light to dark when "preparing" to "drinking". The translucent red-brown ring at the end of the string symbolizes a strong brown color. In fact, users don't need to wait for the color of the tea to change to the color of the ring before you drink it, it just represents the tea maker's cautious way of expressing their love for tea. Mr. Naoto Fukasawa fully captures the visual and psychological behavior characteristics of tea drinkers, and uses the most casual and natural way to build products to better meet subconscious needs.

Figure 4: Groove handle.

Groove handle (Figure 4). A groove is designed on the handle of the umbrella. This small gap can hang the heavy objects on the umbrella. It saves energy and can also accommodate the heavy objects. Mr. Naoto Fukasawa accurately captures people's potential needs and subconscious psychological expectations when using umbrellas, and uses the smallest changes to achieve the greatest psychological satisfaction. His work looks like undesigned, it is the natural result of human needs.
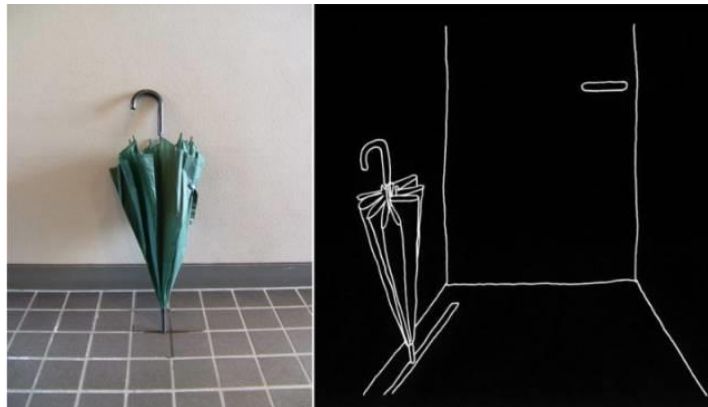

Figure 5: Invisible umbrella stand.

Figure 6: Multifunctional shredder.

Invisible umbrella stand (Figure 5). The umbrella stand designed by Naoto Fukasawa is "Intangible better than tangible". Just dig a small trench with a width of 8 mm and a depth of 5 mm on the concrete floor 15 cm away from the entrance wall. In this way, the person who puts the umbrella will subconsciously use the tip of the umbrella to find the location of this small ditch, and the umbrella can be neatly and naturally leaning against the wall. The design and purpose have been achieved, but the physical entity has disappeared.

Multifunctional shredder (Figure 6). Naoto Fukasawa is always thinking about people's lives. Generally, there are always errors when printing, and there is often no place to deal with papers that are incorrectly printed or typed. The bottom of the printer is directly designed as a device with a waste paper basket, which can smash the waste paper at will, avoiding unnecessary troubles. It is the behavior determines the design.

5. The direction and path of household products mode design from the perspective of unconscious design concept

5.1 Establish the connection between unconscious behavior and product design

The occurrence of human behavior requires the "sender" — human, human complete the behavior process through a certain medium — product, and radiate the purpose of the behavior to the "recipient", and get feedback from the "recipient" to evaluate whether the purpose of the behavior is achieved. It can be seen that the role of the product as a media bridge is irreplaceable.

Le Corbusier's theory "a house is a machine for living" is based on the core essence of mechanical aesthetics. To interpret this sentence with a developmental perspective, we might as well think that all objects are products. "Houses are products for living, clothes are products used to cover or keep warm, transportation is a product use to travel, all man-made objects in the environment where people live can be called products, all human behaviors, whether it is conscious, preconscious or unconscious behavior, it will have a connection with one or some "products" in the environment.

Products are the carriers and media of all human behaviors, and unconscious behaviors are also reflected in certain product forms. The starting point of product design is people, specifically, human behavior, so the study of people's unconscious behavior is an important angle of product design research.

5.2 Putting the mode design methodology into practice

To promote the development of household product design by means of mode design, the research content and objects should be focused on the three elements of "people", "products" and "environment" [10]. The highest state of product design is the coordination of "human-machine-environment". The products created by means of mode design must also be suitable for a certain demand of human beings, and be integrated with the current scene and environment, at the same time, under these conditions, it should play its due role.

5.2.1 People

Observe the subconscious behavior characteristics of people in the home environment from an unconscious perspective, and explore people's deep, potential and core psychological needs for household products [11].

5.2.2 Products

After thousands of years of changes and optimization of human lifestyles, people have adapted to the current lifestyle and home environment. Many product details have unique product semantics, but the existence and use of household products are gradually homogeneous. This kind of design practice should abandon the constraints of traditional forms, innovate the human-computer interaction mode, find out the pain points that people and products do not work well together, and deeply explore the "affairs" behind "things" and the "reasons" behind "affairs ".

5.2.3 Environment

Under different usage situations, scenarios, and conditions, people have different needs, and products should have different forms and even different functions. The innovation of household product design must also define the specific environment and situation of interaction between people and products, and it is necessary to carry out a specific analysis for a specific condition of people getting along with the

home environment.

5.3 Guide life by mode design

In the morphological structure of many existing products, people's cognitive forms are prescribed in existing ways, such as the key arrangement of telephones and computers, the function grouping of electrical control keys, and the opening and storage forms of furniture. Designers use the mode design can guide users to better feel the product. Designers can rely on market analysis, use professional knowledge to discover potential needs in people's lives, design more reasonable products, and guide the public to gradually adapt to a scientific and efficient way of life. The exploration and practice of mode designers can make ordinary products into more reasonable products, thereby optimizing and enriching the public's life style to a certain extent.

The mode design can be used to create a diversified life style, and the mode design enable products with the same purpose to have different realization ways, which have their own strengths, thus providing consumers with more choices. The mode design can be used to create a more humanized product. The humanized guiding ideology enables the mode design to shorten the distance between the product and the person, and more in line with people's usage habits and physical and psychological needs. Every way of life of people may be improved on the original basis, or a new alternative way will be produced, and the relationship between people and products will be more harmonious. Mode design can be used to promote deeper communication between consumers and products. When humanized products enrich people's life, consumers will be moved by the thoughtfulness and comfort embodied. The end user of the product will have more improvement and exploration opinions to provide to the designer, and the product will be better improved in the communication between the designer and the user.

The mode design of household products is considered from the perspective of unconscious design concept, and establishes a connection with people's lives, which aims to guide the design to follow "affairs and reasons" and create more possibilities of life for users. The way design of home products is considered from the perspective of unconscious design concepts, and establishes a connection with people's lives, aiming to guide the design to follow "facts", to create more possibilities of life for users, and to enable home design research. It forms a benign cross and complements with unconscious design concept, design psychology, emotional design, ergonomics, service design, interaction design, user experience design and other fields, so that better design research can be traced [12].

5.4 Innovation for consciousness

Product design should not just stay on the surface, design for the sake design, design for new functions, design for new shapes, design for efficiency, and design for economic benefits, the above motivation is excusable as the starting point of product design, but in the 21st century, with the information explosion, rapid economic growth, and continuous technological advancement, we may have overlooked the nature of human beings, their spiritual world, and their psychological needs. The home environment is the entry point and the most frequent and intimate point of contact with people. In the design of household products. "Design For People" shouldn't just be a gimmick and slogan, and it shouldn't only be designed for "people in the material sense" and "physiological rules and needs of people". Similarly, product design should not only be improved design, should not only design in traditional forms. The design of household products based on unconscious design concept may be able to make this innovation more rational, humane, natural, and designless while changing people's lifestyles, that is "Innovation for consciousness".

6. Conclusion

In the modern society with the rapid development of information technology, home furnishing products are constantly developing in the direction of technological intelligence and humanistic interest. Designers should learn to use the concept of interaction to achieve product design innovation, take appropriate behaviors in a specific environment according to the different needs of specific user groups, and use reasonable design strategies to make the products designed meet people's expectations, and bring the charm of household creative design to the extreme.

Design is indefinite, and art has no standards. There are no universal rules and standards in the design world. Similarly, different consumers have different choices. How to win or be popular among many similar products is the topic that designer and business concern commonly, because the ultimate goal of our design is to benefit mankind, so designer's responsibility is to lead a better, more comfortable and

more pleasant lifestyle. A past era is irreversible and unchangeable, and the memory of time is the deepest. We have no reason not to grasp it properly. The language of industrial designers is the product, and let the product awake the most true emotions in people's hearts.

The incorporation of unconscious design concept into the beginning and end of the mode design of household products is different from common designs that take people's physiological needs and rules as the starting point. In people's home environment, designs that exist due to people's internal needs are easier to enter people's hearts, it more in line with "affairs and reasons", and it give people a reasonable and natural feeling just like it should be, that is"no design"-without deliberate design.

References

[1] Qiu Shipeng (2020). Research on product design based on unconscious behavior-taking lamps as an example [J]. China University of Mining and Technology.
[2] He Tai (2017). Research on the creative design of household products based on the interactive concept [J]. Hubei University of Technology.
[3] Wang Juanjuan (2008). Thoughts triggered by the unconscious [J]. Hunan University.
[4] Pan Xianglong (2020). Elderly reminder pill box design based on unconscious design concept [J]. South China Agricultural University.
[5] Donald A. Norman (2005). Emotional Design [M]. Electronic Industry Press.
[6] Naoto Shenze (2016). Naoto Shenze [M]. Zhejiang People's Publishing House.
[7] Yuan Yanzai (2006). Design in Design [M]. Jinan: Shandong People's Publishing House.
[8] Liu Bin (2020). Analysis of Unconscious Interaction Design in Furniture Design [J]. Nanjing Forestry University.
[9] Liu Jing (2020). Multi-Brand Strategy Management of Product Visual Communication Design [J], Frontiers in Art Research, Vol. 2, Issue 4, pp.11-13.
[10] Fu Tong(2020). Research on overall home design based on unconscious design methods [D]. Donghua University.
[11] Qiu Ye(2020). Research on Aesthetic Design Based on Product Experience Supply Chain [J]. Design Art Research, Vol. 05.
[12] Francois Aubina, Hasmik Atoyana, Jean-Marc Robertb, Tigran Atoyanc (2012). Measuring a product's usefulness, Work 41.