

Exploration and Research on the Design Method of Biomimetic Products Based on Interest

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Abstract: The article analyzes the design of interesting bionic products, explores design methods based on interesting bionics, and conducts case studies. The article takes interest as the starting point to analyze the interactive experience of products in people and product use, as well as the emotional resonance between people and products. The irreplaceability of interesting application in biomimetic product design is analyzed. A interesting biomimetic design method for biological morphology, color simulation, and structural function has been proposed. By exploring interesting biomimetic design methods optimized for emotional desires, a people-oriented design approach is developed that provides new ideas for other designers.

Keywords: Interest; Biomimetic Products; Design Method

Introduction

Nielsen Norman mentioned in “The Theory of User Emotional Pleasure” that reasonable design can meet people’s emotional needs. The source of people’s emotional attachment to products is the pleasure they experience in interacting with interesting products, which in turn brings a sense of satisfaction and participation. Today, it is particularly important for interesting products to meet people’s spiritual and emotional needs. The slogan of people-oriented design signifies that products pay more attention to consumers’ emotional factors than ever before. Some emotional designs that convey humor, humor, and storytelling are not worth enumerating.

1. Interesting Bionic Product Design

There are three main types of fun emotions: pleasure, anticipation, and surprise. Humanization of inorganic objects in biomimetic design makes it easier for consumers to accept and generate pleasure; When a new product is recognized and accepted, consumers have an uncertain interpretation of the product, which can generate excitement and anticipation, leading to associations; Compared to being commonplace, novel things attract consumers’ attention more, so interesting biomimetic designs are more likely to bring unexpected surprises to consumers. Designers collect these emotions and establish a virtual experience model centered on consumer emotional interaction during the design process, forming a positive reference channel in design and redesign, making the product an organic combination with rich emotions.

Steven Bellingham stated in “The Essence of Users” that “interest is the most humanized, direct, and interesting factor in designing products.” Therefore, a good product is not “boring”, and the most effective way to reflect interest is through bionic design.

1.1 The Fun Expression of Biomimetic Products

Emotional design is a creative tool aimed at expressing emotions, and consumers expect more emotional value from products. Therefore, the superposition of multiple emotions in design has become a core challenge faced by current designers. Donald Arthur Norman proposed in “Emotional Design” three levels of product design: instinct, behavior, and reflection. The instinctive level provides sensory stimulation through the intuitive and objective existence of the design object, making people feel the emotions of the design object itself; The behavioral level brings emotional experiences through the function of designed objects in human use; At the reflective level, users establish deeper emotional bonds through their use of design objects, making them a deeper emotional carrier and representative for users. The fun in this design also stems from three levels:

Get fun from the product. At present, people’s emotional needs are increasing day by day, and the market has put forward higher requirements for designers. Designers focus on the natural world, assigning objective information elements such as interesting shapes, colors,

and textures to the design objects, allowing consumers to stimulate their senses and exchange emotions through interaction with products.

Get an interactive experience during use. As the creator and first user of a product, design should focus on its functionality, comprehensibility, user psychological and physical perception, and consider its behavior and feelings from the user's perspective, so as to cleverly incorporate interesting emotions into the operation and usage of the design, rather than designing cold and rigid functional machines. In this way, users can immediately feel the fun and emotion conveyed by the designer during use.

Create emotional resonance with the product. Designers inject anthropomorphic emotional ideas into products, using biomimetic products as emotional bonds to convey to users, resulting in an emotional interaction between designers, design objects, and users. Designers and users bring a variety of interesting emotional experiences when designing and using products. These emotions rarely appear alone and are always distributed at two to three levels to stimulate users' emotions and achieve the emotional value of the product.

1.2 The Characteristics of Interesting Biomimetic Products

Biomimetic product design is a concrete manifestation of imitating nature and is a tracing of the beauty of nature. Interesting biomimetic products incorporate fun emotions into the design itself, so design objects often have the following three characteristics in the general design process:

Borrow form and express nature. Form and shape are the most direct expression factors of a product, and designers usually express their characteristics by imitating objective forms in nature when expressing interest. This is quite similar to the ancient concept of creating objects and taking images. Using the most direct sensory design to express specific forms to meet the emotional needs of different consumers, making interesting biomimetic designs natural.

Borrow colors and blend them into nature. Everything in nature has its relative uniqueness. Interesting biomimetic design incorporates the emotional colors given by nature into the design object, which is one of the most touching design points for consumers. Through the natural sense of interest in the design object, consumers trigger associations to drive interesting emotions, forming a cognitive understanding of the color image of the design object.

Borrow functions and adapt to nature. Most biomimetic products have clever and interesting structures and functions, with interesting emotional use and operation functions superimposed on the products, allowing people to relieve stress in labor and life, mobilize a sense of familiarity and joy towards the products, and are favored in terms of consumption demand and frequency of use.

2. Exploration of Design Methods Based on Interesting Biomimetics

2.1 The Necessity of Designing Interesting Biomimetic Products

The current industrial process is constantly accelerating, and industrial products are dry and mostly "air-conditioned" that keep consumers away. Consumers crave warm and emotionally appropriate designs. In the design process, attention should be paid to reducing the cold atmosphere of the product according to practical needs, enhancing the human touch and fun of the product, and making it fit human emotions.

2.2 Exploration of Interesting Biomimetic Design Methods

Nature is like a huge treasure trove of design, and adopting these natural forms of design is interesting and lively. It can be seen that bi-omic product design is a presentation of "imitating nature", which summarizes natural objects into general natural forms and combines practical functions and structural design. Interesting biomimetic products can provide consumers with multidimensional emotional sensing, and in the interaction, consumers capture these emotions to generate interesting emotions such as pleasure, anticipation, and surprise.

Interesting biomimetic designs can provide consumers with a humorous and humorous psychological experience. Designers need to maintain curiosity and sensitivity towards the things around them in order to use divergent thinking to add a sense of humor and pleasant usage emotions to biomimetic products; In addition, natural materials, colors, textures, etc. are used to create a product's affinity, giving

consumers a sense of trust and belonging during use. This kind of friendly design is also consumers' expectation for fun; Finally, designers should cleverly combine functionality and operation with appearance design, closely follow the way consumers use the product, and constantly give consumers a strong and trendy surprise, in order to catch their attention and not fall out of style.

Three specific techniques can be used during the process:

Interesting biomimetic biological forms. According to the degree of simplification and generalization of biological forms in nature, they can be divided into concrete and abstract forms. The former can relatively fully reproduce the morphological features of natural objects, but this process is not a mechanically imitated imitation. In "Wen Xin Diao Long Kua Shi", it is recorded that "praise with reason and evidence, appropriate decoration". In most cases, the physical characteristics of biology are used to optimize the appearance of the entire product and appropriately add or subtract application functions, achieving exaggeration and moderation, decoration without fabrication, which can increase the fun of the product design, It can also ensure the uniformity of product aesthetics and practicality; The latter is a simplified summary of natural objects, exploring common images, and fully utilizing associative thinking to create a second reality biomimetic product. It forms a fierce confrontation with reality and gives people an alternative creative beauty. This kind of appearance is full of mystery, which will bring consumers anticipation and unexpected interesting emotions.

Interesting color simulation biomimetic. Color is the strongest source of information in life. The natural colors in nature can intuitively and easily evoke emotional resonance, meeting people's interesting aesthetic needs.

Interesting structural and functional bionics. Designers observe certain structures and functions of natural objects to create associations, imitate and apply them in similar product designs. The structures and functions of these designed objects are mentioned and understood by users when using the product, triggering joy and anticipation for the product and natural objects.

3. Conclusion

Nature is an important source of bionic product design, providing infinite reference for designers. When designing and creating objects, designers should distinguish between the subordinate relationship between the designed object and the natural object. The design elements should be taken from nature, detached from nature, and the design theme should be clearly defined. Interesting emotions should be used as a design benchmark for quantitative judgment when we are designing, which can help us quickly complete the design.

References

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