

Research on innovative design of Changsha kiln ceramic toys

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Abstract: This paper focuses on the characteristics and development strategies of Changsha kiln ceramic toys. Through the collection, sorting, extraction and analysis of the modeling characteristics and flower and bird pattern elements of Changsha kiln ceramic toys, we can fully tap the potential of Changsha Kiln Ceramics, and study the innovative design methods of Changsha kiln ceramic toys. Thus, the innovation of Changsha kiln ceramic toys can better highlight the cultural characteristics of Changsha kiln, highlight the regional characteristics, and build its cultural brand. Finally, it will add new vitality to the innovation of Changsha kiln children's characteristic toys and promote the development of cultural and creative industries.

Key words: Changsha kiln; Ceramics; Toys; Innovative design

Changsha kiln is a commercial porcelain kiln with civilian culture, which rose in the Tang Dynasty. The four innovations of Changsha kiln, which are different from other kilns, are stencil decals, kiln glaze, unique utensils and colorful underglaze colors. As a treasure of traditional culture, Changsha kiln is also a very important part of Hunan culture. The innovation research of ceramic cultural and creative toy products has become one of the important means to carry forward Changsha kiln culture, which can effectively solve the serious problem of product homogeneity in the process of ceramic toy research and development. The ceramic characteristics and decorative patterns of Changsha kiln are influenced by Chinese and Western culture. The variety is rich and colorful, and has unique cultural and artistic value. Its shape and elements can be refined as the design materials for the innovation of modern ceramic toys.

1. Development history, current situation and market space of ceramic toys

1.1 development history of ceramic toys

Since ancient times, ceramics, as part of the excellent traditional Chinese culture, has played an indispensable role and influence in the 5000 year history of China. However, as a traditional craft in China, ceramic production has a large number and variety in China. As early as the primitive society, China's ceramic toys had begun to develop. During the Xia, Shang and Zhou dynasties, glazed hard ceramics began to appear. Its main characteristics are that the body is hard, slightly grayish white on the whole, the glaze is cyan, slightly brown yellow. Ceramic toys are still the main body of most ceramic toys. After entering the Eastern Han Dynasty, ceramic toys have made great progress in design and production. During this period, with the popularity of commodity exchange, ceramic toys have also become a commodity, but the overall appearance of ceramics has not changed much. During the Wei, Jin, southern and Northern Dynasties, the manufacturing process of celadon gradually matured, and the porcelain clay began to become more exquisite, exquisite in technology, smooth in glaze, and rich in color. Its ceramic toys are completely different from the previous single color, and more diverse in form, but the price is very high, and are enjoyed by children of noble families.

In the Sui and Tang Dynasties, after the emergence of white glaze, Tang Tri Color and other coloring methods, the market exhibition was greatly promoted, and ceramic toys were more beautiful. Changsha kiln also appeared at this time, with interesting and exaggerated shapes, and was deeply loved by the public. There are numerous ceramic toys unearthed from Changsha kiln. Most of them use flowers, birds, fish, insects, birds and animals as the creative theme of the old ceramic toys of Changsha kiln. Changsha kiln ceramic toys have novel shapes and various playing methods. Even in modern society, many ceramic toys are refreshing and unique.

1.2 development status and market space of ceramic toys

During the 1970s and 1980s, many traditional crafts were seriously damaged, and because the production efficiency of ceramic toys was too low, the shortcomings of ceramic toys were exposed in this turbulent society. At the same time, a large number of foreign toys poured into China. In the face of new and fashionable foreign toys, a large number of Chinese traditional toys were gradually forgotten by the public. It was not until the late 1990s that the United Nations issued the relevant policies of "intangible cultural heritage protection" that these traditional toys were picked up by the public again. Chinese ceramic toys once again appeared in the eyes of all sectors of society and were listed as national protection units. With Jingdezhen as the center, many ceramic art studios gradually began to appear. In the combination of modern culture and ancient production technology, consumers were allowed to invest in the fun of making ceramic art, thus gradually forming the trend of ceramic toy DIY. With the popularity of fashion toys and blind box toys, and toy innovation in combination with regional culture, the ceramic toy market has a huge development space.

However, with the development of today's ceramic product market, especially the rapid development of toys and their derivatives around museums such as the Forbidden City, cultural and creative products have made great achievements today. As a subdivision of cultural and creative products, ceramic toys are also one of the means to guide the public's interest in traditional culture, attract children and carry forward traditional culture. In order to carry forward the Changsha kiln culture and integrate it into the public view, the best way to spread the culture is to design Changsha kiln ceramic toys that are in line with children's aesthetics, interesting and rich in functions.

2. Characteristics of Changsha Kiln Ceramics and innovative design principles of ceramic toys

Changsha kiln rose in the middle and late Tang Dynasty (618-907 AD). It pioneered the firing of high-temperature underglaze colorful

porcelain and established its position as the originator of the earliest firing of high-temperature copper red glazed porcelain. In its heyday, Changsha Kiln porcelain spread all over Asia and as far away as Africa. It was exported to 29 countries and regions. Through water transportation, it opened up a “maritime ceramic road” to South Asia and North Africa. Since the discovery of Changsha kiln in 1956, the number of cultural relics unearthed from Changsha kiln has exceeded 10000, and a large number of cultural relics of Changsha kiln have been unearthed in Changsha, where the kiln is located. Changsha kiln is famous for its unique underglaze color technology, foreign style Decal patterns, diversified decorative patterns and poetry titles. In terms of decoration and patterns and colors, Changsha kiln is also diverse. There are various patterns and decoration forms, such as engraving, engraving, engraving, plastic piling, mold printing, decals, color painting, etc. the materials are all exaggerated, reflecting the simplicity and boldness incisively and vividly. Its unique style has rich artistic and cultural value.

Then, when we carry out the innovative design of Changsha kiln ceramic toys, we should follow the following principles:

2.1 safety design

Safety is the primary principle of all toy design, which should also be followed in the process of innovative design of Changsha kiln ceramic toys. For the innovative design of Changsha kiln ceramic toys, we can consider using smooth structure or adding synthetic ceramic materials to increase the toughness of ceramics to improve the safety of ceramic toys, so as to ensure the safety of children when using toys.

2.2 interactive design

In the innovative design of Changsha kiln ceramic toys, it is necessary to consider that children can feel the happiness of interaction between people and objects after touching ceramic toys, can't help but carry out further exploration, and can achieve the communication between people and objects in the process of operation, so that the significance and original intention of ceramic toys can be realized in a certain sense.

2.3 cultural design

One of the most important points in the innovative design of Changsha kiln ceramic toys is its cultural connotation and the spread of its culture. The same is true for the innovative design of Changsha Kiln Ceramic toy products. At present, most of the products around Changsha kiln extract surface characteristics as design elements, such as words or images. The lack of innovative design that extracts the cultural roots of Changsha kiln may lead to the loss of the most important value of cultural communication, and ultimately lead to the inability to meet the spiritual needs of consumers, It is difficult to arouse people's cultural memory of Changsha kiln and children's interest in Changsha kiln culture, and it is also difficult to spread culture. In the design of Changsha kiln ceramic toys, we should understand the one-sided limitations of absolute culture and avoid the emergence of low-level products. To sum up, the innovative design of Changsha kiln ceramic toys also reflects the cultural status of a thing to a certain extent. For Changsha kiln ceramic toys, the cultural nature of the ceramic toys also refers to the history of Changsha kiln and its historical products, reflecting the culture of Changsha kiln production process and users' living conditions at that time, which is the crystallization of ancestors' wisdom. The innovative design of ceramic toys, culture is its soul. In the innovation of Changsha ceramic toys, the core focus should be to fully explore the connotation and laws behind the cultural elements, fully explore the internal links behind them, and finally design a simple and modern Changsha kiln ceramic toys without losing the cultural connotation by combining the use of modern techniques to convey the spirit of things and borrow things from feelings.

3. Research on innovative design method of Changsha kiln ceramic toys

3.1 construction of design semantics

From conception to the establishment of a practical implementation scheme, it is clear that product design is based on functionality, communication design is based on semantics, and environmental design is centered on space. However, one of the biggest features of toys is playability, so playability, as the fundamental function of ceramic toys, is also the semantics of ceramic toys. It is this feature that distinguishes Changsha Kiln Ceramic toy products from other Changsha kiln souvenirs. The significance of cultural and creative products lies in its playability, which is mainly reflected by viewing and playing methods.

Under the good trend of continuous development of cultural and creative products, scientific design semantics can better define cultural and creative products

The visual image of the product will convey a more symbolic form to users, improve the design level, and conform to the mainstream aesthetic situation. Therefore, the playability of ceramic toys should be constructed. For normal children, ceramic toys with only ornamental value but no playability will be attractive. Nowadays, the consumer values of the public have changed, and the same is true for children. Only toys that are more playable can be loved by children. However, in the process of repeated use, on the one hand, it can increase the fun duration of ceramics and prolong the use time, on the other hand, it can enhance consumers' fun consumption of culture and make culture and our life closer and closer.

Therefore, it is also necessary to pay attention to the expression of playability when designing the ceramic toy production of Changsha kiln. Nowadays, the public's preference has gradually shifted from luxury to simplicity and practicality. You can try to design some ingenious designs to make Changsha kiln ceramic toys natural and beautiful without losing their playability.

3.2 application of Design Semiotics

As an innovative ceramic toy of Changsha kiln, it is necessary to enter the modern society and combine cultural and creative products with semiotics, so that it can be used. It is an indispensable way for ceramic toys of Changsha kiln. However, the symbols of Changsha kiln ceramic toys can be extracted from their patterns, which have obvious characteristics, vivid patterns and smooth lines. Therefore, we can

simplify, refine, innovate and visualize these pattern elements, so as to obtain the unique symbols of Changsha kiln ceramic toys, and lay the foundation for the innovation of Changsha kiln ceramic toys.

3.3 add high-tech elements to echo with information technology

With the development of science and technology, all kinds of high-tech and black technology have attracted more and more children's interest, especially when combining historical objects with high-tech, it can stimulate children's curiosity. When designing Changsha kiln ceramic toys, we should also keep up with the pace of science and technology, and combine with various high technologies, which is also a good innovation way of Changsha kiln ceramic toys. For example, AR painting technology can be used to let children design their own Changsha kiln patterns and 3D print their own toys. While drawing patterns, children can not only learn the cultural history and cultural characteristics of Changsha kiln, but also increase the interaction with ceramic toys. However, because each painted product is unique to every child, Therefore, it can also leave unique commemorative significance and collection value in the hearts of children, which can be described as killing three birds with one stone.

4 Conclusion

To sum up, the key to better innovative design of Changsha kiln ceramic toys lies in the understanding of the cultural connotation of Changsha kiln and the extraction of elements, while also taking into account the safety, entertainment, functionality and aesthetics of ceramic toys. The current Chinese excellent traditional culture needs our new generation of youth to inherit and develop. On the road of future design, as designers, we should not forget our original intention, forge ahead, realize the collision between modern innovative thinking and traditional culture, and design truly excellent toy products.

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