

Research on the Design Status of Jingdezhen's Daily Marbled Pottery Ware

Zhaojing Wang^{1*}

¹ Luxun Academy of Fine Art/Arts and Crafts, Research on Molding and Performance of Ceramic Materials, Dalian, China

Email Address

550404926@qq.com (Zhaojing Wang)

*Correspondence: 550404926@qq.com

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Abstract:

The content of this paper is based on the present stage of daily nerikomi vessel market of Jingdezhen, which is based on the on-the-spot investigation and the data analysis of the survey in Jingdezhen by the author of this article. From the design of the vessel to the productive process of the existing nerikomi vessels on the market can make contribution to the present stage of nerikomi vessels's design. This paper starts the present social and economic environment to analyze the advantages and disadvantages of the product about the design, and think deeply about the development of science's and technology's influence on the manufacturing ceramic products. This paper summarizes the design status of Jingdezhen ceramic marbled pottery ware products, and makes feasible improvement suggestions according to the advantages and disadvantages of the existing ceramic product. So the paper has certain guiding significance for the marbled pottery production and the development of the design of Jingdezhen's daily marbled pottery ware.

Keywords:

Nerikomi, Marbled Pottery, Ceramic Design

1. The Concept of Modern Design

At the launch of the Good Design Movement in Japan, the initiator, Hamaguchi ryuichi, gave an explanation about the modern design: "Good design works are beautiful in form and ease to be used in the human being's daily life." Design, of course, is not necessary for basic human survival needs, but it must be able to provide spiritual pleasure for human survival, make contributions to the human happiness of spiritual food. Design, instead of become a kind of commercial tool, it should be the ancient representation in the modern life, should be tangible to show the intangible future of human activities. The difference between traditional design theories and modern design theories is the latter takes modernism theory as the central idea throughout the whole design activities, modern design aims to put emphasis on getting rid of the shackles of traditional forms and boldly create a design that adapts to the process of modern industrialization, which is a design activity with distinct rationalism and radical views. In order to cater to the development needs of modern society and express the rapid development process of modern society, modern

designers in today's life should pay more attention to these aspects when designing products. Basing on functionalism, the designer should design products with formal aesthetic feeling and adapt to industrial survival. Looking at the current market of marbled pottery ware, a higher degree of industrialization has ignored the design of the products, only pay attention to output of the products; in other case, the hand-made ceramic products only made by some craftsmen , who have aesthetic taste to design but have difficulty in industrializing their products. There are still some reality factor to restrict output of the product, reality factors need to be adjusted in order to get better development in the future.

2. Brief Introduction of the Craft of Twisted Colored Body

The craft of twisted porcelain is a traditional Chinese decorative craft of ceramic. as discussed where [1], at the beginning of the technology, two or more kinds of clay were twisted into mud pieces, which were overlapped, twisted, sliced, spliced, extruded and twisted into textures in regular. At the end, it presented the beauty of "like flowers everywhere, like pretty brocade, with many round lines and varying shades on it". as discussed where [2], Huangye kiln in Gongyi, Henan province and Baihe kiln are the most representative kilns at that time. In the meanwhile, Quhe kiln in Dengfeng, Yaozhou kiln in Tongchuan, Yue kiln in Shaoxing and other kilns also produced maebled pottery, which reached its peak in Danyangyu kiln lied in Henan in The Song Dynasty. In ancient times, nerikomi ware was overwhelming for practical use, like jewel box or pillow and some of them were used to buried with the dead to stand for the dead's social status. At that time, the wrap-around pattern of nerikomi was mainly made to imitate the pattern of lacquer and wood. The pattern types mainly included feather pattern, weave pattern, chrysanthemum pattern, water ripple pattern, quicksand pattern, and category pattern, which were complicated and delicate and full of beauty (Figure 1).



Figure 1. The work of ogata kaorimicio.

At present, the craft of marbled pottery has also developed in the decoration and molding way, in fact, we have to pay more attention on the design, as pointed by Dai [3]. Ceramists and ceramic product designers integrate the color and plane composition of modern design into the twisted colored body's pattern design. The appearance of high temperature color agent used in ceramic also makes the choice and use of color of wring more possible. With the development of social politics and economy, the emergence of new science and technology has also contributed to the development of marbled pottery. However, as far as the market of Jingdezhen daily marbled pottery ware is concerned, although there appears some improvements and innovations in patterns or shapes, on the other hand, it is still stuck to the traditional molding way, which limits the development of marbled pottery products to a certain extent. At present, there are also some modern methods for production. For example,

with the help of mold and 3D printing technology, the design of the production process should also be considered in the design of marbled pottery ware products, because the production process of marbled pottery ware will also have a great impact on the shape decoration and yield of the final fired products. According to the field investigation in Jingdezhen, daily marbled pottery ware accounts for a relatively small proportion in Jingdezhen ceramic ware market, and is sold mainly in Letian Market, Taoxichuan art center and individual and artist studios which located in Sanbao Ceramic Art Institute at Jingdezhen. In Jingdezhen, most of the existing daily-used marbled pottery ceramic vessels are made by traditional marbled pottery technology, which is low in efficiency and has certain limitations for the development of marbled pottery daily-used vessels.

3. Design Status of Marbled Pottery Ware Products

3.1. Categories of the Existing Product

3.1.1. According to the Forming Method Classification

According to the molding methods, the existing marbled pottery ware can be divided into throwing molding, grouting molding, impressing molding and 3D printing used by clay-strip forming technique. The products produced by different molding methods have their own different characteristics. It is easy to identify the marbled pottery vessels produced by clay molding machine. The pattern of vessels is the spiral horizontal lines. There is another way to make the colored clay body by throwing a vessel first and then scraping or drawing the texture with a cutter after the clay body is slightly dry to reveal the pretty changes of the twisted colored clay parts in the mud. The advantages of this production method of throwing forming is high efficiency, the clay body is not easy to crack when waiting for it dry, whatever the disadvantage is that the change in the mud is lackless and easy to become monotonous. Injection molding is the use of colored slurry, in this way by using the mud in the state, the liquid mud form a cascade flow pattern, it preserves the way mud flow, this way of molding relies on the author's aesthetic and the way it was made has greater influence, although they are not very difficult to make molding and not easy to crack when drying, but the color matching of mud and mud flow form adornment path needs to be designed by the designer, but at present, it can still be regarded as a very efficient way to produce twisted colored clay products and produce ceramic products with aesthetic feeling. Impressing forming is the best way to retain the pattern clay sheet made by small muds. Splicing small clay sheet to make twisted colored clay pattern is the traditional method of making marbled pottery. In this way can give full play to the advantages of twisted colored clay on the pattern, but the disadvantage of it is that the production cycle is too long and the process is really complex and easy to crack. Ceramic technology of 3D printing is a combination of new technology nowadays and traditional craft collision, the 3D printing technology print colorful clay strip also is relying on scientific and technological strength to manufacture process sequencing, using the computer to make the good mold for production, on the production process can be even out of artificial work, but in this way of producing marbled pottery ware cost is higher, more important is that there are limits to the pattern design, but it can make some special moulds that are difficult to made by human hand, with extreme precision. Different molding methods have their own different advantages and disadvantages, but nowadays these forming methods only represent the current technology of ceramic, which can be combined and flexibly used

in the ceramic design and production to improve the production efficiency, aesthetic degree and yield rate of marbled pottery ware, so that technology does not become a hard problem that restricts the development of marbled pottery ware products.

3.1.2. According to the Decoration Method Classification

The public's understanding of twisted colored clay is based on the cultural ceramic relics handed down from the museums or the products of uneven quality on the Jingdezhen's ceramic market. The twisted colored clay made by the ancient people were decorated with the mixed clay patterns of splicing and kneading, and the texture on the clay produced by the marbled pottery was very decorative in terms of transparent glaze or no glaze. In today's life, in Jingdezhen's daily marbled pottery ware market, there are glaze with a certain covering power or light color with twisted colored clay, so that the clay part is combined with the glaze to form a semi-covering effect. However, if this kind of decoration is not easy to be mastered, it is easy to make the glaze dominate in expressive force, ignoring the twisted colored clay part. In Jingdezhen ceramic market there is also a part of the products with high temperature colorants made of porcelain clay and with different colors of clay kneading without glaze plain pottery wrung porcelain ware. The twisted plain pottery is different from the delicate porcelain, but the crude production is primitive and has a special flavor. Some producers will use glaze inside the vessel, but retain the plain pottery texture without glaze on the outside in order to get some comparison. Some existing marbled pottery wares in Jingdezhen are decorated with the combination of twisted clay body and texture. This decoration technique cleverly retains the texture beauty of wringing and adds the texture of mud to make the decoration of wringing more ornamental. The production of the texture part can be made by beating or cracking produced by spraying gun or retaining the texture formed by pressing gauze.

3.2. The Advantages of Existing Marbled Pottery Ware

3.2.1. Traditional Crafts Participate in the Modern Design

The twisted colored clay craft originated from the Tang Dynasty. The craft is really complex and the rate of finished products is low, so the number of twisted colored clay handicrafts handed down is low compared with other kind of ceramic handicrafts, resulting in the public's insufficient recognition of it. But there is no doubt that the technology of marbled pottery ware is a part of China's intangible cultural heritage. as time goes by, science, technology and economic are developing.as pointed by Kinggery,W.David. [4], people cannot be divorced from the development of the times, more important is that they cannot be divorced from history and national culture, learn from the traditional cultural inheritance and development of traditional craft is also more important. The development of industrialization makes products similar and impersonal. People begin to reflect on the diversity and inclusiveness of design, especially in China, a country with a long and profound history, which is exactly the advantage endowed by the historical nation. Design itself is a process of seeking balance between history and time, which is exactly what we need to grasp in design. As discussed where [6,8] in the current marbled pottery daily ware products market of Jingdezhen, a part of the ceramic producers who grasp this point is really good, such as Zhu Chen's work- the sea moon cup. Because the traditional twisted colored clay is limited by some historical factors, the pattern of the products is mainly plant pattern, and the use of color is relatively limited, but in today's life can rely on high temperature colorful agent to give out color, the appearance of the high temperature

colorful agent solves this problem. Zhu Chen's work use the traditional twisted porcelain process to make dynamic wave patterns, and the color of the pattern is full of new ideas. The twisted pattern is combined with the traditional shape of the lamp, which is a combination between traditional and modern, and it is highly aesthetic.

3.2.2. Accord with Modern Market Demand

With the economic development of modern society and the popularization of the public education, people's needs have been changing, people pay more attention not only to the needs of survival, but also to the spiritual needs, as discussed where [5,7]. The rise of aesthetic consciousness increases people's demand for beauty. The purchase of ceramic utensils is not only to meet the functional needs, the rise of the quality of life makes people have certain requirements for the quality of ceramic daily utensils. Rich aesthetic ceramic vessels are also stand for the buyer's unique aesthetic taste and social status. As the embodiment of China's intangible cultural heritage, Chinese history and culture, the craft of twisted colored clay for daily use has huge developmental potential and potential development market. At the same time, ceramic product designers also need to integrate the functional needs of modern people into the design of ceramic products. At present, the market of Jingdezhen marbled pottery daily utensils is not saturated, and it is in a favorable time and environment for the development. For example, the existing twisted clay coffee cup can satisfy the using needs of modern people in function, and also begin to draw closer and closer to the modern society in the decoration of the pattern and color matching.

3.3. The Disadvantages of Existing Marbled Pottery Ware

3.3.1. The Quality of Products is Uneven

The way which existing product are sold in Jingdezhen is mainly by The Pottery Workshop Market, shops, retailers and integrated stores, and the quality of the twisted colored clay vessels on sell is uneven, this can sometimes lead disorderly markets, as Maris pointed [9]. The Pottery Workshop Market and a small number of ceramic integrated stores sell nerikomi products of better quality but higher prices. In the meanwhile, a large number of nerikomi vessels made and sold through factories are mainly made just by mixing several kinds of clay and then molding in the way of throwing, which can be highly efficient but there are no new ideas and no sense of design. But such a number of this kind of marbled pottery daily ware products in the Jingdezhen market occupy a large proportion, because of using one of crafts of twisted placenta and have lower price of the production process let it become the first selling choice for the retailers, but the pattern on it is too simple and the color on it is a little boring. In this way, it's easy to give consumers a negative impression about marbled pottery, even more it will affect other marbled pottery vessels to sell, it will be harmful to the development of marbled pottery ware products. The quality and price of different products vary greatly. Designers should open their minds in the process of designing products. The traditional marbled pottery production process contains a variety of decorative production methods such as full wringing, half wringing, the patch wringing and glaze wringing. There are also different kinds of molding methods, clay sheet forming and throwing and so on, the pattern of the twisted caly part also has geometric pattern and botanic pattern. For example, artist Lydia Johnson's twisted tire product has a strong sense of color and geometric figure, and she experimented with nearly 100 types of colored mud to achieve the harmonious and vivid colors. In the design of color matching and decoration of

twisted clay pattern, the designer should also try to do more experiments to find the most suitable way and method to realize it. Innovation not only need to be reflected in the way of making, but also the designer need to pay more attention to the design of nerikomi on molding method, color, decoration and firing, nowadays many twisted colored caly artists also using the effect of firing as decoration, such as twisted colored clay artists, Barbara Gittings, (Figure 2), the firing way of her work is different from the traditional way of firing. when her work reach the set temperature during firing, she will put the work out of electrical kiln in to a metal vat, the burning of newspapers and other inflammable goods will give the work the traces of smoke, which adds a unique decorative meaning to the works.



Figure 2. The work of Barbara Gittings.

3.3.2. Industrialization of the Product is Insufficient

In Jingdezhen's ceramic market, some existing marbled pottery products (selling ways including online and offline) have well-designed products with complex handmade processes and long production cycles, resulting the price of the product is high, which limits a part of consumer groups. The purchasing group is limited to those who know about and understand nerikomi ware, take the quality of life into consideration, and have a certain aesthetic value. They are willing to pay a premium for the product and have a certain economic ability to afford it. However, their purchasing capacity is limited, and the limitation of consumer groups has a negative effect on the production. As the product demand is without growth, the production of marbled pottery ware completely depends on manual production, and it is difficult to get further development.

In the development of marbled pottery ware in the future, it is necessary to pay attention to the inherent cultural attributes of twisted colored porcelain, integrate cultural and historical connotations into product design, as discussed where [10,11], and seek for cultural resonance between products and people, by doing this to increase consumer awareness, and expand the target consumer group. Modern design appears under the background of procedural progress and standardization in the great industrial era. The high economic returns mode of industrial production has a great impact on traditional manual aesthetics. Mass production are made with lower cost meet the people's living needs. However, with the change of the times, the phenomenon of the convergence of design caused by the process of industrialization intensifies make people begin to reflect on the diversity and inclusiveness of design. It is impossible for people to be divorced from history and culture, especially for a diversified country like China, whose rich cultural heritage is the source of inspiration of design. Function is not the only factor that determines the external characteristics of a product. If people want to achieve sustainable development, certain cultural

connotation is a powerful power to support it. Design itself is a process of balancing tradition and modernity, and the designed products should also serve the public.

4. Conclusions

This article is based on the field investigation and literature research in Jingdezhen, it is concluded that the design and product quality of the marbled pottery daily utensils in Jingdezhen are uneven at present. The nerikomi utensils made by artists and factories are divided seriously, each of which has its own advantages but also has corresponding problems. In terms of design, more attention should be paid to integrating modern design into the product design process, which conforms to the aesthetic and functional attributes of modern people. In terms of color matching and pattern design, ceramic designers also need to conduct more experiments and attempts to achieve innovative development. At the same time, it should also adapt to the development needs of the new era, and add industrial steps to replace manual labor in the production process, so as to improve the output and realize the sustainable development of marbled pottery daily utensils.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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