

A Study on the Design of Cizhou Kiln Ceramic Pillows in Song and Yuan Dynasties in China

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Abstract

Pillows are a kind of essential bedding in people's lives. Chinese people had a history of using pillows for more than 2000 years. Normally, pillows are made of cotton, silk or other soft materials, but in the Song and Yuan Dynasties which lasted more than 400 years, hard ceramic pillows became prevailing. It is not only a daily article, but also a kind of art that conveys rich cultural connotation and historical information. This study takes the collection of 57 pieces of ceramic pillows produced in Hebei Cizhou kiln in the Song and Yuan Dynasties as the research object, conducts design analysis and qualitative research on the shape and decoration of ceramic pillows, and excavates the internal reasons why ceramic pillows were prevalent in this period. The study found that the popularity of ceramic pillows in Song and Yuan Dynasties was related to the warming of the climate, the change of social class and the reasonable product design of ceramic pillows themselves. This research provides inspiration for contemporary designers to better inherit and innovate traditional designs.

Keywords: Ceramic pillows, Song Yuan, Cizhou kiln, design features, innovative tradition

I. Introduction

Pillows are common bedding in people's lives. Modern people like to use cotton, down feather and other soft materials to make pillows, but in the ancient China, hard porcelain pillows had a long history. Song Yuan period is the golden period of porcelain pillow development, when well-known kilns throughout the country, including Hebei Cizhou kiln, have fired a large amount of hard pillows. Amongst these products, Hebei Cizhou kiln was best known for its unique characteristics, by combining Chinese calligraphy and painting, recording profound information of the times, which had contributes to its research significance.

Ying, T, starting from the perspective of history, culture, modeling, decoration and other aspects, launched a macro examination of ancient Chinese ceramic pillows. He believes that, by analyzing the ceramic pillows, we can not only understand the ancient Chinese ceramic industry, have a glimpse to the social customs and conventions of that time, but also learn the thoughts, emotions, wishes and pursuits of ancient Chinese [1]. Yonggang Wang focuses on a piece of his collection of Ceramic Pillow and Crabapple from a technical and aesthetic perspective [2]. Xin, Chen, on the other hand, restores the process of making ceramic pillows in Cizhou kiln, which is divided into four steps: making clay, bonding clay, applying decoration, and firing [3]. Boyang, He introduces the shape, color, materials and craftsmanship of the 3 tiger-shaped ceramic pillows [4]. Shilei & Wang Xing Wang pay attention to 14 porcelain pillows representing Yuan Zaju, and research on the relationship between painting art and Yuan Dynasty drama art reflected in porcelain pillows [5].

As these mentioned above, we can find that the current studies of ceramic pillows are rather introductive, which can not reveal the fundamental reasons of their prevailing. And this is exactly the focus of this paper. By studying into the function, shape, decoration, cultural connotation, the production and the use of ceramic pillows, this paper

devotes to restoring the research to the historical scene at that time, to explore the ancient design concept, and inspires modern innovative design of traditional objects [6-8].

II. Materials and Methods

2.1 Materials

This study collected 57 pieces of ceramic pillows produced by Cizhou kiln in the Song and Yuan Dynasties of China as research objects [9]. Through the collection of museum exhibits and the inspection of archaeological publications, we found a list of cultural relics and excavation reports, a total of 132 pieces of porcelain pillows [10]. Subsequently, 57 samples that met the requirements of the study were further screened according to the criteria of origin, kiln, age and degree of equipment defects [11].

2.2 Methods

This paper adopts methods of literature retrieval, graphic quantification, technology and morphological data statistics, to categorize ceramic pillows in typology, and restore the Cizhou kiln ceramic pillow products as truthful as possible. According to the different shapes, ceramic pillows can be divided into 6 categories: Ingot shape, Leaf shape, Octagonal, Ruyi shape, Bean shape, animal shape, while for their different patterns, there are three kinds: plant patterns, animal patterns, child patterns [12]. Then anthropology, history, economics, folklore and other disciplines as the basic perspectives are introduced, to place the production of ceramic pillows in their natural geographical conditions, and the original circulation of ceramic pillows at that time, to conduct a five-dimensional analysis from its history, function, shape, decoration, cultural connotation [13].

III. Results

3.1 The history of Cizhou kiln ceramic pillows

Cizhou Kiln was the most famous non-governmental kiln in Northern China in ancient time, which is located in Fengfeng Mine and Ci County at present. According to the detection, this place reserves more than 10 million tons of Da-qing clay, known as the raw material for porcelains, and is easy to be exploited. Meanwhile, this place is next to the Zhang River and Fuyang River and is particularly rich in fuel coals and piebald stone, a kind of mineral pigments. These natural resources all provided prerequisites for ceramics production. Therefore, in Sui and Tang Dynasties, Cizhou Kiln started to fire porcelains which were covered with white engobes, and the techniques of manufacturing were very mature. Till the Song and Yuan Dynasties, monochromatic porcelain was quite prevailing while Cizhou Kiln was known for firing porcelains, on white engobes of which dark patterns were painted. Overall, Cizhou Kiln targeted lower classes as their potential consumers, so daily items, especially ceramic pillows were its main focus. As recorded, Cizhou Kiln had produced more quantities and shapes of ceramic pillows than any other kiln all over China at that time. After studying into the extant ceramic pillows, it is shown that Cizhou Kiln started to fire these pillows ever since the early years of Northern Song and Yuan Dynasties, while after the development in the next three hundred years, Cizhou Kiln ceramic pillows gradually faded out of the public sights with the closure of the kilns nearby in the early Ming Dynasty [14-16].

However, in their three hundred years of popularity, the rising and declining of Cizhou Kiln ceramic pillows were closely relevant to the global climate changes. In Song and Yuan Dynasties, China were experiencing the worldwide "Medieval Warm Period", and according to the annual records of thickness of stalagmites in Shihua Cave, Beijing, the temperature gradually rose since 907 (the Five Dynasties), and reached its peak in 1100 (the Northern Song Period). In addition, by estimating the cold and warm climate events in Kaifeng district (Northern China), we can find that this place had been generally warm from 930 to 1110. As the glaze surface of ceramic

pillows has cooling function naturally, they became popular daily articles during this period. Nevertheless, in the Yuan Dynasty (1271-1368), China's "Medieval Warm Period" turned to be "Little Ice Age", so the temperature had gradually decreased. As a result, the production of ceramic pillows in Cizhou Kiln had declined by the end of Yuan Dynasty. All these changes proved that the popularity of ceramic pillows had positive correlation with the change of climate: when the temperature rose, ceramic pillows were popular; otherwise, they declined correspondingly [17,18].

3.2 The function of Cizhou kiln ceramic pillows


The glaze on the surface of ceramic pillows provided the physical condition to relieve the summer heat, so families often prepared some for daily use in summer. Never hesitate to express their praise for these pillows, ancient Chinese people even wrote poems on their surfaces. "The summer lasts so long and so does the daytime; My wooden door blocks the heat at the high noon. Sleeping on a ceramic pillow can help me forget the earthly affairs and gain the inner peace", a poem on a Cizhou Kiln ceramic pillow unearthed in Julu, Heibei Province said so. This poem indicated that in the hot summer a ceramic pillow can help people sleep comfortably even at the high noon.






The cooling function of these ceramic pillows is not only due to its porcelain material, but also results in its shapes. For instance, "hollow out" design was frequently adopted to enhance the cooling effect and some ceramic pillows were designed with width varying circular, so different sides could be turned to gain coolness. Apart from these, craftsmen also took comfortability into consideration, so they designed the pillow surface to be lower in the front while gradually higher behind and concave in the middle. In this way, the pressure caused by the single-point contact between the straight surface and head can be released to improve the comfortability of sleeping. In fact, in modern medicine, the most comfortable and scientific height of a pillow should be between 10-13 cm, while the heights of Cizhou Kiln ceramic pillows were about 9 to 12 cm.

3.3 The plastic art of Cizhou kiln ceramic pillows

In the Song and Yuan Dynasties, the shapes of Cizhou Kiln ceramic pillows were the most varied, because craftsmen innovatively developed different plastic techniques based on the characteristics of the Tang Dynasty. This study categorizes these different shapes into six typical forms (shown in Table 1) and by comparing different samples, we can deduce three important evolvement rules in Song and Yuan Dynasties. First, in Tang Dynasty, the traditional square shape pillows had been evolved to be ingot shape, as both sides of the surfaces curled upwards and the middle parts narrowed downward to form the shape of ingots. The second transformation should be leaf shape pillows, the surfaces of which overhung outwards. The third was the octagonal shape, which was derived by edge-cutting techniques. The fourth was Ruyi shape, which means to curve the edges of the square shape. Next is the bean shape with round and applicable angles, which was actually the transformed shape of oval. At last, the animal shapes used in pillows appeared to be tamer in Song and Yuan Dynasties, because in this period the social atmosphere had changed. "Humanities" instead of military force was highly praised, and in Song society, Taoism believes of nihility, peace, and passive action had been valued so the beast figures were more lovely on these ceramic pillows.

Table 1: Different plastic types of Cizhou kiln ceramic pillows

Name	N	Percentage of the total	Plastic Characteristics	Items
Ingot shape pillows	17	29.82%	The top is wider than the bottom, and curls inwards. Its pillow-walls also incline inwards.	

Leaf shape pillows	14	24.56%	It is composed with a leaf-shaped surface and a pier, which can be round or pentagon.	
Octagonal pillows	11	19.30%	The top and bottom are both octagonal, and the pillow-walls are straight.	
Ruyi shape pillows	7	12.28%	Ruyi shape indicates happiness and good fortune.	
Bean shape pillows	6	10.53%	The top surface is oval and the joint edges are smooth and gentle.	
Animal shape pillows	2	3.51%	Tiger and loin shapes pillows are the most common animal shape pillows.	

As illustrated above, Cizhou Kiln ceramic pillows had various plastic shapes, and this is because of their commercial competition strategies. After all, Cizhou Kiln was nongovernmental but self-financed, so it had to meet the needs of their consumers as possible as they could to survive and further develop in the consumer market. Under these circumstances, Cizhou Kiln not only fired household ceramics such as bowls, plates, dishes, jugs, pots, kettles, bottles, toys and etc, but also produced religious ceramic articles, such as butsudans, ceramic figures, censers and so on, and even some constructive ceramics like porcelain tiles. All these proved that Cizhou Kiln particularly emphasized on the preference of their potential consumers, so no wonder a variety of different shapes of ceramic pillows were produced.

3.4 The decorations of Cizhou kiln ceramic pillows





The decoration styles of Cizhou Kiln ceramic pillows were unique in traditional ceramic pillow production, as Chinese traditional painting skills were adopted to improve the artistic value. Moreover, both the simplified decorative techniques and folk ornamental patterns promoted the popularity of Cizhou Kiln ceramic pillows.




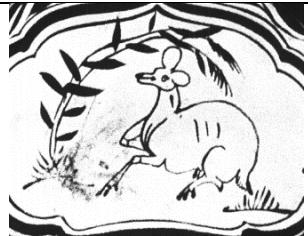


Painting and scratching are the two main decorative techniques which were frequently seen in ceramic pillows. Painting is the most common technique, which only requires one writing brush and some pigments to accomplish. These pigments were exploited from the natural spot floral ores in Cizhou, which contain over 84.94% iron oxide. Being ground and diluted, these pigments were thick in colour and would not fade after thousands of years. By applying Chinese painting techniques to the ceramic decorations, the patterns were more innovative and expressive, which accorded with the daily aesthetic habits of the public. Scratching, on the other hand, is operated by blunt

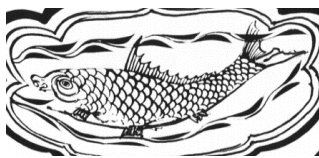

stylus tools, such as bamboo or wooden knives, to engrave different patterns on engobes. In this way, a sharp contrast pattern can be drawn, as the original color of the porcelain body is brown while the engobe is white. Both of the two techniques only require cheap brushes, knives and local pigments, so the costs are very low. Therefore, Cizhou Kiln was able to produce a variety of goods on limited budgets, which was in line with its positioning in the market.

As traditional painting skills were introduced, the artistic expressions of Cizhou Kiln ceramic pillows had been improved, and the decorative subjects had been broadened. After sorting out and analyzing the following patterns (shown in Table 2), we can find that regardless of the different patterns of plants, animals and figures, positive connotations of healthiness, longevity, fortune, prosperity and nobleness are the common elements. Even for those images of fierce tigers and majestic dragons, craftsmen could manage to make them look much smarter and more playful, which were more appealing to ordinary people. These decoration styles appeared to be plain and implicatively elegant, which suggested that Cizhou Kiln had precise understandings towards the spiritual demands of the public.

Table 2 Decorative pattern of ceramic pillows

Name	N	Percentage of the total	Basic information	Cultural Connotations	Patterns
Peony patterns	14	24.56%	Peony patterns were the most common in Cizhou Kiln ceramic pillows. Peony is known as “the king of flowers”, indicating its elegance and dignity.	Wealth	
Lotus patterns	9	15.79%	Lotus patterns were originated from the prevailing of Buddhism in the civil society.	Purity	
Chrysanthemum patterns	7	12.28%	Chrysanthemum was favored by ancient Chinese intellectuals because it symbolizes seclusion.	Elegance	
Bamboo patterns	6	10.53%	Bamboo patterns were also popular among intellectuals as these patterns meant tenacity in	Independence	

			rugged environment.		
Tiger patterns	5	8.77%	Tiger indicates vitality and power, but tiger patterns on Cizhou Kiln ceramic pillows are more interesting and playful.	Vitality	
Phoenix patterns	4	7.02%	Phoenix is an imagined animal, whose image was a combination of several animals. Phoenix has auspicious connotation and is the spiritual totem of Chinese nation.	Intelligence	
Lion patterns	4	7.02%	Lion is regarded as an auspicious animal and is frequently used to "keep the house safe".	Authority	
Deer patterns	3	5.26%	Deer is the common auspicious ride for immortals in ancient Chinese myths.	Auspiciousness	
Magpie patterns	2	3.51%	Magpie patterns are favored by the populace because these patterns indicate the coming fortune.	Happy events	
Crane patterns	1	1.75%	Crane patterns are frequently adopted in Taoism decorations as cranes are regarded as divine animals in Chinese traditional culture.	Longevity	

Fish patterns	1	1.75%	Fish patterns had a long history in China. Since fish is quite reproductive, fish patterns are in accordance with ancient pursuit of more offspring.	Reproductivity	
Kid-at-play patterns	1	1.75%	Kid-at-play patterns show the healthiness and prosperity of the society.	Healthiness	

IV. Discussion

China's society was under great transition between Song and Yuan Dynasties, and with the transformation of political institution and social structures, gentry and townspeople stratum had emerged. These two new classes had different aesthetic favors. Gentries represented high and elegant culture while townspeople stratum preferred the mundane culture. The interlacing and collision of different cultures constituted to the duality of aesthetic culture in this period which was reflected on Cizhou Kiln ceramic pillows.

4.1 The popularity of elegant culture

Chinese history has a long aesthetic tradition to advocate elegant culture, which is related to intellectuals' dominative positions in the feudal society. Intellectuals used to appreciate elegant objects, so delicate decorations were the mainstream. This tendency was strengthened in the Song and Yuan Dynasties, as the imperial examination system was mature and intellectuals could ascend to the dominance hierarchy. Therefore, the gentry class was generated, who enjoyed higher positions in the society and gained respect from the public. In addition, the Song rulers promoted a national policy of “valuing humanities and belittling military affairs”, which consolidated the social prestige of gentry as well.

The aesthetic taste of gentry class inevitably influenced the public, and then became the dominant aesthetic in all aspects in the society, including literature, art, utensil design and so on. The decorations on ceramic pillows reflected the cultural character of the elite class, by emphasizing elegance and delicacy.

For instance, chrysanthemum stands for pride and nobleness, plum blossom for tenacity and grace, lotus for purity and holiness, and bamboo for integrity and modesty. All these decorative floral patterns were much appreciated by gentries in Song and Yuan Dynasties, because they regarded these patterns as the metaphors to dignified spiritual characters. However, it is also noticeable that it was black that was most frequently and solely used in Cizhou Kiln ceramic pillows. This is because it was believed by these gentries at that time that black could bring inner peace while other colors couldn't. As a result, they thought that only the elegant intellectuals could sense the rich connotations of the black color. Hence, the design of Cizhou Kiln ceramic pillows initiatively catered to the elegant aesthetic taste of the gentry class, which promoted the popularity of elegant high culture along with the production, marketing and circulation of these ceramic pillows.

4.2 The uprising of mundane culture

In the early stage of the Song and Yuan Dynasties, the peaceful social environment guaranteed the prosperity of economy, while the loose land policy enabled lower class laborers to detach from their land and later became craftsmen and workers in handicraft industry or commerce. This change stimulated their labour enthusiasm which had been suppressed for a long term, and fostered the prosperity of urban areas. As a result, these plebeians rose to form a new class, the townspeople stratum, who still carried the characteristics of lower class thoughts, taste and aesthetic habits. This was then generalized as mundane culture, and different from the elegant culture appreciated by the gentry class, mundane culture emphasized more on the worldly joy and pragmatic interest, which were easier to be understood and more directly to be expressed. Therefore, mundane culture had the cultural features of natural, straight, pure and lively.

This mundane culture can be traced in the writings on Cizhou Kiln ceramic pillows. Sentences such as “welcome wealth and profit”, “gentlemen love fortune and earn it in a proper way”, “treat others the way you want to be treated”, and “a harmonious family is destined to have noble offsprings” were commonly used to reflect people’s direct longings for worldly desires. However, these honest expressions were rare in ancient China, because worshipping material wealth in public was forbidden in the rigid hierarchical society, as businessmen were regarded as the lowest class. Therefore, according to these expressions on ceramic pillows, we can see that the social atmosphere in Song and Yuan Dynasties were the most tolerant which resulted in the popularity of mundane culture.

Certainly, the influence of mundane culture was also shown in other decorative subjects, such as cuju (ball-kicking, similar to soccer) pictures. Cuju was a very popular ball game in ancient China, and it had become quite popular among townspeople stratum till the Song and Yuan Dynasties. In the Fig.1, the kid is wearing a floral clothe with long sleeves and baggy trousers. His eyes are on the ball, while his arms and legs are stretching dynamically. Similar kid-at-play scenes can be found on other ceramic pillows, including patterns of fishing in ponds (shown in Fig. 2), herding ducks, chasing after butterflies, flying kites, riding bamboo horses, kicking corner balls and so on. As we can observe, these kids have round faces with joyful facial expressions, and healthy bodies, which depicts a wealthy mundane society at that time. Patterns on these ceramic pillows had strong folk vitality which demonstrated the secularized aesthetic attitudes of townspeople stratum, and represented their awakening of self-awareness.



Fig.1: A Cizhou Kiln Ceramic Pillow Painted With Kid Kicking Cuju Pattern in the Song and Yuan Dynasties



Fig. 2: A Cizhou Kiln Ceramic Pillow Painted With Kid Fishing Pattern in the Song and Yuan Dynasties

IV. Conclusion

This study reveals that the popularity of ceramic pillows has direct relation to the climate changes in the Song and Yuan Dynasties. Since these Cizhou Kiln ceramic pillows could effectively relieve the summer heat to provide comfortable user experience, they had been prevailing during these dynasties. Meanwhile, as illustrated above, these pillows had been widely accepted because they had diversified shapes, artistic decorations, folk subjects, as well as cultural duality. It is undeniable that this paper mainly researches on the porcelain pillows themselves, which may not fully reflect the designer's design concepts and ideas. However, by the reference of modern design methods for scientific analysis on traditional artifacts, we can inherit those ancient symbols and further develop creative thinking, which is conducive to the further promotion of national culture in the new era.

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