

Research on Cultural Representation of Bionic Design of pre- Qin bronzes

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ABSTRACT

Taking the pre-Qin bronzes as a model, this paper explores the expression content and cultural attributes of semantic representation in the intentional design language in the bionic design of bronzes. This paper demonstrates the formation motivation and content of cultural representation in bronze bionic design, so as to restore the characteristics of Pre-Qin social style and Chinese traditional cultural thought reflected by bronze as much as possible.

Keywords: pre- Qin dynast, bronzeware, bionic design, imagery, cultural representation.

1. INTRODUCTION

China's Bronze development period is also the Yuandian period of the formation of Chinese traditional philosophy. The civilization created in this cultural axis era continues till now, with its solid historical foundation and brilliant artistic achievements. Pictographic art as image bionics is the aesthetic foundation of China's traditional art. From pictographs to image expression, and then to the cultural representation of symbolism, it is full of the wisdom of our ancestors. Therefore, the bionics of Pre-Qin bronze art is not a simple image imitation, but has more profound symbolic significance and cultural implication.

2. THE PARADIGM FORMATION OF CULTURAL REPRESENTATION OF BIONIC DESIGN OF BRONZES IN THE PRE QIN PERIOD

2.1. The dominant causes of the representation paradigm of bronze culture

The Bronze Age was also an era when Chinese characters were widely used and matured. Therefore, the symbolization of graphic bionics inevitably appeared in a large number of bronzes. Craftsmen in the Xia, Shang and Zhou dynasties observed the animal characteristics and conveyed these characteristic images on bronzes. The image expressed by this visual experience can

arouse the spiritual resonance among the audience and help to bring about their understanding of the semantics of design. Therefore, the symbolic bionics of bronzes is to abstract and simplify specific organisms, so as to make them easy to standardize, copy and spread. This symbolic and concise bionic form was more applicable in the historical period when the productivity was relatively low and the technical level is not high. With the development of productivity and the progress of technology, bionic symbols appear more curves, and symbolic bionics begin to knead into more visual imitation. On the contrary, Chinese hieroglyphics is a process of gradual abstraction from visualization. Up to now, without careful interpretation of Chinese fonts, we can't see the hieroglyphic content, which is an extremely special bionic example. Its particularity is determined by its specific function, and its readability has been completely divorced from the transmission function of image which produces artistic conception. An abstract symbolic communication is almost formed.

With the further improvement of productivity and the accumulation of artisans' experience in imitating natural forms, more vivid shapes and patterns appeared on bronzes within the framework of linear contour. Exquisite patterns, exquisite workmanship and vivid modeling pushed the development of China's bronzes to a climax in the late Shang and Zhou dynasties.

The difference between symbolic bionics and figurative bionics is equivalent to the difference between imagery and stuff. Just like the difference between Western oil painting and Chinese traditional

ink painting, traditional Chinese painting allows the viewer to insert the wings of imagination through aesthetic experience, while oil painting is to strengthen aesthetic experience and enhance the viewer's aesthetic feeling of reality. They are not only the differences between imagery beauty and stuff beauty, but also the layered experience of visual experience. It can be seen that the symbolic intentional expression of linear contour in bronze bionic patterns in Xia, Shang and Zhou dynasties indicates not only the future trend of Chinese painting art, but also the dominant cause of the representation paradigm of bronze culture.

2.2. Hidden causes of bronze culture representation paradigm

The process of bronze design and production shows, the craftsman as the designer was not only the passive recipient of the royal power, but also the executor of the royal power. On the one hand, because it is difficult for art to produce absolute evaluation standards, the acceptance and implementation of the royal power are not completely seamless, and a lot of ingenuity and wisdom were also integrated into it; On the other hand, in the repeated battle between ingenuity and kingship, the craftsmen in low status created more stylized and symbolic expressions to echo the majesty of kingship, so as to avoid more contradictions and conflicts. Therefore, in the late Xia and early Shang Dynasty, when kingship and divine power gathered, bronze bionic design adopted more image concise symbols as visual expression language. In the early Zhou Dynasty, when humanistic thought gradually prevailed, the imitation of realistic images showed signs. The bionics of bronzes began to move closer to nature, and the artistic creation of craftsmen integrated a trace of freedom. In the Warring States period, when the power of the king of Zhou was declining, more vivid bionic designs continued to appear. Terrible and gloomy graphic symbols were skillfully used by craftsmen to change a lovely image with more life. Although there were bionic changes caused by functional transformation resulted from institutional changes, the changes in the relationship between people and the increase of tacit understanding between craftsmen and dignitaries were also internal causes that cannot be ignored.

3. THE CONTENT EXTENSION OF CULTURAL REPRESENTATION OF BIONIC DESIGN OF BRONZES IN PRE QIN DYNASTY

In the book *Rites*, there is a record that "Confucius said: Xia Dao didn't blaspheme, didn't demand or blame, didn't expect from the people, and the people didn't get tired of their relatives. Yin people didn't blaspheme, but demand or blame the people. Zhou strengthened the

people, didn't blaspheme, but rewarded the nobility and punished the poor" ^[1], which shows that Xia, Shang and Zhou dynasties with different governance methods had different political demands, which was an important material carrier for the ruling class to safeguard the royal power. The cultural representation carried by bronzes has also changed and extended significantly.

3.1. Inherit the mystery of primitive religion

From worshipping gods and ghosts to worshipping gods and ancestors, the ideological transformation between Xia and Shang Dynasties was an important representation of bronze Bionics in this period.

The period between Xia and Shang Dynasties was an important period of transformation from the prehistoric barbarian era to the civilized era. This period continued the witch culture of primitive religion. According to records, Xia Qi was a ruler, who was also a witch and a king. "Confucius said: Xia Dao respects life, ghosts respect God and stay away, people are loyal to others, honor before prestige, reward before punishment, and relatives do not respect." ^[2]. There is a huge gap between people and ghosts and gods in Xia Dynasty. People believed that only through the communication of wizards could they be protected, and the king of Xia consolidated his position and ruled the people through the identity of wizards.

"Food is the most important thing for the people". In the period of low productivity, the most important thing for ordinary people and families was to have a full stomach and continue their life. The tripod was the main appliance for cooking. The size of the tripod could determine the prosperity of a family. To be extended represented rights. Therefore, the tripod has become the most important bronze ware in China, The number of tripods has become a symbol of power, size and status. The most important bronze ware in the legend of the Xia Dynasty was the nine tripods symbolizing kingship. "Yu received the gold of nine herds and cast the nine tripods like Kyushu" ^[3] the nine tripods symbolize Kyushu and the country. In the historical records of Fengchan book, "Yu received the gold of nine herds and cast nine tripods, all of which enjoyed gods and ghosts" ^[4] It shows that the nine tripods were not only a symbol of kingship, but also an important tool for the state to sacrifice ghosts and gods.

The Shang Dynasty developed the witch culture to the extreme, and a large number of unearthed oracle bone inscriptions proved the royal power characteristics of divination regardless of major or minor events. In the book *Rites*, there are records that "Yan people respected gods, led the people to serve gods, first ghosts, then rites, first punishment, then reward, and respect but not go close", which fully reflects "the major events of the country are worshipping and fighting" ^[5]. At the same

time, in the design of war utensils and mysterious witchcraft activities, the design of important sacrificial utensils, bronzes, also extracts many ferocious forms from the beasts of nature to set off its mysterious atmosphere, so as to deter the enemy and the ruled class. Bronze Bionics in this period was a design activity that superimposed and mixed fear symbols to form ferocity and mystery.

The Shang Dynasty beast face bronze helmet unearthed in Oceania, Xingan, Jiangxi Province is the representative of war instruments in this period. The high relief animal face pattern with thick single horn and outer roll has great visual impact. The transverse rectangular round eyes are ferocious. The curly cloud ears on both sides and the inner roll nose add dignity to the copper helmet. The animal mouth is centered to form the helmet edge, such as the animal mouth with head (Fig.1). There is also the bronze tiger cannibal vessel, which is hidden in the Spring House Museum in Japan. The body of the vessel is the posture of the tiger embracing people. The rear foot and tail of the tiger form the three feet of the vessel. The tiger's front paws embrace people, people squat on the tiger's feet, embrace the tiger with both hands, and the tiger opens its mouth on people's head. Kui pattern and thunder pattern are the main decorative patterns of the vessel body (Fig. 2). According to the analysis of Mr. Zhang Guangzhi, the tiger cannibal vessel is "an animal with a big mouth, booing and booing, and helping the wizard to visit the sky" [6]. Similarly, the bronze helmet with animal face should also be an animal mask on people's head. The general covered also has the ability to communicate with ghosts and gods, so as to obtain the mysterious ability to kill the enemy. This is an empirical study of the mystery of primitive religion.



Fig 1 Bronze helmet with animal face in Shang Dynasty (Author photography)



Figure 2 Tiger cannibal you (source: www.douban.Com)

3.2. Materialized bearing of Zhou Rites

"Upholding morality and valuing people, ruling by God moves towards ruling by man" is the deep representation of bronze Bionics in the ritual society of the Western Zhou Dynasty.

The book *Rites* records, "the people of Zhou Dynasty respect etiquette and practice, respect ghosts and gods far away, and be loyal to people close to them. Their rewards and punishments are listed by nobility, and they are not respected by relatives" [7]. The Western Zhou Dynasty was the beginning of China's real entry into the era of civilization. The formulation of Zhou rites weakened the theocracy, strengthened the kingship, and advocated the ruling means of patriarchal clan system and ritual and music education, so that the humanistic spirit could be displayed. Influenced by the ritual and music system, the bionic design of bronzes in the middle and late Western Zhou Dynasty had changed greatly. The bionic patterns have become round and comfortable. The patterns are often in order of priority, the shapes were more standardized and magnificent, and the bionic forms were gradually round and plump. These were the changes brought by the new ritual norms.

Economic development and technological progress also provided space for craftsmen to further show their skills. The bionic bronzes of the Zhou Dynasty were obviously exquisite in the Yin and Shang Dynasties, which also reflected the unprecedented prosperity of the economy of the Zhou Dynasty.

The people of Zhou Dynasty learned from the lessons of Yan people's drinking and subjugation, and the types of bronze ritual vessels changed significantly from wine vessels to food vessels in Yin and Shang Dynasties. With the development of ritual system, the function of bronze ware has also changed. In the combination of ritual utensils, there have been "column Ding" and "music hanging" systems, and the design of

Ding and musical instruments has made great progress. With the advent of the era of Zhong Ming and Ding Shi and the establishment of strict hierarchical order, the Zhou Dynasty no longer used ghosts and gods as the main means to govern the people, the mystery of bronze bionic patterns gradually disappeared, and Zhong Ding Wen's chronicle increased, reflecting the nature of ignoring ghosts and gods and emphasizing people.

Bronze bionic design is more and more inclined to visualization and life, both in modeling and decoration, reflecting the humanized characteristics of ritual and music system. The Bird Statue unearthed in the tomb of Jin Hou in Beizhao village, Quwo County, Shanxi Province is a representative artifact of bionic design in the Western Zhou Dynasty. The Phoenix standing and looking back is vivid and solemn. The neck, abdomen, back and tail of the Phoenix are decorated with feather patterns and plume patterns. The cloud patterns on both wings and legs have symbolic significance. Setting the ground with thunder patterns is a continuation of the early patterns. The bird statue is realistic, vivid and ingenious. It is not only a rare art treasure, but also the cultural carrier of Zhou rites (Fig. 3).



Fig 3 Western Zhou bird shaped zun (Author photography)



Fig 4 Western Zhou Animal facial pattern ding (Author photography)

3.3. Image description of the transformation from God to man

"People-oriented morality" is the ideological core represented by the bionics of bronzes in the Eastern Zhou Dynasty.

From the rise of vassals with "rites collapse and music break down" to the rise of scholars with "a hundred schools of thought contend", it is common for vassals to override the ritual system in the Eastern Zhou Dynasty. Scholars with knowledge gradually replaced wizards and had the right to speak. The mystery of bronzes was questioned, the spirit of rites and music gradually faded, and the breath of life was constantly filled. In addition, with the progress of technology, bronzes reached a very high level in both artistic level and manufacturing technology in the Eastern Zhou Dynasty.

The decline of the reign of the Zhou Dynasty reached its peak in the Eastern Zhou Dynasty. Not only the vassals were disrespectful, but even the people no longer abided by the constraints of the Zhou rites. The pottery that imitated the bronze rites was also used as a nether ware in the folk. In turn, the shape of folk utensils also affected the shape design of bronze ware. The life-oriented utensils continued to appear in the bronze design, and the categories of bionic design were richer. Bronze bionic design reflects more of the worldly sacrifice content, and the content of bronze bionic design has stepped down from the altar step by step. The Pao pot in the collection of Shanxi Provincial Museum is an example. The pot combines paoxing with chicken image. The shape of the pot is paogua. Paogua is a kind of gourd and the material for making the "water ladle" of the folk water intake device. "Paogua star" is also known as "Tianji star". The Pao pot cover is chicken shaped, which is a bionic of chicken (Fig.5). The pot is an example of the transformation of bronze bionics from God to man.

Confucius said that "quality is better than literature, and literature is better than quality, and history. If you are gentle, then a gentleman" [8], Mozi said that " Eat to be full, and then seek beauty; clothes must be always warm, and then beauty; living in peace, and then enjoy music" [9], Xunzi said that "carving and carving, making articles, so pleasing to eyes" [10]. The aesthetic thoughts of various schools of thought affect the aesthetics of the times and the progress of social thought. It affects the aesthetic thinking of craftsmen, so these humanistic traces will be revealed everywhere in the imprint of bronze bionic design. During the Chun and Qiu periods and the Warring States period, there were obvious differences between the daily necessities and sacrificial supplies of bronze ware. The decoration of daily necessities reflected the aesthetic ideas of various schools of thought, which tended to be concise

and practical. The decorative content appeared new patterns such as banquets, mulberry picking, war attack and hunting, which were more life-oriented and humanized. (Fig.6)



Fig 5 spring and Autumn period pao pot (Author photography)



Fig 6 Warring States period fish-shaped bronze pot (Author photography)

4. CONCLUSIONS

In short, the bionic design of Pre-Qin bronzes not only laid the foundation of image aesthetics, but also reflected the changes of ritual system and social progress. The respect for gods and ghosts in theocratic politics, the upholding of morality and protecting the people in ritual and music system, and the corruption of ritual and music and humanism after the collapse of kingship, were all reflected in bronze bionic design. Therefore, the pre-Qin bronze bionic design is not only the materialized bearing of humanities, politics, economy and thought in the Yuandian era, which is an

important period for the formation of Chinese philosophy, it is the perfect embodiment of craftsman spirit as well.

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