# Study on the "Dragon Pattern" of Xi'an Bronze Ritual Containers from the Perspective of Long-term Theory

Shuyan Pei<sup>1</sup> Weina Zhang<sup>2</sup>

<sup>1</sup> School of Historical Culture and Tourism, Xi'an University, Xi'an, Shaanxi 710065, China

<sup>2</sup> History School, Northwest University, Xi'an, Shaanxi 710065, China

<sup>1</sup>Corresponding author. Email: whylyxy@xawl.edu.cn

#### ABSTRACT

During the Xia, Shang, and Zhou dynasties, bronze ware, as a ceremonial tool, often appeared in religious ceremonies, court banquets, weddings, funerals, and other occasions, symbolizing the political power of the country. The evolution of the decorative style of bronze ritual vessels reflects the social and cultural characteristics of different periods. Represented by Xi'an, bronze ritual vessels have evolved in accordance with the laws of Baoji, Zhengzhou, and other places belonging to the Yellow River Basin over hundreds of years, indicating the important role of long-term factors in historical development. The evolution of composite images represented by "dragon" in bronze ritual vessels unearthed in Xi'an region has two meanings: firstly, during the Xia, Shang, and Zhou dynasties, the variation and combination of dragon patterns in the "Classic of Mountains and Seas" and bronze artifacts reflect the fusion and reconstruction of social unrest and restructuring. Secondly, the dragon pattern in bronze ritual vessels unearthed in Xi'an gradually evolved from terrifying animal forms to abstract geometric elements such as string patterns, vertical squama patterns, and tile ridges in the middle and late Western Zhou Dynasty. This is consistent with the evolution law of bronze ware ornamentation in Baoji, Zhengzhou, Anyang and other places during the same period, reflecting the influence of geological environment as a long-term factor on the evolution of bronze ritual vessel ornamentation.

Keywords: Time period theory, Xi'an, Bronze ware, Ornamentation.

#### 1. INTRODUCTION

Since the 20th century, research on bronze ritual vessels unearthed in the Xi'an area has mostly focused on bronze ritual vessels, and there have been fruitful achievements in the study of the dating of Western Zhou bronze ware. The representative figures include Chen Mengjia, Zhang Maorong, Cao Wei, etc. In the early stage, Chen Mengjia mainly focused on the content of inscriptions, combined with the shape and ornamentation of the vessels, to infer the age of related bronze ware. Afterwards, Zhang Maorong focused on the bronze ware in the core area of Central Plains and nearby areas, and compared them with the clear standard artifacts of the era through inscriptions, patterns, and decorations. This served as a basis for dating and staging research.

The study of dragon motifs on bronze ware can be found in Mr. Rong Geng's "General Study of Yi Artifacts in the Shang and Zhou Dynasties" and "General Theory of Bronze Ware in the Yin and Zhou Dynasties". Previously, the academic community generally believed that the Kui pattern was a different type of dragon pattern, hence the name "Kui dragon pattern". Some scholars disagreed with this view. Duan Yong proposed that "Kui pattern is actually a hodgepodge of many different types of dragon patterns and other animal patterns (such as bird patterns for those with hooked beaks and elephant patterns for those with long noses). The name "Kui pattern" should be abandoned, and dragon patterns and other patterns should be given their original appearance." [1] Cao Jun further pointed out that "attributing 'Kui pattern' to dragon shaped decorations is biased. The type of animal prototype referred to by 'Kui pattern' is not derived from mythological dragons or dragon like animals, but from the real existence of tigers in reality. Animal patterns with curved lips or large open mouth with fangs are all included in the category of 'Kui pattern'. Based on the evolution of pattern patterns and hieroglyphs, they are divided into concrete, concise, and variant types."[2] In recent years, a more detailed study of Kui dragon patterns has been conducted by Wang Ya's "Preliminary Study on Gu Shou's Kui Dragon Patterns on Shang and Zhou Bronze Ware".

Overall, there have been fruitful research results on dragon patterns in bronze ritual vessels both domestically and internationally, but research on the interaction between bronze culture in Xi'an and neighboring areas based on long-term theory has not yet been conducted. Therefore, the significance of this study lies in conducting archaeological typological research on the dragon patterns in bronze ritual vessels unearthed in Xi'an and its surrounding areas based on the time period theory, analyzing the spatiotemporal environment and historical information reflected in the bronze ritual vessels in Xi'an and its surrounding areas, and deepening the research on archaeology.

# 2. LONG-TERM THEORY AND LONG-TERM FACTORS

The theory of time periods is a theoretical achievement of the overall history writing method of the Yearbook School in terms of specific writing methods. It is an important combination of history and social sciences, and its representative figure is the French Yearbook School representative Brodell. In his view, long-term factors can almost be equivalent to the "theory of environmental effects", and people can hardly see the movement. He called this history of "structure". Brodell's research on the theory of time periods underwent a turning point and deepening in 1968, "enriching and expanding the content of the theory of long periods horizontally, and pulling people's attention back from vertical time to specific daily life at horizontal time points."[3] It can be seen that he did not deny the importance of factors in the medium and short periods, but emphasized the organic combination of the three in specific historical research. The longterm theory, as the most important part of Brodell's time period theory, is almost always a constant factor passed down from generation to generation, reflecting the "almost immovable historical factor" of the environment, which has profoundly

influenced the development process of social history over hundreds of years of change.

## 3. DRAGON-SHAPED COMPOSITE ANIMAL IMAGES IN THE "CLASSIC OF MOUNTAINS AND SEAS"

The "Classic of Mountains and Seas" was completed during the Warring States period to the early Western Han dynasty. It records in mythological form the mountains, rivers, gods, ghosts, and other content of ancient China as the main body. It is also known as the "encyclopaedia of very ancient society" due to its inclusion of various contents such as river geography, historical myths, animals, plants, spirits, and monsters from the Xia, Shang, and Zhou dynasties. The composite animal images in the "Classic of Mountains and Seas" are often related to the mythological theme of "deformation", and the emergence of dragons is a direct manifestation of the development and stability of this "deformation" myth. As in the "Classic of Mountains and Seas", "the total length of the Queshan mountain system, from the first mountain Zhaoyao Mountain to Jiwei Mountain, is 2950 li. Each of these ten mountains has a mountain god shaped like a bird with a dragon head. The ritual of worshiping the mountain god is to bury furry animals and a jade zhang together in the ground, use glutinous rice as the refined rice for worshipping the god, and use white thatch as a grass mat to lie under the mountain god's seat." [4] "There are a total of seventeen mountains in the southern second mountain range, from Cabinet Mountain to Qiwu Mountain, passing through 7200 li. The shapes of the mountain gods are all the bodies of dragons and the heads of birds. Sacrifice to the Mountain God: It is to bury livestock and jade into the ground together, and the rice used for worshipping the God is rice."[5] "There are a total of fourteen mountains in the Southern Three Classics, starting from Tianyu Mountain and ending at Nanyu Mountain, with a distance of 6530 li. The mountain god of each mountain is a dragon with a human face. The mountain god of each mountain is a dragon with a human face. When worshipping the mountain god, a white dog is killed to pray, and glutinous rice is used as the refined rice for the sacrifice."[6] In the "Classic of Mountains and Seas", the composite animal images with dragons as the main body are all "mountain gods" that are worshipped by "shrines" or sacrifices. Compared to other spirits and monsters, they have a higher status and have the characteristics of gods. And these

dragon-shaped composite images highlight the changes in the shape of things, which have profound geographical and environmental significance, such as bird body with dragon head, dragon body with bird head, and dragon body with human face. In the "Classic of Mountains and Seas", nested techniques are used to combine two originally isolated forms of things, or to integrate some of their features into another thing. This "active fusion" method and means reflect the acceptance attitude of the ancestors towards the integration and reorganization of different things and ethnic groups in the turbulent historical background of Xia, Shang, and Zhou societies.

# 4. THE EVOLUTION OF DRAGON PATTERNS IN BRONZE RITUAL VESSELS UNEARTHED IN XI'AN

The recombination and fusion of the composite image of the dragon in the "Classic of Mountains and Seas" is also reflected in the bronze ritual vessels unearthed in Xi'an. Some bronze ritual vessels with dragon patterns are listed as follows ("Table 1"):

Table 1. Representative dragon patterned artifacts of bronze ritual vessels unearthed in Xi'an.

Time	Vessel name	Basic condi	tions		Ornamentation features	
		Unearthed	Size	Unearthed	Now collected	
		time		site	in	
At the end of	Shen Fu	1975	The height is	Fenghao	Xi'an Museum	Ellipsoid. Decorated with bud shaped buttons on
the Shang	Geng You		23.3	Site, Fengxi		the top of the tall canopy; The mouth of the vessel
Dynasty and	("Figure 1")		centimeters	Township,		is inwardly restrained, the belly is slightly
the beginning			and the	Chang'an		drooping, and the circular feet are extravagant
of the Zhou			diameter is 9.9	District,		outside; There is a half ring earbud on the
Dynasty			x 7.5	Xi'an City,		shoulder that connects to the flat lifting beam of
			centimeters.	Shaanxi		the animal head, and the two ends are decorated
				Province		with animal heads; Decorate a beast head and a
						sacrificial head at the front and back of the mouth.
						Decorate the edge and neck with a double headed
						Gu Shou dragon pattern ribbon separated by a
						bead pattern, with cloud and thunder patterns
						filling the ground; Circled foot string pattern [7].
Early Western	Zuobao	1983~1986	The height is	M315,	Institute of	Open mouth, slightly constricted neck, slightly
Zhou Dynasty	Zunyi		21.6	Zhangjiapo	Archaeology,	bulging lower abdomen, with a square seat under
	("Figure 2")		centimeters	Western	Chinese	the circular foot; There are ears under the head of
			and the	Zhou Tomb,	-	the beast. The belly and square seat are
				Chang'an	Social	decorated with animal face patterns, and the
			20.6	District,	Sciences	circular feet are decorated with dragon patterns
			centimeters.	Xi'an City,		[8].
				Shaanxi		
				Province		
Early Western		1976	The height is		National	Wide flared mouth, bulging belly, high circular
Zhou Dynasty	("Figure 3")		28 centimeters	0.		feet, square seat, two animal shaped ears with
				Lingkou 	China	small protrusions below. The abdomen and
			diameter is 22			square seat are decorated with animal face
			centimeters.	Lintong		patterns, the circular feet are decorated with Kui
				District,		dragon patterns, and the four corners of the
				Xi'an City,		square seat are decorated with cicada patterns
				Shaanxi		[9].
Mid Masters	Vonguti	1969	The height is	Province	Vilon Institute	Ear attachment wide flored mouth data
Mid Western		1909	The height is			Ear attachment, wide flared mouth, deep
Zhou Dynasty	("Figure 4")		46 centimeters	Town, Lantian	of Cultural Relics	abdomen, high circular feet; The four gate edges
						run through the body of the vessel. The mouth is
			diameter is 58	County,	Protection	adorned with eye-catching curly patterns, the

Mid Western Zhou Dynasty	Fu Ding Xiang Yue ("Figure 5")	1984	diameter is 21 centimeters.	Shaanxi Province M163, Zhangjiapo Western	Archaeology, Chinese	abdomen is adorned with banana leaf patterns, and the feet are adorned with stealing curly patterns [10]. Trumpet mouth, bulging belly, high circle feet, and external extravagance. The sacrificial head is placed in front and back of the upper abdomen, with two decorative bands composed of two opposing bird patterns on the abdomen, and two string patterns on the lower neck and circular feet respectively [11].
Mid Western Zhou Dynasty	Uncle Jing's Drinking Cup ("Figure 6")	1985	The height is 14.5 centimeters and the diameter is 9.8 centimeters.	M165, Zhangjiapo Western Zhou Tomb,	Archaeology, Chinese	Lack of cover, straight mouth, deep straight abdomen, short circular feet, with semi circular ears on both sides of the abdomen. Decorate the lower part of the mouth and lower abdomen with a stealing curve pattern, and the middle abdomen with a string pattern
Late Western Zhou Dynasty	Ming Che Fu Zuo Bao Hu ("Figure 7")	1976	height is 51.5	Bronze Ware Cellar	Lintong District Museum	Square rounded corners. Cover with a circular gripper; The device has a straight neck, a bulging belly, circular feet, and a neck animal head set with a gripping ring. Decorate the edge and neck with a circle of stealing curves, the mouth with a circle of wave curves, and the abdomen with stealing curves spaced by cross veins. Half a pot of liquid still exists when unearthed [12]
Late Western Zhou Dynasty	Zong Zhong Zuo Yin Ji Ban ("Figure 8")	1974	diameter is 35.5 centimeters.	-	Shaanxi History Museum	Straight mouth, flat edge, square lips, shallow abdomen, high circular feet; There is a wide stream in the front and a dragon shaped chisel at the back. Decorate the mouth and feet with heavy circular patterns, and the abdomen with tile ridges [13].



Figure 1 Shen Fu Geng You.



Figure 2 Zuo Bao Zun Yi.



Figure 3 Li Gui.



Figure 4 Yongyu.



Figure 5 Fu Ding Xiang Yue.



Figure 6 Uncle Jing's Drinking cup.



Figure 7 Ming Che Fu Zuo Bao Hu.



Figure 8 Zong Zhong Zuo Yin Ji Ban.

As shown in the "Table 1" above, representative dragon patterned artifacts unearthed from bronze ritual vessels in Xi'an can be divided into the following three stages:

The first stage: from the end of the Shang Dynasty to the early Western Zhou Dynasty, a large number of dragon patterns appeared on the body and circular feet of bronze ritual vessels such as Ding, Gui, You, and filled the ground with cloud and thunder patterns. Representative artifacts include Shen Fu Geng You, Zuo Bao Zun Yi, and Li Gui.

Stage 2: In the middle period of the Western Zhou Dynasty, the dragon pattern had gradually evolved into a stealing curve pattern, with string patterns filling the ground and almost no cloud or thunder patterns visible. Representative objects include the Yongyu, Fu Ding Xiang Yue, and Uncle Jing's Drinking Cup. The thief curve pattern, also known as the poor curve pattern, is characterized by a curved hook formed by thick lines at both ends or up and down, with the two ends hooked back to form an "S" shape. Therefore, it is also known as the ripple or dragon pattern. In his article "A Comparative Study of Stealing Curve Pattern and Dragon Pattern", Ma Chenxi compared the commonalities between dragon pattern and stealing pattern in composition elements, and believed that "stealing pattern is a decorative pattern formed by deformation based on dragon pattern" [14].

Stage 3: In the late Western Zhou Dynasty, the number of stolen curved patterns gradually decreased and mostly appeared in combination with heavy ring patterns and tile ridge patterns, or the stolen curved patterns disappeared and replaced with heavy ring patterns and tile ridge patterns. The representative objects are the special symbols Ming Che Fu Zuo Bao Hu, Zong Zhong Zuo Yin Ji Ban, and Shi Shi Gui. Heavy ring patterns are often used to decorate the bodies of dragons and animals, or to match and appear with other patterns, expressing the meaning of animal bodies. Tile ridge pattern, also known as "parallel groove pattern", "horizontal stripe", "tile groove pattern", etc., appeared in the late Shang Dynasty, but the bronze artifacts unearthed in Xi'an during the late Shang Dynasty were not widely used until the late Western Zhou Dynasty when it became popular, and later became popular in the early Spring and Autumn period.

It is worth noting that the evolution of artifacts unearthed in the Xi'an area from dragon patterns to stolen curved patterns and then to heavy ring patterns and tile ridges was not achieved in one go. As Uncle Jing's Drinking Cup, the mouth and lower abdomen is decorated with a stealing curve pattern, and the middle abdomen with a string pattern; Ming Che Fu Zuo Bao Hue is decorated with a circle of stealing and curling patterns on the edge and neck, the mouth edge with a circle of wave and curling patterns, and the abdomen with stealing and curling patterns separated by cross veins.

## 5. THE INFLUENCE OF LONG-TERM FACTORS ON THE EVOLUTION OF BRONZE RITUAL VESSELS WITH DRAGON PATTERNS UNEARTHED IN XI'AN

#### 5.1 The Promotion and Restriction of Geographical Factors

The dragon pattern originated from the deformed animal face pattern, and in its development and evolution, some forms directly disappeared, while some forms were simplified into simple patterns such as stealing patterns and cloud patterns. The dragon pattern in bronze artifacts exhibits the following pattern in Baoji, Zhengzhou, and other areas belonging to the middle and lower reaches of the Yellow River: from the Shang

Dynasty to the early Western Zhou Dynasty, the dragon pattern existed independently on the surface of the artifacts or was decorated with bird patterns, vortex patterns, string patterns, and other combinations on bronze artifacts; In the mid to late period of the Western Zhou Dynasty, it was replaced by more simplified and abstract patterns of theft and geometry; During the Warring States period to the Western Han Dynasty, it developed into "coiled dragon patterns" and "coiled cob patterns".

The changes, exaggeration, omission, and symmetry of dragon patterns in different periods reflect people's different ideological consciousness and aesthetic concepts. At the same time, the gradual transition of dragon patterns from animal characteristics to geometric and abstract characteristics implies the yearning of people in the Shang and Zhou dynasties for simplification and stable order. This yearning lasted for several centuries and was deeply reflected in the "Classic of Mountains and Seas", which has become an encyclopaedia of the ancient world.

From the perspective of the entire Yellow River Basin, the combination and use of stealing curve patterns, as well as string and wave patterns, reflects the exchange and integration of patterns in bronze ritual vessels during the mid Western Zhou period, which is consistent with the overall evolution trend of bronze ritual vessels during the Shang and Zhou dynasties. The bronze ritual vessels with dragon patterns unearthed in the Xi'an area are mainly artifacts from the mid Shang Dynasty to the early Western Zhou Dynasty, which may have been directly transmitted from Baoji, Zhengzhou, and other places. Henan and Shaanxi both belong to the middle and lower reaches of the Yellow River, and have a natural advantage in communication and interaction. From a national perspective, the bronze artifacts unearthed in Xi'an, including the Yongyu and Fu Ding Xiang Yue from the mid to late Western Zhou Dynasty, represent the level of craftsmanship in the middle and lower reaches of the Yellow River with exquisite craftsmanship and unique shapes. The level of craftsmanship in artifacts from Sichuan, Hunan, and other places in the middle and lower reaches of the Yangtze River is similar, with slight differences in shapes, indicating that bronze cultures in different regions of China can learn from and spread from each other.

#### 5.2 The Role of Order and Structure

The Yellow River is known as the ancestor of the Four Rivers and the head of the Hundred Waters, and is one of the birthplaces of ancient Chinese civilization. Religious rituals are one of the iconic cultural symbols created by early human civilization in the Yellow River Basin. The culture of ritual and music is the source of national spirit that continues Chinese civilization to this day. Bronze ritual vessels, as tools for religious worship, reflect the social and cultural characteristics of the Xia, Shang, and Zhou dynasties. Represented by Xi'an, bronze ritual vessels have evolved in accordance with the laws of Baoji, Zhengzhou, and other places belonging to the Yellow River Basin for hundreds of years, indicating the important role of long-term factors in historical development.

From the mid to late Western Zhou Dynasty to the Warring States period, etiquette and music collapsed, causing social unrest and shaking. In the context of fission and fusion, the evolution of dragon patterns in bronze ritual vessels unearthed in Xi'an has gradually shifted from terrifying animal forms to abstract geometric elements such as string patterns, vertical squama patterns, and tile ridges. The new abstract geometric pattern elements are a new and more inclusive form of ornamentation compared to previous animal shapes.

The dragon pattern in the bronze ritual container, wrapped in religious sacrificial clothing, is endowed with superior "divine power" like the dragon shaped composite pattern in the "Classic of Mountains and Seas", reflecting national power. After it was replaced by geometric patterns, this fear and awe of the natural environment was gradually replaced by rulers who controlled the state machinery. This reflects the characteristics of this era and the social structure model.

#### 6. CONCLUSION

The distribution area of bronze ritual vessels during the Shang and Zhou dynasties was equivalent to the core area of Shang and Zhou culture and the influence of the state power. Nationwide, the distribution range of bronze ritual vessels decorated with composite images such as "dragons" was concentrated in the middle and lower reaches of the Yellow River and the Yangtze River, represented by Shaanxi, Henan, and Shanxi. The distribution range extended from Liaoning in the north to Lingnan in the south, with a large span. Dragon patterns are mainly popular in Shaanxi region, and later appeared successively in the lower reaches of the Yangtze River such as Anhui, Jiangsu, Shandong, and Lingnan. By the mid Western Zhou Dynasty, the distribution range of dragon patterns further expanded and gradually evolved into stealing curve patterns, breaking away from the early gloomy and solemn animal decorative style. In the late Western Zhou Dynasty, the distribution area of dragon patterns decreased sharply and gradually transformed into geometric patterns. From the differences in the shape characteristics of dragon patterns in different regions, except for Anhui, Jiangsu, Shandong and other regions, other regions have consistency in their shape characteristics with Henan and Shaanxi regions.

The bronze ritual vessels unearthed in the Xi'an area and the composite images represented by "dragons" in the "Classic of Mountains and Seas" reflect the fusion and reconstruction of various ecological environment animals such as mammals, birds, and fish by the ancestors, which is a historical reflection of social unrest and restructuring. The process of the evolution of dragon patterns from terrifying animal forms to abstract geometric elements such as string patterns, vertical squama patterns, and tile ridge patterns gradually emerged in the middle and late period of the Western Zhou Dynasty. This is consistent with the evolution law of bronze vessel patterns in Baoji, Zhengzhou, Anyang, and other places during the same period, reflecting the influence of geological environment as a long-term factor on the evolution of bronze ritual vessel ornamentation.

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#### REFERENCES

- Duan yong, "Do not use hidden dragons" -The dragon pattern on Shang and Zhou bronze vessels [J]. Archaeology and Cultural Relics, 200 (4).
- [2] Cao Jun, The Further Study on the "Kuidragon Design" [J]. Archaeology, 2012 (11).
- [3] Yang Xiaodong, Exploring Brodell's Overall Historical View: The Origins of Long Term

Theory and Multivariate New Historical Views [J]. Cognition and Practice, 2019 (2).

- Yuan Ke, checked and annotated, Notes on the Classic of Mountains and Rivers[M].
   Shanghai: Shanghai Classics Publishing House, July, 1980 (Ver.1), p3.
- [5] Yuan Ke, checked and annotated, Notes on the Classic of Mountains and Rivers[M]. Shanghai: Shanghai Classics Publishing House, July, 1980 (Ver.1), p6.
- [6] Yuan Ke, checked and annotated, Notes on the Classic of Mountains and Rivers[M]. Shanghai: Shanghai Classics Publishing House, July, 1980 (Ver.1), p9.
- [7] Li Boqian, chief ed., Complete Collection of Chinese Excavated Bronze Ware, Shaanxi (1)
  [M]. China Science Publishing House, Dec., 2018 (Ver.1), p134.
- [8] Li Boqian, chief ed., Complete Collection of Chinese Excavated Bronze Ware, Shaanxi (1)
   [M]. China Science Publishing House, Dec., 2018 (Ver.1), p228.
- [9] Li Boqian, chief ed., Complete Collection of Chinese Excavated Bronze Ware, Shaanxi (1)
   [M]. China Science Publishing House, Dec., 2018 (Ver.1), p231.
- [10] Li Boqian, chief ed., Complete Collection of Chinese Excavated Bronze Ware, Shaanxi (2)[M]. China Science Publishing House, Dec., 2018 (Ver.1), p463.
- [11] Li Boqian, chief ed., Complete Collection of Chinese Excavated Bronze Ware, Shaanxi (2)[M]. China Science Publishing House, Dec., 2018 (Ver.1), p481.
- [12] Li Boqian, chief ed., Complete Collection of Chinese Excavated Bronze Ware, Shaanxi (3)[M]. China Science Publishing House, Dec., 2018 (Ver.1), p629.
- [13] Li Boqian, chief ed., Complete Collection of Chinese Excavated Bronze Ware, Shaanxi (3)[M]. China Science Publishing House, Dec., 2018 (Ver.1), p637.
- [14] Ma Chenxi, A Comparative Study of Qiequ Pattern (Curved and Hooked Patterns Derived from Animal Elements) and Dragon Pattern [J]. Art Sea, Dec., 2018.