

# Exploration on Jade Culture in West Liaohe River Basin in the Neolithic Age

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**Abstract**—Many cultural relics of the Neolithic Age have been found in West Liaohe River Basin, among which the earliest known Chinese jade artifacts have been unearthed in Xinglongwa Site, providing evidence for people to explore the source of Chinese jade culture. A large number of jade artifacts were unearthed in Hongshan Culture, and the animal-shaped jade objects were mostly represented by deification. This paper studies archaeological briefs and related historical materials and finds that jade objects were not found in every tomb, but more in the tombs of nobles or clerics. This indicates that jade wares appeared at this time as product of social differentiation, and assumed the responsibility of distinguishing the noble from the inferior and identifying identity. It also proves that there is an inseparable connection between prehistoric jade in Western Liaoning and primitive worship. It can be said that jade was the medium through which primitive ancestors communicated with the gods.

**Keywords:** *Xinglongwa Culture, Hongshan Culture, jade pig dragon, cloud-shaped jade hook, dragon and jade, primitive worship*

## I. INTRODUCTION

Jade culture is a sublimation of the ancient Chinese culture in the long river of history. People always have special expectations for jade. In the traditional concept, jade is a symbol of nobleness and mildness. Since ancient times, there have been such sayings as "face like jade" and "the beauty in the high places is like a jade". Was there any jade in the Neolithic era? An accidental idea gave the authors the idea of exploring the early Chinese jade culture: when did jade appear, what was its development process, and what was the earliest jade processing technology. In the following paper, the authors trace its roots, find the earliest jade articles in China, and explores the jade culture in the West Liaohe Basin in the Neolithic Age.

## II. WEST LIAOHE RIVER BASIN IN THE NEOLITHIC AGE

The Liaohe River is a large river in the south of the Northeast China. The geographical conditions of the area are very complicated. It involves three mountain ranges (Yanshan, Greater Khingan, and Changbai Mountains), flows through mountains, plains, hills, wet lands and deserts, and finally enters the sea at Liaodong bay. The early civilization in the Liaohe River Basin was closely related to

the Xia and Shang civilizations in the Yellow River Basin and Yanshan River Basin, and both were relatively mature forms of civilization. The "Chinese Civilization Exploration Project" officially launched in 2004 is sponsored by "10th Five-Year Plan" science and technology development project and an "11th Five-Year Plan" science and technology projects. It is supported by the state and studies Chinese history and ancient culture through a multidisciplinary comprehensive national science and technology priority project. The project has three stages, of which the second stage aims to study the origin and early development of Chinese civilization. The research results show that the Liaohe River Basin is one of the cradles of Chinese civilization. The West Liaohe River is the upper reaches of the Liaohe River and the largest tributary of the Liaohe River. It is located between the Great Khingan Mountain and the Yanshan Mountain. From the Neolithic Age to early Bronze Age, a series of outstanding cultures emerged in the West Liaohe River Basin, such as Xiaohexi Culture, Xinglongwa Culture, Fuhe Culture, Hongshan Culture, Zhaobaogou Culture, and Xiaoheyuan Culture [1]. It can be learned from the archaeological briefs published so far that there are almost no jade artifacts unearthed in Xiaohexi Culture and Fuhe Culture, and few jade artifacts unearthed in Zhaobaogou Culture and Xiaoheyuan Culture. Only Xinglongwa Culture and Hongshan Culture have unearthed more jade articles. Below, the authors will delve into the jade unearthed in these two cultures.

## III. XINGLONGWA CULTURE: THE OCCURRENCE OF JADE CULTURE

The discovery of jade in Xinglongwa Culture makes the history of jade used in ancient China date back to the middle of the Neolithic Age about 8,000 years ago. The jade artifacts unearthed from the Xinglongwa Site are concentrated in Chifeng, Inner Mongolia, and western Liaoning. Six excavations were carried out between 1983 and 1993. A large settlement was found and there were traces of half-crypt sites, ash pits, graves, etc. The artifacts unearthed were jade, pottery, stone, bone, clam, etc. Among them, the unearthed jade articles mainly consist of jade slotted rings, jade axe, flat jade axe, and jade tube, etc. [2] The Xinglonggou site has been investigated since 1998. Until 2003, three excavations have been carried out. The site is divided into three sites, among which the first site is a

large-scale settlement in the middle of the Xinglongwa Culture. The unearthed jade here is similar with that in Xinglongwa Site. The owner of the M4 tomb was a girl. Two jade slotted rings were unearthed, one in the earth and the other embedded in the right eye socket of the tomb owner. Chzhai site [3] was excavated seven times in different scales from 1896 to 1949. Twenty-seven jade articles were unearthed, including 12 jade daggers, six jade slotted rings, four jade tubes, two jade axes, two jade chisels, and a small jade ring. Among them, jade blocks and jade daggers are mostly found in tombs, and unearthed in the strata and houses. All other artifacts were unearthed in the stratum and houses and were not found in tombs.

The authors comprehensively analyze the unearthed jade articles of Xinglongwa cultural site, and the analysis shows that jade in Xinglongwa Culture has the following characteristics:

*A. There are many kinds of jade with rich color, good quality, and distinctive characteristics of the times*

Experts have identified that the jade used in Xinglongwa Culture is mainly nephrite from Xiuyan, Liaoning, with a variety of colors such as cyan, kelly, dark green, light green, white or wax yellow. Xiuyan jade is the jade material with the longest use time in the historical process of the development of jade culture in China. It has been used since the Neolithic Age [4]. At present, there are about a hundred pieces of jade ware in Xinglongwa Culture, mainly jade slotted ring, jade dagger, jade tube, jade axe, flat jade axe, and jade chisel. They are divided into decorative and imitation tools. Among the various types of jade articles, the largest number of unearthed jade is jade slotted ring, the typical of Xinglongwa Culture, followed by jade dagger. The jade combination represented by jade block, jade daggers, etc., which appeared during the Xinglongwa Culture period, has distinctive characteristics of the times. The jade slotted ring and jade dagger in this period are still in the early stages of carving, which are generally consistent with that of the same period or even later.

The characteristics of its times are reflected in the universal agreement between the jade wares of Xinglongwa Culture represented by jade slotted ring and the jade wares of the middle Neolithic Age. It is obvious that the gender of jade wearers has changed through the comparison between the unearthed jade wares of Xinglongwa Culture with those of Hongshan Culture and Xiajiadian culture unearthed later. In addition, curved jade no longer appears in the Hongshan Culture, but four pieces have been unearthed in the Dadianzi tomb of Xiajiadian culture [5], which are from two tombs, each with two pieces. One of the tombs was owned by a girl of about 11 years old with a bar on her chest; the owner of the other tomb is a middle-aged man. The bar is placed in the niche of the tomb, surrounded by lacquered pig trotters and so on. The seven jade axes unearthed from the Tomb of Dadianzi are from seven large and medium-sized tombs. The position of the jade axe here was relatively fixed when it was unearthed. It was basically placed on the chest and waist, and its body was perpendicular to the body. Obviously, jade axe

has become a symbol of status and power. There are obvious differences in the form and function between the jade axes of Lower Xiajiadian Culture and that of Xinglongwa Culture. All these illustrate the characteristics of the times of the jade ware of Xinglongwa Culture.

*B. The unearthed situation is of complexity and diversity*

The jade artifacts of Xinglongwa Culture are mainly unearthed in five types of places. The first is the accumulation layer of the site, such as the jade axe excavated from the second layer of T0604 in Chzhai Site [6]. The second is the accumulation layer of the site. The third is the residential level of the site. The fourth is the tomb of the site, such as the jade unearthed from the tomb of Chzhai Site; The fifth is outdoor tombs, such as tomb in Baiyinchanghan Site. After a simple comparison, it was found that the jade from the tombs was mainly jade slotted rings and jade daggers, most of which were worn or used by the tomb owner when he was alive. The most typical one is jade slotted ring, which is usually unearthed in pairs and placed near the ears of the tomb owner. The main excavated areas are Xinglongwa Site and Xinglonggou site. What's more, the unearthed jade daggers were mostly placed on the waist, chest and neck of the tomb owner, which were often found in Chzhai site. The combination of the shape and position of jade deepens the authors' understanding towards the function of jade of Xinglongwa Culture.

*C. The jade is small and standard*

The jade wares unearthed in Xinglongwa Culture, whether it is jade slotted ring, jade dagger, flat jade axe or jade axe, are relatively small in shape. The surface is smooth and simple, mostly in geometric shape. Most of the jade slotted rings are ring-shaped and column-shaped. The ring-shaped ones are circular with a gap, most of which are unearthed in Xinglongwa Site and Xinglonggou site. Jade daggers [7] are oblong, concave on one side and arced on the other side. They are slightly narrow at the bottom, and the whole body is undecorated. They are similar with bone daggers in shape. The curved bars are usually curved (like animal fangs) and broken-ring in shape. The one unearthed in F250 of Xinglongwa Site is 4cm long, 0.32cm wide and 0.52cm thick, which should be the earliest example of reformed jade in archaeological excavation. As the shape of the jade tube, flat jade axe, jade axe, and jade chisel is similar with that of stone tube, flat stone axe, stone axe, and stone chisel, the former group should be made from imitation stone tools. The jade cicada unearthed in Baiyinchanghan site is particularly striking and is a valuable physical object for studying the shape and structure of jade.

*D. The processing and carving technology of jade has been mature*

Generally speaking, the difficulty of carving crafts of jade in Xinglongwa Culture varies with the shape. The processing of jade axe, jade chisel and flat jade axe generally include the following procedures: selection of jade, cutting, rough grinding, shaping, and polishing. The processing of

bar bender and jade tube has one more procedure: drilling. The processing of jade slotted ring is most technically difficult, including selection of jade, rough grinding, central perforation, inner hole grinding, polishing and so on. There are two types of hole drilling in jade: single-sided drilling and two-sided drilling. Different methods are used due to the shape. It can be seen that although the jade wares of Xinglongwa Culture belong to the infant stage of the development of jade culture in China, its craftsmanship have been relatively mature and complete.

Therefore, the authors conclude that jade is not only a production tool, but also has a certain decorative effect. At that time, the primitive human were no longer in the budding state of beauty. They had realized the transformation from making tools to making decorations, which coincides with the saying that when the granaries are full, the people follow appropriate rules of conduct. Mr. Yang Boda called jade slotted ring, jade dagger, etc. as jade beauty. The advent of jade beauty shows that the primitive ancestors have explored the decorative effect of jade materials in addition to manufacturing tools, which has been a great leap forward. Of course, not everyone can own jade ornaments. The authors probe into the jade users and possessors and find that those who own these jade articles are generally wizards with privileges. This indicates that at that time, the jade was no longer decorations or pure demonstration of beauty, but has become sacred artifacts and ritual articles. They have become the symbol of status and power. At that time, people needed to rely on jade to communicate with nature or deities, and jade directly served to religious etiquette.

#### IV. HONGSHAN CULTURE: JADE DRAGON AND PRIMITIVE WORSHIP

The jade wares of Hongshan Culture can be regarded as the highest level of jade culture of the same period (the Neolithic Age) in China, which inherited and developed the Xinglongwa Culture. The material source of its jade is mainly local jade, mostly tremolite, a real jade. In a narrow sense, Hongshan Culture is mainly distributed in the western part of Liaoning Province and the eastern part of the Inner Mongolia Autonomous Region, mainly in the middle Neolithic age.

Hongshan jade can be divided into five categories in terms of shape: animal jade, imitation tools, decoration, special class, and figure jade. These unearthened jade mainly reflect Hongshan ancestors' understanding of production, life and nature, and most of their themes and shapes are closely related to nature worship.

Among animal jade, dragon-shaped jade, bird-shaped jade, turtle-shaped jade and jade silkworm are the main themes. Among them, dragon-shaped jade is in the majority. Next is bird-shaped jade, mainly eagle-shaped and pupa-shaped. Turtle-shaped jade include turtle-shaped and shell-shaped, while jade silkworm are mostly in silkworm chrysalis shape. The carving of animal-shaped jade is mostly flat carving or bas-relief. Dragon-shaped jade employs circular engraving. All of these animal-shaped jade artifacts

were created by deification of the animal's original form. There is no doubt that these jade wares were used by people in Hongshan to communicate with deities.

The dragon is the most revered sacred object in the hearts of all generations of people. Among the unearthened cultural relics in China, the earliest and most vivid carving based on dragon is the jade dragon of Hongshan Culture. Among the jade dragons of Hongshan Culture, the C-shaped jade dragon unearthened is the most vivid one. This large jade dragon is carved from a single piece of jade with round carving, and its details are processed by flat carving and bas-relief technique. The whole body is smooth and round, while the dragon's body looks rigid and powerful, with long bristle raising and lively. [8] Jade pig dragon is the most common dragon-shaped jade, also known as "jade carved dragon", "animal-shaped jade carving", "animal-headed slotted ring". The controversy in naming of such kind of ware mainly lie in that some people advocate naming according to the head of the jade ware, while others advocate naming according to the overall shape of the jade ware. In his book *On the Primitive Civilization of the Liao River Basin and the Origin of Dragons*, scholar Guo Dashun takes that the head of the artifact resembled a pig's head, thus the name "jade pig dragon". However, later he considers it head of bear, thus the name "jade-carved dragon". [9] These names have their own reasonability. But the authors think the name "jade pig dragon" is more appropriate, as the jade is circlet-shaped, its head is like a pig with broad ears and fat body, the lines around the eye resemble wrinkles on the skin, and the tusks outside the mouth on the pig's head are visible. The jade dragon unearthened in Hongshan Culture has no feet, no claws, no scales, and no horns, which is the early image of dragon. In addition, the authors wondered why the dragon's head is the image of a pig's head. In China's historical records, the dragon is closely associated with "heaven", "water" and "clouds". The primitive ancestors regarded the dragon as communication deity of nature worship, which reflected people's reverence and pray for nature. They prayed for favorable weather, good harvest and peace. The pig is an important domestic animal in the primitive society, and is the sacrifice in various blessing activities, which shows its importance to people. It is no wonder that the people of Hongshan combine the dragon they respected and the pig they valued into one, forming the jade pig dragon. Jade is the most exquisite ware unearthened in Hongshan Culture, and different jade wares have different functions.

Jade dragon is by no means a simple decoration, but a symbol of some religious significance. According to more than a dozen jade pig dragons that have been unearthened, except for some changes in the lines, the overall image is surprisingly consistent, which shows that the jade dragon is not made casually, but follow a certain fixed design or specification. The jade dragon was often placed on the chest of the tomb owner when unearthened, which indicates that the tomb owner may have held the jade dragon in his hand for sacrifice during his lifetime. Therefore, the jade pig dragon is a symbol of certain right. The tomb owners who can be buried with the jade pig dragon are likely to be clergy, who

are the intermediaries to communicate with gods and people, and the jade pig dragon serve as their psychic medium. This confirms the authors' exploration and reflection on the jade in Xinglongwa Culture above. Thus it can be seen that the jade pig dragon was a religious sacrifice in China's primitive agricultural period. It can be said that the image of dragon is the symbol of the development of primitive agriculture and the demand of religious life. When the ancient Chinese civilization began to turn to the obscure era, the image of dragon came into being. Jade pig dragon is not only a symbol of culture, but also a product of gradual strengthening of the etiquette, hierarchy, and power of the primitive society. It is also a reflection of the natural worship of the primitive ancestors. The development history of Hongshan jade shows that as a prehistoric jade, Hongshan jade plays an important role in the origin and formation of Chinese culture and civilization, and therefore occupies an important position in China's prehistoric archaeology. As a result, the research on the modeling characteristics and connotation of Hongshan jade plays an important role in the study of Chinese prehistoric culture. In addition, jade also reflects the social class and social structure at that time, which contains high cultural connotation.

#### V. CONCLUSION

The study of Xinglongwa Culture and Hongshan Culture shows that the climate in western Liaoning is humid and warm, which is very suitable for agricultural farming. Just as the idiom goes, economic foundation determines the superstructure, ideology and social organization are constantly developing as agriculture makes progress. People have higher pursuit in the spiritual realm, such as the sacrifice to nature, the worship of reproduction and animals, and so on. And the material carrier of such spiritual pursuit is jade. The authors take that in the tribe at that time, there were already specialized craftsmen who made jade articles. The emergence of these professional jade makers also further promoted the prosperity of jade in Xinglongwa Culture and Hongshan Culture. It is precisely in the great prosperity of jade that dragon-shaped jade has developed the most. The jade dragon, the representative of jade of Hongshan Culture, also has its own independent origin and evolution process, from jade slotted ring of Xinglongwa Culture, to the stone dragon of Zuojiashan, and the jade pig dragon of Hongshan Culture. Although there exist faults in the evolution process, and many transitional patterns have yet been discovered, there is no doubt that the internal connection between the three is obvious. It can be found from the excavations that during that period, jade was not only employed as an ornament, but also as a symbol of power and a manifestation of special status, which shows that jade then was a product of social differentiation with the role of reflecting status and nobility.

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