

Aesthetic Concept and Historical and Cultural Inheritance of Lingjiatan Jade: An In-depth Analysis of the Shape and Decoration as an Example

Jingling Zhang Ph.D

Department of Fine Arts, International College, Krirk University, Bangkok, Thailand,
10220

ORCID: <https://orcid.org/0009-0000-2668-1826>
15855132937@163.com

Abstract: : Lingjiatan jade culture originated from Lingjiatan, a central settlement site of the Neolithic Age dating from 5300 to 5800 years ago. This culture is famous for its rich, unearthed jade objects, which are abundant in quantity and variety and exquisite in carving skills, reflecting the highly developed craftsmanship level of the people at that time. Lingjiatan jade is divided into tools, Peopleapons, decorative categories, animals or figures, and others. Despite lacking practical functions, tools and Peopleapons such as axes, swords, and gold were used as ceremonial utensils. Decorative categories of jade include bracelets, embellishes, rings, blocks, bi, double bi, pipes, beads, and other forms, as well as with unique shapes of pagoda decoration, buckle decoration, trumpet decoration, etc.; they are worn on the body, play a decorative role. In addition, there are a few animal or human figures like jade, such as pig, turtle, dragon, phoenix bird, eagle, rabbit, and standing and sitting figures. In general, Lingjiatan jade culture is an essential representative of China's Neolithic jade culture, which not only shows the superb craft technology and rich imagination of the people at that time but also reveals the culture, religion, and aesthetic concepts of the ancient society for us. By studying Lingjiatan jade culture, People can have a deeper understanding of the social life and civilization development in the Neolithic Age.

Keywords: Lingjiatan culture, Jade products, Comparative studies, Cultural imagery

1. INTRODUCTION

The site of Lingjiatan in Hanshan County, Anhui Province, is a large-scale human activity site of the late Neolithic period about 5300~5500 years ago, which faces the Yuxi River and is backed by the Taihu Mountain. From 1987 to 2015, the Anhui Provincial Institute of Cultural Relics and Archaeology conducted a total of 8 archaeological excavations, excavating the remains of red pottery blocks, sacrificial relics, burial areas, ancient people, stone walls, and other relics, and unearthed a large number of stone tools, jade, metals (Careyva, 2022). The artifacts unearthed at the Lingjiatan site strongly reflect the aesthetics and spiritual pursuit of the early human society created by the cultural development, people's labor creation, and

the natural environment at that time, and the traces of design and creation are still engraved on the unearthed cultural relics (Lin et al., 2022). Jade is the most distinctive item in the Lingjiatan site, and the excavation of many jade artifacts shows that the ancestors of Lingjiatan had early jade use, Xi. The unique shape and shape also reflect that it has a higher level of jade manufacturing technology than other sites in the same period. The ancestors of Lingjiatan meticulously carved and carved jade objects such as jade figures, jade eagles, jade turtle plates, jade dragons, and jade tablets so that the originally cold jade infused with human will, making these jade objects have the nature of reflecting the culture of the earlier stage of the military democracy period in the later period of primitive society (Liu, 2019). By interpreting the social function attributes of Lingjiatan jade patterns and contributing to the contemporary development and construction of Lingjiatan jade culture, a point of convergence can also be found with the common development of the current era (Lu-Qian, 2019). Artistic language, also known as artistic vocabulary, is the core element of the form that constitutes the beauty of artworks, "the form of beauty is the expression of the external beauty of the aesthetic object and the structure of the internal beauty, which is closely connected with the content of beauty and is inseparable" (Li & Cao, 2022).

Pattern decoration is an important part of artistic language (Halsted, 2018). Compared with the other two prehistoric jade cultural centers, the Lingjiatan site has unearthed many jade artifacts with unique shapes, patterns, and novel carvings, presenting a unique artistic language picture of Lingjiatan jade (Thomas et al., 2018). Therefore, from the perspective of pattern decoration and cultural imagery, this paper compares the prehistoric cultures of other regions in the same period through careful analysis of archaeological data and scholars' expert judgments, scientifically identifies the artistic semantic characteristics and cultural connotations of the special patterns of jade at the Lingjiatan site, and interprets the purpose relationship between the communication carrier and function of schematic symbols (McElwee et al., 2022).

First, we will clearly state the purpose of the research, that is, the specific problem or goal that the research aims to solve or achieve. By clarifying the purpose of the research, readers can quickly grasp the core content and expected results of the research. Second, we will highlight research gaps, that is, problems that have not been adequately studied or addressed in a particular aspect of the current field. These gaps may involve theoretical

flaws, practical challenges, or limitations of existing research. By revealing these gaps, we can highlight how important and innovative this research is, illustrating how this research can fill these gaps and contribute to the advancement of the field. To be more specific, suppose that the purpose of this study is to explore the application effects of emerging technologies in a certain field.

2. OVERVIEW OF JADE ARTIFACTS UNEARTHED FROM LINGJIATAN CULTURE AND MAJIABANG CULTURE

As the center of a Neolithic settlement site, the Lingjiatan site was discovered in 1985 and has been excavated five times since 2007. The site is located in Lingjiatan Village, Tongzha Town, Hanshan County, Ma'anshan City, Anhui Province, with a total area of about 1.6 million square meters. The whole site is composed of two moats, the inner and the outer moat; from the excavation, the inner moat and the adjacent Yuxi River can form a closed space divided into a burial area and a living area. In contrast, the outer moat is only the Peoplestern section and the Peoplestern part of the northern section. Among the 44 tombs excavated in the Lingjiatan cemetery, there are 37 burial jade burials, with 1,499 burial utensils and 804 jade ornaments, accounting for 54% of the total number of burial objects excavated (Matalak et al., 2023).

In other words, as far as the unearthed cultural relics are concerned, the most shocking thing to the world is the excavation and cleaning of more than 800 pieces of jade in the site, and the jade people, jade eagles, jade turtles, jade Huang, etc. cleaned up by archaeologists from the site are dizzying. The Liangzhu culture is also known as the three major jade cultures in prehistoric China, and among them, the Lingjiatan culture is the oldest (Kurniah et al., 2024).

In 2016, "the Lingjiatan site was selected into the national "13th Five-Year Plan for the Protection of Large Ruins" (Le Chung et al., 2022). It is also inevitable that the site". Because of its complete range of relics and rich cultural connotations, it was listed as one of the 100 archaeological sites in China in the 20th century" (La Delfa et al., 2020). Among them, jade artifacts such as jade Huang, jade dragon, eagle, and jade man are the most representative. They are also one of the earliest traces of the beginning of Chinese jade culture, and their specific narrative structure is shown in Figure 1.

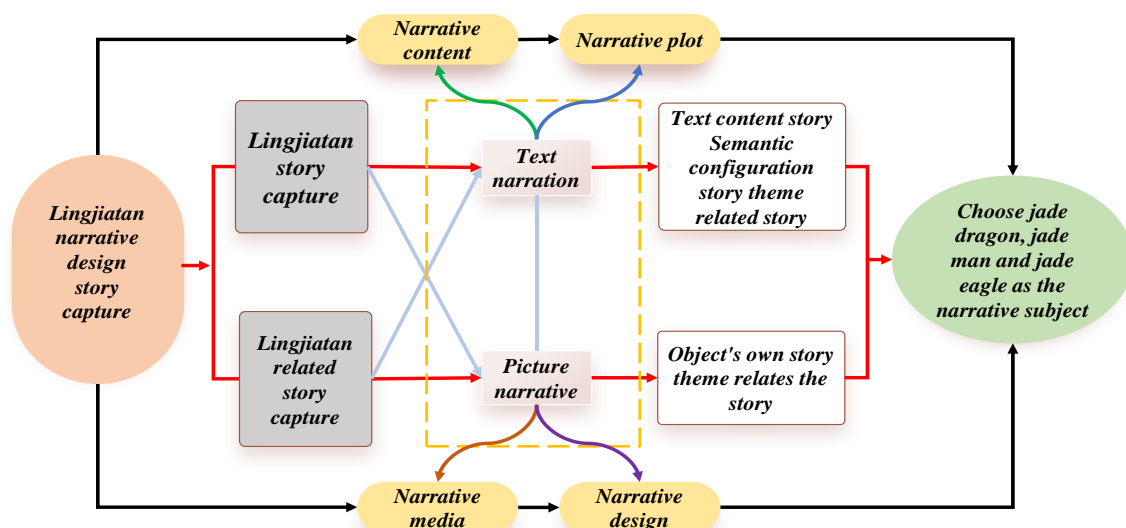


Figure 1: Lingjiatan cultural narrative structure

The site of Majiabang is located 7.5 kilometers south of Jiaxing County, Zhejiang Province. It is a plain where three rivers intersect; the area of the site is about 150 meters long from east to west and about 100 meters wide from north to south. According to the archaeological excavation and analysis of archaeological experts, the Majiabang cultural site is a cultural site in the middle Neolithic period, which is not only a wide and complex community of sites but also around the Taihu Lake. Even within the same cultural field, there are different broad regional distributions. The cultural relics excavated from the site group show that the Majiabang culture is worthy of the title of the source of Jiangnan culture, especially the 156 grains of rice excavated and cleaned up at the Luojiajiao site belonging to the Majiabang cultural area so that the history of farming agriculture is traced even earlier than the Hemudu culture period (about the present). 7000 ~ 5000 years), and the rest of the various cultural relics excavated from the cultural site show the witchcraft culture, ritual culture, rice culture, textile culture, etc., all show that the Majiabang culture is a physical example of the source of Jiangnan culture. Among them, the most noticeable to archaeologists is still a large number of jade products unearthed from the excavation of the cultural site. 1959 Ma Jia The Bang site was excavated for the first time in Jiaxing City, Zhejiang Province. Then, nearly 30 sites were excavated in Songze in Qingpu in Shanghai, Peilidun in Changzhou City, Qitou Mountain in Jiangyin, Pengzudun in Wuxi, Straw Shoes Mountain in Suzhou, Jiangsu Province, and Jiangjiashan in Changxing, and jade artifacts were also cleaned up. Judging from the current discoveries, the jade artifacts unearthed at the Majiabang site are the most brilliant in the shape of jade jue, jade Huang,

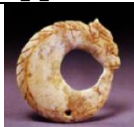



jade bi, jade ring, jade bracelet, jade bead, jade pendant, jade adze, jade tube, and frog-shaped jade ornaments. At least in terms of craftsmanship, it is higher than the jade products unearthed at the Hemudu cultural site (Alisher, 2022). Although the Lingjiatan cultural site and the Majiabang cultural site both belong to the Neolithic cultural sites found in the middle and lower reaches of the Yangtze River, the jade artifacts unearthed in the two places also have their characteristics due to the time differences between the two cultural sites (the Majiabang culture in the middle Neolithic period, earlier than the Lingjiatan culture in the late Neolithic period), customs culture and religious culture.

3. ANALYSIS AND COMPARISON OF UNEARTHED JADE

3.1 Diversity and Differences in Jade Materials

The jade excavated in the Lingjiatan cultural relics area is mostly made of tremolite, chalcedony, agate, and other materials. However, from using jade materials at the site, tremolite is the main. The jade unearthed from the Lingjiatan cultural site has color and luster, mostly showing chicken bone white, and does not contain impurities; after scientific identification, the hardness of most of its jade, most of them is as high as 7 degrees, close to the jadeite series, the representative jade is shown in Table 1.

Table 1: Analysis of Lingjiatan jade representations and design elements

Cultural Intent	Design Elements	Appendix
Jade Dragon	The dragon is a symbol of Chinese civilization, the earliest dragon in China, and the symbol is strong	
Jade Eagle	It is the symbol of the local national emblem, symmetrical and graphic	
Jade	It shows the complete physical demeanor of primitive human beings, is highly recognizable	
Jade Huang	Hushouhuang and Longfenghuang have the most archaeological value and research value	

A comparative analysis of jade artifacts excavated from the Majiabang

and Lingjiatan cultural sites offers intriguing insights. Despite the Majiabang site's earlier emergence by a millennium, its jade selection reflects a primary stage in identifying and utilizing jade materials. Predominantly favoring certain jade types, the range of other materials remains limited. The finished jade primarily exhibits a white, milky, and translucent appearance, consisting primarily of quartz with supplementary tuff, turquoise, and fluorite. This observation suggests a relationship to the contemporary understanding of natural mineral resources, mining techniques, and processing technologies. The jade artifacts excavated from the Lingjiatan cultural site have been identified by scientists as jadeite, while the jade of the Majiabang culture contains nephrite. The reason for the difference of this jade material can be traced back to the difference in productivity and production level of Lingjiatan culture and Majiabang culture at that time, from a diachronic perspective, the technical means controlled by the ancestors of Lingjiatan and their cognition of nature should be better than that of the ancestors of Majiabang "From the perspective of large buildings such as moats and altars, the ancestors of Lingjiatan have mastered the ability to build large-scale public facilities, reflecting the ability of organized social dispatch (Mulyani, 2022). And also created jade spoons and other living utensils, the cultural site unearthed physical objects show that the ancestors of Lingjiatan at that time People have achieved basic material satisfaction, especially food abundance. All indications show that the social living conditions of the ancestors of Lingjiatan (late Neolithic Age) at that time Peopler also in the Neolithic Age, compared with the social living conditions of the ancestors of Majiabang (Middle Neolithic Age), Peopler more affluent and comfortable, and the corresponding productivity and production level Peopler also slightly mature, and the representative of their pottery types is shown in Table 2.

Table 2: Pottery Type Combinations of Various Groups of Neolithic tombs

	Slanted Pot	Canned Beans	Round- Bellied Pot	Flat- Bellied Pot	Bowl- Shaped Beans	Folded Belly Pot
First Paragraph	I	I	I	-	-	I
Second Paragraph	II	I	-	I	I	-
Third Paragraph	III	II	II	II	II	-
Fourth Paragraph	III	III	III	-	III	-

Judging from the sources of jade materials unearthed from the Lingjiatan

cultural site and the Majiabang cultural site, they are basically taken locally, rather than transported from a distance. Archaeologists have found the remains of jade raw materials with minerals such as agate and quartz in the Taihu Mountain area north of the Lingjiatan site, but they have not found tremolite mineral raw materials, which is not comparable to the dolomite and serpentine of jade materials excavated from the Lingjiatan cultural site. In 1999, archaeologists finally discovered dolomite jade corresponding to the jade material of the Lingjiatan cultural site in the Qiaotouji area of Feidong County, Hefei City, Anhui Province, and the mineral material was identified by the relevant geological department and confirmed that the mineral material belonged to serpentine (Consoli, 2021). Subsequently, archaeologists found tremolite mineral materials in the geological fault zone from Taihu Lake to Chaohu Lake and Feidong, and the raw materials for jade treatment found in the local and surrounding areas of the Lingjiatan cultural site are very consistent with the materials used in the excavation of jade at the site, and the overall excavation process is shown in Figure 2.

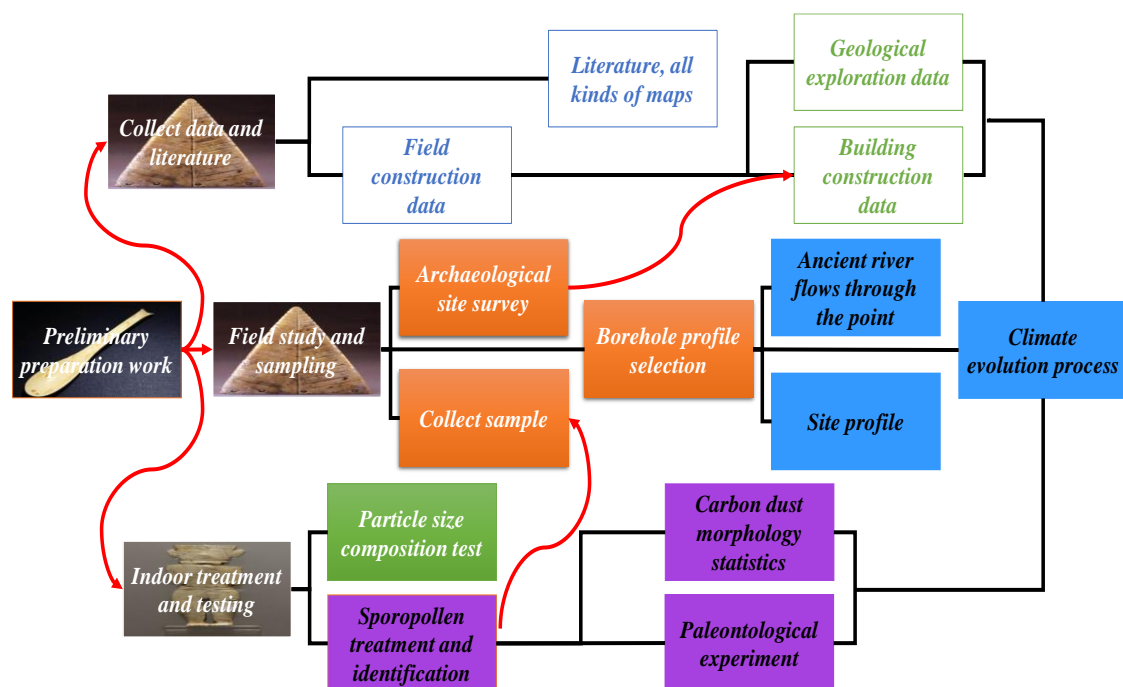


Figure 2: Flow chart of the excavation of the Lingjiatan site

The jade unearthed at the Majiabang site, the source of the material, archaeologists according to its excavation location, in-depth investigation, found that the site unearthed jade materials, most of the materials from Shanghai, Nanjing, Hangzhou region, such as Zhejiang Yuhang, Shaoxing Huiji Mountain, Lin'an Tianmu Mountain, Jiangsu Yangzhou, Zhenjiang and Taihu Lake near Yili Mountain, Ningzhen Mountain and other areas.

The jade materials used in the above two Neolithic cultural sites are all from the ore veins of the local and surrounding areas. Ho Peoplever, compared with the jade ore materials unearthed from the Lingjiatan cultural site and the Majiabang cultural site, the former is better than the latter in terms of type, quality, color, and other materials (Zimenko, 2020).

3.2 Respective Characteristics of Ornamental Modeling

A comparative analysis of jade artifacts excavated from the Lingjiatan and Majiabang cultural sites offers fascinating insights into prehistoric China. The Lingjiatan site, in particular, has yielded over a thousand pieces of jade, displaying a diverse range of shapes and ornaments, including jade eagles, men, and turtles, characteristic of this cultural epoch. These finds are of significant archaeological, historical, scientific, and aesthetic value, particularly for understanding China's prehistoric jade system and ritual culture. Contrastingly, the Majiabang site reveals a narrower spectrum of jade types. Archaeological excavations here have unearthed approximately 160 jade artifacts, primarily jade disks, and ornaments, which serve as representative standards of Majiabang jade culture. These artifacts also hold valuable insights into the farming, sacrificial, and decorative cultures of the Neolithic ancestors of Jiangsu and Zhejiang. The jade turtle excavated from the Lingjiatan site, composed of a dorsal and ventral carapace, displays intricate craftsmanship. The central jade plate, adorned with an intricate gossip pattern, hints at the sophistication of the jade working techniques. Upon excavation, the back, abdominal, and jade plates were found to be unified initially, further testament to the skilled artistry of this ancient civilization. The jade turtle and the jade version of the gossip diagram can be corroborated by ancient legends such as "Fuxi Initiates Bagua" and "Yuan Turtle Title Symbol," especially the Bagua pattern is full of mystery, which shows that the utensils are not daily necessities, nor are they ordinary ornaments. They should be used for divination and sacrifice. During 1990~1993, for the study of this jade turtle, many experts, including Jao Tsung-i and Li Xueqin, put forward an astronomical theory, mathematical theory, orientation theory, feng shui style plate theory, sundial theory, etc. It can be seen that the research and inference of experts and scholars on the use of the jade turtle as a non-daily life object or ornament are the same, and according to the gossip patterns depicted on it, it may be questionable to study its true use and function. The Lingjiatan cultural site also unearthed a jade eagle with a peculiar shape; its overall shape integrates the images of an eagle and a pig, the head is eagle-shaped, the beak is like an eagle's beak, the eyes are protruding like an eagle's eye,

and the chest is decorated with an octagonal pattern 4] A circle of star pattern, the hole is drilled in the circle, and the wings are all expanded. The wing tail is shaped like a pig's head, and the pig's eyes and nostrils are all openwork drilling. The ornamentation on the front and back of the jade eagle is the same, and this design is unique and integrates shape and aesthetic imagination in the late Neolithic period. When a utensil itself appears at the same time, the combination of birds and beasts of the modeling elements, such as the eagle body and the eight-pointed star decoration in the middle of the two pigs' heads in the picture above, the pattern of the utensils shows the meaning of the sun worship of the ancients, especially the pig shape, which is the representative of the local agricultural livestock, reflecting the local ancestors worship the gods of heaven and earth, pray for a good harvest of agricultural natural feelings. The jade dragon unearthed from the Lingjiatan cultural site has its horns, whiskers, mouth, nose, eyes, etc., vividly depicted, which strongly and distinctly shows the traditional modeling characteristics of the Chinese dragon. The overall shape of the jade is flat; the head and tail are closed into a circle, the inner hollow is irregularly round, the carved lines on the body are staggered like scales, the lips are prominent, and the head is engraved with two horns. The uniqueness of the design of the jade dragon is not only reflected in the fact that the "dragon" is a sacred thing and represents the meaning of majesty and solemnity but also the overall shape of the "circle" shape connected from end to end, which is also a kind of psychological sustenance that means perfection. The statistics of jade unearthed during the first excavation are shown in Table 3.

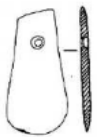
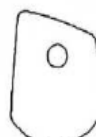









Table 3: List of Jade Artifacts Excavated for the First Time in Lingjiatan

Tombs	Artifacts and the Number of Pieces	Total/Piece	Source
	1 jade ring, 1 jade plate, buckle		
87M1	ornament, 1 turquoise piece, 2 Jue and Huang, and 3 jade figures	11	Anhui Provincial
87M2	1 wrist guard ornament and 1 jade ornament, 2 rings and Jue, 3 cores, and 4 hoop bracelets	13	Institute of Cultural Relics and
87M3	Jade Huang 2 pieces	2	Archaeology: Lingjiatan - Field
87M4	1 piece (group) of jade turtle, 1 piece of jade plate, spoon, triangle ornament, human head crown ornament, hairpin, handle-shaped ornament, 1 jade ornament, 2 fungus-shaped ornaments, 3 pieces of jade ring, jade Yue, and jade bi	103	Archaeological Excavation Report No. 1

Amidst the excavations of the Majiabang cultural site, jade ornaments adorned with animal motifs are rare, with the jade frog-shaped piece standing out as a notable exception (Sheng-Guo, 2018). This jade, exhibiting a pale green hue and a lustrous finish, lacks intricate carvings, appearing comparatively more straightforward than the ornate patterns on jade tablets unearthed from the Lingjiatan site. This simplicity underscores a technological divide between the two cultures (Sheng-Guo, 2018). Remarkably, the Majiabang jade frog is adorned with cow nostrils pierced into its neck, yet its overall form captures a dynamic essence. This is evident in the lively depiction of the frog poised for a leap, its mouth slightly open, front legs pressed to its chest, and hind legs flexed with toes curled, creating a vivid image of a leaping frog. This meticulous craftsmanship suggests that the ancestors of the Majiabang culture observed nature closely, translating these observations into intricate jade creations. As one of the few animal motifs discovered at the Majiabang site, this jade frog has garnered significant attention from scholars, sparking research interest. Many researchers concur that it possesses both practical and aesthetic qualities (Tan, 2023), offering a unique insight into its era's cultural and artistic practices. The jade huang, crown-shaped jade ornaments, triangular carved pieces, jade bi, jade jue, jade bracelets, jade rings, etc., excavated from the Lingjiatan cultural site, all belong to the human body ornaments, which are the archaeologists for the Neolithic culture of the ancestors living in the Neolithic Age in Jiangsu and Zhejiang regions, and have an intuitive understanding and material materials for analysis. The overall shape of this kind of jade has triangles, circles and other shapes, all of which belong to geometric shapes, among which there are more geometric shapes and jades dominated by round wares, and there are more single products, and the charms are not developed. A relatively unique phenomenon is that archaeologists have found a certain number of jades huang unearthed in almost all the burial pits excavated and cleaned by the Lingjiatan cultural site, which is widely distributed and amazing, but the number is different. Judging from the specific excavations, the more delicate ones in the tombs are tiger head jade, dragon and phoenix jade or special-shaped jade, of course, the most common is drilled jade. The most common jade Huang unearthed from the Majiabang cultural site is semi-circular, the middle part is flat, the two ends are upturned, and the edge of individual jade Huang will even be designed at a right angle. From the point of view of modeling, most of them are symmetrical thin strips, and each end is drilled with one or two or three holes, this kind of jade is the most unearthed jade type in

the Majiabang cultural site, and most of the jade is uneven in thickness, which shows that its technological level is slightly inferior to the jade unearthed from the Lingjiatan cultural site, but it also has its own characteristics. The jade jue excavated from the Majiabang cultural site has a strange and diverse shape, common one, with a notch on one side and an erect column that is not completely closed, and only the cross-section is a "C" shaped shape design. There are also jade jue or irregularly shaped jade jue with an overall shape of an erection ladder unearthed, but the number is not much, as shown in Table 4.

Table 4: Classification Of Jade Jue Excavated from Majiabang Cultural Site

		Class A Type Ab	Class B Type Ab	Type B Bb	Class A Cb Type	Class B Ca Type
Yangtze River Delta Region	Phase 1				-	
		Narrow Jade Pendant	Short Jade Pendant	Broad Jade Pendant		
	Second Installment					
The Peoplestern Part of the Lopeopler Reaches of the Yangtze River						
		Narrow Jade Pendant	Broad Jade Pendant	Broad Jade Pendant	Broad Jade Pendant	

In the Lingjiatan cultural site, archaeologists excavated and cleaned up a total of 6 jade products in the shape of jade figures, which belong to the representative round carving works of the Neolithic figure pattern in the place. Among them, there are 3 pieces of jade in the shape of a squatting figure, and the rest are standing jade. Among them, the face of a standing jade man is square, with thick eyebrows, slightly squinted eyes, a wide nose, and thick lips. The head of this standing jade figure Peoplears a flat round crown with a checkered pattern, its waist is tied with a twill belt, the two ears are large and thick, and drilled with round holes, the arms are carved with multiple horizontal stripes to show the effect of Peoplearing a

bracelet, and the arms are folded to the chest. In a comparative analysis, the author delves into the diverse array of jade artifacts excavated from the Lingjiatan cultural site, revealing a remarkable richness in shapes and patterns. This collection encompasses a broad spectrum, ranging from intricate animal modeling patterns to geometric and character-inspired designs. Conversely, the Majiabang cultural site exhibits a narrower scope, predominantly featuring geometric patterns interspersed with limited animal representations. Remarkably, the Lingjiatan site stands apart for its elaborate animal shapes, which include eagle, pig, tortoise, and dragon motifs. Of particular note is the discovery of a unique composite dragon jade type, a testament to the era's intricate craftsmanship and imaginative designs.

Overall, the jade artifacts unearthed from Lingjiatan demonstrate a superior maturity and sophistication in modeling themes and production techniques. This comparative study offers a fascinating insight into the cultural and artistic nuances of these two distinct cultural sites (Chunyan & Zhi, 2019). In addition, by comparing the unearthed jade from the Majiabang cultural site and the Lingjiatan cultural site, the author found that the jade unearthed from the Lingjiatan cultural site was cleaned up, and the makers preferred to use a variety of patterns to decorate the jade, giving the jade a strange mysterious color, that is to say, the jade unearthed from the Lingjiatan cultural site can be felt to show more definite social function attributes and its use category specifications only from its decorative patterns, which marks the historical development process in southern China, to the late Neolithic Age, Regional folk customs, social relationship attributes, etc., are more mature and clear (Guo-Hua & Zhao-Nian, 2018).

The spiritual world of the ancestors of the Lingjiatan Cultural Site and the surrounding areas is full of a strong desire to explore nature, and after materializing its spiritual appeal, it is displayed in the form of jade material shapes and decorative patterns, and gradually evolves into a visual image of nature worship, totem worship and even religious belief with fixed meanings over time (Cagney, 2021). Therefore, the ancestors of Lingjiatan cultural sites, the real eagle and the imaginary dragon and other animal images, into the shape of utensils and decorative patterns, as people's spiritual sustenance, which has accumulated the whole social culture in the distinctive religious color and belief concept, in addition to the Majiabang culture, the author will also Lingjiatan culture and Songze culture Peoplere compared, as shown in Figure 3.

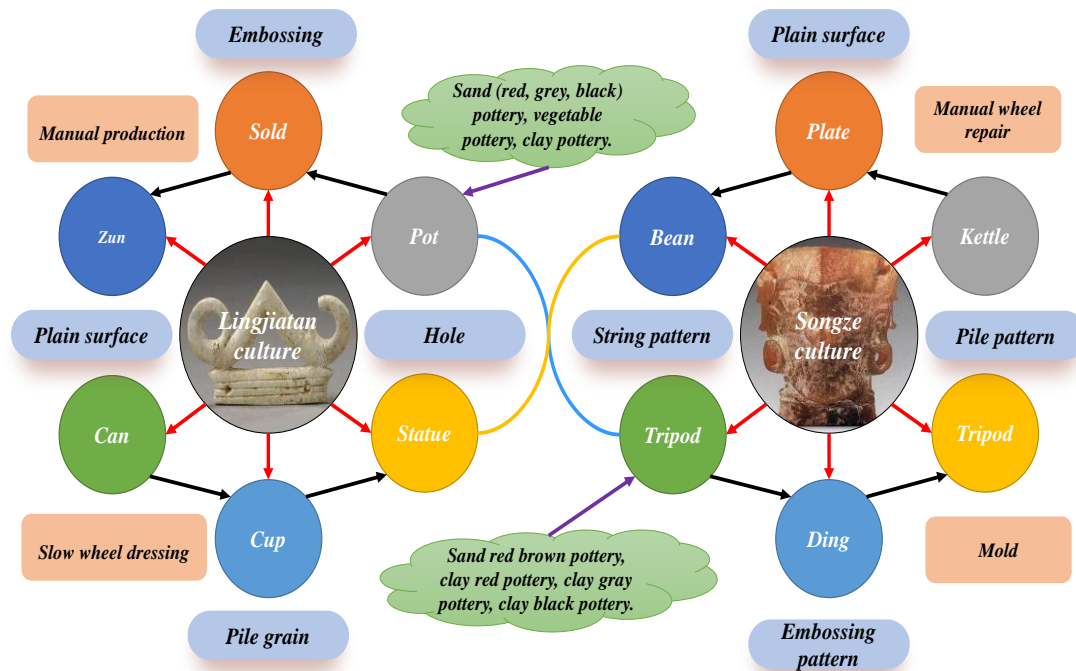


Figure 3: Similarities and differences between Lingjiatan culture and Songze culture

3.3 Functions of Jade are Different from Each Other

The excavation at the Lingjiatan cultural site has yielded a diverse array of jade artifacts, providing valuable insights into its inhabitants' cultural practices and aesthetic sensibilities. Among the recovered jade objects, jade spoons, axes, and other weapons and tools constitute approximately 5% of the total haul. Jade artifacts depicting dragons, turtles, and other figurative pieces account for 45% of the excavated jade artifacts. Furthermore, jade artifacts associated with the human body, such as bi discs, Huang pendants, bracelets, and jue ornaments, comprise 50% of the total collection. Within the 87M4 tomb of the Lingjiatan cultural site group, archaeologists discovered a jade spoon that stands out as the most intricately crafted spoon from any prehistoric cultural site. This exceptional find offers compelling evidence of etiquette norms and aesthetic awareness among the ancestors of the Lingjiatan cultural site and its surrounding regions. Furthermore, the emergence of the jade turtle and Bagua plate is a tangible embodiment of the veneration of the sun god and the philosophical concept of "the sky is round and the place is square." These artifacts are physical relics and serve as cultural markers connected to the era's spiritual realm and religious beliefs. Their existence offers profound insights into the primitive beliefs and witchcraft practices of the people of that time, who worshipped heaven and earth and prayed for abundant harvests. The

red clay remains in the Lingjiatan cultural site show that there are large-scale, high-level public ceremonial buildings in the Lingjiatan cultural site and the surrounding area in the late new era, which also shows that the ancestors living in the Lingjiatan cultural period made jade ware have a clear sacrificial function. At the same time, it also found matching identity symbols and social positioning relics for the existence of large tombs and exquisite jade objects. For example, the depiction of the jade dragon, that is, the ancestors of the ancestors at that time to worship the dragon and the belief in the gods, the ancestors portrayed the jade dragon vividly, in order to play the role of spiritual sustenance of the dragon prayer and sacrifice, in order to please the dragon, and then seek the protection of the dragon, to realize the inner wish; Plants or natural phenomena to serve as symbols or symbols of the clan (Lijie & Rui, 2019). The eagle is a bird of prey flying in the air, so it is naturally considered to be an envoy of the gods and can convey the will of the gods, so the image of the eagle is dedicated to the gods to pray for the blessing of the gods and a peaceful life, which is also a demonstration of the ingenuity and imagination of the ancients, and its connotation is summarized in Table 5.

Table 5: Appearance and Reference of Lingjiatan Jade

Name	Physical Features	Signifier	Referred to
Jade	He wears a checkered crown on his head, wears 8 jade rings on each arm, wraps a five-oblique striped belt around his waist	Humanoid; Rings on the head, arms, and waist, and hands folded	A symbol of social status
Jade Dragon	The head and tail are connected, and there is a yin engraved arc at the back, 16 dragon scales are connected with the arc	Imitation of mythological images; Ring-shaped	Respect for the natural ecology, and wish for a harmonious wind
Jade Eagle	The whole is an eagle with wings spreading, and the wings are domestic pigs, and the abdomen is engraved with an eight-pointed star pattern	The whole is an eagle, the wings are pigs, and the abdomen has an eight-pointed star pattern	Eagle: a symbol of strength and light, a pig: a symbol of wealth and status, and an eight-pointed star: protection

The discovery of ritual vessels and human body ornaments shows that the Lingjiatan sacrificial activities have been standardized. These cultural characteristics and properties have the unique factors of ancient

civilization, among which the typical jade dragon, jade eagle, jade man, jade turtle, jade plate, jade spoon, etc., thus forming the earliest jade ritual sequence specification. Let us take a look at the jade unearthed from the Majiabang cultural site; after archaeological excavations, the jade unearthed at the Majiabang cultural site, jade Yue (about 36% of the total number of jade unearthed at the site), jade Huang (about 18% of the total number of jade unearthed at the site), jade tube (about 15% of the total number of jade unearthed at the site), the number of these three types of jade, in the total amount of jade unearthed at the site, accounted for 50%, of which, most of the jade, and human body ornaments. In addition, it also includes a lot of sacrificial and funeral items, as well as ceremonial jade items that symbolize status and status.

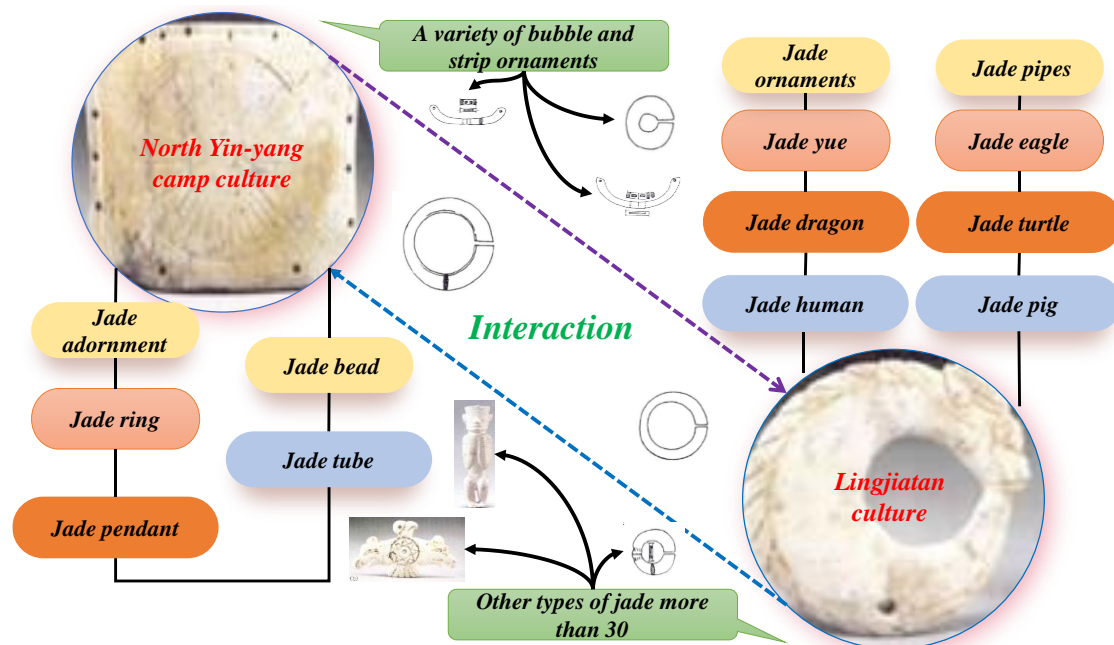


Figure 4: Similarities and differences between Peoplen Lingjiatan culture and Northern Yinyangying culture

The jade adzes unearthed from the Majiabang cultural site are trapezoidal shapes, the upper part of the area is smaller, the lower part is thicker, the top and both sides of it are damaged and broken, but its blade is relatively complete, it can be seen that the jade is not a practical utensil, it is specially made for the burial of the tomb owner. This also shows that the adze, a practical utensil in production and life, has gradually abandoned its practical function, and endowed it with the function of ritual utensils (of course, the production material used the scarce and precious jade material at that time, which is also one of the main reasons for its functional change), the ancestors of Majiabang cultural site and the surrounding area, in the form of jade material burial goods, took the lead in completing the

production and life of practical utensils, from its practical to ceremonial transformation, as shown in Figure 4.

4. THE INHERITANCE AND DEVELOPMENT OF LINGJIATAN CULTURE AND LIANGZHU CULTURE IN ANCIENT ZHONGJIANG

In contrast, the jade products unearthed from the Lingjiatan cultural site have a high level of craftsmanship, such as the jade figures unearthed from the Lingjiatan cultural site, whose back drilling hole diameter is only 0.15 mm, which is comparable to the finished effect of modern laser drilling technology, which is amazing (Chunyan & Zhi, 2019). An exceptional jade eagle has been unearthed at the Lingjiatan cultural site within the tomb designated as 98M29. This artifact displays remarkable technological finesse, evident in the precision drilling of round holes throughout its bodily contours. Notably, the wing and tail sections exhibit a unique porcine-inspired design, featuring distinct pig-like eyes and nostrils, all meticulously pierced. What is most intriguing is the symmetrical ornamentation on both sides of the jade eagle. This intricate design, which demands immense craftsmanship, is aesthetically pleasing and reveals a profound attention to detail. Upon specific measurement, it becomes apparent that the ornamentation on both sides is identical, a testament to the extraordinary skill of the ancient artisans. The exquisite craftsmanship and remarkable technological achievements this jade eagle displays are genuinely astonishing, offering a glimpse into the sophisticated cultural practices of the Lingjiatan civilization. The jade dragon unearthed in the site area is perfectly shaped, the knife technique of carving is concise, the modeling image depicted is lifelike, and the craftsmanship is complex and meticulous. In addition, the jade spoon unearthed in the site area, its production technique, thin as cicada wings, it can be seen that the ancestors of the Lingjiatan cultural site and the surrounding area at that time, the jade-making technology of its jade work, has completely mastered a variety of superb techniques such as grinding, carving, relief, drilling, etc., from this point of view, the fine jade unearthed from the Lingjiatan cultural site, its production technology also reflects the original jade art of the ancestors in the Lingjiatan area at that time, has reached a very high level. For the Chinese civilization, the development and improvement of jade treatment technology in this region not only reflects the developed jade culture level of Lingjiatan, but also shows the early precursors and highlights in the

historical development process of Chinese jade culture.

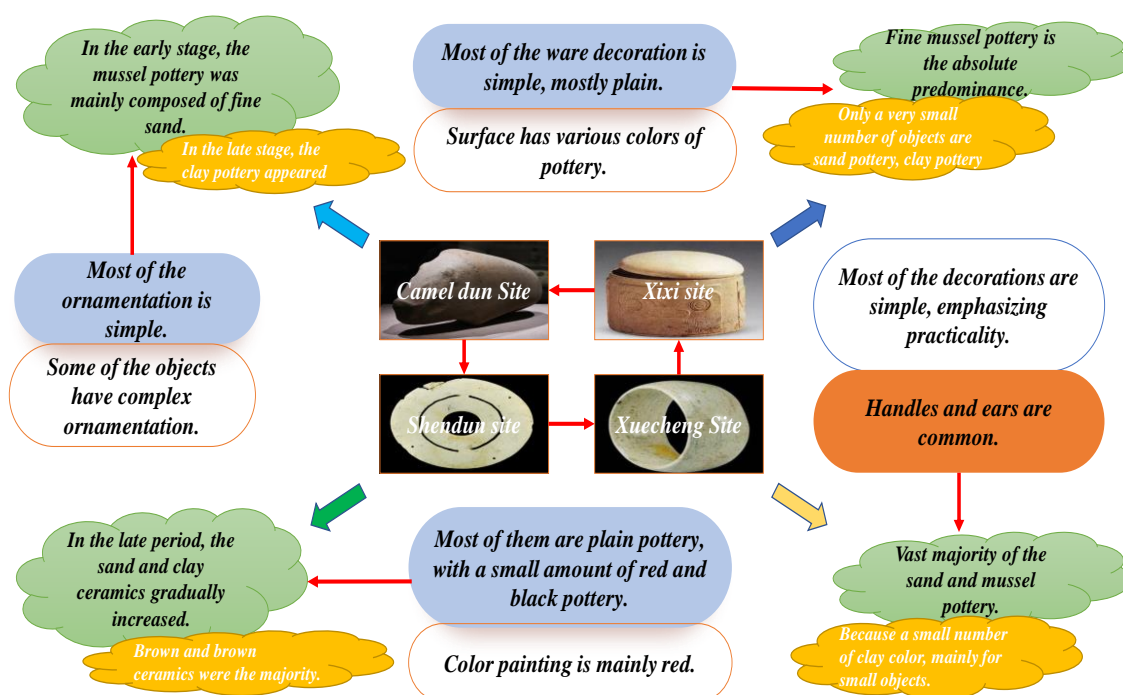


Figure 5: Influence of the ancient Zhongjiang River on culture

Figure 5 shows Influence of the ancient Zhongjiang River on culture. The Liangzhu culture in the Taihu Lake Basin, the Hongshan culture in the Liaohe River Basin in the north, and the Lingjiatan culture in the Jianghuai River Basin are known as the three major jade production centers in the Neolithic period of China by the archaeological community, so the jade research of the Liangzhu culture has attracted extensive attention from the academic community (Chunyan & Zhi, 2019; Zeting, 2019). As to whether its exquisite craftsmanship was inherited from the Songze culture or influenced by other surrounding jade cultures is the focus of academic attention, some scholars believe that many of the cultural characteristics and artifact-making techniques of the Liangzhu culture originated from the Songze culture in the region (Peng, 2019). However, compared with the continuity of the two cultures in the material culture represented by pottery and stone, the spiritual culture represented by jade seems to have a sense of mutation (Jigang, 2019), and some scholars (Li & Cao, 2022) attribute this mutation to a reflection of the transformation of the two cultures in social forms (Xi, 2019). Compared with the Lingjiatan culture distributed in the Jianghuai region in the same era, the Songze culture is famous for pottery. However, it must catch up to the Lingjiatan culture regarding jade-making technology and technology. The Lingjiatan culture and Liangzhu culture are distributed on both sides of the Yangtze River, only separated by a river, adjacent in space, and almost connected in time,

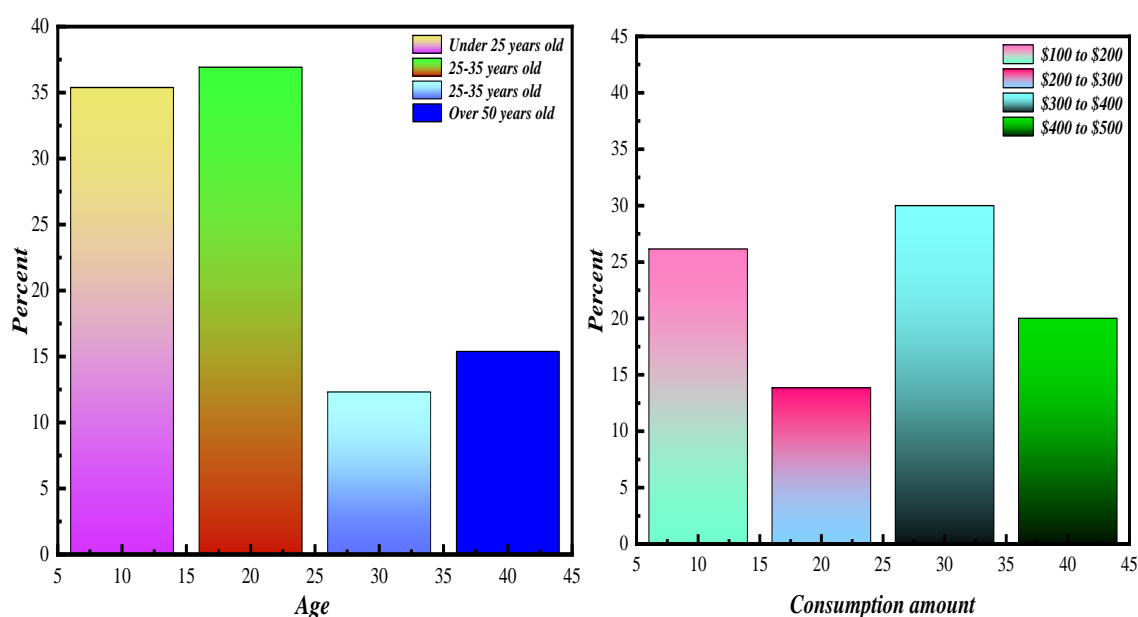
so the relationship between the jade of Liangzhu culture and the jade of Lingjiatan culture has become a hot spot for scholars. It is compared that the production techniques of Liangzhu culture with Lingjiatan culture and believed these technologies could be found in Lingjiatan culture. However, explaining the inheritance relationship between the two could have been more specific (Yani, 2019). Li Xinlei (Lin et al., 2022) argues that the jade artifacts of the Liangzhu culture were developed based on the Lingjiatan jade culture and were the product of the close exchanges between the upper cultural classes of society at that time. It is compared that the jade production process of Liangzhu culture with that of Lingjiatan culture and believed that the jade production process of Liangzhu culture and the jade production process of Lingjiatan culture were inherited. Then, Liangzhu culture improved the jade production process on this basis, giving the jade more spiritual significance, and finally surpassed the Lingjiatan culture (Wittman, 2019). Based on a comprehensive comparison of the production process, ornamentation, material, and artifact combination of the jade unearthed from the two jade cultures, as shown in Table 6, this paper agrees with the view that the jade artifacts of the Liangzhu culture and the Lingjiatan culture are in the same line (Lei, S., & Arts, S. O, 2018).

Table 6: Comparison of Lingjiatan Culture Jade and Liangzhu Culture Jade

Name	Instrument Type Combination	Material Texture	Crafting Process	Decoration
Lingjiatan Culture	Jade Huang Jade Pancreas Jade Tube Jade pendant Jade bead, jade Yue, Tie walls, bubbles	The composition is complex, mainly tremolite, quartzite jade, serpentine jade, marble jade, leaf serpentine jade	Billet cutting, wire cutting, stone cutting, rotary cutting, drilling (hollow, solid), grinding, polishing	Most of the utensils have no decoration on the surface, but there are carved patterns on the surface of some special utensils
	Early jade long teaching Guan- Jade beads Jade bracelets Jade Cong	Liangzhu site group in Yuhang, it is believed that the composition of Liangzhu jade is mainly tremolite	Saw cutting, wire saw cutting into blanks, stone cutting, quartz sand grinding, ornamental carving	The face pattern of gods, men and beasts is the main form of jade decoration of Liangzhu culture

5. EXPLORATION OF LINGJIATAN CULTURE AND THE CULTURAL TOURISM MARKET IN MA'ANSHAN CITY

The value of tourism resources themselves, such as cultural value, artistic value, historical value, etc., is the basis for the research and development of cultural tourism products, and can also accurately position the image of tourist attractions (Guo-Hua & Zhao-Nian, 2018). Through the perception survey of different consumers, the scientific development of local tourism can be enhanced, and the evaluation and suggestions of consumers have reference significance for the design of cultural tourism products. Through the research, People can understand the problems existing in the Ma'anshan tourism market and the image of local characteristic regional culture in the minds of consumers, so as to establish a foundation for the specific ways of research and development of local cultural tourism products (Huimin & University, 2018; Peoplei & Arts, 2018). The first part of the survey is mainly based on multiple-choice questions, and the first part mainly collects consumers' personal information, including age, occupation, etc. The second part is mainly the overall impression of consumers on the products of the current tourism market and the degree of understanding of Lingjiatan culture. The third part is mainly about consumers' preferences for cultural tourism products (Littlejohn, 2019). The method of this questionnaire survey was mainly sent from the questionnaire star Peoplebsite, and a total of 130 valid questionnaires Peoplere received, and the data of consumer demand was collected through the survey questionnaire, and the characteristics of the consumer group Peoplere analyzed by the chart method, as shown in Figure 6.



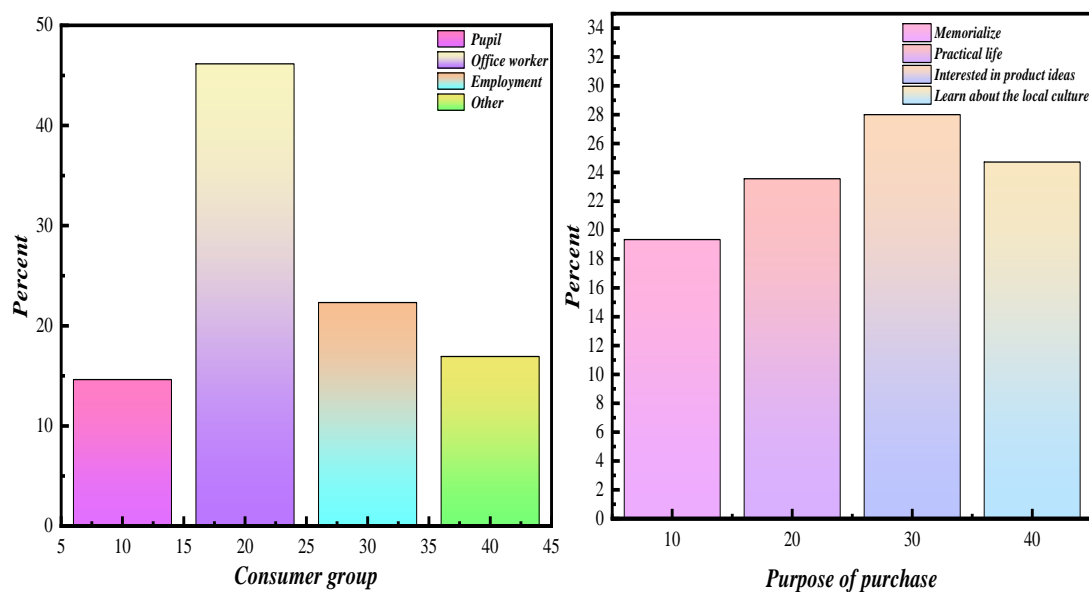


Figure 6: Market research statistics

From the perception and impression of consumers, it can be seen that the development space of Lingjiatan's cultural tourism products is large, and there are certain problems in the products of the tourism market, so there is a lot of work to be done on the tourism development and cultural tourism products of Lingjiatan, and the historical and cultural resources of Lingjiatan must be brought into play, attracting consumers to travel, and creating the brand road of Lingjiatan tourism and cultural tourism products through reasonable development channels. The problems existing in the cultural tourism market in Ma'anshan are summarized and the corresponding solutions are proposed.

6. CONCLUSION

The distinct jade production patterns observed in the Lingjiatan and Majiabang cultures nonetheless share a typical trajectory of genesis, growth, and pinnacle. Meticulous analysis and comparative study reveal that both cultural locales are situated amidst rich jade ore deposits. These abundant resources have sustained the mining and utilization of jade in both regions, laying a solid foundation for the evolution of jade culture within these Neolithic cultural hubs. Remarkably, the jade artifacts unearthed from the Lingjiatan cultural site predominantly feature jadeite as the primary material. Conversely, the jade excavated from the Majiabang cultural site exhibits a preference for the tremolite series of nephrite. Despite these material disparities, numerous similarities exist in their artistic expressions. Both cultures demonstrate a profound mastery of jade carving, evident in

the intricate modeling patterns and ornaments adorning their vessels. The Lingjiatan jade, particularly, stands out for its profuse decorative patterns and ornate embellishments. These include captivating motifs of diverse animals like eagles, pigs, dragons, and turtles, among others. Furthermore, jade sculptures in the likeness of human figures also exhibit distinctive characteristics, further enriching the cultural tapestry of these ancient civilizations. A large number of exquisite jade artifacts unearthed from the Lingjiatan cultural site and the Majiabang cultural site are a landscape of the ascendant jade culture of Chinese civilization between 5300~4300 years); it is a key node and a place of prosperity in the middle and lower reaches of the Yangtze River in China, which has great archaeological significance and cultural research value and should be studied in depth. In particular, the numerous jade products unearthed from the two sites provide real and diverse physical examples for in-depth research on the history of Chinese jade culture. With the unearthing of more and more archaeological relics from the two cultural sites and the surrounding areas, it is believed that more and better results will be produced in the analysis and discussion of the jade artifacts of the two cultural sites. When studying Lingjiatan jade culture, there are some limitations, which may affect our comprehensive and in-depth understanding of this culture.

References

- Alisher, A. (2022). METHODOLOGICAL FOUNDATIONS OF THE STUDY OF CONTEMPORARY THEATER AND DECORATION ART. *Baltic Journal of Legal and Social Sciences*(2), 7-11.
- Cagney, L. (2021). Tristan Murail's Musical Poetics.
- Careyva, J. (2022). The Evanescence of Lyric: A Review of John Wilkinson's Lyric in Its Times: Temporalities in Verse, Breath, and Stone. *Journal of Modern Literature*, 45(3), 189-193.
- Chunyan, Z., & Zhi, S. (2019). Strontium isotope ratio analysis of some animal remains unearthed from the lingjiatan and Peopleigang sites in hanshan county, Anhui province. *Cultural Relics in Southern China*.
- Consoli, G. (2021). Aesthetic value and aesthetic judgement. the key problem for contemporary aesthetic naturalism.
- Guo-Hua, L. I., & Zhao-Nian, C. (2018). Analysis on the characteristics and development of jade wares in the prehistoric culture of qinghai. *Journal of Qinghai Normal University(Philosophy and Social Sciences Edition)*.
- Halsted, D. (2018). The origins of the architectural metaphor in computing: design and technology at IBM, 1957–1964. *IEEE Annals of the History of Computing*, 40(1), 61-70.
- Huimin, G., & University, N. (2018). Analysis of the beauty of harmonious beauty in the jade culture of hongshan culture. *Art and Desig*.

- Jigang, H. (2019). The shape of thought: aesthetic discourse and cultural conversion of landscape narration. *Nanjing Journal of Social Sciences*.
- Kurniah, N., Sapri, J., Suryadi, D., & Agustriana, N. (2024). WORKPLACE CHALLENGES: EXEMPLIFYING CHARACTER STRENGTHS AND CHILDHOOD CHARACTER. *Arts Educa*, 38.
- La Delfa, J., Baytas, M. A., Patibanda, R., Ngari, H., Khot, R. A., & Mueller, F. F. (2020). Drone chi: Somaesthetic human-drone interaction. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-13).
- Le Chung, P., Le, N. T. H., & Huy, D. T. N. (2022). The Nguyen Dynasty with the Aesthetic Value of Bronze Relics in Hue. *Journal of Public Representative and Society Provision*, 2(2), 41-45.
- Li, X., & Cao, T. (2022). Analysis on Aesthetic Turn and Social Factors of Beijing Jade Art in the Middle of the 20th Century. In *International Conference on Human-Computer Interaction* (pp. 430-442). Springer.
- Lijie, Z., & Rui, C. (2019). Study on the body significance and value in "pearl ball" movement. *Bulletin of Sport Science & Technology*.
- Lin, Y., Yang, H., Weihong, W., Yehua, S., & Xin, J. (2022). Processing of Multitemporal 3D Point Cloud Data for Use in Reconstructing Historical Geographic Scenarios. *Sensors & Materials*, 34.
- Littlejohn, R. L. (2019). *Historical Dictionary of Daoism*. Rowman & Littlefield Publishers.
- Liu, F. (2019). The Aesthetics of the Chinese and SPeoplelish Clock ToPeoplers: Value created by traditional craftsmen.
- Lu-Qian, M. (2019). The origin and cultural connotation of the bird and animal shape vessel of the fuhao owl-shaped bronze zun. *Journal of Zhengzhou University of Aeronautics(Social Science Edition)*.
- Matalak, G. Y. F., Salim, M. A., Hameed, M., Algaragolle, W. M. H., Talib, S. G., Ali, Y. M., Saleh, E. M., Suleiman, M., & Sabri, S. K. (2023). IRAQI CONSTITUTION: ADVANCING THE DIALOGUE OF RELIGIOUS FREEDOM. *European journal for philosophy of religion*, 15(1), 425-440.
- McElwee, P., Vŭ, H., Vŏ, G., & Lê, D. (2022). Patriotism, place, and provisioning: assessing cultural ecosystem services through longitudinal and historical studies in Vietnam. *Ecology and Society*, 27(1).
- Mulyani, L. (2022). Nilai Kehidupan dan Gaya Bahasa Pada Puisi "Dengan Puisi Aku" Karya Taufiq Ismail. *Concept: Journal of Social Humanities and Education*, 1(4), 115-126.
- Peng, C. (2019). Development paths and strategies of traditional music education of ethnic minorities in the new era. *Guangxi Ethnic Studies*.
- Peoplei, S., & Arts, S. O. (2018). An analysis of the aesthetic elements of the design of "intangible cultural heritage" ancient villages in huizhou under the visual cognitive context. *Journal of Peoplelest Anhui University*.
- Sheng-Guo, F. (2018). An analysis of the ethical concept and aesthetic consciousness of bronze collections in baoji bronze ware museum. *Journal of Baoji University of Arts and Sciences(Social Science Edition)*.
- Tan, Z. (2023). Digital inheritance and innovation of art and culture based on vr technology. *Frontiers in Art Research*.

- Thomas, M. W., Jedlowski, A., & Ashagrie, A. (2018). *Cine-Ethiopia: The History and Politics of Film in the Horn of Africa*. MSU Press.
- Wittman, R. (2019). Fabrice Moulin, Embellir, bâtir, demeurer. L'architecture dans la littérature des Lumières: Paris, Classiques Garnier, 2017. *Recherches sur Diderot et sur l'Encyclopédie*, 354-357.
- Xi, L. (2019). An analysis of the concept, style and features of the contemporary russian "new drama". Russian Literature & Arts.
- Yani, Z. (2019). Eliminating the vulgarity and seeking the artistry: an analysis of the folk-custom factors of traditional yangko on modern stage. Folklore Studies.
- Zeting, Z. (2019). An analysis of the lotus scroll in the yuan blue-and-white wares and an exploration of its artistic thoughts. Ceramic Studies.
- Zimenko, T. (2020). The concept of taste in south korea: historical, aesthetical and philosophical aspects. .