

# China's Earliest Bronze Vessels

*The Erlitou Culture of the Xia Dynasty*



Christian Deydier

The author Christian Deydier

### **Decocations:**

1996: named Chevalier de l'Ordre des Arts et des Lettres by the French Government.

1998: named Chevalier de la Légion d'Honneur by the French Government.

2001: named Officier du Mérite National by the French Government.

2006: named Officier de la Légion d'Honneur by the French Government.

2011: named Commandeur du Mérite National by the French Government.

### **Publications:**

- *Les Jiaguwen, Essai Bibliographique et Synthèse des Etudes* (The Oracle Bones Inscriptions, Bibliographic Essay and Synthesis of Studies), Publication of the Ecole Française d'Extrême-Orient, volume 106, Paris, 1976.
- *Chinese Bronzes*, Fribourg, Switzerland, Office du Livre, 1980 (in French, English and German editions).
- *Archaic Chinese Bronzes, Volume I: The Xia and Shang Dynasties*, Paris, Arhis, 1995. Illustrated with more than 370 black & white and color photos, this volume is the first in a series of three, the second of which is devoted to the bronzes of the Zhou dynasty and the third to those of the Han dynasty.
- *Ancient Chinese Gold*, in collaboration with professor Han Wei, director of the Shaanxi Province Centre for Archeological Research, Paris, Arhis, October 2001.
- *Chinese Bronzes from the Meiyintang Collection*, Vol. 1 Annexe and Volume 2, Hong Kong 2013.
- *Understanding Ancient Chinese Bronzes, Their Importance in Chinese Culture, Their Shapes, Functions and Motifs*, Paris, 2015 (in English, French, and Chinese editions).
- And numerous exhibitions catalogues since 1985.

### **Donations:**

- Numerous donations to Musée Guimet - Paris.
- Numerous donations to Musée Cernuschi - Paris.
- 1993 donation of a parcel gilt silver box, Liao dynasty, 11<sup>th</sup> century A.D. to Shaanxi History Museum.
- 2015 donation of 28 gold plaques, Early Eastern Zhou dynasty, 8<sup>th</sup> century B.C., to Gansu Provincial Museum.

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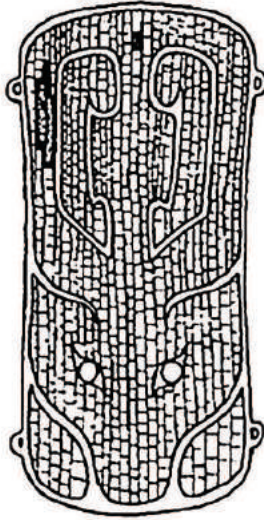
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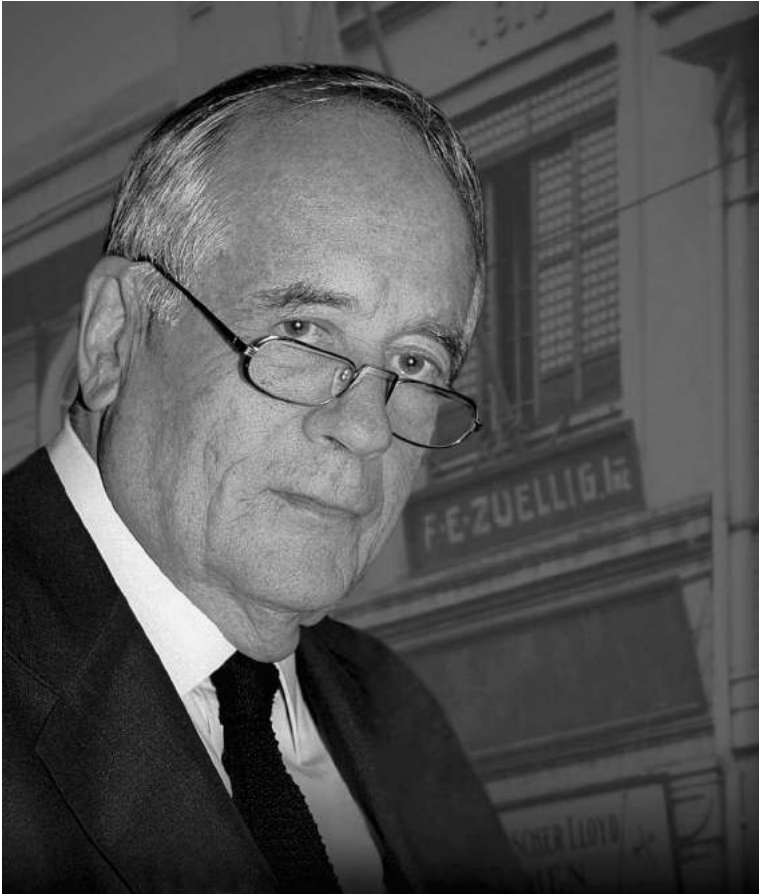
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To my friend the Dr. Stephen Zuellig



## Preface

In 1992 during the 16<sup>th</sup> Paris Biennale des Antiquaires, a very elegant gentleman entered my booth and immediately directed his steps towards a bronze ritual *li* 鬲 vessel dating from the Erligang 二里崗 period of the beginning of the Shang dynasty 商 (circa 17<sup>th</sup>/16<sup>th</sup> to 14<sup>th</sup> centuries B.C.). Without further ado, he informed me that he wished to acquire this object, adding that he had visited numerous museums all over the world, had read a great many books on the subject, had decided to collect archaic Chinese bronzes and had chosen me to be his adviser!

For the past 25 years preceding his death earlier this year, I had the distinct privilege of helping Dr. S. Zuellig build one of the most important private collections of ancient Chinese bronzes in the world. Very early on, the Doctor showed an especially keen interest in the bronze vessels of the earliest part of the Shang dynasty 商, the Erligang period 二里崗 (circa 17<sup>th</sup>/16<sup>th</sup> to 14<sup>th</sup> centuries B.C.), as well as those of the even earlier Erlitou cultural period 二里頭 (circa 19<sup>th</sup> to 17<sup>th</sup>/16<sup>th</sup> centuries B.C.) that preceded the Shang dynasty 商.

In July, 2016 Dr. S. Zuellig requested me to prepare a publication on the Erlitou cultural period, his personal favourite, in order to make amateur Chinese bronze collectors and enthusiasts more aware of this important period and the simple, yet elegant bronze vessels cast therein. The following pages are the result of the research I undertook at the prompting of Dr. Zuellig. I humbly dedicate them to his memory, and I sincerely hope they will increase among the general public and novice collectors alike a greater appreciation and understanding of these, the earliest bronze vessels produced in ancient China.

I should like to take this opportunity to thank those who have helped me in the preparation and publication of this study on China's earliest bronzes: Vincent Girier Dufournier who has, with his unique gift for photography, given new life to the objects here illustrated; Ed. O'Neill for his help in researching certain points and his excellent translation of my original French version into English; and finally Clémence Artur, my assistant, who has supervised all the stages in the production of this publication.

Christian Deydier





## The Erlitou Culture of the Xia Dynasty 夏代的二里頭文化

Since no written records dating from the period have so far been discovered, our knowledge of the Xia dynasty 夏代 (21<sup>st</sup> - 17<sup>th</sup>/16<sup>th</sup> centuries B.C.) is limited almost exclusively to information found in ancient Chinese texts written long after the dynasty's end, texts such as the *Zuozhuan* 左傳 or *Commentary of Zuo*, compiled by Zuo Qiuming 左丘明 in the 5<sup>th</sup> century B.C., the *Shiji* 史記, the *Records of the Grand Historian*, compiled by Sima Qian 司馬遷 in the 2<sup>nd</sup> century A.D., the *Zhushujinian* 竹書紀年 or *Bamboo Annals*, compiled around the 3<sup>rd</sup> century A.D. and the *Tongjiangangmu* 通鑒綱目, written by the Southern Song 南宋 philosopher Zhu Xi (朱熹 1130 - 1200 A.D.).

Once considered mythological by many non-traditional Chinese, as well as most western scholars of the early 20<sup>th</sup> century, the Xia dynasty 夏代, is now acknowledged by almost all to have really existed and to have been the first Chinese dynasty.

According to the *Tongjiangangmu* 通鑒綱目, the Xia dynasty 夏代 lasted for 439 years, between 2205 and 1766 B.C., while according to the *Bamboo Annals* 竹書紀年 the Xia 夏 ruled for only 431 years, between 1989 and 1558 B.C. Modern archaeologists and scientists, however, estimate that the Xia 夏 ruled China from around the 23<sup>rd</sup> to the 17<sup>th</sup> centuries B.C.

Although the ancient texts all agree that there were seventeen consecutive rulers during the Xia 夏 dynasty, there is some disagreement on the exact title by which these rulers were known; Sima Qian 司馬遷 terms them 'Di' 帝 'emperors', while other texts refer to them as 'Wang' 王, 'kings' and certain modern-day professors call them mere 'Hou' 侯, 'marquis'. This last designation comes from the theory current among certain present-day academics that the Xia dynasty 夏代 was not, in fact, a monarchy, but rather a confederation of tribes or states.

## Yu the Great 大禹

The first sovereign of the Xia dynasty 夏代, who was also its founder, is known by the name of ‘Yu the Great’ 大禹. His accomplishments were so formidable, even by modern standards, that he has been continuously revered by the Chinese people since antiquity. Yu the Great 大禹 is most especially venerated by the Chinese as the ruler who tamed the ravaging flood waters and thus regained for cultivation vast expanses of previously inundated fields and then initiated a magnificent system of irrigation, all of which brought hitherto unknown prosperity to the people of Xia 夏民族.

So revered, in fact, did Great Yu 大禹 remain throughout subsequent centuries that the people and rulers of the Western Zhou 西周 (circa 12<sup>th</sup>/11<sup>th</sup> centuries B.C. to 256 B.C.), China’s third dynasty, deified him not only as the god-like figure who controlled the flood waters, but also, in the words of the great historian of the Han dynasty 漢, Sima Qian 司馬遷, as the first ruler whose policies placed the well-being of the people on a firm foundation.

## China’s first bronze vessels

Great Yu 大禹 is also renowned in Chinese cultural and technological history as the first monarch to have had bronze vessels cast. For after reigning in the land of Xia’s 夏 nine bodies of water and dividing the country’s administration into 9 corresponding provinces, he cast one magnificent bronze *ding* 鼎 vessel for each of the newly formed administrative areas. These vessels were to be kept by himself and subsequent rulers as tangible symbols of the centralized power that the sovereign wielded as head of the unified Xia dynasty 夏代. Sima Qian’s 司馬遷 mention of Great Yu’s 大禹 casting these nine bronze *ding* 鼎 is the first known written reference to the commencement of the production and use of bronze vessels in ancient China.

## **Modern scientific excavations at Erlitou 二里頭遺址 that helped confirm the existence of the Xia dynasty 夏代.**

The Erlitou site 二里頭遺址 and proof of its connection with the Xia people 夏民族.

The discovery and initial excavations of the first Erlitou sites 二里頭遺址 near Yanshi city in modern-day Henan province 河南省偃師市 beginning in 1952/53 and continuing through 1957 were, for many reasons, important events in Chinese archaeology. Most importantly, they offered the first credible material proof of the existence of the Xia dynasty 夏代, a dynasty which had until then been considered merely mythological by many modern-day scholars and historians, a dynasty mentioned only in ancient classical texts written long after its supposed existence.

The first discovery of what are now known as ‘Erlitou Culture’ 二里頭文化 objects was made in 1952/53 at Yu Village in Deng Feng County in modern-day Henan Province 河南登封縣玉村.



According to the archaeologists' report written by Han Wei Zhou 韓維周, Ding Bo Quan 丁伯泉 and Zhang Baode 張寶德 and entitled *A Preliminary Report on the Deng Feng County Yu Village Ancient Cultural Site* 河南登封縣玉村古文化遺址概況, published in the 6<sup>th</sup> Issue of 1954 of *Wenwu Cankao Ziliao* 文物參考資料 1954 年第六期 (Cultural Relics Reference Materials Journal): in shape and style, the objects appeared unfamiliar, not only different from the objects excavated at Anyang Xiaotun 安陽小屯, but even quite different from those uncovered at the Zhengzhou Erligang site 鄭州二里崗遺址. Subsequent diggings uncovered objects of the same shapes and style at Erlitou in Yanshi in Henan province 河南省的偃師二里頭, at Luo Damiao near Zhengzhou 鄭州洛達廟, at Dong Gangou near Luoyang 洛陽東乾溝 as well as at Xia County 夏縣 and other nearby areas in the southwestern part of neighbouring Shanxi Province 山西省.

Of all these sites, that of Erlitou at Yanshi in present-day Henan province 河南省偃師二里頭 was the largest in area and depth of strata, and yielded the greatest number of cultural relics in this newly discovered style. For this reason, archeologists decided to name their new discovery 'the Erlitou Culture' 二里頭文化 to distinguish these sites and the objects that they yielded from previously discovered Shang dynasty Erligang 二里崗 and Anyang 安陽 style cultural relics.

In 1959, inspired by the initial discoveries and armed with a knowledge of ancient texts mentioning the Xia people 夏民族, Xu Xusheng 徐旭生 of the Institute of Archaeology of the Chinese Academy of Social Sciences 中國社會科學院考古研究所 led a large group of archaeologists to undertake more extensive excavations in present-day western Henan province 豫西 and adjoining southwestern Shanxi province 山西省西南部.

These locations were chosen because they corresponded fairly accurately with information about the Xia people 夏民族 found in ancient written sources. According to these, the homeland of the Xia people 夏民族 was located in the area around the *Kuai* and *Su* Rivers 山西省澮水, 涑水一帶 in present-day Shanxi Province, the area termed the 'Xia Ruins' 夏墟 in the *Zuo Zhuan* 左傳, the *Commentaries of Zuo*, and in the area between the *Luo* and *Yi* Rivers in modern-day Henan Province 河南省洛河, 伊河, as recorded both by Du Yi Jie 度邑解 in his *Yi Zhou Shu* 逸周書, written sometime before the 3<sup>rd</sup> century B.C., and by Sima Qian 司馬遷 in the

*Zhou Ben Ji* 周本紀 section of his *Shi Ji* 史記, the *Records of the Grand Historian*, completed around 94 B.C.

In the *Shiji* 史記, Sima Qian 司馬遷 further writes that the Xia Culture 夏文化 originated in the Yellow River basin 黃河流域 in the eastern part of present-day Henan province 河南省. He further quotes Emperor Wu of the Zhou 周武帝 (reigned circa 1066 - 1063 B.C.) as saying ‘the area between the Rivers’ Yi 伊 and Luo 洛 was the home of the Xia 夏民族.

The most important result of the 1959 expedition led by Xu Xusheng 徐旭生 was the discovery at Yanshi 偃師 near Luoyang 洛陽 in present-day Henan province 河南省 of the site of China’s earliest large palace ruins dating from the late Erlitou period 二里頭文化晚期. Further excavations at this and other Erlitou sites were carried out on a large scale between 1960 and 1964, 1972 and 1973, in 1975 and yearly from 1980 onwards.

As a result, archeologists now have a fairly precise understanding of the evolution and development of the Erlitou culture 二里頭文化, which most scholars now believe to have been the culture of China’s very first dynasty, the Xia dynasty 夏代.

The Erlitou sites 二里頭遺址, so far excavated cover an area 1.5 km wide and 2.5 km long and have yielded architectural remnants of the following types:

- foundations of huge houses, or more precisely ‘palaces’, of which only large rectangular platforms of rammed earth remain,
- foundations of smaller houses, or ordinary residences, some of which are partially subterranean,
- storage pits,
- pottery ovens,
- the remains of bronze foundaries,
- workshops for turquoise objects,
- roads paved with gravel or rammed earth,
- water wells,
- human sepulchres of various forms and meant for different uses.

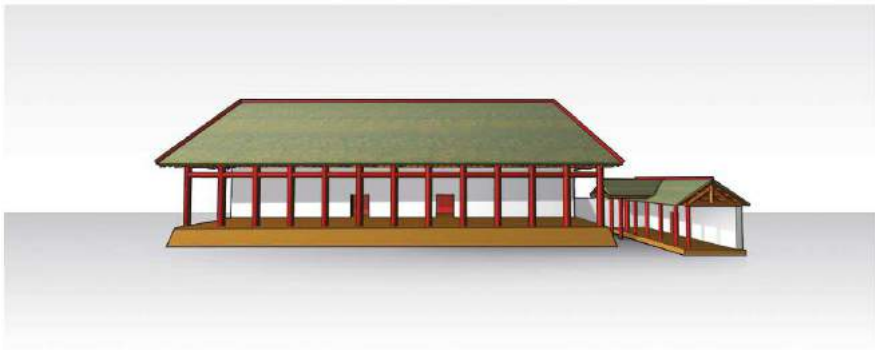
## The Palaces

The scientific excavations carried out at the Erlitou site 二里頭遺址 uncovered rectangular rammed earth platforms facing north to south. These seem to have been the foundations of great buildings or palaces constructed entirely of wood, as was common in much of antiquity.



Palace no. 4

In 1960, the ruins of the first palace were discovered. Almost square and measuring 100 metres across by 108 metres long, the building's foundations are between 1 and 2 metres deep. Made up of earthen layers each 4.5 cm in thickness, these foundations rise almost 80 cm above the surrounding soil. Other remnants suggest that this palace was once surrounded by an earthen wall about 45 to 60 cm high. Parallel to the edge of the platform, archaeologists discovered a series of holes, most probably dug for the wooden pillars of what once must have been a long covered corridor whose large entrance door faced south.

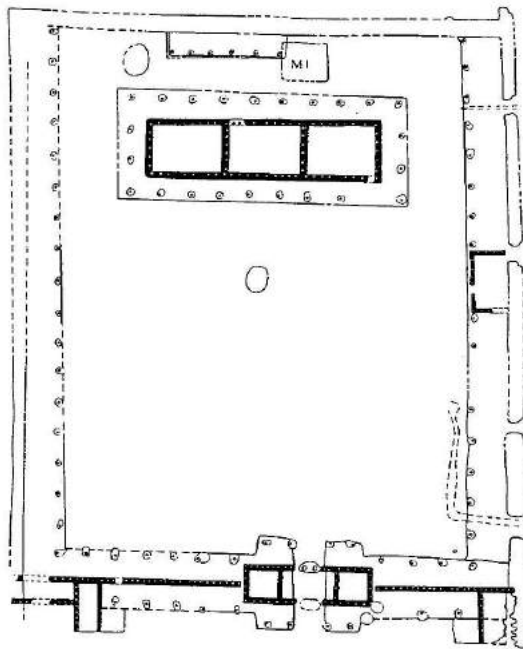


Palace no. 4





Later that same year, remains of the foundations of a second building, termed Palace no. 2, were discovered about 150 meters to the north-east of the site of the first 'palace'. Better preserved and smaller than the first 'palace', these remains consist of a square platform measuring about 33 metres on each side. A careful study of the site enabled archaeologists to reconstruct a plausible plan of the original palace with a corridor in the northern section of the central part of the 'palace' which was composed of three sections which extended to the outside of the original building in the form of verandas. Likewise, the double corridor in the southern part of the building, which ended in a large doorway facing south, was also extended by a veranda. In what would have been the central section of the original building, a drainage system composed of a terracotta tube pipeline was discovered.



Palace plan no. 2

Since 1999 the excavations have mostly been directed towards areas close to the remnants of the building and house foundations, streets, etc. found earlier. As a result archaeologists have uncovered quite a number of other foundations.



## Houses

The remnants of a great number of ordinary houses have been excavated at the Erlitou site 二里頭遺址. Although they vary in size, with some quite long and containing a number of rooms, all are constructed on rectangular foundations.

According to archaeologists, these differences in size point to the existence of various social classes in the society of the Xia people 夏民族的社會 and a central power or political authority which enforced or encouraged this social order.



House foundations 2002 VF75

## Tombs

Several types of tombs or graves have been exhumed by archaeologists at the site, some of which are rectangular, while others are round. Moreover, the depth of these tombs varies and the skeletons or partial remains therein show that the bodies of the tombs' occupants were buried in a number of different ways and placed in various positions. The conditions in some tombs strongly suggest that the occupants died violently such as by decapitation and the positioning of some skeletons even suggests that the deceased were buried alive. The finest tombs, which most likely belonged to important members of the Xia community 夏社會, contain numerous burial objects consisting principally of lacquer coffins, fragments of cinnabar, jade and bone objects and, more rarely, of one or several bronze vessels.



Tomb IV M19



Tomb V M208



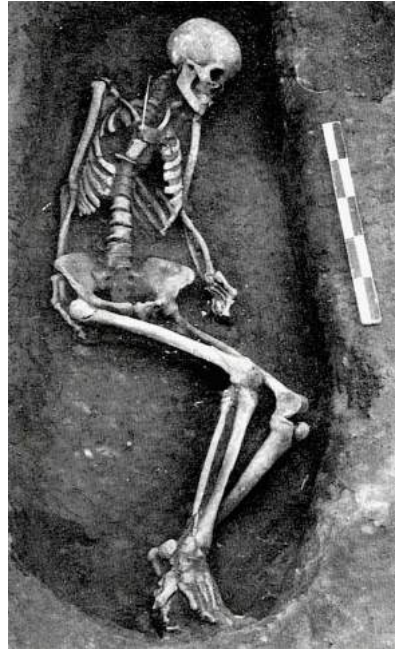
Tomb V M57



Tomb V M60



Tomb V M61



Tomb V M56



Tomb V M204

## Principal excavations at Erlitou 二里頭遺址

The initial discovery of the Erlitou site in the early 1950s and the regular archeological expeditions to the area that followed not only gave archaeologists and historians a better, more factual understanding of the hitherto semi-mythical Xia people 夏民族, but also led to the discovery of the very first bronze vessels produced in ancient China, vessels which most modern specialists attribute to the Xia dynasty 夏代 (21<sup>st</sup> - 17<sup>th</sup>/16<sup>th</sup> centuries B.C.).

### The discovery of the first bronze vessels

Excavations carried out at the site from October 1972 into 1973 uncovered the foundations of a palace and a number of objects including lance tips, knives, fish-hooks, *ge* 戈 daggers and *qi* 戟 hatchets. But by far the most important discovery was that of a bronze ritual tripod *jue* 爵 wine cup (VIII T22 3:6). This *jue* 爵, the first such early bronze vessel scientifically excavated in China, is 12 cm high with thin sides measuring 0.1 cm in thickness and was cast in an alloy consisting of 92% copper and 7% tin, while some of the tools excavated from the same diggings were cast from an alloy consisting of 98% copper and 1% tin. It is important to note that all these metal objects were excavated from Strata III of the site.



*Jue* 爵 VIII T 22 3:6

Archaeological work carried out in the autumn of 1975 uncovered three tombs (75 YLVIK 3-5), all of which were datable to Period III of Erlitou 二里頭. The funereal objects in all three tombs consisted of items in jade, bone, bronze and pottery.

Tomb K3, the largest of the group, is also the most interesting since it consists of a large rectangular ditch 2.3 metres by 1.26 metres in size with a depth of between 1 and 1.26 metres, bordered by another smaller ditch 1.7 metres by 0.74 metre with a depth of between 1.38 and 1.44 metres. The larger ditch contained bronzes, pottery and turquoise, while the smaller adjoining ditch contained jades, bronze objects and vessels, several objects in bone as well as cowrie shells and turquoise.

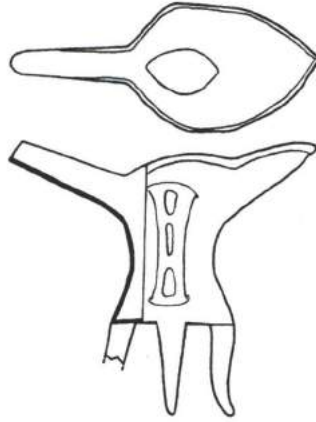




The most important discoveries made by the 1975 archaeological expedition were two bronze vessels in the form of tripod *jue* 爵 wine cups, one in fairly good condition and the other in pieces. The better example of the two measures 13.5 cm high overall, its body is 1 mm thin, its three legs 5 cm high and its pouring spout 5.7 cm long. The vessel's wide handle is perforated in three places.



*Jue* 爵 III M2:2  
from the 1980 excavations



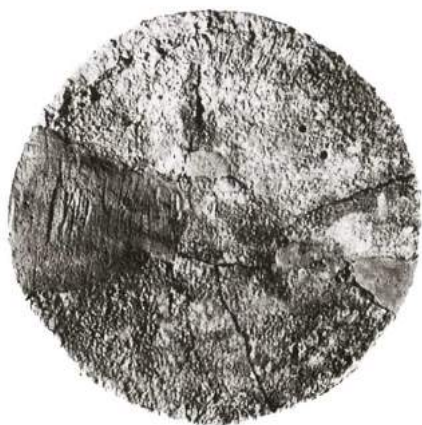
Design of *jue* 爵 YL VIK M 3:4

The other bronze items discovered in Tomb K3 were two round, flat objects 11.6 cm in diameter and 0.1 cm thick. The face of one of these is decorated with three holes, while the face of the other has traces of wood and turquoise on it. These thin, circular objects may well be, as some archaeologists believe, the prototypes or ancestors of the bronze mirrors which became so popular in China in later periods and most especially in the Warring States 戰國時代 (475 - 221 B.C.), the Qin 秦 (221 - 206 B.C.), Han 漢 (206 B.C. - 220 A.D.) and subsequent periods of Chinese history.

The archaeological expedition undertaken in the autumn of 1980 centered on Sector III of the Erlitou site. The expedition's major success was the discovery of Tomb III M2:2 which dated from Period III of Erlitou 二里頭第三期. Though rather small, measuring as it does only 2.55 metres in

length by 1.20 metres in width, Tomb III M2:2 contained an unusual richness of burial paraphernalia, most especially bronze objects. The archaeologists discovered two bronze blades, one 18.4 cm long and the other 26.2 cm long, together with two bronze ritual vessels in the form of tripod *jue* 爵, one 18.4 cm high and the other 22.4 cm high. These elegantly shaped vessels each have an elongated, recessed upper body on a wider, shorter mid-section, a long, wide perforated handle on one side of its upper body, a long spout extending from its top rim and three outwardly sloping triangular legs below its mid-section.

The next archaeological expedition to the Erlitou site lasted from the winter of 1980 to the spring of 1981 and also centred its operations on Sector III of the site. This time the archaeologists discovered a great deal of pottery from Periods II, III and IV of Erlitou 二里頭第二、三和四期, but no bronzes at all.



An early ancestor of the bronze mirror?  
VI KM4:27



An early ancestor of the bronze mirror?  
VI KM3:9

The next expedition, which took place later in 1981 and which concentrated its efforts on Sector V of the site, brought to light a number of tombs datable to Period II (Tombs M4 and M5), Period III (Tombs M1 and M3) and Period IV (tomb M6) of the Erlitou culture 二里頭文化第二, 三和四期. Among these, Tomb M4 from Period II of Erlitou 二里頭第二期 contained several objects that greatly added to our knowledge of the Xia 夏, including a small bronze *ling* 鈴 bell (81 YLVM 4:8) 8.5 cm high and a turquoise encrusted, slightly arched bronze plaque 綠松石鑲嵌青銅牌飾 (81YLVM 4:5) 14.2 cm long. When viewed from top to bottom, the turquoise covering the plaque together with the bronze filaments that separate the turquoise bits into sections form a sort of *taotie* 饕餮 creature with large round protruding eyes and high, inwardly curling horns on its head. Previous to this discovery, such objects had been seen in private western collections but, out of ignorance and for lack of clear archaeological evidence, had been attributed to later Chinese historical periods.



Plaque 81YLVM4:5

When viewed from top to bottom, the turquoise covering the plaque together with the bronze filaments that separate the turquoise bits into sections form a sort of *taotie* 饕餮 creature with large round protruding eyes and high, inwardly curling horns on its head. Previous to this discovery, such objects had been seen in private western collections but, out of ignorance and for lack of clear archaeological evidence, had been attributed to later Chinese historical periods.



Plaque M11:7



Jia 罍 M9:1



The discovery of the bell and turquoise encrusted plaque in Tomb M4 provided a hitherto ‘missing link’ in the evolution of bronze casting in China and also gave archaeologists a clear understanding of the prototype or early ancestor of the *taotie* 饕餮 mask found on later period Chinese bronzes.

A number of tombs from Period III of the Erlitou period 二里頭第三期 were excavated during archaeological work carried out in the autumn of 1984. Of these, Tombs nos. M6, M9 and M11 contained several important burial objects:

- *Jue* 爵 1984 4L V1 M6:5
- *Jia* 斝 1984 4L V1 M9:1
- Bronze plaque 銅牌 1984 4L VI M11:7
- Small bronze *ling* bell 鈴 1984 4L VI M11:2

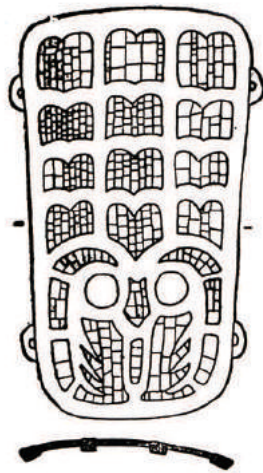


*Ling* 鈴 M11:2



*Jue* 爵 M6:5

- in tomb M6 the archaeologists discovered a pottery *he* 盃 vessel together with a bronze *jue* 爵.
- tomb M9 contained two pottery *he* 盃 vessels, a bronze *jue* 爵 (M9:2) and a ritual bronze *jia* 斝 (M9:1), the first of its kind scientifically excavated at this site and the first such vessel attributable to the Erlitou culture 二里頭文化.
- tomb M11, the richest and most standard of all, contained a pottery *he* 盃 vessel, a bronze *jue* 爵 (M11:1), a small bronze *ling* 鈴 bell (M11:2) and a bronze 銅牌 plaque decorated with a stylised *taotie* 饕餮 mask entirely encrusted with turquoise (M11:7).



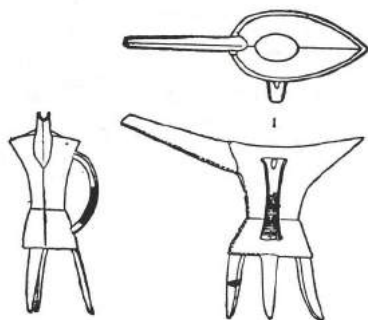
Drawing of plaque M57:4



Ling bell 鈴 M57:3

Between the autumn of 1986 and the spring of 1987 several tombs from Periods II, III and IV of the Erlitou culture were excavated. The richest in terms of burial objects was tomb M57 which was dated to Period IV of the Erlitou culture and which contained 8 jades, 9 pieces of pottery, including one *he* 盃, and 4 bronze objects, including one *jue* 爵 (M57:1) 16.4 cm high, a small *ling* bell 鈴 (M57:3) 8.45 cm high,

a bronze turquoise encrusted plaque 綠松石鑲嵌青銅牌飾 (M57:4) 15.9 cm long and a *dao* knife 刀 (M57:2) 34 cm long.



Drawing of *jue* 爵 M57:1



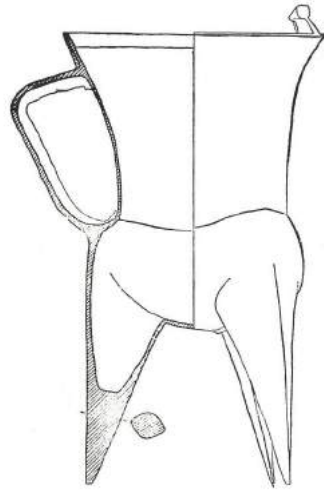
*Jue* 爵 M57:1

Right page: plaque M57:4





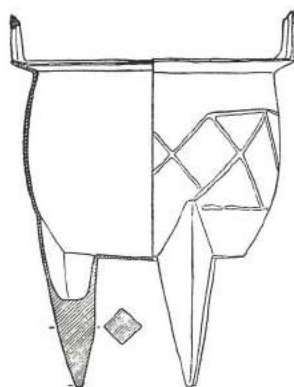
Burial objects uncovered from Tomb 87YLV1 during excavation work undertaken in the spring of 1987 made a great contribution to our knowledge of the bronze ritual vessels of the Erlitou Culture 二里頭文化. The tomb, belonging to Period IV of Erlitou, contained two important ritual bronze vessels, a *jia* 斝 and a *ding* 鼎, both in forms and structures hitherto unknown by archaeologists. This was especially true of the *ding* 鼎, the first from such an early period to be scientifically excavated:



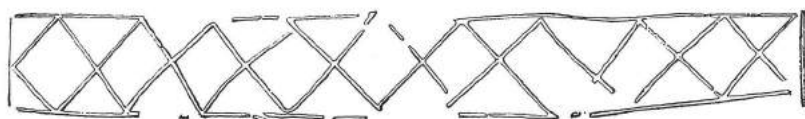
*Jia* 斝 87YLV1:2 together with a sketch of it

- The 26.8 cm *jia* 斝 (87YLV1:2) is different in shape and structure from the *jia* 斝 excavated in 1984 at the same site. The convex bottomed body section of the 1987 *jia* 斝 together with its bulbous, hollow, rounded triangular legs make it look very similar to a *li* 鬲 ritual vessel (See page 51) and it is thus a harbinger of shapes to come in the bronze vessels of the subsequent Erligang period 二里崗時期 (17<sup>th</sup>/16<sup>th</sup> - 14<sup>th</sup> centuries B.C.).

- The *ding* 鼎 (87YLV1:1) was the first ever such vessel discovered at the Erlitou site. 25 cm high, it is in the form of a deep, round, thin-walled bowl with two arched handles, one on each side of its upper rim and a flat bottom supported on three bulbous, rounded, triangular pointed hollow legs. The body of the vessel is decorated with a series of lightly raised triangular shaped netting-like patterns.



*Ding* 鼎 87YLV1:1 with a sketch of it and the decorative motif covering its mid-body



From 1988 onwards, the work undertaken at the site concentrated principally on a study of palace ruins, their foundations, surrounding walls, roadways, possible canal systems and other elements that might help archaeologists obtain a better understanding of the basic layout and evolution of this city, which may very possibly have been one of the capital cities of the Xia dynasty 夏代.

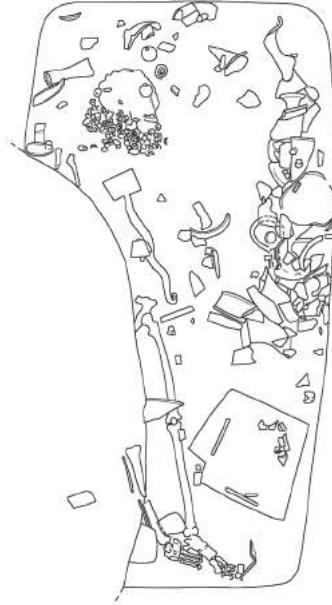
## China's 'earliest dragon'

In the spring of 2002, during the excavation of Tomb 02VM3 at the Erlitou site, an extremely important discovery in the history of Chinese archaeology was made. A long, large dragon composed of over 2000 pieces of turquoise was found placed lengthwise over the skeleton of the tomb's occupant between his shoulder and waistline. Most probably a personage of high rank in the Xia society 夏社會 of the time, the deceased 30-35 year-old male had been interred stretched out lengthwise, in accordance with the usual burial customs of the period.

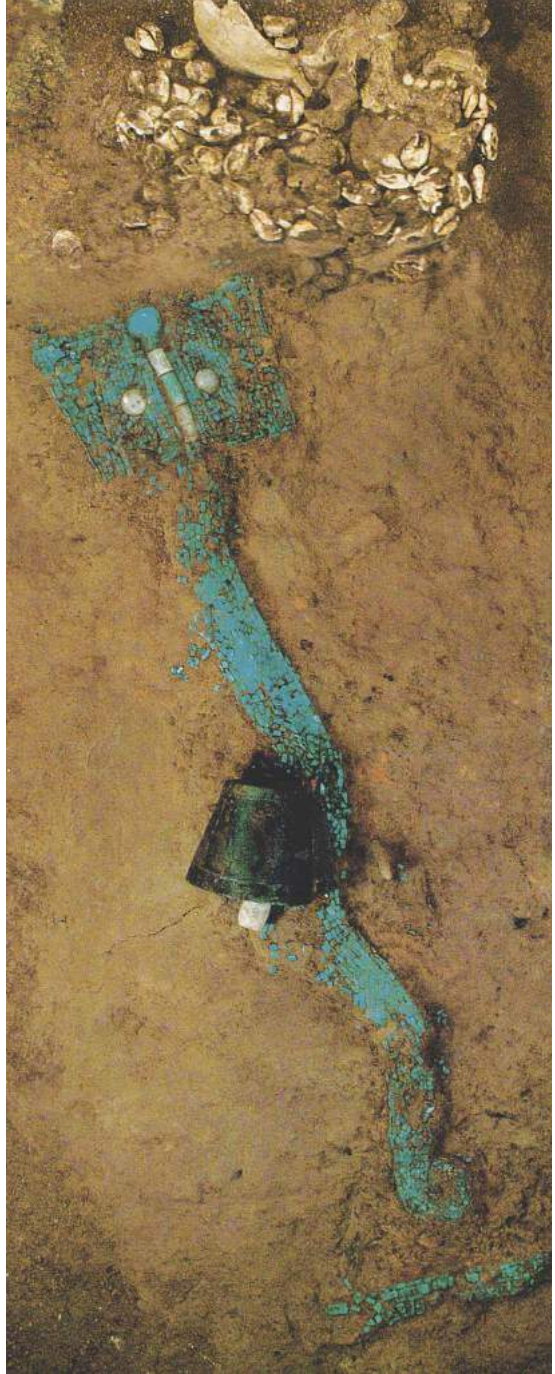
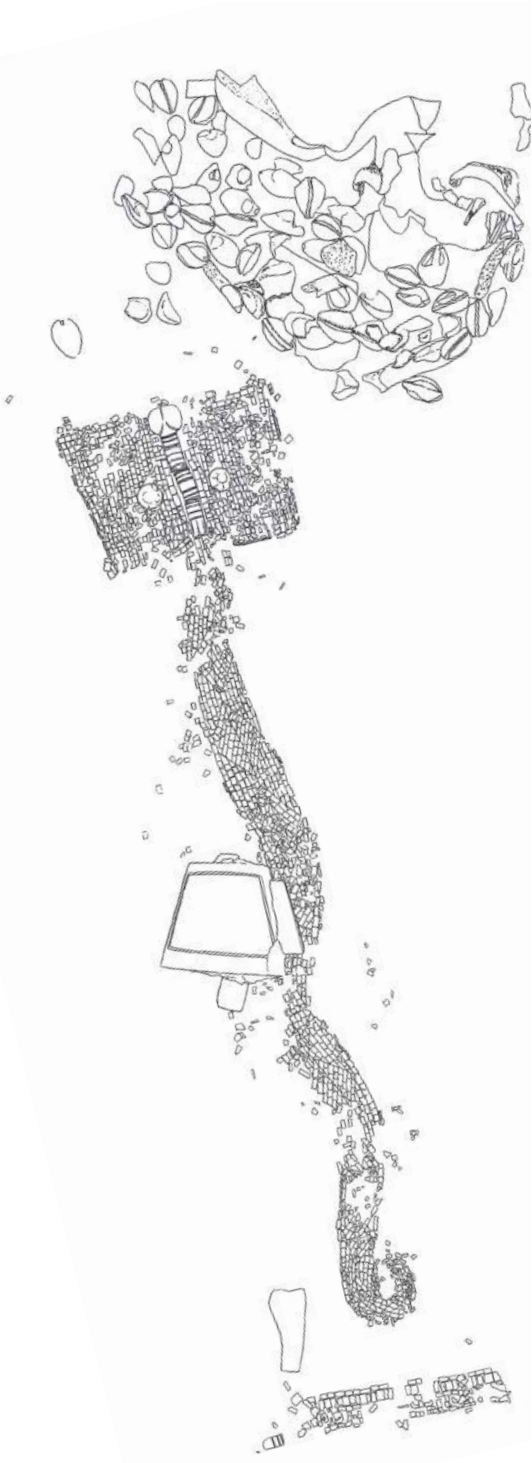
There are a number of popular theories among historians and archaeologists in China today as to the significance of the dragon in Chinese culture from the Xia to the present. Some believe, and the discovery of the turquoise dragon in Erlitou site Tomb 02VM3 seems to confirm this, that the people of the Xia worshipped the dragon and saw the sudden, long undulating flashes of dragon-like lightning that pierced the dark cloudy skies before the onset of life-giving rains as tangible manifestations of that majestic heavenly being, whom they regarded as their protector and benefactor.

The turquoise pieces of which the dragon is composed were originally attached to a now completely disintegrated plaque and have different shapes and sizes which vary between 0.2 cm to 0.9 cm in length with a uniform thickness of 0.1 cm. The 64.5 cm long dragon is depicted with an undulating body topped by a large rectangular head which is 15.6 cm long and varies from between 11 and 13.6 cm in width. The head is embellished with two large round bulging eyes inlaid in white jade, and it has a long nose down its centre formed of three long, narrow, rectangular plaques of white jade, topped by a large round piece of sculptured turquoise.

This remarkable dragon, which provided archaeologists with tangible proof of the cultural significance of the dragon to the people of the Xia 夏民族, serves as a hitherto 'missing link' between Neolithic cultures and the Shang dynasty 商代.



Drawing of the tomb 02VM3



Detail of the tomb o2VM3

## Various sites belonging to the Erlitou culture

### 二里頭文化的遺址

A total of almost 500 archaeological sites have been found to share the single cultural entity which is now termed the 'Erlitou culture'. These are spread among a number of neighbouring modern-day provinces clustered around the Yellow River 黃河 and its tributaries, including Henan province 河南省 where most such sites are found in the area situated between the *Yi* and *Luo* Rivers 伊, 洛二水之間 near the present-day city of Zhengzhou 鄭州, as well as in the southwest of Shanxi province 山西省西南部, the north of Hubei province 湖北省北部 and in the provinces of Gansu 甘肅 and Qinghai 青海.

Although the Erlitou site 二里頭遺址 at Yanshi 偃師 is the most important of all the Erlitou cultural sites so far discovered, two other deserve special mention because of their being the sites of remnants of possible capital cities of the Xia dynasty:

- The Wangchenggan 王城崗 site near Dengfeng in Henan province 河南省登封, where the remains of an earthen city wall have been found,
- the Dongxiafeng 東下馮 site near Xia county 夏縣, the richest and largest Erlitou cultural site in Shanxi province 山西省. The remnants of an ancient city found at this site are also surrounded by vestiges of a city wall constructed of compressed earth. Carbon 14 has dated the site to from the end of the 3<sup>rd</sup> to the beginning of the 2<sup>nd</sup> millennium B.C.

## The various periods of the Erlitou site at Yanshi

### 偃師二里頭遺址

Based on the strata of the deposits found at the site and the cultural contents of each stratum, archaeologists have divided the Erlitou site into four distinct periods.

The first two of these, which are considered to belong to the primitive phase of the Erlitou culture, are characterized by large numbers of grey pottery with a decor in light relief.



Such pieces have been found at the Meishan site in Linru Township in Henan province 河南省汝州臨汝鎮的煤山遺址 as well as at the Yanshi Erlitou site 偃師二里頭遺址. From the material excavated at both of these sites, it is quite obvious that the pottery of these two earliest periods of the Erlitou culture was strongly influenced by the Neolithic pottery of the Liangzhu 良渚文化 and Longshan 龍山文化 cultures.

## Period I

During this period, Erlitou became a regional centre covering an area of about 100 hectares (app 247 acres). The pottery excavated from the strata belonging to this period are either grey, or more often black, some of which are polished. They take the forms of *pen* 盆 basins, *zeng* 甗 rice steamers, *guan* 罐 jars and tripod *pan* 盤 trays. These vessels are decorated with rope or hoop patterns and sometimes with pressed-on patterns.

In strata from this period unearthed at Xiawanggang, Xichuan, in Henan 河南省淅川下王崗, bronze residue and fragments were discovered.

The strata in Period I sites have been dated by carbon 14 to around 1900 B.C.

## Period II

Period II corresponds to the time when Erlitou was being urbanized, by which time the total area had expanded to some 300 hectares (app 741 acres). Among the remnants of buildings excavated from this strata was a 'palace' of 12 hectares (app 29.65 acres) in area, set off on each of its four sides by a road.

Archaeologists noticed an increase in the proportion of grey pottery found in this strata and a corresponding decrease in the amount of polished black pottery. The bodies of the vessels also became less large and more cylindrically vertical in shape with the rims of their necks turned inwards and their bottoms usually fat. Grey pottery *he* 盃 spouted vessels also began to appear in these strata during this period.

The discovery in 1981 in Tomb M4 in Sector V of the Erlitou site, which archaeologists ascribe to Period II, of a small bronze *ling* 鈴 bell (81YLVM4:8) together with a turquoise encrusted bronze plaque (81YLVM4:5) bearing a *taotie* mask design caused considerable excitement among the archaeologists participating in work at the site.

### The Later Periods of the Erlitou cultural site

#### 二里頭文化第三, 四期

The two subsequent, later phases of the Erlitou culture differ from the earlier periods by a marked increase of cultural material, including:

- stone sculptures in the round;
- objects in bone, including a hairpin and a long, flat object bearing a decorative motif;
- a lacquered board. Although quite decayed, a small surviving portion still showed signs of painting and red lacquer;
- jades. Numerous jade objects, quite fine and small and excellently polished, proved that the techniques used to produce them were already quite evolved and sophisticated. Among these jades were a number of handles decorated with animal mask motifs, together with some knives and *zhang* tablets 璋;
- bronzes. The most important discovery from the point of view of the evolution of bronze casting in ancient China was made during the excavation of Strata III and IV, corresponding to Periods III and IV of the Erlitou culture. This was the discovery of numerous bronze objects including knives, scissors, chisels, lance tips etc. and especially the first scientifically excavated ancient Chinese ritual vases: *jue* 爵, *jia* 斝, *ding* 鼎, and *he* 盃 spouted vessels, all of which offered tangible proof that China had advanced into the Bronze Age by or during the later parts of the Erlitou cultural period 二里頭文化晚期.

### Period III

Period III, a period when the population of the Village of Erlitou reached a population of from 18,000 to 30,000 inhabitants, marked an important turning point in the evolution of this culture. Now the palaces were protected by earthen walls 2 metres high, new varieties of ceramics made their appearance, and, most significantly, bronze production began in earnest.

The new shapes of pottery that appeared and quickly became widely used during this period of the Erlitou culture included the *li* 鬲, *jia* 斝, *zun* 罇/樽, *gui* 簋, *weng* 甕, *ding* 鼎, *dou* 豆, *zeng* 甗, etc.

These often carried a simple decoration featuring a comb-like or rope-like motif. The materials used to make these gave the vessels a greyish colouring and grey vessels gradually replaced the black vessels of earlier periods.

Bronze vessels began appearing during this same period, but as the late Professor Ma Chengyuan 馬承源 has remarked, the sophistication of these now earliest known bronze vessels makes one doubt that they could have suddenly appeared without a long period of preparation and testing of techniques, a previous period of trial and error. It is thus likely that there are still some missing links in the history of bronze production in China that are awaiting discovery by archaeologists.

So far archaeologists have excavated the remnants of a foundry containing numerous remainders of bronzes, fragments of molds and a number of small bronze objects including bronze knives, chisels, adzes, scissors, arrow heads, lances and small *ling* bells.

#### **Period IV**

Yet still newer types of ceramic vessels begin to appear during this period, gradually replacing the most common forms seen during Periods I and II of the Erlitou culture and beginning to resemble more closely the types of ceramic vessels that will later appear during the subsequent Erligang cultural period 二里崗文化時期 (circa 17<sup>th</sup>/16<sup>th</sup> to 14<sup>th</sup> centuries B.C.), that brings us into the Shang dynasty 商代 (circa 17<sup>th</sup>/16<sup>th</sup> to 12<sup>th</sup>/11<sup>th</sup> centuries B.C.) the successor to the Xia dynasty 夏代 (circa 21<sup>st</sup> to 17<sup>th</sup>/16<sup>th</sup> centuries B.C.).

During Period IV of the Erlitou culture, tripod *li* 鬲 vessels were produced in greater quantities and their form became standardized.

Although still not as numerous as vessels in pottery, bronze *jue* 爵, *jia* 斝, *ding* 鼎 and *he* 盃 become more common than during Period III.

A carbon 14 test carried out on sample ZK286 from Period IV strata dated the strata to from 1625 B.C. ± 130 years.

## The Erlitou Controversy

In spite of the fact that many or even most Chinese archaeologists believe that the cultural ruins and objects found at Erlitou cultural sites belong, in fact, to the Xia dynasty 夏代, a good number of archaeologists still question this attribution,

The absence of contemporary written records or other tangible proofs that the areas in which the Erlitou sites are located were, in fact, occupied by the people of Xia 夏民族 is at the root of this controversy. Perhaps the only reasonable method of solving this matter is to make an in-depth comparison of the information in extant ancient texts with the actual locations where Erlitou sites have been excavated and see how well they match and then to try to interpret the cultural strata at the sites and see whether there is a discontinuity between the earlier strata from what are termed Periods I & II and the later strata, which are termed Periods III and IV.

Actually three principal theories exist and vie with each other for acceptance:

### **Thesis no. 1:**

The Erlitou culture 二里頭文化 corresponds to the culture of the Xia people 夏民族.

A group of archaeologists unequivocally attribute the whole of the Erlitou culture to the Xia 夏民族. They interpret whatever discontinuity that may seem to exist between the four strata as being due to either an intrusion of Shang 商民族 elements as a result of conquest, or as resulting from the transfer of the capital of the Xia 夏民族 from/to this site.

### **Thesis no. 2:**

The earlier strata of the Erlitou sites correspond to the Xia dynasty 夏代, while the later strata belong to the early period of the Shang dynasty 商代.

For those holding to this theory, the stratigraphic discontinuity at the site is interpreted as a dynastic rupture, with the culturally most prosperous later periods corresponding to the beginning of a new epoque, i.e. that of the Shang dynasty 商代.

### **Thesis no. 3:**

The end of the Longshan culture 龍山文化 and the beginning of the Erlitou culture in the west of Henan 豫西 correspond to the Xia dynasty 夏代, but the end of the Erlitou cultural period is directly connected to what is known as the Erligang period 二里崗時期, which corresponds to the beginning of the Shang dynasty 商代.

In spite of the differences in all of these theories, a consensus seems to have been reached at least as concerns the early periods of Erlitou, i.e. Periods I and II, which all agree correspond to the Xia dynasty 夏代.

### **Important points to be considered:**

In spite of the lack of contemporary written records dating to the actual Xia dynasty 夏代, archaeologists do have several indisputable facts at their disposal to help them reach a definite conclusion:

The Erlitou culture 二里頭文化 extends over a different period than that of the Longshan culture 龍山文化 to its east and even though the Erlitou culture reached a more evolved degree than that of Longshan, the Erlitou culture was derived from the Longshan culture, while also having important connections with the later period of the Qijia culture 齊家文化.

The numerous sites from which Erlitou cultural material has been excavated coincide remarkably with the traditional geographic distribution ascribed by ancient texts to the Xia people 夏民族. In spite of theories attributing parts of the four periods at the Erlitou site to the Xia 夏代 and Shang dynasties 商代, information obtained from carbon 14 test results offers us a more precise dating of the site and so of the culture that once flourished there.

Carbon 14 tests have shown that the 4 periods at the Erlitou site lasted for about 500 years beginning from 1920 B.C.  $\pm$  140 years /1900 B.C.  $\pm$  130 years for Period I and lasting to 1625 B.C.  $\pm$  130 years in Period IV (sample ZK286).

Radiocarbon testing has also yielded some interesting results for the Shang sites 商文化遺址 at Zhengzhou 鄭州 and that at Erligang 二里崗:

- Zhengzhou 鄭州 (Sample CET7 taken from the surrounding wall): 1620 B.C.  $\pm$  140 years.
- Erligang 二里崗 (Stata 3, Sample ZK717) 1595 B.C.  $\pm$  140 years.

It should also be noted that at the Luodamiao 洛達廟 and Nanguanwai 南關外 sites at Zhengzhou 鄭州商城遺址, strata of the Erlitou culture 二里頭文化 are found under the strata of the Erligang culture 二里崗文化.

Thus the dates obtained by radiocarbon testing reveal that the samples tested were from a period earlier than the Erligang period of the Shang dynasty 商代二里崗時期 and correspond, without any possible doubt, to the Xia period 夏時期.

In conclusion, the radio-carbon test results prove that the Erlitou culture preceded that of Erligang and that the four periods of the site at Erlitou correspond perfectly and undeniably to the Xia dynasty.





Jue 爵 Meiyintang collection



## THE ORIGINS OF BRONZE CASTING IN CHINA

Ancient Chinese classical texts and legends attribute the debut of bronze casting in China to the Great Emperor Yu 大禹, the founder of the Xia dynasty 夏代, who is reputed to have cast 9 bronze cauldron-shaped *ding* 鼎 vessels as symbols of his regal power over the nine provinces into which he had divided the Xia lands.

Archaeological discoveries made over the past 100 years or so, though as yet unable to discover Grand Yu's 大禹 original 9 *ding* 九鼎, have enabled us to get a fairly clear idea of the evolution of the metal alloys used in ancient China up until the appearance of the first bronze ritual vases in the Erlitou/Xia period 夏代二里頭時期. Thus in spite of there still being some missing links, we can summarise this evolution as follows:

- The Yangshao Culture 仰韶文化 (circa 5000 - 3000 B.C.), located in an area stretching from present-day Gansu to Henan provinces 甘肅省到河南省之間, with its centre extending from western Henan and southern Shanxi provinces 豫西晉南地區 up to Baoji City in modern-day Shaanxi province 陝西省寶雞市.

A small brass particle and a tube-shaped brass object found at Lintong 臨潼 Jiangzhai 姜寨 at the Yangshao Banpo 仰韶半坡 cultural site (circa 4800 - 4300 B.C.) in the eastern outskirts of Xian city in Shaanxi province 陝西省西安市東 and a brass hairpin found at the Yangshao Banpo cultural site at Weinam Beiliu in Shaanxi province 陝西渭南北劉 have been dated to about 5,000 B.C. A disc discovered at Jiangzhai 姜寨 and also dated to circa 5000 B.C. is composed of an alloy of 65% copper and 25% zinc.

- The Longshan Culture 龍山文化 (circa 2500 - 1900 B.C.), located in present-day Shandong, Henan, Shaanxi, Hebei, Eastern Liaoning, Jiangsu, etc. provinces 山東省, 河南省, 陝西, 河北, 遼東, 江蘇等地區.

Several pieces of metal excavated at the Dachengshan Neolithic Longshan Cultural Site at Tangshan in Hebei province 河北省唐山市大城山新石器時代龍山文化遺址 from 1955 onwards consist of a mixture of copper alloys.

One small object excavated from a Longshan cultural site 龍山文化遺址 in Shangdong province 山東省 and dated to between 3000 and 2200 B.C. is composed of an alloy of copper and zinc.




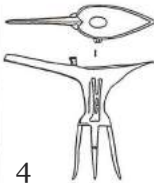




- Majiayao Culture 馬家窯 (circa 3800 - 2050 B.C.), located in present-day western Gansu 甘肅省西部, eastern Qinghai 青海省東部 and northern Sichuan 四川北部 provinces.  
A small bronze knife excavated at Dongxiang Linjia in Gansu province 甘肅省東鄉林家 has been dated to 3000 B.C.
- Qijia Culture 齊家文化 (circa 2050 - 1700 B.C.), located in present-day Gansu province 甘肅省, eastern Qinghai 青海東部 and southern Ningxia provinces 寧夏南部.







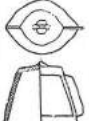


As the Qijia Culture 齊家文化 dates to what is known as the 'Bronze Age', it is not surprising that numerous bronze tools, weapons (hatchets and knives) and other small bronze objects have been found at the sites dating to this period.

- The Erlitou Culture 二里頭文化 (circa 19<sup>th</sup> to 17<sup>th</sup>/16<sup>th</sup> centuries B.C.), located in the west of present-day Henan province 豫西 and the south of present-day Shanxi province 山西省南部.

Fragments of bronze objects have been discovered by archaeologists in Strata I of the Erlitou site, but no bronze vessels have been so far discovered from areas of the site dated to before Period III of the Erlitou culture.



	<i>Jue</i> 爵		<i>Jiao-He</i> 角盃	<i>Jia</i> 斝		
Erlitou 二里頭 Strate 2						
Erlitou 二里頭 Strate 3	1 	5 				
Erlitou 二里頭 Strate 4	3 	4 	7 	8 	9 	

<i>He</i> 盃	<i>Ding</i> 鼎	<i>Ling</i> 鈴			Plaque
		 <p>13</p>	 <p>15</p>		 <p>18</p>
				 <p>17</p>	
 <p>11</p>	 <p>12</p>	 <p>14</p>	 <p>16</p>		 <p>19</p>

N° 1 : 1973 YLVIII22 3:6

N° 2 : 1980 YLIIM2:1

N° 3 : 1984 YLVIM6:5

N° 4 : 1975 YLVIIKM7:1

N° 5 : 1980 YLIIM2:2

N° 6 : Tianjin Museum

N° 7 : Shaanxi Museum

N° 8 : Shanghai Museum

N° 9 : 1987 YLVM1:2

N° 10 : 1984 YLVIM9:2

N° 11 : 1986 YLIIM11:1

N° 12 : 1987 YLVM1:1

N° 13 : 1982 YLIXM4:1

N° 14 : 1984 YLVIM11:2

N° 15 : 1981 YLVM4:8

N° 16 : 1987 YLVIM57:3

N° 17 : 1982 YLVM22:11

N° 18 : 1981 YLVM4:5

N° 19 : 1987 YLVIM57:4



Jue 爵 Meiyintang collection



## BRONZES OF THE XIA DYNASTY 夏代

Although much is still unknown about the origins of bronze casting in China, some casting waste and fragments of bronze objects dating to the beginning of the Erlitou culture, i.e. Period I, have been excavated from sites in Henan 河南, principally at Xiawangang, Xichuan 河南省淅川下王崗. As we have seen above, small bronze *ling* 鈴 bells and turquoise-encrusted plaques 綠松石鑲嵌青銅牌飾 existed as early as Period II of Erlitou, but bronze vessels began to make their appearance only later, during Periods III and IV of the Erlitou culture. As already mentioned, although one may have expected the casting techniques employed at such an early period to have been rather primitive, they were, in fact, quite advanced, as can be seen from the fact that they made it possible for the bronze casters of Period III of Erlitou to produce sophisticated ritual bronzes of a high quality, most especially thanks to their skill at multi-mold casting.

From what we now know and from the material so-far scientifically excavated by archaeologists, the bronze vessels from the Erlitou sites are ancestors of the Shang dynasty 商代 bronzes to which they are clearly culturally and historically connected. Thus we can say with confidence that they were produced during the latter parts of the Xia dynasty 夏代 and that the bronze ritual vessels of the Xia dynasty 夏代 consisted of only four types, i.e. *jue* 爵 wine cups, larger *jia* 斝 wine vessels, *ding* 鼎 food-containing vessels and *he* 盃 water/wine receptacles and that, in addition to these, bronze turquoise-incrusted plaques 綠松石鑲嵌青銅牌飾, small bronze bells *ling* 鈴 and bronze weapons and tools were produced.

### ***Jue* 爵**

The first bronze *jue* 爵 wine vessel found at the Erlitou site during the 1972-1973 excavations was, from the archaeological point of view, the single most important discovery made at the site, since it provided tangible proof that sophisticated bronze vessels were being produced in China much earlier than had been previously thought.

Of the dozen or so *jue* 爵 scientifically unearthed at the Erlitou site up to the present moment, only one is decorated. Excavated in the summer of 1975, it is decorated on the side opposite its handle with a frieze of

round protuberances separated by horizontal lines in light relief, a motif that was executed by etching it onto the inside of the mould, proof of the advanced stage that the technique of direct casting had reached by that early period.

The earliest bronze *jue* 爵 ritual vessel of the Xia 夏代 took the form of a thin-walled tripod cup (1mm thick) with a long, straight, deep, canal-like pourer extending from the top rim of one of its sides.

The area where the spout emerges from the vessel's body is topped on each of its sides by a small mushroom-like protrusion. The vessel's body becomes narrower as it rises from its lower bulbous base and then gradually widens as it rises higher to its upper rim. The whole is supported on three triangular pointed legs and a wide semi-circular handle extends from one side of the vessel.

The shape of the *jue* 爵 wine cup underwent several important changes during the various periods of Erlitou which can be summarised as follows:

- The *jue* 爵 excavated from Strata III, Period III of the Erlitou site are small sized and squat; their triangular feet are very small and their pouring spouts are fairly short.



*Jue* 爵 Meiyintang collection



*Jue* 爵 Meiyintang collection

- At the heart of the period between the end of Period III and the beginning of Period IV of Erlitou, the vessel's pouring spout becomes much larger, looking a bit out of proportion to the rest of the vessel. A very attractive example of this type of *jue* 爵 is conserved in the Meiyintang Collection (see photo page 47). The overall effect of the vessel's squat legs, thin body and elongated spout lends it an elegance that once more attests to the exceptional skill of the bronze casters of the Xia dynasty 夏代.
- During Period IV of Erlitou 二里頭, larger-sized *jue* 爵 vessels make their debut. These *jue* 爵 are characterised by a very long, narrower pouring spout and three longer and larger triangular legs. These larger, long-spouted *jue* 爵 are much rarer. One such example was exhibited for the first time in 1980 at the Metropolitan Museum of Art in a grand exhibition of Chinese objects entitled *The Great Bronze Age of China*. (See plate number 1 on page 79 of the exhibition's accompanying catalogue); another similar large *jue* 爵, now conserved in the Meiyintang Collection, was exhibited at the Guimet Museum in Paris in 2013 and illustrated on page 69 of Deydier Ch., *Initiation aux Bronzes archaïques chinois*, Paris 2016.

The casting of such bronze *jue* 爵 vessels most probably required a four-part mould. The alloy employed in their production consisted of 92% copper and 7% tin, etc.



## ***Jia*** 斝

So far at least six bronze *jia* 斝 vessels dating to the Xia dynasty 夏代 have been scientifically excavated at the Erlitou site.

The first and most ancient of these, dating to Period III of Erlitou 二里頭第三期, was uncovered during excavation work carried out in 1984 on Tomb M9. 30.5 cm high, this *jia* 斝 has thin walls, a body that narrows at its centre, a semi-circular perpendicular handle at one of its sides and two small protrusions with mushroom-shaped tops rising from its upper rim.

The second *jia* 斝 was excavated in 1987 from Tomb 87YLV1. Dating from Period IV of Erlitou 二里頭第四期, it is very similar in form to *jia* 斝 conserved in the Shanghai Museum, the Royal Ontario Museum of Toronto and to one published by Ch. Deydier on the back cover of the November 1991 Issue of *Orientalis* magazine. Like all of these, the *jia* 斝 discovered in Tomb 87YLV1 has a rounded, bulging lower body topped by a narrower, straight upper section that gradually opens outwards as it ascends to its top rim and its body is supported on three hollow, rounded, bulging cone-shaped legs, very much like those found on *li* 鬲 vessels.

The Erlitou period *jia* 斝 in the Meiyintang Collection, very similar to those scientifically excavated at the Erlitou site, exhibits one added element, a band of decoration around the centre of its body consisting of two horizontal lines in light relief, enclosing a group of scarcely noticeable small circles.





*Jia* 罍 Meiyintang collection

## *Ding* 鼎

Up to the present moment, only a single bronze *ding* 鼎 vessel has been scientifically excavated from the Erlitou site. It was found there in 1987 with the second *jia* 罍 mentioned above in Tomb 87YLV1 from Period IV of Erlitou. The *ding* 鼎, which is 20 cm high and 15.3 cm in diameter from handle to handle, consists of a flat-bottomed, rounded, basin-like, thin-walled body supported by three hollow, triangular cone-like legs extending from the sides of the vessel's lower body. Two semi-circular arched handles face each other across the vessel's upper rim and the vessel's body is decorated in light relief with a frieze of criss-crossing lines forming losanges.



*Ding* 鼎 87YLV1

## *He* 盃

A 24.5 cm high bronze vessel in the form of a *he* 盃 was excavated in 1987 from Tomb no. 1 in Sector II of the Erlitou site, a tomb which belongs to Period IV of the Erlitou culture. This bronze *he* 盃 morphologically resembles ceramic *he* 盃 of the same period, with a fat, round, thin-walled globular body topped by a sloping opening on one of its sides and an upwardly raised pouring spout on the other. A long semi-circular handle extends from the middle of the body on the side below its top opening to the centre of one of the vessel's three wide triangular legs.



*He* 盃 87YLIIM1

## Hybrid *Jiao-He* 角盃混合物

Although no such bronze vessel has yet been scientifically excavated from the Erlitou site, a small number of bronze hybrid *jiao-he* 角盃混合物 have been discovered. They are basically shaped like the *jiao* 角 wine vessels of later periods, but have long pouring spouts like those on early period *he* 盃 emerging from near the middle of one of their sides. Almost morphologically identical pottery vessels were excavated at the Erlitou site around 1965 and are now conserved in the Luoyang Museum 洛陽博物館 in Henan province.

Two bronze hybrid *jiao-he* 角盃混合物 are conserved in Chinese museums and a third is conserved in the Meiyintang Collection 玫茵堂收藏.

The first bronze hybrid *jiao-he* 角盃混合物 is conserved in the Shanghai Museum 上海博物館. Although the vessel's original legs are now missing, the vessel is unusual in that the lower section of its body is decorated with a frieze of large openwork circles bordered above and below by a line in light relief and its central section is also decorated with two line-enclosed bands in light relief decorated with small stud-like protuberances.

A second, undecorated bronze hybrid *jiao-he* 角盃混合物, excavated in 1980 at Luoning in Henan province 河南省洛寧 is conserved in the Shaanxi Provincial Museum of History 陝西歷史博物館.

The third known bronze hybrid *jiao-he* 角盃混合物 vessel, part of the Meiyintang Collection, was published by Deydier Ch. in 2016 and illustrated on pages 111 and 112 of his *Initiation aux Bronzes archaïques chinois*, Paris 2016. The vessel's thin-walled body (1mm thick) has a rounded base which slopes inwards as it rises to form a narrower lower neck which gradually widens as it extends upwards towards its opened-out top rim. A very long, slightly curving and gradually narrowing spout extends from just below mid-point of the vessel's front pointed side. On one of the vessel's flat sides, a long semi-circular handle extends from just below its rim to the top part of its body's lower base. The whole vessel is supported by three thin, elegant, triangular legs that gradually narrow into sharp points as they descend.





*Jiao-he* 角盃混合物 Meiyintang collection







## **Ling 鈴 Bells**

Together with weapons and tools, these small bells are among the earliest bronze objects excavated at the Erlitou site. Quite small, from 7 to 8 cm high, these flat-bottomed upside-down teacup-shaped *ling* 鈴 bells have a small handle on one of their sides.

Quite a few of these bells have been scientifically excavated at the Erlitou site, in Strata II (1981, Tomb M4, bronze no. 8), Strata III (autumn of 1984, Tomb II, item no. 2) and Strata IV (1986-87, Tomb M57, item no. 3).



*Ling* 鈴

## **Weapons and Tools**

A great number of bronze weapons and tools including *ji* 戟 hatchets, *ge* 戈 halberd/axes, arrow heads, chisels, saws, scissors, fishing hooks and knives have been excavated.

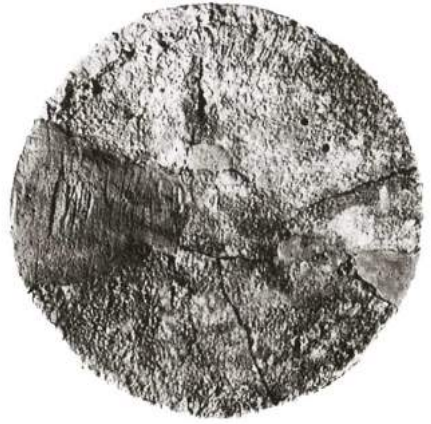
Scientific analyses have revealed that most of these objects were cast with two-part molds using an alloy of from 92 to 98% copper mixed with from 1 to 7% tin.

The majority of the bronze weapons consisted of *ji* 戟 hatchets and *ge* 戈 halberds. The handles of some of the halberds were decorated with cloud or stylised animal motifs and some were probably originally encrusted with turquoise, as can be surmised from the fact that they were cast with now empty canal-like grooves.

## Mirrors 銅鏡

During the excavations carried out in the autumn of 1975 at Erlitou 二里頭遺址 two flat round objects 11.6 cm in diameter and 0.1 cm thick were discovered. The surface of one of these was decorated with three holes and that of the other carried traces of turquoise incrustations.

The shape of these two objects reminds one of the bronze mirrors that became so popular during later periods in China and may very well have been their earliest ancestors or prototypes.



An early ancestor of the bronze mirror?  
VI KM4:27

## Bronze plaques encrusted with turquoise 綠松石鑲嵌青銅牌飾

Like the *ling* 鈴, the bronze turquoise-encrusted plaques are among the most ancient bronze objects found at the Erlitou site. In 1981 one such plaque was excavated from Tomb M4 (object no. 5) and was dated to Period II of Erlitou 二里頭第二期. Several other similar plaques were subsequently scientifically excavated in 1984 (Tomb M11, object no. 7, Strata III, and in 1986 - 1987 (Tomb M57 object no. 4, Strata III). Before these scientific excavations were carried out, a number of plaques of the same type had already been conserved in various collections outside of China, including the collection of Dr. Singer (USA), the Winthrop Collection of the Fogg Museum at Harvard University in Cambridge, Massachusetts (USA), and that of the Honolulu Academy of Arts in Hawaii (USA).

In tombs, these plaques were always placed level with or very near the chest of the deceased and were found only in the tombs of important persons in Xia society 夏社會, as could be ascertained from the fact that the bodies of such persons were always buried amidst an impressive arrangement of funerary objects.



Plaque Meiyintang collection









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