

The discovery of the Xia Dynasty—a study of the small bronze *gui* (簋) with twin birds from the early Zhou period

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Abstract. The question of whether the Xia Dynasty existed has long attracted worldwide scholarly attention. This study seeks to address the issue through material evidence. Combining typological observation with scientific dating techniques and employing the methods of palaeographical analysis, the paper argues that the small bronze *gui* with a cover decorated by twin birds holding a ring is an early Zhou ritual bronze vessel and that its inscriptions are written in a standardized script of the Xia Dynasty. The inscription cast on the outer base was produced during casting, whereas the remaining inscriptions were engraved after manufacture. The owner of the vessel, Ling Caochang, is identified as a descendant of the ritual officiant who served King Zhonggeng of the Xia Dynasty and was familiar with the achievements of his ancestors. The inscription records an exceptionally important episode in Xia history: in the fifth month, King Zhonggeng (also identified as Zhonggeng or Zhongkang) of Xia launched a campaign against the Xiongyu people of western Liaoning. After the victory, the court scribe Xin Zhi observed only that the main army was stationed at a place called Zhu and fulfilled his official duty by making a historical record. The Xia king bestowed (Character Code 8) Congshu, the ritual officiant Canger. The Son of Heaven, possessing profound wisdom and foresight, extended his condolences and regard to the ritual specialist, and this bronze vessel (the Canger bronze) was made for that purpose. In addition, the inscription records that the royal temporary residence of the Son of Heaven was located at Leibei (Character Code 10). At this site, Wen (Character Code 8) performed a divination for King Zhonggeng, obtaining the hexagram *Dayou* (*Great Possession*), an omen of supreme good fortune. The divinatory interpretation reads: "Shi ming hai ping". The cast inscription on the outer base is interpreted as "Made by Ling Caochang". Ling Caochang, the owner of the vessel, was a descendant of the ritual officiant. The engraved decoration surrounding the inscription consists of a double-headed dragon with a shared body in scroll form and a double-headed dragon with intertwined limbs. This vessel was probably a ritual object specially commissioned for a marriage ceremony. Two raised string bands divide the decorative program of the vessel into three registers, with the second register representing the climax of the wedding procession. The triangular banana-leaf motif is a characteristic decorative pattern of early antiquity.

Keywords: small *gui*, Xia Dynasty, Zhonggeng, Xiongyu (凶兪), Ling Caochang

1. Introduction

The question of the Xia Dynasty in early Chinese civilization has long been a subject of global scholarly interest [1]. In the past, only a few incised symbols associated with the Erlitou culture, dating to more than 3,000 years ago and commonly regarded as belonging to the pre-Shang period, had been discovered. Because their meanings were ambiguous, the academic community understandably refrained from accepting them as reliable evidence. Adhering to the principle that material remains should be used to verify history, the present author undertakes a new interpretation of unequivocal bronze inscriptions. These inscriptions constitute primary documentary evidence predating the historical records of Sima Qian by approximately one thousand years. On this basis, the study identifies what is argued to be an authentic historical account of the Xia Dynasty recorded by Ling Caochang, a descendant of the ritual officiant who served King Si Zhonggeng of Xia. The findings are respectfully submitted for the consideration and critical evaluation of the scholarly community.

2. Basic description of the small bronze *gui* with a cover decorated by twin birds holding a ring

The small copper-alloy *gui* with a cover decorated by twin birds holding a ring has the following dimensions: an overall width of 27 cm, a height of 16 cm, a mouth diameter of 20.7 cm, a foot-ring diameter of 12.7 cm, and a weight of 3 kg.

According to Ma Chengyuan's *Chinese Bronzes*, "*gui* vessels were important ritual objects during the Shang and Zhou periods" [2]. They were especially significant in the Western Zhou period, when they served as major ceremonial vessels for sacrificial rites and banquets. The form of the inscriptions on this vessel is also argued to exhibit characteristics associated with the Liangzhu script tradition [1], distinguishing it from the conventional bronze inscriptions of the Shang and Zhou periods. The author therefore proposes that the script represents the standardized writing system of the Xia Dynasty. These features are taken to suggest that the tradition of literacy and written culture was systematically preserved within the family of this Xia official lineage. Accordingly, the vessel is interpreted as a rare Shang–Zhou bronze ritual object preserving a historical record of the Xia Dynasty and is richly ornamented (see Figures 1, 4, and 7–12). The author further suggests that, after the Zhou conquest of the Shang, the Zhou court maintained close supervision over the territories inhabited by the Shang descendants, particularly the State of Song, while extending comparatively favorable treatment to the Xia lineage, regarded as descendants of the Yellow Emperor. On this basis, the owner of the vessel, Ling Caochang, may have held the rank of an Inner Grand Officer (*nei dafu*) in the Zhou administration and belonged to a family with a distinguished scholarly tradition. Such a background would naturally have encouraged the preservation and commemoration of the achievements of his ancestors and their former dynasty. The inscription on the exterior base of the vessel was cast during manufacture (see Figure 17), whereas the remaining inscriptions were engraved after casting (see Figures 4–7 and 13–14).

The vessel is currently housed in the Wang Guoshi Museum of Stone Art, Guizhou Province.



Figure 1. Small bronze *gui* with a bird motif

3. Dating analysis of the small bronze *gui* with a cover decorated by twin birds holding a ring

The Hanjiangxue Museum of Fujian employed a quantum cultural relic dating instrument to determine the age of the small bronze *gui*. The test yielded a date of 985 BCE. Subsequently, the result was independently verified using a different high-technology device, a field-resonance dating instrument, which likewise produced a date of 985 BCE (see Figures 2 and 3). According to the author, this procedure constitutes a form of "blind testing".



Figure 2. Dating analysis of the small bronze *gui*



Figure 3. Small bronze *gui* with a bird motif

One of the defining characteristics of modern science is the verification of results through experimentation. The author therefore considers the experimentally obtained date of 985 BCE for this vessel to be reliable.

Furthermore, on the basis of the typological and decorative dating framework proposed by Ma Chengyuan in *Chinese Bronzes* [2], the twin-bird, ring-handled covered *gui* may likewise be assigned to the early Zhou period.

In the author's view, the results of instrumental testing are consistent with those derived from traditional stylistic and visual analysis.

4. Study of the small bronze *gui* with a cover decorated by twin birds holding a ring

4.1. General Interpretation of the Inscriptions

Interpretation of the Inner Circular Inscription: The inner circular inscription may be summarized as follows. In the fifth month, King Zhonggeng (identified by the author with Zhongkang) of the Xia Dynasty launched a campaign against the Xiongyu people of western Liaoning. Following the victory, the court scribe Xin Zhi observed that the main army was stationed at a place called Zhu and, in accordance with his official responsibilities, made a historical record of the event.

According to the author's interpretation, this inscription indicates that the territorial extent of the Xia Dynasty reached as far as western Liaoning. Although the royal genealogy of the Xia recorded in the *Records of the Grand Historian: Basic Annals of Xia* is relatively clear [3], the account given by Sima Qian concerning Zhongkang mentions only a single military expedition undertaken to punish negligent officials: "Xi and He indulged in drunkenness and neglected the calendar, and an expedition was launched against them, giving rise to the 'xiūmilitary campaigns'". The author considers this traditional account inaccurate and argues that the present bronze inscription should instead be regarded as the authoritative record. Likewise, the view held by some later scholars that Zhongkang was politically weak is considered erroneous. According to later chronological reconstructions, Zhongkang reigned for thirteen years, was the fourth ruler after Qi of Xia, and was the younger brother of Taikang.

Interpretation of the Outer Circular Inscription: The outer circular inscription is interpreted by the author as follows. The Xia king bestowed (Character Code 8) Congshu, the ritual officiant, with the bronze vessel Canger. The Son of Heaven, endowed with profound insight and foresight, expressed his concern and regard for the ritual specialist, and this bronze vessel was made for that purpose. The inscription further records that

the temporary royal residence of the Son of Heaven was located at Leibei (Character Code 10). At this place, Wen (Character Code 8) performed a divination on behalf of King Zhonggeng and obtained the hexagram *Dayou* (*Great Possession*), interpreted as an omen of the highest good fortune. The author regards this as an example of the application of the Earlier Heaven Eight Trigrams in Xia divination and as the recorded outcome of a divination conducted for King Zhonggeng. The ritual officiant Wen (Character Code 8) interpreted the hexagram with the phrase:

"Shi ming hai ping".

The inscription on the interior base of the vessel is transcribed as: Ling Cao zuo yue liu yong mian ming yu jing jing jiu.

According to the author, Yue Liu Yong is the self-designation of the vessel.

The cast inscription on the exterior base is read as: "Made by Ling Caochang" (See Figures 17 and 21).

According to the author, Ling Caochang was the owner of the vessel and a descendant of the ritual officiant.

The owner, Ling Caochang, is regarded as a descendant of the ritual specialist who served King Zhonggeng of the Xia Dynasty and as someone familiar with the accomplishments of his ancestors. Through these inscriptions, he is considered to have preserved an exceptionally important episode in Xia history. Since Ling Caochang predates Sima Qian by more than one thousand years, the author argues that his account is more reliable than that found in the *Records of the Grand Historian* and may therefore be regarded as authentic historical evidence.



Figure 4. Bird's-eye view of the bronze small *gui*

The inner ring of the cover bears engraved inscriptions (see Figure 5).



Figure 5. Engraved inscription on the inner ring of the small *gui*

Outside the engraved inscription is a scroll-shaped dragon with two heads sharing a single body. One head is a long-horned dragon, while the other takes the form of a phoenix (see Figure 6).



Figure 6. Decoration outside the engraved inscription

Surrounding this motif is another composite creature with two heads sharing a single intertwined body. One head is that of a dragon without long horns, while the other is that of a phoenix (see Figure 7).



Figure 7. Intertwined dragon-and-phoenix composite motif on the small *gui*

The author observes that the intertwined dragon and phoenix resemble the interwoven forms of Fuxi and Nüwa and therefore suggests that the vessel was specially produced as a ritual object for a marriage ceremony. The body of the *gui* is divided by two raised string bands into three decorative registers (see Figure 8).



Figure 8. Side view of the small *gui*

The first register depicts paired dragon and phoenix heads facing one another (see Figure 9).



Figure 9. Confronting dragon-and-phoenix heads on the small *gui*



Figure 10. Extensive composition of confronting dragon-and-phoenix heads

The second register expands this motif into a broad decorative composition of confronting dragon and phoenix heads, which the author interprets as representing the climax of a wedding procession (see Figure 10).

According to the author, this elaborate artistic treatment of conjugal affection reflects a distinctly romantic spirit in Xia artistic expression.

The third register is decorated with a triangular banana-leaf pattern, continuing a decorative tradition commonly found on Shang bronzes (see Figure 11).



Figure 11. Triangular banana-leaf pattern on the small *gui*



Figure 12. Side view of the small *gui* with ring handles

Both the front and reverse sides of the two ring handles bear engraved inscriptions (see Figures 13 and 14).



Figure 13. Engraved inscriptions on both sides of the left ring handle



Figure 14. Engraved inscriptions on both sides of the right ring handle)

Unfortunately, severe corrosion has rendered many of the characters illegible. Only a few graphs, including those interpreted as "father", "son", "mountain", "master", and "two hundred", can still be distinguished.



Figure 15. Top view of the small *gui* with the cover removed

The interior base bears an engraved inscription (see Figure 16).



Figure 16. Engraved inscription on the interior base of the small *gui*

The exterior base carries a cast inscription (see Figure 17).



Figure 17. Cast inscription on the exterior base of the small *gui*

The cover is fitted with four small animal-mask knobs of remarkable craftsmanship (see Figures 18 and 19).



Figure 18. Four animal-mask knobs on the cover of the small *gui*



Figure 19. Reverse view of the small *gui*

5. Textual and palaeographical study of the inscriptions on the small bronze *gui* with a cover decorated by twin birds holding a ring

5.1. Textual examination of the inner circular inscription

General meaning of the inner circular inscription: In the fifth month, Zhonggeng (Zhongkang), king of the Xia Dynasty, launched a campaign against the Xiongyu of western Liaoxi. After the victory, the *zuoce* official Xinzhi saw only that the army was encamped at a place called Zhu and, in accordance with his official duty, made a historical record of the event (See Figure 20).

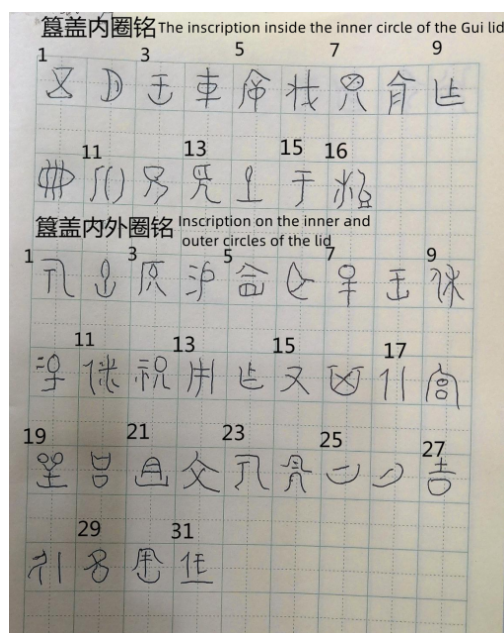


Figure 20. Rubbing of the circular inscriptions on the small *gui*

The territory of the Xia Dynasty extended as far as western Liaoxi. Although the genealogy of the Xia rulers recorded in the *Basic Annals of Xia* in the *Records of the Grand Historian* is clear [3], Sima Qian mentions only one occasion during the reign of Zhongkang when officials were sent to punish negligent functionaries: "Xi and He became addicted to drink, neglected the seasons and threw the calendar into disorder; (Character Code 13) was sent to punish them, and the *Zheng of (Character Code 13)* was composed". This account is inaccurate and should be corrected in accordance with the present inscription. The opinion that Zhongkang was "weak and powerless" is likewise mistaken. Later scholars calculated that Zhongkang reigned for thirteen years. He was the fourth ruler after Qi of Xia and the younger brother of Taikang (See the upper part of Figure 20).

Inner-circle Character No. 1 is "wu" (five). The *Shuowen Jiezi* states: "*Wu* means the Five Elements. It is derived from the numeral two, signifying the intermingling of yin and yang between Heaven and Earth. All characters belonging to the *wu* category are derived from *wu*. 𠄎 is an abbreviated ancient form of *wu*...." [4].

Inner-circle Character No. 2 is "yue" (month). The *Shuowen Jiezi* states: "*Yue* means the moon, the essence of Great Yin. It is a pictograph. All characters belonging to the category of *yue* are derived from it" [4].

The fifth month: the time when the military campaign began.

Inner-circle Character No. 3 is "wang" (king). The *Shuowen Jiezi* states: "The king is the one to whom all under Heaven turn. Dong Zhongshu said: 'The creators of writing in antiquity drew three horizontal strokes connected by a vertical stroke and called it *wang*. The three represent Heaven, Earth, and Man, and the one who unites them is the king'. Confucius said: 'One principle running through the three constitutes kingship'. All characters belonging to the category of *wang* are derived from it". Li Yangbing commented: "The middle stroke is placed near the top. The king models himself upon Heaven" [4].

Inner-circle Character No. 4 is "zhong" (middle). In oracle-bone inscriptions, the demonstrative graph "mouth" originally had curved lines above and below representing a clan banner, (Character Code 1). The banner evolved into (Character Code 2), then into a straight line (Character Code 3) (Collection No. 2102), and was later simplified into two horizontal lines (Character Code 4), the ancient form recorded in the *Shuowen Jiezi*. Some forms have a vertical stroke passing through the middle and extending beyond both

horizontal strokes, as in the present character and in Period I oracle-bone inscription Qian 3.31.2; others extend only to one side. All are variant forms of *zhong*. Bronze inscriptional parallels may be found in the *Zhongdu* coin inscriptions. The *Shuowen Jiezi* states: "*Zhong* means 'inside'. It is formed from *kou* with a vertical stroke passing through from top to bottom" [4].

Inner-circle Character No. 5 is "geng". The character is attested in oracle-bone inscriptions, including the variant form (Character Code 5). The *Shuowen Jiezi* states: "*Geng* occupies the western direction and symbolizes the season of autumn, when all things bear fruit abundantly. *Geng* follows *ji* and resembles a person... All characters of the *geng* category are derived from it".

On "Zhonggeng": it was the temple name of a Xia ruler. Xia kings were named after the Heavenly Stems, and Zhonggeng is the same as Zhongkang. To distinguish individuals, the birth-order designation *zhong* was prefixed to *geng*.

Zhong (中) and *zhong* (仲) are interchangeable.

The *Shuowen Jiezi* states: "*Zhong* (仲) means 'middle'. It is composed of 'person' and 'middle', with *zhong* also serving as the phonetic element" [4].

Therefore, Zhonggeng is Zhongkang.

Kings of the Xia and Shang dynasties were named after the cyclical day on which they were born. To avoid duplication, prefixes such as *Da* (Great), *Zhong* (Middle), *Shao* (Lesser), or other modifiers were added. Examples among Xia rulers include Kongjia, Yinjia, and Lügui. Xia rulers also included Taikang, Zhongkang, and Shaokang, which, according to Chen Mengjia's research in *A Comprehensive Survey of the Oracle-Bone Inscriptions of Yinxu*, correspond to Dageng, Zhonggeng, and Shaogeng.

Therefore, the Xia ruler Zhongkang was Zhonggeng.

King Zhong (Zhong) Geng: This vessel proves that King Zhonggeng (Zhongkang), as identified by Chen Mengjia in *A Comprehensive Survey of the Oracle-Bone Inscriptions of Yinxu*, did indeed reign and accomplish significant deeds, and that he was a genuine historical figure. The present inscription is an important documentary record of his history.

Inner-circle Character No. 6 is "fa" (to attack). The *Shuowen Jiezi* states: "*Fa* means to strike. It is composed of a man holding a halberd. It may also mean to defeat" [4].

Inner-circle Character No. 7 is "xiong" (fierce, hostile). The oracle-bone form is identical. The *Shuowen Jiezi* states: "*Xiong* means evil. It depicts a hole in the earth with intersecting depressions within it. All characters of the *xiong* category are derived from it" [4].

Inner-circle Character No. 8 is "yu (俞)". The *Shuowen Jiezi* states: "*Yu* means hollowing out wood to make a boat. It is composed of *ji*, *zhou*, and *chuan*. *Chuan* means water" [4].

"Attacking the Xiongyu": the campaign of King Zhongkang of Xia against the Xiongyu of western Liaoxi¹ comes to light for the first time in history. Yu was probably a tribe living along a river. In fact, *Yu* is the same as *Yu* (渝), and the original form of the latter was simply *Yu*. Later, to designate the specific place-name Yushui at Linyu in western Liaoxi, the water radical was added, creating the character *Yu* (渝) and differentiating its

¹ Liaoxi (Western Liaoxi): (1) In the narrow sense, Liaoxi refers specifically to the Liaoxi Corridor, the narrow strip of land extending from the urban area of Jinzhou to the urban area of Shanhaiguan, approximately 185 km in length, serving as the overland passage between North China and Northeast China. (2) In the broad sense, Liaoxi includes the regions west of the Liao River in Liaoning Province and adjoining parts of Inner Mongolia and Hebei Province. By convention, Chifeng in Inner Mongolia, Chengde in Hebei, and the Shanhaiguan District of Qinhuangdao are also regarded as belonging to the Liaoxi cultural sphere.

meaning. The Yu people were formidable in warfare, and the Xia Dynasty had previously suffered defeats at their hands. Consequently, they were derogatorily called the "Xiongyu (Xiongyu/ 兪)". The word *xiong* functioned like a military proclamation: "You are cruel and inhumane; therefore our campaign is justified".

Inner-circle Character No. 9 is "zha" (zuo, "to make"). The *Shuowen Jiezi* states: "*Zuo* means to arise. It is composed of the person radical and *zha*" [4].

Inner-circle Character No. 10 is "ce" (register, document). The *Shuowen Jiezi* states: "*Ce* means a written charge or royal commission. The feudal lords received such documents from the king. The graph resembles bamboo slips of unequal length bound together by two cords. All characters belonging to the category of *ce* are derived from it" [4].

Zuoce: Wang Guowei wrote in *Guantang Jilin: Explanation of the Lu Gao*: "*Zuoce* was an official title... its chief officer was called the *Zuoce Yin*... and they were all responsible for drafting royal documents and recording the appointments of officials" [6].

King Zhonggeng (Zhongkang) of Xia had this campaign recorded by the official known as the *Zuoce*. It appears that the battle was won.

Inner-circle Character No. 11 is "xin". The *Guangyun*, *Yunhui*, and *Jiyun* give the pronunciation *xin* and explain it as denoting fearfulness. Han Yu's "*Essay in Sacrifice to the Crocodile*" contains the phrase: "*Xinxin xianxian*, a disgrace to the officials of the people".

Inner-circle Character No. 12 is "zhi". The *Shuowen Jiezi* states: "*Zhi* is a sentence-final particle. It is formed from *kou*, with a downward extension indicating the flow of breath. All characters belonging to the category of *zhi* are derived from it" [4].

Xinzhi: the name of the *Zuoce* official.

Inner-circle Character No. 13 is "wang" (to see, to observe). Its form exhibits the characteristics of the Liangzhu script tradition and may be compared with the oracle-bone form (Character Code 6). Xia script predates oracle-bone writing and differs from bronze inscriptions. The *Shuowen Jiezi* states: "*Wang* means to look out for someone who has gone away and hope for his return. It is formed from *wang*, with *wang* serving as the abbreviated phonetic element".

Inner-circle Character No. 14 is "tun", meaning to station troops for defense. The *Shuowen Jiezi* states: "*Tun* means difficulty. It resembles the first sprouting of vegetation. Growth begins with difficulty. The graph is formed from *che* passing through the numeral one, which represents the earth" [4]. The *Book of Changes* states: "*Tun*: the interaction of the firm and the yielding gives rise to difficulty" [5].

Inner-circle Character No. 15 is "yu (于)", a preposition.

Inner-circle Character No. 16 is "si (Character Code 7)", identical with 耜 (si). The *Jiyun* states: " (Character Code 7), an agricultural implement. The *Shuowen Jiezi* defines it as a spade, formed from the wood radical with *yi* as the phonetic element. Another explanation is that it refers to a tool for moving earth, according to the speech of the people of Qi" [4].

Si (耜): a place-name. Its exact location is unknown.

General Meaning of the Outer Circular Inscription: The Xia king bestowed (Character Code 8) Congshu, the ritual specialist, with Canger. The Son of Heaven was broad-minded and far-sighted and offered consolation to the ritual specialist by making this vessel (the bronze vessel Canger). In addition, the temporary palace of the Son of Heaven was at Leibei (Character Code 9). Here Wen (Character Code 8) cast a divination for King Zhonggeng and obtained the *Dayou* hexagram, a supremely auspicious omen. This is an example of the Xia Dynasty's use of the Earlier Heaven Eight Trigrams for divination and is also the result of Wen

(Character Code 8)'s divination for King Zhonggeng. The formula used by the ritual specialist Wen (Character Code 8) in interpreting the hexagram was: "Shi ming hai ping" (See the lower part of Figure 20).

Outer-circle Character No. 1 is transcribed as "(Character Code 8)", a personal name.

Outer-circle Character No. 2 is "Cong", also a personal name. The *Shuowen Jiezi* states: "*Cong* denotes haste and urgency. It is formed from the heart radical and *cong*, which also serves as the phonetic element" [4].

Outer-circle Character No. 3 may be "shu". The *Shuowen Jiezi* states: "*Shu* means the multitude beneath a roof. It is composed of the shelter radical and *guang*, the ancient form of the character for light" [4].

Outer-circle Character No. 4 is "yi (ci, to bestow)". The *Shuowen Jiezi* states: "*Ci* means to give. It is formed from the shell radical with *yi* as the phonetic element" [4].

Outer-circle Character No. 5 is "cang (Character Code 9)", which may be an ancient form of *cang*.

Outer-circle Character No. 6 is "er".

Canger: the herb *Xanthium sibiricum*. It is the aerial portion of the annual herb commonly called cocklebur, also known as Qiecai'er. It is medicinally useful and differs from cocklebur fruit in being slightly cold in nature and capable of clearing heat.

(Character Code 8) Congshu was bestowed with Canger. Xia inscriptions often omit the grammatical subject; thus the sentence should be understood as: "(The king) bestowed Canger upon (Character Code 8) Congshu, the ritual specialist".

Outer-circle Character No. 7: unidentified.

Outer-circle Character No. 8 is "wang", King Zhonggeng of Xia.

Outer-circle Character No. 9 is "xiu", meaning excellent or beautiful. The *Shuowen Jiezi* states: "*Xiu* means to rest, formed from a person leaning against a tree" [4].

Outer-circle Character No. 10 is "kong". The *Shuowen Jiezi* states: "*Kong* means to penetrate or communicate" [4].

Wang xiu kong: the Son of Heaven was broad-minded and far-sighted.

Outer-circle Character No. 11 is "mi (mi, to console or pacify)". The *Shuowen Jiezi* states: "*Mi* means to soothe or pacify" [4].

Outer-circle Character No. 12 is "zhu". The *Shuowen Jiezi* states: "*Zhu* is the officiant who recites the sacrificial invocation".

Mi zhu: to console the ritual specialist, namely the ancestor of the vessel owner.

Outer-circle Characters Nos. 13–16 are: "yong (use); zuo (make); you (again); qi (its)".

Outer-circle Character No. 17 is "xing". The oracle-bone form may be consulted. The *Shuowen Jiezi* states: "*Xing* means the act of walking".

Outer-circle Character No. 18 is "gong". The *Shuowen Jiezi* states: "*Gong* means a palace or chamber" [4].

Xinggong: the temporary palace occupied by Xia rulers during their travels, serving as an official residence or temporary dwelling. Since Zhongkang's army was stationed at Zhu, the temporary palace should have been located there.

Outer-circle Character No. 19 is "lei". The *Shuowen Jiezi* states: "*Lei* means a military rampart" [4].

Outer-circle Character No. 20 is "bei".

Outer-circle Character No. 21 is transcribed as "(Character Code 10)".

Leibei (Character Code 10): the place-name of the temporary palace; its exact location is unknown.

Outer-circle Character No. 22 is "wen". A deceased father of distinguished virtue was called a *wen kao*.

Outer-circle Character No. 23 is "(Character Code 8)", a personal name, referring to the ritual specialist responsible for divination and sacrifice.

Wen (Character Code 8): the ritual specialist and ancestor of the vessel owner.

Outer-circle Character No. 24 is "fei", (Character Code 11), meaning to raise upward, a technical term of divination. Methods of divination included turtle-shell divination, yarrow-stalk divination, astrological divination, dream divination, and the use of bronze coins and grains of rice. The *Shuowen Jiezi* states: "*Fei* means the soaring of a bird and is a pictograph" [4].

The verbs used in manipulating yarrow stalks include *she* and *li*, and there was also a method of tossing them upward.

Outer-circle Characters No. 25 and 26 are "shang".

Outer-circle Character No. 27 is "ji".

The *Dayou* Hexagram: Supreme Good Fortune. This is an example of the Xia Dynasty's application of the Earlier Heaven Eight Trigrams and the divination result obtained by Wen (Character Code 8) for King Zhonggeng. Later interpretations may be consulted: "The image is that of the rising sun. The sacred meaning is: peace and prosperity at the gate, increasing profits in all undertakings, calamities dispelled and blessings arriving. Plans and enterprises will all succeed".

The interpretation reads: "Many descendants; a male child will be born; marriage is auspicious; wealth will be gained; official success is assured; absent persons will return; lost property will be recovered; lawsuits will be won; illness will cause no harm; the household will prosper; descendants will flourish".

Outer-circle Character No. 28 is "shi". The *Shuowen Jiezi* states: "*Shi* means mutual association and mutual protection" [4].

Outer-circle Character No. 29 is "ming". The *Shuowen Jiezi* states: "*Ming* means to name oneself" [4].

Outer-circle Character No. 30 is "hai". The *Shuowen Jiezi* states: "*Hai* means injury or harm" [4].

Outer-circle Character No. 31 is "ping". The *Shuowen Jiezi* states: "*Ping* means to lean upon an armrest" [4].

Shi ming hai ping: the formula employed by the ritual specialist Wen (Character Code 8) in interpreting the divination for King Zhonggeng. Its precise meaning remains unclear (See the lower part of Figure 21).

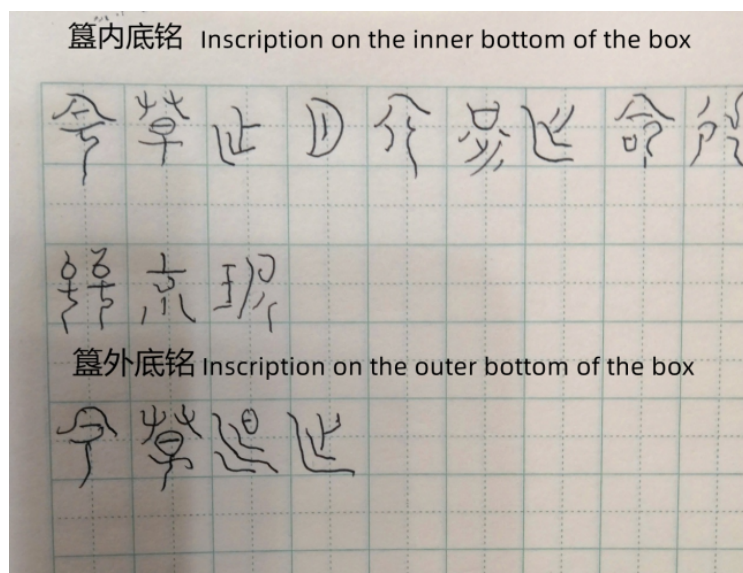


Figure 21. Rubbing of the interior and exterior base inscriptions of the small *gui*

5.2. Textual examination of the base inscriptions of the small *gui*

Interpretation of the inscription on the inner base of the *gui*: Ling Cao made Yue Liu Yong Mian Ming Yu Jing Jing Jiu (See Figure 21).

Inner-base Character No. 1 is "Ling", a surname and, according to the present study, the origin of the Chinese surname Ling. This graph exhibits characteristics of the Xia script. Compare Character No. 8, whose lower component likewise does not follow the oracle-bone form of jie (𠄎). The *Shuowen Jiezi* states: "*Ling* means to issue commands. It is composed of *ji* and *jie*. Xu Kai commented: 'Orders and commands are issued after being assembled; *jie* signifies regulation and control'" [4].

Inner-base Character No. 2 is "Cao", a personal name. The *Shuowen Jiezi* states: "*Cao* refers to the fruit of the oak tree. Another explanation is that it resembles the seed of the dou plant. It is formed from the grass radical with *zao* as the phonetic element. Chen Xuan and others noted that the vulgar form uses this character for 'grass', while a separate graph *zao* denotes the color black. Oak fruit could be used to dye silk black; hence the character came to be associated with black and was later borrowed for the meaning of grass" [4].

Ling Cao refers to Ling Caochang, the owner of the vessel and a descendant of the ritual specialist.

Inner-base Character No. 3 is "zha" ("to make").

Inner-base Character No. 4 is "yue" ("moon" or "month"). The *Shuowen Jiezi* states: "*Yue* means the moon, the essence of Great Yin. It is a pictograph. All characters of the *yue* category are derived from it" [4].

Inner-base Character No. 5 is "liu" ("six"). The *Shuowen Jiezi* states: "*Liu* is one of the numbers of the *Book of Changes*; yin transforms at six and reaches completion at eight. It is formed from the components *ru* and *ba*. All characters of the *liu* category are derived from it" [4].

Inner-base Character No. 6 is "yong". The *Shuowen Jiezi* states: "*Yong* means to sing. It is formed from the speech radical with *yong* as the phonetic element. An alternative form is written with the mouth radical" [4].

Yue Liu Yong is the self-designation of this vessel.

Inner-base Character No. 7 is "mian"². Compare (Character Code 12), Guo–Tang 27 (Chu).

Inner-base Character No. 8 is "ming". The *Shuowen Jiezi* states: "*Ming* means to command or instruct. It is composed of the mouth component and *ling*" [4].

Inner-base Character No. 9 is "yu (隅)". The left-hand component is a variant form of the mound radical (*fu*). It means "corner" or "angle". The *Shuowen Jiezi* states: "*Yu* means a corner. It is formed from the mound radical with *yu* as the phonetic element" [4].

Duan Yucai's commentary explains: "*Yu* and *zou* are mutually explanatory characters. The *Guangya* defines *zou* as 'corner'. The *Book of Odes* uses the expression 'the corner of a hill'. In the *Kaogong Ji*, palace corners and city corners refer to angular projections. In the *Daya*, the phrase 'the corner of virtue' means integrity. Modern usage distinguishes edges and corners, whereas ancient usage did not. Variant forms include *yu* and *yu*" [4].

Inner-base Character No. 10 is "jing (竞)", composed of two persons in contention. The *Shuowen Jiezi* states: "*Jing* means to contend or compete. Another meaning is to pursue. It is formed from the speech component and two persons" [4].

Inner-base Character No. 11 is "jing (京)". Its interpretation is given in Figure 22.

² *Mian* is pronounced *miǎn* and may mean: (1) to cover or conceal; (2) a short defensive wall used for protection against arrows.

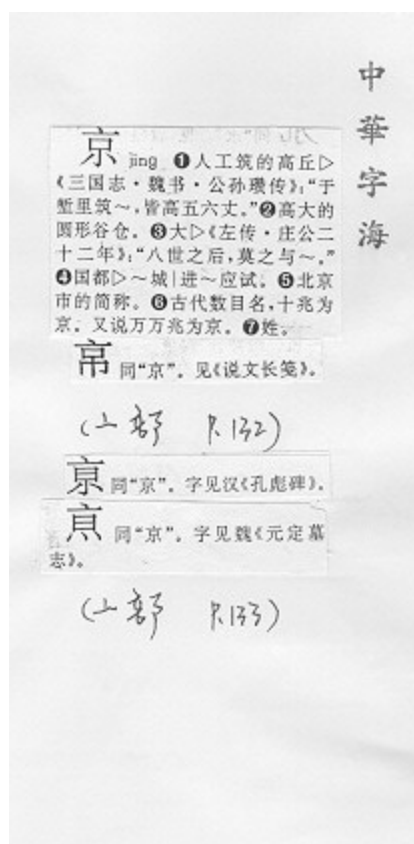


Figure 22. Entry from the *Zhonghua Zihai*

Inner-base Character No. 12 is "jiu", a pendant of black jade or dark-colored ornamental stone. The *Shuowen Jiezi* states: "Jiu refers to a dark stone inferior to jade. It is formed from the jade radical with *jiu* as the phonetic element. The *Book of Odes* says: 'He presented me with a pendant of *jiu*'" [4].

Interpretation of the *Cast Inscription on the Outer Base* of the *Gui*: Ling Caochang made this vessel (See Figure 21).

Outer-base Character No. 1 is "Ling".

Outer-base Character No. 2 is "Cao".

Outer-base Character No. 3 is "Chang".

Outer-base Character No. 4 is "Zuo" ("made").

Ling Caochang was the name of the vessel owner and a descendant of the ritual specialist of the Xia Dynasty.

³ Owing to the passage of time, the inscription on the inner base is difficult to interpret. It may represent a congratulatory formula for a wedding, but this remains to be investigated.

6. A study of the surname ling of the owner of the small bronze *gui* with a cover decorated by twin birds holding a ring

The owner of the small bronze *gui* with a cover decorated by twin birds holding a ring, Ling Caochang, may represent an early origin of the Chinese surname Ling. Existing studies of the surname identify as many as eight possible lines of descent, most of which are associated with historical developments after the Zhou period. Among the commonly proposed origins are the following: Descent from the Mi clan, tracing back to the descendants of Ziwen, the *Lingyin* (Chief Minister) of the State of Chu during the Spring and Autumn period, with the surname derived from an official title. Descent from the Ji clan through the office of *Lingzheng* in the State of Lu during the Spring and Autumn period, likewise deriving the surname from an official designation. Descent from the Ji clan through the office of *Lingyin* in the State of Wei during the Warring States period. Descent from the Ying clan through the office of county magistrate in the State of Qin during the Warring States period. Derivation from official titles associated with the Cao Wei and Jin dynasties. Conversion from the surname Lin, when certain Lin families in Tongwei and Huining, Gansu Province, adopted the surname Ling during the early twentieth century.

Particularly noteworthy, in the author's view, is another traditional explanation that traces the surname to the Ji clan and to the descendants of court musicians (*lingren*) of the Western Zhou period, the surname being derived from their official occupation. The *Preface to "Jian Xi"* in the *Book of Songs* states: "The *ling* official, also called the *ling* official, was responsible for music. The Ling lineage held this office generation after generation and excelled in it; consequently, later generations commonly referred to court musicians as *lingguan*". During the Western Zhou and the subsequent Spring and Autumn and Warring States periods, court musicians in both the Zhou royal court and the various feudal states were classified among the Inner Grand Officers (*nei dafu*) under the jurisdiction of the Heavenly Offices and were directly administered by the royal government. They occupied important positions in state ceremonies, sacrificial rituals, diplomatic receptions, royal funerals, and other major public occasions. On this basis, the author proposes that Ling Caochang, the owner of the small bronze *gui*, may himself have served as an Inner Grand Officer of the Zhou royal court.

7. Conclusion

King Zhonggeng (Zhonggeng, also known as Zhongkang) of the Xia Dynasty was the younger brother of Taikang and the fourth ruler of the Xia Dynasty. Earlier literature regarded him as having been controlled by Houyi of the Youqiong clan. The present inscription, however, demonstrates that he was a strong and capable ruler who expanded his territory and achieved significant military successes. As the saying goes, "It is better to have no books than to believe every word in them". Later writings concerning the Xia Dynasty contain serious errors, some of which appear to have been based merely on conjecture, including matters such as the place-name Zhenxun and chronological data [7]. Such sources should therefore be treated with caution.

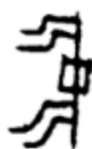
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Appendix: index of character-image codes used in this article

Character Code 1:



Character Code 2:



Character Code 3:



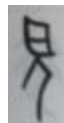
Character Code 4:



Character Code 5:



Character Code 6:



Character Code 7:



Character Code 8:



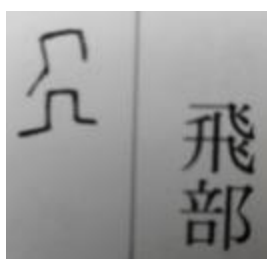
Character Code 9:



Character Code 10:



Character Code 11:



Character Code 12:

矢

Character Code 13:

盾