

The Date of the TLV Mirrors from the Xiongnu Tombs

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In the summer of 2005, the Silkroad Foundation and the Mongolian National University conducted their first season of joint excavation at a Xiongnu cemetery in Arkhangai *aimag* in Central Mongolia. Among their findings were three bronze mirrors. After describing them, I shall focus in this short essay on the first two, TLV mirrors of Chinese provenance. My goal will be to establish their date in the context of a broader discussion of the problems of dating bronze mirrors but not to attempt an examination of other issues such as Han-Xiongnu relations.

The first specimen from Feature 100 is a beautifully decorated intact mirror about 10 centimeters in diameter (Fig. 1, facing page). It belongs to a type referred to as 'TLV' mirrors in Western Sinological literature, because the shapes of the main decorative elements on the back of the mirrors resemble the Latin letters T, L, and V. At the center of the back of the mirror is a hemispherical knob pierced for a ribbon or textile cord, to facilitate the holding of the mirror (Fig. 2). The knob is surrounded by a



Fig. 2. Center of TLV mirror from Feature 100, seen from an angle.

square center field (also called knob-seat), which is decorated with a large, simple quatrefoil. The main decorative zone is framed between the center square and two outer bands, one a narrow band with a comb-tooth pattern and the other a wide rim ornamented with three concentric rings with a saw-tooth pattern. Four pairs of T's and L's are placed on two perpendicular axes through the mirror's center point, while the four inverted Vs are located at the upper outside corners of the four quadrants thus created. On the left and right sides of each T are placed two nipples; two birds, in elegant simple relief, stand on either side of each inverted V. Furthermore, comma-shaped curves and short lines punctuate the spaces between these elements. The overall design of the mirror is perfectly symmetrical, simple, and elegant.

The second specimen (this one from Feature 109) is a fragment of another TLV mirror, further broken into two pieces that were found in different locations in the tomb (Fig. 3). The main decorative zone is largely missing; only one corner of the fragment has the elements of the L and V and a pair of birds with long tails. This mirror is larger than the one excavated from Feature 100. Unlike the intact one from Feature 100, this fragmentary mirror bears a section of a



Fig. 3. TLV mirror fragments from Feature 109, Tamir 1 site.

cast inscription (Fig. 4), which reads:

... do not know aging; when thirsty, [they] drink from the spring of jade; when hungry, [they] eat of jujubes. [They] roam...

不知老, 渴飲玉泉飢食棗, 浮游...

According to similar inscriptions (see below), it appears that these descriptions refer to the immortals dwelling in a transcendental paradise. Mirrors of this type are significant not only because they



Fig. 4. Section of TLV mirror from Feature 109, showing inscription.

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Fig. 5. Detail of mirror from Feature 160, Tamir 1 site.

represent the best specimens of bronze production in the Han period, but also because their inscriptions reflect changing religious ideas in early China.

The third mirror, from Feature 160, is about 7 centimeters in diameter (Fig. 5). It is intact, but its craftsmanship is rather poor, compared with that of the other two. The decorative scheme is barely discernible. Only a small knob is found at the center of the mirror back. This type of mirror seen in Xiongnu tombs is most likely a low-quality, local imitation of Han mirrors.

The chronology of bronze mirrors, along with dating by coinage and pottery vessels buried in tombs, have been important methods used in cross-dating early Chinese and Xiongnu burials. However, the dating of bronze mirrors is a thorny issue for scholars of Chinese art and archaeology. Almost all of the existing chronologies have included in their studies clearly spurious pieces or other mirrors of dubious origins (Umehara 1943, Bulling 1960, Okamura 1984 and 1993, except Zhou 1986; see also the discussion in Cammann 1961, Bulling 1962, Cammann 1962). Bronze mirrors have been highly valued and collected since the North Song dynasty (960-1126). As a result of their high value, forgeries and replicas have been produced – some of which have found their way into private

collections and museums (Bulling and Drew 1971-72).

The problems with these sources have been further exasperated by the preference of collectors for mirrors with inscriptions containing dates, which in turn only encouraged the production of fake dated mirrors. As a result of this situation,

the mirror chronologies have been skewed, because of the reliance of scholars on inscriptions with dates (Loewe 2001-2). Many distinguished scholars, including the Japanese scholar Umehara Sueji, who were connoisseurs of Chinese mirrors, were clearly aware of the situation and had paid particular attention to the issues of forgery. Yet in the end, they too were occasionally duped by fakes.

Fortunately, in the last half century, many bronze mirrors have been discovered under scientifically-controlled archaeological excavations in China. It is now possible to establish a chronology of bronze mirrors solely based on archaeological materials. Since the 1950s, all studies of Han mirrors have incorporated, to different degrees, the newly available archaeological materials (Loewe 1979); yet so far no systematic and methodologically rigorous study that utilizes exclusively excavated specimens has been attempted. We will have to wait to see how significantly an archaeologically-based new chronology would differ from the extant chronologies. Though a full reinvestigation of the chronology of Han bronze mirrors is beyond the scope of this essay, some of the issues involved in dating TLV mirrors will be mentioned below. In my examination, I shall consider only excavated materials.

Long having been the focus of Japanese, Chinese and Western

scholarship on bronze mirrors, the TLV mirror consists of the basic motifs of the letters T, L, and V. They used to be referred to as *guiju* mirrors in Chinese literature (J: *kiku*), because it was considered that the V and L resembled the compass (*gui*) and a carpenter's square (*ju*). Early scholarship focused on the connections between the TLV mirror and the sundial (Yetts 1939, pp. 148-165) and between the TLV mirror and the diviner's board (*shi*) (Kaplan 1937), for several specimens of sundials and diviner's boards were available for comparison at the time.

As many scholars later realized, however, these motifs actually constitute the board of an ancient game called *liubo*, a popular pastime among the elite during the Warring States and Han periods (Yang 1947; Komai 1953). Thus scholars have suggested that the TLV mirrors should be renamed as *boju*, 'game board,' mirrors (Zhou 1987). But the Japanese scholar Hayashi Minao commendably insisted that although the TLV pattern shared many similarities with the *liubo* game board, it is not a game board *per se*; rather the TLV mirror, the *liubo* game board, and the sundial, all share the same cosmographical symbolism (Hayashi 1989, pp. 8-9; also Cammann 1948, pp. 160-1). It now becomes clear from archaeological evidence that there was more than one type of *liubo* game board in early China, and the configuration of those are slightly different from that of the TLV mirrors (it has only four V's and two L's, and six I's; see Li 2002). Thus it is inappropriate to equate the *liubo* game boards with the TLV motif. In current Japanese literature, the TLV mirror is still called a *kiku* (Ch: *guiju*) mirror. For convenience and consistency, and because it is more descriptive rather than interpretational, I shall use TLV to refer to these mirrors throughout this essay.

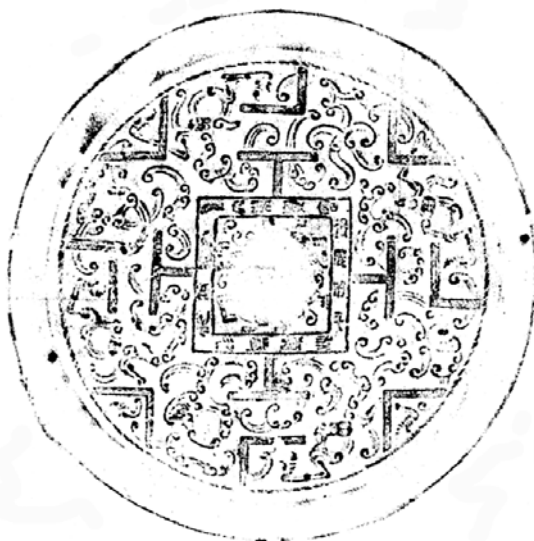


Fig. 6. One of the six TLV mirrors excavated in Hunan (the largest, 14.4 cm). After Zhou 1986, No. 2, p. 106.

The TLV pattern appeared on the *liubo* game board earlier in the Warring States period, but it did not appear on bronze mirrors until the early Han dynasty. The Swedish scholar Orvar Karlbeck, an avid collector of early Chinese bronzes, speculated that the TLV motif on bronze mirrors was first introduced by Liu An (?179-122 BCE), the Han prince of Huainan, who was famous for his keen interest in astronomy and cosmology and who patronized the compilation of a comprehensive astronomical, topographical, and philosophical treatise called *Huainanzi* (cited from Bulling 1960, pp. 20-21). However, it appears in archaeological records that the introduction of the TLV motif onto mirror decoration was earlier than Liu An's time, and the cosmological significance of the decorative motif was more widely appreciated in Han society than in the small circle of Liu An's court.

The TLV mirror was popular not only in Liu An's court in Huainan but as well in the imperial court

and other princely kingdoms of the Han dynasty. Some of the earliest known examples are six inscribed bronze mirrors excavated from an early Western Han tomb in Hunan province (the largest d. 14.4 cm) (Fig. 6), in which TLV mirrors with dragon arabesque (*panchi*) decoration were found

with funerary coins — clay imitations of real coins of Emperor

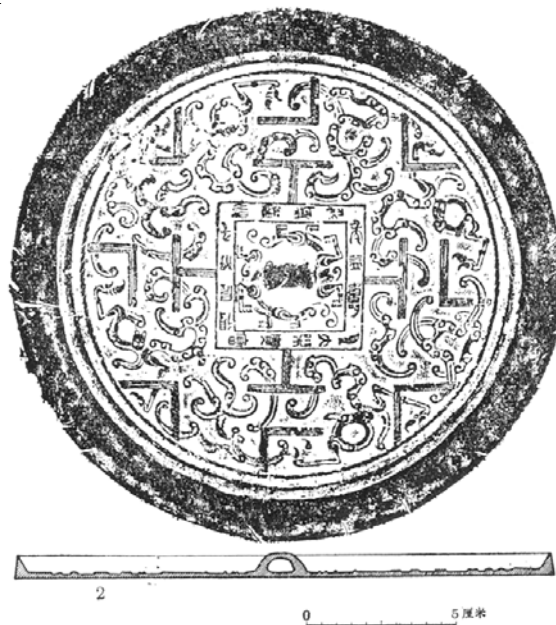


Fig. 7. Bronze mirror from Mancheng M2, d. 18.4 cm.

Wen's reign (r. 179-156 BCE) — for the dead to use in the afterlife (Zhou 1986, p. 70). Similar clay coins also appeared in the famous Mawangdui tomb no. 1 (datable to shortly after 168 BCE), roughly contemporaneous with Emperor Wen. These examples show why

coinage is often more accurate for dating the burials, because in many cases buried coinage is in large quantities and was the currency of the time. This type of TLV mirror lasted into Emperor Wu's reign (140-87 BCE). A famous example, with the same inscription as the Hunan mirror, is the one discovered in the tomb of Dou Wan (d. ca. 113 BCE) (Fig. 7), the consort of Emperor Wu's elder half-brother Liu Sheng (d. 113 BCE), at Mancheng in Hubei province.

The TLV motif also appeared on other types of mirrors, such as the so-called *caoye* 'grass-leaf' mirrors, named after the leaf-like decoration found on the back of the mirrors. The specimen in Fig. 8 is a mirror (d. 11.6 cm) discovered in Tomb no. 23 in the Western Han-period cemetery near Louzhoucheng, Qichun, Hubei province. Similar mirrors have also been discovered in Shaanxi, Sichuan, and Yunnan (Kong 1992, pp. 203, 204, 206).

The majority of extant TLV mirrors are associated with a decorative motif called *sishen*, 'four spirits,' the four imaginative animal symbols of the cardinal directions (along with the color symbolism): the Green Dragon of the East, the White Tiger of the West, the Vermillion Bird of the South, and the Dark Warrior (a combination of a tortoise and a snake) of the North. Developed during the Warring States and Han periods, these creatures often filled the spaces between the T's,



Fig. 8. Bronze mirror excavated from Louzhoucheng in Hebei province. After Louzhoucheng 2000, p. 186.



Fig. 9. Bronze mirror excavated in Xi'an. After Cheng and Han 2002, fig. 38, p. 132.

L's, and V's. Since the spaces between the T and the L on the axes are often too narrow to fit the animals, they are often moved off the axis to fill the eight spaces flanking the four inverted V's. Such is the case in the TLV mirror excavated near Xi'an, Shaanxi province (Fig. 9). As a result, the four spirits were elaborated into eight figures; in addition to the four spirits, there are a bird, a toad, a goat, and a winged immortal. The Xi'an mirror was buried together with a type of coinage (*'xiaoquan zhi yi'*) minted only during Wang Mang's currency reform during the Xin dynasty (9-23 CE), an interregnum between the Western and Eastern Han dynasties. Thus, the combination of the TLV and the 'four spirits' motif and its variations marks the regular, or classical, TLV mirror in early China.

In the 1910s, Japanese scholar Tomioka Kenzô published several articles, arguing that the word *'xin'* ('new') which appeared on ten inscribed TLV mirrors actually referred to the Xin dynasty, established by the usurper Wang Mang. Thus, these mirrors could be dated to Wang Mang's time (collected in Tomioka 1920). These mirrors have the following

characteristics: 1) one mirror carries an inscription specifically dated 10 CE, the second year in Wang Mang's reign (Loewe 2001-2, pp. 240-4); 2) the others either mentioned the important political events during Wang Mang's reign, such as the establishment of the idealized Confucian ritual structures *Biyong* and *Mingtang*; 3), or contain the formula *'Wangshi zuo jing'* ('The Wang family has made the mirror'); 4), or another formula *'Xin you shantong'* ('The Xin has good copper').

Because Wang Mang's dynasty has long been considered illegitimate, and his usurpation was condemned in the subsequent Chinese history (especially during the Eastern Han dynasty), it seems reasonable to assume that 1) the Han imperial workshops would stop producing mirrors with explicit association with the Xin dynasty after the fall of Wang Mang; 2) later mirror manufacturers and consumers would also consciously avoid this association. If these two statements could be proved valid, then those mirrors with an explicit reference to the Xin in their inscriptions would be a good indication of their date.

Tomioka's theory was accepted immediately by scholars in Japan as well as in China; no one has questioned the validity of the two assumptions. Furthermore, Takahashi Kenji attempted to extend Tomioka's conclusions by arguing that mirrors with similar inscriptions found in Japan were also manufactured during Wang Mang's era (Takahashi 1919). But Umehara Sueji soon pointed out that Takahashi's assertion contradicted the material evidence

found in ancient Japanese tombs in which these mirrors were discovered, and he emphasized the importance of paying particular attention to mirror typology (whether it was a TLV mirror, pictorial mirror, etc.) in applying Tomioka's theory. Umehara further pointed out that the regular type of TLV mirror was not limited only to Wang Mang's reign, but instead, it ranged from the late Western Han to the Eastern Han and even later (Umehara 1919).

In retrospect, Tomioka's theory is marred, however, by the questionable examples he used. First, as Michael Loewe has pointed, the 10 CE mirror is of dubious provenance. Among all the extant inscribed TLV mirrors, only two have precisely dated inscriptions; and both of them are likely counterfeit (Loewe 2001-2, pp. 240-5). Second, only three mirror inscriptions, as far as I know, refer to the establishment of the *Biyong* and/or *Mingtang*; and the doubtful 10 CE mirror is one of the three. One of the other two is now in the collection of the Shanghai Museum (Kong 1992, p. 323). In my opinion, the authenticity of it is also questionable. Most importantly, there is no scientifically excavated mirror bearing the references to the establishment of either the *Biyong* or the *Mingtang*. The absence of corroborative archaeological evidence does not necessarily mean that the mirrors in question are fakes. But this should at least alert us to do more investigation regarding the authenticity of the mirrors. We should exercise utmost caution for those mirrors of unknown provenance when their authenticity is not backed up by comparable archaeological materials.

Third, although the formula 'The Wang family has made the mirror' is attested on excavated mirrors, these mirrors are either not TLV mirrors or are datable to a much later period in the Eastern Han dynasty. Such is the case for

the pictorial mirror excavated in Yangzhou, Jiangsu province (Wang et al 1985, p. 95). As Umehara noted above, the 'wang' on bronze mirrors did not necessarily refer to Wang Mang and his dynasty. Fourth, the references to the 'xin' or 'xinjia' (the Xin family, i.e. the Xin dynasty) or the formula 'the Xin has good copper' on mirror inscriptions are not always an indication that these mirrors could be dated to the Xin dynasty. For example, a bronze mirror from a private workshop excavated from Hunan that archaeologist Zhou Shirong dates to the middle of the Eastern Han period bears the following inscription (Zhou 1986, no. 80, p. 143):

The Du family has made the mirror, which is greatly without blemish; the Xin has good copper, which came from Danyang; it is refined with silver and tin, and it is pure and bright; to the left the Dragon and to the right the Tiger eliminate the inauspicious; may you forever prosper and have joy without end.

杜氏作鏡大毋傷, 新有善
銅出丹羊(陽), 涑冶銀錫
清如明, 左龍右虎辟不
陽(羊), 長富樂未央

In this inscription, the mirror designer mistakenly exchanged the characters for *yang* (in 'Danyang') and *xiang* (in 'buxiang,' 'inauspicious'). Although there is the reference to the Xin, the content of the inscription and the archaeological context suggest that this mirror be dated to the middle Eastern Han rather than to Wang Mang's time. Admittedly, this is also not a TLV mirror. This again supports Umehara's aforementioned qualification to Tomioka's rules.

Furthermore, Higuchi Takayasu's research indicates that

some low-quality mirrors bearing the formula 'the Xin has good copper' are dated to the Eastern Han rather than Wang Mang's era (Higuchi 1953). Therefore, the second assumption on which Tomioka based his theory could not



Fig. 10. Bronze mirror excavated in Hunan. After Zhou 1986, no. 52, p. 124.

be viewed as valid, since there are cases in which later private mirror workshops still used the formulae referring to the Xin after the fall of Wang Mang.

The use of 'xin' and 'wang' in the inscriptions even after the fall of Wang Mang deserves further exploration. The use of the family name Wang could be a pure coincidence since Wang has been a common family name in China, and there is no evidence suggesting that this Wang refers to Wang Mang. The use of the formula 'The Xin has good copper' in private workshops could have just followed the formula and models created during Wang Mang's imperial workshop for commercial reasons. But on the other hand, the first assumption still seems to be valid. I am not aware of any case of similar reference to the Xin on products from the Eastern Han imperial workshop.

With these caveats added, now we can test the rest of Tomioka's theory using archaeological evidence. One example is a TLV mirror of high quality excavated in Hunan. It has the following inscription (Fig. 10):

The Xin [dynasty] has good copper, which comes from Danyang, it is refined...; this excellent mirror manufactured in the Shangfang [i.e. the imperial workshops] is truly very skillfully made, above are the immortals who do not know aging; when thirsty, [they] drink from the spring of jade; when hungry, [they] eat of the jujube. [They] roam about all under the heaven and swim the four [seas].

新有善銅出丹陽, 涑; 尚方
佳鏡真大巧, 上有仙人不
知老, 渴飲玉泉飢食棗,
浮游天下遊四[海].

It seems that the first half of the inscription was truncated and followed immediately by another set of inscriptions. In general, mirror inscriptions are often formulaic; that is, set phrases were picked and chosen to create a new inscription. It probably reflects the operation of a certain modular system in designing mirror inscriptions and mirror motifs (see Ledderose 2000). And sometimes carelessly two sets of inscriptions were discretely put on the same mirror. What interests us here, in addition to the similar content on our mirror from Feature 109, is the word 'xin' at the beginning of the inscription. Although it is sometimes mistakenly translated as 'in recent times' (Cheng and Han 2002, p. 107), its reference to the Xin dynasty is clear when we contrast it with another formula of a similar TLV mirror of the early Eastern Han period (Fig. 11, next page), which carries the following inscription:

The Han [dynasty] has good copper, which comes from Danyang; it is pure and bright.



Fig. 11. Early Eastern Han bronze mirror. After Zhou 1986, no. 59, p. 130.

To the left the [Blue] Dragon and to the right the [White] Tiger rule the four quarters. Eight sons occupy the center. The Vermilion Bird and the Dark Warrior conform to the Yin and Yang forces.

漢有善銅出丹陽，清且明。左龍右虎 主四滂(旁)，八子居(?)中央，朱爵(雀)玄武順[陰陽]。

This mirror is of high quality. Similar examples bear the inscription 'Shangfang,' the imperial workshop in charge of the production of bronze and lacquer utensils for imperial consumption. Although the basic formula created during the Xin dynasty is still in fashion, here 'the Han' replaces 'the Xin' in order to avoid the connection with Wang Mang's Xin dynasty. In some cases, the formula 'The Xin has good copper' changed to 'Here is good copper, which came from Danyang' 此有善銅出丹陽 (Fig. 12).

Through the above analysis, it seems clear that imperial workshops of the Xin dynasty did create the classical TLV mirrors with formulae such as 'The Xin has good copper.' Therefore this type

of TLV mirrors could be dated to the Xin dynasty; furthermore, on stylistic ground, mirrors with similar decorative scheme could be datable to the Xin dynasty.

Japanese scholar Fujimaru Shôhachirô has attempted to use a typological method to refine the TLV mirror chronology by distinguishing the late Western Han TLV mirrors from those of the Xin dynasty and later (Fujimaru 1982). He divides the decorative elements into four categories — the

rim decoration, the saw-tooth band, the number of the nipples, and the inscription. He classifies different known TLV mirrors according to these categories. What he found is an interesting pattern of correlation: the TLV mirrors have four nipples and with or without the four animal figures are always decorated with plain rim with oblique comb-tooth between the rim and the main decorative zone. He called this group Type A mirrors. And the Type B mirrors always have eight nipples and various rim decorations. Then he

looked at the elements of the A and B types on non-TLV mirrors, and found that the Type A elements (four nipples, plain rim, and oblique comb-tooth band) are shared by many Western Han mirrors, while the Type B elements belong to the Wang Mang and the Eastern Han period. Thus, TLV mirrors with plain rim and four nipples could be dated to the late Western Han period. This is largely corroborated by archaeological data from Luoyang in Henan province (Fujimaru 1982, 939-940). Archaeological materials also confirmed that, as Umehara and Higuchi pointed out, that regular TLV mirror lasted into the Eastern Han period; and after the middle of the Eastern Han, simplified TLV mirrors appeared in the archaeological record, many of them produced in private workshops rather than in the imperial workshop of the Eastern Han dynasty.

According to their stylistic characteristics, the two TLV mirrors excavated from the Xiongnu tombs belong to the classical TLV mirrors, and are datable to the Xin dynasty or to the early to middle Eastern Han period. An example similar to the complete mirror from Feature 100 was found at Shangsunjiazhai, Datong in Qinghai in a brick-chambered tomb of the early to middle Eastern Han period (Fig. 13, next page). The Shangsunjiazhai mirror is about 11 cm in diameter, and decorated with a simple quatrefoil knob-seat and three rings of saw-tooth pattern on the rim. In the main decorative zone, among the TLV motifs, there are eight birds on both sides of the four Vs, which is the same as those on the mirror from Feature 100. There is no clear indication of the ethnicity of this tomb occupant, but in a



Fig. 12. Eastern Han bronze mirror. After Zhou 1986, no. 63, p. 133.

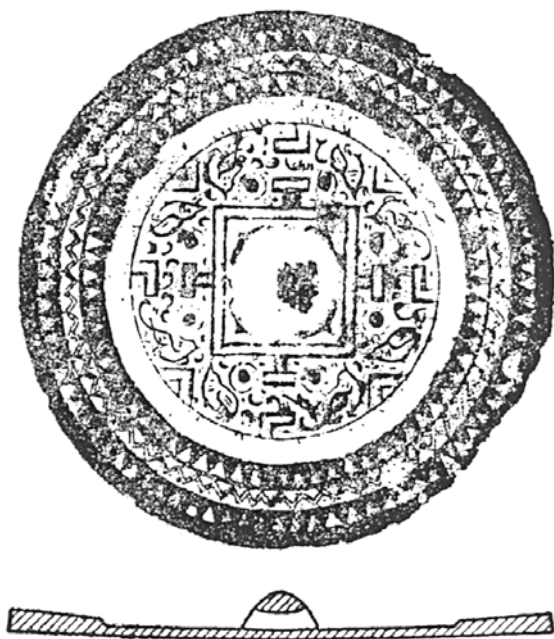


Fig. 13. Bronze mirror from a brick-chambered tomb at Shangsunjiazhai, Datong, Qinghai. After Qinghai 1993.

similar brick-chambered tomb of late Eastern Han period at the same cemetery, archaeologists discovered a bronze seal with the official title that the Han government bestowed upon the leader of the Xiongnu. The excavators suggested that these brick chamber tombs all belong to the Xiongnu (Qinghai 1993).

The fragmented mirror from Feature 109, moreover, is probably a little bit earlier than the intact mirror from Feature 100. The original inscription must have run over 30 characters based on the size of the mirror and the arrangement of the characters. The content of the inscription, like that in Fig. 12, describes the realm of the immortals, which is connected with the cult of the immortals that developed in the middle Western Han dynasty and gained great popularity during the late Western Han, the Xin and the Eastern Han dynasties. The ubiquitous presence of the TLV motif on mirrors, coffins, and other objects reflected this religious frenzy in late Western Han and Wang Mang's time (Suzuki 2003). That is also the circumstantial

evidence for the Xin or early Eastern Han date of the fragmented mirror, since this was the time when the cult was at its peak.

In this essay, I have discussed the date of two TLV mirrors excavated from the Xiongnu tombs in Central Mongolia through a reexamination of previous theories on dating the TLV mirror. The extant chronology of early Chinese mirrors should be rigorously reinvestigated against the large number of mirrors available now through archaeological excavations in the past sixty years. These

scientifically excavated bronze mirrors, such as these from the Xiongnu tombs, are essential for the reconstruction of a reliable framework in which the past of cultural contacts and cultural events can be placed.

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Guolong Lai is an assistant professor of Chinese Art and Archaeology at the University of Florida. Trained as an archaeologist and paleographer at Beijing University, he received his Ph.D. at UCLA in 2002. His recent publications include "The Diagram of the Mourning System from Mawangdui," *Early China*, 28 (2003); "Valuing the Past in China. The Seminal Influence of Liang Sicheng on Heritage Conservation" (co-authored), *Orientalizations*, 35/2 (2004); and "Death and the Otherworldly Journey in Early China," *Asia Major*, 18/1 (2005). He is currently working on a book manuscript using archaeological materials to study early Chinese religions. E-mail: <gllai@ufl.edu>.

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article is largely based on the section on the TLV mirrors that the two authors published in Cheng and Han 2002, pp. 130-140, but many careless errors were introduced into the English translation).

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The bronze mirror fragment with the inscription, as it emerged in the excavation of Feature 109, Tamir 1 site.