

MUSIC

in the Age of Confucius



EDITED BY **JennyF. So**

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BO LAWERGREN

ARCHAEOLOGISTS HAVE recently discovered the ancestors of modern Chinese zithers. Four types of instruments dating back to the late first millennium B.C. exhibit provincial variety as well as foreign influences (fig. 3.1). These findings deeply affect our understanding of China's earliest-known musical culture.

The *se* is the largest zither, and, with about twenty-five strings, the one with the widest compass. Its flat, rectangular box is often elaborately decorated, and examples recovered from Marquis Yi's tomb are among the most sumptuous (figs. 3.2, 3.3). Although prominent in classical literature, the instrument virtually disappeared by the beginning of the first millennium A.D.

The *qin* is much smaller. It, too, was frequently mentioned in classical literature, but it gained even more prestige following the end of the Han dynasty (206 B.C.–A.D. 220) and became the favorite instrument of the gentleman-scholar. Its late-Bronze Age, ten-stringed ancestor (figs. 3.4a, b) shows that the instrument underwent major changes during the first centuries A.D. Since then, the instrument has remained essentially unchanged.

The *zhu* is a long, slim instrument with about five strings (fig. 3.5). Pictorial representations from the Han dynasty show that the strings were struck with a stick rather than plucked. It was rarely mentioned in classical literature and completely disappeared thereafter. All the above three types have been recovered from the tomb of Marquis Yi of Zeng at Leigudun, Suizhou, Hubei Province.

The fourth type, not included among the marquis's instruments, has been found only along the eastern coastal provinces (see fig. 3.11). It resembles the *zheng* that is still played today, with about fourteen strings spanning a long curved board.



Preceding page: detail from lacquered coffin showing fabulous creature playing a *zhu*. Mawangdui Tomb 1, Changsha, Hunan Province. Ca. 168 B.C. After Fu Juyou and Chen Songchang 1992: 11.

Before discussing the ancient instruments, we should note some general characteristics of Chinese stringed instruments. First, the strings of ancient instruments stretch along a wide soundboard — a fact that defines them as zithers.¹ Second, present-day zithers ("classical instruments") acquired their shape during the first half of the first millennium A.D. and have changed little until this century. And third, Chinese zithers use two methods of fine-tuning: adjustments of string lengths by movable bridges such as in the *se* (fig. 3.3) or of string tensions by tuning pegs such as in the *qin* (see fig. 3.4a).

Bridge tuning is used on the *se* (see figs. 3.3, 3.6.3). First the strings are stretched between fixed bridges until they acquire similar pitches.² Then a movable bridge is inserted under each string to shorten its vibrating length and raise its pitches. Peg tuning is seen on the classical *qin* (see fig. 3.8.4). Its seven strings have approximately the same length and tension but different thickness made up of 48, 54, 64, 72, 81, 96, and 108 silk threads.³ This graduated set yields a pentatonic scale, which is fine-tuned by pegs.

Chinese tuning pegs differ radically from Western ones.⁴ On violins and guitars the string meets the peg, called a "lateral peg," at a right angle and winds around its periphery. But on the *qin*, each string is tied to a twisted, thick cord that passes through a channel along the axis of the peg, called an "axial peg" (see fig. 3.9.1e). While in the channel, the cord exits a side opening, loops around the outside of the peg, and returns to the channel through the same hole. This arrangement binds the peg to the lower end of the cord, while the top end is fixed against the bridge. When the peg is turned, the cord twists more tightly, and its effective length shortens. This pulls the string, increases its tension, and raises the pitch.

THE *SE*

The first extant *se* was unearthed in 1935 near Changsha, Hunan Province, and more than seventy have since been found in controlled excavations.⁵ Marquis Yi's tomb alone yielded twelve. All instruments consist of a hollow rectangular box with a slightly vaulted top and a flat board covering the underside. The latter has one fist-sized hole at each end. These facilitate the attachment of strings and act as sound holes, familiar from Western instruments (such as the round hole on guitars or f-hole on violins), where they serve to extend the resonating properties of the hollow box. Here, the effect may be less prominent since the top surface — the soundboard vibrated by the strings — is thicker than on Western instruments (ca. 15–25 mm versus 5 mm).⁶ As a result, the *se* probably vibrated less and radiated weaker sound.

Se-zithers can be up to 2.1 meters in length, but the dimensions of those found in the tomb of Marquis Yi (see figs. 3.2, 3.3) are more typical. Because of

Fig. 3.1 Map showing distribution of different types of zithers and tuning keys from archaeological contexts in China. Map by Li Xiating, redrawn by Gene Thorp.



Fig. 3.2 Twenty-five-stringed se-zither, with two details of painted designs along the sides, from the tomb of Marquis Yi of Zeng, Leigudun, Suizhou, Hubei Province. Fifth century B.C. Carved lacquered wood. Length 167 cm, width 43 cm, depth 12 cm. Hubei Provincial Museum. Photograph by Hao Qinjian. (See also Checklist no. 8.)



detail a (top)
detail b (bottom)

their large sizes, the instruments were often made from several pieces of wood, joined together by carpentry techniques such as dovetailing or the use of dowels or bamboo staples.⁷ Ancient se-zithers often had extensive carved relief and lacquered decorations. Finds from Marquis Yi's tomb are prime examples (see figs. 3.2, 3.3, details). One end shows a pair of eyelike motifs surrounded by a mass of intertwined snakes carved in high relief. The entire instrument is then covered with lacquer in red, black, and other colors.⁸ The sides display alternating blocks of geometric and bird motifs, similar to those on the *zhu* from the same tomb. Some se-zithers are painted with figurative motifs that link them with Chu shamanistic rituals. One example comes from Changtaiguan, Xinyang, Henan Province, but only fragments of the painted motifs have survived (see fig. 1.10). The size and amount of decoration on a se appear to be related to the rank of its owner.⁹ Marquis Yi was buried with twelve sumptuously decorated se, whereas a low-ranking official buried at Liuchengqiao, Changsha, Hunan Province, merited only a single small, undecorated se covered with black lacquer (fig. 3.6.2).



Fig. 3.3 Twenty-five-stringed se-zither, with wooden bridges and detail of carved end, from the tomb of Marquis Yi of Zeng, Leigudun, Suizhou, Hubei Province. Fifth century B.C. Carved lacquered wood. Length 167.3 cm, width 42.2 cm, depth 11.1 cm. Hubei Provincial Museum. Photograph by John Tsantes. (See also Checklist no. 9.)



Some poor tombs had only nonfunctional se with small, solid (and presumably mute) bodies."

Se-zithers mostly had from twenty-three to twenty-six strings, but occasionally as few as nineteen or twenty-one." The strings of the se span the soundboard, emerging from holes behind the long, fixed bridge seen at the right (uncarved) end of the zither. Each string passes over a movable bridge shaped like an inverted v and continues on to one of three short bridges fixed near the left end (see figs. 3.3, 3.6.3). The short bridges are at different distances from the long bridge, the two outer ones being slightly nearer to it than the middle one. The strings descend into the interior through holes behind the short bridges, pass around the left (carved) edge, and up again to the top, where they are tied to string anchors (*se rui*).¹² Most se have four anchors (see figs. 3.2, 3.3, 3.6.1–3), but some may have as few as two and as many as five.¹³ The three-sectioned bridge separates the strings into three sets, often divided as 9–7–9, 8–7–8, 9–6–9, or 7–5–7. Each string is tuned by sliding the movable bridge along the soundboard. A se player would kneel and pluck the strings at one end,



Fig. 3.4a Ten-stringed qin-zither and replica tuning pegs, from the tomb of Marquis Yi of Zeng, Leigudun, Suizhou, Hubei Province. Fifth century B.C. Carved lacquered wood. Length 67 cm, width 19 cm, depth 11.4 cm. Hubei Provincial Museum. Photograph by John Tsantes. (See also Checklist no. 14.)

Fig. 3.4b View of qin with top and bottom separated and replica tuning pegs in place. Photograph by John Tsantes.



Fig. 3.5 (opposite) Five-stringed zhu-zither, with two details, from the tomb of Marquis Yi of Zeng, Leigudun, Suizhou, Hubei Province. Fifth century B.C. Carved lacquered wood. Length 115 cm, width 7 cm, depth 4 cm. Hubei Provincial Museum. Photograph by Hao Qinjian. (See also Checklist no. 15.)

keeping the end with the string anchors to his left (see fig. 1.6).

Of Marquis Yi's re-zithers only the bodies survived, but a complete set of strings and movable bridges was found in situ on a *se* from the early-second-century B.C. in Tomb 1 at Mawangdui, Changsha, Hunan Province (see fig. 3.6.3).¹⁴ This instrument has three pieces of thin cloth wrapped around the strings near the anchors to serve as vibration dampers. Since the intact strings provide information on both thickness and length, they furnish crucial evidence on pitches. Each of the three sets of strings delimited by the short fixed bridges show strings with graduated gauges. Moreover, the placement of the movable bridges yields progressive sequences of string lengths. The outer sets 1 and 3 (see fig. 3.6.3) are identical, with the thinnest and shortest string placed nearest the player and the thickest and longest string farthest away. The middle set consists of much thicker strings, with the thinnest equal to the thickest in sets 1 and 3. With gradually increasing lengths and diameters, the strings of the outer sets must have given descending scales in the direction away from the player. Without information on tensions, however, one cannot determine the exact scales, but those of the outer



detail a



detail b

sets would have been quite similar. Since the movable bridges under the middle set had been disturbed, the pitches are uncertain, but the tessitura must have been lower than for the outer sets, because its strings are thicker and longer. Li Chunyi proposes a pentatonic scale (fig. 3.7). Although details remain unclear, it is nevertheless obvious that the strings in sets 1 and 3 offered the possibility of playing treble tunes in unison.¹⁵ Playing strings in set 3 followed by set 2 allowed tunes that extend from treble to bass registers. Most likely, the same arrangement was used on other ancient se, since the strings were always divided into three sets with matching numbers in the outer sets,

Some aspects of the se's scale structure are also evident on the set of sixty-five bells from Marquis Yi's tomb. It contains several chimes, each providing a contiguous system of pitches (see Chapter 2). The middle tier contains three chimes that ascend from a pitch near middle c. Two of these chimes (M1 and M2) have nearly identical pitch sequences. The third (M3) is considered to be the upper continuation of the base chimes on the lower tier (L1 and L2). The upper tier has two sets (U2 and U3) that, when combined, also ascend from the vicinity of middle c.¹⁶ In all, the sixty-five-bell set contains four independent treble chimes, one of which provides the upper extension of the single base chime. Viewed in this way, it has an obvious similarity to the scale arrangements of the se (see fig. 3.7).

Extant instruments

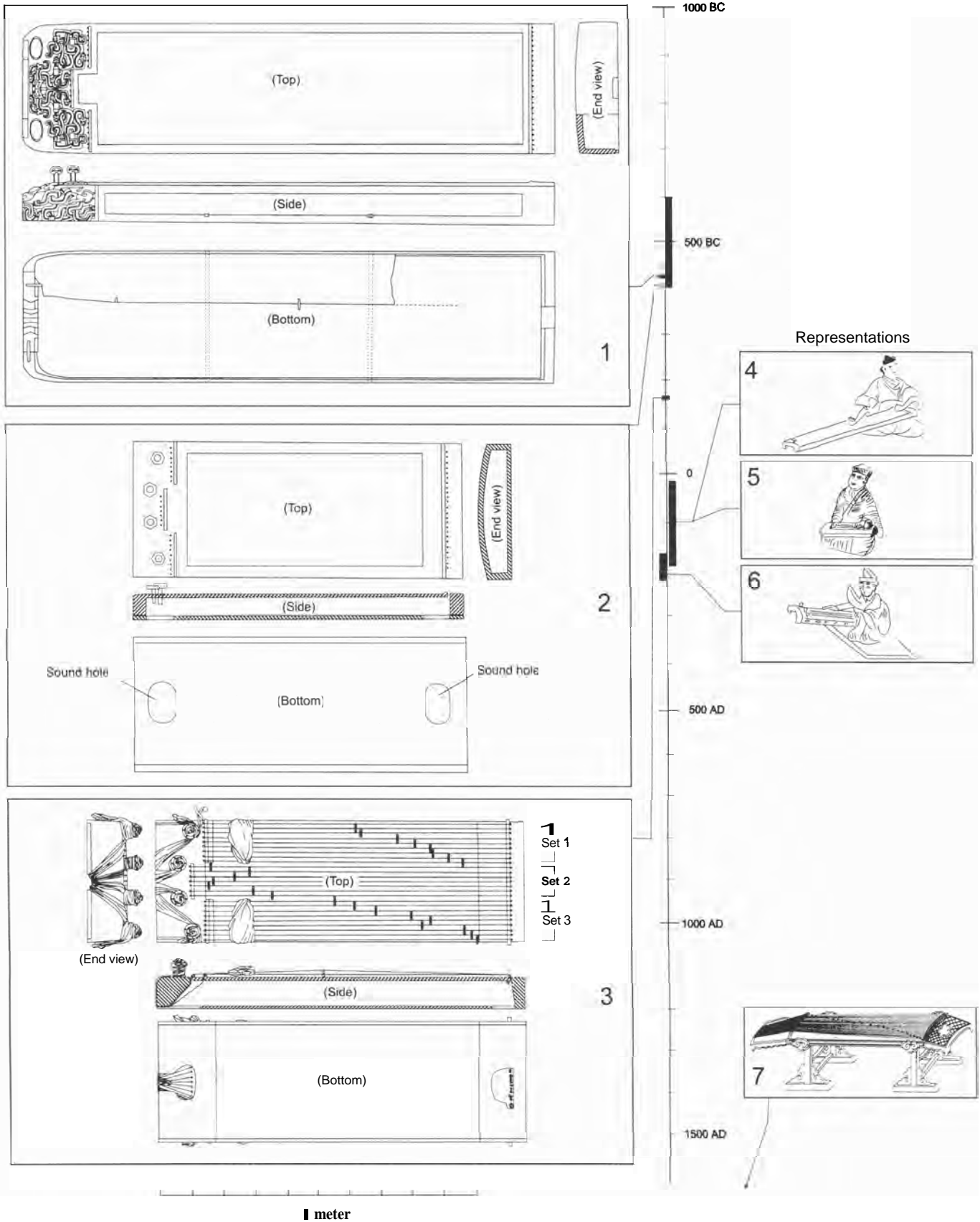


Fig. 3.6 Types of *se*-zithers and their early depictions. All *se* are drawn to scale at bottom and linked to vertical time line at right.

.1 *Se* from the tomb of Marquis Yi of Zeng (fig. 3.2 above). Fifth century B.C. Twenty-five strings. Length 167 cm. After Huang Xiangpeng 1996, Hubei: 275.

.2 *Se* from Liuchengqiao Tomb 1, Changsha, Hunan Province. Late sixth or fifth century B.C. Twenty-four strings. Length 104 cm. After Li Chunyi 1996: 431, fig. 256:2.

.3 *Se* from Mawangdui Tomb 1, Changsha, Hunan Province. Ca. 168 B.C. Twenty-five strings. Length 116 cm. After Li Chunyi 1996: 436.

.4 Tile relief from Dingjiayaodian, Chengdu, Sichuan Province. A.D. first to second century. After Rudolph and Wen 1951: fig. 77.

.5 Stone figure from E'mei Xian, Sichuan Province. A.D. first to second century. Height 57 cm. After Chinese Cultural Foundation 1987: 137, pl. 44.

.6 Tomb relief from Beizhai, Yi'nan, Shandong Province. A.D. second century. After Lawergren 1995–96: fig. 7.

.7 Classical *se*. Length, ca. 200 cm. After Gulik 1969b: fig. 4.

The several overlapping bell chimes — like the overlapping outer string sets on the *se* — allow melodies to be played in unison, or near-unison as in heterophony where each instrument introduces small rhythmic variations on a basic melodic line.¹⁷ According to Confucius, both these techniques were employed: "The music begins in such a manner that all parts sound together [in unison]. Eventually there occurred more freedom [in the performance], but music was still attuned, without interruption, up to the end [of the piece]."¹⁸ A text from the third century A.D. links bells and zithers in yet another way. To tune the bells, Zhou musicians were said to have used a *jun*, described as "a board seven feet long [ca. 162 cm] having a string (or strings)."¹⁹ The required pitches were produced by shortening the *jun* string(s). Some surviving *se* exceed this length and may have served as models for the *jun*.

Se-zithers remained popular throughout the Han dynasty when they were represented on stone and terra-cotta reliefs from different regions (see figs. 3.6.4–6). Some representations are detailed enough to show string anchors (although their quantity may not be reliable). Their plainness and wide variation in size may also be quite representative. The instrument from Mawangdui (see fig. 3.6.3) indicates that Han *se*-zithers had little decoration even in elite contexts. The *se*'s sharp decline after the Han period may be due to changing requirements of ritual music. Perhaps this twenty-five-stringed instrument seemed unwieldy when the fourteen-stringed *zheng* began to gain popularity (see discussion of the *zheng* below). Attempts were made to resurrect the *se* a millennium later, and it lived a shadowy existence in Confucian temples. The shape was altered, the three-sectioned bridge had disappeared, and the string-anchors had been moved to the bottom of the box (fig. 3.6.7).

THE *QIN*

Among the three ancient types of *qin*-zithers known, Marquis Yi's is typical in dimensions and construction (see figs. 3.4a, b, 3.8.1). Compared to the *se*, it is smaller and plainer. Whereas the *se* sound box is composed of separate pieces of wood, the compact body of the *qin* was carved from a single piece of wood. This one-piece construction allows for a thick top and a smoothly curving outer surface. Cavities scooped out of the inside are covered by a separate bottom plate about 2.1 centimeters thick. The D-shaped cavity at the rear end gives access to tuning pegs (see fig. 3.4b). The *qin*'s silhouette visibly separates into a stout sound box with a thin neck. The whole instrument is covered with black lacquer. Ten strings, tied to an anchor under the neck, emerge at the neck and stretch across the body and over a wide bridge where they descend into the box and terminate at the tuning pegs. Because the pegs served to fine-tune the instrument, there was no need for movable bridges.

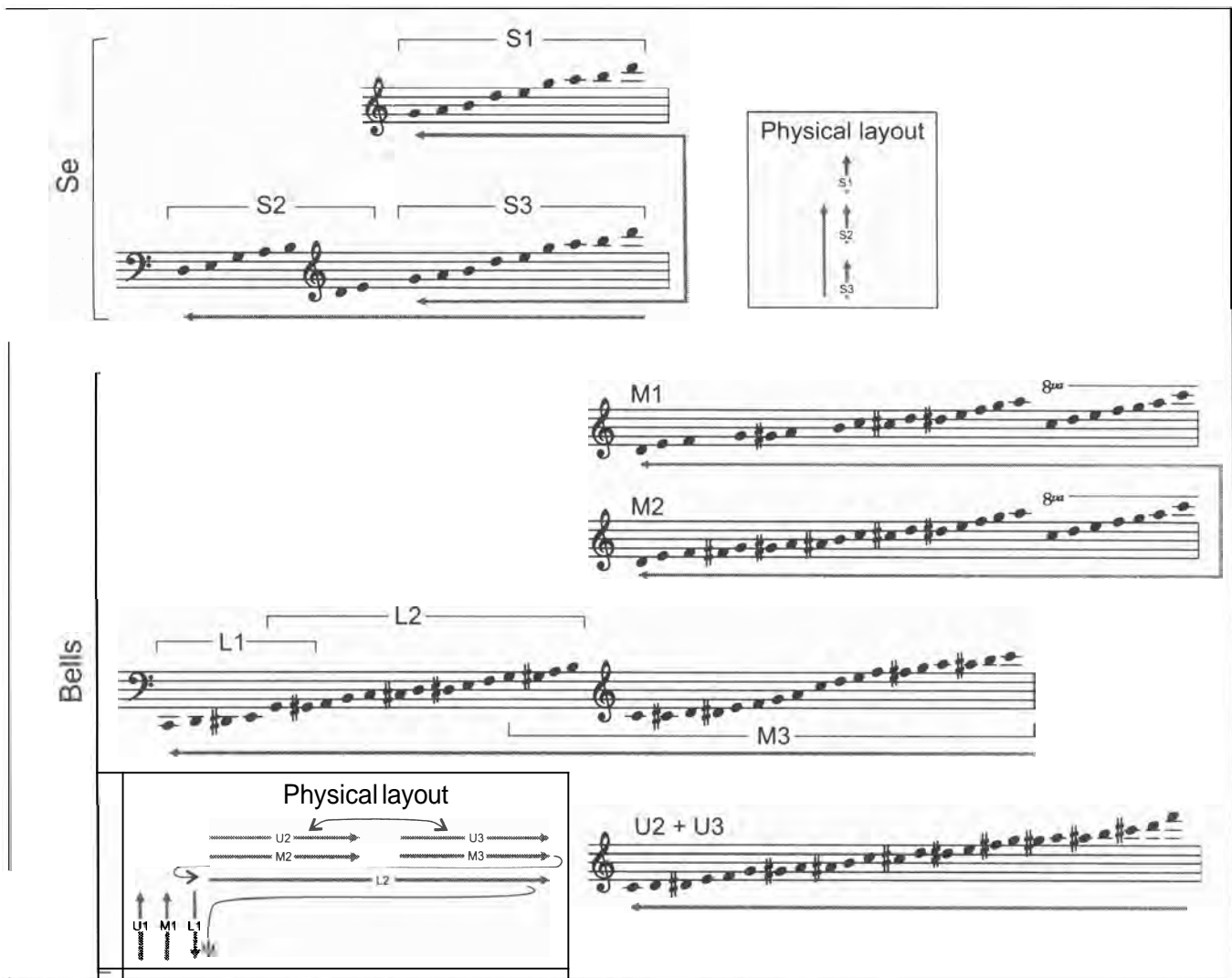


Fig. 3.7 Comparison of tuning systems of the *se* and the sixty-five bells from the tomb of Marquis Yi of Zeng, Leigudun, Suizhou, Hubei Province.

Most bell pitches fall near the indicated notes, but some are as much as a quarter-tone off (Falkenhausen 1993b: 396–99). Arrows are drawn from high to low pitch for each scale or chime. *s*₁ and *s*₃ are notes sounded by the outer sets of strings on the *se*; *s*₂ indicates notes sounded by the middle set. *L*₁, *L*₂ are notes sounded by bells in the lower tier; *M*₁, *M*₂, *M*₃ are notes sounded by bells in the middle tier; *U*₁, *U*₂, *U*₃ are notes sounded by bells in the upper tier.

Slightly later instruments of this kind were first excavated in 1973 from Tomb 3 at Mawangdui, adjacent to Tomb 1, which yielded the *se* discussed above (see fig. 3.8.3). Two others have since been recovered (see fig. 3.8.2 for one example).²⁰ These four surviving ancient qin all come from fifth- through second-century contexts in Chu territory in south central China. This may not necessarily reflect their actual distribution in ancient China, but merely indicates the regions where tomb constructions and/or soil and climate conditions favored the survival of objects made of wood. The number of strings on the ancient qin-zithers varies slightly, but the most common is seven, the same as on the classical qin. Their very thick soundboards (ca. 48 mm on Marquis Yi's) also anticipate the classical qin (ca. 32 mm).²¹ Their string counts, thick soundboards, and the use of tuning pegs for fine-tuning all indicate that these ancient instruments are ancestors of the later classical qin.

There are, however, noteworthy differences between the ancient and the classical qin. The former are smaller, 67–82 centimeters in length compared to the later qin's approximately 120 centimeters. The shape is different: the classical

qin is basically trapezoidal with the narrow end on the player's left (drawn reversed in fig. 3.8.5); the ancient qin has a broad box on the right and a narrow neck on the left. Such a combination of neck and body is reminiscent of the lute, a type of instrument unknown in China at this early period. Lutes flourished in West Asia, where they first appeared in Mesopotamia circa 2300 B.C. Their distribution expanded over time, and we find them in Sogdia from the fourth to third century B.C.²² Other Western stringed instruments also flourished just beyond China's northwestern border. A harp, clearly inspired by West Asian sources but with idiosyncratic details, was excavated at Pazyryk, a nomadic cemetery in southern Siberia from the fourth century B.C.²³ Recently, a similar harp was unearthed at Zaghunlug, Charchan, Xinjiang Province.²⁴ The Xinjiang harp, the Pazyryk harp, and a third example from Olbia in the northern Black Sea area²⁵ belong to a type of Central Asian harp that had reached the western fringes of China in the first millennium B.C. A comparable Central Asian presence of lutes might well have influenced the shape of the ancient qin. This possibility is at odds with classical texts but is worth considering in view of current archaeological evidence.

The strings of ancient qin-zithers have not survived, but impressions of strings left on bronze tuning keys excavated from the tomb of the Nanyue Wang (died ca. 129 B.C.) in Guangzhou, Guangdong Province, show that the strings were probably of graduated thickness.²⁶ At Mawangdui, the surviving twenty-five silk strings of the se also reveal graduated diameters, between 0.6 and 1.9 millimeters.²⁷ Such graduated strings were a natural development of silk manufacture in which threads were made by combining thin strands. Silk strings are mentioned in texts dating from circa 600 B.C., where about two hundred characters appear for silk, including one for instrument strings.²⁸

The survival of four wooden tuning pegs inside the sound box of Marquis Yi's qin presents the earliest evidence for the use of tuning pegs on a stringed instrument in China (see figs. 3.4b). These pegs were made from a circular tube, part of which was cut and shaped to form a flat surface (fig. 3.9.1a). The cut enabled a firm grip on the peg, as does any noncircular shape. The peg on the instrument from Mawangdui (see figs. 3.8.3, 3.9.1b) is an octagonal, truncated pyramid with a central channel and a hole on one side. The tomb of Nanyue Wang yielded eleven bronze pegs (possibly for several instruments) with a more sophisticated shape. These pegs narrow to a waist at the level of the hole on the side, presumably to accommodate a cord encircling the peg (see fig. 3.9.1c). It is similar to the peg from Linzi, Shandong Province (see fig. 3.9.1d).

Apparently the use and location of tuning pegs on the ancient qin required the deployment of an additional accessory, a tuning key. Many keys survived because they were made of bronze and have been catalogued and collected for a long time as ornamental fittings by Chinese archaeologists and Western museums ignorant of their true function. Their association with tuning pegs exca-

Extant instruments

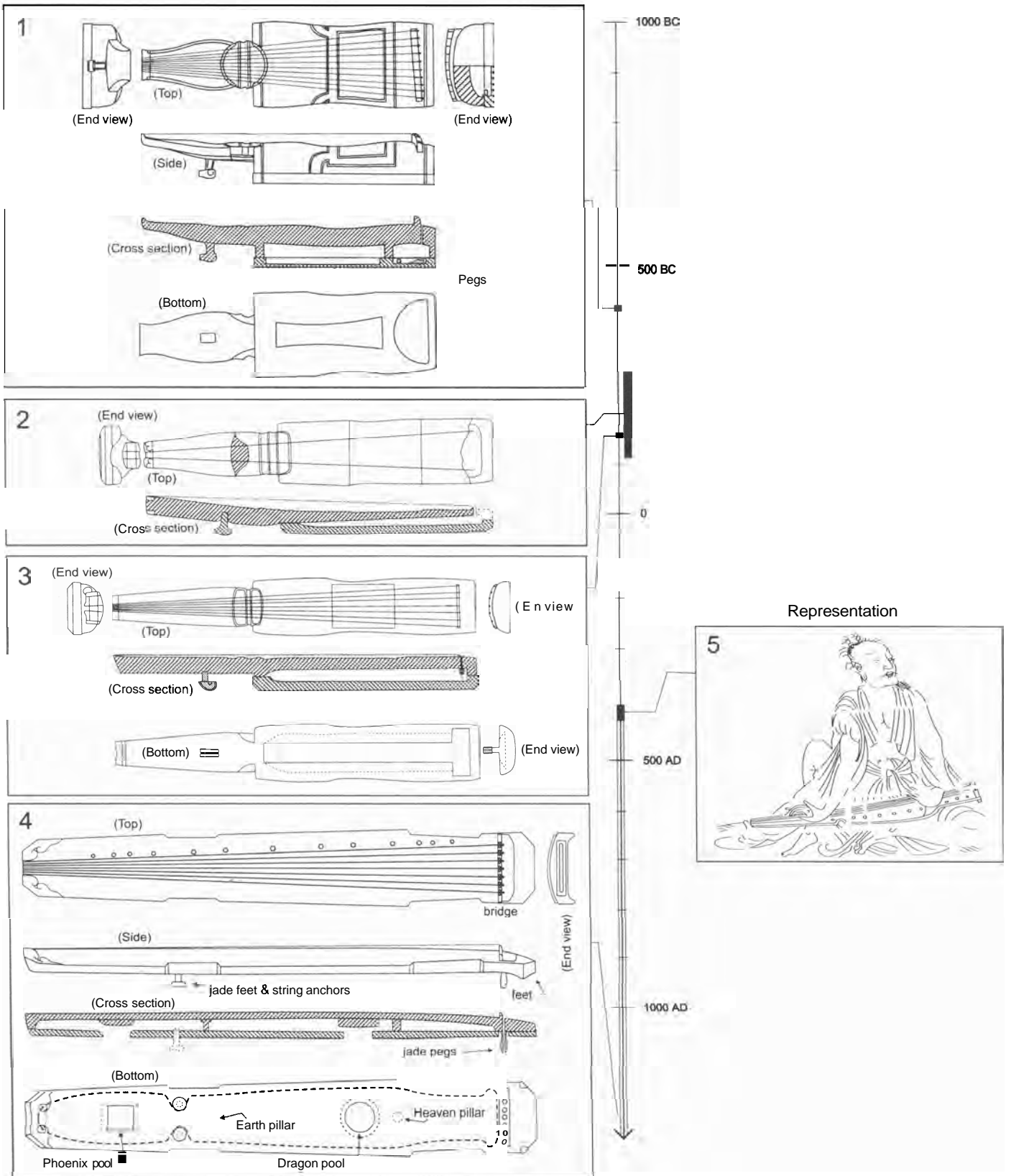


Fig. 3.8 Types of *qin*-zithers and their early depiction. All *qin* are drawn to scale at bottom and are linked to vertical time line at right.

.1 *Qin* from the tomb of Marquis Yi of Zeng (fig. 3.4a above). Fifth century B.C. Ten strings. Carved lacquered wood. Length 67 cm. After Li Chunyi 1996: 449, fig. 266.

.2 *Qin* from Wulipai Tomb 3, Changsha, Hunan Province. Third century B.C. Lacquered wood. Possibly nine strings. Length 79.5 cm. After Li Chunyi 1996: 451, fig. 267.

.3 *Qin* from Mawangdui Tomb 3, Changsha, Hunan Province. Second century B.C. Seven strings. Lacquered wood. Length 82.4 cm. After Li Chunyi 1996: 452, fig. 268.

.4 Classical *qin* said to have been made by Prince Lu in 1644. Ming dynasty (1368–1644). Seven strings. Lacquered wood, jade. Length 120 cm. Metropolitan Museum of Art, New York (1999.93).

.5 Ji Kang playing the *qin*. Detail from molded brick tomb tile at Xishanqiao, Nanjing, Jiangsu Province. A.D. 380–420. After Spiro 1990: 4, 47.

vated in 1983 from Nanyue Wang's tomb in Guangzhou finally allowed them to be properly identified. All keys consist of a shaft with a socket at one end and a handle at the other. The sockets have square cavities that fit the pegs. The handle is sculpturally modeled, often showing animals in combat or predator-victim relationships, such as a bird biting the rear of a feline (possibly a leopard) that bites a snake, a raptor clutching a small animal, or a feline biting a large bird (figs. 3.9.3a, d, f). Less aggressive figures include a seated goat, a bear, a goat-man, a coiled wolflike animal, and a crouching animal (see figs. 3.9.3b, c, e, g, h). Tuning keys made during the Warring States Period (480–221 B.C.) are usually square on the outside (see figs. 3.9.2a, 3.9.3a–e), but some from the Han dynasty are circular with square sockets (figs. 3.9.2g, 3.9.3f).

Many of the motifs on tuning keys are closely associated with the art of the Eurasian steppes in north and northwest China.²⁹ In particular, predator-victim motifs are common in the art of north China and Central Asia, and the goat, bear, and wolf are native to northeastern China. The human-headed goat (see fig. 3.9.3e), a common motif at Persepolis in ancient Iran, suggests more distant connections. Since the motifs are manifestly northern or even foreign, but the only surviving instruments that used such keys were all from the south, we suspect that tuning keys and pegs might have been introduced with northern *ain*-zithers that had been brought south, or may reflect the south's direct contact with peoples who lived in regions far to China's north and west.³⁰ To date, only a handful of tuning keys has been securely identified from three vastly disparate sites in south and north China, while the majority are of unknown provenance (see figs. 3.1, 3.9.3b, g, h).

The archaeological evidence presents a gross disparity between the numbers of *qin*-zithers (only four) and *se*-zithers (about seventy) in the southern state of Chu.³¹ A similar preference for the *se* is revealed in a southern literary work from the fourth or third century B.C., the *Chu Ci* (Elegies of Chu). It mentions zithers six times, and each time it is the *se*.³² On the other hand, northern texts give equal weight to both *se* and *qin*: the *Shi Jing* (Classic of poetry) mentions the *se* eleven times and the *qin* nine times, pairing the instruments eight times.³³ This seems to indicate that the *qin* flourished mainly in the north while the *se* was appreciated both north and south. This, with the *qin*'s lutelike shape and its steppe-inspired tuning keys, supports a northern origin for the instrument. The recent identification of one or two tuning pegs recovered in the 1950s from the Warring States site in Fenshuiling, Changzhi, Shanxi Province, gives credence to this supposition (see fig. 3.9.3b).³⁴ This is an important discovery because these tuning keys are close contemporaries of Marquis Yi's ten-stringed *qin* and thus provides the first excavated evidence for the existence of similar instruments in north China at that time. More definite conclusions must await additional archaeological data. During the Han dynasty, territorial segregation of the *se* and *qin* had probably disappeared. Sets of string

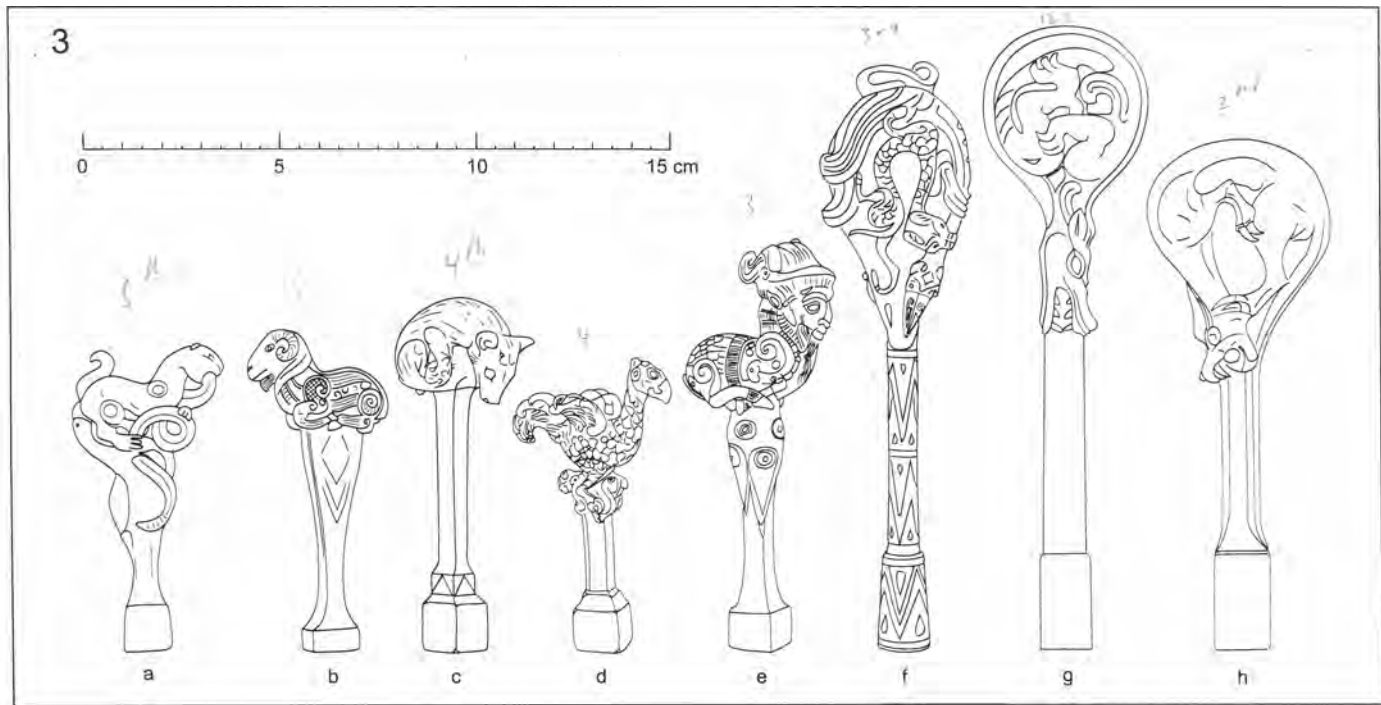
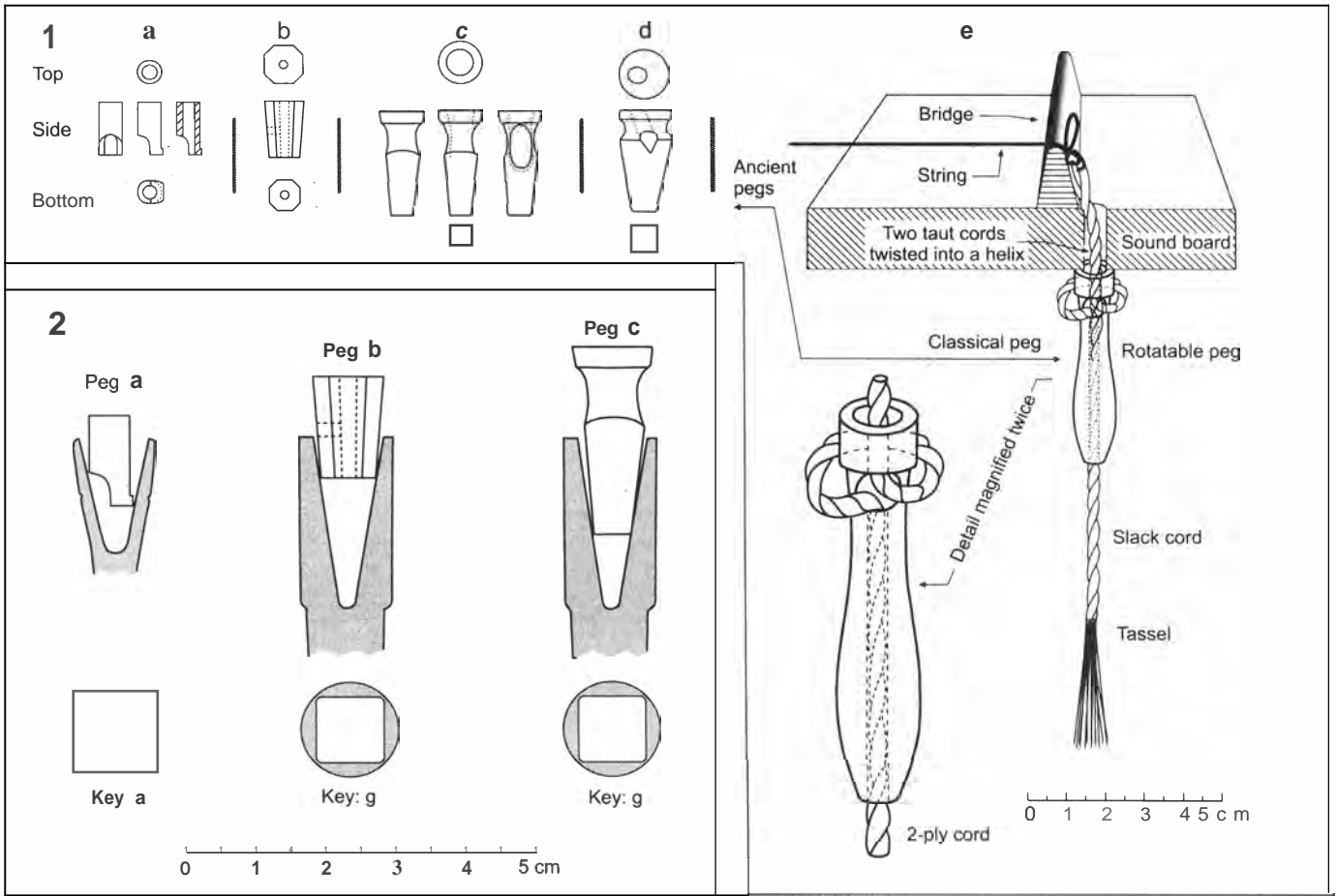


Fig. 3.9 Qin tuning pegs and keys.

.1 Types of qin tuning pegs (ancient to modern) drawn to the same scale. (a) Wooden peg with circular cross section for qin of figure 3.4a above. (b) Bone peg with octagonal cross section for qin of figure 3.8.3 above. (c), (d) Bronze pegs with square heads and circular bases, for qin-zithers buried with tuning keys in figs. 3.9.3g, h. (e) Classical qin peg with circular cross section. Drawings by Bo Lawergren.

.2 Cross sections of sockets on two tuning keys (figs. 3.9.3a, f) and three pegs (figs. 3.9.1a–c) drawn to the same scale, showing how the keys might have fitted the pegs.

.3 Bronze tuning keys. (a) Bird, feline, and snake; provenance unknown; fifth century B.C.; height 8.2 cm; Freer Gallery of Art, Smithsonian Institution, ~1916.454. (b) Seated goat; excavated from Fenshuiling, Changzhi, Shanxi Province; fifth century B.C.; height 8.4 cm; after photograph courtesy Zhang Deguang, Shanxi Institute of Archaeology. (c) Crouching bear; reported provenance, Jincun, Luoyang, Henan Province; fourth century B.C.; height 9.2 cm; Freer Gallery of Art, Smithsonian Institution, F1951.7. (d) Raptor with bear cub; provenance unknown; fourth century B.C.; height 7.7 cm; Therese and Erwin Harris collection. (e) Goat-man; provenance unknown; third century B.C.; height 10.9 cm; Therese and Erwin Harris collection. (f) Feline and large bird; provenance unknown; third to second century B.C.; height 15.5 cm; collection of Shelby White and Leon Levy. (g) Coiled wolflike animal; excavated from tomb of Nanyue Wang, Guangzhou, Guangdong Province; ca. 122 B.C.; height 16 cm; after Guangzhoushi 1991: 93, fig. 62:1. (h) Crouching animal; excavated from Linzi, Shandong Province; second century B.C.; height 13.3 cm; after Ziboshi 1997: 41, fig. 31:2.

anchors for se-zithers recovered from sites in the far north and south indicate that the instrument was widespread.³⁵

Ancient qin-zithers have been excavated only from Chu territory, but instruments in the north were probably similar, although the music played on them could have been different (see Chapter 1). After the Han dynasty, the Chu order was forgotten. The se nearly disappeared while the qin flourished, its design greatly modified to produce the classical instrument we know today. The earliest visual representation of a classical qin appears on a tomb tile from circa A.D. 400 (see fig. 3.8.5), which depicts Ji Kang (A.D. 223–62), one of the legendary reclusive qin players in the instrument's history.³⁶ Since then the main features of the classical qin have remained essentially unchanged to this day.

THE ZHU

The third type of zither found in Marquis Yi's tomb is long, slim, and elaborately decorated (see figs. 3.5, 3.10). The wide part of the body is hollow and the narrow neck solid. The strings are guided around the zither in much the same way as on the se, but neither movable bridges nor tuning pegs have been found.³⁷ Almost the entire surface is covered with bird and geometric designs, similar to those on the se, painted in red and black lacquer (fig. 3.2 details). Designs under the neck show human-headed figures among intertwined snakes, like the ones on Marquis Yi's coffin (compare figs. 3.5 detail a, 1.4 detail, and discussion of Checklist no. 1). Three more instruments, all five stringed, have recently been excavated from a richly furnished tomb at Wangchengpo, Changsha, Hunan Province (see fig. 3.10.2).³⁸ A small nonfunctional example intended for burial has also been recovered (see fig. 3.10.3).

The identity and function of the marquis's five-stringed instrument, the first excavated of its kind, have been the cause of much discussion but little agreement among Chinese scholars. In an early investigation, Huang Xiangpeng identified it with the tuning instrument discussed above called a *jun*,³⁹ but in an examination of the newly excavated (and identical) instruments from Changsha he has called them *zhu*.⁴⁰ In the discussion of the *zhu* in his compendium on ancient Chinese musical instruments, Li Chunyi did not include the marquis's instrument, preferring to leave it unidentified.⁴¹ The Han dictionary *Shuowen jiezi* from circa A.D. 100 describes a five-stringed *zhu* with bamboo body,⁴² the latter probably an extrapolation from the use of the bamboo radical in the character for *zhu*. The *Jiu Tang Shu* (Old history of the Tang dynasty) from A.D. 740–785 describes the *zhu* as being struck with a bamboo stick. But these late observations are unreliable, since the *zhu* had probably already disappeared by the end of the Han dynasty (A.D. 220). Texts from the Ming dynasty (1368–1644) call the *zhu* a bowed instrument, but bowing was not practiced

Fig. 3.10 Types of *zhu*-zithers and their early depiction (ca. 500 B.C. – A.D. 1). All *zhu* drawn to scale at bottom and linked to vertical time line at right.

.1 *Zhu* from the tomb of Marquis Yi of Zeng (fig. 3.5 above). Fifth century B.C. Five strings. Carved lacquered wood. Length 115 cm. After Li Chunyi 1996: 459, fig. 272.

.2 *Zhu* from Wangchengpo, Changsha, Hunan Province. Second century B.C. Five strings. Lacquered wood. Length 117.5 cm. After Kaogu 1994, 8: 722, fig. 3.

.3 *Zhu* (funerary). Mawangdui Tomb 3, Changsha, Hunan Province. Second century B.C. Five strings. Lacquered wood. Length 31 cm. After Li Chunyi 1996: 456, fig. 270:2.

.4 Detail from lacquered coffin showing fabulous creature playing a *zhu*. Mawangdui Tomb 1, Changsha, Hunan Province. Ca. 168 B.C. After Hunan 1973: pl. 21; Li Chunyi 1996: 457, fig. 271:1.

.5 Detail from lacquered wood cosmetics case showing man playing a *zhu*. Lianyungang, Haizhou, Jiangsu Province. Second to first century B.C. After Kaogu 1975, 3: 173, fig. 41.

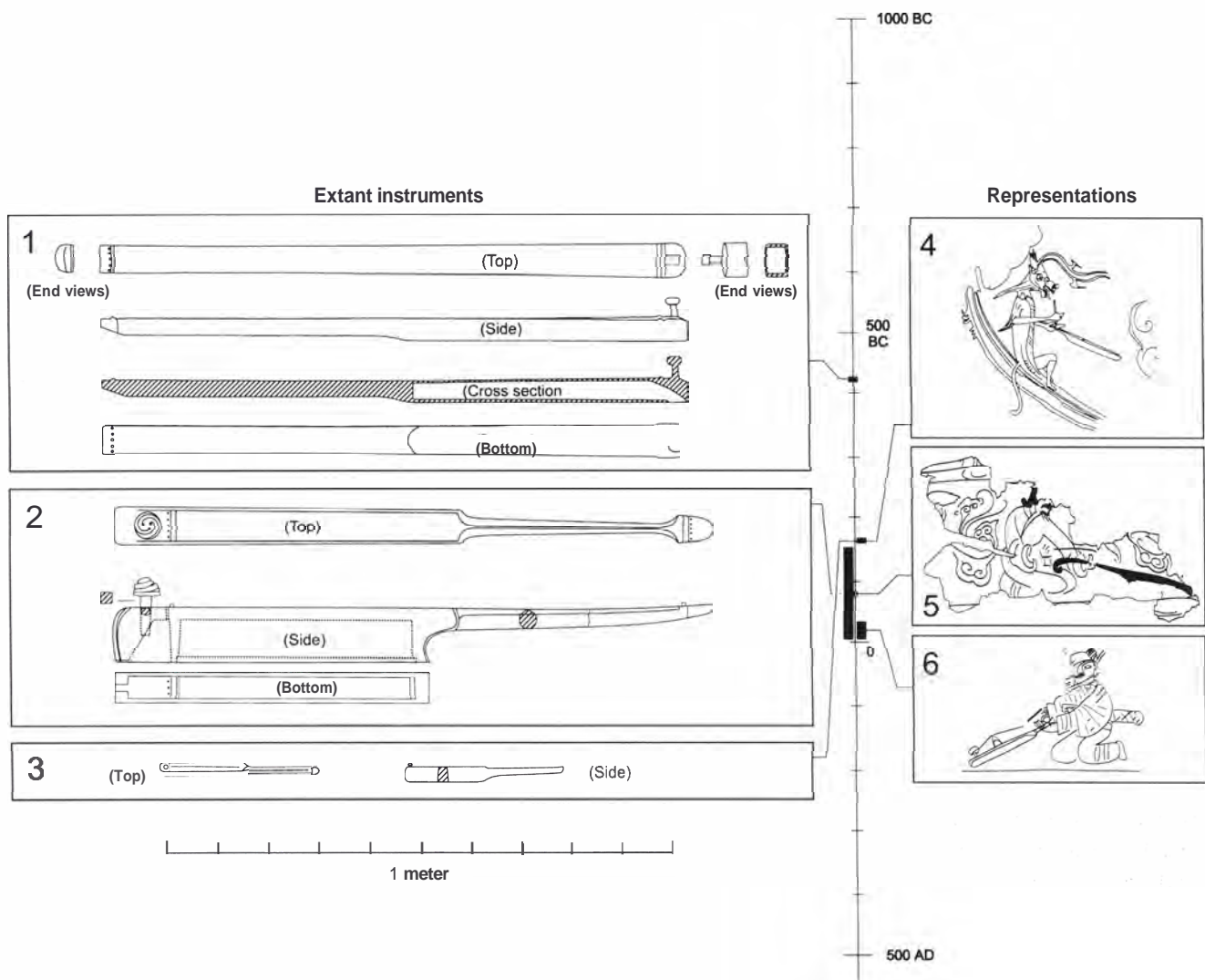
.6 Detail from brick relief from Xinye, Henan Province. Late first century B.C. After Huang Xiangpeng 1996, Henan: 195.

before circa A.D. 750, when it was used on the *zhazheng* or *yazheng* (a type of zither). This bow employed a rigid stick rather than a bundle of hair.⁴³

Like the *zhu* of the Han texts, Marquis Yi's zither also has five strings. The placement of the holes indicates that the strings were so closely spaced that plucking them would have been difficult and they may indeed have been struck with a stick. A passage in the *Zhanguo* (Discourse of the Warring States) from 480 to 280 B.C. reads: "Linzi is so wealthy and well supplied that all of its inhabitants play the *yu*-mouth organ, strum [*gu*] the *se*-zither, strike [*ji*] the *zhu*-zither, or pluck [*tan*] the *qin*-zither."⁴⁴ This passage, written at the zenith of the *zhu*'s popularity, describes three different playing methods for zithers that seem to correspond with the three examples in the tomb of Marquis Yi. Representations from the second and first century B.C. suggest the *zhu* might actually have been struck with a stick (figs. 3.10.4–6). Moreover sticklike objects were found near the *zhu* from Changsha (see fig. 3.10.2).⁴⁵ When playing the instrument, the musician would hold the neck of the instrument in the left hand, point it away from his or her body, and strike it with a stick held in the right hand. As illustrated, the fingers of the left hand could have pressed down on the strings to shorten them. But string lengths would have changed relatively little, producing perhaps only one or two steps above the open string pitch. Two illustrations (see figs. 3.10.4, 3.10.6) suggest that the instrument probably had movable bridges (at least by Han times), but none can be conclusively associated with a surviving *zhu*.

THE ZHENG

Three fragmentary examples of a different type of zither have recently been excavated from sites in southeast China (fig. 3.11.1–4),⁴⁶ but the type was not included in Marquis Yi's ensembles. This suggests that it was a strictly provincial instrument during the marquis's time and had not spread much beyond its southeastern home. This instrument has a long and slightly trapezoidal body sharply curved at both ends. The body is scooped out to provide a shallow cavity. A rebated groove along the rim of the cavity was probably meant to receive a thin board to close it, but no such board has survived. The strings are fewer than on the *se*—twelve to thirteen—and are not divided into three separate bundles. The poor preservation of these instruments means that many details (such as the nature of bridges and string suspensions) are unclear, but it is likely that they were tuned by movable bridges, though none has been found. In their current surviving form, even fixed bridges are absent. One is certainly needed at the wide end near the two rows of holes. On instruments recovered from Guixi Xian in Jiangxi Province (see figs. 3.11.1, 2) the rows contain seven and six large round holes, two centimeters in diameter, that correspond to a

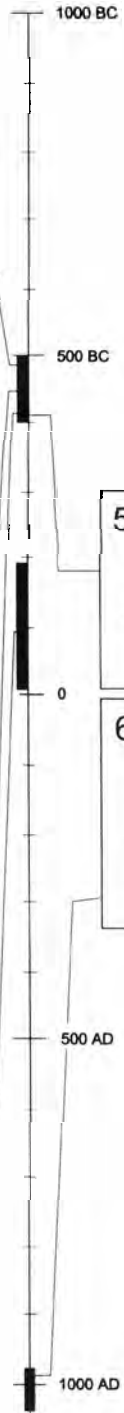
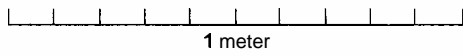
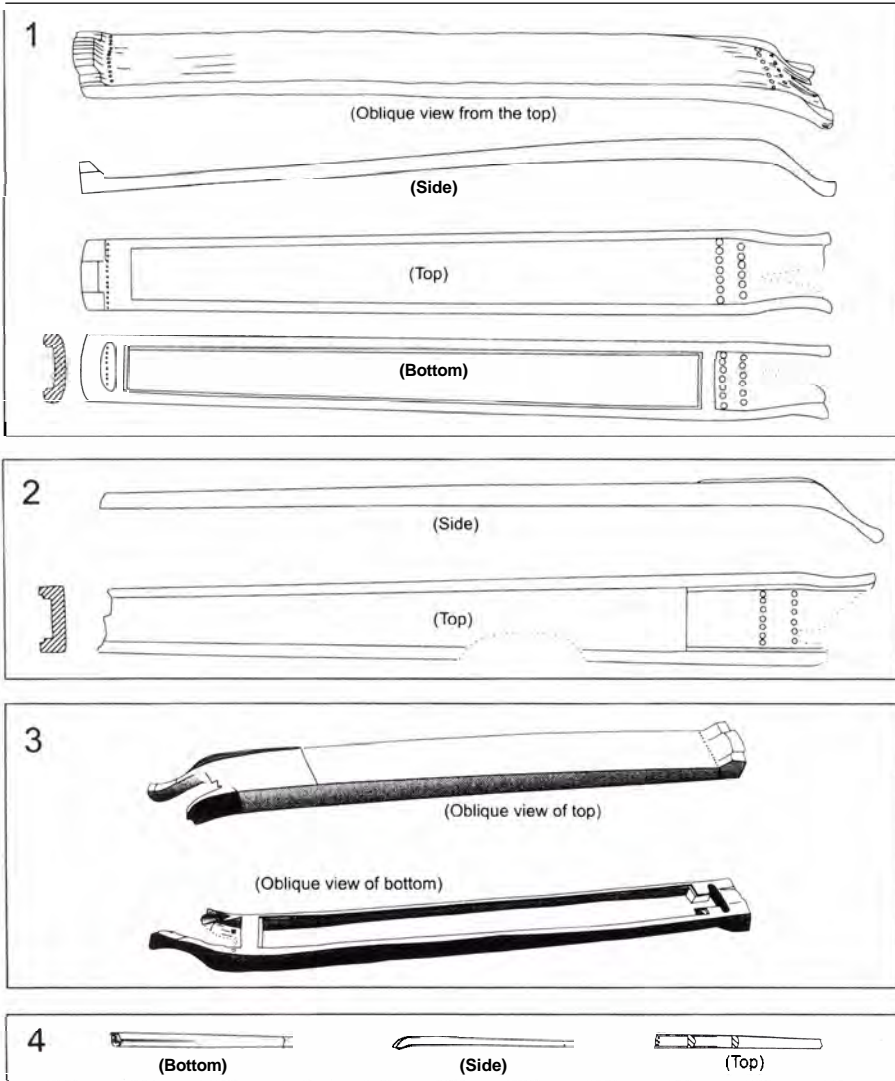


single row of thirteen small holes at the narrow end. An instrument from Wu Xian, Jiangsu Province (see fig. 3.11.3), has two rows of six large, square holes that match twelve small holes at the other end. Narrow side walls rise above the soundboard near the double rows of holes, revealing tiny holes that may have served as string attachments. These instruments appear plain and undecorated, except for the *zheng* from Wu Xian, which has traces of lacquer at the side walls.

A pair of similar instruments is shown inside the small bronze model of a house excavated from a fifth-century B.C. tomb in Shaoxing, Zhejiang Province (fig. 3.11.5; see also fig. 1.11). These miniature figures share details with the excavated zithers, having long bodies, curved ends, and raised side walls. The zithers rest on the players' knees with the bent end almost touching the floor. The same features are still present on the *zheng* a millennium later (fig. 3.11.6) — identical shape and number of strings (about fourteen on the modern compared to twelve or thirteen on the ancient instrument). Apparently, they are one and the same instrument caught at different moments in China's history.

The origin of the *zheng* as recorded in classical texts disagrees with the

Extant instruments



Representations



Fig. 3.11 Types of *zheng*-zithers and their early depiction. All *zheng* drawn to scale at bottom and linked to vertical time line at right.

.1 Zheng from cliff burials Tomb 2 Guixi Xian, Jiangxi Province.

Fifth century B.C. Thirteen strings. Wood. Length 166 cm. After Wenwu 1980, 11: 13–14, figs. 22:1, 23:1; and Liu Lesheng 1992: 200–201.

.2 Zheng from Guixi Xian Tomb 3, Jiangxi Province. Fifth century B.C. Thirteen strings. Wood. Length 174 cm (damaged). After Wenwu 1980, 11: 13–14, figs. 22:2, 23:2.

.3 Zheng from Changqiao, Wu Xian, Jiangsu Province. Fifth century B.C. Twelve strings. Wood with traces of lacquer. Length 132.8 cm. Huang Xiangpeng 1996, Jiangsu/Shanghai: 248–51.

.4 Zheng (funerary) from Luobowan Tomb 1, Gui Xian, Guangxi Province. Second to first century B.C. Wood. Length 42.4 cm (damaged). Li Chunyi 1996: 456, fig. 270:1.

.5 Drawing of musicians inside bronze model of a house from Tomb 306, Shaoxing, Zhejiang Province. Fifth century B.C. (See also fig. 1.11.)

.6 Classical *zheng* with thirteen to fourteen strings, from painting attributed to Zhou Wenju (ca. A.D. 970). Ink and color on silk. After the Art Institute of Chicago E11171 and 50.1370; Kishibe 1956: 105.

archaeological evidence. Texts claim that the *zheng* was invented during the Qin dynasty (221–206 B.C.). But the excavated prototypes come from sites in south-east China dating from the fifth century B.C. in the ancient territory of Yue. It is possible that the *zheng* was unknown in the north before the Qin conquest of Yue in 222 B.C. The rise of popular music during the Qin dynasty prompted musicians to look for a louder and more portable zither (unlike the *se*), and the provincial *zheng* fitted the bill.⁴⁷ ∞

Notes

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1. Hornbostel and Sachs 1961: 22. Some older Western literature inaccurately calls the *qin* a lute (for example Gulik 1969a, Gulik 1969b).
2. Open string pitches are discussed in Mok 1978: 48–49.
3. Sachs 1977: 187.
4. Lawergren 1997a compares the two in detail.
5. Hunan 1973: 104; Mok 1978: 63. See also note 31 below.
6. On the twelve *se* from Suizhou, the sound-board ranged between 15 and 25 millimeters in thickness (Hubei 1989: 160, table 20).
7. See Li Chunyi 1996: 426; Hubei 1989: 161, fig. 73.
8. For a discussion of the possible meaning of these motifs, see Checklist no. 1; of lacquer painting techniques, see So 1997.
9. See Li Chunyi 1996: 441–42, table 110.
10. *Ibid.*: fig. 254.
11. *Ibid.*: 427, table 106.
12. Early anchors were wood and later ones bronze. The latter often survive without their wooden instruments (see So and Bunker 1995: no. 72).
13. Li Chunyi 1996: 426, table 105.
14. String properties are described in Hunan 1973: 102–6; Mok 1978: 46–51; Lawergren 1997a: fig. 5.
15. This capacity was exploited on Ming *se*, which were played by simultaneously plucking strings an octave apart (Chen 1975: 157).
16. Chime *u1* seems to be a combination of disparate chimes (Falkenhausen 1993b: 249). For another interpretation of the musical character of the upper-tier bells, see Chapter 2.
17. Heterophony is common in non-European ensemble music. It permeates the world's first notated ensemble scores, including those from Tang dynasty China (composed before A.D. 841). See Picken 1981: 17–18.
18. Kaufmann 1976: 59, n. 92. The term "harmony" in Kaufmann would be better translated "attuned."
19. Needham et al. 1962: 185.
20. The instrument from Wulipai, Changsha, Hunan Province, was excavated in 1980 (Hunan kaogu *jikan* 1982, 1: 34, fig. 5); another from Tomb 1 at Guodian, Jingmen, Hubei Province, was excavated in 1993 (Yung 1998: 13, fig. 4; excavation reported in *Wenwu* 1997, 7: 35–48).
21. Thickness measured at the round sound hole of the *qin* in figure 3.8.4.
22. Karomatov et al. 1987: nos. 96 and 98.
23. Lawergren 1990, Lawergren 1997b.
24. Huang Xiangpeng 1996, Xinjiang: 13.
25. Bachmann 1994: figs. 1–3, 7, 9, 16, 17.
26. Guangzhoushi 1991: pl. 47:3; discussed in Lawergren 1997a. The instrument from Guangzhou has disintegrated (possibly more than one). It was most likely a *qin*, since the pegs fit the sequence illustrated in figure 3.9.1 and they fit the key (see fig. 3.9.3g) from the same site.
27. See note 14 above.
28. Lindqvist 1991: 216.
29. So and Bunker 1995: nos. 70 and 71. A tuning key in the Copenhagen National Museum (B4407) is identical in design to the Freer example illustrated as figure 3.9.3a, but it is 59 percent larger.
30. See article by Major in Cook and Major 1999: 121–44.
31. Merely counting *se* in Hubei (total of fifty-one) and Henan (total of twelve) Provinces as published in Huang Xiangpeng 1996, Hubei and Henan volumes.
32. Hung et al. 1974: 126–27.
33. Hawkes 1985: 102, 113, 198, 228, 235. Gopal Sukhu kindly checked the zithers in the *Chu Ci* and obtained word counts from Jiang Liangfu 1985.
34. The author is grateful to Jenny F. So for bringing this possible identification to his attention, and to Li Xiating and Zhang Deguang of

- the Shanxi Institute of Archaeology for pursuing it and supplying the photograph and dimensions on which the current drawing is based. The ram-shaped tuning peg was recorded merely as an "ornamental fitting" with no illustration or dimensions in the original archaeological report (see *Kaogu xuebao* 1957, 1: 105). A second similar object from the same site, now kept in the National Museum of History in Beijing, and identified as an ornamental fitting, may also prove to be a tuning key (*ibid.*: 115, pl. 5:7).
35. Hebei 1980: pls. 50:2, 50:3, 50:5, 50:6, 85:3; Guangzhoushi 1991: pls. 15:2, 15:3, 48:1.
36. See Chapter 1. For the best discussions of the *qin* and its lore, see Gulik 1969a, Gulik 1969b.
37. Bridges were supposedly recovered with the instruments in figure 3.10.2 from Wangchengpo, Changsha, Hunan Province, although they could also belong to se-zithers found in the same tomb (*Zhongguo wenwubao* 28 July 1996: 3). Close examination of the original painting of figure 3.10.4 in the Hunan Provincial Museum revealed a single bridge. For another Western Han pictorial illustration of a zhu with a bridge, see figure 3.10.6.
38. *Zhongguo wenwubao*, 28 July 1996: 3.
39. Huang Xiangpeng 1992; also see Needham et al. 1962: 185 for characterization of the *jun*. I owe this summary of current Chinese scholarly debate over the identification of this instrument to Jenny F. So.
40. Huang Xiangpeng 1994.
41. Li Chunyi 1996: 455–60.
42. See also Picken 1962: 41, where *tjuk* is equivalent to zhu.
43. Picken 1965: 83.
44. Quoted in Crump 1996: 169, with zither terms expanded by John S. Major.
45. Kaogu 1994, 8: 724; *Zhongguo wenwubao*, 28 July 1996: 3. Close examination of one of these zhu by the author during a visit to Changsha in July 1999 revealed thin and shallow impressions on the top edge of the instrument's body. If these marks were left by the striking stick, their directions were consistent with the playing positions given in figures 3.10.4–6, where the player's right elbow is shown near the top of the zhu. The author is grateful for the generous cooperation of the staff of the Hunan Provincial Museum and the Changsha Municipal Museum that allowed him to study this instrument.
46. *Wenwu* 1980, 11: 1–25; Huang Xiangpeng 1996, *Jiangsu*: 248–51, pl. 1:13.
47. Gulik 1951: 13–15.

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Journal of the American Oriental Society

Journal of the International Folk Music Council

Kaogu

Kaogu jinghua

Kaogu xuebao

Monumenta Nipponica

Musica Asiatica

Orientations

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Tōyō ongaku kenkyū

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