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Western Influences on the Early Chinese Qin-Zither

by

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Foreign influences on the qin have been considered earlier,¹ but the arguments were brief. The present, more expansive, evidence chiefly concerns the shape of the qin, its tuning keys, and some pre-Han texts. The discussion clarifies what is indigenous features, and what is not. Before embarking on the project (section B), some aspects of ancient Asian instruments are reviewed (section A).

A. The East-West Divide in Asia

Broadly speaking, Chinese music passed through two distinct phases between the Shang and Song dynasties. Before the beginning of our era, music sprang mainly from indigenous sources. Afterward, much came from Central Asia via the Silk Road.² Whereas China was closed to foreign music in the first phase, it struck the opposite stance in the second. Perhaps this bimodal historical model eventually will prove too simplistic but, at the moment, it is useful. A related bimodality emerges when we examine ancient instruments across the Asian continent, east to west. Both ends had radically different types of instruments.

1. The Eastern corpus of instruments

The archaeological records of the Shang dynasty reveal a broad array of instruments. Oracle Bone inscriptions identify them and their social context. The extant instruments in figure 1 (bronze drum, pan-pipe, mouth-organ, ocarina, single pipe) date to Shang or early Zhou. The representations (hand-bell, chime-sets of bells and stones, large drum, and clapper-drum) were produced later, but Shang knew similar instruments.

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¹ Bo Lawergren, "Strings." In Jenny F. So, ed. *Music in the Age of Confucius* (Washington DC: Freer Gallery of Art and Arthur M. Sackler Gallery / Seattle and London: University of Washington Press, 2000), 77, and 79.

² The visual sources of the Silk Road do not show music until the second century CE, although Chinese texts tell of Central Asian musicians being captured and brought to Gansu Province some centuries earlier (Liu Mau-tsai, "Kutscha und seine Beziehungen zu China von 2 Jh. v. bis zum 6 Jh.," *Asiatische Forschungen*, 27, 1969, 101 and 150–58).

String instruments have not survived from Shang, neither as extant objects nor images, but an Oracle Bone Graph may refer to them. This graph [𠄎; with the modern equivalent 樂 (*yue*)] means "music." It has two components, an upper part that shows a pair of twisted silk threads and a lower one [木; with the modern equivalent 木 (*mu*)] which means "tree" with the evolved meanings "wood" and "wooden."³ Since silk strings are shown on top of a wooden body, the graph is thought to depict a string instrument. However, the shape of the Shang string instrument cannot be deduced. Specifically, we do not know if the quartet of zithers known during the Warring States period (*qin*, *se*, *zhu*, and *zheng*) had precursors that early. Since shapes changed strongly at this time, one cannot extrapolate backward from the fifth century shapes.⁴

Drums were prominent during the second millennium BCE and gained an even stronger presence during the first half of the first millennium. The *Shi jing* gives a glimpse circa 900 BCE:

There are blind drummers, there are blind drummers
In the court of Zhou.
Erecting stands, erecting racks
With high flanges and mounted wings.
The echo-drums, kettle-drums, suspended drums,
Little-drums, chimes, rattles, and clappers
Being ready then are played.
The pan-pipes and flutes are all raised:
Huang-huang, their sound.
Solemn and harmonizing the concordant sound.
The prior ancestors hear this.
Our guests arrive and stop,
Long viewing their performance.'

Four types of drums are mentioned. Although their design is poorly known, the semantic differentiation is remarkable. Beginning in the twelfth or eleventh century BCE, bells, too, were differentiated in size and arranged into tuned sets.⁶ Likewise, lithophones were sorted into graduated sets. With time, the sets became larger, culminating in the sets of 65 bells and 32 lithophones placed in the ritual chamber of Marquis Yi of Zeng's tomb in 433 BCE.⁷ Both sets hung from racks. Ensembles grew heavier between the late second millennium and the middle of the first millennium. At the same time light wind instruments remained. All were age-old Chinese inventions.

³ Tong Kin-woon. "Shang Musical Instruments." Chapter 7: Stringed Instruments and Other Wooden Instruments. *Asian Music* 15.2, 1984, 68–70.

⁴ Lawergren, "The Metamorphosis of the Qin, 500 BCE–CE 500," *Orientalizations*, May 2003, documents large changes of the qin between 500 BCE and 500 CE.

⁵ Edward L. Shaughnessy, "Western Zhou History," in Michael Loewe and Edward L. Shaughnessy, eds. *Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C* (Cambridge: Cambridge University Press, 1999), 333.

⁶ Robert Bagley, "Percussion," in Jenny F. So, ed. *Music in the Age of Confucius*, figure 2.19.

⁷ Lothar von Falkenhausen, *Suspended Music, Chime-bells in the Culture of Bronze-Age China* (Berkeley: University of California Press, 1993), 6 and 202.

By the eighth century zithers^R have differentiated into the se and qin mentioned in the *Shi jing*,⁹ and three centuries later the tomb of Marquis Yi (Zeng Hou Yi) contained another distinct type, the *zhu* (figure 2). Judging by the way the instruments were set up there, many large se-zithers would have taken part in an ensemble of ritual instruments centered around sets of bells and lithophones. The qin usually had more intimate associations, as can be seen already in Yi's tomb. Beside the qin, his coffin chamber contained few other instruments: three se-zithers, the *zhu*, a small flat drum, and two mouth-organs. One cannot know if they formed an ensemble, but all were quiet instruments and their sound is likely to have mixed well.

The relative composition of instruments began to shift as the first millennium progressed, and their properties changed. During the first half of the millennium, a bronze bell could produce two pitches, but this ability was lost at the end of the millennium.¹⁰ Gradually, fewer bells were cast, while chordophones became more numerous. Han reliefs show se-zithers at banquets and other occasions of entertainment. It was a shift away from heavy ritual ensembles, and it accelerated when the Silk Road became active at the beginning of our era. Its traffic brought light Western instruments into China. Various factors contributed to the decline of bronze bells, one being their difficult tuning process. Compared to the ease of tuning strings and winds, bronze bells were unwieldy." As bronze bells declined, other vessels associated with the Zhou ancestral cult also did. Like them, bells lost their traditional place in the ritual.

When the Silk Road opened, China was ready to appreciate its musical potential. But up until then, China had stayed largely unaffected by foreign instruments. Later we will see that the qin was an exception.

2. The Western corpus of instruments

Within Western regions¹² instruments such as chordophones (figure 3) migrated easily and designs spread across wide regions. The process was helped by the frequent formation of empires which eased communication across large distances. Players and instruments circulated freely or as booty, gifts between rulers, etc.

Mesopotamia has left many images of instruments and texts about their musical

⁸ Formally, string instruments (chordophones) are divided into four types: harps, lyres, lutes, and zithers. Harps have a sound box with a thin sound board on one side. A thick rod protrudes from the box, and the strings run between the rod and the sound board. The strings form a plane perpendicular to the plane of the sound board. Lyres also have a sound box, but two arms protrude above it and a yoke connects them. The strings run between the yoke and the soundboard. The planes of the board and the strings are parallel. Ancient lutes have few strings and these hardly define a "plane of the strings." But each string is parallel with the sound board. There is a small sound box attached to a single rigid rod (the neck). Strings span the length of the rod. Zithers have a long and broad sound board, and strings run along it.

⁹ The *zhu* and *zheng*, not mentioned in the *Shi jing*, may have arisen somewhat later.

¹⁰ Falkenhausen, *Suspended Music*, 185, 189–90.

¹¹ Falkenhausen, *Suspended Music*, 323.

¹² Here "West" refers to Egypt, the Levant, Greece, Syria, Mesopotamia, and Iran. For arched harps of the first millennium BC, "West" means India (Lawergren, "The Spread of Harps Between the Near and Far East During the First Millennium A.D.: Evidence of Buddhist Musical Cultures on the Silk Road." *Silk Road Art and Archaeology*4, 1995/96, 244).

and societal function. But for extant instruments we must turn to Egypt. Most of its instruments were lightweight, and its harps, lyres, and lutes had thin walls—just as modern European string instruments still have. Images of Mesopotamian instruments look similar to Egyptian ones, and we assume the instruments were equally light.

The first string instrument to appear was the harp, shown in Mesopotamia circa 3000 BCE and four centuries later in Egypt. The earliest harps were arched like hunters' bows and had a box-like resonator attached at the lower end. It had few strings, less than a half-dozen. Around 1900 BCE the vertical angular harp was introduced in Mesopotamia (figure 3a). The angular harp had a large number of strings,¹³ and we might view it as more "efficient" than the arched harp. The latter disappeared in the Near East, but remained in Egypt and seem to have migrated to—or been independently invented in—India (figure 3c). Vertical angular harps were light and portable and spread throughout the Near East, into Egypt and the Hellenistic world.

Lyres, too, emerged first in Mesopotamia, circa 2650 BCE. For the first three centuries they were large ("bull lyres"), about one meter high, but smaller ones (figures 3d and 3f) became standard after 2000 BCE. Although easily portable, lyres hardly spread east of Iran. At the time of the Silk Road, they had become closely identified with the Hellenistic culture of the West.¹⁴

Lutes arose about 2300 BCE in Mesopotamia, i.e., relatively late. They were light instruments with hardly anything beyond a stick, small resonator box, and a few strings. Compared to harps and lyres they were simple. Perhaps as a result, the social status of lutes remained low for millennia.

Many types of wind instruments were available in the West, and all were light. Their sound was soft—such as pan-pipes, and end-blown flutes—or loud—such as double reed pipes and trumpets. Between 2200 and 1800 BCE small (circa 10 cm long) and light trumpets flourished in the oasis sites north of Iran.¹⁵

Drums existed in several types, but they never dominated ensembles as in China. Most were small, but for a brief moment (2100–2000 BCE) a drum as tall as its player flourished in Mesopotamia.¹⁶

3. Silk Road Influences on Chinese instruments

The music of the Silk Road profoundly influenced China for most of the first millennium CE, but negative reactions surfaced at the beginning of the Song circa 960. Music theorists sought to revive the indigenous music played before the

¹³ Close to 20, known from extant harps in Egypt, see Lawergren, "Harfe," in Ludwig Finscher, ed. *Die Musik in Geschichte und Gegenwart* 4, 1996, 42-47; and "Counting Strings on Ancient Egyptian Chordophones," in Catherine Homo-Lechner and Annie Belis, eds., *La pluridisciplinarité en archeologie musicale*. Paris: Editions de la Maison des Sciences de l'Homme, 1994), 519-33. In effect, vertical angular harps functioned as the "grand piano" of antiquity.

¹⁴ The single lyre image at Kizil (Lawergren, "The Spread of Harps Between the Near and Far East") is a straggler.

¹⁵ Lawergren 2003b ("Oxus Trumpets, ca. 2200–1800 BCE: Material Overview, Usage, Societal Role, and Catalog." *Iranica Antiqua* 38 [2003], 41–118).

¹⁶ Subhi Anwar Rashid, *Mesopotamien* (Leipzig: Volkseigener Betrieb Verlag, 1984), figures 49–55.

"corrupt" music of the West had reached China." Although there was little agreement about the nature of that early music, several practices associated with Central Asian imports disappeared. Harps vanished from East Asia and some types of drum left China and migrated to Korean and Japan, as did large lute plectra.

The musical success of the Silk Road was partly due to its easy supply of light instruments. Another reason was religious. Mahâyâna sutras, which profoundly influenced the East, were written as if Western instruments were the norm. Moreover, sacred texts recounted the life of Siddhartha, the prince who would grow up to become the historical Buddha.¹⁸ Up to the age of 29 he had dwelled in his father's palace and enjoyed the company of the female court musicians. He liked listening to their harps, lutes, flutes and drums.¹⁹ A still grander ensemble appears in the Lotus Sutra. It contains drums, horns, conch shells, pipes, flutes, zithers, harps, lutes, cymbals, and gongs,²⁰ an ensemble complement similar to that in figure 4. The sutra indicated that those who assemble such musicians would attain Buddhahood. Indeed, one gets the impression that Buddhist kings and princes were more attracted to the splendors of Siddhartha's courtly life-style than his subsequent enlightened, but spartan, circumstance.

The sacred texts spelled out the delights of Paradise that awaited Buddhists. There would be "music, concerts, and musical instruments," and worshipers would have access to an assortment of "materials, beginning with flowers and ending with musical instruments."²¹ Since the music of Western instruments was a pleasure sanctioned for the after-life, why not enjoy it already here on Earth?

Western instruments and musicians arrived along the two Silk Road branches that ran north and south of the Tarim basin. They left behind numerous painted scenes, some of musical subjects. Chinese pilgrims traveled the opposite direction to India and described the music they encountered. Instruments were brought out on Buddhist festivals. In 630 CE Xuanzang visited Kucha (Qiuci) on the northern road.

The soil is suitable for rice and corn... it produces grapes, pomegranates, and numerous species of plumes, pears, peaches, and almonds, also grow here. The ground is rich in minerals – gold, copper, iron, and lead, and tin. The air is soft, and the manners of the people honest. The style of writing [literature] is Indian, with some differences. They excel over other countries in their skill in playing the lute and pipe. They clothe themselves with ornamental garments of silk and embroidery.²²

¹⁷ Rulan Chao Pian, *Song Dynasty Musical Sources and Their Interpretation* (Cambridge, Mass.: Harvard University Press, 1967), 1.

¹⁸ For the role of music in Buddha's life, see Lawergren, "Buddha as a Musician." *Artibus Asiae* 54 (1994), 226–40.

¹⁹ E.B. Cowell, *Buddhist Mahâyâna Texts. The Buddha-karita of Asvaghosha* (New York: Dover, 1969), 56–7.

²⁰ Burton Watson (trans.), *The Lotus Sutra* (New York: Columbia University Press, 1993), chapter 2, 40.

²¹ F. Max Müller (trans.), *Buddhist Mahâyâna Texts. The Larger Sukhâvati-vyûha* (New York: Dover, 1969), 53.

²² Samuel Beal, (trans.), *Si-yu-ki, Buddhist Records of the Western World, by Hiuen Tsiang* (Delhi: Oriental Books Reprint Corp., 1969), 19.

Lutes began arriving in China during the second century CE,²³ but no extant examples exist from that time. Most likely, they were light instruments with thin sound boards.²⁴ Such a light instrument must have come as a surprise to Chinese musicians whose zithers had thick walls. Lutes came in various shapes — round, pear-shaped, and waisted — and held four or five strings. Harps are shown in China from the third century CE. They were either arched (arriving from India, figure 3c) or angular (from Iran and points further West, figure 3a). A few centuries later angular harps became ubiquitous in Chinese ensembles.²⁵

B. The earliest *qin*

The first example of a *qin* (figure 2a) appeared in the period considered devoid of Western musical influences (433 BCE). Some have asserted that even earlier precursors had arisen already during Shang,²⁶ but there is no proof. By the time of the Eastern Han the idea had taken hold that Confucius had played it in the sixth century BCE, but the only evidence for it earlier than 433 BCE is provided by *Shi jing* which mentions the *qin* and se played at banquets, convivial gatherings, dances, and sacrificial rites.

A few centuries after Zeng Hou Yi the *qin* had acquired such esteem that chroniclers felt compelled to invent fancy pedigrees for it and ascribe mythical heroes like Fu Xi, Shen Nong, and Shun as its inventors.²⁷ It also gained a place in moral discourse with the story of the *qin* player Boya. According to the *Lüshi chunqiu*²⁸ he roamed the Tai mountains of Shandong with his boon companion Zhong Ziqi.

Whenever Boya played the *qin*, Zhong Ziqi would listen to him. Once, when he was playing the *qin*, his thoughts turned to Mount Tai. Zhong Ziqi said, "How splendidly you play the *qin*! Lofty and majestic like Mount Tai." A short time later, when his thoughts turned to rolling waters, Zhong Ziqi said, "How splendidly you play the *qin*! Rolling and swelling like a rushing river." When Zhong Ziqi died, Boya smashed the *qin* and cut its strings. To the end of his life, he never again played the *qin* again because he felt that there was no one in the world worth playing for. This applies not only to the *qin*, but to worthiness as well. Although a man is worthy, if he is not received by a ruler with due courtesy, why should he devote his full loyalty to him? It is like the fleet-footed horse that will not go a thousand *li* by itself when the driver is not skilled.²⁹

²³ Laurence Picken, "The Origin of the Short Lute," *Galpin Society Journal*, 1955, 34.

²⁴ Those in the West were light and had thin sound boards, e.g., the Coptic lute in the Metropolitan Museum of Art, third–ninth century CE (Ricardo Eichmann, *Koptische Lauten; Eine musikarchaologische Untersuchung von sieben Langhalslauten des 3.–9. Jh. n. Chr. aus Ägypten* [Mainz am Rhein: Zabern, 1994], 90–1, plates 19–22) has a sound board 1.5 mm thick.

²⁵ Lawergren, "The Spread of Harps Between the Near and Far East," 270.

²⁶ R.H. van Gulik, *The Lore of the Chinese Lute; An Essay in the Ideology of the Ch'in* (Tokyo: Sophia University and Tokyo/Rutland: Charles E. Tuttle Co., 1969 [1940]), 6; James C.Y. Watt, "The *Qin* and the Chinese Literati," *Orientalism*, November 1981, 44.

²⁷ Gulik, *The Lore of the Chinese Lute*, 6.

²⁸ *Circa* 235 BCE.

²⁹ John Knoblock and Jeffrey Riegel, *The Annals of Lü Buwei* (Stanford: Stanford University Press, 2000), 308. They render *qin* as lute, but I have restored the original. Unfortunately, the great connoisseur of Chinese music Gulik (*The Lore of the Chinese Lute*, 1969 [1940]) provided the bad precedence in 1940. It would benefit studies if translators include the source's musical terminology as well as its English equivalent.

The story became a popular subject on bronze mirrors during the Han period (figure 5, and the series of illustrations in Lawergren 2003a, figure 1) and in the Six dynasties periods.³⁰ It drew attention to the expressive power of the qin, and the rewards of perceptive listening. This, perhaps, made it a favorite of recluses and literati. A millennium later, with the exclusive appeal of the qin intact, it had become more of a symbol than a musical instrument. Hanging on walls, it decorated studios of many literati, even those unable to play it.³¹

When the extant qin of Zeng Hou Yi was recovered in 1977, the exploration of the early history could be put on a factual basis. But the tomb contained much remarkable information on bells, and for decades the significance of the qin was overlooked.

1. The shape of the qin

Three surviving ancient qin-zithers are shown in figure 6, and that of Marquis Yi's is typical in dimensions and construction. Compared to the se (figure 7) it is much more compact. Whereas the se sound box is made from separate pieces of thin wood, the qin body is carved from a single thick piece. Its center is scooped out to form a cavity, but the walls are left thick (nearly 5 cm).³² The outer surface curves smoothly in all three dimensions. The cavity is covered by a separate bottom plate about two centimeters thick. The silhouette of the qin visibly separates it into a stout sound box and a narrow neck. Ten strings, tied to an anchor under the neck, emerge at the top of the neck, stretch across the body, and pass over a wide bridge where they descend through holes into the box and terminate at the tuning pegs accessible through a D-shaped opening (figure 6a, bottom) from the underside. Because the pegs serve to fine-tune the instrument, there is no need for movable bridges.

The other excavated examples³³ in figure 6 come from fifth through second century contexts in the Chu territory of south-central China. This does not 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. These three traits—the string counts, the thick soundboards, and the use of tuning pegs—indicate that these ancient instruments are ancestors of the later classical qin (figure 6d).

There are, however, noteworthy differences between the ancient and the

³⁰ Suzanne Cahill, "Boya Plays the Zither: Two Types of Chinese Bronze Mirror in the Donald H. Graham Jr. Collection," in Toru Nakano, *Bronze Mirrors From Ancient China; Donald H. Graham Jr. Collection* (Honolulu: Donald H. Graham Jr., 1994), 56. As in this figure, Han mirrors often show two companions on either side of Roya. Cahill suggests they illustrate the two facets of the *Zhong Ziqi* character, one hearing Mount Tai, the other a rushing river.

³¹ Watt, "The *Qin* and the Chinese Literati," 46.

³² Cf. the hefty wall thickness of the classical *qin*, circa 3.2 cm.

³³ The first was found 1973 in tomb 3 at Mawangdui (Li Chunyi, *Zhongguo shanggu chutu yueqi zonglun* (Beijing: Wenwu, 1996), 452, figure 268).

classical *qin*.³⁴ The former is smaller, only 67–82 centimeters long compared to the classical *qin*'s span of 120 centimeters. The shape is different: the classical *qin* is basically trapezoidal with the narrow end on the player's left; the ancient *qin* has a broad box on the right and a narrow neck on the left. During the 800 years following Zeng Hou Yi, the *qin* transformed smoothly from the short and stubby model to the long and curvaceous still played today.³⁵ Various new features arose in that period. The 13 small markers (*hui*) that now indicate finger positions were absent on the earliest ancient *qin*-zithers, but are mentioned in the *Huainan Zi*³⁶ compiled mid-second century BCE.³⁷

The ancient *qin*-zithers, while internally consistent, differ from most other ancient Eastern zithers, all which were close to a parallelepiped in shape. As already stated, China had three types: *se*, *zhu*, and *zheng*-zithers (figures 7 and 2). The *se* was most prominent—both in size, usage, and archaeological survival—but it largely disappeared after 300 CE.³⁸ It had no pegs, but was tuned by adjusting narrow movable bridges, one under each string. The same method was used on all zithers except the *qin*. The *se*-zithers of Zeng Hou Yi were long (167 cm) and had 25 strings. There were 12 identical *se*-zithers,³⁹ most of them in a ritual chamber with the set of 65 bells. Had they all played concurrently, the band would probably have held its own against the sound of the grand set of heavy bells.

Several examples of the *zhu* and *zheng* have also survived from the fifth century BCE. Like the *se*, the *zhu* did not last long beyond Han, but the *zheng* is still played today. The *zhu* also had a neck-and-body structure, but it was less prominent than on the *qin*. It was played in a different way: the player sat at the narrow end of the *zhu*, faced down the length axis of the instrument, and struck the strings by a short stick in the right hand.⁴⁰ During the Qin and Han dynasties the instrument gained notoriety. Two incidents were occasioned by the founding emperor's love of *zhu*-music and song. The first emperor of Qin had summoned the extraordinary player Gao Jianli to appear before him and play. But a courtier recognized Gao as a hunted assassin.

The emperor, unable to bring himself to kill such a skilled musician, ordered his eyes put out and commanded him to play in his presence. The emperor never failed to praise his playing and gradually allowed him to come nearer and nearer. Gao Jianli then got a heavy piece of lead and fastened it inside his *zhu*, and the

³⁴ The classical *qin* was profoundly examined by Gulik, *The Lore of the Chinese Lute*. For a more recent presentation, see *Wenwu tiandi* 2004.1, 4–33.

³⁵ Lawergren, "The Metamorphosis of the *Qin*," 37.

³⁶ *A Concordance to the Huainanzi* (Hong Kong: Commercial Press, 1992), chapter 19, 206, lines 16–17.

³⁷ The markers are mentioned in a story about a blind person who cannot tell day and night apart, but plays the *qin* without missing a string or *hui*. The translation by Le Blanc and Mathieu (*Philosophes Taoistes, II: Huainan Zi* [Paris: Gallimard, 2003]), 926 is unclear on this point.

³⁸ A late depiction is in Boston (Wu Tung, *Earth Transformed; Chinese Ceramics in the Museum of Fine Arts, Boston* [Boston: MFA, 2001]), 16–17, "Granary with Figures and Architecture." Late third century).

³⁹ The first ones removed from the tomb dried up and disintegrated, but a technique was found to preserve about six *se*, two of them in splendid condition.

⁴⁰ Two such sticks were apparently excavated over a decade ago (see Lawergren, "Strings," note 45), but they remain unpublished.

next time he was summoned to play at the emperor's side, he raised the *zhu* and struck at the emperor. He missed, and was summarily executed.⁴¹

Since the episode was written around 100 BCE, only a century after the attempt, it may be fairly accurate. Illustrations occurred centuries later, e.g., on a relief in the Wu Liang shrine,⁴² but the artist rendered the *zhu* as a narrow rectangle without a neck. Either he was ignorant of the instrument, or it had changed or vanished at this late date. Today we know the shape of the *zhu* and realize it looks like a 1.5 meter long club. Loaded with a lump of lead, it could have been a lethal weapon.

The second episode concerns the first emperor of Han, Gaozu (Liu Bang), who grew up in the territory of Chu. In 196, while traveling to the capital of Chang'an.

He was passing through his old home of Pei on his way. Here he stopped and held a feast at the Palace of Pei, summoning all his friends and the elders and young men to drink to their hearts' content. He gathered together a group of some hundred and twenty children of Pei and taught them to sing and, when the feast was at its height, Gaozu struck the *zhu* and sang a song which he had composed:

A great wind came forth;
The clouds rose on high.
Now that my might rules all within the seas,
I have returned to my old village.
Where shall I find brave men
To guard the four corners of my land?

He made the children join in and repeat the song, while he rose and danced. Deeply moved with grief and nostalgia, and with tears streaming down his face, he said to the elders of Pei: "The traveler sighs for his old home."⁴³

In both instances the *zhu* is played by soldiers, men who probably had little in common with the recluses who favored the *qin*. It seems to have been a folk-instrument played by soldiers and men of action.

Four zheng-zithers have been excavated, all from Southeast China.⁴⁴ They are nearly identical to known examples of zheng depicted more than a millennium later, and there is little room for misidentification. The fifth-century date is surprising because the *Shi ji* states it was invented in the Qin state of northeast China during the third century BCE.⁴⁵ Evidently, this text is not always reliable on musical affairs.

Figure 8 brings in the earliest string instruments found in Japan and Korea. All are zithers. The *wagon* dominated Japan, with the first excavated examples from the

⁴¹ *Shi Ji*, 2537; translation in Burton Watson, *Records of the Historian; Chapters from the Shih chi of Ssu-ma Ch'ien* (New York: Columbia University Press, 1969), 66.

⁴² 151 CE (Wu Hung, *The Wu Liang Shrine; The Ideology of Early Chinese Pictorial Art* [Stanford: Stanford University Press, 1989]), 324–27.

⁴³ Watson, trans., *Records of the Historian*, 140–1.

⁴⁴ Lawergren, "Strings," 66, 80–83.

⁴⁵ Han Mei, "Zheng," in *The New Grove Dictionary of Music and Musicians*, Vol. 27 (London: Macmillan, 2001), 803.

northern parts of Honshu island during the Jomon period (500–300 BCE).⁴⁶ They were about 55 cm long and had space for two strings. Subsequent examples (300–100 BCE) appeared in more southerly regions. Still later (during the Kofun period, 300–710 CE) the instrument grew as large as 1.5 meter and held six strings.⁴⁷ Since then the wagon has largely disappeared, although an altered version is still played at traditional events. The koto, which has succeeded it as the zither characteristic of Japan, is generally assumed to be related to the Chinese zheng rather than the wagon.⁴⁸

The earliest instrument in Korea was recently excavated at Sinchang-dong, Gwangju, South Korea. It is dated between 100 BCE and 100 CE.⁴⁹ It is a wooden board shaped like a rectangle joined to a semicircle. The latter has a small bracket that probably supported a narrow curved piece, now missing. This complex shape is reminiscent of the current Korean *Gayageum*,⁵⁰ a 12-stringed zither with a curved piece called "ram's horns." Two other Korean/Manchurian instruments, dated to the fifth-century CE, are shown in a tomb situated near the Yalu river.⁵¹ One has completely rectangular shape and carries five transverse tuning pegs at one end. Identical instruments have survived in Japan from the ninth century,⁵² but its ancient name is not known, neither there nor in Korea. The other is a zither with frets instead of pegs, a feature which indicates it is the predecessor of the Geomungo, currently a 6-stringed Korean zither. Figure 9 gives photos of the instruments in the previous figure. The earliest Japanese *wagons* were only thin wooden boards; later ones are boxes. In fact, all known ancient Eastern zithers, except the qin and *zhu*, have near-rectangular shape when viewed from above. We take it to be a genuine feature of early Eastern zithers. The narrow compass of forms becomes even more conspicuous when we consider the great variety of string instruments available contemporaneously in the West (figure 3).

What caused this similarity across the vast Far Eastern region is not known, but

⁴⁶ David W. Hughes, "Music Archaeology of Japan: Data and Interpretation," in Ellen Hickmann and David W. Hughes, eds. *The Archaeology of Early Music Cultures* (Bonn: Verlag für systematische Musikwissenschaft, 1988), 63–66; Hirata Tsutomu, *The Koto, Technetics and Industry* (Osaka: Osaka University Graduate School of Letters, 2002); Wada Katsuhisa, "The Early History of the Zither Wagon," *Nihon Dentoo Ongaku Kenkyuu* (Bulletin of the Research Centre for Japanese Traditional Music, Kyoto City University of Arts) 1, 2004, 75–85.

⁴⁷ The ShBsBin Imperial Repository, Nara, has seven *wagons* from the eighth or ninth century. All have six strings (Hayashi Kenzō et al., *Shōsōin no Gakki* [Tokyo: Nihon Keizai Shimbun Sha, 1967], 33–35, 80, plates 68–92).

⁴⁸ David W. Hughes, "Music Archaeology of Japan: Data and Interpretation," 80.

⁴⁹ Cho Hyunjong et al., *Gwangju shinchangdong jeoseupjee yoojuk IV* (Sinchang-dong wetland site IV). Report on the Research of Antiquities of the Gwangju National Museum, vol. 45 (Gwangju, Korea: Kooklip Gwangju Bakmoolkwan, 2002), 17–18, 133, 141, and 151. A replica of the zither is displayed in the National Museum of Korea, Seoul.

⁵⁰ Twelve-stringed examples were deposited in the ShBsBin Imperial Repository, Nara, Japan at the end of the first millennium CE (Hayashi et al. *ShBsBin no Gakki*, 78 and 79).

⁵¹ Tomb 1, Changchuan, Qi-an, Jiling, on the North Korean-Manchurian border. Both paintings are reproduced in Song Bang-song, *Korean Music; Historical and Other Aspects* (Seoul/Somerset [New Jersey, USA]: Jimoondang International, 2000), 142–45. Several rectangular zithers of similar age and design are given by Song Bang-song, *The Sanjo Tradition of Korean Komun'go Music* (Seoul: Jung Eum Sa, 1986), figures 1–11.

⁵² A 7-stringed example, 120 cm long, is in the ShBsBin (Hayashi et al. *ShBsBin no Gakki*, 21, 75, and plates 38–41).

some sort of common origin seems likely. Equally remarkable is the stark difference between these rectangles and the neck-and-body shape of the *qin*. The feature sets the *qin* apart from Eastern zithers in general. Since a clear separation between a neck and a body can be found on Western chordophones, they are likely to have provided the inspiration.

Steppe harps influencing the shape of ancient qin-zithers

The neck-and-body would normally bring lutes to mind, but lutes did not enter China until the Silk Road was established five centuries after Zeng Hou Yi. Before the era of the Silk Road they existed only in regions west of Iran and Bactria (figure 10a),⁵³ and any impact on China is unlikely. The most plausible source was instead an unusual instrument which possessed the required neck-and-body structure and existed in abundance on China's western border: the horizontal angular harp. It has recently been found in tombs associated with "mummy" burials in Xinjiang Autonomous Region.⁵⁴ Five years ago when I pondered foreign influences, the first such harps were barely published, and one could only hint at the connection.⁵⁵ Now the harps appear to have been common in that western region (figure 10b) during the first millennium BCE.

The two first harps were excavated 1996 in cemetery number 1 located near the oasis of Zughunluq, Qiemo county, Xinjiang.⁵⁶ The site lies on the southern route around the Taklamakan desert, near the Gobi desert, and the dry sand had preserved the complete wooden parts of the harp and some of the leather cover (figures 11a and 11b). They belong to period II, cautiously dated to 770 BCE–8 CE, but were probably buried between the fifth or fourth centuries BCE. In 2003 similar harps were found in a cemetery on the route north of the Tarim, at Yanghai, Shanshan county, Xinjiang (figure 11c).⁵⁷ The harps from the two sites in Xinjiang (figure 10b) are closely related to three more distant harps which have long been known and documented. One was found in a tomb at Pazyryk in the Altai mountains, the other at nearby Bashadar,⁵⁸ and the third was collected at Olbia on the Black Sea (figures

⁵³ E.g., F.M. Karomatov et al., *Mittelasiien* (Leipzig: Volkseigener Betrieb (VEB) Verlag, 1987), figures 49 and 82.

⁵⁴ For a discussion of Tarim mummies, see J.P. Mallory and Victor H. Mair, *The Tarim Mummies; Ancient China and the Mystery of the Earliest Peoples from the West* (London: Thames and Hudson, 2000).

⁵⁵ Lawergren, "Strings," 75.

⁵⁶ In grave M14: Wang Bo et al., "The no. 1 cemetery at Zhaghunluk (Jaganluq), Jumo, Xinjiang," *China Archaeology and Art Digest* 2000.3 (4), 431–35; Wang Zichu, "Reconstruction of Konghou," *Wenwu* 1999.7, 60; see too the reports in the journals *Xiyu yanjiu* 2001.2, 78–85; *Kaogu xuebao* 2003.1, 89–136, figure 25; and in *Wenwu* 2003.2, 56–62.

⁵⁷ *Kaogu* 2004.5, 3–7, figure 9; *Wenwu tiandi* 2004.6, 60.

⁵⁸ Bo Lawergren, "The Ancient Harp from Pazyryk," *Beiträge zur allgemeinen und vergleichenden Archäologie* 9/10, 1990, 111–18. The Yanghai and Pazyryk harps both had five strings made from animal sinew, possibly taken from the back of a deer. The procedure of building long strings by joining overlapping pieces of sinew is well attested in the ethnographic literature both in the north (e.g., in Greenland, Gudmund Hatt, *Arktiske skinddragter i Eurasien og Amerika, en etnografisk studie* [Copenhagen: J.H. Schultz, 1914], 41–43) and in the south (e.g., in the Kalahari desert, see Marjorie Shostak, *Nisa. The Life and Words of a !Kung Woman* [Cambridge, Mass.: Harvard University Press, 2000], 13). To make a string, thin segments are pulled from a dried piece of tendon, and they are shaped between the string-maker's teeth. The saliva acts as glue. The strings are joined by rolling them along the cheek or thigh. The process leaves marks on the front teeth which can be archaeologically detected (Hart Hansen et al., *The Greenland Mummies* [London: British Museum, 1991], 83).

11f and 11e).⁵⁹ All are horizontal angular harps. These three harps have rounded sound-boxes that span the full length of the instrument. But on the Xinjiang harps the box occupies only half the length of the instrument, and the rest is a narrow horizontal neck. A short rod protrudes vertically from the distal end of the neck. At Pazyryk and Bashadar, however, the vertical rod had the shape of an inverted T. It was made from a tree branch and tied to the top of the instrument. Some boxes are narrower in the middle than at the ends, i.e., they are waisted. Most harps had about five strings.⁶⁰ Since all these harps were buried at the edge of the vast Eurasian steppe zone (figure 10b), I call them "steppe harps."

Similar⁶¹ horizontal angular harps were depicted on walls of Assyrian palaces between 850 and 650 BCE (figure 11d).⁶² The extent of the Assyrian empire ca. 830 BCE is given in figure 10b.⁶³ As already discussed, angular harps—horizontal as well as vertical—had arisen a millennium earlier in the Old Babylonian period (figure 3b). Assyria harps descended from those, as did horizontal harps found at Shar-i Sokhta⁶⁴ and in the Oxus region,⁶⁵ which both date to about 2000 BCE. The Assyrian version had vertical rods with human hands carved at the top. Perhaps birds carved on steppe harps (figure 11d) echoed that practice.

The edge of the steppe touched the Assyrian empire and some steppe people (e.g., the Scythians) entered Assyrian territory to join the army as mercenaries.⁶⁶ The recruitment was brisk during the latter half the seventh century, a period when we know the shape of Assyrian harps (figure 11d). Its small size and low weight was well suited to life on the steppes. Riders could play them on horseback and carry them far. In the process it seems plausible that the Assyrian harp transformed into the steppe harp (figures 11a–11c, 11e–11f) during the course of a few centuries. The steppe harps flourished before Buddhism had entered East Asia. They were not associated with Buddhism, nor did they appear on Silk Road paintings.

The strings are tied between the vertical rod and a long horizontal stick (figures

⁵⁹ Werner Bachmann, "Die skythisch-samartische Harfe aus Olbia: Vorbericht zur Rekonstruktion eines unveröffentlichten, im Kriege verschollenen Musikinstruments," In Marcel Otte, ed. *Sons originels: Préhistoire de la musique. Actes du colloque de musicologie, 11-12-13 décembre 1992* (Liege: Université de Liege, 1994).

⁶⁰ A harp found at Bashadar (near Pazyryk) may have had 15 strings (Lawergren, "The Ancient Harp from Pazyryk," 115), but one of the Xinjiang harps seems to have had only 3 (Wang Bo, private information).

⁶¹ They have many obvious features in common, but a more subtle one is the shape of the sound hole. The harps from Zughunluq and Pazyryk have holes shaped like rectangles with concave sides. That was also the shape on Assyrian harps (Bo Lawergren and O.R. Gurney, "Sound Holes and Geometrical Figures: Clues to the Terminology of Ancient Mesopotamian Harps," *Iraq* 49, 1987, 37–52, figure 6 and plate Xa).

⁶² Mostly with 9 strings (Lawergren and Gurney, "Sound Holes and Geometrical Figures, 51). The image comes from the Nimrud palace of Ashurnasirpal II dated 865–860 BCE, but harps drawn two centuries later in Ashurbanipal's palace at Nineveh look similar (Rashid, *Mesopotamien*, figures 137 and 146).

⁶³ Map in Michael Roaf, *Cultural Atlas of Mesopotamia and the Ancient Near East* (Oxford: Facts on File, 1990), 164.

⁶⁴ Lawergren, "Harfe," figure 3b.

⁶⁵ Henri-Paul Francfort, "Gobelet cylindrique avec scene de banquet," in Osmund Boppearachchi et al, eds., *Catalogue de l'exposition de l'Indus a l'Oxus. Archéologie de l'Asie Centrale* [Lattes: Association IMAGO—Musée de Lattes, 2003], 43–44, figure 12a.

⁶⁶ Georges Roux, *Ancient Iraq* (Harmondsworth: Penguin, 1964), 315.

11d and 11f),⁶⁷ and the latter rested in close contact with the skin that covered the sound box. Collars would have been wound around the rod⁶⁸ and string attached as shown in figures 11a and 11d. By turning the collars, string tension was adjusted and pitch regulated. This was an old tuning technique, probably present already on the first harps in 3,000 BCE.⁶⁹ Soon after, intricately plaited collars appeared on a bull-lyre in Mesopotamia, 2450 BCE (figure 12).⁷⁰

It seems that Assyrian horizontal harps gave rise to harps played in the vast steppe region." Some had symmetrical bodies, but those in the Xinjiang region were asymmetrical. Half their bodies were slim like necks, the other half looked like a body with sloping shoulders. This structure is reminiscent of the ancient qin. Moreover, the playing position is horizontal for both instruments. Most likely, the harp inspired the shape of the *qin*. That influence played out over a relatively small space and brief time: in Xinjiang during the first half of the first millennium BCE.

2. Tuning keys

The easiest passage from Xinjiang into China leads through the Gansu corridor. Several other attributes of the *qin* also point in that direction. One concerns the tuning of the qin, specifically its tuning pegs and tuning keys. Each string required a peg and, since the ancient instrument was smaller than the classical one, the spacing between pegs became denser. Classical pegs can be turned by fingers, but the high density of pegs on the ancient *qin* demands the use of narrow keys.⁷² Many have survived because they were made of bronze. For a long time their function was not recognized, but the 1983 excavation of Nanyue Wang finally enabled a proper identification. The key is known as a *zhen yao*.⁷³ Most were decorated with animal-style images characteristic of China's northern zone and the steppes of Central Asia.⁷⁴

The Pazyryk harp had such a stick. However, it was not reported on the Zaghunluq harps (note 56), but excavation photos show stick-like pieces in the vicinity (private communication from the excavator Wang Bo). At Yanghai (see note 56) at least one harp has such a stick inserted into the skin (figure 11c) which also touched a number of perpendicular sticks inserted between the sides of the sound box. These acted as soacers, preventing the collapse of the box when the skin dried and tautened. Similar spacers are documented on the Pazyryk harp (Lawergren, "The Ancient Harp from Pazyryk," 112).

Collars made of leather straps survive on the Pazyryk harp (Karamatov et al., *Mittelasien*, plate 32; Lawergren, "The Ancient Harp from Pazyryk," 115, plate 57.1).

Lawergren, "To Tune a String: Dichotomies and Diffusions between the Near and Far East," in Borje Magnusson et al., eds. *Ultra Terminum Vagari. Scritti in onore di Carl Nylander* (Rome: Edizioni Quasar, 1997), 180.

Lawergren, "To Tune a String," figure 17b.

But steppe harps were made locally of *huyang* timber (Wang et al., "The no. 1 cemetery at Zhaghunluk (Jaganluq), Jumo, Xinjiang," 434).

All known keys are dated before the end of Western Han. Presumably, pegs were turned by fingers thereafter.

Guangzhoushi wenwu guanli weiyuanhui & Guangdong sheng bewuguan, eds., *Xi Han Nanyue wang mu* (Beijing: Wenwu, 1991), volume 1, 92–93, and volume 2, pl. XLVII; Emma C. Bunker et al, *Ancient Bronzes of the Eastern Eurasian Steppes from the Arthur M. Sackler Collections* (New York: The Arthur M. Sackler Foundation, 1997), 293.

E.g., Bunker et al, *Ancient Bronzes of the Eastern Eurasian Steppe*, 113–299.

The pegs of Maquis Yi's qin were found near the sound box (figures 2 and 6a). They were wooden tubes where one end had been provided with a ridge that fit a key with square socket (figure 13a). Nearly three centuries later the Mawangdui pegs were made of bone and given octagonal cross section. There is a central channel and a side hole (figure 13b). Nanyue Wang had eleven bronze pegs with square cross section (figure 13c). The side hole remained, but the key had a waist, presumably to accommodate a cord encircling the peg—as is the custom today.

Keys consisted of a socket, shaft, and handle. The socket had a square cavity that fit square pegs, and the handle was elaborately decorated. Tuning keys made before the third century BCE usually had long square shafts (figures 14a–14i), but later ones often had circular ones (figures 14k, 14n, 14o, and 14q). Some of the keys in figure 14 have been published earlier,⁷⁵ but eight are new.⁷⁶ Unfortunately, many come from antiquities markets and are less trustworthy than properly documented ones.

The animals shown on the handles were common in China's Northern Zone and Central Asia, but less so on the Central Plain. Although the keys were used on qin-zithers in central Chinese regions, their decorative repertoire had originated in distant regions in the north and northeast. Two of the keys (figures 14h and 14i) have even further antecedents. They depict goat-men with bodies of goats and heads of men, and such hybrids were characteristic of Achaemenid art of the Persian empire. Persepolis, its capital, lies 5,000 km to the west.

Northern and Central Asian bronzes commonly show ferocious battles, and tuning keys are no exception. The most explicit battle occurs on the oldest key (figure 14a). A feline rules the top section and bites the head of a long snake curling underneath. At the same time, a large bird attacks the rear end of the feline, its sharp beak hacking away at the anal region. The bird is covered by a mass of feathers and encircled by the snake. Eloquently produced as this scene is, it is hard to see how it relates to the qin or its music.

The goat keys (figures 14c and 14d) were made about 50 years later. Both animals rest peacefully, as do the monkey and bear in figures 14f, 14e, and 14p. But the raptor (14g) is in the ferocious style of the northern steppe: the large bird has grabbed a small bear cub in its sharp talons. A slightly later key shows the violent combat of two animals (14k): a standing bird curves sharply back onto itself and bites the rear feathers of its own body. At the same time the bird is attacked by a small feline that clutches the inner curve of the bird's body. Several other keys have animals with acrobatically curved bodies, postures that permit the animals to bite themselves (14m and 14n). But there are also gentler scenes, such as two monkeys caressing (14j), and wrestlers engaging in a playful tussle (14l). Perhaps they are acrobats like the man on an earlier key (14b).

A number of keys show bears. Normally, their top surface (dorsum) is unbroken, but in figure 14p the surface has a rectangular opening which contains a lever that turns around an axis. The cross-section of the small lever is an isosceles triangle with

⁷⁵ Lawergren, "The Metamorphosis of the *Qin*," figure 5.

⁷⁶ For photographs of keys, see Lawergren, forthcoming ("Iconography of the Ancient Chinese *Qin* Zither [500 BC to 500 AD]," *Music in Art* 29, to be published 2005).

a fairly sharp edge at the inner corner. Most likely, it is a knife for cutting the playing string." It is a folding knife, i.e., a flick-knife.

The image of an acrobat on a key, accords with the role of music known elsewhere: Han reliefs show acrobats at musical performances.⁷⁸ But the majority of keys have steppe motifs, and they seem unlikely to relate to music. Instead, they point to an affinity between the qin and the environment of northern China and Central Asia where such motifs flourished.⁷⁹

Most keys are made of bronze. The exceptions were produced during Western Han, a time when the vogue for key-making was coming to an end. One key is made of solid silver inlaid with precious stones (14p), and the other is solid bronze inlaid with gold and precious stones (14q). Both are elite objects which point to the high status bestowed on the qin at this late date. There is also an iron key in the tomb of Princess Dou Wan at Macheng, Hebei (see below).

Made of perishable material, most qin-zithers have perished from the archaeological record, but their bronze pegs and keys survive and leave clues to the spatial and temporal distribution of the instrument. An inventory of excavated keys would give insight into this important information,⁸⁰ but it is a difficult task since much of the material may be unreported.⁸¹ On the basis of this study one would expect the earliest keys to come from northern China. To date only a handful of keys have been identified in scientific excavations and few are earlier than Han. In the following partial list, six come from sites in northern China, and the seventh from the south. Number eight is made from iron inlaid with gold, all the others from bronze.

1. Luoyang city, Henan Province. Late sixth to early fifth century BCE.⁸²
2. Fenshuiling, Changzhi county, Shanxi Province. Fifth century BCE (figure 14d).
3. Jincun, Luoyang, Henan. Fourth century BCE (figure 14f).
4. Jishang, Woyang, Anhui (80 km west of Hefei). Western Han (similar to figure 14n).⁸³

⁷⁷ A similar bear with flick-knife is illustrated in Emma C. Bunker et al, *Nomadic Art of the Eastern Eurasian Steppes; The Eugene V. Thaw and Other New York collections* (New York: The Metropolitan Museum of Art; New Haven: Yale University Press, 2002), 187.

⁷⁸ E.g., Lucy Lim, *Stories from China's Past* (San Francisco: The Chinese Culture Foundation, 1987), plate 48, which shows jugglers with two musicians playing pan-pipes; Zhou Dao et al., *Henan Han dai huaxiangzhuan* (Shanghai: Shanghai Renmin Meishu, 1985), figure 243, which has an archer, a juggler, and dancer with three musicians playing the zhu-zither, drum, and mouth-organ.

⁷⁹ For convenient archaeological discussions of the Northern Zone, see Katheryn M. Linduff, "An Archaeological Overview," in Emma C. Bunker, *Ancient Bronzes of the Eastern Eurasian Steppes from the Arthur M. Sackler Collections* (New York: The Arthur M. Sackler Foundation, 1997); Nicola Di Cosmo, "The Northern Frontier in Pre-Imperial China," in Loewe and Shaughnessy 1999, 885–966.

⁸⁰ Keys in Western collections usually come from plundered sites and cannot be used.

⁸¹ Since the function of the keys has only recently become known, they may lie misidentified in Chinese museums. One example is the key shown as figure 14d. It was only discovered after Li Xiating and Zhang Deguang learned about the identification in Washington and looked in storage rooms at their home institution, Shanxi Institute of Archaeology (Lawergren, "Strings," n. 34).

⁸² *Wenwu* 2003.12, 12–28, figure 9. The report dates it roughly to Eastern Zhou, but a bronze statuette in the same tomb is similar in shape, size, and decoration to the quadruped in Jenny F. So, *Eastern Zhou Ritual Bronzes from the Arthur M. Sackler Collections* (New York: The Arthur M. Sackler Foundation, 1995), figure 46, and I assign it the same date. For items 1, 2, and 6, see also Lawergren, "Strings," figures 3.9.3.b, 3.9.3.c, and 3.9.3g.

⁸³ See the report in *Wenwu* 2003.9, 25–31, figure 11.

5. Dongdianzi, Xuzhou, Jiangsu. Western Han (similar to figure 14n).⁸⁴
6. Shangwang, Linzi, Shandong. Early second century BCE (figure 14m).⁸⁵
7. Tomb of King Nanyue Wang, Guangzhou, Guangdong. End of second century (figure 14n).
8. Tomb of Princess Dou Wan, Mancheng, Hebei. End of second century BCE.⁸⁶

The list can be extended with finds of pegs, such as that in a Western Han tomb at Xi'an, Shaanxi,⁸⁷ but they have only recently begun to be identified.

Another aspect of pegs has an East-West aspect, albeit a less precise one. This concerns the very idea of peg-tuning which—curiously—arose nearly simultaneously at both ends of the Asian continent. The first Western pegs were found on an Anatolian lyre dated 400–200 BCE.⁸⁸ In the East, as we have seen, the first case is documented in 433 BCE.

3. Textual evidence for the northern affinity of the *qin*

The archaeological evidence gives large disparity between the numbers of *qin*-zithers (four) and *se*-zithers (about seventy) excavated in the southern state of Chu.⁸⁹ A similar preference for the *se* is shown in a southern text of the fourth and third centuries BCE, the *Chu Ci*.⁹⁰ It mentions zithers six times, and each time it is the *se*. On the other hand, northern texts give approximately equal weight to both *se* and *qin*. The *Shi Jing* mentions the *se* eleven times and the *qin* nine times, pairing the instruments eight times. Apparently, the *qin* flourished mainly in the north, while the *se* was appreciated both north and south. This evidence corroborates the information derived from the *qin*'s shape and tuning keys. All concur that the ancient *qin* derived from parts that had originated in the north and west.

During the Han dynasty these and *qin* spread out across China. Sets of Han string anchors, typical of *se*-zithers,⁹¹ have been recovered from northern and southern sites alike, indicating that the instrument was widespread. Likewise, Han tuning keys have been recovered north and south. The dispersion of instruments and the breakup of their regional separation was likely a result of improved transportation facilities and strengthened central bureaucracy. The tendency fits the national agenda advanced by Emperor Wudi when he requested ministers to "unify the people and universalize the culture" in 128 BCE.

⁸⁴ *Wenwu* 1999.12, 4–18.

Zibo shi bowuguan & Qi gucheng bowuguan, eds., *Linzi Shang Wang mudi* (Jinan: Qilu, 1997), 41 and figure 31: 2.

Zhongguo shehui kexueyuan kaogu yanjiusuo, *Macheng Han mu fajue baogao* (Beijing: Wenwu), 1980, volume 1, 277; and volume 2, plate 90.

⁸⁵ *Wenwu* 2004.6, 9, figure 6: 9.

⁸⁶ At Canakkale (Lawergren, "To Tune a String," 181).

⁸⁷ Lawergren, "Strings," 67.

⁸⁸ *Jiu ge* [Nine Songs]: *Dong huang tai yi* [The Great Unity, God of the Eastern Sky], line 11, and *Dong jun* [The Lord of the East], line 11; *Yuan you* [Far-off Journey], line 145; *Zhao hun* [Summons of the Soul], lines 115 and 117; *Da zhao* [The Great Summons], line 48. Translations in David Hawkes, *The Songs of the South* (Harmondsworth: Penguin, 1985), 102, 113, 198, 228, and 235 respectively.

Lawergren, "Strings," 69.

4. Additional similarities between qin-zithers and steppe harps

Several other properties of the ancient qin bring steppe harps to mind. A striking feature of traditional qin-music is the frequent use of glissando-playing. To produce it, a finger on the left hand presses down on the plucked string and quickly slides along it. This changes its length, and sounding pitch. This glissando is often accompanied by extraneous friction noises. But this sound could not have been produced on the earliest *qins*, such as Yi's. Its strings were suspended high above the fingerboard and would have broken if pressed all the way down.⁹² Yi's instrument could only have played open strings, and that—of course—was also the playing technique of steppe harps. Neither of these early instruments could have produced glissandi. But around 200 BCE the spacing between the strings and fingerboard was reduced to permit *glissando*-playing.⁹³

The number of strings on steppe harps is not completely known, but they seem to have been low, such as 3, 5, 5, and 15.⁹⁴ The earliest ancient qin had 10, but later ones stabilized at 7, a relatively low number when compared to the 25 strings found on the *se*. In this regard, the qin was closer to the steppe harp than to the *se* which was the dominant type of zither.

One can draw the same conclusion about sizes. Marquis Yi's qin was about 65 cm long,⁹⁵ but his twelve *se*-zithers were 167 cm.⁹⁶ Steppe harps were 70 ± 15 cm long,⁹⁷ close to the length of the former.

5. Conclusion

Ancient musical migrations transfer various amounts of features. At one extreme is the total importation of instruments and all their paraphernalia. It is exemplified by the extensive transfer of instruments, melodies, and societal function during the height of the Silk Road. Similar mechanisms brought mainland music to Buddhist Japan during the first millennium CE. Chinese emperors would send gifts to Japan where they would exert great influence. Many of the instruments stored in the Shôsôin Treasure House, Nara, provide most valuable examples. These show Chinese conditions during the seventh to eighth centuries CE.⁹⁸

But more often the migration is more restricted, and features may be modified in the process. An example is the spread of lyres from Greece into the Hellenistic world and the subsequent move into the Greco-Roman realm. In both phases the instruments were strongly modified, but retained the basic structure that classified them as lyres.

⁹² Lawergren, "The Metamorphosis of the *Qin*," 36.

⁹³ Lawergren, "The Metamorphosis of the *Qin*," 35–36.

⁹⁴ See note 60.

⁹⁵ Lawergren, "The Metamorphosis of the *Qin*," figure 7.

⁹⁶ Lawergren, "Strings," figure 3.6.1.

⁹⁷ Based on three published lengths of the two harps from Zaghunluq and the one from Yanghai (figure 11).

⁹⁸ E.g., Lawergren, "The Metamorphosis of the *Qin*," figure 2m.

In the case of the ancient *qin* the changes were complex. Only some features transferred from the steppe harps, others belonged to the local heritage of zithers. The shape of the neck-and-body was modified and combined with features characteristic of Eastern zithers—such as strings stretched above a nearly flat body and a player kneeling beside the instrument. Foreign traits mixed with indigenous ones. Another foreign concept appeared on tuning keys: their artistic repertoire is foreign—but the concept of tuning with a key was probably not. One can extend the same bimodal scheme to other parts, e.g., strings. Most likely the *qin* had (indigenous) silk strings. But the steppe harp from Pazyryk had sinew strings.

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Figure 1.
Instruments typical
of Shang ensem-
bles. The extant
ones (marked with
a star) date to the
Shang and the
representations
from Zhou and
Han.

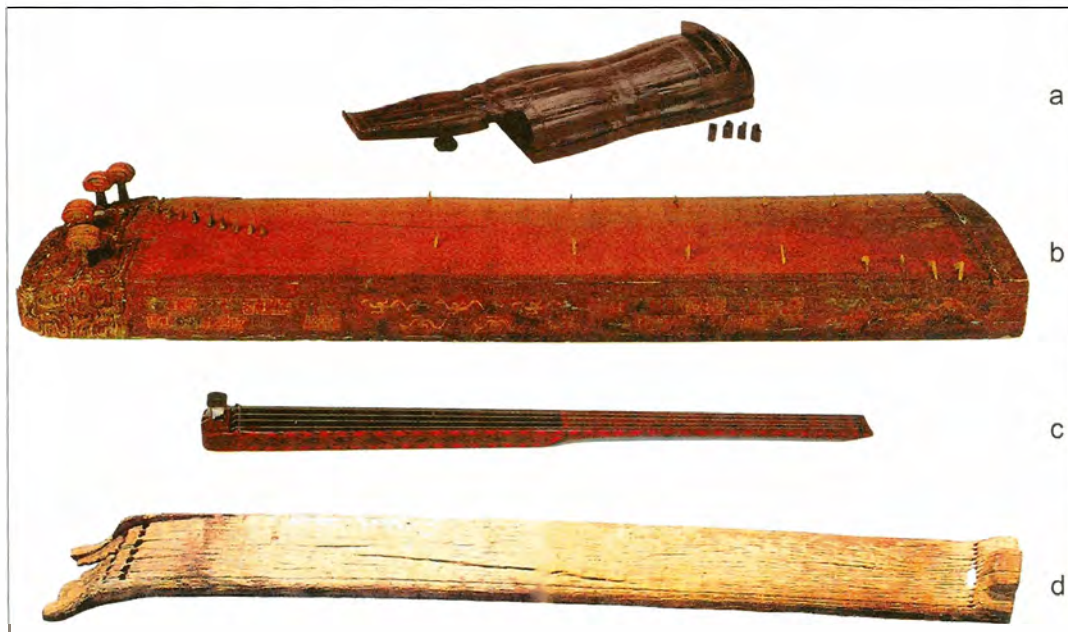
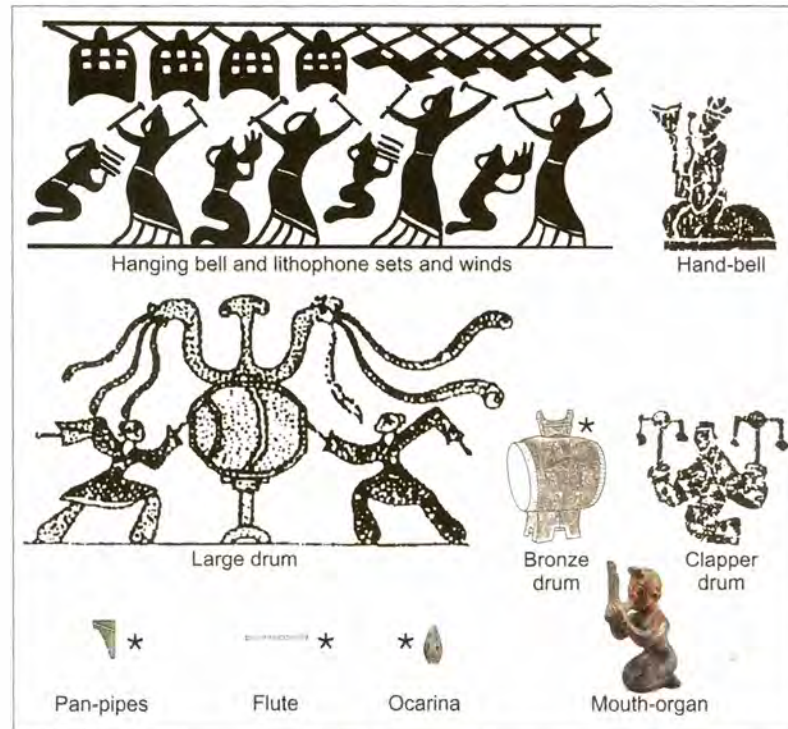


Figure 2

- a. The *qin* from the tomb of Marquis Yi of Zeng, 433 BCE. Lacquered wood. Ten strings. Length 67 cm. After Li Chunyi 1996, 449 and figure 266.
- b. A *se* from the tomb of Marquis Yi of Zeng, 433 BCE. Lacquered wood. Twenty-five strings. Length 167 cm. After Huang Xiangpeng 1996 (Hubei), 275.
- c. The *zhu* from the tomb of Marquis Yi of Zeng, 433 BCE (reconstruction). Lacquered wood. Five strings. Length 115 cm. After DeWoskin 1990, 33.
- d. The *zheng* from Changqiao, Wu Xian, Jiangsu. Fifth century BCE. Wood with traces of lacquer. Length 132.8 cm. Twelve strings. After Huang Xiangpeng 1996 (Jiangsu/Shanghai) 248–51.



Figure 3.
Western chordophones.
a: Vertical angular harp;
b: Horizontal angular harp;
c: Arched harp;
d: Long-necked lute;
e: Thin lyre;
f: Thick lyre;
g: Thin lyre;
h: Greek lyre ("kithara").

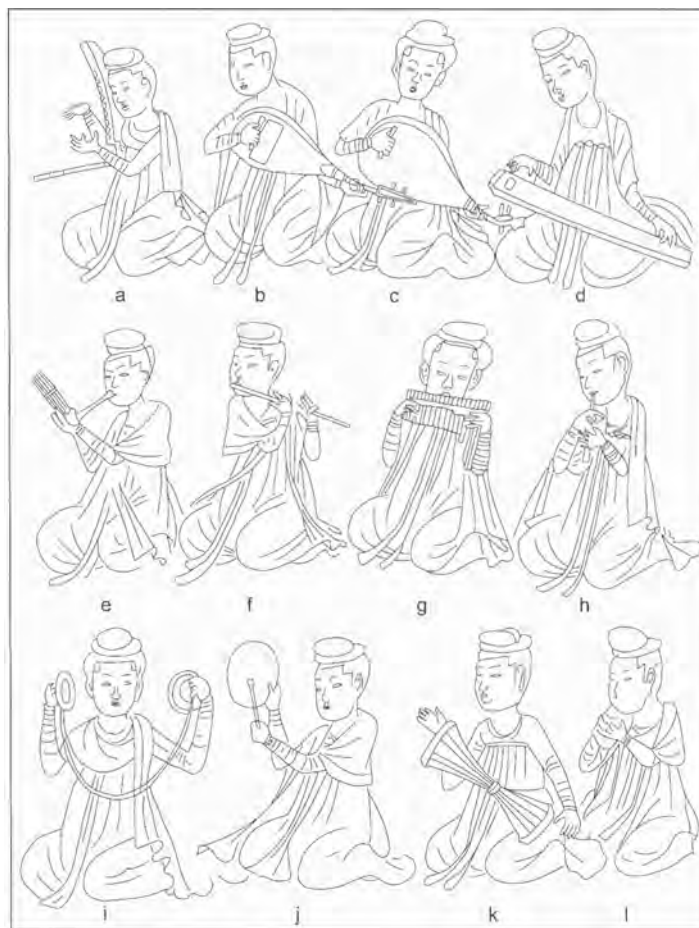


Figure 4.
Buddhist ensemble from
the tomb of prince Li Shou,
630 BCE, Sanyuan, Xian,
Shaanxi. (After Fong 1987,
figure 23).
a: Vertical angular harp;
b: and c: Lutes;
d: Zheng-like zither;
e: Mouth-organ;
f: Side-blown flute;
g: Pan-pipe;
h: End-blown reed-pipe
(or flute);
i: Hand-held cymbals;
j: Gong;
k: Waisted drum;
l: Ocarina or conch shell.

Figure 5.
Boya plays the qin among companions. Part of scenes on Han bronze mirror.

- a: Western Han, *circa* 200 BCE.
Freer Gallery of Art,
Washington (DC). F1935.13.
- b: Eastern Han, 25–220 CE.
Freer Gallery of Art, F1935.15.

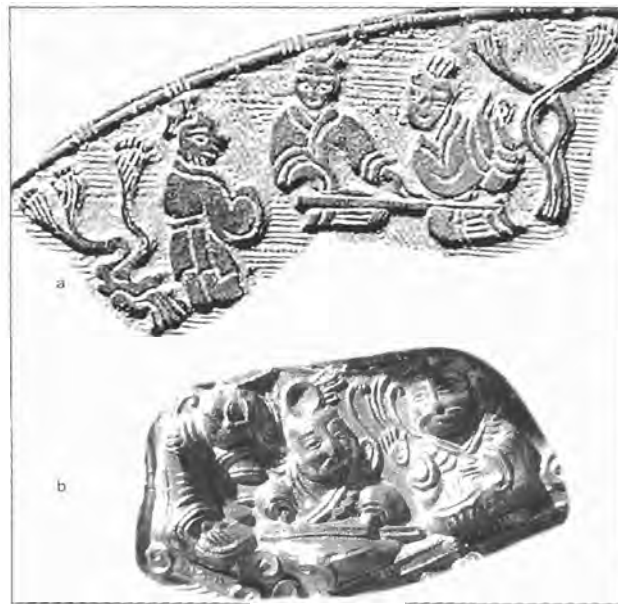
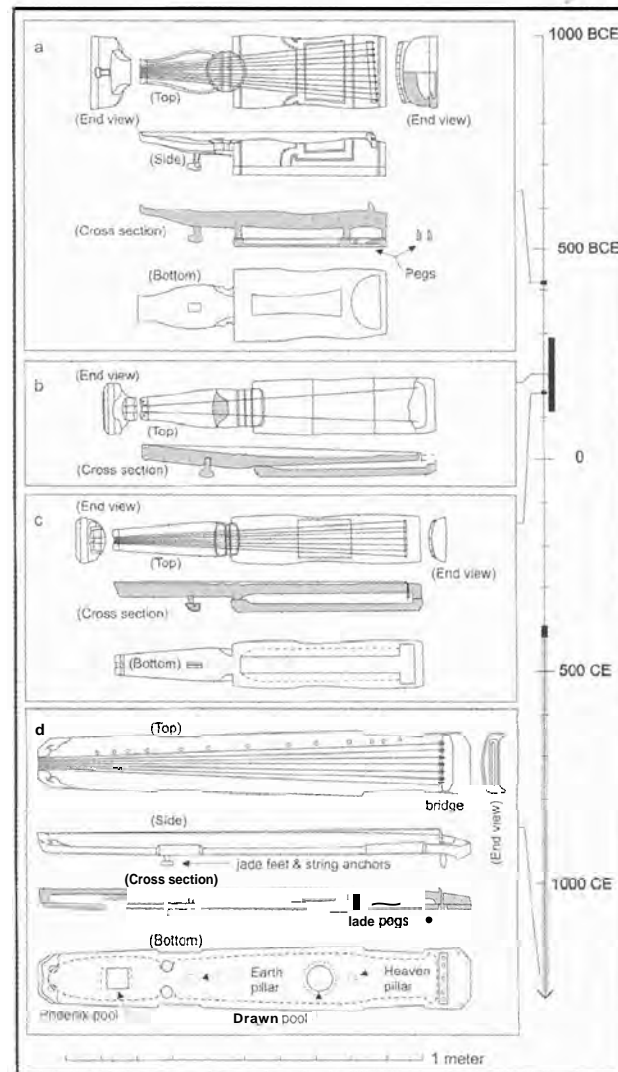


Figure 6
Qin-zithers, all drawn on the scale given at the bottom of the figure:
a: Ancient model. Leigudun, Suizhou, Hubei (Zeng Hou Yi). 433 BCE. Length 67 cm. Ten strings. Lawergren 2000, 76.
b: Ancient model. Wulipai Tomb 3, Changsha, Hunan. Third century BCE. Length 79.5 cm. Possibly nine strings. Lawergren 2000, 76.
c: Ancient model. Mawangdui Tomb 3, Changsha, Hunan. Second century BCE. Length 82.4 cm. Seven strings. Lawergren 2000, 76.
d: Classical model, made by Prince Lu in 1633 (or early 1634) Length 120 cm. Seven strings. Metropolitan Museum of Art, Department of Musical Instruments, 1999.93. Lawergren 2000, 76.



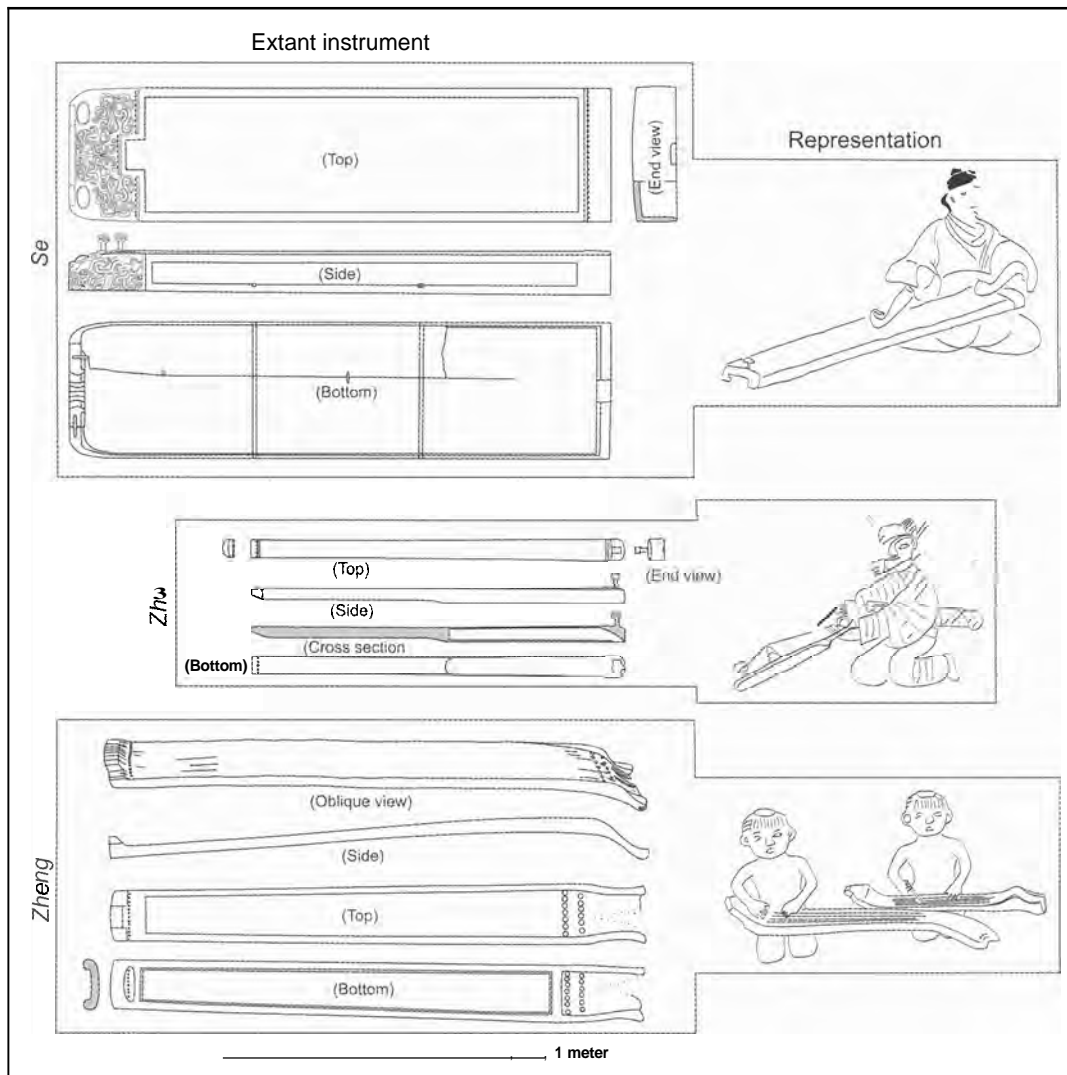


Figure 7.

Three other types of zither from the fifth century BCE, all drawn on the scale given at the bottom:

Se: Leigudun, Suizhou, Hubei (Zeng Hou Yi). 433 BCE. Length 167 cm. Twenty-five strings. Lawergren 2000, 72.

Zhu: Leigudun, Suizhou, Hubei (Zeng Hou Yi). 433 BCE. Length 115 cm. Five strings. Lawergren 2000, 80.

Zheng: Guixi Xian Tomb 2, Jiangxi. Length 166 cm. Thirteen strings. Lawergren 2000, 82.

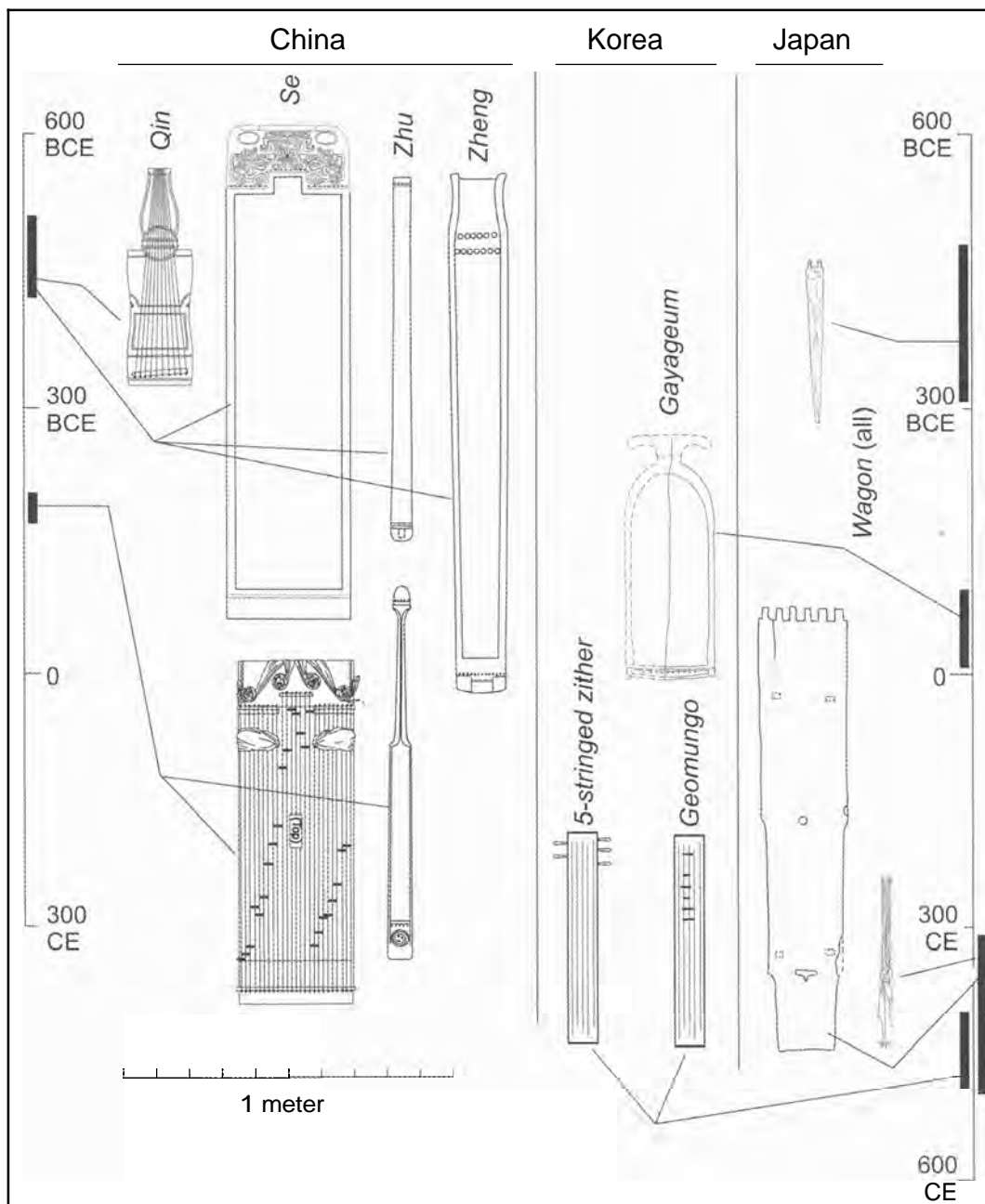


Figure 8.

Line drawings of Far Eastern zithers attested before 400 CE. All are drawn on the scale given at the bottom, and dated on the vertical axes on the left and right. The Chinese examples are taken from figures 6 and 7 or from Lawergren 2000, 72 and 80. Only the right half (solid line) of the Korean *Gayageum* was recovered, see Cho et al. 2002, 17. The other two Korean instruments were painted on the walls of Tomb no. 1, Changchuan, Qi'an, Jiling, Manchuria. The tomb is reconstructed in the Korean National Museum (also Song 2000, 142–145). For the Japanese instruments, see Hughes 1987, 64 and 82.



Figure 9. Photographs of zithers in figure 8. They are not shown on the same scale. The broken Japanese wagon in the lower left corner reveals the box-like structure.

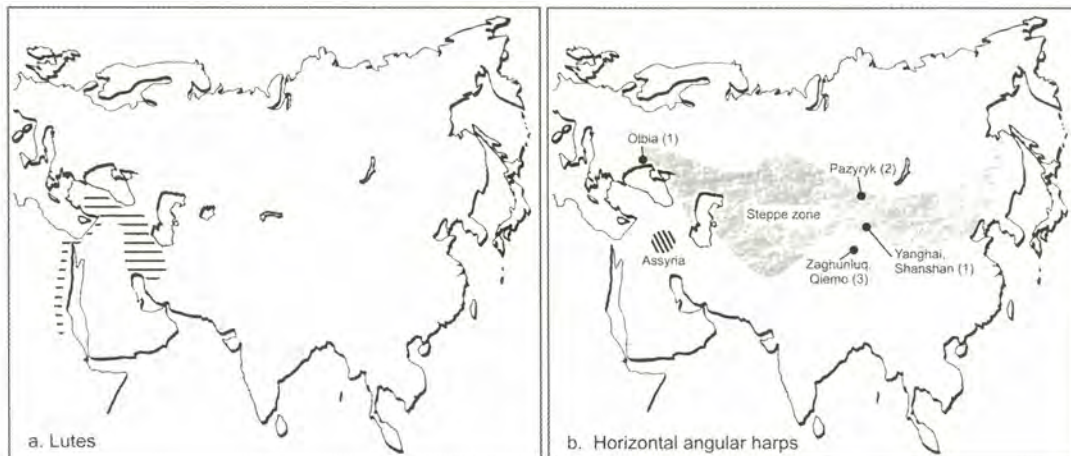


Figure 10.

The geographic spread of (a) lutes and (b) horizontal angular harps before the time of the Silk Road. Lutes occupy regions close to the Fertile Crescent, while harps are restricted to Assyria and areas near the edge of the Eurasian steppe.

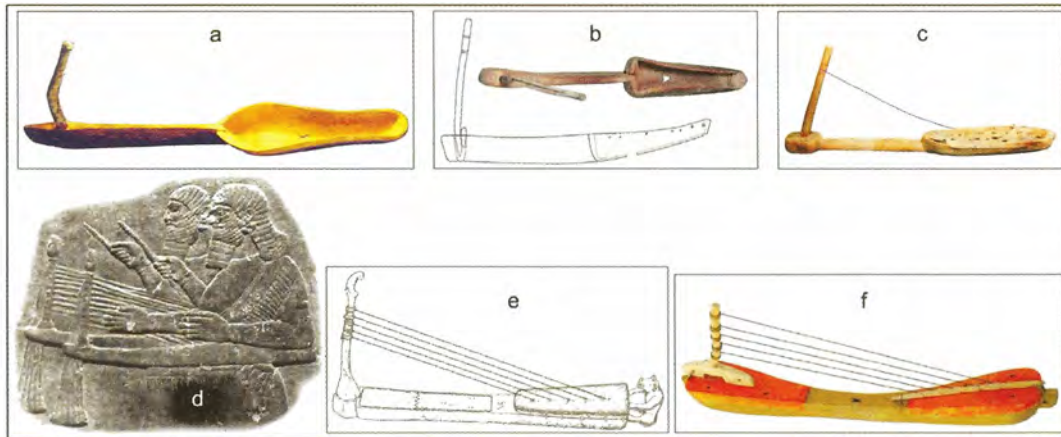


Figure 11.

Horizontal angular harps.

- a: Extant Steppe harp at Zughunluq, Qiemo county, Xinjiang Autonomous Region (southern edge of the Tarim basin), item 20 in tomb M14, length = 87.6 cm, 400–200 BCE.
- b: Extant Steppe harp at Zughunluq, object 27 in tomb M14, length = 61.6 cm, 400–200 BCE.
- c: Extant Steppe harp at Yanghai, Shanshan county, Xinjiang (northern edge of the Tarim basin), first millennium BCE.
- d: Wall relief of an Assyrian harp at Nimrud, Iran, 860 BCE.
- e: Extant Steppe harp at Olbia, northern shore of the Black Sea, 400–200 BCE.
- f: Replica of an extant Steppe harp at Pazyryk, Altai Mountain, 350 BCE.



Figure 12.

Part of a decorative plaque attached to the side of a 140 cm high wooden Mesopotamian lyre. 2450 BCE. University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia, B17694. Shell and bitumen. Height 7.5 cm. Rashid 1984, 41. The scene shows a donkey playing a lyre. Its resonance box is shaped like a cow lying on folded legs. A standing bear supports the instrument, and a small fox sits on the bear's right foot playing a sistrum. The eight strings terminate in plaited collars wound around the horizontal yoke.

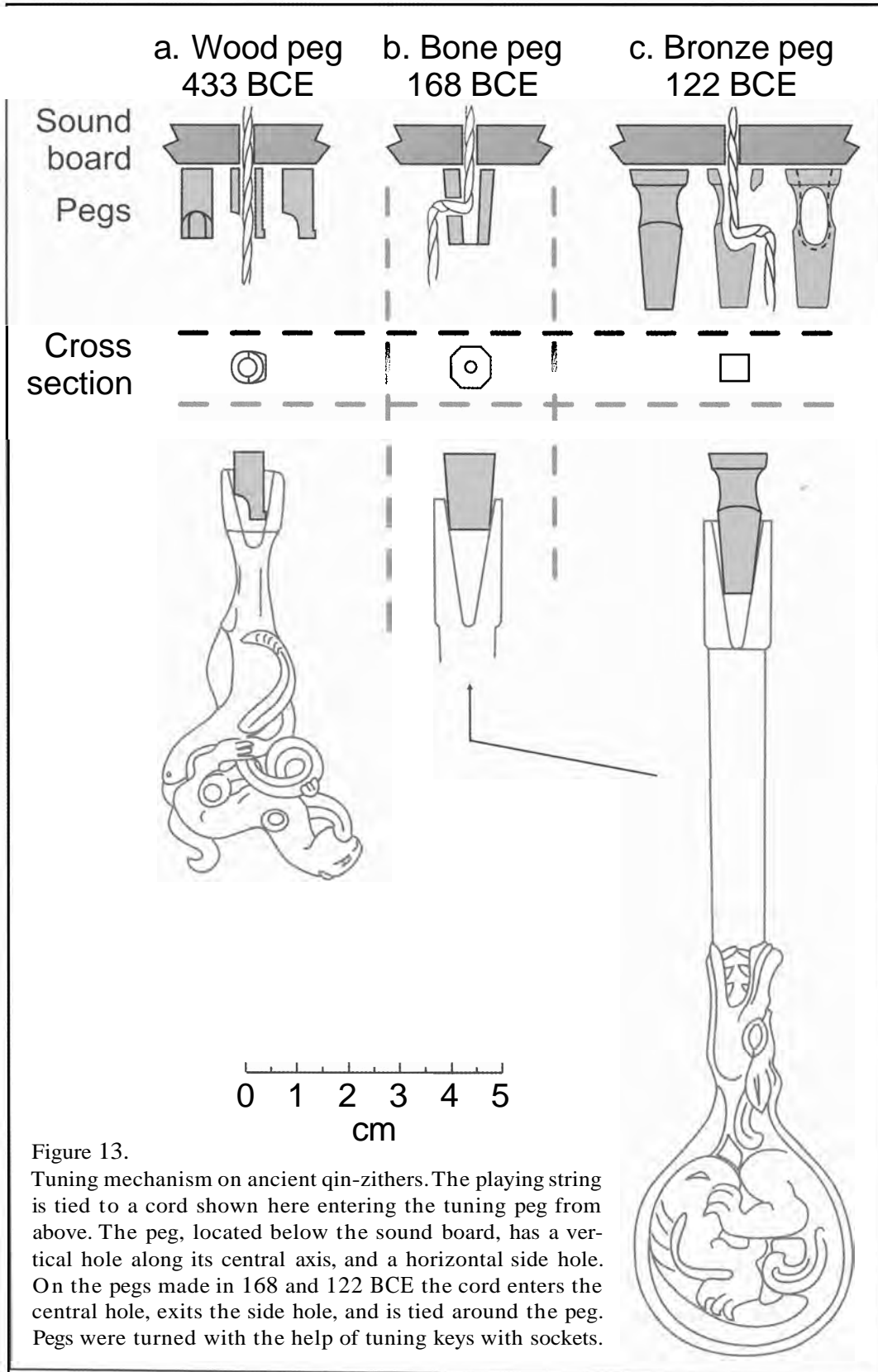


Figure 13. Tuning mechanism on ancient qin-zithers. The playing string is tied to a cord shown here entering the tuning peg from above. The peg, located below the sound board, has a vertical hole along its central axis, and a horizontal side hole. On the pegs made in 168 and 122 BCE the cord enters the central hole, exits the side hole, and is tied around the peg. Pegs were turned with the help of tuning keys with sockets.

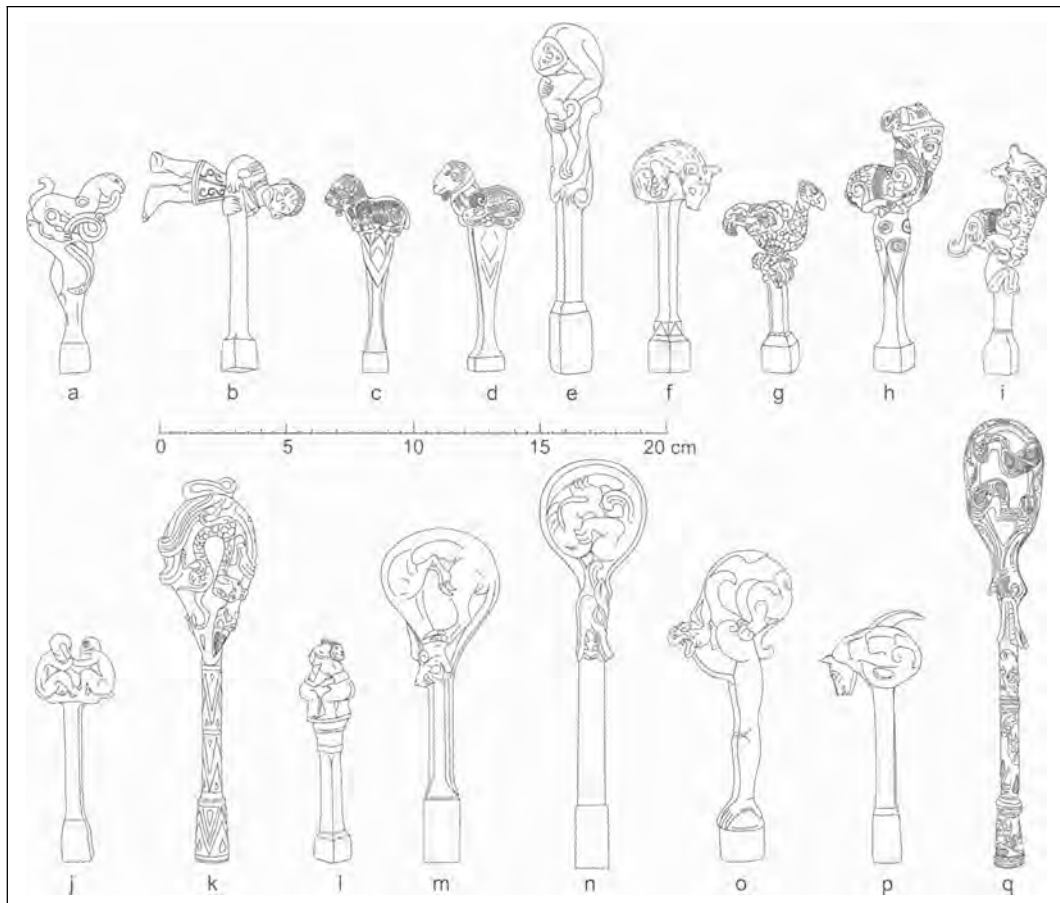


Figure 14

- a. Bird attacking feline that bites coiled snake. Sixth century BCE. Freer Gallery of Art, Washington, F1916.454. Lawergren 2000, figure 3.9.3a.
- b. Acrobat. Fifth century BCE. Formerly J. J. Lally & Co, New York (1994).
- c. Goats. Fifth to fourth century BCE. Formerly E. & J. Frankel Gallery, New York (1985). Lawergren 1997, figure 1C.
- d. Goats. Fifth to fourth century BCE. Lawergren 2000, figure 3.9.3b.
- e. Seated monkey turning his head and holding his raised left leg. Fourth century BCE (?). Collection of Ariadne Galleries, New York.
- f. Bear. Fourth century BCE. Lawergren 2000, figure 3.9.3c.
- g. Raptor holding bear cub. Fourth century BCE. Lawergren 2000, figure 3.9.3d.
- h. Goat-men. Third century BCE. Fantastic composite beast with human head. Lawergren 2000, figure 3.9.3e.
- i. Goat-men. Third century BCE. Fantastic composite beast with human head held aloft by a small crouching humanoid figure. Kasmin Ltd., London.
- j. Erotic monkeys. Third century BCE. Formerly Christie's, New York (2001).
- k. Large bird and feline. Third to second century BCE. Lawergren 2000, figure 3.9.3f.
- l. Two plump men wrestling. Circa 200 BCE. Formerly J. J. Lally & Co, New York (1992).
- m. Quadruped. Second century BCE. Lawergren 2000, figure 3.9.3h.
- n. Coiled wolflike animal. Second century BCE. Lawergren 2000, 122 BCE.
- o. Fantastic beast with massive human arms gripping the base. His clawed hind legs stand on the shoulders. Second to first century BCE. Formerly J.J. Lally & Co, New York (1992).
- p. Crouching bear. On the top of the animal is a flick-knife probably used when mending silk strings. Second to first century BCE. Formerly J. J. Lally & Co, New York (2001).
- q. Wolf-like animal with gemstone inlay. Solid silver with inlay of carnelian, agate [white & clear], and turquoise. Second to first century BCE. Lawergren 2003a, figure 5i.