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A Companion to Chinese Archaeology

Edited by
Anne P. Underhill



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Cover images: Top: Ceramic *ding* tripod excavated from pit H31 at Liangchengzhen, Rizhao city district, Shandong, China (photo by Anne P. Underhill). Center: Excavation in progress at the Longshan period settlement of Liangchengzhen in 2001 (photo by Anne P. Underhill). Bottom: Type A1 slate point from trench T007 at Liangchengzhen (photo by Geoffrey Cunnar).
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To Richard Pearson, with gratitude

CHAPTER 28

The Liangzhu Culture

QIN Ling 秦岭

Liangzhu 良渚 culture (*c.*3300–2200 BC) sites are distributed through the lower Yangzi delta, around Taihu lake 太湖, the third largest fresh water lake in China. They are found in the modern provinces of Zhejiang and Jiangsu as well as the Shanghai city area (Figure 28.1A). The name of this late Neolithic culture is well known due to its association with its distinctive jade-stone production. These jade items are widely collected by museums and are published in studies of East Asian art history. The jade carving technology and particular jade object forms, *cong* 琮 hollowed column or tube and *bi* 璧 disk, were widespread during the Longshan 龙山 period (see Chapters 12, 13, 14, 21, 22) in China, and had a lasting influence on ritual objects in later periods of Chinese culture. The Liangzhu period is associated with the development of craft specialization, high degrees of social differentiation and the emergence of a regional urban center at what we may call the Liangzhu site complex, discussed below. Social status differences have been clearly documented in the burial practices not only between the individual burials within a cemetery but also between cemeteries, which indicates the formation of elite groups beyond local social hierarchies. The power of those elite groups is presumed to derive from the management of a special resource, namely jade production, and probably also from the ideology that lies behind those special jade objects and the artistic images on them. A regional network of jade distribution was established during the middle Liangzhu period (*c.*3000–2600 BC), during which local centers of elites are evident, and a pan-regional, urban center at the Liangzhu complex emerged. The

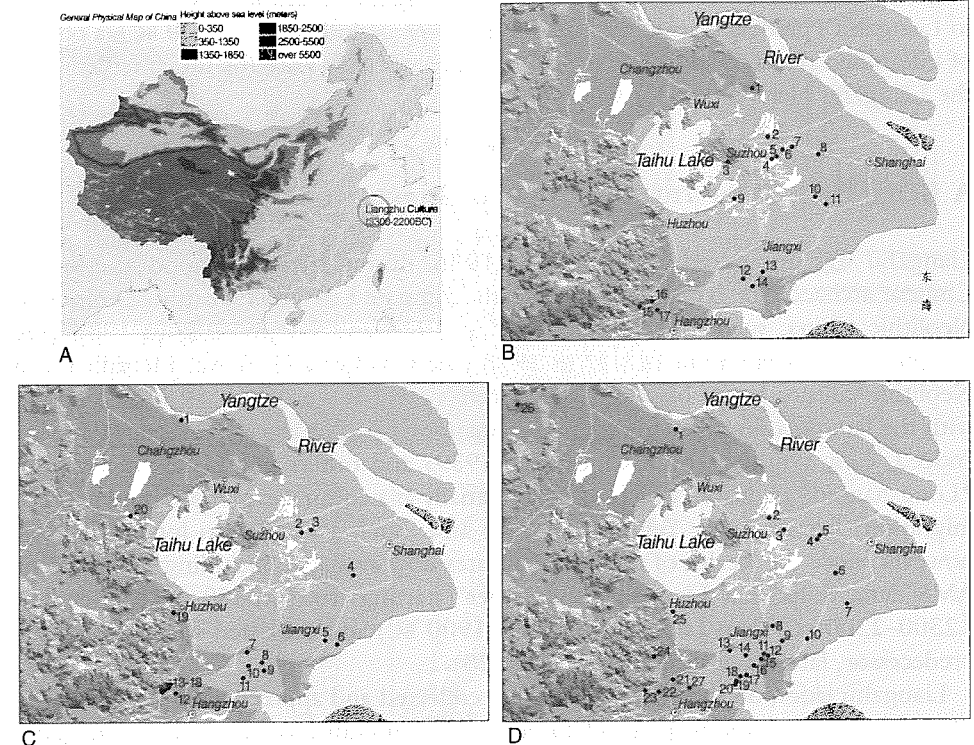


Figure 28.1 Major Liangzhu sites. (A) The location of the main Liangzhu culture sphere. (B) Early Liangzhu: 1, Luodun 罗墩; 2, Caoxieshan 草鞋山; 3, Yuecheng 越城; 4, Chenghu 澄湖; 5, Zhanglingshan 张陵山; 6, Zhaolingshan 赵陵山; 7, Shaoqingshan 少卿山; 8, Fuquanshan 福泉山; 9, Longnan 龙南; 10, Yaojiaquan 姚家圈; 11, Tangmiaocun 汤庙村; 12, Pu'anqiao 普安桥; 13, Zhoujiabang 周家浜; 14, Dazemiao 达泽庙; 15, Wujiabu 吴家埠; 16, Yaoshan 瑶山; 17, Miaoqian 庙前. (C) Middle Liangzhu: 1, Gaochengdun 高城墩; 2, Zhaolingshan 赵陵山; 3, Shaoqingshan 少卿山; 4, Guangfulin 广富林; 5, Pingqiudun 平丘墩; 6, Daimudun 戴母墩; 7, Xindili 新地里; 8, Pu'anqiao 普安桥; 9, Zhangjiabang 赵家浜; 10, Xujiabang 徐家浜; 11, Heyedi 荷叶地; 12, Miaoqian 庙前; 13–18, Yaoshan 瑶山, Fanshan 反山, Huiguanshan 汇观山, Boyishan 钵衣山, Shangkoushan 上口山, Mojiashan 莫角山; 19, Yangjiabu 杨家埠; 20, Yannan 堰南. (D) Late Liangzhu: 1, Sidun 寺墩; 2, Caoxieshan 草鞋山; 3, Zhaolingshan 赵陵山; 4, Siqiancun 寺前村; 5, Fuquanshan 福泉山; 6, Guangfulin 广富林; 7, Tinglin 亭林; 8, Quemuqiao 雀幕桥; 9, Gaodun 高墩; 10, Pingqiudun 平丘墩; 11, Zhoujiabang 周家浜; 12, Longtangang 龙潭港; 13, Xindili 新地里; 14, Balabang 吧喇浜; 15, Dafendun 大坟墩; 16, Gaojialing 高家岭; 17, Qianjinjiao 千金角; 18, Shedunmiao 佘墩庙; 19, Shengjiali 盛家埭; 20, Xubuqiao 徐步桥; 21, Hengshan 横山; 22, Miaoqian 庙前; 23, Bianjiashan 卞家山; 24, Huishan 辉山; 25, Qianshanyang 钱山漾; 26, Dingshadi 丁沙地; 27, Maoshan 茅山.

economic foundation and craft bases of the Liangzhu tradition can be traced back to Liangzhu's predecessors in the late Songze 崧泽 period (from c.3500 BC), a period of intensified rice agriculture, which was a necessary substrate for the emergence of the Liangzhu hierarchy and urbanism.

A BRIEF HISTORY OF THE DISCOVERY OF LIANGZHU

Liangzhu was discovered and named in 1936, during the "childhood" period of Chinese archaeology. This is relatively early compared to other main discoveries of Neolithic China, such as Yangshao 仰韶 in 1920 and Banpo 半坡 in 1953 (see Chapter 9), and Hemudu 河姆渡 in 1973 (see Chapter 27). It was identified as a Neolithic culture by its black polished pottery, which was taken to link Liangzhu with the famous Longshan culture of the Shandong peninsula (see Chapters 21, 22). Indeed, early syntheses by K.C. Chang (1959) and others put Liangzhu into the "Longshanoid" tradition, which was seen initially as a cultural expansion (and perhaps migration) from a lower Yellow river core area. Such a view is no longer tenable, however, since the wealth of radiocarbon dates now available, including much recent AMS data, show that Liangzhu was earlier (starting from c.3300 BC and ending c.2300–2200 BC) than Longshan (c.2300–1900 BC) and coexisted with Longshan's predecessor, late Dawenkou (see Chapter 20).

Liangzhu jades, on the other hand, were collected and appreciated in much earlier times. Now in both the Beijing and Taipei Palace Museums, we can see Liangzhu jades mounted in special hard-wood settings, with re-carved inscription by 17th–18th century Qing emperors (mostly Qianlong 乾隆, 1736–1795). By that time, those jades were considered as artifacts from the Zhou to Han (c.1000 BC–AD 200) periods, which might indicate that they were already collected items in those early historic periods. Few people were willing to believe that such jades could have been made before the use of bronze or iron tools. In 1973, the Caoxieshan 草鞋山 site (Figure 28.1B: 2) (Nanjiang Museum 1996) was discovered by a local archaeology team, and here they excavated for the first time the characteristic *cong* and *bi* jades together with Liangzhu black pottery from one grave (M198). This finally provided an accurate cultural-historical label for the "Han jades" in the Qing palace as jades of the Liangzhu culture.

Since that grave at Caoxieshan was on top of a little hill, local archaeologists gained a clue for locating more Liangzhu cemeteries. In the following years, to the north and east of Taihu lake, similar cemeteries were found one after another. During the excavations, archaeologist also found that those small "hills" sometimes were man-made. Therefore the scholar Su Bingqi 苏秉琦 referred to these sites as "earth-made pyramids", *tuzhu jinzita* 土筑金字塔 (Su 1996).

In 1986, on the 50th anniversary of Liangzhu's discovery, archaeologists in Zhejiang Province found the most important elite cemeteries of Fanshan 反山 in the Liangzhu area (Zhejiang 2005a) (Figure 28.2B), part of the Liangzhu site complex 良渚遗址群 (Figure 28.1C: 13–18; Figure 28.2B). The Liangzhu site complex consists of several formerly identified individual sites that are now regarded as a single socio-political community. Still today, Fanshan remains the richest of all Liangzhu cemeteries in terms of the quantity and quality of burial objects. After that discovery, a series of important sites and cemeteries were found in the 50sqm area which

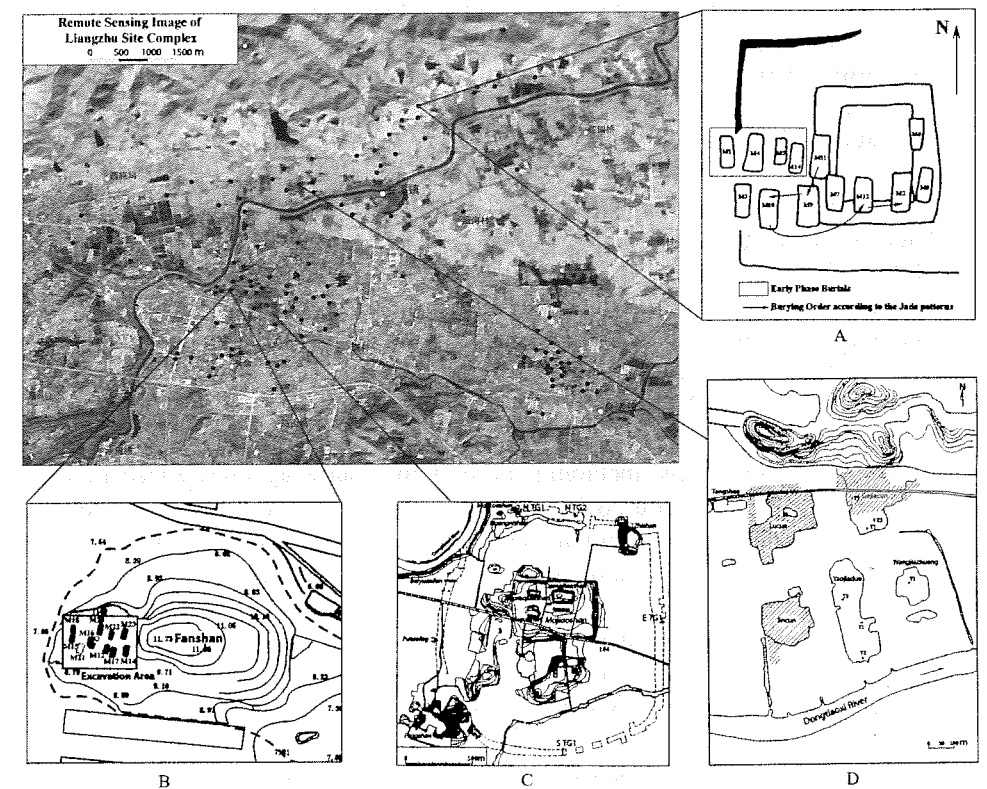


Figure 28.2 Remote sensing image of the Liangzhu site complex: distribution of Liangzhu culture locations. (A) Yaoshan 瑶山 site: plan of burials. (After Zhejiang 2003: 6, Figure 4.) (B) Fanshan 反山 site: plan of burials. (After Zhejiang 2005a: 9, Figure 2; 12, Figure 4.) (C) Liangzhu site complex 良渚古城: wall plan. (After Zhejiang 2008: 5, Figure 1.) (D) Yaojiadun 姚家墩 and Tangshan 塘山 sites. (After Zhejiang 2005b: 106, Figure 21.)

constitutes the Liangzhu site complex, the center of the Liangzhu culture and its social hierarchy.

In 2007, city walls were found by excavation and a coring/probing (*zuantan* 钻探) survey in the middle of the Liangzhu site complex area (Zhejiang 2008). These walls enclose an area of about 1,800 m by 1,600 m, including the Fanshan cemetery, the Mojiashan 莫角山 earth platform (*tutai* 土台) and other important locations. This makes Liangzhu the largest known walled settlement area at that time anywhere in China. It is probably right to regard it as a city (*gucheng* 古城), and some, such as Su Binqi 苏秉琦 (1996), have declared it the "capital" city (*ducheng* 都城) of a Liangzhu "kingdom" (*Liangzhu guguo* 良渚古国).

BASIC CHRONOLOGY AND GEOGRAPHY OF THE LIANGZHU CULTURE

More than 400 Liangzhu sites have now been found around Taihu lake, among which about 150 were located in the Liangzhu site complex area. About 250 radiocarbon

dates are available from Neolithic lower Yangzi delta, of which about 150 are from AMS data. This helps to establish the Liangzhu chronology together with its archaeological cultural features. In general, Liangzhu culture can be divided into three phases (Qin 2000): early, middle, and late, while the late phase can be further divided into the late and epi-Liangzhu phases.

1. The early Liangzhu phase was from around 3300–3000 BC, and typical remains include those from the sites of Miaoqian 庙前 I (Figure 28.1B: 17; Zhejiang 2005c), Wujiabu 吴家埠 (Figure 28.1B: 15; Zhejiang 1993a), Pu'anqiao 普安桥 (Figure 28.1B:12; Beijing Daxue et al. 1998), Luodun 罗墩 (Figure 28.1B: 1; Suzhou Museum 1999a), Zhaolingshan 赵陵山 (Figure 28.1B: 6; Zhaolingshan Team 1996), Zhanglingshan 张陵山 (Figure 28.1B: 5; Nanjing Museum 1984), and some burials of Yaoshan 瑶山 (Figure 28.1B: 16; Zhejiang 2003).
2. The middle Liangzhu phase dates to around 3000–2600 BC, and typical remains are mostly from burials, including those at the following sites: Fanshan, Gaochengdun 高城墩 (Figure 28.1C: 1; Nanjing and Jiangyin 2009), some burials of Yaoshan, Zhaolingshan burial M77, Shaoqingshan 少卿山 (Figure 28.1C: 3; Suzhou Museum 1988), and Guangfulin 广富林 (Figure 28.1C: 4; Shanghai Archaeology 2008).
3. The late Liangzhu phase dates to about 2600–2400 BC, and is represented by typical remains from the Longtangang 龙潭港 (Figure 28.1D: 12; Zhejiang 2001b) site. The great walls at Liangzhu were started during this phase (Figure 28.2C).
4. The epi-Liangzhu phase dates to about 2400–2200 BC, and typical material includes that from the Sidun 寺墩 (Figure 28.1D: 1; Sidun Team 1996) and Tinglin 亭林 (Figure 28.1D: 7; Shanghai Archaeology 1999) sites.

In terms of site distribution, there are three important site concentrations around Taihu lake (Figure 28.1). In clockwise order, first is the northeast region, covering southern Jiangsu (just south of the Yangzi river) and most of modern Shanghai; this region developed at the very beginning of Liangzhu period, with the earliest elite cemeteries containing the earliest carved Liangzhu jade products. Settlement of this region lasted through the end of the epi-Liangzhu period. By the late Liangzhu period, there were two centers of power in this region; one at Sidun, in the north on the south bank of the Yangzi, and one at Fuquanshan 福泉山 (Shanghai Wenguanhui 1999; Qin 2005), further east in the middle of Shanghai. These regional elites exchanged jade products but practiced different burial customs. Another site concentration is in the “5 o'clock” direction (150°), southeast of Taihu lake, in northern Zhejiang province. As with the first region, this area was occupied by Neolithic inhabitants from the time Taihu lake formed (*c.*5000 BC). During the Majiabang 马家浜 (*c.*5000–3800 BC) and Songze (*c.*3800–3300 BC) periods, there were already several settlements in this region, but during the Liangzhu period there was a rapid increase in population, as indicated by the number of sites, especially at the later Liangzhu phases. So far, no top-level elite cemeteries have been found in this region, although a few sites with looted burials may hint at the existence of rich burials of local elites. The third, and most important region, is the Liangzhu site complex, which is to the southwest of Taihu lake in the 7 o'clock position (210°).

This area has very few remains that can be traced back to the earlier Neolithic periods prior to the Liangzhu culture. This suggests that this region was chosen, settled, and developed by the Liangzhu culture and that the huge Linagzhu site complex may have been established with a distinct purpose in mind, such as acquiring particular resources. Further details of these different Liangzhu regions and possible reasons for their differences will be discussed in the following sections.

In terms of its natural landscape, the Liangzhu culture can be regarded as an ancient society connected by freshwater streams and rivers. Liangzhu inhabitants usually located their settlements along rivers or near ponds but placed their cemeteries in higher places. Cemeteries were often located on the slopes of hills, or, in situations where no nearby high ground was available, on artificial earth platforms constructed to provide high ground for the tombs. Since burials were on higher ground, including artificially raised ground, it has proven much easier to find cemeteries than settlement sites, which concentrated on lower ground, which was more easily buried by later sediment. So far, more than 70 percent of Liangzhu remains are those of cemeteries rather than occupation sites. It is a challenge to understand the nature of Liangzhu society, since most of the features and artifacts that we have were prepared for the dead. In addition, since Liangzhu people buried their dead on raised land, the drained, acid soils in these areas damaged or destroyed most of the skeletons of this culture, especially the elites who were buried in the highest and driest conditions. This can be contrasted to earlier cultures in the region, such as Majiabang, with well-preserved burials located in mostly waterlogged, lower ground.

However, these cemeteries, which are easily found, still offer us enough information for the study of social differentiation, craft specialization, and exchange networks in Liangzhu society. Compared to other cultural areas in Neolithic China, the Liangzhu people, whether elite or common, had elaborate funerals accompanied by depositing a rich range of grave goods.

CEMETERY EVIDENCE AND SOCIAL DIFFERENTIATION

By comparison with its cultural precursor, the Songze culture (*c.*3800–3300 BC), there is evidence for increasing social differentiation during the Liangzhu period. Changes in social structure are first indicated in the early Liangzhu phase (*c.*3300–3000 BC) by changes in the scale of cemeteries. All cemeteries became smaller, most including only 10–30 burials, in contrast to the larger (usually over 100 burials) Songze cemeteries (Shanghai Wenguanhui 1987). The smaller size of Liangzhu cemeteries was equivalent to one social status subunit within a typical Songze cemetery.

Early Liangzhu cemeteries can be divided further into two types. In one burials were placed around a single occupational house unit within a settlement area that typically included a few house units. This type is represented by sites at Pu'anqiao (Beijing Daxue et al. 1998) and Longnan 龙南 (Figure 28.1B: 9) (Suzhou Museum 1999b). The other cemetery type was a man-made earth platform built particularly for graves. This type is represented by Luodun (Suzhou Museum 1999a) and Zhaolingshan sites (Zhaolingshan Team 1996).

The difference between cemeteries was rather greater than that between the individual graves within a cemetery, suggesting that cemeteries represented social groups or lineages of similar status. In the northeast Taihu area, the cemeteries of early Liangzhu can be classified into two status levels defined by the wealth of the burials. The first level is represented by Luodun site. The burials of this status level often include about 40 burial objects, divided almost equally among pottery, jades, and stone axes. The second status level, represented by sites such as Shaoqingshan (Suzhou Museum 1988) and Longnan (Suzhou Museum 1999b), usually have only around 10 objects per burial, composed of one stone axe, a couple of jade ornaments and several ceramic vessels.

By contrast the situation in the area to the southeast of Taihu lake was similar to that of the Liangzhu area sites to the south-west. These cemeteries share a common pattern, in which the burial goods include a recurrent assemblage with a number of ceramics. There are usually three or four pots, including a *ding* 鼎 tripod and *dou* 豆 stemmed dish, and an additional *guan* 罐 jar and *pen* 盆 basin, as well as one stone axe in male burials, and various quantities and types of jades. The differences between burials are only in the number and variety of jade objects. The early phase of the Yaoshan cemetery appears to have been the top status level in this area (Zhejiang 2003) and is also the richest amongst the entire Liangzhu cultural world at that time. Miaoqian, another site in the same area (Zhejiang 2005c), represents the lowest and poorest level of cemetery. Wujiabu (Zhejiang 1993b) and Pu'anqiao (Beijing Daxue et al. 1998) are both middle-level sites which show a chronological increase in the numbers of jade objects over the lifespan of these sites.

The site of Yaoshan is located at the northeastern edge of the Liangzhu site complex. It is an earthen platform constructed by people at the top of a hill, and seven construction phases have been identified (Zhejiang 2001b). These include the placement of various colored soils and stone steps. The result was a pattern of three squares (red, gray, yellow), with graves dug into the southern part of the earthen platform that resembled an altar. Therefore, Yaoshan is often referred to as an "altar" cemetery (*jitan mudi* 祭坛墓地). Twelve rich burials in two rows were excavated there (Zhejiang 2003). Differences in artifact types by row seem to be related to gender (skeletal remains were not preserved). The consensus is that males in the southern row have jade *yue* 钺 axes, *cong* 琮 tubes, and other types of jades while females in the northern row have grave goods such as circular *huang* 璜 ornaments and plate-like ornaments.

During the early Liangzhu period, regional differences are quite apparent, especially between the northeastern and southern areas. These differences are seen in the burial objects. In the north, differentiation between individual graves and cemeteries can be seen in ceramics, jades and stone wares. In the south, by contrast, differences were only expressed by the jades, while ceramic assemblages were highly uniform, and stone axes were standard for males. Jades then were the essential wealth item for expressing status differences between burials. This regional contrast can be understood in relation to the background of the cultural tradition. The northeastern area was the core area of the Songze culture. In the early days of the Songze period, the number of pots and stone objects was used to show burial differentiation within a cemetery. By contrast, to the south of Taihu lake, the Liangzhu area was a newly settled region in the early Liangzhu period. Thus it can be suggested these settlers

established a new and simplified grammar for expressing social differences in burials with a focus on jades.

From the middle Liangzhu period (c.3000–2600 BC), social differences between sites (especially cemeteries), even between the regions, became greater. Distinctions appear to have focused on the ability to obtain certain jade and stone objects. In this phase, we need to consider the Liangzhu site complex separately from other Liangzhu remains in terms of how the jades and other stone objects were used.

In the area constituting the Liangzhu site complex, the cemeteries can be divided into three levels. The top level is represented by Yaoshan, Fanshan, and Huiguanshan 汇观山 (Zhejiang 1997). These cemeteries have their own earth platforms or were located on natural hill tops. In addition to the recurrent pottery assemblage, jades and stone axes are abundant in the burials. Forms included the *cong* (Figure 28.3E), *yue* (of jade or other stone, see Figure 28.3F), *bi* 璧 disk, a fork-shaped ornament (*sanchaxingqi* 三叉形器, see Figure 28.3H), and a set of cone-shaped pendants (*zhuixingqi* 锥形器). All of these items together comprised a full "high status set" of jades, which so far can be only found in elite cemeteries of the top level as a whole set. The second level is represented by the Boyishan 钵衣山 site (Zhejiang 2002d), where burials usually have 30–40 objects, including a fixed set of pottery vessels, a stone axe, and a number of jades. Sometimes, a few pieces of the high status set jades, such as *bi* disks, can be found in these graves. The third level includes cemeteries such as Shangkoushan 上口山 (Zhejiang 2002e), Miaoqian (Zhejiang 2005c) and others, in which burials each have 10 to 20 objects, with only simple jade ornaments such as tubes and beads added to ceramics and stone axes, without any of the high status set of jades.

The Fanshan cemetery is located at the northwest corner of the Mojiaoshan site (Figure 28.2B). It is another artificial earthen platform that contains 11 burials (Zhejiang 2005a). Three phases can be identified that represent changing modes of signaling status. The second phase is significant, since a "sacred insignia" (*shenwei* 神徽) appears (discussed below). During the third stage, it appears that the quantity of jades was more important than the quality of jades for symbolizing differences in status.

Since all jade *cong*, *bi*, and *yue* are known from burials, we can regard the find locations of these objects, even when not from systematic excavations, as potential areas of the cemeteries of top-level status groups in the Liangzhu world. Within the Liangzhu site complex, Yangweibashan 羊尾巴山 (Zhejiang 2005b: 42), Xiaozhushan 小竹山 (Zhejiang 2005b: 42), Zhongjiacun 钟家村 (Zhejiang 2005b: 67), Lucun 卢村 (Zhejiang 2005b: 105–117), Biandanshan 扁担山 (Zhejiang 2005b: 59, 129–130), and Houyangcun 后杨村 (Zhejiang 2005b: 72) have all reported collection of high-status jades. In addition in Fengshan 凤山 and the Pinyao 瓶窑 area (Zhejiang 2005b), these high-status jades were collected, which implies that there were additional high status cemeteries beyond what has so far been excavated.

For the cemeteries from the second status level, unearthed jade *bi* can be used as a clue to estimate the total distribution of this type. In Xiaozhushan 小竹山 (Zhejiang 2005b: 42), Huangnikou 黄泥口 (Zhejiang 2005b: 57, 59), Qianshan 前山 (Zhejiang 2005b: 69), Shenjiashan 沈家山 (Zhejiang 2005b: 55) and others, jade *bi* or a few cone-shaped pendants (*zhuixingqi*) have been collected and reported, which shows that those locations might have had cemeteries of at least this status level.

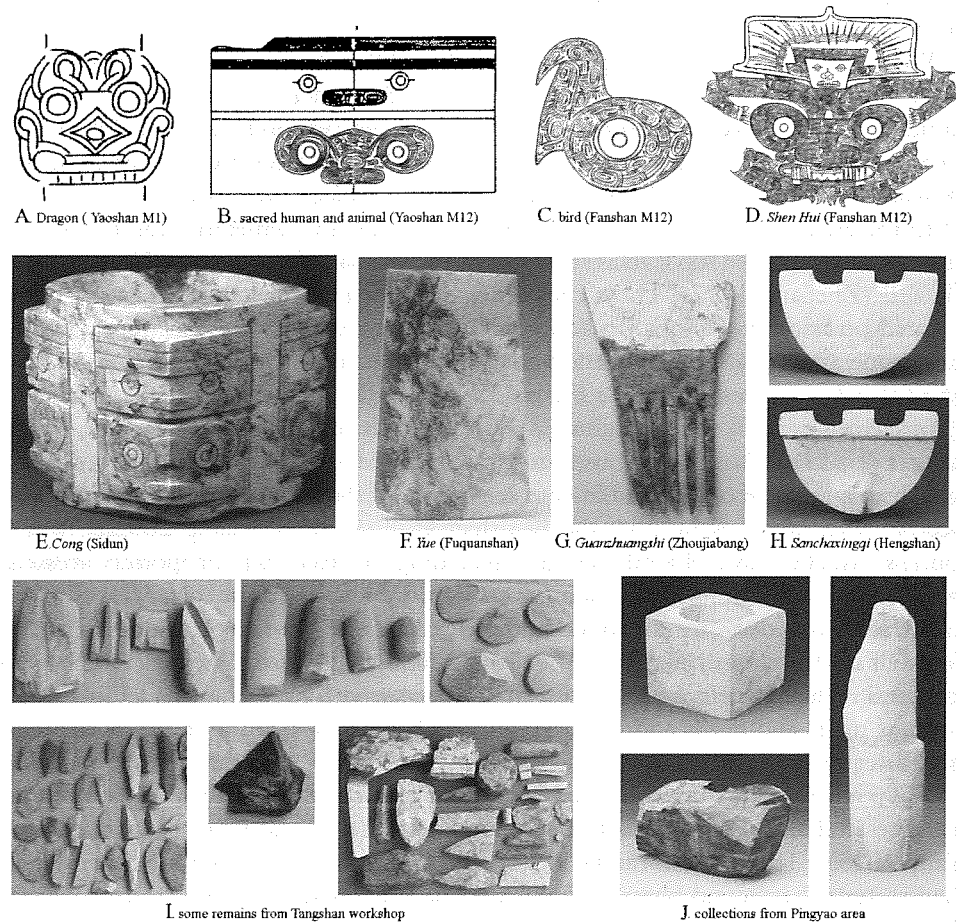


Figure 28.3 Typical carved patterns and types of jade from the Liangzhu culture. (A, from Zhejiang 2003: 28, Figure 26. B, from Zhejiang 2003: 178, Figure 227A. C, from Zhejiang 2005a: 64, Figure 48-4. D, from Zhejiang 2005a: 64, Figure 48-5. E, from Zhongguo Yu 2005: Vol. 7, 36. F, from Shanghai Wenguanhui 1999: Plate 11, Figure 3. H, from Liangzhu and HK 1998: 45, Figure 31. J, from Liangzhu and HK 1998: 30, Figure 7 (top left); 31, Figure 8 (bottom left); 71, Figure 90 (right). G and I, photos by the author.)

In total, the different status levels of cemeteries in the Liangzhu area do not form the “pyramid” structure we usually expect to see in early complex societies. The total number of top-level cemeteries is quite high, which implies that the population of the top elites was similar to that of the second status level in the special area of the Liangzhu region. This characteristic in social structure distinguishes the Liangzhu site complex area from other regions of Liangzhu culture. This is crucial for understanding the unique nature of the Liangzhu site complex within Liangzhu society as a whole.

Considering the scale of cemeteries, whatever status level they are, all cemeteries in the Liangzhu site complex are roughly the same size, around 20 graves, during

the middle Liangzhu period. This suggests a basic social unit of quite stable size. Wherever those social groups were located within the whole of Liangzhu society, the scale of one group, which used one cemetery, was basically the same.

Among the other regions around Taihu lake, middle Liangzhu period sites are fewer in comparison with the site density of the Liangzhu area. The scale of cemeteries remains similar to that during the early phase, with typically around 20–30 graves. The cemetery structure can be clearly divided into two types. Gaochengdun is typical as the first type (Nanjing and Jiangyin 2009), which has an artificial earth platform, and all graves were dug into the top of it. However, unlike in the Liangzhu site complex area, these graves are not so strictly aligned in two east–west rows. A second cemetery type is represented by the Zhangjiabang 章家浜 and Xujiabang 徐家浜 sites where the cemetery is not on an earth platform and burials are grouped into two or three clusters (Zhejiang 2002b).

In terms of both the burial sizes and objects, the differences between cemeteries are still much greater than those within a cemetery. The cemeteries can be divided into to three levels. Gaochengdun represents the first level, in which almost half the burials unearthed contained high status set jades including *cong*, *bi*, and *yue*, and the average number of burial objects per grave was between 40 and 50 (Nanjing and Jiangyin 2009). A few individual burials at other sites can also be put into this category, such as Zhaolingshan M77 (Zhaolingshan Team 1996) and Shaoqingshan M1 (Suzhou Museum 1988). The second status level is represented by the Xujiabang and Zhangjiabang cemeteries, where the burial objects usually number from 10 to 20 pieces, including a pottery set, a stone axe, jade beads and ornaments, and only very few individual burials have the typical top level’s Liangzhu jades such as *bi* or *guanzhuangshi* 冠状饰, cockscomb-style (Zhejiang 2002b). Most lack evidence for access to top quality jade or stone products. The third and lowest status level of cemetery is typified by the Pingqiudun site, where burials have fewer than 10 objects, mostly ceramics, some stone tools, and no jades (Zhejiang 1993b).

In the first level cemeteries, some internal differences between the individual burials are indicated by the presence or absence of the “imported” high status-set goods from Liangzhu site complex. Take the Gaochengdun site, for example, where 14 burials can be divided into two groups, one group with jade *cong*, *bi*, or *yue*, and the other group with only regular jade ornaments. The original number of burials was likely more than 14, judging by two old collections of typical Yaoshan style *cong* in the local museum reportedly from this site (Chen 1996). Most jade *cong*, *bi*, and *yue* can be easily identified as the imported goods from the Liangzhu site complex area, based on their material and decorative patterns. Differing from the top elite burials in the Liangzhu site complex area, Gaochengdun’s burials lack any head ornaments, such as *sancha xingqi* (fork-shaped jades) and *guanzhuangshi* (cockscomb-style jade), nor do they have sets of *zhuixingqi* (cone-shaped jade ornaments). This probably implies different styles of body decoration, for the living or in burials, between the north and south regions of the Liangzhu culture. In addition, at Gaochengdun, stone adzes also appear in the burials alongside stone axes; adzes are never seen in burials in the Liangzhu site complex area. Since both those burial levels are on the same platform at Gaochengdun and there is no clear spatial distinction between them, it is reasonable to consider they reflect some internal relationships of difference rather than inclusion in different levels in the wider Liangzhu status system. The cemetery,

of only around 20 burials, includes some special jade-stone products, which is evidence for significant status within the community as a whole.

To summarize the evidence of middle Liangzhu period burial customs, a major development occurred in the Liangzhu site complex area. The major regional center arose here by middle Liangzhu times. Not only its undoubted top level elite cemeteries with abundant jades and “high status sets”, but also its special settlement pattern and related public facilities (e.g., Mojiashan platform) demonstrate its importance as a center. I discuss the nature of the Liangzhu site complex urban settlement below.

At the same time, the whole of Liangzhu society had established a unified ideological awareness of how to make and use jades and stone tools in their burial rituals. The basic social unit is still quite small, since one cemetery contains only 20–30 burials in total. Social differences mainly signalled distinctions between social groups, rather than within a group. The particular jades and stones that were acquired and interred in burials played an important role in expressing a group’s status locally and regionally. The power of the Liangzhu regional center probably emerged in this period on account of its role in creating and distributing the most valued jades, the high status set, to other regional and local elites, and such exchange relationships helped to reinforce the status of both. Jade production and distribution is further discussed below.

During the late Liangzhu period, there are a couple of apparent changes in cemeteries. First, there is a marked increase in the number of cemeteries. Second, there was an increase in the scale of some cemeteries and variation in the size of cemeteries. Third, the internal structure of a single cemetery began to vary more. Finally, burial practices diversified and appear less unified. In a word, diversity is the main theme of the late phase of the Liangzhu culture.

The number of total cemeteries increased rapidly. This is especially obvious in southeast region. In the Liangzhu area, the same trend was also present. Along with the growth of population, new local elite groups developed in different areas, which included Fuquanshan, the center of east Taihu, Sidun, the center of north Taihu, Qiuchengdun, the center of west Taihu, and probably a couple of new elite centers in southeast area as well. The Liangzhu site complex also witnessed a growth of population, but most of the new groups were no longer of the highest levels of elites and had no access to high status sets. The growth of population can be understood as related to the intensification of rice agriculture over the course of the Liangzhu culture (see below). The increase of population and founding of new communities may be the foundation of the social change towards greater diversity in cultural practices such as burial customs.

Over the long term of the lower Yangzi Neolithic, the scale of cemeteries followed a trend of decreasing size. From the Majiabang period (c.5000–3800 BC), to Songze (c.3800–3300 BC) to Liangzhu, the size of cemetery, representing the size of basic social groups, shows a trend towards being smaller and smaller. In the Majiabang period, one public cemetery contained hundreds, sometimes more than a thousand burials. In the Songze period, these sizes shrank to about a hundred burials per cemetery. Beginning from the early Liangzhu period, the cemetery usually contained only 20–30 burials, which roughly is equal to the size of one subzone in a Songze cemetery. This may reflect a more marked separation of internal social groups in the Liangzhu period. Up to the late phase of the Liangzhu culture, most cemeteries

maintained a similar scale, but a few large late Liangzhu cemeteries appeared, such as Xindili 新地里, with more than a hundred burials (Figure 28.1D: 13) (Zhejiang and Tongxiang 2006). The social groups behind Xindili would have been quite different from those groups represented by the more typical cemetery with 20–30 burials. This change in the size of basic social group in the late Liangzhu phase, suggests major changes were underway in social structure and organization.

During the late Liangzhu period internal structure within a cemetery became more marked. Unlike during previous phases, when differences were mainly between cemeteries, various strategies including intra-group differentiation are indicated. For the top status-level there remained no apparent internal differentiation. However, for lower status cemeteries, layout became more variable. For example, the Zhoujiabang site comprised two groups of graves on two adjacent platforms (Jiang and Li 1999). Tinglin (Shanghai Archaeology 2002) and Balabang 吧喇浜 (Figure 28.1D: 14; Zhejiang 2002a) are additional examples that can be divided into three subzones each, with a core zone of higher status and adjacent dependant zones. Longtangang is a more extreme example in which a ditch separated two groups of burials, with burials east of the ditch representing a lower, more common status level, and that to the west having more elite burials (Zhejiang 2001b). The differences between the east and west groups within this cemetery are equivalent to those seen between cemeteries in the middle or early Liangzhu phases.

The overall increase in the variation in the sizes and internal structure of late Liangzhu cemeteries suggests some breakdown in the unified ideology of the Liangzhu culture that accompanied the growth in overall population and the increase status differentiation within local communities. Nevertheless this was still based on the local elaboration of the Liangzhu interest in key jade objects. For one thing high status jades and stone tools began to have more varied configurations. For example at Sidun there were abundant *cong* and *bi* (Sidun Team 1996), while at Hengshan 横山, the *yue* was abundant (Yuhang 1996). Caoxieshan (Nanjing Museum 1996) and Fuquanshan (Shanghai Wenguanhui 1999) had similar strategies in using diverse jades and stones from a range of sources (with different raw materials, different styles) to indicate social status through the access to a greater diversity of sources.

In ceramics there appear to have been less stringent rules and controls. Even neighboring cemeteries express different preferences. A fixed pottery set was no longer part of burial practice in most cases. The Tinglin (Shanghai Archaeology 2002) and Xindili (Zhejiang and Tongxiang 2006) sites do not have any *dou* stemmed dishes in burials. The two-eared necked jar (*shuangbi hu* 双鼻壶) is generally regarded as a typical late Liangzhu object in the eastern and southeastern area, represented, for example, by the site of Tinglin where 10–20 of these vessels were found in a single burial (Shanghai Archaeology 2002). At Longtangang cemetery, however, these two-eared *hu* jars are not that special; they are few in number and occur in smaller and generally poorer burials (Zhejiang 2001b). Another extreme case is at the Balabang cemetery in the same region, where only the *ding* tripod and three-eared (handled) *gui* 簋 ring-foot bowls can be found in burials. In contrast, typical *dou* stemmed dishes and the two-eared *hu* jars have been found only in the pit fill at the same site, which suggests that the burial objects reflect local preferences and patterns (Zhejiang 2002a). Even within a cemetery, the pottery assemblage can vary, such as that at Miaoqian site in the Liangzhu site complex area, where three distinctive subzones of

burials can be seen not only in spatial position of the graves, but also by the way the *bei* cup, *dou* stemmed dishes, and *hu* jars were used in burials (Zhejiang 2005c).

Stone objects are even more complicated in the late Liangzhu period. This is in marked contrasts to earlier periods when placement of stone tools, such as axes was highly uniform. From the early Liangzhu period the stone axe was a particular social status symbol used in male burials. During the middle Liangzhu, only a few local centers, such as Gaochengdun, had stone adzes (Nanjing Museum and Jiangyin 2009). During the late Liangzhu period, the diversity of stone tools used in burials can hardly be summarized, as this does not obviously reflect either social status or regional pattern. Many agricultural tools, such as sickles, finger harvest knives (*yun-tianqi* 耘田器), and plowshares, appeared as burial objects. Some of them were made as ritual objects, as they show no evidence of use-wear; some were even made of jade. The special use of stone objects varies between cemeteries. For example in the south-eastern area, Longtangang and Balabang maintain the tradition of only using stone axes; while at Zhoujiabang (Jiang and Li 1999), Qianjinjiao 千金角, and Pingqiudun, stone arrows and adzes are important components in burials; Xubuqiao cemetery lacked axes altogether (Zhejiang 1993b). Since the differences between cemeteries are more variable, it is hard to rank those cemeteries into different levels in terms of the stone objects.

Nevertheless, late Liangzhu cemeteries can still be classified into three levels. The highest level there has jades as the focal burial objects, and cemeteries were built on top of earthen platforms made by people, such as at Sidun (Sidun Team 1996), Caoxieshan (Nanjing Museum 1996), Fuquanshan (Shanghai Wenguanhui 1999), and Hengshan (Yuhang 1996). The second tier includes most of the cemeteries of this phase. It is noticeable that among all those second-tier cemeteries, internal social differences are indicated, which implies that the social differentiation had become more elaborate and inflated among "the middle class" of Liangzhu society. The lowest status level in this phase only can be seen at the Zhaolingshan site (Zhaolingshan Team 1996), where all burials have no objects and lack clear burial pits. How representative this extreme case is for the lowest social groups in general, however, needs further support.

To the extent that a unified burial custom within the region can be taken to reflect the same cultural identity among all its practitioners, the Liangzhu culture was quite unified through its earlier period. During the late Liangzhu, this situation broke down through diversification in which more localized practices and preferences became evident. This seems to imply that the specific ideology that had held Liangzhu society together began to disintegrate at this stage, and changes that began to undermine Liangzhu social unity were underway. Craft specialization, evident from jade and stone axes, had been a main source of social power in the earlier phases. In the late Liangzhu period although its meaning as a symbol of status was less pronounced, it still did function in this way within the elite social networks.

EMERGENCE OF A REGIONAL CENTER

The Liangzhu site complex is located in the northeastern section of Hangzhou city, occupying an area of about 50sqkm in the plains, surrounded by mountains and

hills. This area is the transitional zone from the *Tianmu* 天目 mountains to the Hangzhou–Jiaxing–Huzhou plains 杭嘉湖平原. The elevation of this area is about 2–3 m above sea level on average, and there are just a few natural, small hills around 20–30 m in height (Figure 28.2). The earliest cultural remains in this area belong to the Majiabang period (c.5000–3800 BC), but only very few locations have deposits from this period (Zhejiang 1993b). Remains from the next, Songze phase (c.3800–3300 BC) are even less abundant, and so far only one site is known, a late Songze cemetery called Shimadou 石马埭. Therefore this area developed especially from the early Liangzhu period (c.3300–3000 BC) onwards. These remains generally support the interpretation that by the early Liangzhu period a considerable population with a well-differentiated internal hierarchy was present. The occupation of the area reached its peak during the middle Liangzhu (c.3000–2600 BC). In this phase, the layout of the Liangzhu site complex became much clearer in terms of local site distribution and regional differentiation. Late Liangzhu period (c.2600–2200 BC) remains are mainly from settlements, but unsystematic older collections of late Liangzhu-style *cong* tubes and carved *bi* disks imply that there was still continuity of elite Liangzhu traditions in this area. Importantly, in 2007 remains of a great city wall of earth with stone foundations was found at Liangzhu (Zhejiang 2008). AMS dates of rice from the wall foundation indicate that it belongs to the late period.

As a result of surveys, there are more than 150 sites known in this area (Zhejiang 2005b). These remains raise issues about whether it is appropriate to class all of them as "sites." Those sites are very diverse in size; Mojiashan is an artificial platform created in the middle of the Liangzhu area, which is more than 30 ha in size and hard to compare with normal settlements, usually no more than 1 ha in size. In addition it becomes difficult to define the boundary of one single site, since in this area most "sites" are close to each other and may be various parts of the same, larger urban settlement area. For example, in the west around the hill Xunshan 荀山, archaeological remains are only 30–50 m away from other sites. Remains in most locations, however, are about 200 m apart. Third, the most crucial reason to reconsider the definition of a site is that the Liangzhu culture often had separate cemeteries on higher ground, whereas very few occupation areas have been found. Thus, much research focusing on the functions of "sites" and establishing networks of communication between them remains to be done.

Compared with the rich burial data, information from settlements is quite poor. So far, clear variation in settlements can be represented by comparing Yaojiadun 姚家墩 and Miaoqian. Yaojiadun is on the northern side of the Liangzhu site complex; it is 1–3 m above the modern level of cultivated ground, and measures 150 m from east to west, 400 m from south to north (Figure 28.2D; Liu 1998; Zhejiang 2005b: 105–117). A burned, hard house surface and stone foundation structure were found in the northern part of the site. In the middle and southern part, remains of several burned red bricks were found; and in trench T3, there were packed-earth activity surfaces more than 2 m thick. On the other hand, Miaoqian represents a typical settlement in the area. Here, houses were built on naturally higher land surrounded by modern rice paddies, with a cemetery nearby. This site, like others, was developed in conjunction with a drainage system, relying on a natural stream or artificial ditches to define the edge of the residential area (Zhejiang 2005c). This type of settlement usually is no more than 1 ha in size.

If those two types of settlements can be regarded as forms of sedentary occupation of two different social levels, then it would appear that there is no correlation of residential site differentiation with the cemeteries. Yaojiadun and four other earthen platforms have been regarded as one settlement unit with very close internal relationships (Liu 1998; see Figure 28.2D). At Lucun jades in the form of *cong* tubes, *bi* disks, and *yue* axes were reported to have been unearthed, which implies a high-status cemetery like Fanshan and Yaoshan (Zhejiang 2005b: 105–117). If so, Lucun and Yaojiadun, and probably three other platforms as well, can be understood as different activity areas (settlement and cemetery) belonging to one social group or community. In this case, where were the wealthy inhabitants of those areas interred at the Fanshan and Yaoshan cemeteries? If the cemeteries can be divided into at least three (or even more) levels, how can this relate to the classification of settlements in which only two levels can so far be recognized? Those questions imply that there are limits to the reconstruction of social structure from cemeteries alone.

The special characteristic of the Liangzhu site complex comes not only from the above remains, settlements and cemeteries but even more so from large public constructions, of as yet unclear function, such as the artificial platforms at Mojiaoshan and the recent discovery of the massive Liangzhu walls.

Mojiaoshan is a large artificial earth platform located in the middle of the Liangzhu site complex. It is rectangular, 670 m from east to west, 450 m from north to south, thus more than 30 ha in area, and it is about 8 m above the local rice paddies (Zhejiang 2001a, 2005b: 139–143). There are three smaller platforms on top of Mojiaoshan (see Figure 28.2C), known as Damojiaoshan 大莫角山, Xiaomojiaoshan 小莫角山, and Wuguishan 乌龟山. Between and under these small platforms is the 3 ha artificially constructed platform which was revealed by a program of probing/coring and some excavation. The rammed deposits of this platform were alternating sandy and clayish layers, 13 layers in total, up to a thickness of about 50 cm. On this rammed-earth base, archaeologists found rows of postholes, most of which were 130 cm in length and 30 cm in width, indicative of very large posts, with one post hole more than 70 cm deep. According to an interview with local villagers, in 1958 when a pond was dug on the slope of southwestern Mojiaoshan, wooden mortise-and-tenon joints were found beneath about one meter of soil (Zhejiang 2001a). This indicates that there were originally wooden structures on the top of Mojiaoshan. In addition the regularly-arranged ditches, pits with rock fill, and pits were also found on the Mojiaoshan platform, suggesting a range of facilities and activities in addition to the presumably massive architecture suggested by the postholes. The area is interpreted as a “palace” by some archaeologists, although there is no evidence clearly linking this area at Mojiaoshan with the cemetery of any particular status group. Around the Mojiaoshan platform, there are a few top-level elite cemeteries, such as Fanshan to the northwest, about 150 m from Mojiaoshan, Sangshutou 桑树头 in the southwest (Zhejiang 2005b: 55) and Zhongjiacun 钟家村 to the southeast (Zhejiang 2005b: 67). Analysis of graves indicates the basic social unit in the Liangzhu culture was a group restricted in size which used the same cemetery consisting of 10–20 burials. It is hard to relate Mojiaoshan to any of them, and no evidence of planning at the subregional level that might have separated groups has been found in the remains at Mojiaoshan. Instead, the evidence suggests a single, planned public site. At the moment, the function and the ownership of Mojiaoshan still remains unclear.

In terms of the date of Mojiaoshan, one small, late Liangzhu burial that cuts into the slope of Mojiaoshan provides a small clue. However, it is not clear whether that burial suggests an abandonment of the main function of Mojiaoshan, or whether the burial was a part of the public activities at Mojiaoshan. Nevertheless the stratigraphic evidence indicates that Mojiaoshan was built and used mainly before the late Liangzhu period. Considering all the changes during the middle Liangzhu period, Mojiaoshan probably represents important remains of the middle Liangzhu.

In 2007, another exciting discovery was announced by the Zhejiang province Institute of Archaeology (Zhejiang 2008): an ancient city wall in the center of the Liangzhu site complex area. The preliminary results from coring and excavation show that there is a artificial wall surrounding the Mojiaoshan site, including Fanshan and other cemeteries in each corner of Mojiaoshan. This wall enclosed an area of about 1800–1900 m from north to south, 1500–1700 m from east to west, enclosing an area of about 290 ha (see Figure 28.2C). The base of the wall was built on a layer of rock, and the width of this rock base is about 40–60 m. Pure yellowish clay was piled on the rock layer to form the wall, and the best preserved part of the wall is currently about 4 m high. AMS dates were obtained from the deposit on both sides of wall, showing that the wall was used from around 2600 to 2200 BC, during the late Liangzhu period. But the date when the construction of the wall began is unclear. So far, no pottery remains have been found from the wall excavations that are earlier than the late Liangzhu, suggesting that the beginning of the wall was perhaps not before 2600 BC. This raises another question about the relationship between the Liangzhu wall and other important discoveries which date to the middle Liangzhu, such as the Mojiaoshan platform and the rich cemetery of Fanshan. Mojiaoshan and Fanshan would have been enclosed within the late Liangzhu walled area. The Yaoshan altar-cemetery is about 3.5 km northeast of the wall, and Huiguanshan is about 1.5 km northwest of the wall. No doubt this arrangement made the Liangzhu wall central to the Liangzhu site complex as a whole. Since all of those important remains date to the early to middle Liangzhu period, however, they were already present for several hundred years prior to the construction of the great Liangzhu wall. Regardless of its specific functions, the wall is significant in that it reinforces the position of the Liangzhu site complex as the preeminent regional center for the whole Liangzhu culture. It is also clear that this culture did not decline and collapse in the late phase of the Liangzhu period.

Tangshan 塘山 comprises another wall-like artificial feature of the Liangzhu site complex area. This earthen wall is located to the northwest of the site group area. It is about 4.3 km long from east to west, preserved to heights of between 2 m and 12 m, and it is 20–50 m in width (see Figure 28.2) (Zhejiang 2005b: 118–122). According to a test excavation, it was surely constructed during the Liangzhu culture. The function of Tangshan is still controversial; flood protection is one of the main current hypotheses, since the wall lies between the mountain (where potential local floods might arise) and the center of the Liangzhu site complex.

One important discovery at Tangshan was a jade and stone workshop, excavated in 2000 (Fang 2002). A 458 sq m excavation area was opened, and more than 460 jades and other stone pieces were unearthed. Stone tools found could be divided into three main types: whetstones or grinding stones, arrows and black flints. The grinding stones were of various sizes and shapes, with big ones (Figure 28.3E) mostly for fine

polishing of long cylindrical pieces such as cone-shaped jades. Medium-sized grinding tools were cylindrical and probably for internal polishing of the holes of *cong* tubes and other pieces. Small grinding stones were irregular disk-shaped and probably used for polishing. The second type of stone recovered in quantity were reshaped stone arrowheads, possibly the waste products of arrowheads, or tools re-used for polishing. The third type, black flints, was represented by a few flint cores and many flakes. These flints are regarded as carving tools. Among the jade remains, most are pieces of raw material varying in size. Cut marks are evident on most of these; tracks from use of a blade are more common than marks from sawing with string. There were also a few tubular, drilled jade cores and one fragment of a *cong* tube. This is the only excavated workshop that provides detailed information about the production of Liangzhu jades. All the tools appear to be linked with a couple types of jade products, including cone-shaped jades. The remains at this site suggest that all jade production processes were not conducted at one place. The Tangshan workshop was mainly concerned with the final cutting and polishing steps. Most importantly, analysis of waste products suggests the Tangshan workshop was not directly linked with the jade products for top status-level individuals, items found in burials at Fanshan and Yaoshan.

There are many other locations in the Liangzhu site complex area where evidence for jades or jade working has been recovered; together they indicate the importance of the jade-stone industry in the region. For example, at Pinyao (Figure 28.2), a blank *cong* tube (Figure 28.3J), broken *cong* tube and *cong* tubular core were collected by the local museum. Therefore, jades of the top status-level may have been produced near Pingyao.

In summing up the significance of the Liangzhu site complex, four points need to be emphasized. First, the Liangzhu site complex was newly settled by migration, and constituted a newly established society in the early Liangzhu period. Second, the mortuary practices here were organized around the basic unit involving small cemeteries of 10–20 burials, a characteristic of the Liangzhu culture as a whole. Third, the production and consumption of jades and stone tools was most developed within the Liangzhu site complex, and the highest level of elite individuals was more common in this area than elsewhere in the Liangzhu world. Fourth, Mojiaoshan and the surrounding city wall marked a center of this area by middle Liangzhu times, and it remained in use until the end of the Liangzhu culture.

Compared with other Liangzhu settlements, the different loci of the Liangzhu site complex are unique in terms of evidence for types of construction and activities. Within the Liangzhu site complex, there is no clear definition of a “site” referring to a certain spatial area for one community’s daily life, mortuary ritual, and resource catchment area. Instead different functional locations, such as cemeteries, settlements, workshops, and public spaces were patchily distributed across the area, and the boundaries between daily life, funeral events, and other public activities are not entirely clear. These characteristics of the Liangzhu site complex make it different from the typical spatial concept of a village, which is usually based on a settled community practicing agriculture. Instead the Liangzhu site complex is more like a “city” in terms of its layout and unique social structure. Here, the difference between the Liangzhu site complex and other common settlements of the Liangzhu culture is not simply a difference in hierarchy and scale, but also one of complexity. It is absolutely

right to put the Liangzhu site complex at the top of social hierarchy of the Liangzhu culture. In addition, the Liangzhu site complex can be seen in relation to other sites of the Liangzhu culture as one would contrast a modern city with neighboring villages.

JADES PRODUCTION AND CRAFT SPECIALIZATION

Liangzhu jades, their production, form types, carved motifs, and use in burials are an important part of the study of Liangzhu culture and are summarized in this section.

Liangzhu jades are normally extensively carved with distinctive patterns, especially in the early and middle Liangzhu periods. In the late phase, however, the shapes and sizes became more important indicators than the carved patterns on the jades. The basic Liangzhu motifs can be divided into three categories: (1) “dragon” (Figure 28.3A); (2) “sacred human and animal” (*shenren shoumian* 神人兽面) (Figure 28.3B); and (3) “bird” (Figure 28.3C). These three main themes were not fully established at the start of the Liangzhu tradition but developed gradually during the early Liangzhu period (Qin 2006). The “dragon” and “sacred human and animal” motifs were very tightly connected in terms of the technique of expression and details of design. The “dragon” had been separate already in the early phase and was only used on bracelets, tubes, and small *bi* disks. The “sacred human and animal” motif shared the same technique of expression and eventually formed the Liangzhu *shen hui* (sacred insignia) motif during the middle Liangzhu period, which is represented, for example, by the full image on jade *cong* from burial M12 at Fanshan (Figure 28.3D). However this most complete form of the insignia might have been made and used in only one generation, or by a single craftsman, since it has only been found in burials M12 and M22 of Fanshan, which are regarded as the burials of one ruler (M12) and his wife (M22). However the motifs of the “sacred man” and “sacred animal” can be traced back to the middle phase of the Yaoshan cemetery. Originally this combination was used on various types of jades, including fork-shaped jades (*sanchaxingqi*) and cockscomb-style pieces (*guanazhuangshi*), and *huang* (half-disk) ornaments. However, the range of forms it appeared on became gradually restricted up to the middle phase of the Fanshan cemetery, and finally in the late Liangzhu period it became restricted to *cong* tubes. This was part of a wider shift in the elite jade system.

The “bird” pattern developed relatively later, and it was never a main theme on jade carvings. The bird pattern expresses a bird’s body, but was carved by a comparable technique and style to that used for the “sacred animal” eyes (compare Figure 28.3C with 28.3B and 28.3D). Both styles changed over time at a similar rate. This implies that all carved jades belong to one craft system or tradition, and the motifs were designed and copied by the full range of craftsmen and underwent stylistic change in a similar way. The symbolic meanings behind these motifs were presumably widely shared.

The “bird” is the only theme encountered in various aspects of Liangzhu culture. On jades, the carved “bird” is usually associated with a “sacred insignia” or “sacred man and animal” motif. In addition, “bird” is also a major theme incised on black

polished ceramic vessels of the Liangzhu culture. It is usually a combination of “bird,” “snake,” and “clouds.” On ceramics the technique expressing these forms differs from that on jades, which suggests different craftsmen and traditions for ceramic production as opposed to jade-carving. Until the very latest stage of the Liangzhu culture, a series of small, “blurry” symbols can be found carved at the edge of *bi* disks and sometimes on the top edge of *cong* tubes. This symbol usually is a bird standing on an “altar” (*jitan* 祭坛). This motif is never seen in other Liangzhu jade objects, and the carving technique is completely different from earlier traditions. Some scholars suggest that these symbols were intentionally incised to appear blurry (Teng 2004). If so, the function of this symbol is different from the carved patterns on most Liangzhu jades.

In terms of jade forms, *cong*, *bi*, and *yue* are the most typical in the Liangzhu system. *Cong* is generally regarded as deriving from the form of a bracelet. The external square and internal circle (*waifang neiyuan* 外方内圆) is characteristic of the *cong* shape (see Figure 28.E as an example) which had become standardized by the latter part of the early Liangzhu, as seen at late contexts at Yaoshan. Over time the internal hole became increasingly small, a change that made it diverge from the original function as a bracelet. At the same time, the *cong* gets taller over time, and the surface of *cong* tubes become divided into multiple layers, with each unit displaying the same reduplicated theme: sacred man and sacred animal. The principle appears to be that the sacred man was always on top of the animal, and these two together comprises a complete unit, which could be replicated along the entire length of the *cong* (see Figure 28.3E, top with “sacred man” and bottom with “sacred animal”). Eventually, the tradition of detailed, complicated carving was abandoned, as was the image of the sacred animal. In the late phase, a kind of tall *cong* (*gaojie cong* 高节琮), usually more than seven units or friezes (up to 19) occurs, with a simplified sacred man of two eyes and one nose as the only motif. These were widespread in the Liangzhu culture zone and even in adjacent regions. This type of object was made of a different raw material and was decorated with rough and simple carved faces of the “sacred man.” Clearly it originated from other craft production systems (or different workshops), represented by finds from the Sidun cemetery on the northern edge of the Liangzhu culture distribution area (Sidun Team 1996). It is quite distinct from the craft traditions and workshops represented by the jades of the Liangzhu site complex area, which has the most complete and complicated “sacred insignia.” For the late phase, another interesting development is that finished *cong* were sometimes in two pieces, and *cong* were reused or redistributed. Both Hengshan (Yuhang 1996) and Fuquanshan (Shanghai Wenguanhui 1999) cemeteries have evidence of one finished *cong* having been cut in two, with both pieces then being put in one single burial. This suggests that the quantity of *cong* was highly valued during the late phase.

Compared to *cong*, jade *bi* disks were not common from the beginning of the Liangzhu period, and they did not carry special motifs. The *bi* disks in the early Liangzhu were small, and their use appeared no different than for other ornaments. It is in the middle phase of Liangzhu that *bi* disks became high-status objects, and the number of *bi* in one burial became indicative of the social status of the deceased. For example in burials M20 and M23 at the Fanshan cemetery, the quantity of *bi* is respectively 43 and 54, comprising almost 25 percent of the burial objects. Those *bi* were mostly made of the same raw material and in similar size. Their double

tubular-drilled holes had similar diameters. This suggests that this one group of items were produced at a single workshop. The amount of *bi*, together with the number of *yue* stone axes became another standard expression of social status from the mid-Liangzhu period. The size of *bi* disks became gradually larger over the late period. The jade raw-material of *bi* is always similar but differs from that of other jade objects, which implies that the *bi* were produced from a different source than the other jade objects. At the very end of Liangzhu period, the symbol of the bird standing on an “altar” appears on the edge of a *bi*, which may relate to a special function or symbolic meaning of *bi*. So far, only the Yujiashan 玉架山 site has evidence of *bi* with this symbol from an excavated burial (Lou et al. 2010). The other known cases involve old collections lacking excavation contexts (Teng 2004). Unfortunately it is not possible to discuss the different archaeological contexts of *bi* disks in more detail.

Liangzhu jades are mostly nephrite (*ruanyu* 软玉), with a very few non-nephrite pieces (such as serpentine, *shewenshi* 蛇纹石) from smaller burials and common cemeteries (see Wen 1986; Gan et al. 2010). According to a recent study, 80 percent of the jades from the Liangzhu site complex are tremolite or tremolite-actinolite. At the moment, it is still very hard to distinguish the particular jade resource (place of origin or provenance) based on the structure of tremolite, components, and micro-morphology, which generally are the same for all of them. For the trace elements, recent analysis suggests that all Liangzhu jades are likely from the same origin (Gan et al. 2010: 3417), probably locally distributed along mountainous areas west of Taihu lake.

However, since the carved jades have distinctive style “marks,” it is still possible to reconstruct the distribution of jade from different workshops during the early and mid-Liangzhu phases. During the late phase, when most jades were undecorated, the distribution analysis is inferred mainly from the comparison of raw material and shapes.

In summary, in the early and mid-Liangzhu phases, we can see a very tight linkage between all elite cemeteries in the Liangzhu site complex area. They share the same special jade products, probably even the same craftsmen within a particular generation. They do not share these with common people living in the same area. Local workshops and the discovery of fragments and blank (unfinished) *cong* tubes show us that this could be a local system of production and consumption. In addition the Liangzhu jade evidence highlights long-distance exchange and communication between elites in different parts of the Liangzhu world. If we compare jades from the Liangzhu site complex with other finds in the wider Liangzhu culture zone, we can observe long-distance distribution from the Liangzhu site complex to elites in other regions. The Liangzhu site complex area apparently is the craft production center of the Liangzhu cultural world, in terms both of producing the finished products and more importantly of creating and modifying the whole criteria of what Liangzhu jade should look like (especially in the early and middle periods). As such the Liangzhu site complex was at the center of constructing and maintaining the Liangzhu ideological system that was shared by all elites and probably by ordinary people as well. Another crucial aspect is that people in the Liangzhu site complex area not only seem to have produced abundant jades, they also consumed most of them. So far we can only see one direction of movement involving jades from the Liangzhu site complex outwards to elites in other areas. There is no evidence for the

inverse – the spread of symbolic objects into the Liangzhu site complex. This shows us a very particular pattern of jade specialization and the creation of symbolic meaning. More than simple commodities, these jades communicated and constructed privilege and control. Much of the use and consumption of these products was local, within the greater Liangzhu elite community. The control over the production of these jades implies that elites from the Liangzhu site complex had a certain level of authority within the whole society. In comparison we can consider the bronze-casting system in later China, especially during Shang (see Chapters 16, 17, 18, 23) and Western Zhou periods, when a similar mechanism of centralized production of objects and central authority can be observed.

Another issue raised by the jade specialization at Liangzhu is that this was not a straight forward complex society with a pyramid-like model of status levels. While the Liangzhu site complex controlled both the best products and most sacred concepts, this area was not the only one producing elite craft objects. It did not monopolize all elite symbolic production. Minor centers elsewhere maintained somewhat distinct burial traditions and some jade-stone production. Products from these other centers were locally distributed. At the same time, other local elite burial practices mirrored in general those at Liangzhu, suggesting that they maintained “politically correct” practices from the point of view of the Liangzhu center. Non-elites created their own social differentiation through the creation and burial of tools, including making certain agricultural tools in jade. This implies that non-elite communities could access some jade resources (nephrite) and carry out jade production techniques, resulting in jade objects being distributed across the whole cultural region. This also implies that only the authority to make and bury certain highly valued ritual pieces (the “high status set”) was tightly controlled. In another words, control of the production and consumption of the jade objects in the “high status set”, and not simply the control of jade *per se*, was the source of social power.

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PART

VIII

The Southeast