Social Change along the Middle Yangzi River: Re-Configurations of late Neolithic Society

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ABSTRACT

Through the case study of the Shijiahe site, Tianmen, Hubei, this thesis investigates the dynamics of enclosures along the Middle Yangzi River during the third millennium BC. During the early third millennium over a dozen of enclosures were constructed in this region, earlier than elsewhere in China during this millennium. All were abandoned and some re-settled around 2000 BC, followed by another episode of abandonment. The major theoretical paradigms dominating the field are culture history and social complexity. The thesis argues that these are insufficient to fully appreciate the actual details and dynamics of the developments at the Middle Yangzi sites. As an alternative, this thesis employs a combination of approaches. A detailed practice-based analysis of the biography of Shijiahe reveals dynamics of identity formation and changes to tradition not observed before. The techniques of enclosure construction, reasons for their construction and abandonment will also be discussed.

The thesis acknowledges the central importance of religion and interaction as two essential underlying currents of prehistoric lives that, in the case of China, have largely been ignored. From this angle a series of objects, such as red pottery cups, pottery pointed-bottom vessels and jade ornaments, from Shijiahe are investigated and their religious significance established. They and the practices they were used in are also mapped according to their find spots, which show the connection of Shijiahe with regions even beyond the Middle Yangzi, such as the Yellow and Huai river regions. These interactions were probably also stimulated by religious practices. The northward connections are of particular importance, as they confirm

that the Yangzi, and the giant swamp of the Yunmengze in the Jianghan Plain, were formidable barriers southwards. The usually posited direction of movements from the Yellow River into the south must be challenged on the basis of this thesis, which argues for multiple directions of interaction and transmission of objects and ideas.

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Chapter 1

INTRODUCTION

Introduction

The third millennium BC was the millennium of enclosure construction in China. At no other time in prehistory do we see so many enclosed sites in eastern China. The first wave of enclosure construction in this millennium occurred along the middle reaches of the Yangzi River, the present-day provinces of Hubei and Hunan, during the early third millennium. Afterwards, enclosures were built in other regions. In this thesis, I will focus on the Middle Yangzi enclosures, with the site of Shijiahe, Tianmen, Hubei (fig. 1.1), as a case study. I will investigate enclosures in China from an alternative methodological angle to the dominant paradigms, social complexity theory and culture history. In an attempt at achieving a nuanced understanding of enclosed sites, I will examine Shijiahe and other Middle Yangzi enclosures from a practice-based angle through thick description, while also emphasising the importance of religion and interaction.

The terminology employed will forsake the current use of 'wall' and 'moat' to describe features of enclosures.[1] Instead I will use the less problematic terms of bank and ditch, common in work on prehistoric earthworks in Europe without allusions to medieval fortifications. The current Chinese term for bank, *chengqiang,* is usually translated as wall[2] and the terms for ditch, *huanhao* and *huchenghe*, are translated as

[1] I am grateful to Dan Hicks and Simon Kaner for pointing me in this direction.
[2] See below for the implications of using *cheng* for the interpretations of enclosures as cities.

moat. Such terminology implies and perpetuates levels of socio-political development widely accepted among scholars both in the West and in China.

In China, enclosures are usually interpreted as indicative of urbanisation. With Shijiahe as a case study, I will focus on two episodes in the history of the site, which are usually interpreted with social-evolutionary views in mind, such as emerging social complexity and notions of decline. These two episodes are the construction of the enclosure during the early third millennium and its abandonment, followed by another episode of re-settlement and abandonment toward the end of this millennium. In this thesis, I will investigate these developments in their own right by placing them into the context of the long-term history of the site and by scrutinising the activities during the each chronological stadium, here termed 'phases', through thick description in order to reveal the practices involved. A detailed look at these practices allows for tracing the similarities and differences between each phase, which in turn allows us to make statements about continuities and discontinuities of practices. The Shijiahe site and the Middle Yangzi region are suitable for the approach taken as the site was excavated on a large scale and almost entirely published. In comparison to its northern counterparts, the Middle Yangzi region has received less attention overall, which encourages trialling new methodologies.

My investigation of Shijiahe has resulted in recognising long-term historical contexts of the developments of the third millennium, which is this thesis' focus. Enclosure construction is a significant and disruptive episode in the history of a site and I will propose an alternative interpretation of why it occurred through an investigation of cemetery developments and the ways in which the flow of water was manipulated. This thesis will also provide alternative interpretations of the processes of construction. A close study of the practices of inhabitation and disposal of the dead

will show differential dynamics. For example, while the burial customs remain remarkably stable throughout much of the third millennium, other religious practices appear almost constantly in motion just as the changing nature of the meaning of the enclosure for the inhabitants. I will also fully investigate the abandonment of Shijiahe and its subsequent re-settlement and frame these processes more optimistically instead from the angle of decline. While I will be able to propose a more nuanced understanding of the reasons for enclosure construction, the reasons for abandonment cannot yet be fully understood; however, clarification regarding the overall patterns will be provided.

The developments at Shijiahe did not occur in a vacuum and need to be placed within wider regional and interregional contexts. I will show that the episode of enclosure construction at Shijiahe has to be envisioned as a region-wide phenomenon similar to the abandonment, which also occurs at other (enclosed) sites, most of which are not re-settled. Interaction across the region is a central feature of the main events discussed for Shijiahe. But the site is also entangled in terms of the religious practices happening there. Currently, clear evidence for socio-political organisation, economic activities and the like is missing, but practices that can be described as ritualised and also religious can be identified. And it is these practices, or at least the objects employed in them, that are also found at other sites along the Middle Yangzi but some also even reach the Yellow and Huai River areas. I will place a particular emphasis on access routes and paths of communication and illustrate the ways in which transport on and along rivers may improve our understanding of sites such as Shijiahe.

In light of these phenomena, the Shijiahe site can be more fully understood if concurrently approached from two angles: local site histories resting in a practice-based approach are able to demonstrate the particular dynamics of a site; a second

focus on the entanglement of a site with other sites has the power to contextualise a site, its people and things within the wider regional and interregional interaction networks.

Chapter Overview

This first chapter will introduce the Shijiahe site, place its enclosure into its regional and superregional contexts, and also provide a site narrative providing a clear account of the site as point of departure for the rest of the thesis. Detailed discussions of results and developments will follow in the subsequent chapters. This chapter will also address the major reasons for enclosure construction as currently discussed for China as well as those relating to the abandonment of the site by the end of the third millennium BC. These provide points of departure for alternative notions raised in the following chapters, already raised in the site narrative. The chapter concludes with an outline of the methodology used in this thesis, which centres on a practice-based approach employing thick contextual descriptions coupled with a strong emphasis on religion and interaction. Chapter 2 offers the first integrated chronology for all Shijiahe loci and related sites by demonstrating the establishment of the phasing of the site on which much of this thesis rests. The chapter also discusses the climate, environment, topography and waterbodies in the region during the third millennium, which is an important preliminary step for our understanding of site locations and access routes in and out of the region.

The third chapter provides a detailed discussion of the enclosure at Shijiahe and the modes of construction and examines the ways in which these led to the formation of a joint identity among the builders before narrating the long-term biography of Shijiahe over several millennia until its abandonment. It will also look at

the process by which the meanings of the enclosure changed over the course of the third millennium. The general biography of Shijiahe during the third millennium from construction to abandonment and at time re-settlement as a region-wide phenomenon will be confirmed through an analysis of the Yinxiangcheng and Chengtoushan enclosed sites. The chapter concludes by suggesting that later third millennium enclosures further downstream and even in Shandong may have appropriated the construction technique from the Middle Yangzi, bringing further evidence for the importance of interaction.

Chapter 4 discusses a number of key object types, such as tube-shaped pottery, red pottery cups, red pottery figurines and pottery pointed-bottom vessels. It will be demonstrated that these were central to religion at Shijiahe, practices related to which will be discussed in detail. These practices will be related to the developments of the site discussed in the preceding chapter. These discussions will illustrate the power of a practice-based approach through thick description revealing insights on practices at Shijiahe not recognised before. Chapter 5 complements the previous chapter by placing the discussed practices into their regional and supraregional contexts. I will show the distribution patterns of the various objects across the different phases and also discuss the practices at other sites comparing these with those at Shijiahe. It will be suggested that not only were the objects shared across a region but possibly also the practices intimating a joint understanding of religion. I will also illustrate the persistent northward movement of these objects, which also arises both from the continued contacts between the Middle Yangzi region and its northern neighbours as well as the prevention of southward movements due to the formidable barriers of the Yangzi and the swamp of the Yunmengze. The success of Shijiahe as a site will be

explained as resulting from its favourable location at the junction of major routes of communication.

In the concluding Chapter 6 I will summarise the major findings of this thesis and provided an overview of the major themes discussed. In addition, I will discuss the two paradigms of culture history and social complexity in greater detail as these have been dominating the ways in which the archaeological evidence has been approached in China. I will illustrate the ways in which this thesis has strived to move beyond these paradigms thereby suggesting alternative methodological approaches to the archaeological evidence, which, as shown in this thesis, may re-frame our understanding of Neolithic enclosures in China.

The Enclosure at the Shijiahe Site

The Shijiahe site in Tianmen County, Hubei (fig. 1.1), is a suitable case study for investigations into enclosures along the Middle Yangzi River: Shijiahe's enclosure was the first Neolithic example discovered in this region and it has remained the largest among those discovered. These facts in conjunction with Shijiahe being the type site for the so-called 'Shijiahe Culture' have raised the expectations as to what Shijiahe might reveal about the late Neolithic along the Middle Yangzi, especially in terms of cultural history and social complexity as to be discussed below.[3] As a result, Shijiahe is among the small number of sites that has been excavated on a larger scale with much of this work published. The archaeological evidence is sufficiently rich to allow for an in-depth analysis of the site along the lines proposed in this thesis.

While Shijiahe is not the only excavated Neolithic site in the Middle Yangzi Region, it has certainly become the most famous due to the discovery of multiple

[3] A recent sequence of archaeological cultures in the Middle Yangzi region is shown in figure 1.13. The basic sequence is Daxi-Qujialing-Shijiahe-Post-Shijiahe culture.

enclosures consisting of a bank and a ditch. What we observe at the site today is dominated by the second, later enclosure that was built on top of the northeastern corner of the Neolithic enclosure, known as Tucheng, during the Western Zhou period (c. 1050-771 BC; fig. 1.2).[4] It is oval in shape and consists of a bank and a ditch. The bank encloses an area of about 510m from north to south and 280m east to west. The ditch is more than 100m at its widest point and about 80m where it is narrowest, which is probably the result of erosion over the millennia. The bank as it remains today reaches 4 to 6m in height, 10 to 20m in width at the base and 4 to 6m in width from the top. There is a 12m wide opening in the eastern section of the bank, once probably a gate or entrance.

While the Western Zhou enclosure is significant in its own right, the Neolithic enclosure has attracted most attention, as it was the first Neolithic enclosure discovered in the region. But, as with most enclosures along the Yangzi, it was difficult to detect, being largely overgrown, eroded, turned into rice or other fields and also built over with houses (fig. 1.3). As details of the construction and other issues will be discussed in Chapter 3, it suffices to say that the bank, which was built by piling up soil,[5] turned out to measure 1200m north to south and 1100m west to east (fig. 1.4). Its extant portions are about 50m wide at the base and about 10m at the top with a remaining height of 6 to 8m. The ditch is about 4800m in length, 80 to 100m wide on average and 60m at its narrowest. Its depth during the Neolithic has not been determined. The area covered including the enclosure amounts to 180ha and,

[4] Shijiahe 1992: 237-238.

[5] *Duizhu* is the term used by Chinese archaeologists for piling earth on top of earth to make a bank thereby creating thick layers of soil, which are less compact than those of contemporaneous banked sites in northern China constructed of pounded-earth. *Duizhu* can be considered as a term explicitely coined to denote a construction technique not involving pounded earth. Pounded earth banks are constructed in layers of loess. Rectangular, wooden boxes with neither top nor bottom are filled with earth that is then rammed making it tight and durable. The wooden box is then removed and reassembled higher up for the next level, by which the wall gradually rises (see Needham 1971: 38 *et passim*). Southern soils are generally damper and more cohesive than its northern counterpart, which is loess, thus affecting the choices of the builders.

excluding the enclosure, the 'inhabitable' area amounts to 120ha.[6] The latter is most often cited, although, as will become clear in Chapter 3, the enclosure should not be distinguished from the interior as both belong together. In fact, given that many of the mounds just outside the ditch were also piled up artificially and that many of these and other loci in the immediate vicinity of the enclosure were inhabited, the total area covered by the Shijiahe site should be adjusted upwards. In any case, the Shijiahe site remains the largest Neolithic enclosure in the Middle Yangzi region.

The Regional Context: Enclosed Sites Along the Middle Yangzi

To date (October 2011), a total of 19 enclosures are known, 16 of which can be included in the following discussion as sufficient data are available (tables 1.1 and 1.2). The region's earliest enclosed site is Bashidang in Li Xian, Hunan, and dates to the late sixth millennium BC.[7] As the potential reasons for the enclosure construction and its biography were probably different from the later sites, this thesis will focus on the other enclosures that are much closer in date to Shijiahe. As shown in figure 1.5, the sites are roughly divisible into three subregional groups: the first group is east of the Han River and includes Shijiahe itself. All sites, with the exception of Wangguliu, the exact location of which has not been reported yet, are found along tributaries of the Han River. These sites are Shijiahe, Qujialing, Longzui, Taojiahu, Menbanwan, Yejiamiao and Xiaocheng. The second group, consisting of Yinxiangcheng, Majiayuan and Chenghe, can be found west of the northward bend of the Han River north of the Yangzi. The third group lies south of the Yangzi River and northwest of

[6] Shijiahe 1992: 273-274. Flad and Chen (forthcoming) suggest that it might have taken between 555 and 1664 person-years of labour to complete the Shijiahe enclosure based on an estimate of 607,500 cbm of earth contained in the bank. I am grateful to Flad and Chen for granting me a preview of their forthcoming book.

[7] For a full report of the excavations at Bashidang and the neighbouring site of Pengtoushan, see Pengtoushan yu Bashidang 2006.

Dongting Lake. The sites are Chengtoushan, Jijiaocheng, Jimingcheng, Qinghe and Zoumaling. Bashidang is also located here. The fact that all sites can be found either in the floodplains of the Yangzi or in the transitional terrain from mountainous to plain areas, but within close range to rivers is a defining feature of these sites and its significance for the interactionist view that this thesis takes will be touched upon in several chapters. The Middle Yangzi enclosures also share the same construction technique for building banks employing *duizhu*, i.e. through piling earth up, as opposed to the pounded-earth banks that were built elsewhere.[8]

Since most sites or at least their enclosures have been discovered very recently, not many were extensively excavated. Only rough surveys or trial excavations took place, seriously limiting a meaningful discussion about site use. The attribution of dates thus almost exclusively relies on the pottery, either collected or from test trenches, and rough dates are assigned according to the current culture-historical scheme (table 1.2). While the date of enclosure construction is relatively clear for most sites, only the extensive work at Shijiahe, Yinxiangcheng and Chengtoushan was reported in more detail allowing for a more comprehensive understanding.[9] At least three periods of enclosure construction occurred (table 1.1): one in the fourth millennium, one in the early third millennium, and one in the Western Zhou period.[10] Such waves of enclosure building are unlikely to be unrelated to each other. Especially the fact that the early third millennium enclosures were constructed contemporaneously must place interaction between the various areas of

[8] See Chapter 3.
[9] It is hoped that the large-scale fieldwork at, e.g., Jijiaocheng, Yejiamiao and Zoumaling, will be reported soon to improve our sample.
[10] Including the enclosure at Bashidang there are four periods of construction but so far this appears to be an isolated case. In addition, the earliest enclosure at Chengtoushan (mid-fifth millennium) predates the enclosures built in the fourth millennium. Both are located northwest of Dongting Lake and the phenomenon of their early dates may have to be explained through a very detailed study of the subregional circumstances.

Hubei and Hunan at the centre of interpretation. As the more detailed analysis of Shijiahe, Yinxiangcheng and Chengtoushan in Chapter 3 shows, other developments, such as their abandonment by the end of the third millennium and the resettlement of some sites in around 2000 BC, must be closely linked as well. Any study of Shijiahe needs to consider the wider connections if an attempt at explaining these enclosures should ever become possible.[11]

Enclosures in Eastern China

The wider context should also include enclosures in other regions, i.e. along the Yangzi and Yellow Rivers as well as Inner Mongolia. Including those from the Middle Yangzi and covering the period from the sixth down to the second millennium an approximate total of 149 enclosures have been discovered by September 2011, and this number is probably already out of date (table 1.3).[12] In the following, I will briefly introduce the major enclosures dating to the fourth to second millennium to provide an overview of the available archaeological evidence.[13]

The earliest banked enclosure in the Middle Yellow River is Xishan in Zhengzhou, Henan, which was dated to 3300 to 2800 BC (fig. 1.6a). The enclosure, composed of a bank and a ditch, is nearly circular and covers about 3ha. Building foundations were also excavated and some human remains were found under the bank, which was made of pounded earth. Slightly earlier is the enclosure of Xiyincun, Xia Xian, Shanxi, dated to between 3900 to 3600 BC, which consists of a ditch only

[11] Possible reasons for why the enclosure was constructed will be discussed below. I will add to these notions through a more detailed analysis of Shijiahe in the following chapters.
[12] In comparison to the thousands of non-enclosed sites, the number of enclosures may appear not statistically relevant and one might want to focus on the former. However, less data is available on these as most scholars study enclosures and as I will show throughout the thesis the potential for the study of enclosures has hardly been tapped yet.
[13] Yang 2004 provides one of the best English-language surveys of Neolithic enclosures, on which I will draw occasionally. Additional and more recent material, not introduced in English before, is separately referenced.

and also covers 3ha. Further south in Xichuan, Henan, it was discovered that the long- and well-known site of Xiawanggang was probably banked and ditched during the fourth millennium.[14] In Shandong a number of late fourth to early third millennium enclosures were found, but so far not much information is available. They seem to cover between 3.5 and 4ha.[15]

During the mid to late third millennium along the lower reaches of the Yellow River, new enclosures were built and older ones may have continued. Recent counts suggest the existence of about 18 enclosures, including well-known examples, such as Chengziya, Zhangqiu, Shandong, dating from about 2600 BC. The irregular rectangular bank covers more than 20ha. Another example is Dantu in Wulian, also Shandong, whose initial enclosure consisting of a bank of pounded earth and a ditch (9.5ha) dates to the late 'Dawenkou Culture', mid-third millennium (fig. 1.6b). This enclosure was enlarged twice later in the third millennium, first to about 11ha in early 'Longshan period' and to 18ha in the middle 'Longshan period'.[16]

About eleven third millennium enclosures were found in Henan, Shanxi and Shaanxi, eight of which are located in Henan. One of the most famous and recently re-investigated examples is that of Wangchenggang, Dengfeng, Henan, which had a pounded earth bank enclosing 30ha (fig. 1.6c). This site is the largest 'Longshan' enclosure in Henan and the much smaller 1ha enclosure discovered in 1970s belonged within this enclosure.[17] Just as famous is Taosi in Xiangfen, Shanxi province (2300-1900 BC). Since 2000, the eastern, northern and southern pounded-earth banks, which form a rectangle with rounded corners of about 270ha in area, were revealed (fig. 1.6d). Built during the middle phase of the site (2100-2000 BC), this larger bank

[14] Gao Jiangtao 2011.
[15] These sites are Wangjiazhuang and Huangguzhong in Yanggu, and Xikangliu in Tengzhou.
[16] The Longshan period in Shandong is often given as 2600 to 2000 BC.
[17] Wangchenggang 2007.

encloses a banked settlement of 56ha located in the northeastern corner, dating to the site's first phase (2300 BC). Next to the south bank of the larger enclosure another banked settlement of the middle phase (1ha) was discovered. It is not clear whether it is a component of the larger site. Many rammed-earth building foundations and thousands of burials were discovered.

Inner Mongolia is the third northern region, where many enclosures were built during the third millennium. Six were found in Baotou, four in Zhunge'er, two in Qingshui and five in Liangcheng. All have stone banks and are dated to 2800 to 2300 BC. The enclosures are rather small in size and only cover 1 to 2.5ha. Slightly later are the 'Lower Xiajiadian' sites (2300-1600 BC), which are also enclosed by stone banks, but slightly larger covering between 1 and 10ha. About 48 of these enclosures have been discovered.

In Sichuan, six sites were found in the Chengdu Plain. Dated to the 'Baodun Culture', these were probably built by 2000 BC. The sites cover about 10 to 60ha and are enclosed by one or two ditches and a bank. Many fewer sites were found in Anhui. The earliest enclosures date to the late 'Dawenkou Culture', i.e. the early to mid third millennium. Yuchisi in Mengcheng is a prominent ditched example, covering 8ha (fig. 1.7). The site is well known for the buildings and burials found and will feature in the discussions in Chapter 4 and 5.[18] A more recent discovery of the same date is Gaixia in Guzhen. The rectangular enclosure of about 15ha consists of a bank and a ditch, which was re-used and repaired in the Han period (206 BC – AD 220).[19] The bank was constructed with the *duizhu* technique.[20] Slightly later is the date for Sunjiacheng in Huaining, which is about 25ha in dimensions (fig. 1.8). The

[18] Yuchisi 2001, 2007.
[19] Gaixia 2010.
[20] Wu Jiehong (Shuo Zhi), Anhui Sheng Wenwu Kaogu Yanjiusuo, personal communication, September 2011.

rectangular bank was also constructed employing the *duizhu* technique. No ditch was found. The bank was possibly re-used in Han, Northern and Southern Dynasties (AD 420-589), Ming (1368-1644) and Qing (1644-1911) times.[21]

Just as recent are discoveries of enclosures in the Lower Yangzi. Yujiashan, for example, in Yuhang, Zhejiang, dates to the third millennium (mid to late 'Liangzhu Culture', 3300-2200 BC). The 2.5ha site is surrounded by a square ditch.[22] Much larger with 290ha is the Mojiaoshan site, also in Yuhang, dating to the mid to late third millennium (late 'Liangzhu Culture') (fig. 1.9). The enclosure consists of a bank with stone foundations and surrounds some of the best-known burial mounds, such as Yaoshan and Fanshan.[23]

In the following I will briefly review some of the second millennium sites to give a wider context. During the second millennium we observe some continuations of third millennium enclosures, such as in Sichuan, Inner Mongolia and in central China. Overall, the number of enclosed sites declined sharply, but those sites that were enclosed are larger on average.[24] About ten new constructions dating to the Bronze Age along the Yellow and Yangzi rivers can be counted. Among the earliest ones is Wangjinglou in Xinzheng, Henan, dating to 1800 to 1400 BC. It consists of two banked and ditched enclosures measuring 37ha and 168ha, which can be securely dated to the Erligang period (1600-1400 BC), but probably began during the Erlitou period (1900-1500 BC). The best-known Erligang-period enclosure is that of Zhengzhou, Henan, consisting of an inner and outer pounded-earth bank, stretching across 2000ha in total (fig. 1.10a).[25] Begun in this period and in use until the Western

[21] Shuo Zhi 2008.
[22] Lou Hang *et al.* 2010.
[23] Liu Bin 2008.
[24] For a review of the general developments from the initial enclosures down to the first millennium BC, see Falkenhausen 2008.
[25] Thorp 2006: 65-67.

Zhou period, is that of Sanxingdui in Guanghan, Sichuan, which is enclosed by a bank and covers about 300ha (fig. 1.10b). The two well-known pits containing many objects of bronze, jade, ivory and so forth date to the late second millennium and are located within the enclosure.[26] Further downstream in Huangpi, Hubei, is Panlongcheng, a small banked enclosure with architectural foundations within, covering 7.5ha (fig. 1.10c).[27] It seems that an additional, outer bank was recently found enlarging the site to an estimated 110ha, but the date of this discovery remains to be confirmed.[28] Another southern enclosure is that of Wucheng, Zhangshu, Jiangxi, which has a bank and ditch and covers 61.3ha. Culturally this site is related to the famous burial at Dayangzhou, Xin'gan, dating to the mid to late second millennium.[29]

Most second-millennium enclosures were found in the Yellow River reaches. Of the eight that I found, most date to the earlier part of the second millennium, including the ones mentioned. There is basically none of late second millennium date. Well-known is the site of Huanbei at Anyang, Henan, which is adjacent to Anyang or Yinxu, probably the capital of the late Shang (fig. 1.10d). Huanbei dates to around 1400 BC and is enclosed by a bank covering 400ha. Another well-known example is Shixianggou in Yanshi, Henan, better known as *Yanshi Shang cheng*, dated to the Erligang period. It is enclosed by a bank and a ditch surrounding a settlement of 190ha.

An important realisation from this overview is that the early third millennium enclosures in the Middle Yangzi regions are the or among the earliest enclosures after some of the earliest enclosures were constructed in the fourth millennium. The Middle Yangzi enclosure are thus at the forefront a second wave of enclosure construction

[26] Thorp 2006: 234 and 235, fig. 5.11; Falkenhausen 2008: 216.
[27] Thorp 2006: 73; Panlongcheng 2001.
[28] Guojia Wenwuju 2009: 143.
[29] Peng Minghan 2005: 21-26.

during the third millennium. This fact has not previously been realised. The overview also shows that Shijiahe is among the largest enclosures during the third millennium. In comparison, most other sites can still be considered as small. The implications of these differences in dimensions are yet to be seen, but they are usually perceived in terms of different scales of socio-political organisation.[30] While it appears that enclosure construction is prolific across Eastern China, the total number of enclosures appears small. Although more will undoubtedly be discovered, it seems clear that most sites were not enclosed. Some of these observations may be addressed in future research, but I shall now turn to Shijiahe, the main case study of this thesis, which will be investigated from a different angle.

The Shijiahe Site

Shijiahe lies in the northern part of the Jianghan Plain, about 15km north of Tianmen at the confluence of the West and East rivers (fig. 1.11). Located between the foothills of the Dahongshan to the north, which are less than 200m above sea level (a.s.l.), and a low-lying lake area in the south leading to the floodplains of the Han River, the area is transitional between the hilly and plain areas with low mounds usually between 30 and 50m a.s.l. peppering the area.[31] While there is slightly higher-lying land to the north of the site, it is rather low-lying to the south, with less than 30m a.s.l. Although this low-lying area is entirely used for rice farming now, it was known as 'Beigang Lake'. According to the county gazetteer, this area used to be covered by a large lake, which disappeared after an irrigation canal, connecting the

[30] The social complexity approach will be scrutinised below and in Chapter 6.
[31] See Shijiahe 1992: 216-219 for a good overview of the site's immediate topography at the time of the survey.

lower reaches of the West and East River, was dug. In the 1990s locals still recalled that the rivers often used to overflow their banks and threaten their houses.[32]

Discovery and excavation

In 1954, the Hubei Provincial Committee for the Management of Cultural Relics joined the Shilong Cross-River Reservoir Project in Jingshan and Tianmen counties to conduct archaeological surveys.[33] In both counties together a total of about 80 archaeological sites were discovered, among them Shijiahe.[34] In 1955, four loci at Shijiahe were excavated twice followed by a third season from 1956 to 1957.[35] Unfortunately, the first two campaigns were only reported in a very preliminarily fashion in 1956 and further publication of the work only happened after the revival of fieldwork at the site in the 1980s. From the later reports it becomes clear that the four original loci were Guanpingyan (or Yangjiawan), Shibanchong and Sanfangwan, all of which were excavated during the first campaign,[36] and Luojiabailing, which was excavated during all three campaigns (fig. 1.12).[37] Zhang Xuqiu quite correctly believes that the neglect of the Shijiahe site until later was a result of the limited publication of the earlier fieldwork.[38]

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[32] Shijiahe 1992: 216.
[33] Wang Jing *et al.* 1955: 41. The purpose of this project was to construct the Shilong Reservoir in Jingshan County, north of Tianmen County, to alleviate the damage caused by the seasonal floods that occur in the area.
[34] Shilong 1956: 11. Elsewhere the number of sites was given as 100, 90% of which were dated to the Neolithic (Luojiabailing 1994: 191).
[35] Shilong 1956: 13; Luojiabailing 1994: 191. Shijiahe was initially not seen as a cluster made up of several loci, but each locus was regarded as an individual site in relative isolation from the other. Only later would the overarching name of Shijiahe become synonymous for the site.
[36] Tianmen 1996.
[37] Luojiabailing 1994.
[38] Zhang Xuqiu 1992: 238. Interestingly, the fieldwork methodology employed at Shijiahe prompted an article by Zhang Yunpeng heavily criticising the mistakes made in those excavations with regards to the general structure and organisation of the fieldwork. He condemned the order in which the settlement remains were excavated and the size of the trenches (2m x 10m instead of the 5m x 5m quadrangle that has become standard in field archaeological practice in China) (Zhang Yunpeng 1957: 69-70).

Fieldwork resumed at Shijiahe when the Jingzhou Museum conducted a trial excavation at Dengjiawan, which is one of the various loci at the site, in 1978.[39] In 1981, this was followed by a survey of 20 sites in the four counties of Jingmen, Zhongxiang, Jingshan, and Tianmen, which included some of the loci that would later be known as belonging to Shijiahe.[40] Then, in 1982, the loci of Tanjialing[41] and Tucheng were excavated.[42] Probably triggered by the rich cultural remains found during the previous survey, the Jingmen Museum and the Tianmen County Museum conducted a county-wide survey from 1984 to 1985, during which a total of 57 Neolithic sites was discovered.[43] And again, loci belonging to the Shijiahe site were discovered, but as before, their interrelationship remained obscure.

The fieldwork only gained momentum after the archaeologists from Peking University joined in. From 1987 to 1991, the loci of Dengjiawan, Xiaojiawuji, Tanjialing and Tucheng were excavated on a larger scale. This work was complemented by a systematic survey from 1990 to 1991, whose stated goal it was to determine whether Shijiahe had an enclosure, a fact unknown until confirmed by the survey.[44] After the preliminary publication of the excavations,[45] the naming of the archaeological culture as 'Shijiahe Culture' became obvious as it was, indeed, first

[39] The various loci of the Shijiahe site take their names from the numerous villages, farmsteads and present-day settlements that can be found in and around the enclosure, while the name Shijiahe refers to the larger Shijiahe (former Shihe) Town close-by. Because of the large amount of loci composing and surrounding the enclosed settlement, this cluster is also referred to as the 'Shijiahe site group' (*Shijiahe yizhiqun*).
[40] Jingzhou Diqu Bowuguan 1987.
[41] Mao Lin 1985.
[42] Shihe Kaogudui 1990: 1.
[43] Tianmen Xian Bowuguan 1987.
[44] Shijiahe 1992. As it is typical in China, the survey was not so much a collection of surface finds, but a collection of stratigraphic samples through 'coring' using the Luoyang spade, a tool professional archaeologists took over from tomb robbers, who invented it. See also Zhao Hui 1997 for an overview of the employed methods.
[45] Shihe Lianhe Kaogudui 1989; Shihe Kaogudui 1990; Meng Huaping 1993; Shihe Kaogudui 1994. The locus of Tanjialing will be fully published after submission of this thesis (Zhang Xuqiu, personal communication, September 2011).

discovered at this site in the 1950s.[46] Most recently, in conjunction with the project investigating the origins of Chinese civilisation,[47] a survey was conducted around Shijiahe in order to clarify the number, extent, date, cultural attribution and distribution of surrounding settlements.[48] From March to June 2011, the Hubei Museum excavated 200sqm at Shijiahe with 50sqm between the loci of Sanfangwan and Tanjialing and 150sqm in the southeastern corner.[49] More work is planned for 2012. So far, only the excavations of the loci of Xiaojiawuji and Dengjiawan, among the more recent work, have been published.[50]

Site Narrative

Now that the site's current appearance and history of fieldwork have been addressed, I will now focus on the long-term history of the site as resulting from my research. While more detailed discussions on most points will follow in the next chapters, it is the purpose of this site narrative to anchor the discussions around some of the major results. The site narrative is one of the key approaches of this thesis with wider applicability to other sites as well. I will focus on reconstructing a 'slow history' of the site detailing the developments phase-by-phase instead of archaeological culture by archaeological culture, while integrating all loci at Shijiahe at the same time.[51] The importance of religion, interaction and water will be highlighted as important components of this narrative, as these will feature prominently in the discussions in the next chapters. The reader is advised to return to

[46] For a table of archaeological cultures in the region from the mid-fourth to the end of the third millennium BC as compiled by Guo Lixin, see figure 1.13.
[47] This project and its implications will be discussed in Chapter 6.
[48] Meng Huaping *et al.* 2009. Unfortunately, for Shijiahe itself, the survey relied entirely on the 1990s survey and did not re-examine the site.
[49] Meng Huaping, personal communication, September 2011. See also Meng Huaping *et al.* 2011, which Meng kindly sent me.
[50] Xiaojiawuji 1999; Dengjiawan 2003.
[51] The justification for the phases will be given in Chapter 2.

the site narratives and its accompanying table 1.5 when reading the other chapters, which provide much more detailed and denser accounts.

SHIJIAHE I (sixth millennium BC)

Gradually sloping from the northwest to the southeast and divided by the courses of several rivers, the original parts of the site consisted of three series of mounds of Yandouziwan-Sanfangwan-Changmenchong, Yangjiashan-Dengjiawan-Tanjialing-Yangjiawan, and Zhoujiawan-Jingshanpo-Tucheng, each of which may have been linked then, but became separated through human and natural transformations later on. The first and second as well as the second and third series of mounds were probably separated by rivers with an additional river east of the third series (fig. 3.2). The 2011 excavations between Sanfangwan and Tanjialing confirmed that this area once was a river course or at least waterlogged for an extended time period. Lodged at the confluence of two rivers at the southern end of the third series of mounds at Tucheng, evidence for the earliest human activities in the form of pottery attributed to the so-called Chengbeixi Culture was found in 1982. This pottery would date the beginnings of the site to the sixth millennium BC based on the dates conventionally given for this archaeological culture. As the sherds have not been fully published, nothing more can be inferred regarding the earliest history of the site.

SHIJIAHE II and III

The next evidence for human activities dates to the fourth millennium (including phave IV; no radiocarbon dates are available). At the confluence of two rivers at Tanjialing, there is evidence for Shijiahe being used a cemetery with 23 pit (fig. 3.18) and 8 urn burials (fig. 3.19) dating to phases II and III. Also, 23 pits were

found. Precise relative dating is not possible for the majority of features. The higher ground between the two rivers may have been considered safe from the regular swelling of the rivers during the summer monsoon season, but may have also had religious significance being lodged between flowing waters (fig. 3.2). Such possible connections between people and waterbodies, especially flowing waters, are a repetitive theme in the history of Shijiahe and the way in which people conceived of their relationship with waters is crucial to understanding this history.

SHIJIAHE IV

The use of Tanjialing as a cemetery may not have lasted longer than the previous two phases, as no further burials were reported for this phase. However, activities at Tanjialing continue in the form of pits. During this and the preceding phases, human manipulations of the landscape at the site may have been non-existent or at least negligible as they do not appear in the archaeological evidence. This situation was to change during the following phase when the entire site was re-configured through the construction of a bank, excavation of a ditch and the construction of mounds surrounding the ditch on a large scale.

SHIJIAHE V (from c. 3000 BC)

Beginning in this phase, Shijiahe and many other sites in the Middle Yangzi region experienced an entire re-configuration in the form of enclosure construction, illustrating that this was a regionwide phenomenon (fig. 1.5, table 1.1). While we can document the occupation of various loci across Shijiahe only for phases V and VI together due to the low chronological resolution of the early 1990s survey, more

detail is provided by the great level of detail available for Dengjiawan, Xiaojiawuji and Tanjialing (fig. 3.6).

The construction of the enclosure changed the entire landscape and re-routed a number of rivers. It is preceded by Shijiahe being used as a cemetery once again, which is clearly shown in the bank overlying burials at Dengjiawan (fig. 3.12). People appear to have returned to Shijiahe to bury their dead there before the site was transformed lastingly. Once the enclosure was built, more burials amounting to eleven pit and two urn burials for phase V were dug there following the curve of the bank at Dengjiawan (fig. 3.13). These activities were joint by other religious practices, for example those centring on tube-shaped pottery (fig. 4.2), which would trigger layers of related practices in the same locations in this and the subsequent phase as seen in large numbers of pits, some containing tube fragments (figs 4.8, 4.10). These and later activities establish Dengjiawan as a locus of religious importance. The pit burials are significant in terms of the sets of pottery burials vessels interred with the deceased as these begin a tradition of burial customs, which lasted until phase VII. One of the main components of these customs is a subset of pottery tripod *ding* and red pottery cups on the one hand and a set of high-necked jars on the other (figs. 4.18, 4.20). These subsets remained remarkably consistent over into phase VII.

While Dengjiawan was mainly used for funerary and religious purposes, Tanjialing is usually regarded as more 'residential' as six building foundations (fig. 1.22), dating to this and the next phase, were excavated there. A number of other loci were also occupied into phase VI, for example the western part of Sanfangwan, Xushuling, Guanshan, Changmenchong, Jingshanpo, Wangjiatai, Luojiabailing and possibly Huangjinling. There is also evidence for occupation at Xiaojiawuji for phase V in the form of two pits and one building. These occupations illustrate that higher-

lying ground was settled not only within the newly-built enclosure but also at loci surrounding it.

The enclosure did not limit the settlement to its interior. There was no bank in the southeastern corner. The 2011 fieldwork in this area has shown that a bank was not constructed until possibly phase VI (fig. 3.7). A bridge appears to have connected Sanfangwan and Xushuling. The silt layers there and in the trench excavated between Sanfangwan and Tanjialing suggest that these areas, which roughly correspond to the river courses disrupted by the bank construction, were temporarily or permanently water-logged. The impression is gained that the re-routed rivers did not only supply the ditch but also the former river courses within the bank with consequences for movements between the various loci of Shijiahe, some of which may only have been accessible by boat. This reinforces the impression of the complex relationship of people and water and its flow at the site, which people were able to manipulate.[52]

Just as the construction of the bank needs to be regarded in relation to the manipulation of the flow of water, this approach should probably also be extended to mounds at the loci of Yinxintai, Yandouziwan and Huangjiashan-Yangjiashan beyond the ditch, which were constructed in similar manner to the bank and also at the same time in phase V (fig. 3.5). The bank and these mounds were also constructed by piling up (*duizhu*) layers of differently-coloured soils showing the great care taken in first processing the soil and then piling it up. Given the religious importance of the site and the intention to manipulate flow, the construction of the enclosure may have periodically united groups of people working together on the bank thereby establishing a common identity among the builders with long-term consequences for the way in which people related to the site until phase VII, for which there is evidence

[52] Such approach to water should be further investigated in terms of its potential for irrigation and the use of paddy field rice cultivation.

that traditions began to change. The enclosure can be regarded as the motivating factor, which led to the nucleation of people at a specific site. This contrasts conventional ideas about population pressure leading to the need for defence, although defence may have been a factor.

The significance of the enclosure construction for Shijiahe is evident not just for the site itself but also beyond. Enclosure construction was a regionwide phenomenon in the Middle Yangzi region, where a number of sites were enclosed at about the same time. Knowledge of enclosure building and its technique may have gradually reached other regions, especially in the lower reaches of Yangzi, but also Shandong where some enclosures were built with a combination of *duizhu* and pounded earth.

SHIJIAHE VI

Throughout much of the third millennium we have to envision the landscape around Shijiahe to be forested based on recent paleoenvironmental work at the nearby site of Qujialing, which contrasts not only with today's many rice fields and general absence of trees but also the drier climate toward the end of the third millennium, for which less forest cover was suggested. For much of the third millennium we have thus to imagine Shijiahe as surrounded by water and trees.

Many practices from the previous phase continue. For example, Dengjiawan continues to be a cemetery, but with even more burials, counting 41 pit and 13 urn burials, again largely following the course of the bank (fig. 3.14). Rich sets of religious practices as begun in the previous phase continue in the same locations as before illustrating a succession of religious practices from phase V to VI, exemplified in the so-called 'sacrificial remains' and related pits (fig. 4.10). Continuities are also

seen in the burial customs both at Dengjiawan and Xiaojiawuji, where 37 pit and 5 urn burials were found. Again, subsets of *ding* and cups on the one hand and high-necked jars on the other can be found in pit burials, but in this phase the separation into subsets is spatially more pronounced as the former set is found close to the body of the deceased and the latter is often either deposited by itself or when together with the other set then in a separate location, often on the *ercengtai*, the secondary ledge surrounding the burial pit, which, just as the practice of secondary burial, becomes a feature of a number of burials (fig. 4.22). While the burial customs become richer overall, they also remain distinctly conservative and clearly parallel those in the preceding and following phases.

Although the chronological resolution of the early 1990s survey is not sufficient to relay in detail the possible changes in occupation at most loci in and around Shijiahe, it appears that Tanjialing remained primarily occupied by buildings. Xiaojiawuji sees an increase in the number of features. In addition to the burials, we also find six building foundations, many pits and ditches showing a trend toward rich occupation, which continues into the next phase.

In light of these continuities from the previous phase, the construction of a bank in the previously open southeastern corner, as established in recent excavations, is a striking contrast (fig. 3.5). The purpose of this construction may have been to exclude the interior of the enclosure from participating in systems of flow and possibly to join the disjointed loci thereby opening up more space for occupation. Some loci may only have been reached by boat, bridge or by walking on the bank at times. That more space became available is shown by 'Shijiahe Culture', i.e. later, layers on top of wooden remains from this phase or even earlier. Despite the construction of the additional bank section, the southeastern corner may still have

been the major access route into the enclosed space. Not only has the bank 'disappeared' until recently, the excavations showed that the bank was level with the surrounding surface by phase IX.

SHIJIAHE VII

Continuities with the previous phases are clearly discernible, but new practices emerge. Again, due to low chronological resolution, differences in occupation between phases VII and VIII cannot be discerned but it appears that more loci are occupied within and outside of the enclosure, such as Yinxintai, Shibanchong-Changmenchong, Huangjinling, Yangjiawan, Yangjiazui, Beidi, Xinhe, Zhoujiawan, Yangjiaguangling, Hujiawan-Tianjiachong, Jingshanpo, Maojialing and Luojiabailing (fig. 3.15). People appear to increasingly perceive of the bank differently from the previous phases, as features can now be found crawling up the bank, for example some burials at Dengjiawan are dug directly into the bank instead alongside it (fig. 3.12). While the enclosure may have been perceived as more 'enclosing' in the previous phases, an impression, which is especially amplified by the construction of bank in the southeastern corner, the enclosure may have lost this function from phase VII.

During this phase, Dengjiawan continued to be a cemetery with 42 pit and 8 urn burials, but most burials are found further south in the excavated area, indicating that the locations of the earlier burials may have been visible above ground (fig. 3.15). Continuities are also evident in the burial goods as the general configuration of the burials, including the subsets, continues. However, more diversity among the burials is visible and the groupings of objects are followed less strictly. This divergence from established traditions mirrors the described different perception of the enclosure.

At Xiaojiawuji, the practices seen in the previous phase continue with 23 pit and 9 urn burials as well as many pits, ditches and buildings. Six buildings were excavated belonging to either phase VII/VIII. The strongest increase occurs in relation to pits and ditches with numbers reaching 409 and 22 respectively. One of the other features discovered is a 'well', so identified because of its black silt fill. A stretch of 'road' was discovered 'paved' with small pieces of red scorched earth. Also, two kilns were found, but without pottery remains.

Known mostly from burials and pits in the preceding phases, red pottery cups become central to religious practices at Sanfangwan, where large accumulations of such cups were found (fig. 4.16). It is proposed that these deposits are the result of repetitive, regular religious performances, which resulted in the built-up of a 1.5m thick layer, consisting itself of several thinner layers (fig. 4.30). As tens of thousands of cups are estimated to be contained in this layer, the practices that resulted in their deposition are likely to have occurred on a large scale involving many members of the community.

Further to the notion of enclosure construction as a regional phenomenon, the site was widely connected across the Middle Yangzi region and toward the north and east at least from phase V. Red pottery cups were distributed across the Middle Yangzi and even into the middle reaches of the Yellow River during phases V and VI (fig. 5.5). An even wider distribution is seen in phases VII and VIII with cups also reaching the Huai River area (fig. 5.6). While evidence for associated practices as at Shijiahe is missing, cups were also placed in burials at other sites, possibly illustrating a Middle Yangzi–wide phenomenon of practices. In the previous phases, the tube-shaped pottery was found at other sites allowing for speculations in the same direction, but without any concrete contextual evidence for the practices involved (fig.

5.4). Regarding the cups, it may be relevant that they are most widely distributed at the time when they are central to large-scale religious practices at Sanfangwan.

SHIJIAHE VIII

As before, low chronological resolution often only allows us to discuss this phase in conjunction with phase VII, for example at Xiaojiawuji. But the level of chronological detail in the Dengjiawan report allows for subdivding this phase into phases VIIIa and VIIIb (figs 3.16, 3.17). Only pit burial, M32, is reported for phase VIIIa. In phases VIIIa and VIIIb all other burials are urn burials. This phasing out of the custom of burying people in pits is in stark contrast to the long burial tradition established over the preceding three phases. This phenomenon may conclude the above-mentioned divergence from traditions in terms of burial good assemblages in phase VII finally leading to the complete abandonment of the pit burial practice.

As begun at Sanfangwan with the deposition of large quantities of red pottery cups, which probably continues into this phase, scale is also a factor in other religious practices. These involve the final deposition of large quantities, possibly thousands of small red pottery figurines, mostly those of animals but also some of people (figs 4.32, 4.33). Based on their contexts of deposition and geographical distributions (fig. 5.9), the practices involving the cups may be seen as distributive in contrast to those involving the figurines, which appear more concentrated resulting in more controlled deposition in pits. This explanation may also shed light on the fact that not as many figurines appear at other sites in comparison to the cups. But both share the same general distributional patterns, only reaching beyond the Middle Yangzi region in phase IX, when their original meanings may have been lost.

Just at the time when the figurines and cups appear in large quantities in phase VIIIa, a new set of religious practices occurs at Shijiahe with origins in Anhui and eventually in Shandong. These practices involve the deposition of large pointed-bottom pottery vessels deposited on their side in parallel rows linked bottom to mouth in its most common occurrence, although different placements are also found at Shijiahe (fig. 4.36). Four such sets were found at Dengjiawan and seven at Xiaojiawuji (for example, fig. 4.37). The Anhui origins not only of the vessels themselves but also of the practices of deposition are evidenced by an almost identical set at Yuchisi, slightly pre-dating the Shijiahe sets (fig. 5.13). At Yuchisi, such vessels were also used as urns to bury children (fig. 5.14). Ultimately, the vessels can be traced back to several sites in Shandong province, where they were placed in burials (fig. 5.17). This chain of evidence not only proves the external origins of the vessels themselves but also of the associated practices as well as their religious significance.

SHIJIAHE IX (c. 2000 BC)

After four phases of continuous built-up of rich practices at Shijiahe since completion of the enclosure, the site was abandoned. The settlement in phase IX was different from the previous phase(s) (fig. 3.24). Maybe anticipated by phase VIII, pit burials are not seen again at Shijiahe as all deceased are now buried in urns. At Xiaojiawuji 77 urn burials were found, one at Tucheng and Husanjia respectively and several at Tanjiaxiang. At the three latter loci the burials were dug into the bank, which together with the fact that the bank was levelled in the southeastern corner suggests that the bank may not even have been discernible as such and its very existence may have been forgotten by this phase. Dengjiawan and Tanjialing were

entirely and Sanfangwan partly out of use, the latter especially in relation to the deposition of red pottery cups, which ceased. The ceasing of activities at these loci is particularly striking as it is here where rich practices were documented for the preceding phases. Overall, fewer loci were occupied. These are Xushuling, Taishang, Aojiaquan, Panjialing, Beidi, Xinhe, Xinnongcun, Yangjiawan and Luojiabailing, where sherds and/or pits constitute the majority of finds and features (fig. 3.24). In addition to the urn burials, some features at Xiaojiawuji, such as one building and pits indicate that (domestic) activities are similar to the preceding phases, but the activities are clearly overlying the earlier ones as if there had been no awareness of the earlier occupation (fig. 3.25). This impression is especially emphasised by the fact that a pond was dug into the centre of the locus destroying earlier features.

Hence, Shijiahe was partly resettled after a period of abandonment. This period of abandonment may have lasted sufficiently long for knowledge about the enclosure and locations of previous settlements to disappear. The bank and surrounding mounds may have simply been regarded as higher lying ground suitable for settlement, as is often the case today. Nonetheless, there appears to be a number of continuities, such as the continued existence of red pottery cups and figurines. These do not only continue to appear at Shijiahe but also at other sites throughout the Middle Yangzi region and into Henan (figs. 5.7, 5.9). For example, they appear at Middle Yangzi sites as before, but in much smaller numbers, while the numbers of figurines appear similar, but concentrated at Shijiahe and in the western Jianghan Plain and for the first time in Henan. Although most of the practices associated with these objects at other sites are largely unclear, it is clear that previous contexts of use at Shijiahe ceased and maybe only the objects survived. The wide distribution pattern of the figurines, for example, may point to a very different perception of such objects

in phase IX, when concentrated deposition was no longer required, which previously resulted in a more limited distribution.

The general distribution patterns known from the previous phases are maintained also in another material, which makes its (re-)appearance in the Jianghan Plain by phase IX: jade (fig. 5.25). The custom of burying all deceased in urns is accompanied by the appearance of small ornaments made from jade and other hardstones. These appear in burials at Shijiahe, Liuhe, Zaolingang, Sunjiagang and possibly other as yet not fully reported sites (fig. 5.26). Only at Sunjiagang they were not recovered from urn but pit burials. These distinctive jade ornaments also appear at contemporary sites north of the Middle Yangzi region, such as Wadian, Qingliangsi, Taosi, Shimao and Zhufeng, thus reaching Henan, Shanxi, Shaanxi and Shandong.

The material and the knowledge of the way in which to work it were probably the result of outside stimuli, possibly from the Lower Yangzi area, but the designs and distinctive patterns of use and deposition are a Middle Yangzi feature. The similar jade ornaments found north of the Middle Yangzi possibly originate from the Middle Yangzi. Significantly, the general distribution pattern appears to maintain those of all objects, such as red pottery cups and figurines. This observation may shed light on routes of exchange and accessibility of certain areas and rivers were probably the most important transport conduits.

Parelleling the phenomenon of enclosure construction, the abandonment of Middle Yangzi enclosed sites occurred regionwide. The re-settlement of Shijiahe is an exception. Both phenomena had great consequences for the configuration of societies in the Middle Yangzi. Their regionwide nature points to the importance of communication and interaction for our understanding of Neolithic life and lifeways along the Middle Yangzi River.

Debating Enclosure Construction

In this thesis, I will propose that an alternative reading of enclosed sites, such as Shijiahe, as outlined in the site narrative, might be more beneficial for our understanding of such sites. The thesis sets out to challenge the current, dominant paradigms in the field of Chinese Neolithic archaeology, which are the persistent reliance on a culture history and historiography as well as the emphasis on investigating social complexity, which has become very popular in China. In this chapter, I will dissect the ways in which enclosure construction has been interpreted in China and offer alternatives based on my work on Shijiahe. I will also discuss the abandonment of Shijiahe in the context of previously forwarded interpretations. Both issues will be further discussed in the chapters that follow where detailed justifications for the forwarded arguments will be provided.

Culture History and Historiography

A full discussion of the culture-historical approach, which is the backbone of Chinese archaeology, will follow in Chapter 6, where I will demonstrate the way in which this thesis encourages ways to move beyond this approach.[53] In the current chapter, I will briefly summarise the approach and the major obstacles it presents for a comprehensive study of enclosures. In culture history material remains are aggregated to form assemblages sharing common traits termed 'archaeological cultures'. These assemblages are believed to occur at a certain point in time and are geographically restricted. Grouping the archaeological evidence in this way, and in China this is mostly done through the analysis of pottery, invites an emphasis on common types

[53] References will be provided in Chapter 6.

and other features of pottery between sites, which has resulted in the establishment of regional sequences of archaeological cultures.

The critical debates surrounding the culture-historical approach in the Anglo-American academic world have not been taken up in China yet, in fact, culture history is still considered to be the backbone of Chinese archaeology, which is reflected in academic training. A focus on local and then regional pottery typologies has resulted in the marginalisation of other types of material culture and an emphasis on the local and regional. Archaeological cultures are believed to be local or regional phenomena, while external impacts are glossed as variations of the theme of influence, often seen as the result of migrations and conflicts. Furthermore, archaeological cultures become agents themselves instead of being limited to status of heuristic devices with the primary goal of bringing order to the material. The danger lies specifically in the simplification of complex patterning and the neglect of possible different patterning resulting from other features and material culture, such as buildings, burials, lithics and so forth. The resulting reduction of the complexity of possible interpretations correlates with an increase in order as imposed by culture-historical patterning. Archaeological cultures are then treated as equivalent to polities, which they are not. Fringes within and 'peripheries' are neglected vis-à-vis the entirety of an archaeological culture in contrast to its predecessors and successors and geographical neighbours.

However, culture history also has its merits, for example, through the establishment of chronology and sense of geography, which is of particular importance for a large area, such as China, otherwise difficult to grasp. But as mentioned, such sense of order might be deceiving, a fact increasingly reflected in the breaking down of cultures, such as the Daxi Culture in the Middle Yangzi, which is

now regarded as only encompassing one of its regional subtypes, while its other regional subtypes were promoted to cultures in their own right (see fig. 1.13). Apparently, the more material evidence becomes available the more formerly neat archaeological cultures are disintegrating and loosing the order they are supposed to uphold.

One final criticism raised at this point in the thesis is the treatment of culture change. As mentioned before, the mechanisms of change are usually influences of some sort, but the change from one archaeological culture to the next is usually treated equivalent to dynastic change, although archaeological cultures are not equivalent to dynasties. It also decreases the necessary chronological resolution to treat developments at sites and across regions in the required detail, a central claim of this thesis. As I will show, the alternative of a phase-by-phase chronology over a succession of cultures has the virtue of revealing in greater detail the similarities and differences between chronological frames thereby lending more analytical depths to the observed developments. Presumed continuities within one culture are broken down in favour of a more complex picture.

Closely linked to the culture-historical approach in the archaeology of China is the historiographical orientation of the discipline. As again fully discussed in the concluding chapter, I will only give a brief outline of the major features of this significant component of Chinese archaeology. Archaeologists in China draw heavily on much later texts in their interpretations of prehistoric and also historic materials. While the earliest writing dates from around 1200 BC, editions of the canon of classical literary evidence were established in the second half of the first millennium BC, frequently drawing on earlier materials. These texts often refer to earlier periods, such as the time of the Yellow Emperor, who is regarded as the origin of Chinese

civilisation and thought to have lived in the third millennium BC. Such origin myths and also information on conflicts between groups of people in the north and south are taken at what seems to be face value for explanations of the patterning seen in material culture of the same period. For example, the Hua Xia are said to have vanquished the San Miao by the end of the third millennium BC. As the Hua Xia are believed to have been located along the Yellow River and the San Miao to their south along the Yangzi (fig. 1.15). The fall of the San Miao is equated with the abandonment of enclosures in the Middle Yangzi and the influx of northern pottery types. Archaeological evidence is thus directly interpreted from this textual angle instead of being interpreted in its own right. Problems with backdating such texts without the appropriate source criticisms are symptomatic of archaeological interpretations in the archaeology of China. They not only bias the interpretations toward the north, the eventual source of the textual traditions, but also impose interpretations on the material, which may not be borne out by less biased studies of the material. Such historiographical approaches severely limit the scope of possible interpretations and also bias these toward political (and economic) histories, which form the core of the later literature.

Social Complexity

While culture history and historiography do not provide explanations for the construction of an enclosure, these approaches shape interpretations of the archaeological evidence in a way, which caters to the social complexity notions. For example, the former creates neat geographical boundaries for cultures, which are often equated with political boundaries, subsequently matched with settlement patterns. The latter provides convenient political narratives that are matched with the

archaeological evidence helping to explain the need for enclosures and their eventual abandonment. As such, the contribution of culture history and historiography to the ways in which the enclosure construction and abandonment are interpreted cannot be underestimated, even though their impact is usually not explicitly invoked.

In investigations into social complexity enclosures are usually regarded as a key phenomenon in the study of a society's level of socio-political organisation as the index of which they are regarded. Especially the third millennium enclosures discussed in this thesis are usually seen as a stepping stone in the path of the societies to civilisation. Among scholars in China, there appears to be a broad consensus that these enclosures are already a part of a civilisation and express the formation of states and the emergence of urbanisation. Western-based scholars tend to be less bold and usually regard these enclosures as part of chiefdoms or simply complex societies without specifying a stadium. However, both emphasise unilinear developments of societies on the path of ever-increasing social complexity regardless of the term used for the stadium. Crucially, enclosures appear to be seen as either cities or as on the inevitable path to urbanisation. Such claims, whether directly stated or part of underlying assumptions, are usually bolstered by studies of settlement hierarchies, burial hierarchies and craft specialisation. Individual, in-depth studies of sites detailing distinct site-based developments are usually sidelined in favour of broad regional approaches. Below I will detail approaches to settlement archaeology and social complexity in China especially in relation to enclosed sites as these are crucial for an understanding of the ways in which this thesis differs from these major models.

The Introduction of Settlement Archaeology

The opening up of China from the 1980s led to a trickling in of western approaches to social complexity, especially the introduction of settlement pattern studies in the 1980s by K.C. Chang was to have a great impact.[54] Interest in settlements arose as a result of the large-scale excavations of the fifth to fourth millennium BC ditched sites of Banpo and Jiangzhai, both in Shaanxi, where, for the first time, the internal layout of a settlement was revealed. Scholars developed much interest in the cemeteries to discuss the marriage system, family structures and societal structure and later on internal organisation of houses and households and political and economic organisation.[55] Especially Yan Wenming's work is noteworthy as it generated a huge following.[56] The main purpose of settlement archaeology (*juluo kaogu*), as laid out by him, appears to be the identification of family structures through house layouts and of social structures through settlement layouts. Although there are some similarities to western approaches, the main angle of the approach in China rests on the development of the family as outlined by Friedrich Engels which is also true for the development of prehistoric society towards patriarchy.[57]

The Study of Enclosed Sites

Enclosed sites became the research topic of the day in the 1980s. Although the sites of Chengziya, Shandong, and Hougang, Henan, were discovered in the 1930s, the existence of their enclosures was not confirmed until later. The discovery and excavations of Wangchenggang and Pingliangtai, both in Henan, in the 1970s

[54] Liu and Chen 2001.
[55] Zhang Chi 2008: 43, 45.
[56] Yan Wenming 1989, 1997b.
[57] Yan's impact is seen in the many scholars that have reproduced his work. See, for example, Zhang Chi's (2003) study of settlements along the Middle and Lower Yangzi.

clarified the existence of enclosed sites in the Yellow River reaches.[58] Their discovery, as well as that of many more Neolithic enclosed sites throughout the following decades, triggered a considerable amount of discussion surrounding the nature of such sites, eventually inevitably to be linked with the issue of the beginnings of 'Chinese civilisation', which is considered to be 'the sum total of the material and spiritual wealth created under the administration of the state'.[59]

Discovering the earliest states in China is indeed the stated goal of the civilisations project and it appears that there is much agreement on locating them in the third millennium BC, i.e. in a period when enclosed sites are most numerous (see above). This thinking is no coincidence but the conscious outcome of pushing Chinese achievements ever further back in time to rival the 'civilisations' of the Middle East.[60]

Consequently, the currently common identification of sites enclosed by a bank as 'cities' is not surprising, which is a move on from the initial term *chengbao*, castle, that was used in the 1980s due to the relatively small size of the enclosed space (for example, Wangchenggang with 1ha, Pingliangtai with 3.4ha).[61] The presence of an enclosure, especially that of a 'wall', came to stand for a highly developed society and its need to defend itself from other highly developed societies. The sites are assumed to also have other non-military functions, such as being a centre for government and culture. The reason given for the constructions of the banks is usually a simple one: the protection of the private property of an elite due to social stress stemming from stratification of society into the haves and have-nots. By now, the political units, of which the settlements are thought to be the centres, are called 'chiefdoms', 'states',

[58] Zhang Chi 2008: 53.
[59] Wang 2007: 18.
[60] See also Chapter 6 for a discussion of the quest for Chinese civilisation.
[61] Recently it was discovered that the small enclosure at Wangchenggang is part of a much larger enclosure of about 30ha in size (Wangchenggang 2007; fig. 1.6c).

'city-states' and the like.[62] The obvious shortcomings of such interpretations will be discussed below.

Western Settlement Archaeology

Chang's introduction of western settlement archaeology in the 1980s began to complement the Chinese take on settlements. Especially through the Sino-American systematic surveys, Chinese scholars began to be increasingly interested in western approaches to the study of socio-political organisation, which led to a wide-ranging adoption of settlement archaeology and large-scale regional surveys in China paired with a stronger interest in the relationship between settlements and the environment.[63] Many of the systematic surveys were carried out in the northern parts of the country, such as Henan, Shandong, Inner Mongolia or most recently Sichuan.[64] Systematic surveys into settlement patterns have become a part of the standard tool kit of the field archaeologist in China.

It is the promise of settlement archaeology to enable the study of social relationships understanding them as 'as functioning systems of economic, political,

[62] See Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo and Zhongguo Shehui Kexueyuan Gudai Wenming Yanjiu Zhongxin 2003 for an overview of works dealing with enclosed sites.

[63] The work of the following scholars, backed by their respective universities, such as, most prominently, Harvard, Pittsburgh and UCLA, which engaged into collaborative research projects espousing the issues of socio-political complexity, may be considered as instrumental in fostering these approaches in China: Huang's (1992) study of the Liangzhu Culture and its identification as chiefdom society and also Liu's (2004) study of the Longshan societies which 'clearly developed from egalitarian village societies and some of them evolved into states' (Liu 2004: 13). The latter's work in particular has been important for the development of the study of settlement patterns in China (see Liu Li 1998), not at least through her own Chinese doctoral students adopting this approach (e.g., Ma Xiaolin 2005; Dai Xiangming 2006; Li Xinwei 2008). Other scholars have pursued different courses, such as Underhill (2002) who traces changes in pottery production and links them to social changes, or Flad (2004, 2007) who uses an approach taken from economic anthropology to discuss salt production in relation to social change. Another study, Shelach 1999, takes a different angle, though based on the study of settlement patterns, and proposes that a change from sedentary life to pastoralism at the end of the second millennium BC in Inner Mongolia may not have led to a decline in social complexity. The almost exclusive focus of American students on ancient China on the issue of social complexity is quite astonishing.

[64] See Liu Li *et al.* 2002-2004; Underhill *et al.* 1998; Linduff *et al.* 2002-2004; Flad *et al.* 2008.

and affective relationships'.[65] This goal is achieved by analysis along three basic levels: the individual structure (e.g. the house), the settlement and distributions of settlements. Settlement patterns, as derived from surveys and the collection of pottery sherds, are thought to be indicators of the distributions of sites as well as their sizes, from which conclusions can be drawn about the way in which these settlement are related to each other and how socio-politically complex a society was. Settlements may mostly be smaller villages and hamlets but some places arise to 'central places' thereby integrating other settlements into a larger political unit. Taken together, the size of the various settlements, their distribution and quantities as well as whether a site is merely a village or a centre of some sort are believed to reveal which political system, for example a chiefdom or a state, existed at a certain point in time.[66] Such work on a regional scale is usually further supported by an analysis of cemeteries, household structures and intra-settlement studies in order to reveal political hierarchies, social inequalities and related aspects of economic relationships.[67]

Enclosed Sites and Settlement Archaeology

The impact of this approach on the understanding of enclosed sites is clear. As enclosed sites tend to be larger sites and are enclosed they are by default regarded as 'central places' integrating the surrounding settlements politically and economically, as exemplified by the work of Liu Li on north-central China.[68] She states that, along with the nucleation of large settlements, the construction of fortifications had become the most significant feature of settlement patterns throughout the third millennium

[65] Trigger 1967: 151.
[66] Liu 2004: 159. Her work is heavily based on Johnson 1977 and Steponaitis 1981.
[67] Liu 2004 is the prime example of this approach as it is being pursued by scholars working on China.
[68] See especially Liu 2004, which has been translated into Chinese and appears to be selling well especially among students. Her other work, e.g. Liu Li 1998, is frequently quoted in the literature on the Neolithic.

BC.[69] For her, the construction of banks, she calls them 'walls', was another episode in the development of a settlement, expressing 'an important socio-political transformation'. She regards banks as more labour-intensive, which thus require the pooling of workers, maybe in the form of tribute, from across a larger region. The existence of a socio-political organisation at the level of the chiefdom is suggested, since it implies that elites could 'mobilise' the population for monumental building activities.[70] Banks are seen as expressions of increased warfare between the various chiefdoms, but may have also served to prevent floods. Further, such monumental public constructions could have functioned as 'political symbols, to demonstrate the power and prestige of the elite who was able to mobilize large numbers of people regionwide to conduct great projects'.[71] Evidently, the economic, political and military functions of sites enclosed by a bank are stressed, although a whole host of other functions, including ritual and as population centres at the regional level, are also listed. The settlements are thus not only regarded as somewhat central to an area, but as the area's 'central places'.[72]

In this way, the conclusions on banked sites are congruent with those posited by archaeologists in China. The logic of each approach is very similar: banks are considered to be an expression of military conflicts as well as of importance for political purposes of the elite. From there, it is only a small step to conclude that the sites, and indeed all of the banked ones, had further functions of central significance for the surrounding territory, such as 'ritual', economic and craft production. It is therefore not surprising that western-style settlement approaches have become so popular in China: they may produce the same results.

[69] Liu 2004: 95, 96.
[70] Liu 2004: 115.
[71] Liu 2004: 115.
[72] The notion of the 'central place' will be discussed below.

Such views of enclosures are very limiting. Banks are simply interpreted as representations of something else, such as political power and defence and, by largely silent assumption, also of 'ritual' and other purposes, instead of being investigated in their own right.[73] Inquiries into socio-political and economic aspects of past lives and how these relate to enclosures are no doubt valid trajectories of investigation. However, with overemphasising political, economic and defensive aspects, others have become a collateral, in the end simply listed in order to support notions of centrality derived from largely economic and political aspects of enclosure, which is typical of central place theory (see below).

Critique

As mentioned, the state of excavations of enclosed sites poses a dilemma. Very few have actually been excavated on a sufficiently large scale to allow for proper analysis of function and purpose. While settlement archaeology has its merits, there is an often rigid application of central place theory and conclusions about socio-political stages are often rooted in assumptions of relationships between sites, although the necessary detail to understand sites may be elusive. A further problem as discussed below is the conceptual distinction between various enclosures, such as between ditched and banked sites, based on the assumption that constructing a bank requires more central direction. The Shijiahe example will illustrate that the social dynamics leading to the construction of an enclosure can be more complex. Another line of critique, which grows out of my close study of Shijiahe, is the fact that settlement archaeology in the above-described manner appears to regard enclosures as static for the duration of an archaeological culture or even longer. The example of

[73] The term 'ritual' will be discussed below.

Shijiahe will illustrate the complex dynamics and biography that a site undergoes including the changing significance of the enclosure.

Middle Yangzi Examples

Liu Li's and the work of others has largely focused on north-central China, i.e. the areas along the Yellow River, where impressive Bronze Age societies developed that were to dominate Chinese historiography. The Yangzi River has also found attention, especially the Yangzi Delta, where jades and other finds related to the so-called 'Liangzhu Culture', dated to about 3300 to 2200 BC, sparked much discussion as to the socio-political level of this culture and the way in which this marginal cultural phenomenon relates to the areas along the middle course of the Yellow River that are perceived as central. The recent discovery of the enclosure of Mojiaoshan (fig. 1.9) has helped to amplify these discussions. Settlement surveys have not been carried out and the study of settlements largely followed the work of Yan Wenming. The Chengdu Plain in Sichuan has also attracted attention, not least due to the enclosed sites of the 'Baodun Culture'. Sino-American systematic survey work has begun to reveal the 'origins' of the Sanxingdui finds of bronzes.[74] Due to the fact that much of the Yangzi catchment area is covered in water either through rice paddies, fishponds or natural water features, conventional field walking is notoriously difficult, which is further amplified by the finds often being hidden beneath the alluvium. The Chengdu Plain survey has substituted conventional field walking with using augers managing to reveal deeper deposits.

No such systematic regional surveys have been conducted in the Middle Yangzi, where the analogue to the auger, the Luoyang spade, is still employed to

[74] Flad *et al.* 2008.

explore sites. However, settlement archaeology has been carried out here as well. The work of Zhang Xuqiu and Zhang Chi exemplifies the application of Yan Wenming's approach in the Middle Yangzi area.[75] Evidence from cemeteries is considered in conjunction with the construction of enclosures as evidence for increasing inequality and family structures are believed to develop toward patriarchies. As recently summarised by Ren Shinan and Wu Yaoli for the 'Qujialing Culture', 'apart from single-room buildings, double- and multiple-room buildings also existed, even independent family courtyards appeared; one large family [or clan] broke into several smaller families, illustrating that men were the major workforce in social production, and thus also occupied an important place within the family.'[76] The Middle Yangzi thus began to meet the requirement for a place developing toward a civilisation.

But also the western tradition of settlement archaeology has begun to take hold in the region within the framework of social complexity. Guo Lixin was the first to apply these approaches in the region for the period between 4300 and 2000 BC, although the results mirror what the more conventional Chinese studies have tried to show, through employing the familiar terminology centring on the concept of the chiefdom (fig. 1.15a, b).[77] While also proposing the emergence of social complexity from the angle of the subsistence economy, population dynamics, craft specialisation and exchange, one of his two major foci is on burials, from which he extracts through complicated statistical calculations increasing social differentiation through time. A second focus is settlement patterns, both at the level of the house, within the settlement and on the regional level, which strongly resembles Liu Li's approach to the Yellow River settlements. From the phenomenon of enclosure, skeletal remains and counts of possible weapons he builds an argument for increased warfare and

[75] Zhang Xuqiu 1992, 2004; Zhang Chi 2003.
[76] Ren Shinan and Wu Yaoli 2010: 448.
[77] Guo Lixin 2005.

inter-group conflict. These conflicts resulted in the necessity of enclosures sited in reasonable distance from each other. Within these so delimited areas, settlement patterns arose, in which a centre dominated a larger number of subordinate settlements in the sense of a chiefdom. Guo Lixin's work has encouraged a number of imitators showing the increasing popularity of this approach also for the Middle Yangzi.[78]

In addition to the flaws of the general approach mentioned above and taken up once more below, the fundamental issue with it lies in the data used. Again, although we have a much clearer picture for Shijiahe and some of the other enclosed sites along the Middle Yangzi, a full understanding of most other sites eludes us. The same is true for many of the non-enclosed sites in the region. But most gravely, the foundation of settlement archaeology with the goal to reveal the level of socio-political organisation is rooted in survey data detailing site sizes and distributions, but no systematic survey has been undertaken yet. To compensate for the lack thereof, Guo and others use data generated in what Liu Li calls 'traditional surveys'.[79] These surveys, conducted mostly throughout the 1980s resulting in the Culture Relics atlas,[80] are aimed at identifying sites and their dates, sometimes for future excavation plans and sometimes as a necessary preliminary for construction projects. While entire provinces have not been surveyed everywhere, it appears that many counties in Hubei were completely surveyed.

The data generated by these surveys have some significant weaknesses, as partially noted by both Liu Li and also Guo Lixin:[81] the selective nature of the survey may result in sites being overlooked. The measurement of site sizes if attempted at all

[78] See, for example, Wang Yinping 2008.
[79] Liu 2004: 161. She heavily relies on these survey data for her own settlement analyses.
[80] For Hubei, see Guojia Wenwuju 2002 .
[81] Liu 2004: 162; Guo Lixin 2005: 202.

is not necessarily reliable and the methodology is often not comprehensible. Also, the dating of sites is mostly based on loose cultural attributions, for example for Xiaogan County in Hubei, the dates are given as: Qujialing Culture, Longshan-period culture, Shang-period culture, Western Zhou period, Eastern Zhou period, Han period, and Song period.[82] If even the better chronological resolution of the systematic surveys can be criticised for being too low, then these cultural attributions have even less potential to be used meaningfully. Nonetheless, Liu, Guo and others employ these data. Another weakness especially in light of sites like Shijiahe is that none of the surveys ever realised that some sites had enclosures, which is a problem for settlement pattern studies that rely on such sites for their central places. The study of settlement patterns as gleaned from traditional surveys may thus not be the answer to fully understand enclosed sites.

Ditch vs. Bank

Before concluding this section, one final issue with social complexity and related studies undertaken in China will be discussed, which pertains to seeing the enclosures as representing urbanism. This flaw pertains to the usage of the term *cheng* meaning 'city wall' and through another meaning of 'fortress' also meaning 'city'.[83] Thus, the existence of a bank around a site has led to its inevitable equation with 'walls' and 'city'. This emphasis on the 'wall' as an integral element of the city has led to an unhelpful division in the study of enclosures between sites that have a bank and those that have other forms of enclosure, such as a ditch or palisades. 'Walls'

[82] Li Duanyang and Chen Mingfang 1994.
[83] Falkenhausen 2008. See also Wang 1999. The term *cheng* re-appears frequently in other combinations to form concepts, such as city-states, and the city *chengshi*, being comprised of a wall and a market/market town, i.e., clear trade-related features (see below).

have become the undisputed indicators of the existence of a 'city' connected with the appearance of 'Chinese civilisation'.[84]

By contrast, ditched sites have not been part of this discussion, which clearly reveals a problem of semantics relating to the study of enclosed sites. Yet, a small number of ditched sites was completely excavated and delivered the stimulus for studying the internal organisation at the level of the settlement itself as stated above. The sites are those of Banpo and Jiangzhai, both in Shaanxi Province and attributed to the so-called 'Yangshao Culture' (5000-3000 BC).[85] Without having to go further into how these sites were studied,[86] it should have become clear that the study of Neolithic enclosures in China is conceptually flawed. An artificial distinction is made between sites surrounded by a bank (plus a ditch if applicable) and non-banked, but otherwise enclosed sites.[87] The threshold is believed to be that of civilisation, with 'walls' thought to clearly indicate a 'civilised' society. Thus, this distinction has promoted a certain notion of progress, but deflects from the issue at hand, which should have been the phenomenon of enclosure as such.

Also Liu Li, whose work is the prime example of social complexity studies for late Neolithic China, maintains the distinction between banked and ditched sites.[88] She suggests that ditches served as protection from wild animals and as means of channels for transport. Further Liu argues that the construction of banks was another episode in the development of a settlement, expressing 'an important socio-political

[84] See Yan Wenming (2008: 74), who clearly makes that connection and goes even one step further by elevating some of the enclosed sites to the level of 'capitals'.
[85] See Banpo 1963 and Jiangzhai 1988.
[86] For a comprehensive review, see Zhang Chi 2008: 42-48.
[87] This distinction had the consequence that, for example, only recently the province of Anhui appeared on the map of those studying the 'origins of Chinese civilisation' in Beijing due to the discovery of a banked Neolithic site at Sunjiacheng, Huaining (See Shuo Zhi 2008 for a brief overview of the site). The late Neolithic site of Yuchisi, also in Anhui, though nationally recognised as an important archaeological discovery, has fallen under the radar, since it is 'only' enclosed by a ditch and not by bank and ditch (Gong Xicheng, Anhui Institute of Cultural Relics and Archaeology, personal communication, 2009).
[88] Liu 2004: 95, 96.

transformation', since banks are regarded as more labour-intensive and thus requiring the pooling of workers. Liu suggests the existence of a socio-political organisation at the level of the chiefdom, as it implies that elites could 'mobilise' the population for such monumental building activities,[89] although such generalising claims should be based in detailed studies of individual sites as attempted in this thesis generating alternative ideas.

Such distinctions between ditches and banks have been unhelpful and predicated by universalising assumptions on what form social progress should take instead of investigating this case by case. Hence, I believe that it is essential to collapse the distinction between ditches and banks, not just when both occur together and can be regarded as the by-product of each other, but also when each appears by itself, they belong to the same phenomenon. I suggest that a more holistic, multi-dimensional approach, which leaves room for considerations on the way in which the banks and ditches created and shaped 'the human experience and social relations between people',[90] in order to fully appreciate the nature of Neolithic and later enclosures.

In this thesis, I will suggest alternative interpretations of enclosures, based on a detailed study of Shijiahe. I suggest that religious reasons closely related to people's perception of the flow of waters are key to an understanding of this site. While defence certainly cannot be excluded and may have been a factor, the evidence is weaker and above all indirect. Hence, it is likely that agricultural developments and population growth did not result in enclosure construction, but that other motivations led to it. It is more likely that, in the case of the Middle Yangzi, enclosure

[89] Liu 2004: 115.
[90] Gosden and Hill 2008: 9. Although Gosden and Hill specifically refer to British later Iron Age metalwork, the same argument can be made for architecture and buildings as well. See also Gosden 2004.

construction may have resulted in the nucleation of population, which in turn necessitated more efficient methods of agriculture to feed these larger groups of people, which in turn resulted in population growth. While nothing more than speculations at present, the Shijiahe site may provide a case study for producing a more complex set of processes of enclosure construction in future research through guided fieldwork.

For now, we have to contend with what the archaeological evidence allows us to infer. For instance, the fact that enclosure was built over an earlier cemetery site, may provide part of the explanation.[91] At the beginning of the third millennium, Shijiahe continued as a cemetery before the bank and ditch were built. Hence, the selection of a spot already religiously charged suggests that the significance of a mythical connections to the past. This accords well with the suggestion that a common identity was created through joint construction. The construction of bank and ditch may be explained as a conscious attempt at reconfiguring the landscape by, among others, alternating the courses of two rivers. Other explanations may refer to the advantageous location of Shijiahe within networks of interaction, thus marking an important location along routes of communication. Despite these potential contributing factors, an unequivocal set of reasons explaining why the enclosure was built cannot be offered at present, but we may arrive at a more wholistic understanding of the developments of the site including enclosure construction. The claims made in this cursory listing of potential reasons for the construction of the Shijiahe enclosure will be substantiated in the following chapters.

[91] See Chapter 3.

Understanding Abandonment

Just as formative as the construction of the enclosure in the early third millennium was its abandonment toward the end of the millennium, followed by a period of what appears to be a re-invigoration of life with subsequent abandonment for about one millennium.[92] Understanding the abandonment of Shijiahe has usually focused on the first episode of abandonment, here labelled as the time between phase VIII and phase IX, but usually described as 'chasm' between the 'Shijiahe Culture' and the 'Post-Shijiahe' or 'Sanfangwan Culture'. The period of re-settlement, i.e. phase IX, is not usually seen as positively as in this thesis. Hence, understanding the abandonment of Shijiahe sheds light on the ways in which change and its causalities are understood in the archaeology of China. In the following I will discuss the four major hypotheses, which, until present, have informed our understanding of these processes with regards to Shijiahe. The four hypotheses will be treated consecutively, but they are nevertheless tightly intertwined and often invoked in a cumulative manner.

Under the first hypothesis I discuss the postulation that changes in the environmental and natural disasters led to the decline of the societies along the Middle Yangzi. Invasions of peoples from the north, which successfully supplanted the local cultures, are grouped as the second hypothesis. A third hypothesis discusses the notion of population pressure through farmer migrations draining the Middle Yangzi region of its inhabitants. Finally, hypothesis 4 deals with the assumption that interactions with the northern neighbours resulted in a change in culture towards uniformity with the neighbours.

[92] See site narrative above.

While most hypotheses have interaction at the heart, they also have serious flaws, and cause and causality are often misunderstood. More detailed discussions of the processes of abandonment and life during phase IX will follow in the subsequent chapters, but in this chapter on some of the more detailed arguments and causalities usually invoked to preface the analyses in the next chapters.

Hypothesis 1 – The Environment

A popular explanation for the changes observed around 2000 BC is that of climate deterioration and environmental change. It was suggested that the 'decline' of the flourishing 'Longshan Age', i.e. third millennium BC, cultures in all regions of China, except the Zhongyuan,[93] was caused by changes in the natural environment, and that these changes resulted in the regions being occupied by new cultures whose developmental level can only be explained as a 'step backward'.[94] Only the cultures in the Zhongyuan continued to progress further, eventually developing into the Bronze Age cultures that laid the groundwork for all of Chinese history. The notion of uninterrupted development and prosperity in the Zhongyuan follows the popular lines of thought about historical progress in China and should be treated with caution. The notion of environmental decline and its consequences for (late Neolithic) societies, however, remain a valid inquiry.

The evidence put forward is the climate change observed for around 4000 years ago as seen in a decrease in temperature and fluctuations in precipitation.[95] As most of the conclusions are based on pollen data, the observed climate change probably happened earlier, but the changes in vegetation occurred with a time lag as

[93] The Zhongyuan is the Central Plain referring to areas in north-central China along the Yellow River centred on Henan and parts of neighbouring provinces traditionally regarded as the cradle of Chinese civilisation.
[94] Wang Wei 2004.
[95] Whether the date was calibrated is not known, but what Wang Wei means is 2000 BC.

to be discussed in Chapter 2.[96] The mentioned study also links this evidence to passages from texts like the *Mengzi* and the *Mozi* (see table 1.5) that 'record' climate change and large-scale floods for the time of Yao, Shun and Yu in addition to a Western Zhou bronze inscription referring to Yu controlling water.[97] These events are considered to have occurred in around 2000 BC. As stated above in relation to the historiographical orientation of Chinese archaeology and more fully discussed in the Conclusion, employing these much later literary sources to shed light on the earlier archaeological evidence is not helpful.

As for the Middle Yangzi, Wang regards the construction of the large enclosure at Shijiahe as evidence for flood control and in turn for the existence of devastating natural disasters.[98] Coupled with higher precipitation levels, higher groundwater and changes in temperature, such disasters could have wiped out the rice fields, which are considered the basis of Yangzi River subsistence, and resulted in a setback for the cultures. While he also states that the environment may have not been the only reason, this could especially be so for the Middle and Lower Yangzi.[99]

Other researchers have also seized upon the notion of environmental change, for example Guo Lixin, who, starting with the initial cause of a changing environment, provides a neat chain of events that led to the demise of the Neolithic cultures of the Middle Yangzi: people's livelihoods were disrupted by colder climate; higher flood levels and larger lakes resulted in the flooding of many agricultural fields, in turn reducing productivity and output; increased population pressure resulted in increased internal conflict pitting the very poor against the very rich. These

[96] The same climate event discussed in Chapter 2 is meant here.
[97] Yao, Shun and Yu are sage rulers of the Hua Xia, which are ancestral to all Chinese people. Yu is the alleged founder of the Xia dynasty. For the references to the bronze vessels, see Wang Wei 2004: 77, note 2.
[98] Wang Wei 2004: 71, 72-73.
[99] Other reasons are the invasion of the Hua Xia (probably meaning the Middle Yangzi) and the unsustainably wasteful nature of religious activities (probably meaning the jades in the Yangzi delta).

developments in conjunction with natural and man-made disasters weakened the San Miao so that the Hua Xia could easily invade and topple the former.[100] As conclusive as it seems, the situation was probably not as straightforward as argued. It is of interest that flooding and the destruction of the economic base are seen as at the root of change again. Significantly, the author contradicts himself in the very same book by stating that the late Neolithic flood levels in the Middle Yangzi were lower than today and floods did not pose a major problem to sites.[101]

Others also advanced the hypothesis that floods were the major catalysts of change.[102] Indeed the possibility that enclosures were initially constructed to protect sites from floods was proposed many times. I agree that floods must have been present and would go further by stating that floods and changes in water levels were part of the daily life of the inhabitants of the Middle Yangzi.[103] The element of water must have been a major source for people's cosmologies both for its beneficial and detrimental effects on daily life. However, I tend to disagree with the notion that large-scale floods were the major factor that ultimately triggered the changes in society.

The climate and environment changed, as to be shown in Chapter 2. But these changes were probably gradual, leaving people with the chance to adjust. Floods are a phenomenon that people in such watery regions as the Yangzi River must have been accustomed to, although the occasional unusual flood must have had devastating effects. Even before the research on the Middle Yangzi Neolithic gained in popularity, environmental reasons, such as severe floods, cold climate or marine

[100] Guo Lixin 2005: 301.
[101] Guo Lixin 2005: 19.
[102] E.g. Zhang and Hung 2008a: 316.
[103] In the conclusion to Chapter 5, I will argue that the changes in water levels together with the beneficial location along routes of interaction may have affected the choice of Shijiahe as location for a site. See also Chapter 2 for a discussion of site locations during the late Neolithic.

transgression, were put forward to explain the end of the 'Liangzhu Culture' in the Yangzi delta.[104] Very soon these reasons were regarded as insufficient to explain the observed large-scale changes in the archaeological evidence, and the primacy of the environment was given up. The same is probably true for the Middle Yangzi. Environmental change, no matter how powerful, may not always explain the entire phenomenon, but need to be taken into account in investigations of change. Finally, the chronology of the environmental change needs to be improved as seen in Chapter 2, where not much concrete evidence for past climates and environments specifically gathered in the Middle Yangzi will be used due to lack thereof. Thus, while the environment may have played a role in the wider picture of societal changes around 2000 BC along the major rivers in China, it in itself is not sufficient to explain what happened in the Middle Yangzi region.

Hypothesis 2 – Invasionist Interpretations

Probably the most popular opinion among scholars researching the break before Shijiahe IX is that of an invasion from north-central China, i.e. Henan, sealing the fate of the archaeological cultures in the Middle Yangzi. The Hua Xia are believed to have successfully conquered the San Miao.[105] A related explanation is that of interaction changing local cultures and will be discussed as hypothesis 4 below. Here I will discuss the assumption underlying the historiographical and other paradigms, which is the notion of large-scale warfare as defining characteristic of the 'complex' societies of late Neolithic China.

[104] See Jiao 2010 for a summary.
[105] See Chapter 6 for a full discussion. For proponent of this notion, see, for example, Zhang Xuqiu 1992: ch. 6; Yang Quanxi 1994; Dong Qi 1995; Han Jianye and Yang Xingai 1997; Meng Huaping 1997: ch. 5; Gao Chongwen 2000: 190-191; Wang Wei 2004; Guo Lixin 2005: 301; Wang Jing 2007; Jin Songan 2010.

The notion that warfare was prevalent during the late Neolithic period, i.e. the third millennium, was not just spurred by interpretations of much later texts, but is also a logical consequence of research supporting an increase of socio-political complexity during this period. As discussed, ditched and banked enclosures have been interpreted by, for instance, Liu Li, one of the strongest proponents of social complexity studies for China, whose papers are widely quoted by Chinese scholars, as evidence for an increase in competition and warfare between polities centring on the large, enclosed sites along the Yellow River.[106] A number of scholars in China have also followed this line of argument proposing that increased population pressure and social complexity led to warfare in the Middle Yangzi region.[107] In most cases, similarities in pottery between phase Shijiahe IX sites and southern Henan (see fig. 1.16) are taken as sufficient evidence and proxies for warfare and conquest, consequently seen as supporting the texts,[108] but of particular interest are those specific studies discussing possible evidence for warfare in the late Neolithic.

Often the investigators of warfare in Neolithic north-central China base their evidence for warfare on an increase in stone and bone arrowheads for the Longshan Period, supposedly less used for hunting than for fighting,[109] the special status of the stone axe heads of the type *yue* (fig. 1.17), allegedly signifying royal and military power, as well as an increase in enclosed sites.[110] Methodologically similar are attempts at finding evidence for Middle Yangzi warfare. Guo Lixin notes an increase in large defensive enclosures and in arrowheads and *yue*, of which especially the latter is considered strong evidence for warfare, as it is believed to be an offensive weapon

[106] Others have supported such notions, e.g. Underhill 1994, 2002; Demattè 1999.
[107] Guo Lixin 2005: 155-194.
[108] Studies dealing with notions on interaction derived from pottery evidence will be discussed below.
[109] Given that the Longshan Period is considered one of large agricultural output and with a marginal role attributed to hunting and gathering, arrowheads appear to have been attributed to warfare by default.
[110] Okamura Hidenori *et al.* 1997.

and stand for the presence of military leaders.[111] Such notions were initially supported by Anne Underhill, whose first study of Neolithic warfare claimed that enclosures around settlements were defensive in nature and served to protect the elite.[112] She is rightly cautious about the identification of stone tools as weapons as each of the potential types could have also served as a tool. A third line of evidence adduced by her is that of skeletal evidence, for which exist methodological problems in tying the evidence directly to warfare or related kinds of conflicts. Guo Lixin also looks at skeletal remains and finds that the phenomenon of heads missing from burials of bodies is evidence for warfare, which in my and probably also Underhill's view, would not count as strong enough evidence for conflicts between societies.[113] Other, maybe religious reasons could also explain decapitation. Usually, the available contextual evidence allows an argument for a violent death, but not necessarily for warfare and other forms of conflict.

Underhill's recent discussion of warfare during the late Neolithic is a more nuanced review of the evidence, which leads her to conclude that conquest warfare during the Longshan Period was less likely and that occasional raiding may have been the state of play.[114] Again, she adduces the increase in 'defensive, walled sites' in the Yellow River valley as possible evidence, but also correctly notes that enclosures may not have been contemporary and that most other sites were not enclosed. Further, evidence for warfare at any of the enclosed sites is basically non-existent and there is little evidence for the Longshan Period in general. The same is noted for physical traces of warfare in the form of skeletal remains. Finally, there is no clear evidence

[111] Guo Lixin 2005: 161-172.
[112] Underhill 1989.
[113] Guo Lixin 2005: 157-161. It should be added that Guo uses the three types of evidence, i.e. skeletal remains, weapons and enclosures, as cumulative for the presence of warfare, as he is probably well aware that each by itself may not be strong enough.
[114] Underhill 2006: 263.

for weapons, but tools could have been multi-functional, although there seems to be some 'symbolic weapons' made from jade, which were found in burials.[115] I agree with many of Underhill's conclusions.

Underhill's paper helps us to rethink the nature of warfare and violence in late Neolithic China and fuels a strong position against the invasionist interpretation of the late Middle Yangzi evidence. The notion of full-fledged warfare probably has to be rejected as much as some recent work, which has tended to de-emphasise the importance of conflict, violence and warfare for prehistoric societies, a situation Keeley termed the 'pacification of the past'.[116] We probably have to reconceptualise notions of violence and conflict in prehistory, and James' discussion of British Iron Age violence is particularly helpful in this respect, as he attempts to bring the topic of violence in prehistoric Britain back on the agenda.[117]

James, as noted for Neolithic China by Underhill, states that there seems to be little direct evidence for violence in the British Iron Age, which, of course, does not mean it did not exist. The data appear to be limited but when accumulated there is sufficient evidence for 'widespread physical conflict',[118] a case that could possibly be made for China, once more evidence becomes available and especially skeletal remains are examined. In this vein, enclosed settlements could also be seen as having martial aspects, just as the British Iron Age hillforts. James helpfully states that religious, or symbolic aspects of hillforts, as these are predominantly interpreted, and martial components are not mutually exclusive.[119] For the late Neolithic Chinese

[115] The so-called *yazhang* blade is regarded as the only specialised weapon form that came into existence during the Neolithic, but these were mostly made from jade, which is why Underhill suggests that they were exchanged between elite commemorating defensive alliances (Underhill 2006: 263).
[116] Keeley 1996; Keeley *et al.* 2007. I disagree, however, with Keeley's notion of, for example, universal features of past fortifications, which take the cultural contexts out of the equation.
[117] James 2007.
[118] James 2007: 165.
[119] James 2007: 164-165.

enclosures, violence and conflict may have also been factors in their construction, for example as deterrents or safe havens. But a purist military interpretation goes too far, especially by interpreting the enclosures as primary evidence for the existence of large-scale warfare. A more nuanced look at conflict and violence is necessary.

Following James' suggestions for the British Iron Age, we have to assume that life in prehistoric China was also unlikely to be entirely peaceful and that people were victims of violence and inflicted violence. Violence and death have to be regarded as part of daily life; one has only to think of childbirth, infections, injury and disease. Maybe thinking in the dichotomy of war and peace is no longer tenable, as suggested by James, who argues for recognising prehistoric life as a state of being, in which 'insecurity', which he defines as 'some risk of physical danger from others in the absence of reliable peace as well as organised warfare', was common.[120] Here, Underhill's notion of 'symbolic weapons' made from jade, that could not have been used in actual conflict due to the fragility of the material, may hint at the presence of 'insecurity' in life in late Neolithic China. Most weapons, if they are indeed weapons and not tools, were mostly placed in burials, which could suggest that conflict and violence were deliberately invoked or alluded to during funerals.[121]

In any case, the rethinking of conflict and violence in Neolithic China has barely begun, but for the present purpose, it suffices to say that full-fledged warfare in the way envisioned by the scholars mentioned at the beginning of this section was probably non-existent or at least on a much smaller scale. We can be fairly certain that conflict did not play out as clashing archaeological cultures with one being victorious over the other. Such perceptions of treating archaeological cultures as agents were dismissed on theoretical grounds above and in the Conclusion, as were

[120] James 2007: 169.
[121] This of course has to be judged on a case-by-case basis.

the historiographical notions that come with it. We must also question the work investigating the social complexity of the Middle Yangzi late Neolithic societies as partly done above. Conflict and violence need to be re-envisioned differently in order to make it heuristically viable again.

Hypothesis 3 – Farming Dispersal

This hypothesis also has population replacement at its centre, but in the more peaceful version of migration. One culture is supposed to have been replaced by another by migrating away from and into the Middle Yangzi area respectively. Most Chinese scholars follow the more militaristic version of the migration hypothesis, while other, less martial versions are less entertained. However, there is a group of scholars that strongly propagates the dispersal of farming populations southward. The main objective of these and other scholars is the explanation of the migration of speakers of the Austronesian language family from Taiwan to the Malay Archipelago, Melanesia, Micronesia, Polynesia, New Zealand, Madagascar and Hawai'i over a period of 3000 years. They are believed to have left Taiwan in around 3000 BC, subsequently reaching the Malay Archipelago, Micronesia and Melanesia, arriving in Madagascar in around AD 500, New Zealand in AD 1200 and Polynesia in between AD 600 to 1250 (fig. 1.18).[122] The assumption is that agriculturalists left their 'homeland' and migrated to new regions taking their language and genes with them. This model, often called the 'farming/language dispersal hypothesis', is probably one of the last grand narratives in archaeology and has found ample criticism.[123] Of importance here is that this model, at least for the dispersal of farmers from Taiwan

[122] Bellwood 2005: chs 6, 7.
[123] See the discussions in the *Cambridge Archaeological Journal* 17:1, 2007. See also Wylie (1995) for a discussion of the same hypothesis as initially suggested by Colin Renfrew for the dispersal of Indo-European languages and farming into Europe.

into the Southeast Asian and Pacific islands as well as into mainland Southeast Asia, has been strongly connected to Mainland China as the ultimate source of these movements. And the Yangzi River basin as place where rice was first cultivated and domesticated is thought to have played a major role.

Recent work builds on these notions in an attempt at their substantiation through syntheses of archaeological evidence from southern China.[124] By using the appearance of rice remains as proxy for farming at various southern sites correlated with some types of lithics and pottery suggesting contacts between various archaeological cultures, it has been postulated that the movement of peoples across southern China provided the background for Austronesian dispersals. The further south sites with rice remains are located the more recent the radiocarbon dates, which is believed to suggest the different times when farming reached these areas (fig. 1.19).

The notion of farming dispersal can be criticised for many reasons. For example, the primacy given to farming populations is problematic as the perceived inevitability of their dispersal and displacements or absorption of local populations, maybe those of hunter-gatherers, paints a very black and white picture of prehistoric subsistence and leaves not much room to discuss the grey areas. Also, in prehistoric China, farming may not have been inevitable and many populations subsisted on a mix of various strategies of subsistence must have existed.[125] This remark is inextricably linked to the nature of the archaeological evidence for subsistence for southern China. From an archaeobotanical perspective, it is probably highly unlikely that the evidence for agriculture gathered from the specimens listed for the investigated sites by Zhang and Hung[126] is sufficient for such claims. The discussions surrounding cultivation and domestication of rice in the Yangzi delta have shown that

[124] Zhang and Hung 2008b, 2010. See also Zhang Chi and Hung Hsiao-chun 2008a.
[125] Cf. Pluciennik 2007 for similar remarks regarding Europe.
[126] Zhang and Hung 2010: 16-17, table 1.

a straightforward correlation of a small number of grains and phytoliths with farming is improbable.[127]

Before touching upon the notions put forward for the Middle Yangzi and its role in the farming dispersal, a few remarks are necessary regarding the issue of migration ('dispersal'). Migration has been a very tricky field of investigation in archaeology and only recently attempts have been made to revive it in the West.[128] In China, with prehistoric archaeology firmly rooted in culture history, migration has always played a role. In culture history, migration has been the default explanation for culture change, but a view of culture as a form of adaptation to local environments by processual archaeology shifted the focus away from migration as an explanation. I agree with other scholars that migration is a worthy field of study in need of re-evaluation for China.[129] It is agreed, however, that a satisfactory way of conceptualising migration is yet to be found.

Of relevance here are the reasons why farming dispersal may have happened. For example, Bellwood suggests an increase in population together with environmental stress, conflict, and an increasing demand for agricultural production, which together resulted in an expansion of peoples from their homelands.[130] This notion has also been adopted for the claimed farming dispersal in China. As to be discussed below, Sherratt would call such views 'calorific' as they are one-sided and marginalise other forms of evidence. While Zhang and Hung also include some material culture in their analysis, this plays a secondary role to the distribution of rice as correlated with radiocarbon dates. The result is maps showing movements across large geographical expanses with thick arrows connecting the regions. Much detail is

[127] See Fuller *et al.* 2007.
[128] See, for example, Anthony 1990, 1992; Burmeister 2000.
[129] See, for example, Jiao's (2010) attempt at explaining the replacement of the Liangzhu Culture by the Guangfulin Culture in the Yangzi delta through the influx of migrants from Henan.
[130] Bellwood 2005: 278.

lost and it is especially this detail that makes the archaeological evidence so fascinating and does not allow for it to be pressed into the 'straight jacket' of farming dispersal.[131]

On another note, Fuller has recently suggested that large-scale migrations of farmers were unlikely, offering as alternative for the explanation of the way in which, for example, rice reached other parts of China by seeds probably having been carried in small quantities as exotics by itinerant travellers, followed by locals learning how to make use of them, although more recently he has been more in favour of arguing for the migration of farming populations.[132] While the issue of migration from the Middle Yangzi will be discussed in the following sections, I will briefly comment on the available evidence for agriculture in the south.

Many claims for the early cultivation of rice as well as its domestication have been based on some finds of rice in seasonally inhabited cave sites in the Yangzi area dating to around 10,000 years ago.[133] From a palaeobotanical perspective, this orthodoxy is unsubstantiated, but illustrates the significance of an early beginning of rice in contemporary discourse. Any claims of finds of rice along the Yangzi are usually taken as evidence for agriculture and the more sites have such finds the more agriculture is thought to have played a role in food production. However, as Fuller *et al.* have noted, the use of wild rice has rarely been considered and evidence for cultivation and domestication is shaky.[134] Further, an important distinction between cultivation (human activity) and domestication (changes in plant through key morphological and genetic adaptations) needs to be made. Domestication traits, such

[131] Pluciennik 2007.
[132] Fuller 2011a, 2011b.
[133] For example, the cave of Zengpiyan, Guilin, Guangxi. For a critical review, see Crawford 2006; Lu 1999. The discussions usually focus on rice, but the use of other crops, such as various millets, should not be neglected.
[134] Fuller *et al.* 2007.

as the development of larger or heavier grains, a reduction in awns and hair and a development of non-shattering spikelet bases that allow for the grains to effectively harvested, occur in response to cultivation, which creates selection pressure for the plants.[135] Cultivation comes first, followed by domestication. The intermediate stage between initial use and cultivation of wild rice and the full-fledged appearance of domestication traits, that Fuller *et al.* call 'pre-domestication cultivation', is a drawn-out process and may take several millennia.

Hence, at early Middle Yangzi sites, such as Pengtoushan, Li Xian, where ceramics were tempered with rice husks (8000-7000 BC) and Bashidang, also, Li Xian, where 1000s of rice grains were found (7000-6000 BC), it should not come as a surprise that there is no good evidence for domestication.[136] But it is these sites, Bashidang in particular, where the occurrence of any evidence for rice is often taken as direct evidence for early rice agriculture.[137] From about 6000 BC, the beginning of cultivation along the Yangzi, there is evidence for some domesticated rice in the Lower Yangzi with the probable completion of the domestication process by 4000 BC. Paddy fields emerged about 500 years earlier.[138] It is at this time, from around 4500 to 3500 BC, that we have evidence for both wild and domesticated rice at Chengtoushan, as well as a rice paddy field dating to before 4300 BC and a possibly

[135] Fuller *et al.* 2007: 318-319.
[136] Fuller *et al.* 2010: 122.
[137] Bashidang 'has markedly thin rice, comparable to those from Kuahuqiao [in the Hangzhou Bay, Zhejiang], which we interpret as immature and morphologically wild' (Fuller *et al.* 2007: 323). There is also evidence for the use of other, gathered plants, such as nuts, that may have been eaten more than rice (Pengtoushan yu Bashidang 2006).
[138] Fuller and Qin 2009: 95.

later one (fig. 1.20).[139] The Middle and Lower Yangzi evidence matches also insofar as there still was much dependence on gathered foods.[140]

While the evidence for these more general developments of rice agriculture is largely based on sites in the Yangzi delta with some additional sites in the Middle Yangzi, there is barely any evidence for a continuous development with the exception of the Lower Yangzi area where finds of rice, paddy fields and tools were also made dating to the fourth and third millennia, such as the fourth-millennium rice fields from Chenghu or the later fields at Caoxieshan and Chuodun in the Lower Yangzi region.[141] So far the available evidence for rice along the Yangzi has allowed scholars to make huge progress in charting the general developments of rice cultivation and domestication, but much is in the dark still. For the Middle Yangzi, we are in a particular dilemma, as no direct evidence for rice agriculture post-dating the fourth millennium exists, also due to the nature of archaeological recovery. As summarised by Guo Lixin, the evidence for the third millennium includes rice straw or husks or leafs or impressions thereof mostly in scorched soil.[142] These occurrences of rice or rice-related finds can only help to form a basic impression, but a solid sample, from which to draw substantiated conclusions, is sorely missing.[143] To date, only indirect evidence coupled with the assumption that there must have been rice agriculture on a large scale has been brought forward.

This array of negative evidence does not necessarily suggest that rice farming did not take place at all, especially in light of the rice fields in the Lower Yangzi area

[139] Fuller *et al.* 2007: 325-326; Pei 1998. Fuller and Qin see the paddy field in conjunction with the large enclosure around the site as evidence for a 'more centralised social system and organisation of rice cultivation' (2009: 97). This claim falls into the 'social complexity trap' where presumed scale of production results in notions about presumed socio-political organisation.
[140] Gu Haibin 2007.
[141] Fuller and Qin 2009: 99-100, where further references may be found.
[142] Guo Lixin 2005: 84-86, table 2-1.
[143] It remains to be seen whether the recent excavations at Shijiahe provided such a sample.

and the rice fields at Chengtoushan pre-dating the third millennium. However, is there sufficient evidence to argue for the farming dispersal advocated by Bellwood and others? At the moment, the evidence for rice agriculture in the regions south of the Yangzi is patchy with limited rice remains coming from a number of sites dating to the third millennium, which illustrates that rice was at least known in the regions in this time period.[144] Zhang and Hung have recently painted a convincing picture of the complexity of sedentary hunter-gatherers in southern China until 3000 BC until the alleged migration of farmers from the Yangzi basin.[145] Is the current evidence for farming sufficient to suggest wholesale changes in societies toward rice or is it more prudent to be cautious and opt for mixed subsistence?

Although patchy, the current Middle Yangzi evidence may help to shed light on this issue. In the probably heavily forested areas of the Middle Yangzi[146] hunting and gathering as evidenced for the fourth millennium likely continued into the third millennium. Recent work on meat-acquisition patterns has shown that domesticated animals did not constitute a major source of meat along the Yangzi.[147] While the evidence for rice agriculture is not entirely convincing yet, it is possible that it occurred in distinct pockets of settlements in the area, maybe related to enclosed settlements.[148] Such complexities of subsistence, gauged from what the available evidence permits, may also be proposed for areas further south. Overall, these points reinforce one of the main points made in this thesis, which is that detailed studies of individual sites set in their wider contexts may reveal great complexities allowing us to paint a more diverse picture than broader brushstrokes permit. Much of the

[144] See Zhang and Hung 2008a: 16-17, table 1.
[145] Zhang and Hung 2012.
[146] See Chapter 2.
[147] See Yuan *et al*. 2008 and Chapter 4.
[148] It is possible that enclosures, in addition to the reasons advocated in this thesis for their construction, also managed the flow of water for irrigation, although evidence is still outstanding.

suggestions as to subsistence and possibly concentrated intensive agriculture are nothing more than speculation at present, but warrant investigation once more data become available.

Further to these issues relating to the subsistence economy, there are also concrete issues with the version of events in the Middle Yangzi region. It was suggested that Shijiahe was a site of high social complexity at the end of the Neolithic that fell into decline and was abandoned in favour of small settlements mostly in the northern Yangzi valley, caused by an expansion of late Longshan cultures from the Yellow River, which is roughly consistent with hypothesis number 2. The numbers of sites for this new culture, as seen in the evidence from Li Xian, are considered to be few, illustrating a sudden and dramatic decline in population.[149] Flooding, population movements or a collapse of the social order are argued to have played a role as well. Influences from the Lingnan cultures are also claimed due to the appearance of geometric impressed pottery in phase Shijiahe IX and in other Yangzi cultures.[150] Rice cultivation during the early third millennium ('Qujialing Culture'), it is posited, resulted in its dispersal southward into Guangxi and Sichuan and later into Fujian and Guangdong. The decline, and hence depopulation, of the Middle and Lower Yangzi areas, consequently resulted in rapid population growth in Lingnan and Fujian.[151]

These ideas rest on the assumption that the counts of settlements in the Middle Yangzi area reliably reflect demographic developments in this region. This notion, however, is problematic. Settlement data from the Middle Yangzi have not yet reached a stage to be considered reliable. As noted by Liu concerning the data used in her own analyses of settlement patterns along the Yellow River, two types of surveys,

[149] They further adduce that occupation layers, for example at sites in Li Xian, are thin.
[150] Zhang and Hung 2008a: 309-310, 315-317. It is possible that this suggestion may hold up to scrutiny, as impressed pottery is indeed a novelty in phase IX.
[151] Zhang and Hung 2010: 20-21.

traditional and systematic, can be distinguished. While the latter, also called full-coverage survey, is used to locate as many kinds of human activities as can be recovered from surface collections in a necessarily rather small area, the former is less precise. Its focus is on locating good sites for future investigations thereby overlooking smaller sites.[152] These traditional surveys, which were mostly conducted in the 1980s, are chronologically imprecise. Broad cultural attributions as known at the time of the survey are used and the collections have not been re-examined since to see if they would allow for a more fine-grained analysis.[153] Most traditional surveys thus do not account for sites that would date to phase IX, as these are all subsumed under the broad group of a 'Shijiahe Culture'. The only survey that makes a difference is that conducted at Shijiahe, which features a single site only.[154] Another problem of conventional surveys in southern China and along rivers in general both in the north and the south is the thickness of the alluvial layers hiding sites from surface collections. This situation is further amplified by large-scale rice cultivation, which results in the coverage of large chunks of surface under paddy soils that lock away any evidence that might be collected in drier conditions.[155] Existing site counts are thus hardly reliable evidence and any claims made regarding population expansion or decline need to be treated with scepticism.

A recent survey of the southern foothills of the Dahongshan around Shijiahe illustrates this point.[156] While, unfortunately, not re-surveying Shijiahe itself and relying solely on the data from the 1992 publication, the team surveyed the East and

[152] Liu 2004: 161-162.
[153] Such issues regarding the settlement data for the Middle Yangzi are discussed by Guo Lixin 2005: 201-202. Guo, as Liu as well, use these flawed data nonetheless to reconstruct past occupations and social changes.
[154] Shijiahe 1992.
[155] A recent survey project in the Chengdu Plain attempts at circumventing this issue by auguring, thus adding evidence from deeper layers (Flad *et al.* 2008). This method is essentially analogous to the much-used Luoyang spade.
[156] Meng Huaping *et al.* 2009. The following will use culture-historical attributions due to a lack of higher chronological resolution.

West river courses and the area where the two rivers meet (fig. 1.11). For the Qujialing Culture the survey found 22 sites, mostly clustered around Shijiahe, followed by the Shijiahe Culture, for which 63 sites were detected, again clustering heavily in and around Shijiahe with some sites found in the West River valley and south of Shijiahe. For the Post-Shijiahe Culture (phase IX), 14 sites were found with minor exceptions lying in and around Shijiahe. While the Qujialing and Shijiahe cultures are seen as the periods of the formation of a central place, the Post-Shijiahe evidence is seen as its collapse. We know that Shijiahe was largely abandoned before phase IX, but if we stay with the numerical settlement evidence, we observe that the number of sites counted for the Qujialing Culture is not much different from those counted for the Post-Shijiahe Culture. One might suggest a minor decline but the impression is less dramatic, as when compared to the Shijiahe Culture counts. One might conclude that the populations of the Qujialing and Post-Shijiahe cultures were approximately similar. The Qujialing Culture, however, is often regarded as a period of growth and expansion, while the latter is seen as a period of decline. These conclusions are of course oversimplifications and are not tested against other evidence, for example, the appearance of Qujialing-type pottery at sites in the north, which is partly discussed in the next section, but simply relies on settlement counts.

In conclusion, we might posit that suggestions of social, political, cultural, economic and population decline are based on problematic settlement data, which may lend itself to outlines general trends and locating sites, for example, but should not be subjected to the types of analysis employed by students of settlement hierarchies. In any case, if a postulated decline is compared to evidence for prosperity and richness of long-distance exchange as discussed below, and for example seen in the jades, the decline does not look too sour after all. Maybe our notions of what

constitutes a decline should be re-evaluated. Potential falls in population numbers do not imply a lack in prosperity, especially in a case such as Shijiahe, where the activities of phase IX might even be regarded as a new 'golden age', as it is clearly a form of re-settlement following the abandonment. What should have become clear is that the farming dispersal hypothesis may not hold as explanation for the phase IX changes when one zooms in from a supraregional perspective. Zooming out decreases the degree of complexity, but a closer look at the sites necessitates a more detailed and balanced view of the evidence.

Hypothesis 4 – Influences, Exchange and Interaction

Maybe the weakest of all hypotheses forwarded, at least in terms of its intensity, is that of contact between cultures. Similarities in pottery between archaeological cultures are generally explained as influences (*yingxiang*), exchanges (*jiaoliu*) or interactions (*hudong*), which is analogous to the concept of diffusion of artefacts or cultural traits used in culture-historical writing. Such thinking has largely been underlying the work on phase IX, as many scholars were not sure how to conceptualise similarities and differences between pottery from this phase and surrounding areas and often just stopped short before naming it a culture of its own.[157] Many scholars went on to equate the Qujialing and Shijiahe cultures with the group of the San Miao known from much later texts.[158]

Typical work explains similarities in 'late Shijiahe Culture,' i.e. phase IX, pottery with contemporary pottery from western and central Henan with exchange and northern influences on the culture in Hubei, while the reverse was much less the case

[157] The denomination 'Post-Shijiahe Culture' is one consequence of the insecurity of how to handle the phase Shijiahe IX assemblage and was initially intended to be preliminary (Meng Huaping, personal communication, June 2008). In recent years, the term 'Sanfangwan Culture' appears to have become accepted as seen in its usage in the report of the Qilihe excavations (Qilihe 2008).
[158] See Chapter 6 for a detailed discussion.

(see fig. 1.16).[159] This impression was also gained by others who, while still postulating that late Shijiahe developed from early and mid Shijiahe Culture, detected similarities to the late Henan Longshan Culture or even the Shandong Longshan Culture.[160] The incursions or influences from outside cultures must have resulted in a 'chasm' (*duanceng*) between the earlier and the later culture in the Middle Yangzi, as it is termed in the Xiaojiawuji report.[161] Zhang Chi also claims an outside impact from the Zhongyuan through expansions of cultures from there, eventually leading to a decline of the Middle Yangzi area.[162] By contrast, Guo Lixin regards the appearance of urn burials at Xiaojiawuji and Zaoligang as evidence for continuous social evolution toward complexity and that the cemeteries show the development of the concept of kingship at Xiaojiawuji and the existence of an elite at Zaolingang. But he relates these developments to influences from surrounding areas that also led to previous settlement structures falling apart.[163]

Guo Weimin, on the other hand, seems more cautious and states that the appearance of the urn burials cannot be explained at present, although he sees strong Zhongyuan influences in the Middle Yangzi for the period following the Shijiahe Culture. He further finds it difficult to gather the phase IX finds under one cultural heading and sees many influences from non-Middle Yangzi cultures operating, whose sources can be found in the Zhongyuan cultures in southern Henan that themselves are influenced by cultures in the central part of the Zhongyuan, such as the Miaodigou II Culture. Due to these influences, the Wangwan III Culture develops in southern

[159] Zhang Xuqiu 1992: 310-311; Wang Jing 2007.
[160] Gao Chongwen 2000: 190-191; Xiaojiawuji 1999: 347-348.
[161] Xiaojiawuji 1999: 347.
[162] Zhang Chi 2003: 233, 237.
[163] Guo Lixin 2005: 292, 297.

Henan, pushes southward and causes the changes in the Middle Yangzi, and resulting in the development of the Post-Shijiahe Culture.[164]

While these explanations are almost archetypical of the work done in China, they still focus on interaction at the heart of the explanation. However, the major arguments are based on evidence from similarities in pottery. They are basically attempts at making sense of similarities in archaeological evidence, similarities that have been claimed to exist on a cross-regional scale from about the fourth millennium BC as argued by K.C. Chang in his concept of the 'interaction sphere'.[165] An interaction sphere, as originally proposed by Caldwell, attempts at explaining similarities among otherwise separate societies, and in his view such exchanges appear to be gravitating towards the formation of 'civilisation'.[166] A similar argument is made for late Neolithic China. Chang claims that

> 'by approximately 4000 B.C. some of the adjacent regional cultures had come into contact as an inevitable result of expansion and that a number of ceramic styles began to assume a sphere-wide instead of merely a region-wide distribution. For example, among pottery vessel types, the *ding* and the *dou* are found in every region, often in large numbers, suggesting the wide distribution of a style of cooking formerly prevailing only in the Dawenkou and Daxi cultures. The perforated slate rectangular and semilunar knives represent another horizon marker, as do some pottery and jade art motifs that, as pointed out earlier, may reflect deeper substratal commonalities than recent contact'.[167]

There are several issues with this influential view of cultural processes during the later Neolithic in China. The concept of the interaction sphere is necessarily teleological in terms of the mentioned interactions leading to convergence of cultures into phenomena Chang calls 'Chinese' as well as civilisation. What may not be more than superficial similarities in pottery shapes, as all other material culture is largely

[164] Guo Weimin 2010.
[165] Chang 1986: 234 *et passim*.
[166] Caldwell 1977.
[167] Chang 1999: 58-59.

sidelined, is understood as reflecting wider commonalities across societies in one of the biggest nation states on the planet. In this way, Chang clearly works within the culture-historical tradition where cultures are seen as normative. At the same time, the usual socio-evolutionary trajectories are also accounted for. The 'interaction sphere' as used by Chang falls thus squarely into the two research paradigms this thesis tries to move beyond. Crucially, Chang does not offer an explanation as to the reasons for the gradual convergence.

On the positive side, the concept of the 'interaction sphere' acknowledges the importance of interaction and it remains one of the more sensible big picture approaches in the archaeology of China (vis-à-vis the more bold and theoretically less grounded search for Chinese civilisation [see Chapter 6], although both are linked). In this way, it resonates with Sherratt's 'interactionism' favoured in this thesis.[168] However, Sherratt acknowledges the importance of uneven developments between settlements and regions and explains these with access to desired things and locations on routes of communication, thereby also providing explanations for the patterns he observes in the archaeological evidence. Sherratt's approach can be applied from the micro to the macro scale of the archaeological inquiry, while Chang's interaction sphere would probably implode at the micro scale. Hence, while acknowledging Chang's important contribution at conceptually advancing the archaeology of the late Neolithic in China, Sherratt's approach appears to hold more promise.

The reliance on pottery as indicator for interaction is reminiscent of approaches made in the 1960s and 1970s under the banner of the New Archaeology that attempted to relate the similarities and differences in designs on pottery to the

[168] See below.

extent and degree of the interaction between communities.[169] However, as Hodder's ethnoarchaeological work has shown, 'material culture may be used knowingly and strategically by human groups to enhance their identities and maintain boundaries, irrespective of the degrees of contact between those groups'.[170] In the Chinese case, this realisation implies that the cultural dynamics as concluded from the pottery evidence are a fallacy. Following this argument through, we may conclude, for the similarities in pottery between the Middle Yangzi area and southern Henan during phase IX, that contact between peoples probably existed with the result of the adoption of pottery, but the mode of the adoption cannot be subsumed under rubrics such as dominance or expansion, not even influence, as this term implies the passivity of one side. Interactionist interpretations of the archaeological evidence need more substantial backing than similarities between and convergences of pottery shapes can provide. The true nature of the interactions was more complex and needs to be mapped more carefully as I will attempt in this thesis.

Making Sense of the Phase IX Abandonment

Many of the deficiencies of these hypotheses are obvious, mostly because they work as a logical extension of the culture-historical framework that regularly fails to provide plausible explanations for change. The environment hypothesis stands apart from this, but, at the moment, it is based on evidence that is not sufficient, especially for the region in question. It is most remarkable that the environment as dominant factor of change has been rejected for the Lower Yangzi a while ago, but for the Middle Yangzi it is still considered plausible. While the environment may have been a factor, it may only be part of the story. Most obviously derived from culture history

[169] See, for example, Plog 1976, 1978.
[170] Thomas 2008: 64; Hodder 1982.

are the hypotheses that favour an explanation of change due to warfare and invasion as well as migration and the above discussion of each hypothesis has shown the flaws of these proposals. Similarly flawed are pottery-based notions of influence and the like.

As to be shown throughout this thesis, the picture that can be painted of Shijiahe is exceedingly complex. Despite these complexities, the practices observed for phase IX are clearly a break with the previous phases despite some continuities, for example, the red pottery cups and figurines.[171] Because of this clear break, I will argue that the phase IX activities have to be envisioned as a re-settlement. The abandonment occurred between phases VIII and IX, and probably resulted in somewhat of a hiatus in terms of settlement activities at Shijiahe, which explains why many of the activities of the latter phase differ from the former.

Emphasising the temporality of the abandonment and the re-settlement leads to further questioning of the four hypotheses, which espouse clear causalities. For example, warfare, migration and diffusion all surmise that Middle Yangzi populations are pushed out by others, which bring the said northern pottery. However, once we account for the temporal break, such causalities seem less plausible. Possible incursions from the north may account for the episode of re-settlement only, but do not explain why the site or any of the other enclosed sites in the Middle Yangzi were abandoned and remained so for a while. This insight raises the question why the invaders only (re-)settled Shijiahe and Yinxiangcheng but not any other enclosed site. The question also arises why an 'invasion' would have to be wholesale, i.e. leading to

[171] See esp. Chapter 3.

the abandonment of all enclosed sites.[172] In all, none of the hypotheses has the power to explain the reasons for the abandonment.

Nonetheless, the claimed northern connection seen in the ceramics can be substantiated as to be demonstrated in Chapter 5, in which I argue that the major lines of interaction in relation to religious practices at Shijiahe were directed northward. The hypotheses postulate a phenomenon of movement that, in caricature, would seem like a domino effect southward, eventually resulting in people in Fujian being pushed over the cliff and into the sea beginning the great Austronesian migrations. Such notions are clearly related to the general historical perception of the Yellow River as the centre of events, from which emanate ripples of influence. The reverse is unlikely to be considered in a scholarly climate that at least tacitly accepts the primacy of the Yellow River region. So far, however, the evidence for major, religious activities in the Middle Yangzi region does not support much southward movement.[173] The view I take in this thesis matches what Li Feng observed for the southward expansion during the Western Zhou, when the Yangzi was the limit and the Yunmengze appeared too difficult an obstacle.[174] The movement with the least obstacles appears to have been toward the north as mirrored by the pottery animals, cups and jades.[175] The pointed-bottom vessels show that the movement was not unidirectional, but multidirectional. Interaction is unlikely to just go one way. As to be discussed in Chapter 3, the enclosure banks in Shandong were often built of a combination of what is to be expected in the loess-rich Yellow River basin, i.e. pounded earth, and the typical southern technique of *duizhu*. Again, this combination may show an impact of interaction with the Middle Yangzi, resulting in a local appropriation of *duizhu*, but

[172] Some sites, such as Majiayuan, might have even been abandoned earlier.
[173] See Chapter 5.
[174] Li 2006: 327 and note 99.
[175] See Chapter 5.

combining it with the pounded-earth technique. If we should be compelled to argue for any direction of movement, maybe even of people, it would be northward.

Despite turning current notions about the relationship between Henan and the wider Yellow River basin in relation to the Middle Yangzi on its head, this still does not bring us any further in understanding why the abandonment occurred. However, we are able to outline the major aspects of this process:

1. As most enclosures in the Middle Yangzi were abandoned at the same time, we can speak of a region-wide phenomenon, which also implies that it was connected and should be considered at a regional level, while not losing sight of site-specific developments.
2. The events leading people to leave the sites resulted in permanent abandonment for most sites. Sites like Shijiahe and Yinxiangcheng that were re-settled in phase IX are the exception.
3. The abandonment deeply contrasts with the rich practices documented for the preceding phases.

While these observations will be fleshed out in more detailed in the following chapters, more in-depth study beginning with these aspects in addition to close scrutiny of individual sites, other than Shijiahe, once the archaeological evidence is published, should, in future studies, bring us closer to an answer to what triggered the abandonment.

In conclusion, despite the difficulties at identifying the motivations for the abandonment, this process has encouraged me to look at the before and after, thereby identifying (fluvial) interaction along religious lines as the major factor that helps us

understand the relevant phases. Interaction may also eventually help us to understand the abandonment itself. Also, further work on the Middle Yangzi environment and climate may shed light on this issue, given that not much substantial work has been carried on the third millennium BC. The abandonment, as the second major development in addition to enclosure construction during the third millennium, has and will be scrutinised yielding results differing from other approaches. While some of the detailed discussions of the developments, which have been cursorily summarised above, will follow in the remaining chapters, the above has set out the parameters of the discussion.

An Alternative Methodological Approach

The above-discussed re-interpretations of the reasons for enclosure construction and abandonment are rooted in the alternative methodological approach discussed in this section. As indicated, the application of abstract cross-cultural principles of social complexity research to the Chinese evidence has the potential fallacy of ignoring the particularities of the specific case. Just as the research into 'Chinese civilisation', it is often in a manner akin to ticking boxed thereby gauging the level of society. Such work seriously downplays the richness of the archaeological evidence by imposing an order on notoriously complex data. Recognition of that complexity is the first step to look beyond abstract models including notions like the archaeological culture, which reduces the archaeological evidence to a limited number of common denominators. The above discussions of common reasons for enclosure construction and abandonment have shown the problems with current investigations into causes and functions. Both the nature of the archaeological evidence and the insufficiencies of current paradigms require the search for an alternative perspective

on enclosed sites. One of the more promising avenues of investigating the development at Shijiahe is that of interaction. I take my inspiration from Andrew Sherratt, who attempted to show that interaction is key to understanding changes in societies, site locations and distributions among others.[176]

Sherratt's Interactionism

In a 1995 paper, Sherratt specifically criticises 'stadial' perspectives of history that put social phenomena in a typological sequence, which is of relevance here as the social complexity studies focus on establishing successive types of socio-political organisation.[177] This criticism is further lodged against what Sherratt calls the 'premise of calorific priority',[178] according to which major changes in the past are related to changes in food production, while other phenomena get neglected, but should actually be regarded as just as or even more important. For Sherratt, farming and other modes of food production are not at the root of change and not the primary cause for what had happened in the past. He offers an alternative, termed 'interactionist', which for him is rooted in three aspects.[179] First, certain geographical locations, such as river valleys, 'isthmuses and stark juxtapositions of mountain, desert, and sea', allow for contacts between societies. Secondly, things as well as 'non-material culture' move across landscapes and are exchanged. And thirdly, consumption and the social meaning of things should be favoured over production, although both are intimately related.[180]

[176] See Sherratt 1995, 1996a, 1996b.
[177] Disturbingly, Sherratt constantly uses the term 'civilisation' in his writings, which slightly subverts his attempt at decanting stadia, as civilisation itself implies having reached a certain level societal development.
[178] Sherratt 1995: 7.
[179] Sherratt 1995: 10.
[180] The three aspects basically outline the way in which Sherratt defines 'interaction'. In this thesis, interaction is defined broadly as 'mutual human action […] whereby two or more people act

In this way, outside contact may be a plausible explanation for change, and, while the focus does not need to centre on invasions and migrations, trade and exchange may indicate why things changed. Sherratt thus places a strong emphasis on the interdependence of societies through processes of communication with the desire to consume certain things being at the heart of these processes. Especially when considered together with his emphasis on travel along rivers as major routes of transport,[181] a perspective provided by human geography offers itself that will be crucial to understanding site locations and how things travelled. While I will come back to these points at the end of this section, I will now discuss further points, in which the archaeological evidence is grounded, but also from which it might be understood. Interaction as a basic principle of understanding archaeological evidence will feature in these points as well.

Chronology

The culture-historical approach as developed in China centres on sequences of archaeological cultures within a particular region. The archaeological evidence is investigated within the temporal and spatial brackets an archaeological culture provides. At times, archaeological cultures are broken down into periods, such as early, middle and late, providing more fine-grained data. But usually the boundaries of an archaeological culture, whether these are debated or not, remain also the boundaries of the analysis. Rarely, as for example Guo Lixin in a recent study on the locus of Dengjiawan at Shijiahe,[182] scholars cross cultural boundaries, and analyse, as Guo does it, 'Qujialing Culture period 2' and 'Shijiahe Culture period 1' together,

reciprocally on and between each other' (Skeates 2009: 557). The use of this definition as opposed to trade or exchange reflects the difficulties at teasing out the mechanisms underlying these interactions.
[181] Sherratt 1996b.
[182] Guo Lixin 2009.

thereby correctly recognising the continuities that existed across cultural boundaries. Very often it is this recognition that is missing in the literature.

Again, Shijiahe is a prime example, whose continuities and discontinuities, especially throughout the third millennium, have the power to allow new insights. For example, a higher resolution allows for the recognition of changes in the meaning of the enclosure instead of otherwise regarding it as unchanging over time. The only way of achieving the desired resolution is to employ phases, which are chronological units shorter than archaeological cultures allowing for more detail and less glossing over. It is this approach that is taken here. The details of constructing a phase-by-phase chronology for the Middle Yangzi with Shijiahe as the temporal benchmark will be the focus of the first part of Chapter 2. Such a phase-by-phase approach is made possible by the ever more comprehensive excavation reports, such as those available for Shijiahe.[183] Admittedly, many reports, especially those published in archaeological journals and not as monographs, list finds by archaeological cultures obscuring further chronological detail. In such cases, it will be necessary to yield to such imperfections and try to relate culture-historical attributions to phases if possible.

Practice and Thick Description

Within the phases to be established, practices take place that can be traced in the archaeological evidence, which are best studied within the framework provided by practice theory, which eventually goes back to Marcel Mauss' work on the human body. He regards 'the forms of bodily action as a social product'[184] and employed the notion of 'body techniques' (*techniques du corps*) to observe how people from

[183] See Xiaojiawuji 1999; Dengjiawan 2003.
[184] Gosden 1999: 124.

different cultural backgrounds used their bodies.[185] The point is that those techniques are acquired unconsciously and become part of the daily actions. This view resulted in the formulation of the term of *habitus,* which captures those aspects of culture rooted in the bodily and daily practices. Building on this and focusing on the importance of the individual's socialisation and interaction with other individuals, Pierre Bourdieu's version of *habitus* is defined as 'systems of durable but transposable dispositions, including, for example, a sense of honour, but also left/right, up/down and other structuring principles', which enable agents to act in the world.[186] Action within one's *habitus* or even at the group level results in practices that might be recognisable in the archaeological record.[187] Especially through the repetitive nature of how people deal with the world, practices become part of the archaeological record. But in order to make most of the archaeological evidence in terms of identifying past practices, one has to distinguish between those depositional practices produced by people and those produced by natural forces. Only then past practices and their abandonment can be meaningfully discussed.

Practices can be both conscious and unconscious. Indeed, probably most practices are unconscious as part of the *habitus* of everyday life. Such stability and coherence is due to the material settings into which people are socialised.[188] On the other hand, practices can also be conscious and, in recent years, many such practices have been subsumed under the term of 'structured deposition', which was first used to make sense of depositions in later Neolithic henge enclosures in Britain by Colin

[185] Mauss 1936.
[186] Hodder and Hutson 2003: 90. In Bourdieu's (1990: 53) own words, the *habitus* is defined as 'systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is as principles which generate and organise practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary to obtain them'.
[187] The problem remains, however, in which way changes in *habitus* come about, which Bourdieu does not account for.
[188] Gosden 1994: 125.

Richards and Julian Thomas. As the deposits could not be categorised according to common functional pigeonholes, these deposits were considered as being 'structured' implying that these were the result of rituals.[189] As Joshua Pollard correctly points out, the terminology is a problem in as far as somehow 'unstructured' deposits, such as refuse, are implied. Also, it would be too easy just to call every deposit that appears non-functional as structured, when deposits as the outcome of practice are culturally charged: one person's rubbish would be another's symbolic form of expression.[190] While I will return to the issue of ritual below, it suffices to say here that I follow Pollard in recognising that some forms of deposition are different in quality from others. Instead of categorising them, we should focus on 'context and effects' of deposition ranging from routinised, unconscious ones to conscious, performed ones.[191] In this way, it is possible to fully account for all practices, of which lives consist, without directly assigning meaning to them.

Since most practices, no matter whether conscious or unconscious, are repetitive in nature, they leave a pattern that may be observable for the archaeologists. As such, they can span many generations and in most cases exceed the lifetime of a human being.[192] What we are thus dealing with is how to recognise change in the long term. In order to detect long-term changes in material practice a biographical, diachronic approach to sites in total as well as to things will be adopted here, since only a close and detailed look at the available evidence can provide us with an approximate idea of the practices involved instead of drawing premature conclusions. Such detailed look is possible through analysis through 'thick description', after

[189] See Pollard 2008; Richards and Thomas 1984.
[190] Pollard 2008. See also Hodder 1982, in which Hodder clearly demonstrates how refuse is structured according to cultural values, as for example seen in the bone refuse practices of the Nuba that can only be understood in terms of Nuba values and ideas.
[191] Pollard 2008.
[192] See Gosden 2006 for a discussion of long-term change.

Clifford Geertz, which is description, 'in which interpretation was essential but in which care was taken to come close to the rich specificity of events'.[193] Thick description takes into account that any description of, for example archaeological evidence, entails a certain subjectivity and cannot be fully objective. Descriptions are always interpretations. In acknowledging this, descriptions of activities in and between phases might bring us closer to the practices of the past.

A complementary contextual look at the material is provided by Jessica Rawson's notion of the 'set', which deals with assemblages of things from a closed and undisturbed context, such as a burial, and juxtaposes the identified sets of things with other sets of things in contemporaneous and earlier and later contexts, thus revealing similarities and differences and how these relate back to people.[194] The practice-based approach through thick description is viable for Shijiahe just as it is viable for other well-published sites. The particular complexities of the archaeological evidence at Shijiahe make the site a suitable case study for employing thick description as method.

Time and Temporality

Another aspect of the emphasis on practices should be that of time, which is the recognition that the temporal structure of many practices is crucial to their understanding and indeed to understanding the ways in which time is perceived in past societies.[195] For example, understanding the many so-called 'oracle bones' used for pyro-osteomancy, that is, the interpretation of cracks produced by heating the

[193] Hodder 1999: 68; Geertz 1973.
[194] See, for example, Rawson 1988 and 1990 for expositions of this idea as pertaining to sets of bronze vessels used for ancestor worship in Bronze Age China, which led her to discover a change in ritual practice for about 850 BC when the composition of the sets changed from vessels used for the consumption of alcoholic beverages to that of food.
[195] Lucas 2005: ch. 3.

bone, found at the important mid-Bronze Age site of Anyang, Henan, c. 1200 BC (late Shang), requires time to be factored in. A recent study of these oracle bones suggests that such elaborate divination procedures conducted by ritual specialists were a source of political power for the upkeep of the state.[196] However, linking the divinatory activities to power may only be part of the story, since, as Keightley remarks, 'human time' is perceived by the diviner, and I would go further and include everybody else as well, as 'religious time', meaning the cyclical schedule of rituals and sacrifices, 'the luck of a particular day or week, the portentous significance of events occurring at one time rather than another'.[197] It is clear from inscriptions on oracle bones that, for example, ancestors received sacrifices on specific days within a repeating six-week cycle of sixty days. As the ancestors had temple names after elements of this cycle, the ritual occurred on the day of their temple name. Time is thus a defining part of oracle bones divination on which these rituals were recorded. By extension, the temporal structure is a defining criterion of late Shang society as a whole, which in turn can only be understood through this temporal structure, which may be considered crucial in trying to comprehend issues, such as 'power' and the 'state'. Such perspective on time broadens our perception of practices at Shijiahe, where the temporally repetitive nature of practices has not been recognised before in Chinese archaeology, although it is crucial to our understanding of the activities at the site, including the construction of the enclosure, as will be shown in Chapters 3 and 4.

Another issue relating to time and space is that the past mattered in the past. As much as the religious practices of the late Shang are concerned with the present and future, they are also, through the ancestors, connected if not obsessed with the past. We are thus concerned with the creation of social memories and how these were

[196] Flad 2008. Recent work by Campbell questions the suitability of the concept of the state for the polity centring on Anyang (Campbell 2009), but this issue shall not concern us here.
[197] Keightley 1999: 249 *et passim*.

made through social and material practices. Social memory means the 'many social contexts in which memories are made' and the process of remembering of people as parts of social groups.[198] Memory is part of everybody's daily life and thus a constantly changing process through the active engagement of people in remembering, forgetting, inventing and transmitting, for example.

Memory cannot be divorced from space and landscape. As for example at Rams Hill, a site in southern Britain, the earliest of three enclosures dates to the late Bronze Age, followed by an Iron Age hillfort, which itself is linked to a Roman enclosure. It is of significance that the same place was used over and over again, thereby stressing links with the past, while the new structures highlighted differences from the past.[199] Gosden and Lock suggest that the site remained in memory through 'long genealogical histories', in which history was recounted as genealogy that kept the memory of the specific place up until it eventually slipped into myth.[200] Thus, the palimpsest we encounter as archaeological evidence at each site is an outcome of the continuous process of remembering, forgetting and so forth, sometimes deliberate, as for example, when memory is used to legitimise the present, which may even involve the invention of memory, or, as probably in most cases, as part of unconscious practice. As noted by Gosden and Lock, genealogical history not only relies on storytelling and thus the human memory, but mnemonic devices, such as the landscape and also things.[201] Places thus become 'timemarks', which, as Chapman argues, are the result of the acceptance of a certain place as special by the group, thereby strongly contributing to the formation of identity and social integration.

[198] Mills and Walker 2008: 6.
[199] Gosden and Lock 1998: 7.
[200] Gosden and Lock (1998), in addition to 'genealogical history', which worked through 'relations of blood and kin', also argue for the existence of a 'mythical history', which precedes the timeframe of genealogical history, but it forms elements of the landscape as its most ancient features.
[201] Gosden and Lock 1998: 5.

Hence, the selection of 'a' place demonstrates a social consensus.[202] Archaeologists can trace the practices that indicate that a place was made, but the archaeological evidence can also show that a place was broken, i.e., that practices of some or all kinds ceased at a place or that they changed profoundly, effecting the history and identity of place and people. These aspects of site use can affect our understanding of the complex biographies of enclosed but also other sites.

Religion, Ritual and Practices

The practices central to the study of Shijiahe are those that can be grouped under religion. And it is these practices that lie at the heart of the interactions between Shijiahe and other sites. It is therefore necessary to offer a theoretical perspective on these practices. Often these are subsumed under the term ritual as opposed to domestic activities. For example, those 'structured' deposits were almost automatically associated with some kind of ritual practice in the past. However, in a forceful critique, Joanna Brück rejected such distinctions between ritual and domestic as an outcome of post-Enlightenment rationalism, in which distinctions are made between the sacred and the secular.[203] Such categorising conveniently shoves everything that is not evidently explained in rational terms of domestic life into a black box of inexplicable, irrational behaviours termed ritual. However, such perception of not immediately apparent practices seriously curtails the potential of the archaeological evidence and may lead to a stronger focus on what fits today's categories of (domestic) life instead of acknowledging that such categorising may not have been appropriate for the contexts studied, as ideas and values are culturally

[202] Chapman 2000: 188 *et passim*.
[203] Brück 1999.

defined and thus may not match our universalising post-Enlightenment categories.[204] But we still have to account for the fact that some actions were seen as special and different from others. Through careful study of the archaeological evidence we have to evaluate what practices may have been 'ritualised' in accordance with Bell's use of the term,[205] which is 'the process of picking out some actions and making them special'.[206] In this way, ritual is part of human practices as a total and, as mentioned regarding depositional practices, can be seen as one possible end of a continuum of practices. Ritual will thus not be defined in this thesis in a rigid manner, but the focus will be on the ritualisation of practices, which often makes practices religious, as ritual is regularly part of religion. Indeed it is through 'ritual action that religious beliefs are communicated, negotiated and transmitted'.[207] The emphasis on a continuum of practices, some of which could be considered ritualised, and resonates with Pollard's critique of 'structured deposition' as discussed above. The preferred term used in this thesis will be 'religious practices' to emphasise the religious nature of the practices and avoid potential confusion with non-religious notions of ritual as ritual can be seen as ambiguous.

Ritual is often treated as a stand-alone category of some sacred behaviour, maybe even equated with religion, although in the end it is a part of religion.[208] An emphasis lies on a part, while the whole – religion – is neglected.[209] Thus, I would like to follow Tim Insoll in seeing religion not as one category of life along others, but actually as the underlying, all encompassing framework, within which other

[204] See also Bradley 2005.
[205] Bell 1992.
[206] Gosden and Lock 1998: 4.
[207] Verhoeven 2011: 126.
[208] Non-religious rituals also exist, but in this thesis I will emphasise the importance of religion as defining force of life.
[209] Insoll 2004: 12. The definition of religion is notoriously difficult and widely debated (see Insoll 2004 for a discussion of this issue). It may have the elements of myth, ritual, belief/emotion/experience and the numinous/holy, but their balance varies.

categories, such as economy and trade, social organisation, death and so forth may be understood, obviously to varying degrees.[210] But we have to be aware that we may probably not be able to detect the whole religious package, but only parts of it.[211] Much of the involved practices are invisible to the archaeologist and we have to deal with fragments only, which, however, should not be taken for the whole. Without being religiously deterministic, it is possible, for example, to relate certain activities, such as oracle bone divination or the use of bronze vessels to a set of ritualised actions, but also to go beyond such special practices and include warfare, hunt, agriculture and so on and try to understand them within an overarching religious framework. The fact that such activities are not merely secular or domestic in nature is evidenced by oracle bone inscriptions recording that divination was directed towards the outcome of such activities.

The Significance of Water

Possibly relating to religion, water and water bodies have significance in people's lives not only for biological needs.[212] The physically omnipresent water surrounding Shijiahe, for example, probably played a role in the way in which the landscape was lived and may consequently have become part of people's religious believes. People constantly interact with the elements, such as water, in their daily lives, which results in elements becoming an important part in the ways in which people make sense of their world.[213] Richards, stressing the ontological importance of the elements, suggests that these form part of the religious framework, within which

[210] What Insoll basically means is that religion should not be underestimated in the field of archaeology, only because it was marginalised in western thinking since the Enlightenment, while 80% of the world's population are still seeing in religion the guiding principles of their lives. Insoll obviously takes his cue from his work in the Islamic world (see Insoll 1999).
[211] Insoll 2004.
[212] See Oestigaard 2011.
[213] Finlay 2008.

the world is perceived and from which people develop cosmologies of their world. Water in particular may be seen as a metaphor for movement, standing for transition and transformation.[214] Such potential implications of water have been largely ignored in the context of prehistory in China, where water is mostly studied from a functionalist angle in terms of being needed for wet agriculture and irrigation in general and for transport. But water is also conceived of as threat for people's lives through floods. In this way, the construction of enclosures to prevent floods was explained.[215] While these views of water are essentially correct, this element's wider significance should become part of the interpretation.

Water is ontologically significant. While floods may partly explain enclosure construction, the permanence of water around or close to a site may also explain why a site was perceived of as place in the first place. Water is thus not something to react against or to be protected from, but becomes a fundamental part of the architecture.[216] As with Richards' study of henge monuments in Britain, the seasonality of water-logging and the expansion and contraction of large water bodies in the proximity of the site, such as the Yunmengze, as well as the swelling and ebbing of rivers may explain the ways in which the site gathered significance over time.[217] Water has thus a contradictory nature. It gives life but can also bring death,[218] and the ubiquity of water around the major case study site in this thesis, Shijiahe, or indeed all across the Jianghan Plain, may have resulted in an ambivalent ontological perception of water.

[214] Richards 1996.
[215] For example, see Zhang Yingqiao 2005.
[216] See Chapter 3, where I make this argument for Shijiahe.
[217] The ways in which these waters may have been used in agriculture remains to be studied.
[218] For some pertinent case studies, see Kamash 2008.

Burials

Principles of interpretation bridging the religious and 'secular' should also apply to burials that will be discussed in Chapters 3 and 4. However, most work in China on burials focuses on social organisation, such as social stratification and family structures, which is also true for the Middle Yangzi. Burials are believed to reflect the status of the deceased in life.[219] The dispersed groups of burials at Xiaojiawuji are identified as each representing a family graveyard, which is an assessment entirely based on comparative interpretations of cemetery sites in north-central China, especially those of Banpo and Dawenkou.[220] Conclusions on social stratification are largely based on counts of burial goods and the existence of certain artefact types that are believed to symbolise power.[221] Others read the deceased's profession of the grave goods by suggesting, for example, that burial M54 at Xiaojiawuji (fig. 4.28), which contains many jars, and is located in proximity to kiln remains and other burials with large quantities of pottery, is that of a potter.[222] Complicated statistical calculations akin to what is usually found in the literature on burials in western social complexity studies are also done for the Middle Yangzi, leading to results regarding social hierarchies.[223]

Mortuary archaeology employing evidence from China has rarely seen approaches that go beyond analyses with socio-political organisation at the centre of their inquiry. In this way, they are not dissimilar from many of the mortuary analyses that were conducted by archaeologists under the banner of the New Archaeology. Cross-cultural ethnographic analysis was employed to establish universal laws

[219] Zhang Xuqiu 2004: 175. Similar views are implicitly or explicitly expressed by He Jiejun (2004: 387-409) and Guo Lixin (2005: ch. 4).
[220] Zhang Xuqiu 1992: 222-224; see also Zhang Xuqiu 2004: 175-181. Meng Huaping (1997: 225-227, 228) follows Zhang Xuqiu in all aspects of the analysis.
[221] Zhang Xuqiu 1992: 307-309.
[222] Zhang Chi 2003: 146, 150, 152, 155, 163. This argument is repeated for the site of Zoumaling.
[223] Guo Lixin 2005: ch. 4.

regarding mortuary practices by for example Saxe, Binford and others.[224] The quantity and quality of the grave furnishings were considered direct or indirect manifestations of social organisation, and social status and ranking in particular. Such approaches were also employed by most westerners investigating burials in China, such as Liu Li, whose 2004 book shall once again serve as illustration.[225] In her study of Neolithic cemeteries along the Yellow River her main concern is that of social stratification.[226] Quantitative analyses of the dimensions and structures of burials, quantity and quality of burial goods and the presence of 'prestige goods', such as jades, musical instruments, pig bones, are thought to reliably reveal social stratification. As a result, her analysis ties in neatly with the remainder of her book that centres on settlement patterns revealing the predictable pattern of ever increasing social complexity.

As summarised by Parker Pearson,[227] criticisms of these conventional approaches highlight that mortuary practices are not simply the passive blueprint of social organisation including wealth. The community of the living, those that eventually interred the deceased and provided him or her with the furnishings, not to mention the activities that occurred and are largely invisible to the archaeologist, has to be considered as well. Activities in relation to burials are richly imbued with meaning and must be seen within the various cultural contexts, in which they are found. Universalisms based on abstracted ethnographic examples are difficult to maintain, as there is always the exception to the rule. Even somewhat promising synthesising studies such as that conducted by Carr, which includes 'philosophical-religious beliefs' alongside socio-political organisation and other aspects of mortuary

[224] See Saxe 1970; Binford 1971 and, e.g., Peebles 1971 and Tainter 1973.
[225] Liu 2004. Others include Allard 2001; Pearson 1981, 1988; Underhill 2000; Shelach 1999, 2001.
[226] Liu 2004: 117-125.
[227] Parker Pearson 1999: 83 *et passim*.

behaviour, while giving some useful hints at what might be considered trends in mortuary behaviour, show that there were many ethnographic societies that did things differently.[228] And there are reasons to assume that people in the distant past were just as diverse and messy as the ethnographic present suggests. However, ethnographic examples point out that this messiness exists and needs to be addressed.

Hence we need to consider burials in Neolithic China from the perspective of the survivors within their specific cultural contexts, while incorporating the above notion that religion was a defining characteristic of practices.[229] Consequently, any analysis of the burials at Shijiahe and other sites should focus on in which way material practices developed over time in order to reveal continuities and breaks that might tell us more about what happened towards the end of the third millennium BC.

Place and Interaction

The previous sections have outlined the principles, which will guide the interpretation of Shijiahe and other sites. As will become clear in the following chapters, these principles are informed by and have grown from the empirical data and do not attempt to impose abstract concepts on them, which should enable us to enrich our understanding of Shijiahe. While the above theoretical aspects provide an ample framework, which allows us to paint a new picture of a single site, it is necessary to return to the notion of interaction as underlying principle of social change as no site exists in isolation.

[228] Carr 1995.
[229] Liu (2004: 117) regards the orthodox processual view of mortuary remains and that of the post-processualists 'mutually complementary', thereby overlooking that the former is rooted in a very functionalist view of past societies with the aim of defining cross-culturally applicable rules, while the latter emphasises the individual cultural contexts.

Central Place Theory

Putting interaction first, after Sherratt, is especially important, because it explicitly argues against food as primary cause of change.[230] While food was certainly an important concern of past societies, it was not the only driver. As Sherratt puts it: 'Calories don't *cause* people to do things; calories *allow* them to things they want to do for other reason'.[231] Much work has looked at how improved food production pushed societies into the next stages of social evolution, e.g. from ranked society to chiefdom, as larger populations need different means of socio-political organisation. While Sherratt's juxtaposition of food against interaction is somewhat forced, his rejection of the unilinear intensification model of food production translated into stadial schemes of social progression is certainly justified. A closer look at interaction to highlight its significance is required instead of treating it as epiphenomenal.

Sherratt finds central place theory a particular hindrance in explaining locations of sites.[232] The German geographer W. Christaller developed the concept of a central place in the 1930s in order to explain the ways in which sites are spaces and function together. He posited that central places should be roughly equidistant from each other with subsidiary centres in between, which may be linked to even smaller units. This theory in its original guise is primarily economic in outlook with trade as a central feature and is based on economic criteria relating to capitalist and realsocialist forms of economic activities, i.e. market economies of some sort, and has thus limited applicability to most past societies.[233] Only with Johnson's further abstraction of the model to the extent that movements between places are minimised apart from local movements, that only a selection of places witness certain activities, and that

[230] Sherratt 1995: 7-9.
[231] Sherratt 1995: 8. Emphasis in original.
[232] Sherratt 1996b: 224.
[233] Bernbeck 1997: 171.

settlements tend to be distributed in a regular fashion, the concept became applicable to archaeology.[234] From this follows an understanding of the role of centres that underlies much work, e.g. that of Liu Li, with them having larger populations and concentrating several functions.[235] More functions are thus assumed than may actually be present, because of the way the model has to work in order to be applicable. Indeed, they do not even have to be visibly present, as only the identification of a settlement as a central place implies the presence of certain functions. As argued above, a detailed study of a site is needed to reveal what functions the site may actually have had. Aspects of central place theory might still be useful to come to terms with why certain settlements became more important than others and the ways in which this could be understood within a wider regional context.

Interaction and Rivers

Ironically, while trade was a major aspect of Christaller's central place theory, this aspect has basically been dropped from the later revisions of the model by archaeologists. Site distributions and wealth disparities are thus seen as grounded in 'success in farming', while interaction is regarded as marginal and a side effect.[236] However, locations may be better understood through the lens of interaction. Site distributions analysed as a network lies at the heart of interaction studies. Sherratt shows for prehistoric Britain that during the Iron Age the distribution of the so-called hillforts can be understood in their location within a larger inter-regional exchange network centring on Wessex and its connection to the coastal areas linking Britain to the continent (fig. 1.21).[237]

[234] Johnson 1977: 495.
[235] Bernbeck 1997: 171 *et passim*.
[236] Sherratt 1996b: 224.
[237] Sherratt 1996b: 222.

In terms of transport routes, Sherratt posits that '[i]t is the rivers which form the pre-existing network, and with which an analysis should begin'.[238] Transport probably happened on and alongside rivers as these were more convenient for travelling instead attempting to cross mountains and ridgeways. '[P]rehistoric geography is a fluvial geography',[239] and nowhere does this make more sense than for China with its extensive network of rivers, but where riverine travel has been largely overlooked in studies on the Neolithic.[240] The argument for fluvial interaction, from which to understand parts of the activities at Shijiahe, will be discussed in more detail in Chapter 5, in which the location of Shijiahe as well as possible access routes are investigated.[241]

Other Studies of Interaction

Aspects of interaction, as discussed above, have been studied before and also been part of the arguments explaining the changes observed for Shijiahe around 2000 BC. Within the culture-historical approach change is often explained through migration and this notion lies at the heart of Bellwood's language/farming dispersal theory that sees the developments during the Neolithic as an outcome of the migration of farming communities.[242] Both people and things diffuse from one place to another. When contacts between archaeological cultures are mentioned by Chinese scholars, influences in terms of similarities in pottery shapes and decorations are listed and

[238] Sherratt 1996b: 218.
[239] Sherratt 1996b: 226.
[240] Li Feng (2006) has successfully shown for the Western Zhou period how important it is to conceptualise transport along routes of access in order to understand the historical geography of an area.
[241] Other scholars have also emphasised the importance of rivers, see for example Fekri Hassan's work on the Nile (see, among others, Hassan 1997), and also Yasuda Yoshinori's work on the Yangzi (see his contribution to Chengtoushan 2007b, which grew out of his Yangtze River Civilization Project). While the former acknowledges that economic issues are not of sole importance, most work focuses on environmental issues and food production, and little is said about the importance of rivers for interaction.
[242] Bellwood 2005; and above.

whatever culture has more influences than the other is considered as the dominant culture.[243] This contact is often linked to warfare between archaeological cultures and by extension groups known from ancient texts. Hence, interaction has not been entirely ignored, but been part of interpretations, although in a unsatisfactory manner that espouses both culture history and social complexity and in turn shares the limitations of both approaches. There has not yet been a real departure from these paradigms.

Data and Sources

The following section will review the nature of the data. As this research is largely publication-based, I will begin by reviewing their nature.[244] Basically, all material on the fieldwork in China is published in Chinese. Fieldwork, regardless whether surveys, trial or larger-scale excavations is published partly in preliminary and partly in final fashion in national journals, such as *Kaogu*, *Wenwu* and *Kaogu xuebao,* or regional journals, such *Jiang Han kaogu* or *Huaxia kaogu*.[245] Publication usually occurs with a time lag, and much work is simply not published. Therefore, other outlets, such as monographs, edited volumes, museum catalogues, where finds are also being published, are important. Recent discoveries are published in *Zhongguo Wenwubao*, the culture relics newspaper, and online on the websites of the Institute of Archaeology, CASS, but also on those of the provincial museums and archaeological institutes, for example that of Hubei.[246]

Neolithic sites, including those from Hubei and Hunan, are increasingly published in proper reports with continued improvements in comprehensiveness and

[243] See for example Zhang Xuqiu 1992, 2004; and Meng Huaping 1997, for Middle Yangzi examples.
[244] See also Wagner 2006: 9-11 for a concise review of the nature of Chinese archaeological publications.
[245] See Falkenhausen 1992 for an overview of these journals.
[246] www.kaogu.cn; www.hubeimuseum.net

image quality. All reports feature the same basic structure: they begin with the discovery of site, its location and details of the fieldwork undertaken. Then follows a chapter on the stratigraphy of selected trenches with profile drawings, followed by an illustrated and annotated list of the excavated features (pits, burials, buildings, etc). The main part is the description of the finds by medium and within medium by type, usually not by excavated feature, although there has been some improvement in recent years. It should be noted that all descriptions and, for example, mention of colours are always subjective and do not follow a set standard, such as the Munsell chart, resulting in occasional difficulties in relating the finds to those from other sites.

As already hinted at in the section on culture history, the centrality of typological analyses in the reports is no surprise. Nowadays these analyses are based on stratigraphy as chronological anchor instead of entirely relying on perceived evolutions of shapes. After establishing the chronology of the site it is usually concluded whether the finds establish a new archaeological culture or can be attributed to one or several extant ones. Conclusions in larger reports also include discussion of subsistence, contact with other cultures and list radiocarbon dates. Before the plates the reports often feature appendices listing the features and finds therein. Often additional chapters are included analysing plant and animal remains, jades and other stones, building construction, pottery production and the like. Analyses of human remains are rarely seen.

The publications for Shijiahe follow this basic structure. The recent publication of the two major reports on Xiaojiawuji and Dengjiawan, as well as those on other loci is very welcome, since they make the Shijiahe site accessible for in-depth research.[247] However, as the Shijiahe site is composed of various other loci,

[247] Xiaojiawuji 1999; Dengjiawan 2003.

which together form the enclosed settlement, research has to rely on a patchwork of full and preliminary reports to make sense of the site. Naturally, these various reports are of different quality, so that it may be difficult at times to fully understand in which way the loci relate to each other. However, together they provide a picture of the Shijiahe site of unprecedented and often ignored detail, from which this thesis will benefit. In general, the increasing number of reports on the Middle Yangzi Neolithic appears to be ever increasing in length, as is the detail provided, which is enhanced through more scientific analyses.[248] The reports on Xiaojiawuji and Dengjiawan, however, are more conventional overall with additional study being limited to jade material analysis and pottery production (Xiaojiawuji) and compositional analysis of an excavated metal fragment (Dengjiawan). Some other weaknesses of the reports will be mentioned throughout the thesis when relevant. One particular weakness should be mentioned here, which is the fact that the loci of Tucheng and Tanjialing have never been fully published.[249] This situation is tragic as Tucheng is one of the few Western Zhou enclosures along the Middle Yangzi, and Tanjialing is commonly interpreted as residential centre of Shijiahe, because of the many excavated building remains. Investigation of such claims through a report is desirable. We have to rely on the only published drawing of a 'house' from Tanjialing in one of Zhang Xuqiu's books and one photo in the preliminary report (fig. 1.22a, b).[250]

[248] See, for example, the reports for Chengtoushan (Chengtoushan 2007a, 2007b) and Pengtoushan and Bashidang (Pengtoushan yu Bashidang 2006), all in Li County, Hunan, which, among others, include excellent work on the paleoenvironment.

[249] After the three major projects (Xiaojiawuji, Dengjiawan and the survey) were distributed among the three institutions that were involved in the excavation, it was apparently impossible to reach an agreement on how to divide the publication of the other excavations (Meng Huaping, personal communication, June 2008). As mentioned, the full report for Tanjialing will be out after submission of the thesis.

[250] Access to the archive of the institutions that participated in the excavations was not possible for this study and is usually impossible in China. We will have to await the full publication of this locus later this year.

Although this thesis relies heavily on published material, I had the opportunity, during a number of trips to China, to visit sites and museums in order to get a first-hand impression of sites and finds. In 2008, I travelled to Hubei and Hunan and visited the provincial museums. In Jingzhou, I visited the stores of the Jingzhou Museum, where some finds were kept, and also saw the Yinxiangcheng site. Elsewhere in Hubei, I was taken to the ongoing excavations of the enclosed site of Yejiamiao, Xiaogan County. In Hunan, I visited the sites of Chengtoushan, Jijiaocheng, Pengtoushan and Bashidang. While in Changsha, I also had the opportunity to handle objects in the stores of the provincial archaeological institute. A year later, I had another opportunity to visit Hubei. I spent a day at Shijiahe to gain a most insightful first-hand impression of the site and to speak with farmers inhabiting it.[251] In 2011, I visited Hubei once more, this time travelling from Wuhan to Jingzhou to Xiangyang to Suizhou and back to Wuhan gaining an appreciation for the major routes of transmission into and out of the Jianghan Plain. These tours also gave me the chance to speak with the provincial and local archaeologists about the sites, finds and their publication, often complementing and enriching the impressions gained from the literature.

[251] During this trip I also travelled downstream to Anhui, Jiangxi, Jiangsu and Zhejiang provinces to survey the Neolithic finds in various provincial and on-site museums.

Chapter 2

CHRONOLOGY AND ENVIRONMENT

Introduction

The following discussions of chronology and paleoclimate and paleoenvironment are the necessary groundwork for the chapters that follow, which provide deeper analyses of aspects of Shijiahe. The first part, on chronology, builds on the argument in Chapter 1 that a tighter chronology might improve our understanding of enclosures and other sites. In following the phasing of sites, as demonstrated by Mayke Wagner, a chronology based on individual phases will be constructed for Shijiahe. Unlike previous studies of this site that treat each locus individually and merely link them through attributions to archaeological cultures, this study links each locus to every other locus through phases thereby establishing the first comprehensive chronology for the site. This chronology will be supported by radiocarbon dates, which despite being few in number, nonetheless establish the third millennium as time frame for the archaeological evidence discussed.

Taking the Shijiahe chronology as anchor, chronologies for the other enclosed Middle Yangzi sites will be established, which is essential for the discussion of site biographies and the ways in which these are linked across the region. For the areas beyond the Middle Yangzi, I will often have to rely on culture-historical attributions. Also, for some of the Middle Yangzi evidence, culture history cannot be entirely avoided attesting to the pervasiveness of this approach and to the way in which it has structured the archaeological evidence. Nonetheless,

as will be shown in the following chapters, a tighter chronology through phases will be essential in remodelling our perception of Shijiahe and other enclosures.

The second part of this chapter deals with the geography, environment and climate of the Middle Yangzi Region. These are important parts of people's lives as much in the present as in the past. However, they are not a mere backdrop, against which life unfolds, as which they are often portrayed in the writing of archaeologists in China. This thinking is often very similar to that of processualist archaeologists who regard human behaviour as determined by the environment. People's agency takes a backseat and they are seen as merely reacting or adapting to what is out there around them. While this assessment admittedly caricaturises actual work that is being produced along these lines, there is also a truth to this as seen in recent work on prehistoric China. The almost wholesale adoption of processual thinking among Chinese archaeologists will help to promote such thinking in China.

Through an introduction to the Middle Yangzi geography, this chapter provides the understanding required for the discussions of routes of interaction, transmission and contact, especially in Chapter 5. The same is true for the discussion of the extent of the Yunmengze, a marshland that covered much of the Lianghu Plain between Hubei and Hunan. Into this feeds an overview of site distributions throughout the third millennium. I will also discuss a climate cooling event, which had an impact on the vegetation by the end of the third millennium. Another issue is that of precipitation and flooding, which must have been an integral part of Neolithic life in the region. These aspects in combination provide a better contextual understanding of Shijiahe as a site, Neolithic life and livelihoods and interaction.

Chronology

Commonly, Chinese prehistoric chronologies are either given as regional or multiregional as sequences of archaeological cultures (Daxi Culture - Quijialing Culture - Shijiahe Culture - Post-Shijiahe Culture) or simply visualised in form of a table (fig. 2.1). However, chronologies based on archaeological cultures favour broad sweeps of changes, that is, from one culture to the next. This way many important nuances within 'cultures' are being ignored.[1] Such nuances can embody important continuities and changes at one site and even across a region and beyond. In some cases one may consider abandoning details in favour of the big picture but, as shown in the site narrative in Chapter 1 and to be further discussed in the following chapters, a detailed look at Shijiahe allows us to tell an alternative account of the site, which would otherwise be disguised by culture-historical levelling.[2] One way to achieve a detailed look is to employ shorter chronological units. It is this approach that is taken here and it is the aim of the first part of this chapter to establish a phase-by-phase chronology for Shijiahe and parts of the Middle Yangzi. The focus will be on Shijiahe as the chronological 'anchor' as the analyses in the following chapters are largely limited to Shijiahe. In this way Shijiahe will provide a timeframe that will be applied to other sites in the region and beyond as well.

The approach is inspired by Wagner's study of parts of northeast China from 8000 to 3500 years ago, one of the few studies that have espoused such alternative

[1] While briefly summarised in the previous chapter, a full discussion of the culture-historical approach in Chinese archaeology and of the ways in which this thesis is moving beyond this paradigm follows in the concluding chapter.

[2] Archaeological cultures also simulate intra-regional similarities, which may only exist in a few similar key pottery types. By contrast, comparing phases at different sites may reveal local variations and differences. For instance, a closer look at the burial customs at Shijiahe and Chengtoushan shows that these were quite different, which requires explanation.

chronologies so far.[3] She successfully established chronologies of larger regions without relying on archaeological cultures. Her focus lies on the relationships between sites, as some clear similarities exist in terms of pottery, lithics, building forms and the like. The common occurrence of some artefacts between sites shows that they may have been contemporaneous, which helps to reliably establish relative chronological relationships between them. Backed-up with radiocarbon dates, this method provides a regional chronology.

Mayke Wagner largely follows the periodisation of sites provided by the excavators, which in most cases is based both on stratigraphy and pottery typology. As exemplified by the site of Baiyinchanghan in Inner Mongolia, Wagner accepts the five periods and seven phases for the site, naming them Baiyinchanghan I, IIA, IIB, IIIA, IIIB, IV and V, at which the excavators arrived on the grounds of the stratigraphy, pottery typology and comparison with existing finds from other sites. Within each phase, Wagner documents the find assemblage and draws parallels to similar finds from other sites in order to create chronological relationships between the sites. After the analysis of an entire region, her results are used to create a chart of these chronological relationships supported by radiocarbon dates (fig. 2.2). The chart reveals are finer-grained chronology for each site in relation to other sites, which would not have been possible, if the sites' phases had simply been attributed to existing archaeological cultures, which usually cover a longer time period than each phase covers. A significant result of Wagner's approach is her suggestion, for example, that Bayinchanghan I predates the earliest conventional Neolithic culture of the region.

[3] Wagner 2006.

In principle, this approach is also espoused by Chinese archaeologists, and indeed, Wagner almost exclusively relies on the basic results from Chinese excavation reports. These, however, were written with the conventional culture-historical approach in mind. While the reports usually assign the sites to archaeological cultures, Wagner refrains from doing so. Moreover, she attempts a more holistic approach by basing the assessment of sites on more than pottery, also including, for example, buildings, lithics, jades and other hardstones, surviving organic materials, burials and so forth. In the following, I will attempt to follow her example but will largely rely on the pottery evidence. An entire synthesis in chronological terms of the Middle Yangzi during the Neolithic and early to middle Bronze Age would be necessary, but goes beyond the scope of this thesis. The focus is to establish a working chronology for Shijiahe.

Despite the overall focus on archaeological cultures, to which conclusions in some, especially shorter, reports are reduced, the excavators usually rely on less broad chronological phasing, which this thesis can readily exploit. Based on features, stratigraphy and the finds therein, phases within archaeological cultures are established,[4] which will provide the basic unit in this thesis and help to date other features at the site.

As for Shijiahe, chronologies have been established by locus, but not much has been done to bring all the evidence together, not even in the books synthesising the Neolithic of the Middle Yangzi, which rely heavily on the excavations at Shijiahe.[5] However, most synthesising accounts were written before or just after the publication of the Dengjiawan report, which explains why important evidence was

[4] See, for example, Dengjiawan 2003: 130-136, 281-286.
[5] The report on the survey of Shijiahe (Shijiahe 1992) is one of the few instances, in which the writers look beyond the individual locus.

not factored in. Guo Weimin's book is a welcome exception in this respect, but he continues to work along culture-historical lines, which at times creates a lack of detail in the analysis, especially in relation to the later phases.[6]

So far, only one publication provides an account that may help to link all loci. This is a preliminary report that brings together the results from the Dengjiawan, Tanjialing and Xiaojiawuji excavations.[7] While not yet mentioning the enclosure, the report contains the realisation that all 'sites' are spatially very close and show a similar cultural content, which is why they are linked for periodisation.[8] This resulted in the three 'sites' being tied together in eight phases as shown in table 2.1.[9]

Significantly, the established periods hold up in light of the more recent reports on Shijiahe and roughly correspond to the periodisations found in these. Naturally, more detailed analyses of the finds especially at Dengjiawan and Xiaojiawuji, where more was discovered than was used to establish chronological relationships in the early report, have resulted in some corrections. Some features are now being dated to other phases, but the overall trends are still correct. The 1990 chronology can thus be used for phasing Shijiahe. One obvious problem, however, is the establishment of three Shijiahe Culture phases at Dengjiawan, but these periods (2 and 3 in the Dengjiawan report) are taken together as one period in the 1990 report (period 7). In order to make the chronology applicable, especially in light of the less detailed chronology for the corresponding period(s) at Xiaojiawuji, periods 2 and 3 at Dengjiawan will be aggregated to form one period or phase. But

[6] Guo Weimin 2010.
[7] Shihe Kaogudui 1990. This report is especially valuable since it is the only place where Tanjialing was reported.
[8] Shihe Kaogudui 1990: 10.
[9] Shihe Kaogudui 1990: 10-14.

in the more detailed analyses in the following chapters, this period at Dengjiawan will be broken up into subphases a and b, i.e. the original phases 2 and 3 for the Shijiahe Culture, as this level of detail might reveal important pieces of information.

The intermediate results of the 1990 report together with a closer look at the more recent reports on Dengjiawan and Xiaojiawuji are shown in table 2.2. A question mark highlights the possible existence of finds from a phase at a locus or site but needs further confirmation. In this case there is reason to believe that there was a sixth phase at Tanjialing as burnt earth pits were reported to belong to the 'Shijiahe Culture'.[10] But they were not related or compared to evidence from other loci, so that they disappeared in the chronology in the 1990 report. A suggested Shijiahe Culture attribution would date the pits to phase Tanjialing VI, which is equivalent to overall phase VII. It should also be noted that phases Dengjiawan V and Xiaojiawuji VI are finds dating to the Eastern Zhou period (770-221 BC). These are included here because I believe the full history of past occupations should be documented, even though these will not feature in the detailed discussion that follow.[11]

Importantly, among the earliest finds from Shijiahe are those at Tanjialing but there is probably earlier pottery from Tucheng,[12] which should consequently be recognised as the earliest phase of Shijiahe, labelled Shijiahe I,[13] although it will not be possible to discuss it in detail due to lack of publication. Most other loci have been published in more detail and the finds are almost exclusively dated by attribution to archaeological cultures, for example, the results from the survey of

[10] Shihe Kaogudui 1990: 9.
[11] For Zhou finds at Dengjiawan, see Meng Huaping 1993, and for Xiaojiawuji, see Xiaojiawuji 1999.

[12] Pottery attributed to the Chengbeixi Culture was found in the northeast corner of the enclosed site in 1982 (at Tucheng) (Dengjiawan 2003: 290; Guo Weimin 2010).
[13] Denomination principles after Wagner 2006

Shijiahe are given in such manner.[14] Such dating imposes severe limitations on our goal of dating the entire site to phases. The only alternative is to slot finds by archaeological culture roughly into the table to the phases that were identified to belong to the archaeological cultures in the excavation reports. For example, pottery sherds dated to the Qujialing Culture in the survey report probably date to either phase Shijiahe V or VI or both. In such cases, the locus will be dated to both phases, unless an early or late Qujialing Culture date is proposed that would offer slightly more detail.

If this teaches us one lesson about doing archaeology in China, it is that one cannot entirely escape the confines of culture history. Some concessions have to be made to this dominant archaeological tradition, as there is basically no choice to proceed otherwise. As such, culture-historical attributions are used to denote rough time frames and correlations only. In particular, many reports are vague and do not allow for phase-by-phase dating and only give some general cultural attributions. These general cultural attributions can serve as rough guides. Only in some instances has tighter dating been possible. It is convenient that the attributions in the survey report to a 'late phase of the Shijiahe Culture' clearly correspond to phase Shijiahe IX, which makes it possible to analyse the later developments at Shijiahe, which are of particular interest in this thesis.

These results will be the basis of the following chapters and are the first comprehensive chronology for Shijiahe, which is a vital prerequisite for any discussions of the site, but has been lacking so far. With this, cross-referencing will become more convenient.

[14] Shijiahe 1992: 275.

There are also potential problems with my chronology. While it was possible to establish phases, the duration of each is difficult to gauge. Phasing of this kind does usually not account for the temporalities that led to the stratigraphy, e.g. the duration of forming the strata and so forth, hence no claims are made as to the duration of each phase. This kind of information is basically impossible to obtain based on published data. Site formation studies are not very advanced in China. However, my chronology is probably still more suitable than the aggregation of material culture under the culture-historical concept, which creates differences where continuities could be observed. The recent recognition of taking the Qujialing and Shijiahe Cultures together as one cultural complex can be seen as realisation that assembling cultures into distinctive packages may not be that helpful after all.[15]

Other Middle Yangzi sites

Discreet phasing and analyses through thick description from phase to phase have the potential to reveal continuities and discontinuities at Shijiahe. But Shijiahe is not the only site to be considered in this study, despite being its focus. Other sites need to be linked to Shijiahe and the chronology for Shijiahe provides a tool of reference for this task. It is not the goal of this study to provide a conclusive and final chronology for all sites along the Middle Yangzi, as this deserves a book-length study in itself, so that the focus here will be on a small number of relevant sites.

Making connections between sites is facilitated by the fact that site reports usually feature a section at the end, in which the excavated pottery is related to

[15] See Guo Weimin 2010.

similar pottery at other sites. The comparison thus established is usually accurate, which is probably the result of the rigorous training in typology that Chinese archaeologists receive. These pottery relationships between sites help to establish a relative chronology between sites. It is likely that similar pottery at different sites indicates that they were contemporaneous, if supported by other evidence, such as other pottery, but also buildings, burials and so on. This approach may be particularly successful if the focus lies on local connections, i.e. not between sites too far apart. Based on similarities in pottery and rough culture-historical attributions a relative chronology was established for the Middle Yangzi enclosed sites (table 1.1). The chronologies of these sites are related to Shijiahe, which provides the benchmark, which in turn makes comparison between phases easier.

I have also established relative chronologies of the finds, such as red pottery cups, red pottery figurines, pottery pointed-bottom vessels and jades that are the evidence for regional and interregional interaction. Due to the nature of the reports, it was necessary to rely more heavily on rough culture-historical attributions, which is unfortunate, but does not contradict the overall trends seen at Shijiahe (see tables 5.1 and 5.2 for the cups and figurines respectively).

Absolute dating

Radiocarbon dates should provide some general ideas about an absolute chronology for the Middle Yangzi. They exist for a number of sites from around the Han River, but only very few come from Shijiahe. A much greater number of dates exist for the Liyang Plain, but these dates end before the beginning of the third millennium BC, thus predating most of the archaeological evidence discussed in this

study.[16] Table 2.3 shows the calibrated dates for Shijiahe and the corresponding sequence in figure 2.3, while table 2.4 and figure 2.4 show the results for the other sites.

The first two dates (BK87091 and BK87092) for Shijiahe appear too early for the features they are supposed to date. The early dates are not supported by other finds.[17] The other dates indicate that the phases Shijiahe V to VIII are very likely to date to the first half of the third millennium and slightly into the second half. The problem is that it is unclear whether the radiocarbon samples from Xiaojiawuji come from Shijiahe VII or VIII features due to the imprecise relative chronology in the Xiaojiawuji report.

A much wider temporal margin is possible for other sites in the Han River area. Many overlap with the Shijiahe dates but also pre- and postdate them. Most dates in figure 2.3 date to the third millennium BC matching the associated pottery between the sites. They thus place the main events discussed in this thesis in the third millennium. As for Shijiahe IX, it is possible that some of the later dates dating to around 2000 BC, for example BK84052 and BK84069, correspond to this phase. Related pottery seems to confirm this chronological relationship. These results give us the probable chronological extent of Shijiahe IX, though much more evidence is needed before the claim that this phase dates to between 2100 and 1900 BC as proposed by Guo Weimin can be substantiated.[18]

[16] All radiocarbon dates to be discussed follow an uncalibrated BP date of 5568 years of half-life and BP 1950. Some dates were given with a 5730 years half-life but these were converted to 5568 years half-life. All dates were (re-)calibrated with OxCal 4.0 (Bronk Ramsey 2010; atmospheric data based on Reimer *et al.* 2009).
[17] See also Guo Weimin 2010.
[18] Guo Weimin 2010.

Although the existing radiocarbon dates shed no light on the potential duration of phases, they add the security that, when we focus on probable third-millennium features, we are actually taking about this period. But apart from this, the absolutes dates have not added much. The above relative chronological relationships between the phases are still our best attempt at making sense of the site(s). It is hoped that further radiocarbon dates from carefully excavated contexts will help to tighten the overall chronology and to establish durations of phases. In the following chapters, we will have to rely almost entirely on the established relative chronology.

Summary

In this part of the chapter, I have established the first comprehensive relative chronology for Shijiahe incorporating all loci at the site. This will allow discussing the site in its entirety by navigating between loci as shown in the following chapter. Dismissing culture-historical chronologies, which so far have dominated and are dominating accounts of the Neolithic, the chronology established here relies in on shorter chronological units, called phases. Although concession to culture history will have to be made when no better dates are possible, the phase-by-phase chronology, on which the following chapters rely, allows for teasing out greater detail when tracking the similarities and changes at Shijiahe throughout time. The chronology established for Shijiahe is used tie in other relevant site across the Middle Yangzi, which will help to discuss regional developments. A discussion of the few radiocarbon dates available has placed the main account of this thesis into

the third millennium, but it is hoped that future radiocarbon dates provide a more solid foundation for interpretation.

The Geography and Environment of the Middle Yangzi Region

In the past, the climate and environment were different from the climate and environment of the Middle Yangzi region today. The second part of the chapter will focus on reconstructing the climate and environment during the period in question, i.e. from about 3500 to around 2000 BC. Due to the data, or scarcity thereof, especially with regards to the Middle Yangzi region as such, climatic developments will be sketched in broad strokes and multiple lines of evidence, including from other regions, though not directly applicable in all cases, will be used.

The Geomorphology of the Middle Yangzi[19]

The Yangzi is China's longest river and the third longest river in the world stretching over 6300 km (fig. 2.5). It has a catchment area of one fifth of China's total land area.[20] The middle reaches conventionally refer to the 1000km stretch from Yichang to Wuhan in Hubei, while the lower reaches are the 900km from Wuhan to its estuary mouth and the upper reaches the 4400km from Yichang to its

[19] The name Yangzi (or Yangtze) is actually the local name for the last 322 km of the river only and relates to the ancient fiefdom of Yang encompassing this part of the river (Lynn 1997: XIII). In 19th century, this part of the river was easily accessible to Western travellers. They picked up this local denomination, which eventually entered travellers' and navigators' accounts, thus perpetuating its usage. Although a misnomer with regards to the whole river, as every stretch of it has a local name, the river became known as Yangzi henceforth. The Chinese name the entire river simply Changjiang (Long River) or Dajiang (Great River). For purposes of convenience, I will use the denomination Yangzi or Yangzi River, and also keep the pinyin Romanisation in favour of the more common 'Yangtze' (or Yangtse, Yangtze Kiang and the like).

[20] Lynn 1997: XXIII; Zheng Ping 1999: 81.

source in Qinghai.[21] This partition of the river is derived from navigation rather than from actual geology and is based on the depth of water in which ships can navigate with safety under varying conditions of the water-level.[22] Geologically and environmentally, the lower and middle reaches form a single unit.[23] However, it is possible to denominate a Middle Yangzi region based on geomorphological features, i.e. mountain ranges (see below). In this way, the Middle Yangzi region does not end in Wuhan, but in Jiujiang, Jiangxi, where the foothills of the Mufushan and Dabieshan encroach closest onto the river and contribute to providing a barrier between the middle and lower reaches (fig. 2.6). In the Middle Yangzi area so specified, the river turns northwestward toward Wuhan where it bends south/southwest toward Dongting Lake. There it meanders northwest again until Yichang and the Three Gorges. This entire stretch of the river is very curvy, which accounts for much of its length in the region.

The centre of the region is the Jianghan Plain together with the Dongting Lake Plain (fig. 2.6),[24] where most archaeological sites discussed in this thesis are located. A number of mountain ranges delimit the Middle Yangzi area in Hubei, Hunan, and parts of southern Henan. The Nanyang Basin in northern Hubei and southern Henan with the Funiu and Tongbai Mountains on its edge opens naturally into the Central Plains area. The floor of the basin is undulating and falls in elevation from the mountain areas to the centre of basin. Because of this topography,

[21] Lynn 1997: XXIII.
[22] Although the river from the estuary mouth to Yibin, Sichuan, can be navigated for the whole year, only vessels of a certain tonnage are capable of navigating the various sections. From Nanjing and downstream these are 10,000dwt, from Wuhan and downstream 5000dwt, from Yichang and downstream 3000dwt, from Chongqing and downstream 1500dwt, and from Yibin and downstream 500dwt (Zheng Ping 1999: 78; Lynn 1997: XXIII). The construction of the Three Gorges Dam and Reservoir allows ships of 5000dwt and above to reach Chongqing (Ponseti and López-Pujol 2006: 167).
[23] Barbour 1935: 5.
[24] Jianghan and Dongting Lake plains are summarily also referred to as Lianghu (Two Lake) Plain.

rivers eventually merge into the Baitang River, which flows into the Han River in the basin's south. The Nanyang Basin is connected to the Jianghan Plain through the Han River valley between the Jingshan and Dahong Mountains in the West and the Sui-Zao Corridor, which runs between the Dahongshan and Tongbai Mountains, in the East. The western boundary of the region is the foothills of the Qinling and Daba Mountains, as well as the Wudang, Jingshan and Dashennongjia. Most mountains are 1000 to 2000m in height with a decline from west to east. The entrance to the Three Gorges is also located in this area and framed by the Daba and Wuling Mountains. Further to the east are the Tongbai and Dabie Mountains that sit on the border between Hubei and Anhui forming the northeastern edge of the region. These rather low mountains (maximum of 500m in elevation) are dissected by some rivers and not impermeable. Across from the Dabie Mountains are the Mufu Mountains that frame the Dongting Lake Plain to their west and to the west are the Xuefeng and Wuling Mountains (both 1000+m). South of plain the Xiang River valley comes from the Nanling Mountains that are the southernmost parts of Hunan and form the interfluve between the Yangzi and Pearl riverine systems, but also the climatic border between south-central and south China.

The Dongting Lake Plain lies south of the Yangzi. It is the alluvium of the rivers Xiang, Zi, Yuan and Li, some of the larger rivers among the 5300 rivers in Hunan, and Dongting Lake. This lake is China's second largest covering an area of around 2820sqm. It is divided into four lakes now, East, South, West Dongting and Datong lakes, and once maybe covered an area of about 14,000sqm.[25] The lake silted up and decreased in size because of flood prevention activities that averted floods on the plains but pushed water downstream, while leaving sediments in the

[25] Zhao Songqiao 1994: 152.

lake area.[26] The lake may have formed as late as the mid-first millennium BC.[27] The Jianghan Plain, on the other hand, lies north of the Yangzi and is constituted of the Yangzi and Han rivers and many lakes, which take up 18% of the plain. It is drained by the Han River, which is the Yangzi's longest tributary with its source in Shaanxi, as well as by many of the other 1200 rivers in Hubei. Consequently, the floodplain is formed of sediments.

As indicated by the quantity of water bodies, the Middle Yangzi region receives much rain throughout the year, especially during the months of the summer monsoon. On the one hand, it is a blessing, because in combination with the fertile soils, it has resulted in this region becoming one of China's biggest producers of crops. On the other hand, torrential rainfalls during the monsoon also cause floods. The East Asian summer monsoon reaches the Lower Yangzi by April and then moves eastwards reaching Sichuan by late July. Together with the melt-water from the Central Asian mountains, the Yangzi swells and seasonal variations of the water-level at Wuhan can lie around 15m.[28] Hundreds of shallow lakes in the plains around the Yangzi serve as natural reservoirs in summer, prevent flooding and supply water for irrigation in winter thereby extending the farming season. All of these are natural precautions against flooding, but sometimes large-scale floods devastate the area.[29] However, floods also have beneficial effects, such as the deposition of sediments across the plains, creating an ideal soil for farming, as they are rich in nutrients. On the other hand, the failure of the summer monsoon could

[26] Bowden 2003: 32; Zhou Shunwu 1992: 270.
[27] Fang 1991.
[28] Lynn 1997: XXIV.
[29] In the 20th century such floods have claimed many lives, such as the floods in 1931 with 145,000 dead, in 1935 with 142,000 dead and in 1954 with 30,000 dead (Pollard 1997: 26).

result in food shortage, such as recorded for 1876 to 1879.[30] Flooding of the plains was also an important factor of life during the Neolithic (and Bronze Age) and will be discussed below with special reference to the Yunmengze, a marsh that once covered much of the plains area.

Environment and Climate Today

The middle and lower reaches of the Yangzi are a climatic unit and together belong to the subtropical zone, and, if further subdivided, to the Northern Subtropical Zone.[31] This zone is characterised by a humid climate with four distinct seasons of approximately equal length. Summer and winter each last about three to four months.[32] The annual mean temperature lies between 16-20 degrees Celsius, while the winter temperature averages at 3-5 degrees Celsius and the summer temperature around 27-29 degrees Celsius. Due to the monsoon, the region has a long wet season and the annual total amount of rain ranges from 1000 to 1400mm. Between 75 and 90% of this amount falls during the peak months of the monsoon between May and July.

The vegetation is subtropical. Studies of the vegetation in south-central China make a distinction between a northern part, which is roughly equivalent to the Northern Subtropical zone, and a southern part. I will detail the vegetation in the northern part, where the current flora exists of deciduous forests with evergreen broadleaf trees,[33] due to the distribution of relevant archaeological sites there. They are mixed with some temperate broadleaf trees, thus forming mixed evergreen

[30] Pollard 1997: 37.
[31] Domrös and Peng 1988: 266-267.
[32] Ren Mei'e *et al.* 1985: 225.
[33] Ren Mei'e *et al.* 1985: 231 *et passim*, 245 *et passim*.

broadleaf and deciduous broadleaf forests. The major tree families are beech, oak, laurel and tea. These forests are distributed in the mountainous areas encompassing the Jianghan Plain. Hunan's north is largely similar to Hubei, but subtropical evergreen broadleaf forests can also be found. Oak, beech, walnut and maple families dominate.[34] Hunan and Hubei as well as parts of Anhui, Jiangxi, Jiangsu and Zhejiang and large parts of northern Lingnan, the east coast as well as Sichuan together form the subtropical evergreen broad-leaved forest region.[35] The plains areas in Hubei and Hunan, where no forests can be found, are nowadays widely used for agriculture, mostly rice.

Environment and Climate in the Past (c. 3500 – c. 2000 BC)

The reconstruction of the palaeoclimate and palaeoenvironment is no easy task. It has recently become popular due to the increase in studies relating to climate change issues. Before proceeding to outline the late Neolithic climate and environment in the Middle Yangzi, potential problems and pitfalls inherent in some of the reconstructions will be mentioned.[36] The first major issue is that most reconstructions and geological chronologies use uncalibrated radiocarbon dates (BP). By contrast, calibrated dates are used by most archaeological studies. In order to be able to match the climatic reconstruction to archaeological ones, uncalibrated dates must be calibrated.[37] Another important point is that many palaeoclimatic results are obtained from pollen profiles. Changes in vegetation, however, are

[34] Ren Mei'e *et al.* 1985 254 *et passim*.
[35] Hou 1983: 545, fig. 44.
[36] The following is based on Liu 2004: 22-23. It should be noted that Liu herself does not always recalibrate the radiocarbon dates, which decreases the usefulness of her study.
[37] Dates from paleoenvironmental studies are calibrated here using OxCal just as above. Plus/minus 80 is used for the calibration process, unless the error is given; the dates are given with 95.4% confidence.

known to lag behind actual episodes of climate change by up to 300 years. The vegetational response as well as sea-level and lake-level changes are slower than the actual climate change.[38] Also, the human response is often slower and not immediately visible in the archaeological evidence. Hence, paleoenvironmental data should be carefully evaluated and not taken at face value.

The Middle Yangzi area provides a particularly difficult case for the reconstruction of past climates and environments. Only a small number of studies concentrated on this region, but usually not on the period of interest. Some recent work focused on the Chengtoushan site and its environs in the Liyang Plain, but the published results largely cut off at around 3000 BC.[39] Ideas about what climates and environments were present during the third millennium BC especially the Jianghan Plain must be pieced together from various other studies that give a general impression of the period for China.[40] The results can thus only provide possible trends.

Guo Lixin was the first to attempt a synthesis of the available material on the Middle Yangzi and to suggest a reconstructed palaeoclimate.[41] As he did not use calibrated radiocarbon dates, however, especially his correlation of environmental effects to events gleaned from the archaeological evidence is imprecise and out of sync once the dates are calibrated. The following is thus drawn from other sources. The Holocene climatic optimum started in China in around 7547 to 6359 cal BC and terminated in around 2533 to 1236 cal BC. As He *et al.* base this assessment on pollen data, there is probably some time lag, but they give wide margins for the

[38] Bradley 1999: 365-370; He *et al.* 2004: 55.
[39] Chengtoushan 2007b.
[40] During the 2011 fieldwork season at Shijiahe investigations geared towards reconstructing the past environment were undertaken, but the results are pending.
[41] Guo Lixin 2005: 5-12. I recalibrated all dates.

beginning and end that may compensate for the time lag.[42] The beginning of the termination of the climatic optimum implies the beginning of a cold period, which is also supported by other studies. Morrill *et al*., for example, based on a synthesis of 36 previously published palaeoclimate records, show that an abrupt climate change occurred around 3050 to 2550 cal BC, which fits into the observed pollen profile that document the change in vegetation just mentioned.[43] A shift toward colder and/or drier conditions occurred in central and south China coinciding with an abrupt weakening of monsoon strength. This observation is corroborated by further studies that recognise a cooling event in this time period resulting in reduced vegetation cover and wetland systems.[44] Tao *et al.* conclude for the southern Yangzi delta an increase in coniferous pollen from around 2533 cal BC as opposed to the evidence for the mid-subtropical evergreen broadleaf forest in the preceding period up to 4898 cal BC.[45] This evidence supports the impression that the climate turned cooler and less humid with decreased precipitation.

Also, data from the Middle Yangzi itself at Chengtoushan together with that from Japan support this suggestion.[46] At first climate change resulted in evidence from pollen for an evergreen forest consisting mainly of evergreen oak (*Quercus subgen. Cyclobalanopsis*) mixed with chinquapin (*Castanopsis*), sweet gum (*Liquidamber*) and pine (*Pinus*) near the Chengtoushan site from 3850-3750 cal BC. An abundant forest surrounded the site at that time. A drastic destruction of this forest occurred due to changes in climate after 3350 cal BC. This evidence for a short cold period is inferred from evidence from Lake Togou-ike in Japan. Further

[42] He *et al.* 2004: 55-56.
[43] Morrill *et al.* 2003.
[44] Chen *et al.* 2005; Li *et al.* 2009: 42. The latter date the period in question down to 2050 cal BC, which is probably due to their inclusion of pollen data and the mentioned time lag.
[45] Tao *et al.* 2006.
[46] Yasuda *et al.* 2004.

evidence from Lake Togou-ike supports the notion of the beginning of a colder climate and a weakened summer monsoon around 2550 cal BC. Further climate deterioration is suggested for 2250 to 2050 cal BC and is thought to have resulted in the abandonment of Middle Yangzi and other sites.[47] The cooling event is again inferred from Lake Togou-ike. The latter may have to do more with the time lag in vegetation change, but overall the data appears consistent. We can thus conclude for the third millennium BC that climate change dating to sometime in the first half of that millennium resulted in colder climate and eventually in changes in vegetation. Recent work at the Qujialing site on pollen profiles and charcoal records show that, for the period of 5400 to 4200 cal BP, the site was surrounded by evergreen broad-leaved and deciduous broad-leaved forests.[48] For the period from 4200 to 2200 cal BP, the pollen record suggests a drier environment with much less forest cover, which probably was the result of the mentioned changes in climate.

The changes in sea level provide further evidence. After 3050 cal BC there is a general decrease in sea level with instances of a high sea level again around 2050 cal BC (fig. 2.7). At times the coast was about 100km further inland compared to today's coastline. Throughout much of the third millennium the sea was higher than at present.[49] Higher sea levels imply broadening rivers, whose flow decreases in velocity and whose carrying capacity for sediments decreases. This results in much deposition of sediments, which in turn raises the bed of the river, eroding its edges and finally overflowing of the edges. Flooding of the surrounding areas and the development of large lakes and marshes, all further amplified by melt water and

[47] Compare the discussion of hypotheses of abandonment in the previous chapter.
[48] Li Yiyin et al. 2009.
[49] Liu 2004: 29. The data is based Zhao Xitao 1993.

monsoonal rains, are the consequences.[50] These consequences for the water bodies in the Middle Yangzi region are especially interesting in the light of availability of inhabitable space (see below).

An *et al.* show that the lake changes in the middle and lower reaches of the Yangzi are hydrologically connected to the rivers. Fluctuations in the lake-levels are variously controlled by local precipitation and melt water. They conclude that high lake levels have never been prevalent in the region as a whole, but that there were two periods to the contrary. These are 6906 to 5882 cal BC and 1236 cal BC to the present day.[51] However, there were probably other periods with some fluctuations as known for the Yunmengze, which was a marsh, into which the Yangzi and Han rivers flowed, that took up much of the Lianghu Plain (fig. 2.6).[52] There is some agreement in the literature regarding the first period of high lake levels, as shown by An *et al.*, but some other phases with higher lake levels have also been identified. The Yunmengze covered much of the region in the mid to late third millennium.[53] An earlier period is found in two studies for the time around 3500 cal BC, during which the Yunmengze may have reached Tianmen County.[54] While a retreat of the Yunmengze could be expected for a time of lower sea levels, the sea levels throughout much of the third millennium were still higher, which explains the marsh's continued existence.

But there is further evidence from studies on site distributions that support a large extent of water bodies, Yunmengze in particular, during the Qujialing and

[50] Mo Duowen *et al.* 2009: 22.
[51] An *et al.* 2000: 747.
[52] As noted by Zhang Xiugui (1980) Yunmeng and Yunmengze denote different things during much of the first millennium BC. Yunmeng refers to a hunting district used by the Chu polity during the Eastern Zhou period, which included mountainous, hilly, plain and watery areas. Yunmengze is a part of the Yunmeng referring to a lake within this hunting district.
[53] Zhu *et al.* 1997.
[54] Zhu Cheng *et al.* 1997; Guo Weimin 2010 (based on Zhou Fengqin 1994 [not seen]).

Shijiahe periods.[55] Based on admittedly problematic data for sites that allow us to only sketch some general trends, Zhu *et al.*'s study allows us draw some tentative conclusions regarding the extent of water bodies in Hubei. Most known sites during the period in question can be found along river courses 0 to 200m a.s.l., i.e. on plains or in hilly areas.[56] During the so-called Qujialing period, sites moved out of the Three Gorges area and into the hillier regions surrounding the Jianghan Plain, for example in the Sui-Zao Corridor and along the Han River. During the following period the number of sites increases more than 50% in the 50-200m a.s.l. terrains. Many sites can still be found in the plains, e.g. around Jingmen. Only a small number of sites were found above 200m a.s.l.. Curiously, there are barely any sites in the core area of the Jianghan Plain, which may be due to the existence of the Yunmengze. During the Shijiahe period, we even see sites further retreating from the plains suggesting a further enlargement of the water bodies, which coincides well with an increased extent of the Yunmengze from around 2500 cal BC onward.

These observations suggest that people in the Neolithic may have settled, where sites could not have been devastated by floods, which would have been a common occurrence.[57] While Guo Lixin argues that the flood levels in prehistory were lower than today, there appears to be evidence for certain amounts of floods as gathered from sediment evidence.[58] Much more work is needed on the floods in the Middle Yangzi area and the extent of the Yunmengze. The issue of limited accessibility of the Jianghan Plain due to the Yangzi itself and the Yunmengze is

[55] Zhu Cheng *et al.* 2007. The results of this study are supported by a more recent study on site distributions in the Middle Yangzi, but this time also including the Dongting Lake Plain, by Deng Hui *et al.* (2009).
[56] See also Wang Hongxing 1998.
[57] It is possible that many sites in lower lying areas have not been located as they are hidden beneath meters of alluvial soil.
[58] Guo Lixin 2005: 19; Zhu *et al.* 1997.

further discussed in Chapter 5, where distributions of objects are related to possible routes of transmission.

Summary

In the second part of this chapter, I have pieced together evidence for a reconstruction of the climate and environment in the Middle Yangzi region for the period between 3500 and 2000 BC. The temperatures were higher than today and parts of the plains area may have be forested. A cooling event occurred in the third millennium with tangible results in terms of a drier environment toward the end of this millennium. Water was and still is a constituting feature of the Middle Yangzi region given the many rivers and lakes in this part of China. Flooding may have been a common occurrence. Much of the Jianghan Plain was covered in the Yunmengze determining the location of sites. While still awaiting scrutiny, it appears from two published studies that sites were situated on ever higher lying terrain from the fourth to the third millennium. This, I propose, may have been related to an increase in the size of water bodies in the plains area. This reconstruction of topography, environment and climate provides a better understanding of the region and will be considered in the chapters that follow. Reasons for enclosure construction, the reconstruction of access routes as well as the ontological significance of water will be taken up again.

Chapter Three

THE SHIJIAHE ENCLOSURE

Introduction

The greatest episodes of intervention at Shijiahe are the construction of the Neolithic and Western Zhou enclosures as well as the episodes of abandonment. While the construction of the Neolithic enclosure fundamentally altered the landscape by, for example, redirecting two rivers and imposing monumental architecture onto the landscape, the Western Zhou enclosure fundamentally altered the appearance of the former. Because of this chain of events, the chapter will begin in reverse chronological order by introducing the Western Zhou enclosure of Tucheng first, before proceeding to the main discussion of the Neolithic enclosure. Abandonment, occurring several times in the history of the site, is also a transformative event as it signals far-reaching changes in people's lives and junctures in the history of sites.

While many aspects of the enclosure construction and life history of Shijiahe featured in the site narrative in Chapter 1, the more detailed discussion of many of these events and practices follows in this chapter. Among the main results produced is a detailed study of the construction of the Neolithic enclosure, whose bank comprises *duizhu* layers in different colours, prompting the suggestion that much care was taken in its construction, and that this care also extended to the mounds surrounding the ditch, which are composed of similar layering. Given the enormous size of the enclosure (180ha) and the care that was taken in piling up the bank, it is likely that the construction process was drawn out, although the enclosure was

completed within phase V. I will argue for the importance of, for example, the mythical knowledge of the site's earlier history, the location and other factors that contributed to the creation of a joint identity among the builders and inhabitants.

The chapter will also outline the practices at Shijiahe through thick description, which has become possible because of the tighter chronology established in the previous chapter. It will be shown that the perception of the enclosure was changing throughout the third millennium. This process is especially visible for phases VII and VIII, when the mounds surrounding the site were increasingly inhabited and the slopes of the bank were also encroached upon.

One of the major events at Shijiahe was its large-scale abandonment after phase VIII, followed by its partial re-settlement in phase IX, after which the site was abandoned once more. I will show the ways in which the abandonment may have been anticipated by slightly earlier events, for example the phasing out of pit burials coupled with an increase in religious practices. I will also show that continuities existed into phase IX, but that overall the archaeological evidence speaks for a clear break.

In order to illustrate that the events at Shijiahe were not isolated, I will outline the developments at other enclosed sites taking Yinxiangcheng and Chengtoushan as case studies. These and other Middle Yangzi enclosures share the overall fate of Shijiahe, but only few were re-settled. This is proof that the events that led to the abandonment were interrelated. Further connections are seen in the urn burials that appeared in phase IX, and which are found across the region.

A final piece of evidence illustrating the interconnectedness of the region is the technique used to build the banks, called *duizhu*. *Duizhu* is a speciality of the Middle Yangzi, where some of the earliest enclosures were built, and from where it

probably spread across the Middle Yangzi and into other regions, especially downstream into Anhui and the delta. I will also argue that the combination of this technique with the pounded earth technique, which is often observed for the mid to late third millennium enclosures in Shandong, is an outcome of interaction between these regions, a claim that is further bolstered by the investigations into interactions in religious practices in Chapter 5, which confirm a Shandong connection.

Tucheng: A Western Zhou Enclosure

Tucheng is a curious locus as it is both the place of the earliest evidence for human activities in the form of 'Chengbeixi Culture' sherds (see Chapter 1 and below) and of some of the latest activities in the form of the Western Zhou enclosure. Tucheng was surveyed and excavated a number of times, the results of which have never been completely published, although some interesting conclusions as to the later life history of Shijiahe can be drawn from the available data.[1] The pottery sherds collected at Tucheng suggest a mid- to late-Western Zhou date (*c.* 9th to 8th century BC) for the enclosure. Both its bank and ditch are still clearly visible today, and the former is 'towering' over the lower-lying parts of the site.[2] The oval-shaped enclosure is about 510m from north to south and about 280m from east to west (fig. 1.2). The bank is about 4 to 6m in height, measured from the bottom of the ditch, 4 to 6m wide at the top and 10 to 20m wide at the base. The

[1] Tucheng was surveyed by the Jingzhou Museum in 1981 and dated to the late Neolithic (Hubei Longshan Culture) and to the middle to late Western Zhou period based on collected pottery sherds (Jingzhou Diqu Bowuguan 1987: 51). The same museum and the Tianmen County Museum surveyed Tianmen County once more, including Tucheng, in 1984 to 1985, and clarified the dating to from Qujialing to Western Zhou (Tianmen Xian Bowuguan 1987: 235, table 1). Apparently, a section of the eastern bank was excavated in 1982 and a section of the western bank in 1989; both remain unpublished (Shijiahe 1992: 237-238). The excavations in 1989 were accompanied by a large-scale survey of the site, also including some coring at Tucheng (Shijiahe 1992: 237-238).
[2] Tucheng is clearly visible on satellite images and the locus' prominence was confirmed by my own observations in the field in July 2009. Further information is taken from Shijiahe 1992: 237-238.

excavation of a section of the western bank in 1989 revealed a core of pounded earth of about 2.3 to 2.5m width at the top and bottom with a height of about 2m.[3] There are ramparts on both sides of the core.[4] The bank is complete and has only a single opening of about 12m in its eastern part, which could have been the entrance.

The surrounding ditch, whose fill was probably used to construct the bank, has a maximum width of 100m, which appears to be result of many centuries of drainage. The surveyors believe that, unlike comparable ditches, this ditch may not have served the purpose of defence very well, if its present appearance is in anyway close to its original appearance.[5] Unfortunately, they do not give any further information on what they base their assessment. Although not mentioned by Li Feng in his assessment of the advance of the Western Zhou into the areas north of the Yangzi,[6] the establishment of such a small enclosure tallies well with this advance possibly implying that Tucheng may have served the Western Zhou as a base.

Parts of Tucheng were built over the earlier Neolithic enclosure and heavily destroyed large parts of it. The ditch along the western and southwestern bank clearly cuts into the loci of Dengjiawan and Tanjialing. The same is true for the southeastern part where remains of the Neolithic bank at Huangjinling were interrupted by the ditch (fig. 1.12).

The trial excavations of a section of Tucheng's southeastern bank in 1982 revealed layers of earth that are said to resemble quite closely those constituting the

[3] Interestingly, the earlier, mid-second millennium BC enclosure at Panlongcheng, near Wuhan, was also made of pounded earth (Hubei Museum 2007b). Both the inhabitants of Panlongcheng and possibly also those of Tucheng may have come from the Yellow River area, where pounded earth was the typical construction technique, which was transferred to sites in Hubei.
[4] Shijiahe 1992: 238. Finds of Western Zhou period pottery in the earth used to construct the bank confirm the previous attempts at dating Tucheng as mentioned.
[5] Shijiahe 1992: 238.
[6] Li Feng 2006.

Neolithic bank at the loci of Sanfangwan, Dengjiawan and Huangjinling, suggesting that the later enclosure was built over the earlier bank. An urn burial dating to Shijiahe IX was found on top of the earlier bank, which like another section of the bank at Tanjiaxiang may have been used as a cemetery in phase Shijiahe IX. A layer dating to this phase was found beneath the Western Zhou bank section in the northwest.

Further evidence that the Neolithic bank became part of the later enclosure is provided by a tongue-shaped higher-lying platform, directly opposite the proposed entrance, extending eastwards from inside the western part of the bank (fig. 1.2). Coring at this location revealed that the lower layers match the bank layers at Dengjiawan exactly, which led the surveyors to suggest plausibly that this platform may have been part of the Neolithic northern bank.[7] An imaginary extension of the bank from Dengjiawan would precisely link up with this location within Tucheng (fig. 3.1). If further linked up with the remains of Huangjinling at the southeastern part of Tucheng, the original course of the Neolithic bank takes shape (fig. 3.1). This look at Tucheng has thus generated a clearer picture of the pre-Western Zhou appearance of the site. Peeling away the heavy alterations caused by the Tucheng enclosure in combination with tracing layers identified as diagnostic of the Neolithic bank has allowed us to establish the course of the former in its northeastern corner.[8]

[7] Shijiahe 1992: 238.

[8] The question of the re-settlement of Neolithic sites during the Bronze Age merits a study of its own, as not only parts of Shijiahe at Tucheng, but also, for example, the Neolithic enclosure at Yinxiangcheng was re-settled during the Western Zhou (Okamura Hidenori and Zhang Xuqiu 1997).

Re-Constructing the Bank

In the following, I will discuss the Neolithic bank in great detail, because its construction was a significant episode in the history of Shijiahe, which altered the landscape to an extent that can still be experienced at the site today. Figure 3.2 shows the river courses and the loci, which formed part of the landscape prior to enclosure construction, but overlying the present-day appearance of the site.[9] All other developments at Shijiahe since the construction of the bank have to be seen in relation to it and its ditch because of the huge impact it had on people's lives, their material practices and the landscape.

Course of the Enclosure

In the following discussion of course and construction method of the Neolithic enclosure it should be borne in mind that the entire construction happened within what might have been a rather short timeframe in Shijiahe phase V, as discussed below. This impression of relatively speedy construction stems from the fact that the pottery in the burials below and on the slope of the bank at Dengjiawan do not exhibit any typological differences allowing for both to be dated to phase V.

While the discussion of Tucheng has revealed the likely course of the Neolithic enclosure in the northeast, the picture for the still visible southern and western sections of the bank at the locus of Sanfangwan is clearer, a group of three platforms (north, east and west) surrounding a pond, just south of Tanjialing. One can easily trace the bank from where the Shilong Cross-River Canal makes a bend northwards and then further upstream, since the canal was dug along the southern section of the bank, basically in the bed of the old ditch (fig. 3.3). As to be

[9] The impact of the enclosure on the topography will be discussed below.

discussed in great detail in the next chapter, the eastern platform at Sanfangwan is of particular importance in phases VII and VIII when large quantities of red pottery cups were discarded there in some form of ritualised practice (see also below).

A focus on the bank at Sanfangwan will demonstrate the particular care that was taken in its construction. The surveyors estimate the southern and western sections of the bank to be about 10 to 20m wide at the top and about 50m at the base rising to about 6 to 8m above the ditch, although it must have originally been higher.[10] At the location where parts of the western bank were destroyed by a small road and a kiln the archaeologists surveyed a profile section of the outer rampart of about 12m in length and 3.6m in height, which can be roughly divided into three stratigraphic layers (fig. 3.4).[11] Under the topsoil, two layers between 1 and 2.6m thick make up the rampart. Each of these two larger layers consists of ten or more, smaller layers, each with a different soil colour or mixed of various differently-coloured soils each, which, as the surveyors suggest, may have been deliberate, as the different soils usually appear in patches and not mixed in the area.[12] Of course, the layers could also have resulted from soil being taken out of where the ditch was being dug and deposited where the bank was going to be. However, the fact that differently-coloured soils are usually not found together and especially not in layers as in figure 3.4, a deliberate deposition in a multicoloured fashion appears likely. Wherever the soil was taken from, it appears to have been managed to a certain extent. Such special care is also suggested by the fact that the soil had few inclusions only and pottery sherds were only occasionally seen.[13]

[10] Shijiahe 1992: 220.
[11] Shijiahe 1992: 220 *et passim*. The profile was no longer visible when I visited the site in 2009. The remainder of the bank is now heavily overgrown facilitating its detection as it stands out against the villages and rice fields.
[12] Shijiahe 1992: 221.
[13] Shijiahe 1992: 221.

On account of the differently-coloured smaller layers, two construction phases were identified at Sanfangwan. As there is no additional layer separating the two larger layers, the surveyors suggest that the bank was constructed in one go despite its two obvious phases. This conclusion, however, is not necessarily convincing, for several phases of bank construction at other sites, such as at Chengtoushan, were found directly one on top of each other, although the date of construction was some time apart.[14] Given the meticulous, seemingly deliberate layering of the bank, I would suggest that any additional soil covering the earlier phase of the bank could have been cleared away to reveal the previously piled-up layers before continuing the construction work. It is unclear whether all episodes of construction took place throughout the same phase at Sanfangwan.

Such practices suggest that special care went into constructing the bank at its western part at Sanfangwan and the phenomenon of a bank layered in different colours is not limited to this section but extends across all sections of the enclosure and also includes a number of the mounds beyond the ditch.[15] For instance, the layers of the Neolithic bank under the Bronze Age bank at Tucheng are said to resemble those at Dengjiawan, Sanfangwan and Huangjinling, although the report is not specific as to the exact way in which they resemble the other sections.[16] It likely refers to the layers as described above for Sanfangwan. The report is clearer on the remains of the eastern bank at Huangjinling, by stating that coring at two spots revealed that the bank was erected of differently-coloured layers of pure soil, again

[14] See, for example, the profile of the southwestern and southern sections of the bank in Chengtoushan 2007a: figs 47, 56. The second phase of construction could also be interpreted as some form of later 'reinforcement' of the bank, but the fact that the soil layers are close to the first phase suggests that both are close in date.
[15] Zhang and Okamura (1999) believe that the use of different soils to pile up the bank was done in order to strengthen it.
[16] Shijiahe 1992: 238.

not unlike those at Sanfangwan, Tanjialing and Dengjiawan.[17] The fact that the practice of piling up layers of differently-coloured soils is also visible at other loci confirms the impression that construction in this way was deliberate. The bank and platforms outside the bank are described in a way, which implies visual homogeneity. Unfortunately, no images of bank profiles exist, which would allow for confirmation of the descriptions and profile drawings in the 1992 report.

When the ditch was excavated, the earth was probably not only used to pile up the bank inside the perimeter of the ditch, but also deposited on its outside, which led to the formation of some of the mounds just outside the ditch. The current height of some of these mounds even matches that of the bank at the loci of Tanjialing, Dengjiawan and Sanfangwan.[18] These are Shibanchong-Changmenchong along the south side, Yinxintai and Tandouziwan to the west and Huangjiashan-Yangjiashan to the northwest (fig. 1.12). With the exception of Shibanchong-Changmenchong, where none was reported, coring revealed that the mounds were built with layering similar to the sections of the bank.[19] As stated by the surveyors, these mounds may or may not have been created intentionally, but they eventually became part of the site.[20] Given the layering of the mounds, I would argue for intentional creation and their conceptual inclusion into the site from the outset showing that bank and ditch are not the perimeters they are often considered to be (fig. 3.5; see also below).

[17] Shijiahe 1992: 236. To my knowledge, no section of the bank directly at Tanjialing was cored or excavated. But I suspect that the profile section in the western bank at Sanfangwan that was described earlier is considered as being representative of the remaining, still visible sections of the western bank, which, almost uninterrupted, reach beyond Tanjianling up to Dengjiawan (see fig. 1.4).
[18] Some of the mounds had been part of the pre-bank topography of the site, such as Tandouziwan, Changmenchong, Yangjiashan and Jingshanpo. Others may have been present in parts only before being raised during the ditch excavation.
[19] Shijiahe 1992: 244, 245, 246-247, 249.
[20] Shijiahe 1992: 279.

As the coloured layering of the bank is a recurring feature observed during the fieldwork conducted at the site, this phenomenon requires explanation. As shown below, the construction of the enclosure occurred within a reasonably 'short' timeframe limited to phase V, maybe within a limited number of decades. Enclosures are usually considered an end product but not a process. The below phase by phase account allows for a more processual understanding of the site's history as it reveals the dynamics of the inhabitation. The construction of the bank, ditch and mounds requires a similar approach. The recurring layering of the bank sections suggests that the activities of building were not simply a translation of a design into an end product, but the result of 'practices of making'.[21] Lesley McFadyen suggested a similar sensibility for understanding the construction of barrows of Neolithic Britain.[22] In her work, the participation of the entire community in the making of barrows takes centre-stage and is crucial for the way in which people perceive their world.

The practices of building the enclosure at Shijiahe may be seen in a similar way. Differently-coloured layers are clear evidence that special care was taken. It is entirely possible that the building process was not continuous but had deliberate breaks and ruptures, as layers would lie open and be exposed before being covered by another layer in a different colour, which would lie in the open again. These sequences of raising the bank would periodically re-unite the people involved. The result of such repeated practices may have been the creation of joint histories of the site, probably including the creation of myths regarding its location, which may already have figured in the original choice of the location. Joint building activities would also result in the builders identifying themselves with the site, which is

[21] McFadyen 2006: 22.
[22] McFadyen 2006, 2007, forthcoming.

probably the main reason why Shijiahe became and remained inhabited and certain loci were made into cemeteries. As mentioned in the site narrative in Chapter 1, the transformation of the landscape, especially its waterways through the building process – piling up banks and mounds and digging a ditch – is a disruptive process for the space chosen, which had the effect of thoroughly reconceptualising the lived-in world and the formation of a group identity for the people at Shijiahe.

Later History of the Enclosure

The example of the mounds at Shijiahe shows that an enclosed settlement is not limited to the space within its enclosure(s), a notion commonly not recognised in the study of enclosures in China. In addition to the mounds, which were constructed concurrently with bank and ditch, the loci of Xiaojiawuji and Luojiabailing to the southeast, for example, were settled as early as Shijiahe V and VI respectively (fig. 3.6). It would be difficult to argue that they were not part of the site as a whole, especially as these are not the only loci that were settled quite early on.[23]

Until recently, the considerable gap of about 450m in the bank between the eastern end of the Sanfangwan bank section via Xushuling to the southern end of the Huangjinling bank section, which directly connects the interior of the enclosure with Luojiabailing and Xiaojiawuji, was considered to be nothing more than a stretch of the ditch. As no remains of a bank were found, this led the surveyors to suggest that the 'project' may have been unfinished or that palisades or other forms of enclosure existed there.[24] Although these possibilities exist, it is still conspicuous that such a huge gap remained. During the 2011 excavations this area was

[23] Others include Changmenchong, Guanshan, Wangjiatai and Jingshanpo.
[24] Shijiahe 1992: 279.

investigated through the excavation of a 150sqm trench.[25] It was suggested that during the late Qujialing Culture, roughly corresponding to phase VI, a bank was built connecting Sanfangwan with Huangjinling via Xushuling completing the enclosure. During initial enclosure construction during phase V, this area appears to have held water as seen in layers of silt. The excavator also discovered two rows of eleven wooden pillars in the silt layers between Sanfangwan and Xushuling below the bank layers leading to the suggestion that both loci were connected by a bridge until the construction of the bank in this area. From finds of burials, pits, ditches and ash layers dating to the late Shijiahe Culture, i.e. phase IX, on top of the bank, the excavators conclude that the bank had already been levelled to form part of the phase IX surface, which is evident from the published bank profile (fig. 3.7).

While all of these new insights require confirmation through proper publication, they already hint at some interesting possibilities for our understanding of the site as suggested in the site narrative in Chapter 1. The enclosure may have been build for reasons related to both religious issues and to attempts at manipulating the flow of water. The construction of the enclosure heavily altered the landscape and re-directed the flow of two rivers. From the recent excavations, it has become clear that the former riverbeds may have continued to hold water after the bank was constructed, possibly fed through rain and the gap in the southeastern corner of the bank. Excavations between Tanjialing and Sanfangwan revealed finds of wood, including remains of what may have been a boat, and woven bamboo and plant remains.[26] Maybe the southeastern corner of the enclosure was left open to allow for drainage especially during the heavy rains of the summer monsoon, but it may also have held water for longer periods of time as indicated by the 'bridge' and

[25] Meng Huaping *et al.* 2011. I am grateful to Meng Huaping for sending me an advance copy of this short article announcing the recent discoveries.
[26] Meng Huaping *et al.* 2011.

'boat'. Closing the gap in the southeast by constructing a bank may have been an attempt at taking the interior of the enclosure out of cycles of flow, maybe allowing it to be drained of the water. That surface area within the enclosure was gained is illustrated by the early to middle Shijiahe Culture finds, corresponding to phases VII and VIII, overlying and thereby preserving the finds of wood south of Tanjialing. Should this enlarged surface correspond to an increase in population, it is possible that the large scale of religious practices documented for phases VII and VIII, to be detailed in the following chapter, may reflect a larger population as well.

Despite the additional enclosure construction, Shijiahe should still be regarded as an open site. And this openness was even more apparent during Shijiahe VII and VIII, when a large number of mounds and platforms surrounding the enclosed area were settled, as indicated by the presence of pottery sherds and red scorched earth fragments that may have been the remains of building floors (see below). Among these loci are those of Yinxintai, Yandouziwan and Shibancheng-Changmenchong just outside the bank to the west and south, as well as all mounds north of Tucheng and some loci east of Huangjinling (fig. 3.8). Even the slope of the bank at Huangjinling itself appears to have been encroached upon during these phases, especially its western slope, which was the inside of the bank. By contrast, no 'refuse', red scorched earth, pottery and the like were found on the eastern slope.[27]

Finally, some mounds in the southeastern part of the site were also occupied during this period, just as those loci within the enclosure where activities continued and even increased in area, such as at Sanfangwan represented by the red pottery cups. The levelling of the bank in the southeastern corner may have been the result

[27] Shijiahe 1992: 231-236. The surveyors suggest that Huangjinling may have been a 'common' residential area, i.e. not religious for example, based on their collection of what were identified to be daily utensils (Shijiahe 1992: 236).

of the openness in the way that the earlier access route in this area continued to be used by people walking across the bank. Consequently, this history of increased settlement of loci beyond bank and ditch illustrates that Shijiahe was conceived as open since the construction of the enclosure. Such conception of the site hints at flows of movement within and beyond the bank and ditch as integral part of practices of everyday life with an increase in such practices from Shijiahe VII, which tallies well with a general increase in the visibility of religious practices at the site as highlighted in Chapter 1 and to be discussed in more detail below and in the following chapter. These flows of movement also hint at the integration of the site within its surroundings suggesting mutual permeability.

The Bank at Dengjiawan

Let us now turn to Dengjiawan in the northwestern corner of the enclosure, where an incomplete cross-section of the bank was excavated providing the most reliable evidence for its date and construction method. The extant western section of the bank can be traced northward from Tanjialing to the few houses that are the village of Dengjiawan, where the bank suddenly disappears, while the ditch continues and curves towards the northeast (fig. 3.1). Apart from the excavated area, which covers about 1605sqm, the Dengjiawan platform extends towards the east until cut off by the Tucheng ditch, and south and southeast in terraces eventually linking up with Tanjialing (ca. 60,000sqm in total area; fig. 3.9). Coring at several places, revealing finds of pottery, charcoal fragments and red scorched earth, shows that the eastern parts of Dengjiawan may have been occupied by buildings.[28] The excavated area and possibly also its immediate surroundings

[28] Shijiahe 1992: 230.

belong to a cemetery and remain used in religious practices as discussed in detail in the next chapter.[29] Coring confirmed that the disappearance of the bank at Dengjiawan was the result of damage leading to the disappearance of the bank's traces on the surface.[30] Initial coring during the survey revealed that the layering of the bank at Dengjiawan is similar to that at Sanfangwan.[31] Further coring in 1992 suggested the potential full extent of the bank in the northwest as shown in figure 3.1.[32] Importantly, a cross-section of the inner section of the bank was excavated. Unfortunately, the excavators did not extend the trench to include the outer section as well. Nonetheless, the data from this excavation provide evidence for a higher chronological resolution, allowing us to date the bank's construction and sequences of events with much clarity.

Figure 3.10 shows the southern wall of trench T8 viewed from the north, illustrating the inner rampart of the bank, which was divided into four larger layers themselves composed out of several smaller layers.[33] As layer 4 cuts into the natural soil and other superimposed layers, the excavators interpret it as 'foundation fill',[34] although one wonders why it is only found beneath the rampart and not beneath what can be seen of the bank core. Scrutiny of figure 3.10 and the accompanying descriptions of the layers raise several questions. Figure 3.10 is in itself a work of

[29] Dengjiawan 2003.
[30] Possible reasons are the construction of the village in this area and that the whole locus was heavily farmed and is still covered in rice fields. My own observations at other sites, such as at Yejiamiao in Xiaogan, Hubei, confirm such practices, since large sections of the bank at this site were truncated by superimposed later house constructions as well as through farming, leading to the ancient site melting into a landscape of rice fields, fish ponds and minor villages. During my visit to Shijiahe in 2009 I found Dengjiawan difficult to access but the disappearance of the bank as indicated by the plans was clearly visible from higher-lying areas beyond the ditch.
[31] Shijiahe 1992: 230.
[32] Dengjiawan 2003: 17.
[33] Dengjiawan 2003: 14, 16-17. Layer 1 is composed of layers 1a-d, layer 2 out of 2a and b, layer 3 of 3a-f, and 4 out of 4a and b.
[34] Dengjiawan 2003: 17.

interpretation by the excavators and should be scrutinised.[35] First, no colour image of the profile is provided, which would allow for a better understanding of it. Secondly, the excavation report only describes every small layer within each larger layer attributed to the bank but leaves out all other layers seen in the profile (layers 1, 2, 3, 4, 5, 7, 9, 10 and 11). Some of the information can be gauged from the profile of the northern wall of trench T7 (fig. 3.11) but these layers do not match to those in figure 3.10 exactly and the trench in T7 does not seem to have been excavated to natural.[36] Thirdly, it is not entirely comprehensible for what reasons the different smaller layers were attributed to the four larger layers. While the layers in some, such as layer 1 and 2, seem to be based on common soil colour, the soil colours of the smaller layers in layers 3 and 4 are more diverse, so that the reasons for their inclusion are less obvious. Nonetheless, the evidence allows improving our understanding of the bank, its construction and relation to other features.

Figure 3.12 shows a revised version of the profile, which might improve our understanding of it. It is obvious that the layer below layer 11 is the earliest layer as it did not yield any finds and was consequently correctly recognised as natural soil. Then follows layer 11 with finds dating to phase V and overlying a ditch feature G4 in trench T7, also dated to this phase.[37] Then follows layer 10, above which is burial M104, which appears to cut into one of the layers attributed to bank layer 3, maybe 3e or 3f. From the cut and the slope it seems that bank layer 4 is later than layer 10 and M104 and probably also the lowest layer of bank layer 3. The feature, which bank layer 4 appears to be filling, cuts into sterile soil and its profile suggests that it is some kind of ditch, which was later on filled with what the excavators interpreted as the foundation of the rampart. In light of the suspicions already raised, it seems

[35] I am grateful to Arlene Rosen, who helped me to interpret the profile.
[36] Dengjiawan 2003: 9-10.
[37] Dengjiawan 2003: 9, fig. 5.

likely that this was a ditch or at least some kind of pit. The part of bank layer 3 directly on top of bank layer 4 also appears to be some kind of fill. Thus not the entire bank layer 3 is actually part of the bank but some kind of fill for the earlier impressions. Bank layers 2 and 1 are more likely to actually belong to the bank together with large chunks of bank layer 3. In light of this evidence, it seems reasonable to suggest that the history of the enclosure began with the excavation of some kind of ditch, on which the inner part of the rampart was later built. It is unclear whether this ditch feature could actually be considered an enclosure ditch. Unfortunately, due to lack of data from other bank sections, this suggestion cannot be further substantiated at present, but alerts us to the fact that some activities dating to phase V may even pre-date the earliest burial features in this part of Dengjiawan adding a layer of complexity to the history of Shijiahe (see below).

A look at the layers in figure 3.10, which actually belong to the bank, shows that the differently-coloured smaller layers in bank layer 3 alternate, which is probably not unlike the coring results east from here and by extension the layering at Sanfangwan and other loci. This layering further supports the notion that the use of different colours may have been deliberate.

As the smaller layers identified at other loci are rather tightly packed, pounding was initially suggested as construction method. However, as the slope of the bank is not steep (c. 25°), unusual for an pounded-earth bank, which is usually fairly straight, the surveyors suggest a method, they call *duizhu*, in which each layer is piled up upon each other.[38] Piling creates thick layers of soil, which are less

[38] Shijiahe 1992: 279. Pounded earth banks are constructed in layers of loess. Rectangular, wooden boxes with neither top nor bottom are filled with earth that is then rammed making it tight and durable. The wooden box is then removed and reassembled higher up for the next level, by which the wall gradually rises (see Needham 1971: 38 *et passim*). Piling was also identified as major construction method at other banked sites in the region, e.g. Yinxiangcheng and Chenghe (see below).

compact than those of contemporaneous banked sites in northern China constructed of pounded-earth.[39] The Dengjiawan excavations revealed that some of the smaller layers (bank layers 1b, 1c, 1d, 2a, 3b) were actually pounded harder than others,[40] suggesting that the bank was constructed of a combination of tamping or compressing and piling. While this should not be considered as pounded earth *sensu strictu*, it hints at the fact that some layers were compacted, possibly to increase the stability of the bank.

The Date of Construction

The excavation of the bank profile at Dengjiawan provides solid evidence for the date of the construction without having to rely on inclusions of pottery sherds only. As this section will show, the enclosure was probably constructed within a reasonably 'short' timeframe in phase V, as already hinted at above. The Dengjiawan bank section was constructed on top of burial M104 (figs 3.10, 3.12), dated to phase V, the earliest phase of activities at Dengjiawan (fig. 3.13). That the bank or at least parts of it may have been finished during this phase is indicated by the alignment of other, contemporary tombs within the curve of the bank, for example burials M35, M66 and M70 located well clear of the bank, but in alignment with it. Features dating to the three following phases also roughly follow the course of the bank, such as most burials dating to phase VI (fig. 3.14) as well as the pits of phase VII and VIIIa and VIIIb (figs 3.15, 3.16 and 3.17), although the inner rampart was now included into the practices that formed the cemetery and other activities. For example, some phase VI burials are found directly on the foot

[39] Southern soil is generally damper and more cohesive than its northern counterpart, which is loess, thus affecting the choices of the builders.
[40] Dengjiawan 2003: 14, 15.

of the rampart (see, e.g., tomb M87 in figs 3.11, 3.14), tightly aligned with the bank. Consequently, the main construction work of the bank occurred during phase V, which is confirmed by other sections of the bank, where finds dating to later phases are found on top of the inner rampart.[41]

In addition to securing the date of enclosure construction, the temporal relationship of burials and enclosure also clearly shows that Dengjiawan began as a cemetery before enclosure construction and continued as such after. As hinted at in Chapter 1, the selection of Shijiahe for the enclosure, following the pre-phase V activities, may have been religiously motivated. Such a perspective on enclosure construction may also explain the great care that was taken as seen in the multicoloured layers of soil. Groups of people may have joined together in digging earth, processing it and piling it layer for layer thereby raising the bank and mounds. Such process of building would have supported the generation of a sense of community among the builders as well as identification with Shijiahe as a place. Once envisioned as community practices, this may allow us to step away from the often-proposed notion of enclosures simply legitimating the power of a single 'big man' type individual. It is just as likely that role of the person in charge may not have been fixed in one person alone but shared or alternating. Despite occurring within phase V, the construction was probably gradual with people periodically returning to work on the enclosure.

Peopling the Enclosure

Expanding on the site narrative in Chapter 1, the following is a diachronic outline of the general patterns of occupation of Shijiahe largely based on the survey

[41] Shijiahe 1992: 217.

that was published in 1992.[42] There appears to be evidence for an early occupation or at least some form of activities at Shijiahe, hence termed phase I. Pottery attributed to the so-called Chengbeixi Culture, datable to the sixth millennium, was found in the northeastern corner of the site (at Tucheng) in 1982.[43] It is very difficult to make sensible comments on the basis of the excavators' remarks of having seen some possibly Chengbeixi Culture pottery sherds in the lower layers at Tucheng. However, the question of the earliest occupation of the site is a fascinating one and should not be neglected. Unfortunately, the publication of the excavations at Tucheng is still pending, so that phase I cannot be further discussed here.[44]

Phases II-IV: Tanjialing

In order to understand the earliest human activities at the site that left traces to discover, it is helpful to look at the excavators' attempt at reconstructing the original, 'untouched' appearance of the site before or with only minimal human intervention. Figure 3.2 shows the later appearance of the site underneath earlier features of the landscape (mounds by name and rivers). The reconstruction is based on the general flow of the landscape and the chronology suggested for the construction of the enclosure. It has been plausibly suggested that the landscape consisted of the terraced northwest to southeast sloping 'platform', which was divided into several parts by the courses of rivers. These platforms may be precursors of the series of mounds of Yandouziwan-Sanfangwan-Changmenchong, Yangjiashan-Dengjiawan-Tanjialing-Yangjiawan, and Zhoujiawan-Jingshanpo-Tucheng (fig. 3.2), each of which may have been linked then, but became separated

[42] Shijiahe 1992.
[43] Dengjiawan 2003: 290.
[44] Guo Weimin (2010: 66-67) also mentions this pottery as evidence for the site's earliest inhabitants.

through human and natural transformations, such as drainage, later on. The 2011 excavation of a 50sqm trench between Sanfangwan and Tanjialing importantly confirmed that it was part of an ancient river course and the excavators even found what may have been a wooden boat.[45]

Tanjialing was excavated several times, beginning in 1982 with 137sqm, but only briefly reported, just giving the general features of the pottery and their culture-historical attributions.[46] In 1987, 275sqm (11 trenches in total) were excavated in two areas called III and IV (fig. 3.9). The former is located east of the village of Tanjialing, while the latter is north of it.[47] The earliest burials were found in the deepest stratigraphic level (level 6 corresponding to phase II), such as burial M13, which is a rectangular pit burial, 2m long, 0.6m wide and 0.1m deep, filled with grey-yellow earth mixed with natural soil (fig. 3.18).[48] The rather well-preserved, but neither osteologically nor otherwise examined skeletal remains are laid out in a supine-extended position, with the head oriented to the northwest (273°). The grave goods consist mostly of pottery and were placed at the head of the deceased with a single jar placed on top of the left part of the abdomen. Fish bones were found to the left of the deceased.[49] The only other reported burial (M7; probably also phase II) has similar dimensions, but its fill consists of pieces of red scorched earth, the same that is usually used for building floors and other surfaces, but the skeletal remains have mostly decayed so that their placement is not clear. 12 pottery items were placed in the tomb.

[45] Meng Huaping, personal communication, September 2011. The date of the excavated wooden remains is not entirely clear yet. See also Meng Huaping *et al.* 2011.
[46] Mao Lin 1985.
[47] Shihe Kaogudui 1990: 6-9. Another area was excavated in 1989, but it is nowhere reported and only briefly mentioned in Shijiahe 1992: 228-229. This area is located even further east of the village, just west of the local kiln (see fig. 3.9).
[48] The burial was probably deeper but its top may have been destroyed during excavation.
[49] Shihe Kaogudui 1990: 8.

In total, 23 pit burials were found in the lowest layers of the excavated areas and possibly also in the trench dug in 1989, since the 'situation of the cultural layers of the three areas is largely similar'.[50] In addition to pit burials, eight urn burials were excavated, which either consist of a single urn or two urns and jars stuck together at the rims and lying on the side (fig. 3.19). There is no further information regarding the urns. A total of 23 pits were found at the site, some of which, for example H15 and H22, are said to belong to the lower levels, but unfortunately none was reported in detail.[51]

The early finds at Tanjialing can be divided into three phases (phases II-IV), with most of the burials dating to phases II and III, suggesting that burial at this very location occurred consistently over a longer period of time and possibly even across a larger area, if the cemetery extended across Tanjialing. Locked between two rivers on a platform sloping towards where the rivers would eventually meet, the connection with (flowing) water may have been of importance for selecting the site and also for related, religious connotations.[52] The fish bones found in tomb M13 can be considered as strengthening this connection, as does the orientation of the burial, which is roughly parallel to the river courses, although the latter may be a mere coincidence, since the other tomb (M7) is oriented east-west. In any case, it appears that the natural flow of the landscape as reconstructed was utilised making Shijiahe a distinct place for the dead.

Phase IV is obscure. In the only report, the illustrated pottery attributed to this phase was either taken from the relevant 'cultural' layers and pits, but none from burials, as was done for the preceding two phases.[53] Although one cannot be

[50] Shijiahe 1992: 229.
[51] Shihe Kaogudui 1990: 9, 11.
[52] See discussion at the end of Chapter 2.
[53] Shihe Kaogudui 1990: 11-12.

certain, this suggests that no burials date to this phase.[54] As far as can be gauged from the published material, it is likely that Tanjialing ceased to be a cemetery. Although some activities took place, these may have been on a different scale and not related to the dead and could be seen as evidence for re-occupation after what may have been a hiatus in occupation.

Phases V and VI

After an episode of using Shijiahe as a cemetery at Dengjiawan (see above), the site underwent a major change with the construction of the enclosure during phase V. While previous occupations followed the topography of the site, the building of the enclosure was a major departure from this. Shijiahe was basically re-envisioned and moulded according to the community's perception, which was the most fundamental change that occurred at the site and would shape it lastingly. Unfortunately, our impression of the unfolding of the events at the site is hampered by the way the various finds were dated in the survey. Phases V and VI were lumped together as the 'Qujialing Culture' and phases VII and VIII are represented as 'early Shijiahe Culture'. A more detailed picture is available for Dengjiawan and Xiaojiawuji.

At Tanjialing, six building foundations were excavated in areas III and IV,[55] dating to phases V and VI. For example, building F1 (fig. 1.22) was found as well

[54] There is a predilection to use the assemblages found in burials (secure contexts) for dating and the fact that no evidence from burials was used for phase VI suggests that no burial date to this phase.
[55] Finds of red scorched earth are usually correctly identified as foundations of buildings, as floors were frequently burnt in order to make them watertight. However, red scorched was also found in tombs as noted above and in pits, which makes the identification problematic at times. But if a consistent layer of red scorched earth is present, it is reasonable to infer the presence of a building. What the building was used for is another question and it cannot be taken for granted that most were residential as assumed by the excavators. A pile of red scorched earth with finds of pottery and stone tools underneath, which I could observe at the late Neolithic Dongshancun site in Zhangjiagang, Jiangsu, could be the result of the collapsed wattle-and-daub walls after burning the building.

as some scorched earth pits that may also have been building foundations.[56] The excavations in 1989 also yielded large chunks of building foundations of red scorched earth, often in several layers cutting into each other, spread all across the excavated area. Once again, the earlier foundations were preserved much better than the later ones, so that the walls occasionally stood to almost 1m in height.[57]

Repetitive practices are materialised in these complicated deposits of building floors and walls that reveal a deep history of occupation of Tanjialing and by extension the entire site, possibly creating genealogical histories in the sense of Gosden and Lock.[58] Place and landscape were continuously reconfigured building on the long history of the site. It would be surprising if digging at Tanjialing during the later phases had not disturbed earlier burials, thereby also sanctioning the possibly auspicious choice of the location and creating incentives for a tighter-knit group identity through the creation of joint memories. Because remains of human activities, such as ashen areas or red scorched earth, were exposed at the northern and southern parts of the terraced areas that make up Tanjialing, the surveyors conclusively suggested that Tanjialing must once have been a large, possibly residential area, which is a strong departure from its earlier function as a cemetery.[59]

Interestingly, Tanjialing is linked to other higher lying 'platforms', e.g. those of Dengjiawan to the northwest and Xushuling and Yangjiawan to the southeast (see fig. 1.12), so that it is possible that these loci once formed a larger interlinked complex. Tanjialing may have also extended toward the northeast to

[56] Shihe Kaogudui 1990: 9. Two probably contemporary building foundations were also excavated in 1982 (Mao Lin 1985). Unfortunately, micromorphological studies of building floors as well as of ditches are not available in China as such studies are in their infancy. It is hoped that future fieldwork will include such work.
[57] Shijiahe 1992: 229.
[58] Gosden and Lock 1998.
[59] Shijiahe 1992: 228, 230.

Tucheng, but this area was largely destroyed by the ditch built during the Western Zhou period.

Coinciding with the re-settlement of Tanjialing, Dengjiawan was occupied becoming a cemetery. As shown, Dengjiawan began to be used as a cemetery before the enclosure was constructed. The chronology of events at Dengjiawan may be suggested as beginning with layers 11 and 10, in which Shijiahe V sherds were found, followed by the excavation of a ditch, which was subsequently filled up (fig. 3.12).[60] I suspect that this may have occurred swiftly considering the annual rainfall or flooding or it may have even been done deliberately. Into the fill burial M104 was cut, followed by the construction of the bank over this burial. Unfortunately, it remains unclear how the activities at other loci or even those recorded for other parts of Dengjiawan relate to this, but most burials were dug after the enclosure was completed.

As discussed in Chapter 4, in phase V, Dengjiawan also became a place where religion was practised as shown by the five locations, trenches AT301, AT607, AT6 and neighbouring trenches, pit H28 and neighbouring features as well as pit H79 and neighbouring features, where tube-shaped pottery was deposited (fig. 3.13). In trench AT301, more specifically pit H59, tubes were laid out in groups of different types along the edge of the pit and reaching into it. Other locations yield similar forms of deposition, but in most cases only fragments were found possibly indicating that similar practices may have taken place there.[61] The practices of depositing tube-shaped pottery continued into phase VI, and triggered a clustering of activities in the form of the excavation of pits and other features at each of the locations, which could be identified as being religious. In the next chapter, I will

[60] Studies of soil micromorphology might be helpful in gauging the speed of this, but such studies have not been conducted in the Middle Yangzi region.
[61] See Chapter 4 for a detailed discussion.

focus closer on the formation of the features, which lead to a great density of practices in the area around trench AT6. In the following paragraphs I will briefly introduce some of the features to give a fuller impression of the features and practices found at Dengjiawan.

To these features belong 'Remains (*yiji*) no. 1 and 2' in trench T11 and buildings F2 in trench AT7 and F3 in parts of trenches T10 and T11.[62] The earlier one is 'Remains no. 2' (fig. 3.20).[63] It consists of four layers alternating between ash and red scorched earth. Conflagration activities may have taken place here, probably involving the deposition of pottery as evidenced in the large amounts of sherds found in a thick ash layer. Also, three postholes arranged in a triangle were found in these features. The excavators explain the postholes as possible locations where the tubes may have been erected since tube fragments were excavated here in 1978, which is an intriguing idea but difficult substantiate.[64]

'Remains no. 1', located in the southeastern part of trench T11, consists of what was called a 'platform' and ash.[65] This is one of the later features, since it cuts into the layer overlying 'Remains no. 2' (fig. 3.20). Only one fourth of number 1 was excavated with a possible radius of about 2.5m of what may have been an approximately round feature (fig. 3.21). Despite the small extent of the excavation, it was revealed quite clearly that great care was taken in building this feature. The first three layers within the shallow pit that makes up the feature are the foundations consisting of rather pure soil beginning with yellow soil, followed by grey clay and with yellow clay at the top. The top parts of this feature consist of an outer ring of

[62] Dengjiawan 2003: 30-33, 17-20.
[63] In fact, the two 'remains' are among the earliest remains found in trench T11. They are superimposed by burial M85, and urn W25 and pit H109, all datable to phase VI (Dengjiawan 2003: 132). Although the 'remains' are also dated to phase VI, they might be close in date to the adjacent pottery tubes.
[64] Dengjiawan 2003: 31.
[65] Dengjiawan 2003: 30-31 and 30, fig. 22.

mixed red clay including some red scorched earth and ash around a probably oval inner part that was identified as a 'platform'. The latter consists of grey mixed clay topped by a layer of ash. Stones in the centre of the platform have an altered grey-green colour due to the conflagration that took place. Curiously, the platform is the only part of this feature where small finds were recovered, such as five complete painted pottery cups, one stone axe, and charred animal bones and teeth.[66] The cups are those, which frequently appear in burials as discussed in Chapter 4, of which they are an integral part of activities at the site from phase V to VII. While cups also appear in pits, it is not until phases VII and VIII that cups form part of large-scale practices beyond the funerary realm. Their occurrence in 'Remains no. 1' in conjunction with burnt animal remains may anticipate the rising importance of the cups in religious practices, especially when considered that this feature dates to phase VI and thus immediately pre-dates the practices at Sanfangwan.

While the building labelled F2 in trench AT7 is not described in the Dengjiawan report because of too heavy damage, more information is available on the adjacent building F3 (fig. 3.22).[67] It is rectangular with two rooms and was built directly on the surface. The larger eastern room measures 3.4 by 2.94m and the western one 3.4 by 1.45m. The walls are clearly visible with the exception of the destroyed northeastern corner. Two openings are in the south wall and another opening connects both rooms. On both floors are remains of a hard red scorched earth surface as is common for buildings of the period. In the northeastern corner of the smaller, western room are pottery sherds, red scorched earth and some plant ash. It is unclear whether the northern wall continued westwards since much of this area

[66] For the cups see Dengjiawan 2003: 50, fig. 33:10, 14.
[67] Pit H109 cuts into the north wall of the house, underlies the remains number 1 and overlies number 2. For building F2 in trench AT7 see Dengjiawan 2003: 20. On F3, see Dengjiawan 2003: 17-20 and 19, fig. 10.

was destroyed, but there is clearly an opening in the west wall.[68] The purpose of the building is unclear as basically no finds were made inside. But as it is the only building in the excavated area throughout all phases, with the exception of the nearby, but badly preserved building F2, and is located in the immediate vicinity of the 'Remains', tubes and burials, it is possible that may be related to these practices. F3 may only have been in use for a short period of time considering that the contemporary phase VI feature pit H109 destroys its northeastern corner.

Just north of the building a curious find of what remained of eight pottery vessels was made (fig. 3.22).[69] Vessels number 1 to 3 run approximately parallel to the building's north wall approximately equidistant from each other. Five more vessels run in lines approximately parallel to the first row. Vessels number 1 and 2 are well-preserved, but only the base or sherds of the others remain. Nonetheless, it is clear that all stood upright with the mouth facing up. Numbers 1 and 2 are described as made from coarse brown clay and decorated with basketry and applied patterns. Unfortunately, none of the vessels was reported in more detail elsewhere in the report. The suggestion that they are contemporary with the building can be questioned.[70] From one of the published profile views it becomes clear that the vessels are probably later than both building F3 and pit H109, as they cut into H109, which itself cuts into the northern wall of the building (fig. 3.22). Despite this evidence, the excavators believe that the vessels and the building are contemporaneous, as they are in the same layer.[71] The vessels appear to have been dug into the earlier features at a later date. Their parallel alignment with the

[68] The walls are made of a grey-white soil and are about 25 to 27cm wide with a remaining height of 15 to 20cm. They were built atop an even floor, which was covered in a hard layer of red scorched earth. Since no postholes were found, the wall was probably reinforced with wooded planks.
[69] Dengjiawan 2003: 19-20.
[70] Dengjawan 2003: 20.
[71] Dengjiawan 2003: 20.

northern wall of the building hints at the possibility that, despite partial destruction, the walls remained visible. As far as can be gauged from the published materials, these vessels are likely to be similar to the pointed-bottom vessels appearing in phase VIIIa (see below) and could be a related feature.[72]

In conclusion, regarding Shijiahe VI, rich sets of practices are documented at Dengjiawan, some continuing those of Shijiahe V. The complex stratigraphic relationships, demonstrated above, hint at the complex temporal relationships of religious practices during just one phase and in a limited area. These clusters of practices will be fully discussed in the next chapter.

During Shijiahe V and VI other loci within the enclosure, apart from Tanjialing and Dengjiawan, including the western part of Sanfangwan, Xushuling and possibly Huangjinling, were occupied (fig. 3.6). Activities are also documented at loci outside the enclosure, including Xiaojiawuji, Guanshan, Changmenchong, Jingshanpo and Wangjiatai. For example, at Xiaojiawuji, for which the documentation is best, phase VI saw an increase in activities with six buildings, 31 pits, nine ditches and 37 pit and five urn burials. The loci on the outside of the enclosure, especially Xiaojiawuji and Luojiabailing, were linked to the enclosure by the huge open space between the southern and eastern sections of the bank and ditch. This connection was further strengthened by the settlement of Xushuling, maybe in Shijiahe VI, which extended the large settled area from Dengjiawan across Tanjialing into the open space between the bank sections down to Xiaojiawuji and neighbouring loci. Despite the construction of bank in this area, Shijiahe should be regarded as open, as discussed above. In fact, the construction of the additional bank section may have more to do with the manipulation of flows of

[72] They will be included in the discussion of the pointed-bottom vessels in Chapter 4.

water than with limiting movement of people or separating locales from each other. Hence, there may not have been any strict distinctions between the outside and inside of the bank. The impression of a permeable enclosure is further strengthened by the evidence for activities dating to the subsequent phases of Shijiahe VII and VIII.

Phases VII and VIII

By this time, most loci within the enclosure had been settled, for example Huangjinling as evidenced by red scorched earth, refuse pits and pottery sherds (fig. 3.8). The same is also true for Yangjiawan in the southeast. Even more mounds outside the enclosure yielded finds, such as Yangjiazui, Beidi and Xinhe in the east, and Zhoujiawan, Yanjiaguangling, Hujiawan-Tianjiachong, Jingshanpo and Maojialing in the north and the northeast. Finally, also the mounds located west and south of the ditch were settled during this period. Significant changes also happened at Sanfanwang, where all platforms saw activities, for example, buildings were probably located on the western and northern platforms, where red scorched earth, pits and pottery sherds were found. One of the most crucial observations, fully discussed in the following chapter, can be made for the eastern platform, which became a major place for religious practices employing large quantities of the red pottery cups also found in burials. Here it is estimated that thousands if not tens of thousands red pottery cups can be found in layers, together amounting to about 1.5m in thickness, superimposed on the bank's slope.[73] As I will show in Chapter 4, these cups were probably used in religious practices by larger groups of people who subsequently discarded off the cups, which led to the formation of these layers and

[73] Shijiahe 1992: 225 and fig. 9.

layers of cups. These developments at Shijiahe are mirrored by the large quantities of red pottery figurines especially found at Dengjiawan and the occurrence of sets of pottery pointed-bottom vessels at Dengjiawan and Xiaojiawuji in phase VIIIa. They are all evidence for an increase in religious activities in and around Shijiahe.

They also mirror evidence for the changing significance of the enclosure, which largely comes from finds, such as those made on top of the bank at Huangjinling, right on top of the layers that make up the bank.[74] A similar development can be discerned at Dengjiawan (see fig. 3.14), where at first burials and pits were dug very close to the rampart but not into it. This situation changed by phase VII when the bank was covered by further layers of soil not belonging to the layers that make up the bank, such as layers 7 and 5 in figure 3.10. Into these layers, ditches, pits, urn and pit burials were dug. Finally, during phase VIII features were dug into the top of the bank, as for example pit H116 (figs 3.16, 3.17) and possibly also pit H46. All of this points to the changing perception of the enclosure, which was probably increasingly seen analogous to the mounds surrounding the ditch, that is a place to be occupied and lived on.

As argued above, this perception of the enclosure may have been prefigured from as early as the construction of the enclosure when the mounds framing the ditch were piled up in a manner comparable to the bank and maybe even to the height of the bank. These mounds are Shibanchong-Changmenchong along the south side, Yinxintai and Yandouziwan to the west and Huangjiashan-Yangjiashan to the northwest (fig. 3.8). With the exception of Shibanchong-Changmenchong, where none was reported, coring revealed that the other mounds have a layering

[74] Shijiahe 1992: 236.

similar to the sections of the bank.[75] As shown, some of these were settled or somehow occupied by Shijiahe VII, further illustrating the changing importance of the enclosure for the inhabitants.

Dengjiawan and Xiaojiawuji

The loci of Dengjiawan and Xiaojiawuji, with some additional evidence from Sanfangwan, shall serve as examples to paint a more detailed picture of the developments at Shijiahe, especially in relation to the cemeteries. Dengjiawan began as a cemetery even before the construction of the bank. The Dengjiawan cemetery of phase Shijiahe V consists of eleven pit and two urn burials that form the earliest mortuary remains at this locus and at Shijiahe after the Tanjialing cemetery was given up by phase Shijiahe IV (fig. 3.13).[76] After the construction of the bank, the pit burials continued the previously established cemetery, which began with M104, but the burials were dug in alignment with the newly-built bank. In fact, as can be seen in the alignments of the burials M35, M66 and M70 (and also urn W11), the enclosure may have provided the rationale for the orientation of these burials. Although the bank was probably less of a constraint for movement than enclosures are usually being perceived of, it may nonetheless have created an area within the enclosed space that was considered particularly suitable for religious practices as well as burials. The choice of Dengjiawan as the location for ritualised activities, centring on the tube-shaped pottery during Shijiahe V (fig. 3.23), and for burials may have been deliberate. Both practices were probably related, at least spatially.

[75] Shijiahe 1992: 244, 245, 246-247, 249.
[76] Note that the location of burial M45 at Dengjiawan is not known since it is not included in the plan. The list at the back of the report states that the record was lost (Dengjiawan 2003: 298).

This suggestion can be further substantiated by the second area, where burials were found, which is about 10 to 15m further to the south. The six pit burials are associated with pits H11 and H90, in which tube-shaped pottery was found.[77] The second urn burial, W9, was found in the easternmost excavated trenches, also associated with many pits, which contained fragments of tube-shaped pottery. The practices that resulted in the deposition of tube-shaped pottery were probably bolstered by those practices that occurred when a deceased member of the community was interred.

Moving into the subsequent phase VI both at Dengjiawan and at Xiaojiawuji, where burials appear for the first time, we can see clear continuities in burial customs but also a number of marked departures from the previous phase.[78] At Dengjiawan, there is a marked increase in the number of both pit and urn burials (table 4.1). This continuity firmly establishes this locus as a cemetery nested along the curve of the bank, where most of the burials can be found. Their orientation appears to be governed by the curve of the bank resulting in a rather uniform cemetery layout.[79] The impact of the bank on the orientation of burials may also be felt at Xiaojiawuji, where many are oriented north-south or even northeast-southwest approximating the curve of the bank. But a greater number of burials have an east-west orientation, probably because this locus is more distant from the bank. The general orientation of the burials during most phases, with the exception of phases VIII and IX, may have been affected by the construction of the bank.

While the burials at Dengjiawan follow the previously established layout, Xiaojiawuji is a different case. Here, new cemeteries were established all over the

[77] See Chapter 4.
[78] The continuities in burial customs are discussed in Chapter 4.
[79] There are some exceptions with burials in east-west orientation, which may be related to burials in similar orientation at Xiaojiawuji.

excavated area and only some of these were consolidated in later phases through continued interments. While the burials at Dengjiawan remain spatially related to the religious practices as mentioned above,[80] the cemetery locations and the clustering of burials at Xiaojiawuji were probably related to settlement activities. Among the seven buildings found at Xiaojiawuji for phases V and VI, only one dates to the former, while six date to the latter. Overall fewer activities are documented for phase V with only two pits, but 31 pits and nine ditches during phase VI.

During phase Shijiahe VII, we observe continued funerary activities both at Dengjiawan and Xiaojiawuji. Once again the distribution of burials at Dengjiawan displays remarkable continuities (fig. 3.15). Once more, both the northwestern and southern parts of the excavated area were used, but this time burials were much more numerous in the southern section. It appears that a southward shift had occurred. In addition, most of the burials of this phase occupy spots that had not previously been occupied by burials. These observations allow for the suggestion that not only were the burials somehow marked above ground, but also that these markers were maintained and influenced the spatial development of the cemetery. These are clear continuities in cemetery use masked by an all too strict differentiation between chronological stages in the culture-historical approach. Further continuities can be seen in the orientations of the burials as once again we see that the majority of the burials appear to be oriented along the bank, as suggested for the previous phases. And again, only few burials are oriented East-West. A final set of continuities exists in terms of the burial goods deposited, which will be investigated in the next chapter.

[80] Some of the religious practices, such as the use of tube-shaped pottery begun in Shijiahe V, probably continued into Shijiahe VI (see Chapter 4).

At Xiaojiawuji, we also observe similar continuities, coinciding with a strong increase in practices not directly related to burials as well. Six buildings were excavated belonging to either phase VII or VIII, which are difficult to distinguish at this locus due to the way in which it was reported. The strongest increase occurs in relation to pits and ditches with numbers reaching 409 and 22 respectively. Also, other features were discovered at this locus, for example, a 'well' so identified because of the black silt fill.[81] A stretch of 'road' was also discovered extending to 23.9m in length and 1.55-2m in width. It was 'paved' with small pieces of red scorched earth of 0.1-0.15m in thickness.[82] Also, two kilns were discovered, unfortunately none with pottery remains.[83] Important features are the seven sets composed of pointed-bottom vessels, which are located in clusters across this locus. As to be fully discussed in the next chapter, these were the locations of religious practices.

The cemetery in the northwesternmost part of the excavated area continues and the newly dug burials do not interfere with the older burials. Further burials of this phase are found in the southernmost part, here previously unoccupied space was also used but further away from the burials of the preceding period. Some well-used cemetery space fell out of use, such the eastern section of the excavated area. Only one pit and a few urn burials were dug ten or more meters north of these earlier burials and thus very close to or indeed as part of the settled area. However, how contemporaneous these features are remains to be seen, because no distinctions can be made between phases Shijiahe VII and VIII at Xiaojiawuji. While there is an association between mortuary and 'residential' activities at Xiaojiawuji as seen in the short distances between cemeteries, buildings and related features, Dengjiawan

[81] Xiaojiawuji 1999: 127.
[82] Xiaojiawuji 1999: 127.
[83] Xiaojiawuji 1999: 127-128.

continues to be a space separate from 'residential' activities, but still associated with Tanjialing.

During phase VI, the number of urn burials increases at Dengjiawan, with only a few at Xiaojiawuji. They are distributed among the pit burials. Eight urn burials date to phase VII at Dengjiawan. Again, they are found among the pit burials in the northwestern and southern sections of the excavated area. For phase VIII, 15 urn burials are reported. Five are dated to phase VIIIa, and ten to VIIIb. No pit burials are reported for either phase. The situation is possibly similar at Xiaojiawuji, although clear phasing is not possible. Some of the nine urn burials are distributed close to some of the probably earlier pit burials, while others are found associated or at least in close proximity to features in the northeastern section of the excavated area.

This 'phasing out' of pit burials contrasts with the increase in religious activities at these and other loci. For instance, during phase VII and into phase VIII, we see the beginnings of new sets of religious practices at Sanfangwan involving the consumption of liquids from small red pottery cups followed by their discard. These cups are identical to those buried with the deceased until phase VII.[84] At the same time, we witness the appearance of large numbers of red pottery figurines at Dengjiawan and other loci, which were probably also used in religious practices. Then, during phase VIIIa at Dengjiawan and also at Xiaojiawuji, we see the brief emergence of religious practices involving sets of interlinked pottery pointed-bottom vessels. This flurry of activities contrasts with a decrease other, especially mortuary activities from phase VIIIb, possibly indicating a phasing out of activities with only some urn burials and pits remaining.

[84] See Chapter 4 for more details and also for discussions of other practices.

The implications of these developments merit a more detailed discussion at a later stage, especially after a more detailed analysis of the red pottery cups, figurines and pointed-bottom vessel sets. However, it appears that the above-mentioned abandonment of Shijiahe may have been anticipated earlier than previously thought. The end of the pit burials with only urn burials remaining and what appears to be a decrease in domestic activities are all indicators, but these are contrasted by a flurry of religious activities involving large quantities of cups, figurines and pointed-bottom vessels. While the changes toward the end of the third millennium are indeed quite dramatic and sudden, they may have been prefigured by earlier activities.

Phase IX

Chapter 1 has discussed the many hypotheses aiming at explaining the changes in material culture at Shijiahe in phase IX. Most forwarded notions treat this phase as a step backward in terms of the overall historical development of the site. In this section, I will show the ways in which phase IX constitutes a break in the trajectory of the site, but I will challenge the suggestion that phase IX is a period of decline by arguing for regarding this phase in its own right as a re-settlement between two episodes of abandonment.

The best evidence corroborating the notion that Shijiahe was (largely) abandoned before the phase IX re-settlement stems from the fact that settlement activities largely ceased. The occurrence of a major change is also supported by a wholesale transformation of burial customs from pit to urn burials, which was probably foreshadowed by the events discussed in the previous section. The fact that some loci also see activities in Shijiahe IX may be regarded as either continued

settlement of selected loci during and after the abandonment or episodes of re-settlement following the abandonment, but could also have been a combination of both.

While the above has shown an ever-increasing occupation of Shijiahe, the site was used entirely differently by phase IX as already noted by the surveyors.[85] Most striking is the abandonment of the loci that appear to have been central to the site, such as Dengjiawan and Tanjialing, where no finds dating later than Shijiahe VIII were made (fig. 3.24). For Tanjialing, there appears to be no evidence even post-dating Shijiahe VII. This development is especially significant, considering the long history of occupation there. However, not all activities ceased entirely within the perimeter of the bank, for example activities are documented for Xushuling, where an ash pit dating to phase IX was found.[86] While the western and eastern platforms of Sanfangwan were abandoned, finds of pits and numerous red scorched earth bits suggesting building floors, all presumably dating to phase IX, were made on the northern platform.[87] Considering the rich activities including the red pottery cups on the eastern platform, the different activities and their move to the northern platform show a clear disconnect between the phases.

In addition to these remains within the enclosure, most finds dating to phase IX were made outside, especially to the east and southeast (see fig. 3.24). Mostly

[85] Shijiahe 1992: 278. Although the surveyors do not discuss this change in detail, they make the valuable and accurate suggestion that the 'original meaning' of the bank was not extant anymore during the later phase.
[86] Shijiahe 1992: 239.
[87] Shijiahe 1992: 222-223. The profile P_2 next to the primary school revealed a pure layer of red scorched earth extending along four fifth of the profile cut, suggesting that it may have been a building floor (numbered F1). On both sides of the foundation, two pits or ditches were found that could have been the building's drainage ditches. East of the primary school, the surveyors observed a terraced field revealing further red scorched earth beneath the cultivated layers above and approximately at the level of F1. Based on the pottery sherds found in a pit (H1) at the same level as the building floor the surveyors established a Shijiahe IX date for the pit and extended this date to the rest of the northern platform. Further east, but still on the northern platform, some building floors and pottery were unearthed that predate Shijiahe IX (Shijiahe 1992: 223-225).

pottery sherds and sometimes also pits were found at Taishang, Aojiaquan, Panjialing and Beidi in the east,[88] and also in the southeast at Xinhe, Xinnongcun and Yangjiawan.[89] Xiaojiawuji, which was excavated on a large scale, provides the best evidence for the observed changes. It had continuously been settled since phase V. From this phase onward, Xiaojiawuji was a settlement accompanied by a cemetery, very similar but to a lesser degree than during phases VII and VIII, if one only considers the quantity of excavated pits, which drops (the number of buildings remains constant).

Some marked changes happened in phase IX: some buildings, many pits and urn burials show that Xiaojiawuji was occupied and also used as a cemetery. But the cemetery was one composed of urn burials only, as opposed to a combination of pit and urn burials during the previous phases. While features pre-dating phase IX generally do not disturb each other, this is not the case for phase IX. For example, the group of urns discovered in the excavated area labelled 'D' clearly overlies earlier features (fig. 3.25).[90] More strikingly, a large, but shallow pond of 67.5m by 30m in dimensions was dug into the centre of the excavated area destroying pre-Shijiahe IX features.[91]

Several urn burials were discovered at other loci during the survey confirming that these were used as cemeteries, too. For example, one was found in the southeastern section of the Tucheng bank in 1982, where it was dug into the Neolithic bank. Another one was found at Husanjia east of Tucheng.[92] A number of urns were discovered on the southern slope of Tanjiaxiang west of the bank, where

[88] Shijiahe 1992: 262, 264, 268.
[89] Shijiahe 1992: 269, 272; Tianmen 1996.
[90] Compare the illustrations in Xiaojiawuji 1999: 103, fig. 76 and 60, fig. 41.
[91] Xiaojiawuji 1999: 144. The pond was still extant when Xiaojiawuji was excavated. It clearly truncates the road of the earlier phases.
[92] Shijiahe 1992: 237 for Tucheng, and 268 for Husanjia.

an earthen road from Sanfangwan cuts into the deposits revealing their stratigraphic profiles and within them several destroyed urn burials, two of which, W1 and W2, were excavated.[93] The urn burials dug into the bank suggest that, in phase IX, no or only limited knowledge of the bank as a bank may have existed. This impression is also substantiated by the levelling of the bank in the southeastern corner by phase IX.[94] Given the flood-prone nature of the area, the raised mounds of the bank may have appeared like a suitable location for burials.

Returning to the notion of abandonment, it is clear that many loci at Shijiahe witnessed practices quite different from earlier phases. A small number of loci may have remained or became settled areas once more, with most activities being conducted outside of the bank. One can then indeed speak of abandonment, a development that was already foreshadowed by the decrease in certain activities from phase VII onwards. Also, one can speak of phase IX as a re-settlement as most observed activities break with the previous phases despite some overlap. Place was re-made at Shijiahe.

Evidence for Interaction: Other Enclosures in the Middle Yangzi Region

As established in Chapter 1, interaction is a defining feature of prehistoric societies and needs to be fully appreciated, if we intend to improve our understanding of the Neolithic enclosed sites in China. In this respect, it is curious that most of the enclosures in the Middle Yangzi region were constructed at about the same time as the enclosure at Shijiahe, with dates given as early or late Qujialing Culture to early Shijiahe Culture (first half of the third millennium BC).

[93] Shijiahe 1992: 252-254.
[94] See above discussion.

Also, the dates of occupation, as gauged from the excavated finds, suggest dates of abandonment at around the same time as Shijiahe. These coarse observations are all we have for as long as we do not have any better dates grounded in more thorough archaeological phasing of each site derived from larger scale excavations. Instances of earlier abandonment appear to have occurred at Majiayuan and possibly also at Jimingcheng. Only at a very small number of sites there is evidence for activities contemporary to phase IX at Shijiahe, for example at Yinxiangcheng. It may not be surprising if later fieldwork at some of the sites resulting in better chronological resolution confirmed practices similar to those found at Shijiahe and Yinxiangcheng, while still showing clear signs of large-scale abandonment and changes in site use. I will demonstrate that Shijiahe was no isolated case and has to be understood from a regional angle, as already mentioned in Chapter 1. The following will briefly illustrate the life histories of two sites, Yinxiangcheng and Chengtoushan, where comprehensive fieldwork was undertaken, in order to show the alignment of events at some enclosed sites along the Middle Yangzi, which can only be fully grasped, if the sites are seen as being entangled in interactions.

Yinxiangcheng

The site was discovered in the 1950s, followed by a survey in 1983, during which the bank was discovered, and from 1991 to 1992 including some trial excavations, of which a cross-section in the eastern bank is the most significant result (fig. 3.26; see fig. 1.5 for the location). The last survey and excavation in 1995 by a joint Chinese and Japanese team investigated three areas, including a

small section of the western bank, some trenches in the centre of the site and in its southwestern part.[95]

Yinxiangcheng is located in Jiangling, Hubei, about 25km north of the Yangzi on a plain drained by the Juzhang River, a Yangzi tributary. Unfortunately, the site's preservation is far from perfect, especially as its northern third was destroyed by flooding, resulting in it becoming part of Yujia Lake. This illustrates the points made in the previous chapter about the danger that floods probably posed in the Middle Yangzi region. The remaining parts extend about 580m from east to west and 350m from north to south. In the trench on the higher-lying eastern area, the first evidence for settlement was made in the form of red scorched earth and pits dating to before and immediately preceding phase II at Shijiahe. Settlement activities at this location continued until its abandonment after the phase equivalent to phase VIII. Significantly, this is also the only place where all finds dating to phase IX, three urn burials, were made, suggesting that this part of the site was turned into cemetery. Less than three kilometres from Yinxiangcheng lies the urn burial cemetery Zaolingang,[96] also dating to phase IX, and so the question remains how the two are related.[97] In any case, the general pattern is reminiscent of that found at Shijiahe with parts of Yinxiangcheng being used as cemetery.

Other early finds were made underneath parts of the western bank, including the earliest enclosure at the site. These consist of a ditch, which was re-cut during the following periods until it was filled up with earth laying the foundations for the

[95] The best report is that of Okamura Hidenori and Zhang Xuqiu in *Toho Gakuho* (1997), on which the following account is based. This report is very comprehensive and detailed and seems to follow Japanese reporting standards, since it exceeds the two reports on this site in Chinese archaeological journals by far (Yinxiangcheng 1997, 1998). A short English summary can be found in Zhang and Okamura 1999: 92-94. A full report is currently under preparation.
[96] Zaolingang yu Duijintai 1999.
[97] While Zaolingang will be discussed below, the question regarding how the cemetery is related to Yinxiangcheng has to remain open.

bank that was found on top, dating to about phase V.[98] These earliest phases of occupation were followed by the construction of a bank piled up of alternating layers of two kinds of earth, maybe not all too dissimilar from Shijiahe, but of very irregular thicknesses (fig. 3.27). After the site was largely abandoned after the equivalent of phase VIII and subsequently used as a cemetery, there followed a hiatus of activities until the Western Zhou period. Unlike at Shijiahe, where a new enclosure was built using parts of the earlier one, the basic enclosure of Yinxiangcheng was kept, with the bank being broadened and later repaired (phases 2 and 3 of the bank; fig. 3.27).

Finds of Western Zhou pottery across the site attest to occupation throughout this period, although an exact chronology is not possible on present evidence. Later, a Spring and Autumn period (770-500 BC) burial was dug into the inner slope of the western bank, but there is no evidence for other activities at the site. In summary, Yinxiangcheng is a site with very close similarities to Shijiahe, although it is impossible to say whether the site grew beyond its walls in a similar way, as all work focused on the area within the enclosure.

Chengtoushan

The second example is the site of Chengtoushan in Li County, Hunan, located on a small plateau in an otherwise flat floodplain (figs 3.28, 1.5).[99] Discovered in 1978, excavations began in 1991 and continued until 2001, exposing about 6402sqm of the about 12ha area including the bank. The site as it presents itself today is roughly circular, about 315m in from north to south and 325m from east to west. The remains of the latest phase of the bank are still clearly visible, as

[98] Maybe the ditches at Yinxiangcheng and Dengjiawan are another parallel.
[99] The following is based on Chengtoushan 2007a. An English-language summary of the excavations is provided by He 1999, though the work at the site after 1999 is obviously not included.

are sections of the ditch, about 35m wide and 4m deep, running from the southwest along the western bank and ending at eastern part of the northern bank. The remaining sections of the ditch were filled in the 1970s and turned into rice fields, although attempts have recently been made at reclaiming these areas as a ditch for an on-site museum.

Obviously, only the enclosure's final form is visible today. Excavations have, however, revealed a complex development of the site, which will be briefly outlined here. The earliest settlement evidence dates to the mid-fifth millennium coinciding with the earliest enclosure at the site. This enclosure is a ditch of about 3m in width and 1m in depth, of which some parts could be tracked through coring (fig. 3.29). Evidence for occupation during this phase comes from two pit burials and some ash pits as well as rice paddies that were found to the east, outside of the ditch. The following phase, roughly contemporary with the earliest phase at Yinxiangcheng, and thus still earlier than Shijiahe, witnessed the construction of the first bank and ditch, followed by a second bank some time later (fig. 3.29). This bank was probably topped by palisades, as indicated by rows of postholes aligned with the ditch. As can be seen in figure 3.29, each new episode of bank construction led to an widening of space within the bank, as the shape of the eastern half of the site was continuously pushed outwards, while the western half stayed the same. The last two periods (3 and 4) of the bank, respectively corresponding to phases V and VI at Shijiahe, are roughly the same, although the last construction phase saw a broadening of the bank. There is no further evidence for enclosure-related building activities since, although it remained occupied throughout the late Neolithic.

An increase in overall activities at the site, as seen in large numbers of excavated houses, platforms, pits and burials - alone more than 500 burials – occurs

within the enclosure in phases V and VI. Further evidence for rich, possibly religious, practices, especially during the phases dating to during and after the construction of the first two banks, is provided by platforms that were identified as 'altars', although their nature needs to be re-investigated. Some houses and pits, dating to phases VII and VIII, were found. Their dispersed distribution is quite unlike the distribution of houses during the previous phases, when, for example, house remains tended to nucleate in certain areas. This situation may either constitute a change in site use or that the relevant areas where much of the later activities occurred have not been excavated yet. In any case, the fact that there is no evidence for further work on the bank and that some features dating to this period were encroaching onto the bank may support the impression of gradual changes in site use. Unfortunately, a much closer analysis of this settlement, though desirable, is beyond the scope of this chapter. It remains to say that there is no further evidence for Neolithic activities at the site after phase VIII. Apparently, the site was abandoned and not re-settled.[100]

The two examples of Yinxiangcheng and Chengtoushan have provided ample evidence to support the hypothesis that enclosed sites were abandoned after phase VIII with some possible earlier instances in the Middle Yangzi region. Considering the interconnectedness of the region in other aspects of material culture, to be discussed in the next chapter, it is more than likely that both events, enclosure construction and abandonment, were connected regionally.

[100] The enclosed site of Jijiaocheng is very close to Chengtoushan. Maybe the events at the latter are somehow related to the former. We have to await the publication of the recent fieldwork at Jijiaocheng.

After Abandonment: Urn Burials Across the Region

Shijiahe and other sites underwent a major shift from phase VIII to IX. The enclosure began to lose its significance followed by large-scale abandonment leaving a much smaller number of loci occupied during phase IX after re-settlement. This process of abandonment also meant an end to the religious practices that had shaped Shijiahe as a place throughout much of the third millennium. The rich material practices also existed in the funerary domain in terms of pit and urn burials.[101] The shift from pit to urn burials at Dengjiawan during phase VIII possibly somewhat anticipated the abandonment. This gradual shift in the treatment of the dead should come to its full fruition in phase IX when urn burials were the sole burial custom at many sites across the Middle Yangzi, which will be the focus of this section.

Before analysing the cemeteries, some comments on the chronology are required. As shown in Chapter 2, Shijiahe is the only site with a truly long and well-reported chronology, which makes it the benchmark site for dating other sites in the region. This is of particular importance, because Shijiahe is also occupied in phase IX and yields a large cemetery at Xiaojiawuji solely consisting of urn burials.[102] Xiaojiawuji's relative dates allow us to date other, similar cemeteries to the same phase. It is important to emphasise this point when considering the evidence from other cemeteries. A good example is Zaolingang where large quantities of jade-yielding urn burials were discovered, which are overall very similar to Xiaojiawuji. The burials at Zaolingang, however, come from an unstratified context.[103] The urns were so close to the surface that many were damaged defying attempts at producing

[101] See Chapter 4 for a discussion of these religious practices and more detail on the pit burials.
[102] The situation is somewhat comparable for Liuhe, but the evidence is less well reported. See Liuhe 1986 for the report.
[103] Zaolingang yu Duijintai 1999: 6.

a stratigraphy. Further, there are no *dapo guanxi*, i.e. relationships between features that cut into and disturb each other, indicating relative chronological relationships. Some loosely distributed, unreported pottery sherds, summarily attributed to the Shijiahe Culture, are also of no help. The only possible evidence for dating Zaolingang is its close similarities with the Xiaojiawuji cemetery.

Similar evidence for dating must be advanced for Sunjiagang, Li Xian, Hunan, where a number of pit burials yielding jades similar to Xiaojiawuji and the other sites were found.[104] Here, however, we have good pottery evidence that was given an early to mid-Shijiahe Culture date. However, the existence of the jades suggests a later date corresponding to phase IX, a point already made by Zhang Xuqiu.[105] Nonetheless, we have to consider the possibility that the cemetery began earlier and continued into phase IX, thereby providing the earliest possible evidence for the typical Middle Yangzi jades and pre-dating the finds at Xiaojiawuji, Liuhe and Zaolingang.[106] I will return to a discussion of the jades and their role in interactions in Chapter 5.

Cemeteries and their Layouts

As shown above, Xiaojiawuji underwent striking changes in phase IX, the strongest evidence for which is the appearance of a pond in the centre of the locus, much of which was not excavated because of its continued existence to the present day (fig. 3.25).[107] I also mentioned that, while some activities continued at Xiaojiawuji, they seem to have decreased over time. While the eastern and western parts of the excavated area at Xiaojiawuji appear to have seen many activities in the

[104] Sunjiagang 2000.
[105] Jingzhou Bowuguan 2008.
[106] One jade head was found at the Dingjiashan site, also in Hunan, probably Li Xian (Guo Weimin 2009). Although the context has not been reported yet, it most likely dates to phase IX.
[107] Xiaojiwuji 1999: 144.

form of pits, buildings, ditches and also pointed-bottom vessel sets, much more diminished is the amount of activities during phase IX. Some pits appear loosely distributed all over the excavated area. A road was found in the northwestern corner and close to the pond, at least one building to the west and some red scorched earth were found in the north. The most extensive activities are those that are the result of establishing Xiaojiawuji as a cemetery once again. The urns are distributed in two locations, west and east of the pond, which is different from the previous phases, which saw them much more scattered across the excavated area. Roughly half of the urns were buried east of the pond, but some seem to cluster where burials from previous periods had been located. The other half of the urns is clustered closer together west of the pond, just south of many pits and a building (fig. 3.25). Contrasting with the previous phases, it is possible that Xiaojiawuji was mainly a cemetery during Shijiahe IX.

The Zaolingang site is a different case, as it is not directly related to any other site, though its proximity to Yinxiangcheng of about 2km makes it likely that the two sites were connected. But I would not go as far as the excavators and claim that Zaolingang, just as Xiaojiawuji, was the cemetery of the elite residents of the enclosed site, which is a conclusion evidently based on the placement of jades in the urns.[108] The size of the cemetery is estimated at around 6000sqm, but only 2340sqm could be investigated, because the remainder is occupied by farmers' houses. The excavators claim to see a certain pattern in the distribution of the urns as evidenced

[108] See Zaolingang yu Duijintai 1999: 194-195. The excavators go even further and claim that the appearance of the jades is linked to the enclosed sites, which may be a plausible connection in a small sample of two sites, Shijiahe and Yixiangcheng/Zaolingang, even given the time difference between abandonment and appearance of the urn burials. However, Liuhe already provides an exception to this suggestion. In any case, the existence of an enclosure may have played a role in establishing Xiaojiawuji as a cemetery linking the new burials back to the mythical history of Shijiahe as embodied in the enclosure as I will suggest below. This is very different from the excavators' suggestion, which is very much embedded in notions about socio-political evolution connecting enclosures and jades to the emergence of states.

in the alignment of a number of urns but this seems improbable given the incomplete excavation (fig. 3.30). There is no apparent pattern in the distribution, neither is there a stratigraphic relationship between the urns. While, on present evidence, the cemetery does not seem to be carefully planned, no clusters are visible, the lack of intersection hints at the possibility that the burials were marked above ground.

The situation at Liuhe is less clear. Although a site plan was published that shows the location of the trenches (north, west and east), the distribution of the features is not illustrated and can only be roughly gauged from the text, which gives the find spots by trench (fig. 3.31). Liuhe had a long history of occupation, beginning just before the end of the fourth millennium, covering the entire third millennium, and maybe also the early second millennium, and, after a hiatus of around one millennium, there are also Western Zhou finds. While the richest sets of activities were found in the western and eastern trenches, the phase IX urns were found in the northern trenches. Finds of the same phase were also made in the western trenches. It seems that, once again, a separate cemetery was formed. The way in which the burials within this cemetery are distributed cannot be ascertained based on the published materials.

By phase IX, cemeteries containing urns only, many with jades as the only burial good, appear in Hubei and Hunan. These cemeteries show much local variation in terms of what types of jades were buried, but overall the commonalities are stronger than the differences. This impression gained from the urn cemeteries confirms the site biographies established earlier. As will be further shown in Chapter 5, these similarities across a larger region are also evidence for continued interaction. Significantly, the jades buried with the deceased in the Middle Yangzi

were exchanged toward the north and the northeast but without the custom of placing these in urns at the death of a person.[109]

Enclosure Construction in the Middle Yangzi

Another element that feeds into notions of interaction is the construction technique of the enclosures. Similarities in the ways in which enclosures, especially the banks, were constructed may further reveal that and the ways in which societies were connected. The best-known way of constructing banks and walls in China is pounded earth, known as *hangtu*. This was used in the past circa 5000 years by pounding loess with hammer-like tools.[110] When a support frame of wooden boards is used the technique is also called *banzhu*.[111] Building in this manner results in even, horizontal layers and very straight banks and walls. Archaeologically, these layers can be detected including the traces of where the pounding tool hit the soil. The *hangtu* technique is conducive to the loess soil in northern China, as loess grains are angular, which allows them to stand in steep or vertical faces, even without human interference. This property is exploited in *hangtu*.

Southern soils on the other hand are less rich in loess and are more conducive to the *duizhu* technique, which results in loose layers of earth. Soil layers are simply piled on top of each other and then occasionally tamped to give the bank more stability. The layers tend to be uneven in thickness and not level. Also, *duizhu* banks tend to be relatively wide with less steep slopes.[112] As such, they can also be recognised archaeologically.

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[109] See Chapter 5.
[110] Needham 1971: 38. See Yang 2004: 106, fig. 3-7 for illustrations of tools, frames etc from the Warring States to the Qing period (c. 500 BC – AD 1910).
[111] Xishan 1999.
[112] Zhao Hui and Wei Jun 2002: 13, note 40.

The above account of bank construction at Shijiahe has shown that it was accomplished through *duizhu*, specifically through piling up layers of differently-coloured soils on top of each other. The bank is very wide and seems to have had a gentle slope. These parameters are fulfilled by most third-millennium banks in the Middle Yangzi, with the exception of the multi-coloured layers, whose existence needs to be confirmed or rejected for other sites. While the evidence is still outstanding for the sites of Taojiahu, Zoumaling, Qinghe, Wangguliu and Jimingcheng, the situation at other sites is clearer and suggests that *duizhu* was used. For example, at Yinxiangcheng, the Neolithic bank was built through *duizhu* with some evidence for tamping, while the Western Zhou addition appears to have been a combination of both *duizhu* and *banzhu*.[113] The banks at Chenghe, Menbanwan, Yejiamiao, Xiaocheng and Jijiaocheng all appear to have been piled up.[114] Only for Majiayuan 'pounded layers', *hangceng,* have been reported. These are between 14 and 30cm thick.[115] However, it remains to be seen whether these constitute pounded layers in the sense of *hangtu* or tamped layers of piled-up earth. Overall, it appears that *duizhu* is the favoured construction technique in the Middle Yangzi area and maybe this consistency across this territory is no coincidence but the outcome of interaction between the builders.

The question remains whether building enclosures is an idea that may have had its origins in the Middle Yangzi or has come from elsewhere. In recent years, fieldwork in the region has provided us with ample evidence to trace the first Middle Yangzi enclosure back to about 6000 BC (the so-called 'Pengtoushan Culture'). Bashidang in Li Xian, Hunan, is a site covering some 30,000sqm. Apart

[113] Yinxiangcheng 1997: 5.
[114] Chenghe 2008: 28; Menbanwan 1999; Liu Hui 2010: 16; Xiaocheng 2007: 484; Jijiaocheng 2002: 60. For Jiajiaocheng, the brief report mentions that the bank appears to have been built from the soil from the excavation of the ditch.
[115] Majiayuan 1997: 49.

from buildings and burials, the most important discovery has been that of a bank and ditch (fig. 3.32). Its excavated section in the east was constructed by *duizhu*, probably slightly tamped, directly on top of the surface,[116] constituting the earliest instance of this technique. The southern section was also built directly onto the surface. Here the *hangtu* technique was suggested as the layers appear rather tight, but no traces of pounding were found.[117] It is likely that *duizhu* was used but the layers were packed rather tightly.

Evidence closer in time to the third millennium comes from other sites, such as Chengtoushan, where the bank was constructed and re-made four times in total, as illustrated above. *Duizhu* was clearly used for the earlier two episodes of bank construction, for example at the southern section of the enclosure, while those for the later two phases have clear evidence for pounding.[118] The evidence for the mid-fourth millennium site of Longzui in Tianmen, Hubei, which was enclosed by a bank and a ditch, shows no traces of tamping but several episodes of *duizhu* and again no foundation layers.[119] From this, it is clear that *duizhu* probably originated in the Middle Yangzi region and spread throughout this region during the early third millennium.

As shown in Chapter 1, enclosures were built in the Middle Yangzi region early in the third millennium, and thus, on average, earlier than elsewhere in eastern China, including much of the Yellow and Yangzi rivers and Inner Mongolia, with the exception of a small number of *hangtu* enclosures, such as Xishan at Zhengzhou, Henan (fig. 1.6a).[120] Furthermore, as to be investigated in Chapter 5, the Middle Yangzi, exemplified by Shijiahe, was widely connected with other

[116] Pengtoushan yu Bashidang 2006: 224.
[117] Pengtoushan yu Bashidang 2006: 227.
[118] Chengtoushan 2007a: 84 *et passim*.
[119] Longzui 2008: 5-6.
[120] See Yang Zhaoqing 1997: 56 on Xishan.

regions especially Anhui, Shandong and Henan as seen in selected pottery and jades. Hence the question arises whether the enclosure construction technique was also part of these interactions.

Only a few enclosures with banks were found downstream from Wuhan. The earliest among these, dating to the early to mid third millennium, is that of Gaixia, Guzhen, Anhui, which is enclosed by a rectangular bank and ditch, covering some 150,000sqm, which was re-built and -used in Han times (206 BC – AD 220).[121] According to what has been published to date and confirmed by the excavator, the bank was also constructed using *duizhu*.[122] The same was confirmed for Sunjiacheng, Huaining, Anhui, a mid-third millennium enclosure without a ditch (fig. 1.8).[123] Even further downstream in Zhejiang, the recently-discovered enclosure at Mojiaoshan, dating to the mid-third millennium, was also built using *duizhu*.[124] The innovation at this site is the use of a layer of stones as foundation for the bank, which is not usually the case in *duizhu* construction further upstream. The evidence from these sites suggests that the notion of building banks using *duizhu* may have originated in the Middle Yangzi and was subsequently transmitted downstream through the frequent interactions throughout the third millennium.[125]

The situation is different for the Sichuan Basin, where a number of mid-third to early-second millennium enclosures were found. Significantly, these may have been built of pounded earth instead of *duizhu*.[126] Maybe the connection is not with the Middle Yangzi, but with the Middle Yellow River, where all enclosure dating to the same period were built of *hangtu*, even those sites that were connected with the

[121] Gaixia 2010. No illustration is available.
[122] Wu Jiehong (Shuo Zhi), personal communication, September 2011.
[123] Shuo Zhi 2008: 31.
[124] Liu Bin 2008.
[125] Possible routes of interaction will be suggested in Chapter 5.
[126] See Baodun 1997: 43; Mangcheng 1999: 14.

Middle Yangzi.[127] This tradition of *hangtu* enclosures is certainly related to the ubiquitous loess along the Yellow River. It is further rooted in earlier enclosures, such as Xishan, establishing a tradition that runs parallel to the *duizhu* tradition along the Middle and Lower Yangzi. Both traditions meet in the Lower Yellow River region.

As mentioned in Chapter 1, a large number of third-millennium enclosures were found in Shandong and adjacent provinces. One would expect these to have been built from pounded earth as is customary along the Yellow River, but apparently, *hangtu* was not used exclusively. In a survey of the Shandong enclosures, Zhang Xuehai divides these into two basic groups, those built in plain areas and those built on mounds.[128] The former, as exemplified by Bianxianwang (fig. 3.33), appears to have been largely built of *hangtu* and *banzhu*, while the latter, such as Wangjiazhuang, were built of *duizhu* only or of a combination of both. The banks of Tenghualuo, for example, were constructed as a combination of *duizhu* and *banzhu*.[129] The site has an outer and an inner enclosure. The former consists of a bank and a ditch. It appears that the core of the bank was built of *banzhu*, while the outer rampart was piled up with soil from the ditch excavation.[130] Given the extensive contacts of Shandong with both the middle reaches of the Yellow River as well as the Middle and Lower Yangzi, it is possible that this combination of both constructing traditions is an outcome of these interactions. These examples show the significance of interaction as a central concept for understanding Neolithic enclosures.

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[127] See, for example, Wangchenggang 2007: 64; Mengzhuang 2003: 87 *et passim*; Haojiatai 1992: 64; Guchengzhai 2000: 6, 2002: 57; Fang Yanming 2009: 35 (for Wadian).
[128] Zhang Xuehai 1996: 44-45.
[129] Tenghualuo 2001: 36.
[130] Tenghualuo 2001: 36. Zhang Xuehai (1996: 45) believes that this combination had the effect of improving the enclosures' efficiency and quality, as it allowed increasing the foundation, on which an even larger bank could be built.

Conclusion

This chapter has illustrated the great complexities of the Shijiahe site through the application of the phase-by-phase chronology established in Chapter 2 and approaching the archaeological evidence from the angle of thick description. The chapter has made the following contributions to our understanding of Shijiahe and the Middle Yangzi region:

The chapter opened with tracing the extent of the Neolithic bank and ditch by peeling away the Western Zhou enclosure at Tucheng and highlighting the signature layers of differently-coloured soils of which the bank is constructed and allow for its identification as such. These soil layers have not found any attention in the literature. The identification of these layers has also contributed to a revised understanding of the construction process and I suggested that the care that was invested into constructing the bank of these processed soils reflects the importance of 'processes of making' with groups of people periodically returning to the site to construct the enclosure, thereby fostering a group and site identity, which may be crucial to understanding the 'success' of Shijiahe as a site until its abandonment.

The motivations that guided people to construct the enclosure are possibly religious in nature. I have shown that Dengjiawan was a cemetery before the enclosure was built and that this cemetery continued afterward. The consolidation of Shijiahe as a place of special significance may have been of sufficient motivation to construct the enclosure. As such, this interpretation alters our understanding of possible reasons for enclosure construction in Neolithic China. It allows us to move away from interpretations favouring casting enclosure construction from the angle of urbanism as relayed in Chapter 1.

Another important realisation of this chapter is the fact that the enclosure was constructed in one phase, phase V. Equally important is the realisation that the signature layers of soils were also found in mounds surrounding the bank and ditch showing that the same care was taken in their construction and that they formed part of the enclosure from the outset. The significance of these mounds has not previously been realised. As many of these mounds were occupied in phase V and/or later, it was possible to re-think Shijiahe as a site that is not limited to the confines of the 'conventional' bank and ditch, but as a site, which incorporates loci beyond including the mounds and that this was intended from the outset. This realisation contrasts with the notion regarding the loci as part of settlement hierarchies centring on the bank and ditch for their central place. I argue instead that these loci, as for example Xiaojiawuji, were part of the site, which needs to be understood differently. The impression of the permeability of the enclosure was amplified by the realisation that the bank may have changed in meaning for the inhabitants who increasingly encroach upon as also seen in an increase in settled loci beyond the perimeter of the ditch.

Large parts of the chapter discussed the development at Shijiahe chronologically. While leading to a revised understanding of the enclosure construction and clarification of the date of construction, they also chronicled the differences and similarities from phase to phase. One of the results is the interpretation of Shijiahe as an open site including the changing significance of the enclosure for the inhabitants, as just relayed. The wider significance of this realisation will be illustrated in the chapters that follow by linking it to developments in religious practices, only hinted at in this chapter, to the wider developments and interactions, including mortuary practices.

Another important aspect is related to phase IX and the abandonment of the site. I argued in Chapter 1 that most of the hypotheses trying to explain phase IX have failed as there is a misunderstanding of the causalities of change. In this chapter I have shown the ways in which phase IX constitutes a break from the previous phases and that a form of abandonment happened despite minor continuities. Phase IX with its distinctive activities should therefore be re-cast as re-settlement and investigated in its own right. I have also confirmed that the abandonment is best understood as a regional phenomenon. While it is not necessary to repeat what was said in Chapter 1, it is unfortunately still impossible to fully explain why the abandonment occurred.

I have also shown that enclosure construction in the Middle Yangzi should be seen as a regional, connected phenomenon. The appearance of similarly constructed enclosures at about the same time cannot be coincidence. While the reasons for construction as discussed in detail for Shijiahe may not be applicable to the other sites, as each site merits such in-depth discussions in their own right, enclosure construction can nonetheless be connected. Re-configurations of the landscape as massively as for example at Shijiahe might not have gone unnoticed and have been communicated across the region.

But such communication may have also reached areas beyond this region. As shown, the *duizhu* construction technique was probably appropriated downstream because of interactions with the Middle Yangzi. This technique may have even reached Shandong where both techniques were combined. As the Middle Yangzi enclosures pre-date most other third millennium enclosures an initial impetus from this region appears likely but has not been realised or acknowledged until now, just as the fact that the Middle Yangzi third millennium pre-date the

enclosures in other regions has not been sufficiently appreciated before. The east and northeastward directionality of the possible transmission of knowledge of enclosure construction technique, which is further supported by the directionality of other interactions shown in Chapter 5, has the potential to challenge the common 'out of the Yellow River' paradigm and envision contact between the eastern Chinese regions in a new, alternative light.

In the following chapters, I will enrich our understanding of Shijiahe in its wider context. While referred to in this chapter, Chapter 4 will investigate the religious practices at Shijiahe in great detail and offer re-interpretations of some of these practices, while at the same time relating these to the overall developments outlined in this chapter, allowing for a more comprehensive picture of the site. Chapter 5 will show that these religious practices were part of wider regional interactions and even reached areas further north and northwest. I will show that the connectedness of enclosure construction and abandonment are no anomalies but fit into wider patterns of interactions at Shijiahe. Discussions of access routes and the location of Shijiahe will further add to our growing knowledge of why the enclosure was constructed by suggesting that its location was favourable within the network of interaction it is entangled in.

Chapter Four

RELIGIOUS PRACTICES AT SHIJIAHE

Introduction

In order to fully grasp the developments at Shijiahe we require a more detailed understanding of the practices occurring at the site. While the previous chapter has provided a biographical account of the developments of the site, this chapter will focus on a number of selected religious practices. The interactions these are entangled in will be dealt with in the next chapter.

The practices discussed include the deposition of tube-shaped pottery found at Dengjiawan dating to phases V and VI. In phase V, we also see the beginning of the use of red pottery cups in burials, in which these are consistently placed until phase VII. During phase VII we see a general increase in practices, as for example, larger depositions of such cups at Sanfangwan, where they were used in periodical religious practices, involving the consumption of liquids. It is also in phase VII that we see the appearance of red pottery figurines in the shape of animals and later humans. During phase VIII, further enrichment of religious life takes place through the introduction of pottery pointed-bottom vessels that were deposited in sets both at Dengjiawan and at Xiaojiawuji. Only the cups and the animals appear to continue into phase IX. I will argue for each of these types of object that they were part of religious practices. In the conclusion I will link these practices to the developments traced in the previous chapter.

Tube-shaped Pottery

Figure 4.1 shows a well-published example of the kind of tube-shaped pottery found at Dengjiawan in phases V and VI. This section will discuss this type of pottery, especially its role in ritualised practices at Dengjiawan. I will show that these practices may have been constitutive in the layering of religious practices at this locus during the two phases in question. The finds of similar pottery at other Middle Yangzi sites and hence interaction along religious lines will be discussed in the next chapter.

The finds of tube-shaped pottery cluster into five locations (fig. 3.13):

1. AT301 in the southern part of the excavated area;
2. AT607 in its eastern part;
3. AT6, AT7 and T11 with pit H110 in its western part close to the bank;
4. pit H28 with pits H90 and H11 between AT301 and AT6;
5. pits H79,[1] H74, H66, H65, H86, H96 and H71 also in the eastern part south of AT607.

While AT301 (fig. 4.2a, b and 3.23) is the best-known example and the most complete arrangement of tube-shaped pottery, most other locations yielded at least large quantities of sherds of tube-shaped pottery, which justifies their inclusion into the clusters.[2] The excavation report frequently mentions the problematic circumstances of preservation, which made it difficult to properly assess features. It is thus likely that the concentrations of sherds in some clusters may once have been groups of complete pottery tubes as in AT301 and AT607.

[1] Pit H79 could not be located on the published plan (Dengjiawan 2003: 15, fig. 7), but according to the report (Dengjiawan 2003: 132) it cuts into H84, which corresponds to pit H78 on the plan. But there is also in H78 for the later phases. Hence, H78 on the plan for the earlier phases should be H79.
[2] Yan Wenming (in Dengjiawan 2003: 3) believes that there are many fragments because the tubes may have been shattered after each use. The huge concentration of basically complete tubes gives a different impression. Much care was taken to deposit them properly. The sherds could be better explained as a result of taphonomy.

Dating

As noted in the excavation report, the date of the tube-shaped pottery is not entirely clear.[3] But stratigraphic evidence (see below) and the fact that fragments of such pottery were found in pits H90, H110, H79, H74, H66, H65, H86, H96, H71 and H11, which clearly date to Shijiahe V, suggests a similar date for the tube-shaped pottery. There is strong evidence to suggest that the tube-shaped pottery was still known in phase VI based on the fact that similar pottery was found at the nearby site of Qujialing in layers dated to the equivalent of phase VI (see fig. 5.1). Additional evidence is provided by the clustering of subsequent phase V and phase VI activities around the location of the tube-shaped pottery as the below analysis will demonstrate.

Typology

The total of 32 excavated, relatively complete tube-shaped pottery pieces can be divided into five types (A-E),[4] but only types A to C are found in larger numbers. Type A (fig. 4.3) is a tall and thin tube ending in a dome at one end and in a slightly flaring mouth at the other,[5] made of a fine red or red-brown pottery.[6] The three examples of this type have up to three small round holes in the walls. The only complete piece is about 71.2cm in height and 13.2cm in diameter at the opening. The diameters of the other two pieces are very similar, but the pieces are shorter in height, as the top sections are missing. There are two pieces that were grouped as

[3] Dengjiawan 2003: 28.
[4] Dengjiawan 2003: 61-67.
[5] Zhang Xuqiu 1992: 224 *et passim* calls these 'small cylindrical devices'.
[6] Objects at Shijiahe, which were used in religious practices, tend to be made from fine red pottery, such as the cups, the tubes and the figurines. Maybe the colour red was considered to have religious significance.

type B (fig. 4.4), again made from fine red pottery.[7] The top section basically consists of type A but is joined to a middle section, which is round or elliptical and covered in protruding, finger-like spikes. The bottom section logically continues the cone shape of the top section and is covered in rows of applied saw-tooth-shaped notches. Both pieces are almost 1m in height. The spiked middle section and the lower section with rows are very similar to what was grouped together as type D (fig. 4.5a). It is possible that these were joined with the narrow tubes of type A, which in turn would produce type B as suggested by Zhang Xuqiu.[8]

The third type is type C with 22 examples (fig. 4.5b).[9] These are fine red pottery cone-shaped tubes with a narrower open joint at the top end and a wider opening at the bottom. The outer surface is covered either in numerous tightly packed thick rows or less tightly-packed thinner rows of applied saw-tooth-shaped notches. The diameter of the opening is a perfect fit for either type A or type B, as again suggested by Zhang Xuqiu. All objects of type C are of similar height, between 60 and 70cm. As we will see shortly, the tubes were probably designed for assembly in different ways, almost like modules. An odd piece was discovered in trench AT6, which seems related to the tube (fig. 4.5c). Although heavily damaged, one can discern the notched rows, the round holes and the tube-shaped cross-section. On each of the four sides is a tube-shaped projection. It is related to a similar piece discovered at Qujialing (see fig. 5.1). One could imagine that it once served as middle section just like type D. Type E, found in pit H71, is also made of fine red pottery and measures 17.2cm in remaining height and is 8cm across at the mouth (fig. 4.5d). The mouth section is similar to those of type C. The bell-shaped

[7] These are called 'nippled cylindrical devices' by Zhang Xuqiu (1992: 224 *et passim*).
[8] Zhang Xuqiu 1992: 226. The diameters of the mouth of type A and that of type D (about 10cm) confirm that they would fit together.
[9] Zhang Xuqiu (1992: 224 *et passim*) names these 'thick cylindrical devices'.

lower section is different from type C and finds its closest parallel at Wangjiagang (fig. 5.3b).

Current Interpretations

As the tubes are unusual and unique, they have attracted some attention. The main interpretation, provided by Zhang Xuqiu, has been accepted by most scholars, at least in China.[10] His argument is that the type B tubes (fig. 4.4) are key to understanding their meaning, as these incorporate both form and use of the other two major types (A and C). Focusing on type B, he goes on to postulate that the character *qie,* found in inscriptions on oracle bones and bronze vessels of the Shang and Zhou periods (late second millennium through first millennium BC), looks similar to the tube-shaped object (fig. 4.6). The two strokes in *qie* appear to divide the character into three parts just as the tube-shaped piece is divisible into three parts. Hence, Zhang concludes that *qie* is its representation.

The bronze inscription version of this character, however, has often one or three horizontal strokes, which according to Zhang is unproblematic, as later, i.e., Shijiahe Culture, locales with interlinked pointed-bottom vessels (see below and fig. 4.37) use different configurations to form a set. Consequently, every stroke is considered to stand for the mouth of one pointed-bottom vessel and when the number of such vessels varies, the number of strokes varies accordingly. Further, the character *qie* does not only stand for the phallus in oracle bone and bronze inscriptions, but with the addition of a man in profile making offerings to a phallus, it also stands for the worship of ancestors. Zhang concludes that the tube-shaped

[10] Zhang Xuqiu 1992: 226-229; 2004: 207. Zhang's view was picked up by Meng Huaping 1997: 225; Guo Lixin 2005: 148 *et passim*; 2009: 48; Zheng Zhonghua 2000; and also by Lee-Kalisch in Goepper 1995: cat. no. 8. This was dropped from the English edition of Goepper 1995 (see Rawson 1996: cat. no. 11). Most scholars agree on a religious context for the tubes.

objects and the later vessels are evidence not only for a society favouring males and patriarchy through its phallic symbolism, but also for ancestor worship. The tube-shaped objects could thus be called *taozu*, pottery ancestors (or phalli). Following on from that, Zhang argues for the tubes being used in activities with the purpose of asking for the blessing of the ancestors and the prevention of catastrophes as well as for reproduction and prosperity. Such religious activities have the purpose of bolstering the power of leaders, possibly through the help of professional 'shamans'.

While I agree that the tube-shaped objects were used in religious activities, I doubt the validity of the above interpretation, which clearly stretches the boundaries of analogical reasoning.[11] First, the tubes may not represent phalli. A suggestive shape does not warrant this identification. Secondly, there is no continuity between the practices involving the tube-shaped objects or of these types of pottery down to more than a millennium later when the character for ancestor was first inscribed on bones and bronzes. There is thus no (direct or indirect) connection between the activities of the late Neolithic along the Middle Yangzi and the religious practices of the much later Bronze Age in north-central China. Similarities between the pictograph and the tubes are probably mere coincidence. Even the connection between the tubes and the pointed-bottom vessels of the later phases at Shijiahe is implausible, as the pointed-bottom vessels originated in Shandong (see below and Chapter 5). This widely accepted interpretation falls into the same pitfalls as much of the work relying on later textual materials.[12] An alternative interpretation, which fully scrutinises contexts of deposition and takes the involved practices into account, should be sought.

[11] Wylie 1985.
[12] See the Chapter 6 for a full discussion of the historiographical orientation in Chinese Neolithic archaeology.

An Alternative Interpretation: Practices from Production to Deposition

As shown, the tube-shaped pottery found at Dengjiawan can be grouped into five clusters. Among these only few allow a reconstruction of the final deposition of the tubes due to better circumstances of preservation and probably also excavation. Unfortunately, not all of these were described or illustrated in detail. One of these is trench AT607 containing a group of type A pieces apparently placed in parallel rows (fig. 4.7) and a spiked type D, whose placements is unknown. Pit H28 was described both by Zhang Xuqiu and Yan Wenming, but illustrations were not provided.[13] According to these scholars, H28 contains fragments of about seven to eight of the thick cone-shaped tubes of type C, four of which could be reassembled. Below the sherds of these was a 95cm long piece of type B, next to three tubes of type A, two of which were linked. According to the typological section in the Dengjiawan report, a spiked objects of type D also comes from this pit H28, but was not mentioned by either Zhang or Yan.[14]

The best-described and illustrated example is found in trench AT301 (fig. 4.2).[15] The arrangement of tube-shaped objects centres on pit H59 with tubes and combinations of tubes either in alignment with the pit's edge or partly inside the pit, which itself was not excavated entirely.[16] Considering the dimensions of the pit, which measures about 1.12m by 3.26m and was excavated to a depth of 0.72m, the interlinked tubes on the edge cover a considerable stretch of several meters. They can be roughly divided into two groups. The first group, at the southeastern edge of the pit partly reaches out from it. Although much damaged, the group is still about 2m long and appears to consist of two interlinked tubes of type A with a third piece

[13] Zhang Xuqiu 1992: 225; Yan Wenming in Dengjiawan 2003: 3. The description in the latter is basically taken from the former.
[14] Dengjiawan 2003: 66, fig. 45:3.
[15] Dengjiawan 2003: 28-30.
[16] Dengjiawan 2003: 292, table 1.

that is damaged beyond recognition. The other group basically consists of two rows. Again the end piece, here numbered as 4 (fig. 4.2b), is unrecognisable, but it is clearly linked to the next tube that is similar to type A, which in turn is linked with two type C tubes that are joined at the large open ends. A similar composition can be found further along, which may originally have been connected to the other part. Parallel to these type C tubes are two tubes of type B, one, heavily damaged though it is, sticking out from the other. Both parts are 2 to 3m in length. Most tubes, no matter to what group they belong, lie directly on top of natural soil, while the soil below those numbered 5, 6 and 7 was characterised as 'turned soil'. Fireplaces around H59, as mentioned by Lee-Kalisch,[17] are nowhere reported. Locales that may fit this description, in close proximity to one of the tube locations (AT6), will be discussed below.[18]

It appears the tubes were meant to be used in sets, as shown by the case of pit H59 (fig. 4.2). Once assembled, as for example in figure 4.1, these were easily as tall or taller than a standing person and, if ever used in this way, must have made an impressive sight, especially if several were set up vertically. However, while the assemblage of the tubes in the way depicted in figure 4.1 is entirely possible and allowed for by the way in which the various types of tubes were made, this reconstruction does not appear to be based on the evidence recovered from the features just described, so this reconstruction should be treated with caution.[19] Nonetheless, the measurements for the various types of tubes given above shows that they were made to fit, so that each type could be seen as a module of a larger object. But it should be noted that there appears to be no single 'right' way of

[17] Lee-Kalisch in Goepper 1995: 184.
[18] See Dengjiawan 2003: 31-33.
[19] This reconstruction must have been an inspiring factor in interpreting the three (post)holes found in as part of the 'Remains No. 1' as potential location where the tubes were erected (Dengjiawan 2003: 31; fig. 3.21). While this remains a possibility, it can hardly be confirmed.

assembly, as we can see in figure 4.2 where there are two occurrences of type C pieces being aligned at their larger openings.

The practices that led to the final deposition of these tube-shaped objects must have been a group effort. The extraordinary size of the objects is not mirrored by any other pottery found at Shijiahe and may have necessitated for a group of people working together. They would have joined forces to mine the large amounts of clay necessary for making these pieces followed by careful processing of this clay so that it could achieve a fine texture and even colour during firing. Several people well-versed in the manipulation of clay would have come together to raise the long tubes through coiling, although some sections could have been formed on the wheel and then fitted together. From personal inspection of such pieces in the Jingzhou Museum in September 2011, it appears that the surface was paddled to achieve an impression of evenness. The pieces were finished by applying the saw-tooth-shaped rows of clay and by attaching the finger-shaped protrusions on the spherical objects. Holes were drilled into the tubes of type A probably so that air could escape during firing. The kilns in which these objects were fired must have been quite large, though they have yet to be located. Firing was probably a pain-staking effort considering that the temperature had to be stable throughout to achieve an even colour.

The next step leading to the final deposition as described probably also involved a group of people and may have been witnessed by an even larger group of participants and spectators. Judging from trench AT301, the practices involved may have included the digging of pits, which could accommodate the pieces, although some may have been placed on the ground. Several people at a time may have moved the pieces, possibly variably assembling them as the modules allow. In fact,

considering that the pieces appear to fit quite precisely, this fitting must have been a goal in the production process and involved thorough planning and careful firing to achieve even shrinkage. The whole assemblage of the pieces at the various locations at Dengjiawan was likely to be a performative event and considering the size of the pieces the bodily movements to achieve this may have been thoroughly choreographed.

From descriptions and depictions of AT301, AT607 and H28, it appears that clear rules may have governed the final deposition, whose recurring feature is the placement of the tubes in rows several meters in length. This final deposition again may have been a group effort. It is possible that the tubes were re-used for the same practices over and over again, which would imply that the pits were not filled in after placement of the tubes. In fact, as I will show in the next section, knowledge of the location of the tubes probably persisted into phase VI as demonstrated by the continued use of each location throughout phase V and into phase VI, often involving tubes, whose fragments were found in several pits. Judging from the precision required in the production of the tubes and the rules governing their deposition, it can be concluded that their use between production and deposition was also highly prescribed. The entire chain of events from production to deposition may thus rightly be regarded as ritualised action within a religious framework. This impression is further confirmed below as some locations came to be associated with burials, but all locations saw the digging of pits sometimes resulting in complicated stratigraphic sequences.

As hinted at repeatedly in this section, the practices resulting in the deposition of the tube-shaped pottery in the mentioned five locations probably triggered the clustering of the depositional outcomes of more activities in the same

locations during phases V and VI. These practices appear closely related to the use of Dengjiawan as a cemetery both spatially and temporally. Although the current scheme of a phase-by-phase chronology has already a much higher resolution than the usual culture-historical divisions, it is still too crude and insufficient to trace practices visible only at a higher chronological resolution. Such higher resolution is provided by the schematic renderings of sequences of stratigraphy by trench provided in the excavation report, which are basically equivalent to a Harris Matrix.[20] Unfortunately, the way in which the site was recorded and reported, it is almost impossible to line up the stratigraphic sequences in adjacent trenches. Although the report does provide a table listing the layers in each trench,[21] matching them across trenches is unfortunately impossible. Based on the provided stratigraphic sequences, the published site plan and the division of features into phases V and VI, I was able to roughly integrate the features across trenches and trace the general chronological development, although it has often not been possible to be exact about all chronological relationships.

The first example is the cluster around pit H28 encompassing trenches T37, T28 and AT203 (fig. 4.8). This pit is one of the earliest features together with the burial M13 and M14 in the same trench, no other features dating to phases V or VI were found on top of these features with the exception of burial M4, which cuts into the edge of H28. As mentioned above, H28 contained fragments of up to eight type C tubes, beneath which an example of the type B variant was lying next to three tubes of type A. The location of the type D object is unclear. From the site plan it appears that tube-shaped pottery was found in the pit and adjacent to it, maybe not all too different from trench AT301. Burials M13 and M14 appear

[20] Dengjiawan 2003: 130-133.
[21] Dengjiawan 2003: 11-13.

contemporaneous and their proximity to pit H28 intimates a close connection between burials and other religious practices at Dengjiawan. The next feature, burial M4, is slightly later than H28 as it cuts into it. Pit H90 is probably of the same date as M4 as both are cut into by H11. Pit H90 shows the consecutive nature of depositions pit fills, which can be rarely be observed due to the way in which pits are excavated in China.[22] Pit H90 is irregular in shape, but measures 2.66m from east to west, 2.12m from north to south and 0.90m in depth (fig. 4.9). From its profile, the pit appears to have been re-cut at least once. The lowest layer of pit fill (no. 4) is significant as it contains fragments of tube-shaped pottery, which directly relates the pit to the practices leading pit H28 in the adjacent trench. The next fill (no. 3) is the bulk of the pit and contained sherds of different types of pottery with grey, red and yellow fabrics. Fill no. 2 contains a number of recognisable vessels, such as *dou*, high-necked jars, feet of tripods and eggshell thin painted pottery cups. The top fill also contained a number of pottery pieces, such as *ding*, *huxingqi*, bowls, jars and cups. The depositional sequence suggests that the pit was curated over a longer period of time resulting in the gradual deposition of objects. The depositional episodes may be the result of religious practices related to the burials and the tube-shaped pottery. Cutting into both H90 and M4 is pit H11 followed by burial M3. In phase VI, first burial M26 and then H64 overlie these features.[23] Both pit H11 and H64 contain a variety of pottery, but, importantly, H11 also yielded fragments of tube-shaped pottery. The example of pit H28 illustrates that the initial deposition of tube-shaped pottery may have resulted in the consecutive excavation of pits and also burials throughout phase V and into phase VI showing the

[22] Dengjiawan 2003: 23. The pit fill is only rarely reported so that the sequence of deposition can usually not be established.
[23] It is unclear how ditch G1, dated to phase V, relates to these features, but the fact that a number of pottery sherds were found in it (Dengjiawan 2003: 26-27), suggests that it could be treated analogous to the pits.

continued significance of the tube-shaped pottery. This impression is further boosted by the occurrence of tube-shaped pottery fragments in two of the later pits. It is also clear that the practices involving the pottery tubes are intertwined with burials.

The constitutive nature of these religious practices is also demonstrated by the second example, which centres on the cluster of trenches AT6, AT7, T10 and T11 (fig. 4.10). According to the site plan, tube-shaped pottery appears in all trenches with the possible exception of T10, although it remains unclear what types of tubes were deposited there.[24] The dots on the plan indicating the distribution of tube-shaped pottery, however, suggest a wider distribution, though the circumstances of preservation were probably not beneficial to provide further details. According to a description in the report's section on 'religious remains (*zongjiao yiji*)', in the eastern part of trench AT6 there is layer of loess, on or as part of which belongs a layer of pottery sherds, largely consisting of those of pottery tubes.[25] The occurrence of this layer of tubes suggests that, just as in H28, the pottery tubes were the earliest depositional episode in this location. Their deposition coincides with the excavation of burials adjacent to the tube feature in the trenches concerned, which are related to the general development of the cemetery close to the bank as detailed in Chapter 3. I will not further discuss the sequence of burials apart from highlighting the fact that once again burials appear closely related to the tube features. Significantly, pit H110 in trench AT6, which overlies burials M66 and M70, yielded tube-shaped pottery fragments.[26]

[24] In the typology section of the report only the piece with the protruding tubes is listed as from trench AT6 (Dengjiawan 2003: 66, fig. 45:6).
[25] Dengjiawan 2003: 31.
[26] Dengjiawan 2003: 20.

These are the earliest features in the discussed trenches, all dating to phase V. On these follows a hive of activities in phase VI, mostly confined to trenches T10 and T11. In the former we see the construction of building F3, which was described in Chapter 3. In the latter we see an even richer sequence of activities, all the likely result of religious practices. The first layer of activities centres on 'Remains No. 2', which, as relayed in Chapter 3, consists of a platform of alternating layers of ash and red scorched earth. The centre of the platform contains evidence that conflagration activities were practised here. Later are pit H117 and, more importantly, 'Remains No. 1' consisting again of differently-coloured soils and ash with a platform in the centre.[27] There are some hints that conflagration took place here as well. It is significant that, in addition to one stone axe and charred animal bones and teeth, five painted pottery cups were found here. These are typologically related to those found in burials and show that religious practices involving cups were not solely confined to funerals before phase VII. Burial M85 was dug right into 'Remains No. 1' followed by pit H109 cutting both into 'Remains No. 1' and building F3, concluding the sequence of practices for phase VI. This complex sequence confirms once more that the practices involving the tube-shaped pottery were constitutive for the clustering of later episodes of religious practices at Dengjiawan. A similar case could be constructed for the pits clustering around trench AT605. It is probably no coincidence that, in and around trench AT6, many burials can be found, as it is this area where the major part of the cemetery during phases V and VI was located. Again, burials and other religious practices are spatially very close.

[27] See Chapter 3 for details.

Summary

Sets of various types of large pottery tubes or their fragments were found in phase V and VI features at Dengjiawan. They were often deposited in long, parallel rows, which is the outcome of religious practices involving a certain kind of performance. While current interpretations emphasise phallic symbolisms due to their focus on one of the ways in which the tubes could be assembled, the final deposition of the tubes shows that many different ways of assembly were possible. Nonetheless I agree with the most scholars who regard the tubes as used in religious practices. The above discussion has shown the consequences of the establishment of the religious practices focusing on the tubes throughout phases V and VI. It has gone unnoticed so far, that the five clusters where tubes and tube fragments were found saw a complex layering of religious practices as illustrated by a closer look at the stratigraphic sequences and the repeated finds of tube fragments in pits and their close association with burials. It can thus be argued that not only did the practices involving the tubes trigger a flurry of religious activities in the exact same locations for two phases, but also that these may relate to Dengjiawan's function as a cemetery. As such, phase V witnessed the creation of Dengjiawan as a locus of religious importance before, during and after construction of the enclosure.

Another aspect relates to the occurrence of tubes beyond Shijiahe. While more fully discussed in the next chapter, it requires mention here that tubes were at Shijiahe and also at other Middle Yangzi sites, such as Qujialing and several other sites, but in much smaller numbers (fig. 5.4). These finds hint at the possibility that not only the tubes were known beyond Shijiahe, but also that the associated practices may have had significance at other sites. It is a recurring feature of religious practices at Shijiahe involving prominent objects, such as the tubes, red

pottery cups and figurines, that these are also found at other sites where they may have had the same or at least similar religious connotations hinting at a shared understanding of religion and the world across a larger region.

Red Pottery Cups

One of the most intriguing objects from Shijiahe and beyond at many Middle Yangzi and some north-central sites, dating to phases V to IX, is the red pottery cup. In order to show the centrality of religious practices at Shijiahe, the appearance of cups in various contexts, such as burials and in large deposits at Sanfangwan, will be analysed. A full discussion of their appearance at other sites will follow in the next chapter.

The Cups

Two basic types of cup, an earlier and later one, can be distinguished, which had identical functions as both were used in funerals and deposited with the deceased, although the later shape was used in a wider range of practices. Nonetheless, during all phases cups were part of interactions. As noted by Han Jianye, there is an evolutionary relationship between the earlier cups, dating to phases V and VI, and those of the later phases, dating to phases VII, VIII and IX,[28] which is further amplified by their functional commonalities.

About 9cm in height, the earlier cups tend to have wide mouths and wide bases giving them a short appearance overall. Many of these cups, mostly of red pottery, are covered in a coat of red paint and geometric designs painted in black. Importantly, the earlier cups are usually thin, 'eggshell thin' as such wheel-thrown

[28] Han Jianye 2002. He uses attributions to cultures and not phases.

pottery is often called. When closer dating criteria are applied, there appears to be a tendency for the cups to approximate the shapes that are commonly seen in the later phases (fig. 4.11).

The earlier cups are overall less numerous than the later ones. Only 51, from cultural layers and pits, were discovered at Dengjiawan in addition to 20 of the same general type from burials.[29] At Xiaojiawuji, only five cups dating to Shijiahe V and 11 dating to Shijiahe VI were found in cultural layers and pits, and 71 from burials could be reconstructed (fig. 4.12).[30] The lower quantities overall suggest that certain kinds of practices that were especially prominent during the phases Shijiahe VII and VIII, especially those at Sanfangwan, were less prominent in the earlier phases. No early cups come from Sanfangwan.

Cups dating to phases Shijiahe VII and VIII were found at more loci and in greater numbers. 19 out of 32 loci at Shijiahe yielded at least one cup found in 'cultural layers' or features identified as pits.[31] Particularly large quantities come from Dengjiawan and Xiaojiawuji probably due to the large-scale excavations of these loci. 440 of such cups, roughly divided into two types, come from Dengjiawan (fig. 4.13). The majority of cups of the first type, A, (240 out of 260) are identical to those found at Sanfangwan. They all have thick, oblique walls and tapering lips.[32] Interestingly, these cups would not be able to hold much liquid, since the walls gradually thicken towards the base, which itself is rather high up in the interior. Cups of all types have indented bases. The second type, B, is generally very close to type A, but has thinner walls on average and a flaring mouth. 180 pieces of this type

[29] Dengjiawan 2003: 49-54 and 50, fig. 33, 119-121 and 126, fig. 114.
[30] Xiaojiawuji 1999: 38-39, 49 and 50, fig. 36, 90-92 and 93, fig. 72.
[31] These loci are Dengjiawan, Xiaojiawuji, Huangjinling, Xushuling, Yangjialing, Tandouziwan, Shibanchong, Changmenchong, Gushan, Jingshanpo, Tianjiachong/Hujiawan, Yanjiaguangling, Maojialing, Aojiaquan, Luojiabailing, Husanjia, Xinhe and Guanpingyan.
[32] These cups are also often referred to as 'oblique-belly cups' (see, e.g. Han Jianye 2002). The full description of the types can be found at Dengjiawan 2003: 167-170.

were found. About 20 cups, counted as a subvariant of A, probably because they lack a flaring mouth, are characterised by thinner walls, oblique walls and tapering rims, but have wider bases. The exterior of some is covered in red slip. These are very similar to cups from the preceding phases and probably the last remnants of the earlier type. Cups of type B were also found at Sanfangwan.

Most cups, at least those illustrated in the report, were excavated from pits. In those whose content was reported – the usual list of pits detailing their contents is unfortunately missing from the report – the cups are often associated with red pottery figurines of animals to be discussed below. Although there are pits in which only cups occur, if a pit contains animal figurines, it usually also contains a red pottery cup.[33] However, the latter do not only appear in pits, but also in pit burials. Of the 43 pit burials of phase Shijiahe VII, 23 contained cups of the relevant types (38 cups in total).[34]

At Xiaojiawuji even more cups, dating to phases VII and VIII, were excavated, amounting to 1029 excluding those from burials (fig. 4.14).[35] The majority of these (749) are grouped as type B, which is the equivalent to type A at Dengjiawan. Type C and some cups categorised as type A at Xiaojiawuji, a total of 154, are similar to Dengjiawan type B with their flaring mouth. The subtype at Dengjawan that is reminiscent of earlier periods is represented with 126 pieces. Most cups come from pits and ditches, although some were found in 'cultural layers'. 54 pieces come from pit burials. Once again type B (Dengjiawan type A) dominates the total assemblage.[36]

[33] See Dengjiawan 2003: 283, 284. The joint occurrence of cups and figurines may mutually reinforce their interpretation as religious objects.
[34] Dengjiawan 2003: 277-279 and 278, fig. 236.
[35] Xiaojiawuji 1999: 192-195.
[36] Xiaojiawuji 1999: 309-310 and 310, fig. 247.

At Xiaojiawuji we can also observe that such cups existed in phase Shijiahe IX. Despite the existence of cups of type B (fig. 4.15), the excavated quantities are considerably smaller than before. Only 56 examples were found and most of them appear to have come from pits.[37] An even stronger decline in numbers can be found in the cemeteries, where only urn W6 contained a single cup. This is no surprise as the cemeteries underwent a great shift toward urn burials in phase IX. With the abandonment of much of the site the practices that involved these kinds of cups, especially those occurring at Sanfangwan and in cemeteries, must have come to an end. The question is whether this decline happened at other sites as well.

Making the Cups

The pottery found at Shijiahe was probably made at Shijiahe, although the kilns have yet to be located.[38] More can be said about the way in which these were made. The Shijiahe VII and VIII cups collected intact at Sanfangwan were all reported to be made from a red pottery that is so fine that it does not contain any inclusions. Some commentators correctly suggest that the clay was thoroughly processed before being made into the cups.[39] My own first-hand inspection of such pieces at the Shijiahe site in 2009 and in the stores of the Jingzhou Museum in 2008 confirms this impression. I can also confirm the ubiquitous nature of the cups at and around Sanfangwan, where farmers regularly come across them and keep some in their homes, where I handled them. Another aspect of these cups as correctly observed by the surveyors is that they appear to have been formed by hand. If this was the case, it would not speak against specialised production, but against

[37] Xiaojiawuji 1999: 255 and 256, fig. 193.
[38] Two kilns were found at Xiaojiawuji, dating to phase VII and/or VIII, but it is not clear what was produced with them.
[39] See Shijiahe 1992: 228 for a description of the pottery cups. See Zhang Xuqiu 1991: 56 and Li Wenjie 1999 for statements regarding the fineness of the pottery.

moulding, which is at the heart of Guo Lixin's argument for Sanfangwan as a workshop site (see below).

The surveyors make it very clear that the cups have quite thick walls that either remain straight up to or end in an everted rim. Although only very small of around 9cm in height, the cups appear quite sturdy, which is an impression enhanced by the rather thick walls.[40] Thus, the 'standard type' of pottery cup from Sanfangwan matches those considered the typical shape of the 'Shijiahe Culture' by Zhang Xuqiu (see fig. 4.16). And indeed, it is this type that is very common at contemporaneous loci at Shijiahe, dated to phases VII and VIII,[41] especially at Dengjiawan and Xiaojiawuji as just shown. A peculiar feature of these cups is their indented bases. It is as if the potter pressed a finger into the base during forming, thereby decreasing the surface area, so that the cup could stand upright as simple hand-forming of a such small vessel may have led to the base not being even.

It appears that cups with thicker walls outnumber those with thinner walls. Does the thickness of the potting imply a less skilled hand? Maybe what we are seeing here is the result not of manufacture by craft specialists, but of many different people that all adhered to a possibly prescribed set of shapes.[42] Uniform assemblages, after all, are not necessarily the prerogative of specialists, but are also produced by non-specialists.[43] In fact, the whole assemblage hints at the possibility

[40] The surveyors do not give any dimensions, so that these pieces of information were gained from personal inspection and from Dengjiawan 2003 and Xiaojiawuji 1999.
[41] Due to problems in exactly linking sites by phases, I will have to rely, quite reluctantly but to a greater extent in this chapter than in others, on culture-historical attributions. These will only provide rough relative dates, but, unfortunately, will not allow for very fine-grained dating of the activities involving the cups.
[42] Yan Wenming had already suggested that the later cups were not the result of specialised production (Yan Wenming 2000; followed by Han Jianye [2002: 70]). However, his assessment that the small capacity of the cups as well as their rather poor quality (he probably refers to their thickness) intimate against their usage as everyday drinking vessels hinges on present-day notions of what makes a good drinking vessel. This rationality goes hand in hand with his conclusion that the cups consequently must have been used in sacrificial ceremonies.
[43] Stark 1995.

that the cups are multi-authored: the fine clay may have been processed by those well-versed in the skill of potting and the cups subsequently formed by the same group of people or even a larger group including all users, maybe even those, who were to use them in funerals and at Sanfangwan.

While the above pertains to the later cups, a different impression is gained from the earlier ones, which are mostly 'eggshell-thin' and have painted decoration. Although the question whether the production of pottery became increasingly specialised in some way or another needs much more study, especially with regards to the Middle Yangzi Region,[44] one can nevertheless conclude that the manufacture of such thin vessels requires a different set of skills from the one required for the later cups. While the later cups appear to be hand-shaped, achieving the thinness of the earlier ones requires the use of the fast-wheel. On top of that the earlier cups are often painted. Overall more work and more skill are required in making these. The production of the later cups thus appears inclusive, which is mirrored in their larger numbers and the wider sets of practices they were used in, and the production of the earlier once appears to be exclusive and the prerogative of a smaller group of people possessing the required skills. Smaller numbers of cups and restricted contexts of use, mainly in relation to burials, reflect this assessment. Practices involving the cups, especially in relation to burials, continued, but were supplemented by other practices, such as those observed at Sanfangwan, involving larger groups of people,

[44] Pottery specialisation, especially through the increased use of the wheel and the appearance of more complex shapes, has often featured in research on the Middle Yangzi (see Zhang Xuqiu 1992 and 2004; Meng Huaping 1997; Guo Lixin 2005 and many others). But systematic and detailed studies of the way in which for example craft specialisation actually works are lacking and my suggestion that more specialised skills were required in the earlier periods than in the later ones would probably be considered as counter-intuitive, as it is during the later periods when skills are considered to be more evolved. Considerable attempts at studying specialisation were made for the Neolithic pottery of north-central China by Anne Underhill (2002) and for salt production in Sichuan by Rowan Flad (2004; 2007). These studies are very valuable and are the first attempts at systematic discussion of specialisation as regards Neolithic China. All these discussions relate increased specialisation to an increase in social complexity, which appears rather one dimensional. The discussed evidence for Shijiahe may enrich the discussions.

which may have resulted in an increased need for cups and a decrease in overall quality and refinement.

Contexts of Use of Pottery Cups: Burials

In this section I will discuss contexts of deposition and practices relating to the cups. Before investigating the practices that led to the deposition of thousands of cups at Sanfangwan, I will discuss the only other context that allows for detailed study of the cups: the burials at Dengjiawan and Xiaojiawuji. This discussion will also establish the fact that the use of cups was probably rooted in religious practices, which are continued on a different scale at Sanfangwan. Some of the other observations made regarding the burials will feed into the discussion of the dynamics at Shijiahe, especially its abandonment, in the next chapter and the conclusions.

A total of 284 burials, inhumations both in pits and urns, were excavated and can be dated to the various phases as shown in table 4.1. Only pit burials contain red pottery cups, which, as we shall see, form part of a fixed set that was buried with the deceased.

Phase V Burials at Dengjiawan

Although the report provides a list with much information on each of the eleven pit burials, only eight are illustrated in more detail, allowing for more detailed analysis. The excavators divide the burials into types based on the shapes of their pits. Regardless of this typology, it is clear that the burials of this phase are simple rectangular pits, between 1 and about 2.3m in length and between 0.4 and

0.8m in width and rather shallow with around 0.2 or 0.3m in depth (fig. 4.17).[45] Most burials contained almost complete skeletal remains, which, unfortunately, were neither sexed nor aged with the exception of two. The vast majority of the deceased was buried in a supine extended manner. The occupant of M66 is said to lie flexed on the side, but this cannot be verified from the tomb plan, which does not differ much from the supine extended burials with the exception of the crossed feet.[46]

Only one burial, M13, was identified as a secondary burial; however, it is always difficult to ascertain how this can be inferred from the skeletal remains. A comparison, for example, of the line drawings of M66 and M13, reveals clear differences (fig. 4.17a,b). While the skeletal remains in M66 appear intact even including the small bones of the fingers and feet, which is very similar to the other burials that were identified as primary ones, these small bones together with the spine are strikingly missing in M13. Only the long bones, ribs, pelvis and skull remain. It is a common occurrence that smaller bones, especially those of the fingers and toes, are lost to rodents, but this does not explain the way in which the bones were deposited in M13. For example, the pelvis and the thigh bone appear to have been deliberately placed in this manner. Overall, however, the placement of the bones is anatomically largely accurate, which can also be observed in later burials identified to be secondary. Hence, the suggestion that M13 is a secondary burial appears correct. It remains unclear what exactly happened to the deceased. Were certain people 'regularly' interred first and then later exhumed only to be placed back into the same or another pit? Were the bodies of certain deceased kept

[45] Zhang Xuqiu (2004: 175-181) cautions that some burials may have been deeper but that the top was sometimes disturbed. This information is not contained in the report (Dengjiawan 2003).
[46] Dengjiawan 2003: 94, fig. 76. The later burial of M26 at Dengjiawan also has skeletal remains with crossed feet, which may show a continuation of this practice.

after death and then buried at a later time? A close investigation of the bones would help to answer these queries as it might reveal tool marks on the bones showing that remains of tissue were scraped off or whether these bones are somehow different from those deceased identified as primary burials. So far, these questions have to remain unanswered. It is obvious that great care was taken to place the deceased in the pit, especially those in secondary burials, which were laid out anatomically accurately.

This secondary burial practice anticipates similar burials dating to later phases. Other anticipations are also present in the objects buried with the deceased. Throughout Shijiahe V, sets of pottery are largely the only burial goods. Due to the dire state of preservation of wooden remains, it is unclear whether the bodies were buried in coffins.[47] Although the following discussion mostly centres on the pottery, we have to remember that goods made of other, more perishable materials were probably also buried. As for the pottery, we observe strong regularities not only in their placement, but also in the nature of the assemblages, which continue into later phases. With the exception of M3, where all objects were deposited at the head, the objects in the other illustrated burials were placed at the feet end.[48] The interment practices thus did not leave room for much variation and appear to have been highly regulated by a strong consensus among the survivors regarding the ways in which to treat the body, what to bury with it and how to deposit these accompanying objects.

As noted, all grave goods are deposited at the foot end of the pit. In addition, they appear in certain assemblages or sets. Eight out of the eleven burials contain a

[47] During Shijiahe V, M35, in which a wooden board that may have belonged to a coffin was found, may be the exception. This burial is also said to have contained remains of lacquer (Dengjiawan 2003: 90)

[48] It is not entirely clear whether the pottery in M35 was deposited at the head or feet, but given that the pit widens towards one end, it is likely, as seen in other burials, that it is there where the feet were located.

set consisting of the following pottery:[49] one tripod (*ding*) occasionally with lid and a number of cups, as exemplified by burial M25 (fig. 4.18). Other types of vessels appear less regularly with the exception of small jars that have the same dimensions as the cups. Judging from burial M7 of the subsequent phase Shijiahe VI (fig. 4.19a,b), where cups and small jars were deposited together at the head end of the pit and separated from the other pottery, these small jars were probably used in similar fashion to the cups. But later only the cups remain and the small jars ceased to be deposited. Thus, whatever practices resulted in the deposition of both small jars and cups, eventually only cups continue into later phases. Despite such small changes in the overall composition of the set, the practice of depositing *ding* and cups together remains consistent until the end of Shijiahe VII.

Another pottery shape that became even more prolific and important in later funerary practices makes its first appearance in Shijiahe V: high-necked jars, as deposited in burial M3 (fig. 4.20a,b). As seen in later phases, they are deposited as a (sub)set in themselves. Consequently, what we observe at Dengjiawan during Shijiahe V is not only the beginnings of a new cemetery, but also of practices of depositing certain assemblages of vessels in burials that remain surprisingly persistent. The use of cups in burials also appears to prefigure the later importance of the cups for the religious life at Shijiahe as seen at Sanfangwan. As noted, it is not the exact type of cup that survived into later phases is of significance, but the practices associated with it.

Phase VI Burials at Dengjiawan and Xiaojiawuji

[49] Here an assessment of the entire set of pit burials dating to this phase is possible because the list at the back of the report includes all burials and grave goods.

As in the preceding phase, the pits are roughly rectangular with some irregularly cut edges and rounded corners. However, more burials have widened foot ends, probably for the placement of more burial goods, giving some pits a more trapezoidal shape. A further innovation is the appearance of the *ercengtai*, which is a secondary ledge partly or completely surrounding the pit into which the body was placed and onto which grave goods are often placed.[50] Both at Dengjiawan and Xiaojiawuji, the *ercengtai* is a feature of only a small percentage of burials (see table 4.2) and it remains so in the subsequent phase. As there is a predilection in the reports to illustrate more burials with *ercengtai* than without, it singles these deceased out as having been treated specially. A comparison of the average numbers of objects in burials with and without *ercengtai* shows that there are more objects in those burials that have an *ercengtai*, which has further boosted the impression that the *ercengtai* indicate special treatment of the deceased. Whether this treatment relates to status or has any other validity remains to be investigated.

As before, although many skeletal remains were found, only very few were sexed and aged, which, again, prevents us from investigating gender- and age-related questions. The majority of the deceased in both primary and secondary burials were laid out in a supine-extended position. The bones in the secondary burials were on average laid out rather precisely, although some appear jumbled and disorderly. The number of secondary burials sharply increases in comparison with the preceding phase (table 4.3). If we consider the appearance of the *ercengtai* and the increase in secondary burials together, we notice an increase in burial ostentation, which may also include the use of coffins as seen in the wooden

[50] There is the question whether the *ercengtai* was a local innovation or derived from elsewhere. The most likely source are cemeteries in Shandong and related areas accumulated under the 'Dawenkou Culture', which often yield burials with *ercengtai* (see, for example, the 'Dawenkou Culture' burials at Yuchisi, Mengcheng, Anhui; Yuchisi 2001: 200-205).

remains in a few burials, especially in those that have both *ercengtai* and are secondary burials.

Once again, exclusively pottery was placed in the pits and new practices in its placement can be observed. In the previous phase, the distribution of the pottery was not very varied, but during this phase some notable changes are present. There is much variation, but regularities occur. While in some burials all goods are grouped together in one area, e.g. very often at the foot end, a difference is often made between certain types of pottery. High-necked jars having become numerous are usually deposited together with other types of jars at the foot end and, if an *ercengtai* is present, they sit on the *ercengtai,* also at the foot end. *Ding* and cups (and/or small jars) are deposited closer to the body. They can be found either at the feet, but separated from the jars, or in the upper body or head area. Even when the other group of vessels is not present, these general distributional patterns are maintained with *ding* and cups found closer to the body either around the feet or elsewhere along the body, and jars found at the foot end either in the pit or on the *ercengtai*.

The basic set of pottery is very similar to that of the preceding phase. *Ding*, including their lids, and cups, the latter complemented or substituted by small jars as before, in addition to small basins in some burials, tend to occur together. A new development is the deposition of the high-necked jars in large quantities. Often both sets were deposited in the same burial, while maintaining spatial separation between them. Both appear to form subsets. Additional pottery types are also found, but they do not appear with much regularity, so that I will not count them as constituting parts of these sets, although, once deposited they form parts of one of the sets depending on their location in the burial. From the illustrated burials in the

excavation reports we can see that some types of vessels tend to be grouped with one subset rather than the other. Bowls, for example, are more often deposited on the *ercengtai* together with the jars, while basins (*pen*) are often found together with the *ding* and cups/small jars (fig. 4.21a,b). Indeed, the distinction between the small jars and some of the basins, which are of roughly the same size, seems to be a mere technicality, as they are treated similarly during deposition. The strong focus on typology in the excavation reports tends to obscure such relationships and may lead to erroneous conclusions. Other, larger basins tend to be grouped with the jars. Overall there appears to be a difference based on the dimensions. Larger vessels tend to cluster into the subset centred on the jars, while smaller vessels tend to cluster into the *ding*/cups subset. An exception of a large vessel type is the so-called *huxingqi* that only rarely occurs, but when found, it is often separated from the other subsets and deposited close to the head (fig. 4.22a,b).

There are also quantitative differences between the subsets. As noted, the high-necked jars commonly appear in large numbers. This has prompted Guo Lixin to infer differences in social status from their absolute numbers correlated with the surface dimensions of the burials.[51] While the jars do appear in impressive numbers, they are only part of the story and must be seen in context with the other pottery. The *ding*/cup subset has two major components that also display quantitative differences. *Ding* are usually few in number at Dengjiawan with usually only one per burial. At Xiaojuwuji, an average of three to four *ding* were deposited per burial. It is difficult to ascertain what this difference between the cemeteries implies, since this is the only pottery type that features such differences, but this difference continues into the subsequent phase. By contrast, the cups and related

[51] Guo Lixin 2009. His conclusion is that the social status of the deceased of the Qujialing Culture was lower than those of the Shijiahe Culture.

small vessels belonging to this subset appear in larger quantities, often greatly outnumbering the *ding*. Only in some burials at Xiaojiawuji, where three to four *ding* appear together with about the same number of cups and the like, one could propose the existence of matched sets, but usually the cups outnumber the *ding* even at this cemetery. Both are in turn usually outnumbered by the jars, several dozens of which were deposited at times.

What do these differences in subsets imply? This is a question, which will concern us more below, when the discussion will also include the Shijiahe VII pit burials and when I will also discuss the possible sequence of deposition. But it is already clear that both subsets continue earlier practices. Hence, they are conscious references to and continuities from the past and embody certain social memories that are re-invoked almost every single time a member of the community died, probably in conjunction with the other religious practices relayed in the section on the tube-shaped pottery. Although there are some novelties in the observed burial practices, such as an increase in secondary burials and the appearance of the *ercengtai*, the overall sets of practices seem reasonably stable, especially in terms of the general structure of the burials and the grave goods. When compared to the observations made in the previous chapter, in which I demonstrated a site in constant flux, it appears that the burial practices are less dynamic and root society in its place. For much of the third millennium, the cemeteries are rather stable focal points and retain a conservative nature in terms of the funerary practices. Though some of the pottery types change over time, as for example the shape of the cups, the basic practices they are associated with are not affected. This stability of practices continues into phase Shijiahe VII.

Phase Shijiahe VII Pit Burials at Dengjiawan and Xiaojiawuji

Once again, we find pits cut in a roughly rectangular shape with some enlarged at the foot end or elsewhere to accommodate the grave goods. It appears some pits were intended as simple pit burials, originally without *ercengtai*, but then the need for space for the grave goods may have occurred, and they were enlarged. In M48 at Dengjiawan, for example, the usual high-necked jars and associated items were placed on an extension that can now be called an *ercengtai*, but these jars were probably supposed to be placed into the main pit, into which they did not fit, which explains why the extension was dug (fig. 4.23a,b). This disassociation from the body, as seen in almost all burials containing these jars, may provide an explanation for the *ercengtai*. However, there are also simple pit burials that do not appear to follow this separation of grave goods, as seen in Dengjiawan M91 (fig. 4.24). Considering the quantities of burials with and without *ercengtai,* it appears that the latter are the exception and not the rule. While the relative amounts of burials with *ercengtai,* both at Dengjiawan and Xiaojiawuji, remains basically unchanged in comparison with the preceding phase (table 4.2), these burials still represent anything but the norm. Burials without *ercengtai*, despite still being illustrated in smaller numbers, are still the majority.

The practice of secondary burials also continues, with a slight decrease in the relative numbers at Dengjiawan, but with a steep increase at Xiaojiawuji. The numbers remain problematic due to the large number of unknown burials, possibly distorting the actual relative counts (table 4.3). In any case, the secondary burials of phase Shijiahe VII clearly illustrate the observed continuities. What also becomes clear is that no matter how the body was treated, the final deposition is basically identical during all phases. Obviously, the skeletal remains in the primary burials

are more complete than the secondary ones, but apart from this, there are no obvious differences in terms of their deposition. The pits, the accompanying objects, the body position and so forth are identical, only some deceased were singled out for possible later interment after secondary rites were conducted. This situation makes it difficult to assess why some deceased were singled out as opposed to others.

As for the burial goods, we notice consistencies with the preceding phases. Once again the subsets of *ding*/cups and jars are present (figs 4.25a,b, 4.26). As before, versions of either subset appear in a burial either by themselves or in combination. Also, in many cases their distribution inside the burial continues as before: the jars tend to cluster at the foot end and the *ding* and cups tend to be located closer to the body. But there are also diversions from these practices and more varied distributions occur. As seen in Dengjiawan M18 (fig. 4.27a,b), both subsets are deposited together on the *ercengtai*. There are also less strict distributions of the burial goods. Instead of being roughly confined to parts in the burial, they are often distributed all around or along the body on one side, both in burials with and without *ercengtai*. A notable example is Xiaojiawuji M54 where 101 high-necked jars were lined up in rows of two in two layers to the right of the body alongside the wall of the pit (fig. 4.28a,b). Thus, while remaining relatively stable overall, the funerary practices become slightly more varied. But many features of the burials remain constant, even down to such minor occurrences as the *huxingqi,* which is once again deposited close to the head of the deceased, when it appears. Overall, the increased variations of known practices may suggest that as we move further and further away from the beginnings of these practices, their enforcement may have lessened. We may have arrived at a juncture when the

memory of the practices that was handed down over generations seems to deteriorate, giving way for divergence from tradition.

Nonetheless, faced with such remarkable stability of funerary practices over time, there remains the study of the sequence of deposition with M7 at Xiaojiawuji as example (fig. 4.29a,b). We also find the described sequence for other burials but in varying degrees of complexity. M7 has a rectangular pit at the bottom containing the secondary burial of a male. The pit is surrounded by a large *ercengtai* with sloping sides, which is very narrow at the head end, equally wide at the sides and widest at the foot end. At the foot end and only there, the *ercengtai* is filled with 62 high-necked jar as well as two larger jars of a different type and three bowls. All of these objects were deposited in an orderly fashion on the sloping ledge. The pit itself contains what is left of the bones of the deceased in a supine extended position with the head facing the other end of the pit away from the grave goods. 29 cups appear to have been piled up in a heap at the feet. To the left of the body there are four *ding* including one lid for a *ding*, a *huxingqi* (close to the head), and a large stone axe blade. The stone axe is an anomaly and at the same time an innovation of this phase, which again illustrates the novelties of this phase. Two other burials at Dengjiawan, M32 and M33, also contain stone tools, but this time adzes. Unlike M7, where the axe was deposited close to the body, the adze in M32 was placed on the *ercengtai*.[52]

The depositional sequence may have looked as follows. After excavating the pit, maybe in two stages beginning with the lowest part, the disarticulated bones, after their treatment during secondary rites, were reassembled in the lower part of the pit. Then, the grave goods were placed next to the body probably beginning with

[52] A further anomaly is the pig bones that were found in a number of Dengjiawan burials, such as M10, M37 and M105. Just as the stone tools, the pig bones illustrate the point made above about the divergence from tradition.

the *ding*, axe and *huxingqi*. The liquid contained in the cups was consumed and the cups placed at the feet of the deceased probably involving 29 people, as many as there are cups. Similar practices to those at Sanfangwan may have occurred, which also always resulted in the final discard of the cups. The occasion of the death of a community member required that certain practices be followed ensuring the continuous and repetitive nature of religious practices just as at Sanfangwan and other loci. One difference may be the group of people involved. The amount of cups at Sanfangwan suggests a communal nature of practices, while the numbers of cups in the tombs suggest the involvement of a smaller group of people.

The jars and associated items may have different connotations. After the cups, the next subset was deposited by placing the jars and bowls on the sloping ledge at the foot end. The participants began at the upper edge close to the surface until they reached the upper edge of the lower pit. The large number and the similarities between the jars suggest that they may have been contributions of the community members to the burial rites, maybe that of families. It is unknown what the jars actually contained, if anything at all. Maybe different parts of the community were involved in depositing the jars that were involved in depositing the cups. And these community members may have offered food and consumed liquids.

We can imagine that all of these practices were an attempt at fostering the social relationships within the community. The continuity of practices, despite the variations that occurred during Shijiahe VII, ensured that the uncertainties created through the death of a member of the community were relegated through a rigid set of practices that ensured a sense of stability and order – life goes on – while at the same time ensuring the cohesion of the group and reiteration of beliefs and worldviews. In all these practices, the red pottery cups played a significant role

showing that they were an important part of the religious practices at Shijiahe, which is further amplified by their deposition at Sanfangwan.

Contexts of Use of Pottery Cups: Religious Practices at Sanfangwan

In the previous chapter, we have already touched upon the locus of Sanfangwan, but have not fully discussed the eastern platform, where large quantities of red pottery cups were found. The survey work on the eastern platform discovered finds, dating to phases Shijiahe VII and VIII, on top of layers that are very similar to the layers belonging to the bank.[53] Interestingly, the layers dating to the later phases are found to be 'crawling' up the bank, which is very similar to other loci, such as Dengjiawan, where the inner slope of the bank is increasingly encroached upon by later activities, further proving the points made in the previous chapter about the enclosure's changing significance. The most intriguing finds on the eastern platform of Sanfangwan are the red pottery cups (fig. 4.16), discovered in a layer (numbered as '2') just underneath the topsoil. Open-lying strata towards the edges of the platform show that this layer covers the highest point of the platform, running more than 70m from north to south and more than 90m from east to west, that is about 6300sqm, which is less than the size of a football (soccer) field.

Coring results at 12 locations all across the platform support these results (fig. 4.30).[54] The layer is about 1.5m thick and of yellow or yellow-brown soil mixed with large amounts of charcoal pieces, red scorched earth and fragments of lithics as well as pottery sherds, mostly those of cups as well as some complete cups

[53] Shijiahe 1992: 225 and fig. 9. This finding is supported both by a short profile cut into the eastern edge of the platform as well as by coring all across the platform.
[54] Shijiahe 1992: 226.

that came up inside the Luoyang spades.[55] A collection of surface finds in an area of approximately 10m by 3m yielded a striking amount of 1076 sherds, 916 of which (85%) are of a fine red fabric without any decoration. Although only four complete cups could be reconstructed from the sherds, the surveyors collected 101 parts of cup bases, exceeding the amount of diagnostic sherds attributed of any other vessel type. The existence of this layer at other locations on this platform was confirmed by further shovelling in the farmed ground, leading the surveyors to estimate that the platform must yield 10,000 or several tens of thousands of these cups.

Generally, these amounts of cups have not been interpreted as a result of activities of 'regular daily life', but as the result of a workshop or place of religious activities, as first suggested by the surveyors. Both eventually became the two major opinions on the cups.[56] Other interpretations of the cups, logically following on from the initial interpretations, appears to have largely been inspired by their possibly enormous quantities and it was posited that they were evidence for specialised production and division of labour among pottery specialists rooted in surplus from agriculture that could support craft specialisation.[57] As discussed above, it seems unlikely that the cups were made by specialists. I will return to this issue in the following review of the arguments made for the proposed functions of Sanfangwan.

While He Jiejun, for reasons not stated, thinks that the close proximity of the eastern platform to the bank makes it unsuitable for a pottery workshop, he suggests that the accumulation of cups may be related to festivals in conjunction with a

[55] Shijiahe 1992: 226, 227.
[56] Shijiahe 1992: 280. The assessment that other parts of Sanfangwan also yielded only a few 'regular' features, such as floors and pits, i.e. evidence for daily life, supported the surveyors' interpretation of Sanfangwan being a workshop or a place for religion.
[57] Zhang Xuqiu 1992: 206, 283. The same argument appears to be made for any kind of large accumulations of things, such as the pottery figurines to be discussed below.

possible second phase of bank construction.[58] Though not related to the bank itself, religious interpretations were also proposed by Yan Wenming and Han Jianye.[59] The latter, in following Yan Wenming, whose opinion is often authoritative for interpreting finds from Shijiahe, states that the large quantities of cups had been used in sacrificial ceremonies, as they did not appear to be actual drinking vessels (in daily life) and also had not been made by specialists. Vessels for daily life, he goes on, were mostly made of grey pottery, so that the colour red implied religious activities.[60] To make his point regarding a religious use of the cups, Han further argues that a religious interpretation of the cups was supported by the depiction of such cups carved on pointed-bottom vessels excavated at Dengjiawan (see fig. 4.31), which themselves are also usually interpreted as evidence for religious activities.[61] He concludes that, while the cups may have been used as normal drinking vessels early on, they gradually became an important part of the 'witchcraft' used by the San Miao, which he supports with quotes from the *Shangshu*, *Lüshi chunqiu* and *Mozi*.[62]

While I generally agree with a religious interpretation and other aspects of the forwarded notions, such as the special significance of the colour red and the non-specialised production of the cups, there are some considerable objections against some of the more specific points made. For one, large, unusual

[58] He Jiejun 2004: 451. As the accumulations of cups seem to be crawling up the bank, it is unlikely that they are related to the earlier bank construction.
[59] See Yan Wenming 2000 and Han Jianye 2002. Such interpretations are probably also implied in Zhang Xuqiu's notion that the pottery cups may have been some kind of alcohol vessel (Zhang Xuqiu 1992: 206).
[60] Han Jianye 2002: 70. In this, he follows Song Yuqin's proposal, made in reference to the red pottery figurines, that red might symbolise blood and thus has religious connotations (Song Yuqin 1995: 48). While the differences in colours of the pottery appear significant, a direct association of the red with blood is speculative and has no basis in the archaeological evidence.
[61] See below. It is questionable whether the carving on the vessel actually represents a cup of the type in question.
[62] Han Jianye 2002: 70. In none of the quotes from these texts he uses as evidence there is any mention of cups.

accumulations of things are too readily associated with 'ritual' or religion, since they do not appear to fit into any functional categories based on today's judgements of functionality. Secondly, most of the interpretations, such as the link with blood as reason for the colour red or the straightforward identification of carvings on a pottery vessel at Dengjiawan with these cups or the San Miao connection, are unconvincing and not supported by the archaeological evidence. He Jiejun's suggestion, however, that the cups were related to the construction of the bank is interesting, but not supported by the cyclical nature of the practices at Sanfangwan, as shown below, and the fact that the bank was built at a much earlier date.

For the identification of Sanfangwan as a pottery workshop, the strongest case was made by Guo Lixin.[63] He suggests three possible reasons for the accumulation of such large quantities of cups, which dismisses in turn to reach the conclusion of Sanfangwan being a workshop site. The first possibility is that Sanfangwan was used to store the cups. Based on the assumption that stored items represent wealth, Guo argues that they would be stored close to each other and also not mixed with refuse. Since the cups are distributed over an area of more that 6000sqm and mixed with other sherds and lithics, they do not fit his notion of what storage should look like. Apparently, this notion is based on the fact that many Neolithic finds, if they are not random items from so-called 'cultural layers', are found in closed contexts, such as pits or burials. A small cluster of pits filled with red pottery cups would have probably resulted in the interpretation of Sanfangwan as storage area for cups. Notions of what is functional or reasonable today govern such ideas.

[63] Guo Lixin 2005: 115-117.

The second possible function of Sanfangwan, discussed by Guo, is that great quantities of cups were used in religious ceremonies, as suggested by Yan Wenming, because of the thickness of the cups' walls, which intimates against daily usage.[64] Guo principally agrees with this assessment and also interprets Sanfangwan in such manner, but he appears to be startled by the question why people would have used so many cups and then simply discarded of them. He goes on to state that if cups had really been used for religious purposes, then only as alcohol containers, without resulting in discard after each time of use. If there had not been any discard after religious use, fewer cups would have accumulated over the duration of the Shijiahe Culture, but nothing like the quantities estimated for Sanfangwan. He further argues that if cups had indeed been mainly used for sacrifices to the gods, there should be pit- or heap-like buried features and not these large, continuous accumulations. Further, if the cups had been actual utilitarian items and not religious, such large-scale accumulations would probably not have happened and the evidence would be more in a scattered fashion together with other finds, such as those found at Sanfangwan. Hence, Guo concludes that there was no large-scale use of the cups at Sanfangwan, thereby also negating the use of the eastern platform at Sanfangwan for religious activities.

There are several issues with this assessment. First, it too readily accepts the assessment that thicker walls of the cups imply religious usage, which hinges on the assumption of practicalities that may not have been those of the Neolithic inhabitants of Shijiahe. Secondly, there is the assumption that religious use would preclude repeated discard and that things have to be used until they cannot longer be used. Again, this is how we may think about patterns of usage today, which may not

[64] Yan Wenming 1993 cited in Guo Lixin 2005. The question arises why thicker walls intimate religious use. This reasoning does not seem plausible.

be congruent with those in the Neolithic. The last point of criticism is directed at Guo's notion that pit- or heap-like features should be the archaeological evidence for religious activities. This assessment also appears universalising and implausible. Such interpretations need to be supported by the archaeological evidence for each site on case-by-case basis and not globally.

The last possibility regarding the function of Sanfangwan, and the one favoured by Guo, is that of the locus being a pottery workshop. Stating that 'normal' pottery workshop sites would yield large deposits of refuse and semi-finished products, he finds these represented in the many cup sherds found at Sanfangwan, thereby not taking into account deliberate discard and taphonomy. According to Guo, the large amounts of charcoal and red scorched earth in the strata could be related to firing clay. He further explains the large area used on the eastern platform with the small dimensions of the cups, in following Philip Arnold, that the smaller the pottery items the larger the space that is needed for drying the formed vessels.[65] The dimensions of the drying areas thus determine the output of the workshop, which matches the amounts of pottery and the large area covered. Sanfangwan, therefore, was an area where specialised production of these cups took place. In this way, Guo Lixin is in line with previous interpretations of Sanfangwan, such as those by Zhang Xuqiu. As intriguing as this possibility may sound, it is not self-evident. While charcoal and scorched earth may indeed indicate some form of conflagration, the cause was not necessarily a kiln. Also, kilns themselves have not

[65] Arnold 2000. Arnold's article is a review of work in ceramic ethnoarchaeology since 1985. In this review, he gives a very short summary of a study by Dean Arnold (1999) that looks at the space used in the production of smaller vessels through vertical-half moulds in Ticul, Mexico, which comes to the conclusion that the interior space available for drying and keeping the moulds impacts on the amount of pottery produced, as it has to be balanced with other activities, which could take place in the same space. The reference is specifically to domestic pottery production and moulded vessels. Neither is given in the late Neolithic context along the Middle Yangzi, especially as the cups do not seem moulded but easily hand-formed as most commentators suspect.

been discovered at Sanfangwan yet. Finally, it is not self-evident that the loci of production and consumption have to be different. The cups may have been made, where they were eventually used. Also, as discussed above, the question whether these cups were those made by craft specialists or not, is not a straightforward one, and large accumulations of similar items do not necessarily imply specialisation. In all, Guo Lixin's assessments as to the function of Sanfangwan are not persuasive.

An Alternative Interpretation of Sanfangwan

The following re-interpretation of the eastern platform of Sanfangwan, though still concluding that religious practices took place there, hinges on an observation made by the surveyors in the early 1990s, which has not found the attention of scholars interested in Shijiahe. Although no excavation has taken place at Sanfangwan in attempt to verify the interpretations forwarded, there is evidence from the coring undertaken during the survey of this locus, which can be used to reconstruct a different sequence of practices than previously realised.

As above-mentioned, the coring resulted in the realisation that the cups were in a layer of about 1.5m in thickness all across the eastern platform. Importantly, the surveyors also observed that this layer can be subdivided into several smaller layers based on different soil colours and objects and other inclusions. This they visually depicted as seen in figure 4.30.[66] The earliest layers can be seen in cores ZT12 to ZT14 and consist of soils of different shades of brown on top of which can be found some yellowish soil. These layers appear to be the natural soil. Later than these layers are those in cores ZT15 and ZT16 consisting of a brown soil containing pottery sherds, red scorched earth, charcoal bits and rocks. Found in cores ZT12 to

[66] Shijiahe 1992: 226.

ZT15, the next layer is composed of yellowish soil mixed with pottery sherds, charcoal pieces and red scorched earth. These may well represent the result of the earliest activities in this part of Sanfangwan, not yet related to the red pottery cups. The next layers, up to three in each core just below the topsoil, contain red pottery cups. Again composed of a yellowish soil, these layers of varying thickness contain red pottery cups, but also other pottery sherds and charcoal pieces. Red scorched earth is only found in core ZT12.

The question of the way in which the accumulation of these layers happened is central to a revised understanding of the practices at Sanfangwan. While the layers date to phases VII and VIII, the existence of these very layers suggests that further breakdowns into even shorter chronological units should be possible, likely analogous to my above analysis of the built-up of religious practices at Dengjiawan, which originated in the deposition of tube-shaped pottery. These shorter units are implied and represented by the layers. This succession of layers is suggestive of the possibility of their gradual built-up. In conjunction with the fact that many recovered cups are found intact, it is highly likely that these were discarded after use and deposited at Sanfangwan. Taking into account the possibly large quantities of cups and the extent of the eastern platform of Sanfangwan, it is possible to suggest that large numbers of people periodically congregated at this location. The practices involved may have centred on the use of the cups, from which liquids may have been consumed. On this may have followed the discard of the cup after each episode of use. Cups may not have been re-used. There is the possibility that the cups were not the only element of these practices as charcoal and red scorched earth pieces were also found in the small layers. The use of fire may thus have also been involved. Such repetitive nature of the practices may provide an alternative

interpretation for the succession of layers eventually leading to 1.5m in thickness. These practices may best be described as rituals. This religious significance of the cups matches their deposition in burials.

Summary

This section has covered one of the most prolific objects involved in religious practices at Shijiahe and as to be shown in the following chapter also beyond: red pottery cups. The specific type discussed here appeared in phase V and continued into phase IX, although with some marked changes in manufacture, shape and decoration between phase VI and VII. The earlier cups, from phases V and VI, are usually well-made, wheel-thrown, very thin and painted on the outside, while the later cups, from phases VII, VIII and also IX, are somewhat coarser, appear taller and are undecorated. I have argued that the former were made by expert potters, while the latter were made by a wider group of people, which may be reflected in the greater numbers of cups. Despite these basic differences between the earlier and later cups, there are no functional differences.

One of the most stable and continuous uses of the cups involves their deposition in burials from phase V to phase VII. They were often found together with *ding* close to the body of the deceased, forming one of two subsets in burials at Shijiahe. The other subset consists of high-necked jars, often found in greater distance from the body. Despite the changes in the cups themselves, these basic parameters of deposition did not change. In phase VII, the deposition of cups in burials is also attested for by finds at other sites.[67]

[67] See Chapter 5.

In addition to burials, the religious significance of the cups increased in phase VII. While there is evidence that cups were also used outside of burials in phase V or VI as seen in their deposition at the centre of the 'platform' of 'Remains no. 1' at Dengjiawan,[68] by phase VII new, distinct practices emerge at Sanfangwan. A layer of about 1.5m in thickness across this locus may have yielded thousands of cups. As first suggested in this thesis, the successive built-up of this layer suggested the repetitive nature of religious practices involving the cups for drinking, after each of which these cups were discarded. Such practices explain both the large numbers of cups during phase VII and VIII and also their simpler manufacture suggesting that the participants in these practices were involved in making the cups. The regular discard of cups both at Sanfangwan and in burials may have required a larger number of available cups and with it more makers.

Red Pottery Figurines

The following analysis of red pottery figurines of animals and people and establishes these as objects used in religious practices. These figurines appear in large numbers at Shijiahe and were also distributed across the Middle Yangzi area. They underpin some of the impressions gained from the study of the cups, including the suggestion of the intensification of religious practices at Shijiahe from phase VII.

Discovered in 1955, the figurines were initially dated to the Han dynasty (206 BC – 220 AD), from which figurines of animals and people are known. In 1973 to 1976, a survey at Shijiahe collected more than 60 figurines, which were

[68] See previous chapter and remarks in the above section on tube-shaped pottery.

correctly dated to the Neolithic.[69] Later, more than 1000 figurines were excavated at Dengjiawan, and other finds came from other loci both at Shijiahe and other sites.

At Dengjiawan, the figurines come mostly from pits (17) and from a feature that was identified as an ancient swamp, but never from burials. Although not all find contexts could be dated with absolute precision, most features with figurines could be dated to phases VII and VIII. The number of such features appears to increase from phase VII to late VIII, as only one pit dates to phase VII, four to phase VIIIa and 12 to phase VIIIb, which is also matched by an increase in the quantity of figurines.[70] Exceptionally large amounts were excavated from two pits alone: H69, dating to early phase VIII, and H67, dating to late phase VIII. Large quantities also come from pits H1, H4, H16, H31, H63, H106 and H116.

Another feature, in which many figurines were found is the so-called swamp (*wadi*) found in trenches T1 to T4 in the southwestern corner of the excavated area. It has a maximum length of 20m north to south and is 1.6m at its deepest. Its extent from east to west is unclear.[71] The feature appears to date to phase VIII as it sites on top of the phase VII burials in trench T2.[72] Large quantities of red pottery animal figurines were found in this feature, especially at its bottom. Often the figurines appear in piles.

Interestingly, it is reported that pits containing figurines also contain several other pottery vessels, such as jars, bowls, *li* and *hu*, but more significantly also red pottery cups and pointed-bottom vessel fragments.[73] These joint occurrences hint at the possibility that religious practices during phase VII and especially phase VIII

[69] Cf. Liu Anguo 1980. See also Zhang Xuqiu 1992: 283-293.
[70] Pit H119 is the only phase VII feature. Pits H4, H42, H69, H85 date to phase VIIIa and pits H1, H3, H16, H31, H33, H34, H63, H67, H103, H106, H116, H118 to phase VIIIb.
[71] Dengjiawan 2003: 148.
[72] Dengjiawan 2003: 281.
[73] Dengjiawan 2003: 144-145.

were greatly entangled and maybe even conceived of as parts of a larger vision of religion. The pits also contained some charcoal and scorched earth fragments indicating the possibility that conflagration was practiced.[74]

In addition to the complexity of practices leading to the deposition of figurines, the most striking features are the suggested sheer quantities of these objects. As most figurines were in fragments or lumped together, Zhang Xuqiu, one of the excavators, ventures to suggest that the total number must exceed 5000, several thousands from pits H67 and H69 alone, although he also admits that it is difficult to make such estimations based on fragments alone.[75] Despite these large numbers only 233 figurines could be identified with reasonable confidence and were reported.[76]

Identifications and Typology

The excavators divide the figurines into two groups: human figurines and animals.[77] All are hand-sculpted in a few movements and consist of fine red pottery, which was neither painted nor coated in slip. They were fired at a low temperature making them fragile objects. All are rather small, averaging between 5 and 10cm in dimensions. Also, all figurines have rather clear features inviting identification, although not all can be identified with certainty.

Despite missing legs, hands and facial features, the human figurines can be clearly identified as such (fig. 4.32). Ears, noses and the headdress are usually clearly modelled, almost exaggerated. Many are sculpted in kneeling posture, on the

[74] See previous note. The excavators note that the combination of pottery and burning has probably to do with *jisi* (sacrifice). Large quantities in the absence of kilns are cited as supporting this suggestion.
[75] Zhang Xuqiu 1992: 283-293. The estimates in the excavation report are even higher than that at about 10,000 figurines (Dengjiawan 2003: 174).
[76] Dengjiawan 2003: 174-226.
[77] Dengjiawan 2003: 174.

heels or holding a large fish on the thighs. Others are shown standing with outstretched arms, while others appear to be sitting or supported by a ball-like extension at their bottom.[78] A final group appears to be carrying an animal on the back or holding a dog. As Zhang Xuqiu correctly observed, human figurines are an occurrence of the late phase, that is, late phase VIII, and were not seen earlier.[79] As shown below, much attention focused on interpreting the human figurines, although they are much fewer than the animal figurines, which account for about 90%.[80]

Similar to the human figurines, the animal figures are also modelled realistically, again with exaggerated features, which make many identifiable. Most also appear vivid and lifelike, as if sculpted based on observations of real animals.[81] The excavators and most commentators group the animals into four categories: domesticates, wild animals, birds and water animals (fig. 4.33).[82] Among the 'domesticates' the excavators subsume dogs (43), pigs (7), sheeps/goats (4), hares (5) and one cat, among the wild animals monkeys (7), elephants (14), tapirs (3) and one fox, among the birds chickens (41) and a variety of other birds that could not be identified as a specific species (48), and among the water animals tortoises (15) and one fish. Such categorisation is not unproblematic, as evidence for domestication is not derived from excavated animals bones, but simply from the figurines themselves and, apparently, assumptions that certain species must have been

[78] It is very difficult to assess whether this extension is part of the figurine or whether it is some kind of seat.
[79] Zhang Xuqiu 1992: 288.
[80] Dengjiawan 2003: 184.
[81] This point was first made by Zhang Xuqiu 1992: 290.
[82] Dengjiawan 2003: 184 and, for example, Li Xiangsheng 2005. We will remain with Dengjiawan as exemplary locus, since most figurines were excavated there, providing us with a representative sample to work with. Figurines at other loci at Shijiahe and beyond are less numerous.

domesticated by the third millennium.[83] Hence, in our interpretations of the animals we must proceed with caution.[84]

Animal Domestication

Although only few scholars explicitly argue for domestication, the usual typology dividing the animals into domesticated and wild species shows that the same thinking underlies most work on the figurines.[85] Li Xiangsheng, for example, lists all the animal figurines he believes to be domesticated. For example, dogs were domesticated early on and consequently must have been domesticated at Shijiahe as well, where they may have been used for hunting. Chickens, he argues, must have still been 'evolving', which is why there is so much diversity among the figurines. As ox bones were found at Chengbeixi and were also common at Hemudu, a fifth millenium site in the Lower Yangzi region, figurines of oxen must have existed as well. Pigs were domesticated in order to compensate for the lower yields from hunting.

While Li's ideas may be appealing, they are impossible to prove. While the study of animal remains from the Middle Yangzi area is merely in its infancy, there is a bigger concern with Li's study. As mentioned above, the actual identification of species is not always warranted and often subject to interpretation. Given these

[83] It can also be questioned if categorising the chickens as bird makes sense, when it could also be included under domesticates if one follows the logic that was applied. This case shows the problems of some typologies that mix descriptive with interpretative categories. The same will be apparent for the typology of the jades discussed below.

[84]The best data on domestication comes from northern China with evidence for dog domestication for around 7000 BC, pig for around 6000 BC and ox and sheep for around 2000 BC (Yuan Jing 2001). The evidence for southern China is shakier and it is not evident that all species identified here as domesticates should count as such, but it seems that some animals were domesticated by the third millennium, such as pigs and possibly dogs (Yuan *et al.* 2008: 354). However, as the judgement of domestication is made from pottery figurines and not from actual bones and, in addition, is also based on the assumption about which animals are supposed to be domesticated, there is always the possibility that the assessment is incorrect, while the overall identifications of the species appears correct with some exceptions.

[85] Zhang Xuqiu 1992: 283-293; Li Xiangsheng 2005.

doubts, it is difficult to maintain that chickens were evolving or that pigs were at a stage between the Asian wild boar and domesticated pigs. I also doubt that the animal figurines give an accurate picture of the meat acquisition patterns along the Middle Yangzi.

A recent study by Yuan *et al.,* investigating the meat acquisition patterns along the Yangzi from about 10,000 to 4000 BP, has shown that a reliance on wild animals remained consistently strong throughout this period, unlike in the Yellow River area, where people turned to domestication.[86] Although, admittedly, there are many problems in the way animal remains are recovered archaeologically in China, some major trends are apparent for the Yangzi as a whole, including the third millennium along the Middle Yangzi. Unfortunately, only one site, Miaoping in Zigui just east of the Three Gorges, yields properly analysed mid-third millennium animal finds.[87] However, the observed patterns clearly mirror those from other Yangzi sites. Fish dominate the assemblage with over 90% followed by mammals (8%) and birds (0.8%). Fishing was thus obviously the major source of animal protein during this period. The importance of fish is reflected in the figurines from Shijiahe and other sites: human figurines are often holding a fish in their laps, probably reflecting the special place fish had in the diet of the people. Fish figurines not associated with humans are not known with one possible exception.

Among the excavated mammal bones at Miaoping, 70% are those of deer, while only 30% belong to pigs regardless whether they were domesticated or not.[88]

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[86] Yuan *et al.* 2008.

[87] Yuan Jing and Meng Huaping 2003. There are also animal remains at Diaolongbei but they appear to largely pre-date the third millennium (Diaolongbei 2006). Many of the animal bones found there are those of possibly domesticated pigs showing that it was known in the region, which is also confirmed by the finds at Miaoping (see below). As noted, some pig bones were found in burial at Shijiahe, but whether these are from domesticated pigs remains to be seen. No appendix analysing these remains is included in the reports.

[88] Yuan Jing and Meng Huaping 2003.

Once again wild species dominate the assemblage. Interestingly, deer, which are also dominating many other assemblages along the Yangzi, are not represented among the figurines. Judging from the actually procured meat, as evidenced by excavated animal bones, the animal figurines do not reflect what was actually consumed. Indeed animals, of which the diet consisted, are not represented at all with the exception of fish, which, however, appear in small numbers and at a later date. Should some of the species considered to be domesticated actually have been domesticated, the figurines do not accurately reflect past economic and nutritional activities with the exception of the fish.[89] Focusing on the figurines to discuss issues of domestication or meat consumption are thus not borne out by the composition of the assemblage of figurines, which does not match the meat acquisition patterns along the Yangzi River.

Religious Interpretations

Despite a certain focus on food and animal husbandry, figurines were often seen as having religious functions.[90] While some commentators merely state that they were used in some kind of religious or ritual activities, while at the same time also arguing for other functions, others go into more detail offering specific interpretations. Zhang Xuqiu, for example, regards the (animal) figurines as a means to pray for good domestication and successful hunts based on an analogy he makes with Palaeolithic petroglyphs, but he also relates the figurines to the practice

[89] It is crucial, however, to obtain more data from archaeological sites in the region in order to substantiate such notions. Yan Wenming (in Dengjiawan 2003: 5) states that both deer and water buffalo are often seen among the animal bones found at Shijiahe, but none have been reported.
[90] See Zhang Xuqiu 1992: 293; Meng Huaping 1997; He Jiejun 2004; Guo Lixin 2005, 2009; Duan Yu 2007; Yan Wenming in both Xiaojiawuji 1999 and Dengjiawan 2003; Song Yuqin 1995; Zhou Guanglin 1996.

of 'sorcery'.[91] However, most opinions unduly focus on the human figurines alone, while the animals are seen as merely representing animal sacrifice. The former are regarded as performing certain tasks in relation to ritual, for example playing an instrument in the shape of a fish as suggested by Meng Huaping[92] or conducting a ritual using a fish or dancing.[93]

More often, the human figurines are specifically interpreted as used in shamanism.[94] While it appears that human and fish had a special relationship as shown by the figurines, a concrete interpretation of the nature of this relationship is nearly impossible. We can speculate with some confidence as to the high percentage of fish in the diet of people along the Middle Yangzi and that this may be reflected in the figurines, but to identify them with shamanism may go too far. There has been a tendency in studies of the Chinese Neolithic to interpret forms of religious expression as shamanism. For example, jades from the Lower Yangzi area were interpreted in this way.[95] Shamanism is problematic, especially as it arose as conceptual antithesis to Christianity, when missionaries in 17th-century Siberia needed a term for the 'other', but even this 'other' has been resisting unification under a single definition at a closer look.[96] As such, it seems even more misconceived to try to understand religious life in Neolithic China under the rubric of shamanism. Consequently, many of the interpretations suggesting concrete identifications of motifs and designs seem difficult to maintain.

[91] Zhang Xuqiu 1992: 293.
[92] Meng Huaping 1994 cited in Guo Lixin 2005: 208-210.
[93] Yan Wenming in Dengjiawan 2003: 5.
[94] Song Yuqin 1995; Zhou Guanglin 1996; Guo Lixin 2009. The Chinese term used is *wu*.
[95] For the most forceful statement of this kind, see Chang 1989. His study laid the path for later work in this direction.
[96] Insoll 2004: 140-141. See Price (2011) for a discussion of shamanism and Keightley (1998) for a discussion of the possible inappropriate use of this term to denote Chinese Neolithic and Bronze Age religions as shamanist.

Other interpretations parallel interpretations offered regarding the large amount of red pottery cups at Sanfangwan. The large amounts of figurines are also seen as evidence for specialised production and division of labour.[97] As before, these notions can be dismissed on the same grounds as advanced for the red pottery cups: uniform assemblages can also be produced by non-specialists, which is even more amplified when considered that cups and figurines are contemporary. Further, we note that the typology is insufficient for grasping the variety among the figurines. It can only give us an approximation of what was found, but a closer look at the individual categories shows that there is less uniformity within the assemblage than the categorisation suggests. If we, for example, look at the figurines that were identified as pigs (fig. 4.34), we can immediately see that no single figurine alike, which is also the case for the standing dogs (fig. 4.35). It is noticeable that the features used to define a type and to identify the dogs as dogs are quite pronounced in each of the figurines, but that beyond that, there is much variety. Apparently, it was of great importance for the sculptors to make figures that almost unambiguously define an animal, but this may have been the only requirement. Much freedom was possible. Maybe this observation allows for similar conclusions as for the cups: production of such items existed on a large scale, probably not by specialists, but by a large number of people who made, used and discarded them. Specialised production thus seems unlikely as explanation.

The case of the figurines bears striking parallels to that of the cups. Most obviously, both appear in huge quantities, unprecedented even in China. In both cases very fine clay was used, which must have been thoroughly processed.[98] Then, as with the cups, the figurines were hand-formed. Attention was paid to make sure

[97] Zhang Xuqiu 1992: 275, 283; Song Yuqin 1995: 48.
[98] Zhang Xuqiu 1991: 56.

that certain diagnostic features of animal species were visible creating distinct groups of animals. The choice of animals appears not to reflect what people ate, but may reflect different meanings. The figurines may have been considered efficient in structuring the way in which people thought about the world. Apparently, by the later phase VIII, it was considered important to depict people often interacting with animals. Maybe such interactions are embodied in the figurines in the first place. The suggested quantity of figurines is another parallel to the cups, maybe again indicating the involvement of larger groups of people.

The clearest difference between the cups and the figurines in terms of practices are the final contexts of deposition. While it appears that cups and figurines regularly appear together in pits, as mentioned above, the largest accumulation of figurines in the two pits at Dengjiawan is a stark contrast to the discard of the cups at Sanfangwan. Also, figurines do not occur in burials. The location of the two pits at Dengjiawan at the periphery of the excavated area may reflect that in the final episode of deposition figurines had to be located away from other practices. This appears to be reflected in their more concentrated occurrence almost exclusively in the two pits as opposed to the more distributive occurrence of the cups.

It may thus be argued that cups and figurines are part of same intensification of religious practices but at different locations within the continuum of practices. While cups and figurines are deposited together in pits, the practices they are used in appear quite different. The dichotomy between distribution in relation to the cups on the one hand and concentration in relation to the figurines on the other is also reflected in their respective distributions across the Middle Yangzi and beyond as to be discussed in the next chapter. Cups are ubiquitous, while figurines are found at

much fewer sites. The fact that figurines appear at more sites and are more widely distributed in phase IX may signal that knowledge of the earlier treatment of the figurines may have been lost.

Summary

Just at the time when the cups become a central part of large-scale communal practices at Shijiahe, as demonstrated for Sanfangwan, figurines first of animals and later for humans made of red pottery appear. In phase VII, they appear across Shijiahe in relatively small numbers, but in phase VIII thousands may have been deposited at Dengjiawan alone as suggested by the large quantities found in two pits at this locus. Simply sculpted in a few quick hand movements, the figurines of animals are clearly discernible as such as certain features were deliberately emphasised. Species could thus be identified, such as pigs, dogs and birds. Many claims were made to read the degree of animal domestication or the use of domesticates at Shijiahe from the figurines, but basing such suggestions on figurines without support from studies of animal remains is dangerous. Claims for use of domesticates at Shijiahe run counter to studies of meat-acquisition patterns along the Yangzi River, which demonstrate that the majority of the animals consumed are wild species. Curiously, species typically identified as wild, such as deer, are not found among the animal figurines. For now, practices of meat consumption need to await proper studies of animal bones.

The use of the figurines in religious practices is the most likely interpretation and also shared by most authors, although many unduly focus on the human figurines, which are a later occurrence and remain few in numbers. Animal figurines dominate the assemblage. My suggestion that the figurines had religious

significance largely rests on parallels to the red pottery cups: both employ a processed fine red pottery, were simply hand-formed, appear in large numbers and are distributed across the Middle Yangzi. Taken together, they indicate an intensification of religious practices involving large amounts of similar objects at Shijiahe for phase VII and also VIII. However, different rules may have governed the final deposition of the cups vis-à-vis the figurines. While the former appear in burials, many pits and large quantities at Sanfangwan, the latter do not appear in burials, fewer come from pits and when deposited it appears to be in a concentrated manner, quite unlike Sanfangwan. These different practices of deposition and the difference in find contexts suggest that, while related overall in terms of the material and religious developments at Shijiahe, the religious practices involving the figurines were different from those involving the cups. The dichotomy between dispersal and concentration is also seen in the distributions of cups and figurines beyond Shijiahe. The latter appear at few other sites only.[99]

Pointed-Bottom Vessels[100]

During the early part of phase Shijiahe VIII, religious practices centring on sets of large pottery pointed-bottom vessels were added to the already rich repertoire of religious activities. However, while the other practices can be contextualised within the Middle Yangzi and may be regarded as regional phenomena, these new activities originate from elsewhere: Anhui and Shandong.

[99] See Chapter 5 for a full discussion.
[100] This descriptive term, which could fit many vessels, specifically refers to the type of shown in figure 4.36 and related types.

The Vessels

The vessels are made from a coarse red pottery with a thick body and walls that are often slightly constricted towards the mouth. They have a thick, everted rim and either a pointed or flat base (fig. 4.36). Most vessels also have a few applied bowstring lines across the central section of the body and a number also has a mark carved into the upper part of the body. 120 of these vessels were found at Dengjiawan and 80 at Xiaojiawuji. They mostly come from sets, to be discussed shortly, but also from cultural layers and pits.[101] In addition to largely similar pottery fabrics, the vessels' dimensions are also roughly identical: The diameter of the mouth is consistently between 27 and 29 cm, and the height is usually between 45 and 50 cm. They appear to have expressly been produced for the purpose of interlocking as seen in set JY4 from Xiaojiawuji in figure 4.37.

Sets

The vessels appear in sets, although some fragments were also found in other features. Unfortunately, it is impossible to establish from how many other features at Dengjiawan fragments of these vessels were retrieved, but the examples described in the report come from pits and cultural layers suggesting a wide distribution of the pointed-bottom vessels.[102] The situation is clearer for Xiaojiawuji.

At Dengjiawan, one set is found in trenches AT301 and AT302 consisting of three parallel rows of vessels (fig. 4.38). The vessels (of type Aa) are interlinked

[101] Dengjiawan 2003: 156-162 (types Aa, Ab and Ac); Xiaojiawuji 1999: 169-172 (types A III and IV).
[102] Unfortunately, the report does not contain an annex listing all the pits from this phase and their content as is usual. I suspect this was simply overlooked.

with the lower third of one vessel resting in the mouth of the other.[103] Forming an S-shaped feature of about 10m in length, roughly oriented north-south, its diagonal section is preserved best. Most of the mouths of the vessels point northward or northeastward, while those in the northernmost section point toward the south. It is unclear whether this set of vessels is actually lying on the bottom of a long pit or was arranged on top of the Neolithic surface. The deposits above the set contain some red scorched earth pieces, red pottery cups and pointed-bottom vessels (probably fragments), red pottery animals and some other pottery.

The second set at Dengjiawan is illustrated in figure 4.39. It consists of two parallel running rows of vessels (type Aa), each interlocked much in the same way as in the other set. All of the vessels' mouths point towards the west.[104] The deposit on top of this set is similar to that in trenches AT301 and AT302. Both sets may not be complete, as suggested by their fragmentary state of preservation.

Also at Dengjiawan, there is an incomplete feature possibly running about 18m alongside the bank at the western edge of the excavated area.[105] It was categorised as 'religious site' in the report and named 'sacrificial remains no. 2'.[106] It can be dated to phase VIIIa just as the two pointed-bottom vessel sets. Its northern part consists of a small section of pure yellow clay paved over the underlying soil. The larger, southern part consists of a layer of yellow-brown earth that increases in thickness southward and contains large amounts of pottery sherds, especially those of pointed-bottom vessels. These can be found on top of the yellow clay in the north, a bit further south in a ditch, in an uneven pattern in the centre and

[103] Dengjiawan 2003: 139.
[104] Dengjiawan 2003: 139, 141.
[105] For an illustration, see Dengjiawan 2003: fig. 119.
[106] Dengjiawan 2003: 137-139. There is also a spot treated similarly as 'sacrificial remains no. 1' (*jizhi*) that was not reported due to its poor state of preservation, but it is located on the site plan in trench T7 (Dengjiawan 2003: 138, fig. 118), where it cannot be distinguished from the one that was reported.

widely distributed in the south. Some are more complete than others and allow identification as pointed-bottom vessels of type A, while others are sherds only. Also, bowls were found that had been deposited joined at their mouths. It is possible that the pointed-bottom vessels were deposited here in sets like those seen elsewhere at Dengjiawan and Xiaojiawuji. As the exact nature of their deposition is unclear and preservation is bad, the 'sacrificial remains no. 2' have been ignored in previous discussions of the pointed-bottom vessels. I suggest including this feature into the list of sets.

The same neglect is true for the nine pottery vessels found north of and in building F3 described in Chapter 3 (fig. 3.22). From the published profile it becomes clear that the vessels were dug through pit H109 into the natural soil so that they could stand upright, that is with the mouth facing up. This placement is less evident for some, such as the one found in the building remains. The vessels thus appear later than the features they are associated with. Although none of them was reported in detail, the shapes seen in the profile drawing allows the suggestion that they are of the same type as the pointed-bottom vessels of type A deposited in sets elsewhere. While the placement differs from most other features, in which pointed-bottom vessels were found lying on their side and interlinked mouth to bottom, the sets at Xiaojiawuji show that depositions differing from the 'norm' are possible. Hence, the vessels associated with building F3 should be considered the fourth group/set of pointed-bottom vessels at Dengjiawan, doubling the count of sets vis-à-vis the report and other publications.

At Xiaojiawuji, a large number of pits contain fragments of pointed-bottom vessels, but also seven sets were discovered.[107] These appear just as fragmentary as

[107] Xiaojiawuji 1999: 128-131.

their counterparts at Dengjiawan. Their placement is similar to those at Dengjiawan. Lying at the bottom of shallow pits, apparently dug to contain the vessels or lying on top of the surface, the vessels are interlocking base to mouth with the exception of number JY7, whose vessels form a row of more than 4m in length from east to west but their mouths face the ground (fig. 4.40).[108] The rows of vessels in the other sets seem to be orientated in random directions without clear pattern (fig. 4.41). Unlike at Dengjiawan, where the sets are accompanied by a few pits only, many features are in close proximity at Xiaojiawuji including buildings. The biggest problem with this locus is that there exists no finely-phased chronology to distinguish between phases Shijiahe VII and VIII. Most features for both phases are simply lumped together as 'early Shijiahe Culture' thereby restricting the level of detail of the analysis. I assume, however, that the Xiaojiawuji vessels are contemporary with their Dengjiawan counterparts and should be dated to early Shijiahe VIII.

Interpretations

Any discussions of the pointed-bottom vessels include the carved marks on the upper section of the body, seen on many pointed-bottom vessels at Dengjiawan and Xiaojiawuji.[109] As can be seen in figure 4.42, some marks approximate the shape of a hook and were carved into the upper half of the body before firing.[110] The depth and fluency of the lines would have been difficult to achieve after firing. A total of nine different marks were found on the vessels at Xiaojiawuji with the

[108] Set JY2 is not separately illustrated but from the site plan (Xiaojiawuji 1999: 101, fig. 76B) it appears to consist of three interlocked vessels, similar to set JY5.
[109] I will use the term 'mark' in preference over other possible terms, such as sign, symbol, character or the like, as this term is rather neutral and does not necessarily imply meaning.
[110] Xiaojiawuji 1999: 218-223; Dengjiawan 2003: 233-236. Demattè 2010 writes that some of the marks were filled with red pigment but there is no mention of that in the reports.

hooked-shaped ones as most frequent (fig. 4.43), just as at Dengjiawan where six different ones were found (fig. 4.44). Only one pointed-bottom vessel at Xiaojiawuji has a carving that could be called pictorial probably depicting a standing person holding an axe (fig. 4.45). Most marks were found on vessels or vessel sherds in cultural layers and pits and it is almost impossible to establish the exact distribution of marks per set, as this information was not reported in full. However, a look at the reported marks shows that hook-shaped one predominantly appears in the sets at Dengjiawan. At Xiaojiawuji we also see hook-shaped marks coming from a number of sets and the report even states that most marks in set JY7 are similar, i.e. hook-shaped,[111] but it remains difficult to ascertain whether different sets are more likely to have different combinations of marks or whether their distribution is more random.[112]

There has been much unity among scholars in China[113] to interpret the pointed-bottom vessels and their sets as related to some sort of ritual or sacrifice.[114] This interpretation of the vessels is intimately linked to the marks, but some scholars treat them separately with the marks being linked to some religious content, while the vessels are interpreted from a different angle. Not surprisingly, attempts were made at identifying what was depicted and in consequence there are inevitably many attempts at deciphering the meaning of the marks.

A number of more precise interpretations have been advanced. For one, continuities from the tube-shape pottery of the earlier periods at Dengjiawan to the

[111] Xiaojiawuji 1999: 130.
[112] Yan Wenming in Xiaojiawuji (1999: 3) and Dengjiawan (2003: 3.) Yan Wenming correctly cautions that it is not possible to conclude whether this difference is a real difference or coincidence.
[113] The pointed-bottom vessels have not found much attention outside of China.
[114] See, for example, Zhang Xuqiu 1992: 266; Xiaojiawuji 1999: 223; Dengjiawan 2003: 236; Zhang Chi 2003: 144; He Jiejun 2004: 215-216, 405-406; Guo Lixin 2005: 148 *et passim* and 208-210; Yan Wenming in Xiaojiawuji 1999 and Dengjiawan 2003; Zheng Zhonghua 2000.

pointed-bottom vessels were postulated.[115] While the tube-shaped pottery continued to be used into phase VI as argued above, there is no evidence for it to continue into phase VII or even into early phase VIII when the pointed-bottom vessels appear. Of course, one could imagine people at Shijiahe revealing tube-shaped pottery when moving earth. However, as I will show in the next chapter, the pointed-bottom vessels were an outcome of a different connection and had come from elsewhere. Nonetheless, writers seamlessly transferred the interpretations in relation to the tube-shaped pottery to the pointed-bottom vessels, meaning that these were also interpreted as evidence for ancestor worship, especially that of male ancestors.[116] For the same reasons as discussed above, such notions are difficult to sustain, especially as much of the inspiration has come from later, Shang-period examples.[117]

Needless to say that there is no evidence for concretely pinpointing or deciphering the marks on the vessels, which is why I will refrain from discussing individual interpretations in much detail, but briefly list them to provide an impression of the scholarship. For example, the excavators believe that the marks symbolise real or religious life. The possible depictions of cups, tools and weapons are thus related to the 'real' world and others are related to the natural world and thus carry religious meanings.[118] One scholar goes even further in relating the horn-like marks and those resembling stone or jade axes to the military, and those resembling stone sickles to agriculture and those resembling stem- or red pottery

[115] See, for example, Zheng Zhonghua 2000: 57; Demattè 2010: 222.
[116] See above and Zheng Zhonghua 2000: 58; Guo Lixin 2005: 148 *et passim*. Guo Lixin sees further support for Zhang Xuqiu's opinion that the pointed-bottom vessels have to do with ancestor worship in the fact that two items, one of pottery and the other of stone, clearly resembling phalli (at least more than the tube-shaped pottery and pointed-bottom vessels) were found at Xiaojiawuji, although it remains to be seen whether the phalli actually relate to the sets.
[117] Guo Lixin (2005) explicitely quotes Zhang Hongbin (2000) on aspects of Shang religion.
[118] Xiaojiawuji 1999: 223.

cups used in sacrifice. The human figure on the jar must consequently be a warrior, a military leader, and so the military, agriculture and sacrifice are considered the most important activities of Shijiahe society.[119] Yan Wenming argues that the vessels may originally have been used as containers, cooking vessels or vessels for pounding rice, but, in carrying these marks, they may have come to represent rich grain harvest and were used to process grain in rituals.[120]

Another notion that relates the use of the vessels to more 'mundane' purposes, but this time not to agriculture, is the notion, forwarded both by Zhang Xuqiu and Meng Huaping, that the large vessels were used as crucibles for the production of copper artefacts,[121] although Zhang only identifies one type of vessel from a site called Yaojialin as crucible as it contained much grit.[122] So far, this notion is not supported by the archaeological evidence. Just as much as the notion of a 'Copper Age' may be the wish to include China into the club of past societies that experienced the widespread use of metals early on, the identification of these vessels as crucibles also seems stem from this wish.

A final interpretation is that the marks on the vessels represent writing, thereby continuing arguments that suggest the high antiquity of writing in China. It is argued that since the marks express a common and coherent notion, e.g. sacrifice, ancestor worship and the like, they fulfil and possess the particularities of 'primitive

[119] Yan Wenming in Xiaojiawuji 1999: 3.
[120] Yan Wenming in Dengjiawan 2003: 4.
[121] Zhang Xuqiu 1992: 279-282; Meng Huaping 1997: 227-228. However, both do not discount a religious meaning of the vessels either. Zhang relates them to 'sacrifice' and Meng thinks the marks have religious meanings (Zhang Xuqiu 1992: 266; Meng Huaping 1997: 288).
[122] In general, the evidence for copper or bronze casting is rather thin. As much as this is a desideratum in the search for any evidence for 'Chinese civilisation', only one piece of cast copper, believed to be a fragment of a knife, was found at Dengjiawan belonging to phases VII and/or VIII (Dengjiawan 2003: 243). Apart from that only malachite was found (Dengjiawan 2003: 303) and some copper ore was found at Xiaojiawuji (Xiaojiawuji 1999: 236) all dating to the same period as the copper fragment. Some malachite and slag are believed to have been found at Luojiabailing as well (Luojiabailing 1994: 227).

script'.[123] The marks from Shijiahe are related to marks found on pottery and jades attributed to the Dawenkou Culture in Shandong and Anhui and the Liangzhu Culture in the Yangzi delta, which are also seen as ancestors of Anyang writing. While the connections between these areas existed, as I will argue in the following chapter, the evidence for treating the marks as writing is not borne out. As Bagley convincingly argued, these marks seem to have little in common with Anyang writing, so that the latter cannot derive from the former. A further point is that the areas of each of the three Neolithic 'cultures' is removed from Anyang both temporally by more than a millennium and also spatially.[124] It thus seems that most of the forwarded interpretations do not hold up to scrutiny. All interpretations, but the one identifying the marks as writing, ignore one important component of the available evidence: the external connections. I will show that the pointed-bottom vessels and the practice of depositing them in the way described originate from Yuchisi in Anhui but the origin of the vessels reaches even further apart into Shandong. These entanglements in interactions, which led to the adoption of new religious practices, are vital for understanding this period at Shijiahe.

In the following I will focus on the practices, which may have led to the deposition of the pointed-bottom vessels, as these have been largely ignored by having been glossed as simply religious, sacrificial and the like but without looking at contexts and spatial relations to other features. Overall, however, I agree that the vessels and their sets relate to practices that should be considered religious, but such conclusion should be drawn from a contextual assessment only. Their final deposition and the distribution of pointed-bottom vessel sherds across larger areas

[123] Zheng Zhonghua 2000: 60. See also Demattè 2010, who regards the marks found in the realm of the Dawenkou, Shijiahe and Liangzhu cultures as predecessors of Shang writing.
[124] Bagley 2004: 228-230.

both at Dengjiawan and Xiaojiawuji suggest that the practices were widespread at least at Shijiahe.

One important dimension adding to our understanding of the pointed-bottom vessels is that they originate from Yuchisi and ultimately Shandong. As I will argue in the next chapter, their appearance at Shijiahe and deposition in the same fashion as at Yuchisi suggests the wholesale transfer of religious practices including meaning. However, as seen in the diverging deposition of Xiaojiawuji set JY7 and the set of vessels close to building F3, once over 400km removed from Yuchisi new meanings may have been accumulated. The people at Shijiahe have thus not just passively adopted religious ideas from far away but also actively shaped these.

Another aspect to consider in relation to this long-distance transfer is transport. At least some of the vessels must have been transported to Shijiahe, maybe to provide models for local production of such vessels there. The Yuchisi vessels are usually 10 to 20cm taller and also often made of a grey-brown pottery, while those at Shijiahe to be made of red pottery. These differences suggest that the people of Shijiahe made local versions of the Yuchisi and Shandong originals. And they also used red pottery, which is commonly used at Shijiahe for objects with religious significance, such as the figurines and cups. This may be taken as another indicator for a thoroughly local adaption of the Yuchisi practices and not simply passivity. Nonetheless, actual examples from Yuchisi may have acted as models. And these must have been transported the over 400km from Yuchisi to Shijiahe. There is a precedent for the long-distance transport of such unwieldy vessels in the example of examples from Shandong probably having been transported to Yuchisi as discussed in the following chapter.

A considerable effort was thus invested into getting the vessels to Shijiahe and establishing them as part of the already rich sets of religious practices. The general practices are probably comparable to those described above in relation to the tube-shaped pottery as such large objects may require similar bodily movements, although in the production and deposition of the former tales about distant worlds may have played an important roles given their provenance. The locations, which were chosen for the final deposition of the pointed-bottom vessels at Dengjiawan, do not appear coincidental, but as a conscious choice by the participants of locations, which were those of previous religious practices. For example, the location of the second set matches that of earlier burials and pits beginning in phase V. Many pits were dug around this feature in phase VIIIa. Similar remarks can be made for the vessels found in 'sacrificial remains no. 2' and the vessels at building F3. These have long been the locations of accumulated religious practices and the deposition of the vessels added to these.

At Xiaojiawuji, the sets appear to cluster. For example, sets JY1 and JY2 are in close proximity to each other in excavated area B. While set JY3 is not spatially close to any of the other sets, it is surrounded by many pits and ditches, some of which may relate to the practices involving the vessels. Another cluster consists of sets JY4, JY6, JY5 and JY7, which are no more than 5m apart. The clustering of sets may indicate that certain locations were carved out for conducting religious practices.

Summary

I argued above that the increase in red pottery cups and the appearance of red pottery figurines in phase VII signal an increase in religious practices at

Shijiahe. To this general trend can be added the appearance of pointed-bottom vessel sets in phase VIIIa. However, while on current evidence the cups and figurines appear to be local developments, the pointed-bottom vessels and their use in sets were appropriated at Shijiahe from elsewhere. Previous interpretations of the large pointed bottom vessels have largely relied on seeing these as continuation of the tube-shaped pottery. Finds of similar objects in Shandong, Anhui and elsewhere, all dated slightly earlier than their appearance at Shijiahe, clearly show their external origins. The contexts in which the vessels were used in Shandong and Anhui also illustrates that these vessels were considered to be of religious importance. In Shandong they were placed in medium to large burials, at Yuchisi in Anhui, they were used as urns for children and placed on their sides, mouth linked to bottom on the ground or into pits. In the latter fashion they also appear at Shijiahe, although some sets diverge from this practice.

Hence, not only the vessels themselves but also the one type of practices they were used in was taken over. While discussed further in the following chapter, the occurrence of these vessels and the contexts they appear in show the entanglement of Shijiahe in interactions with the outside, a point made repeatedly in this thesis. The pointed-bottom vessels clearly illustrate that religion was an important factor of these interactions.

Conclusions

This chapter has offered greater detail on selected practices, standing out against the continuum of other practices at Shijiahe, that were often suspected to be religious, but here proven for the first time through a thoroughly contextual studies from a practice-based angle. I have shown that practices relating to religion are an

important feature of life at Shijiahe throughout the third millennium, which appear to have occurred on a grand scale from phase V right through to the abandonment. At the same time, religious practices were variable across time and not constant. Once the practices involving the tube-shaped pottery were phased out, red pottery cups begin to be used on a grand scale at Sanfangwan. While begun in phase VII, it is the following phase that the figurines gain traction and were deposited in great quantities. In the same phase, the pointed-bottom vessel sets were appropriated from Yuchisi. It appears that religious life at Shijiahe was constantly being enriched with the greatest push occurring in phase VII.

This development of practices unfolds against the background of rather stable burial customs. I have shown that the placement of pottery, the body of the deceased and general parameters of the pits remained remarkably stable from phase V to VII. While other practices came and went, the burial customs experienced greater variation in phase VII only. The greater variation may signal an increased loss of cohesion of overcome traditions. These developments are matched by an increase in religious practices, maybe involving ever-larger numbers of people. The above account has thus deepened some of the impressions gained in the biographical analysis of the site in the previous chapter. The general developments outlined there are clearly mirrored by the developments of religious practices.

With respect to the changes from phase VIII to IX, between which the abandonment occurred, it is plausible to argue that the abandonment was wholesale and whatever happened in phase IX was very different from the previous phases, as indeed is accurate for most activities at Shijiahe as shown in the previous chapter. But, as shown in this chapter, some of the objects also appear in phase IX, for example the cups and the figurines. These appear in far fewer numbers than before

and also the practices they were used in bear no obvious similarities to the earlier phases. There is thus no evidence for continued practices into phase IX. Continued existence of some objects current earlier does not negate the sequence of abandonment and re-settlement.

In this chapter, I have continued to look at the developments at Shijiahe from the perspective of thick description. I emphasised contextualizing objects often suspected to have been religiously relevant. However, such interpretations have usually been based on the fact that some of these objects were perceived as odd or religious interpretations were added to a plethora of other interpretations. Here, the meaning of the objects was gauged from placing them more completely into the contexts provided by the archaeological evidence. Thick description has thus supplied a method to achieve a fuller understanding of the religious developments of Shijiahe leading to more rounded and convincing conclusions. This understanding will be deepened in the next chapter when the practices discussed in this chapter will be contextualised with regard to their role in regional and inter-regional interaction showing that objects related to religion play a significant role in interaction.

Chapter Five

RELIGIOUS PRACTICES AND INTERACTION

Introduction

The previous chapter established the relevance of religious practices for Shijiahe during the third millennium. These practices further improve our understanding of the site as discussed in Chapter 3. In this chapter, I will substantiate these accounts by showing the relevance of the discussed practices beyond Shijiahe both in the Middle Yangzi region and even into areas to the north and northeast. The distribution of the objects may indicate that the discussed practices were relevant at other sites as well and I will attempt at identifying contexts of use at other sites. The greatest challenge is that many find spots beyond Shijiahe are unclear and often not thoroughly contextualised. In addition to the practices discussed in the previous chapter, I will add the example of phase IX jades in order to show the continuity of connections in terms of the routes taken.

The chapter will mainly include distribution maps highlighting the sites where the relevant objects were found. These may constitute the nodes of a potential network. The significant question concerns the way in which these nodes were connected. Hence, the chapter will conclude by arguing for the importance of rivers in these connections and the way in which river connections may have operated in the third millennium. These rivers are likely to constitute the links of the network and explain the reason why Shijiahe may have become an important site in the first place.

Tube-Shaped Pottery Beyond Shijiahe

For most practices discussed in the previous chapter the Shijiahe site provides the best contextual evidence, but similar objects were also found at other sites enlarging the scope of the enquiry. This is also true for the tube-shaped pottery.

The best-preserved examples, apart from Shijiahe, were found at Qujialing, not far from the former. One tube of type C, almost identical in shape and dimensions to those excavated at Dengjiawan, was excavated (fig. 5.1),[1] in addition to another piece that possibly served as middle section just as a similar piece from Dengjiawan (fig. 5.2).[2] Unfortunately, the exact contexts of these pieces are unclear. They were attributed to 'cultural layers' and not to precise features. Dated to the equivalent of phase VI, the tube-shaped pottery at this site demonstrates that the use of the tubes continued into phase VI as suggested for Dengjiawan in the previous chapter. The proximity of Qujialing and Shijiahe allows for the speculation that communication existed between practitioners at both sites and that the tubes may have been used similarly or identically to Shijiahe.

Similar pottery, although nothing more than fragments, has also been reported from other sites, but the evidence is often more obscure. For example, fragments with applied decoration similar to type C were discovered in 'cultural layers' at Qinglongquan (fig. 5.3a).[3] Similarly difficult evidence comes from Majiayuan where pottery with applied decoration was also found.[4] There is, however, no (published) evidence whatsoever for Zoumaling and Yinxiangcheng confirming the claims of a number of writers that similar pottery was also found at these two sites.[5] More solid

[1] Qujialing 1965: 64, 61, fig. 48:9, pl. LII:2.
[2] Qujialing 1965: 64, 65, fig. 51, pl. LII:3.
[3] Qinglongquan yu Dasi 1991: 70, 71, fig. 61:5.
[4] Majiayuan 1997: 52.
[5] See Meng Huaping 1997: 225; Zhang Xuqiu 2004: 207. There was an excavation at Yinxiangcheng in 2000, which has not been published yet.

evidence comes from a pit excavated at Wangjiagang in Gong'an County, Hubei, where a pottery fragment was discovered that looks similar to type E from Dengjiawan (fig. 5.3b).[6] Despite some doubts, these occurrences, especially at Qujialing and Wangjiagang (fig. 5.4), whose 'tubes' are identical or closest to those from Shijiahe, demonstrate that the practices may not have been limited to Dengjiawan, but extended across a larger territory, encompassing much of the Middle Yangzi River region. This was probably the result of interactions linked to the initial phases of enclosure construction at several sites.

The tubes are also the first instance indicating that certain practices related to religion may have been shared or known across a larger region. It is tempting to regard the objects and practices as emanating from Shijiahe. However, more contextual and chronological information is required to further substantiate such speculation. It is hoped that should tubes have actually been found at Zoumaling and Yinxiangcheng that these provide the necessary contextualisation so that inferences can be made on the practices in which they were used.

Red Pottery Cups and Interaction

In the previous chapter, I have shown the way in which the red pottery cups had been used in religious practices beginning in phase V with their deposition in burials and also at 'Remains No. 1' at Dengjiawan by phase VI. While their use as an important part of burial rites continued into phase VII, the cups acquired an even greater significance as mirrored in their deposition at Sanfangwan, where they were employed in large quantities during religious practices, which included their discard. I have also shown that the cups still existed in phase IX, thereby surviving the

[6] Wangjiagang 1984: 215, fig. 13:5. In the report, the piece is listed as 'high-necked jar'.

abandonment of Shijiahe. However, their previous contexts of use ceased to exist. They no longer formed part of burials with the exception of urn W6 and also Sanfangwan was abandoned. It is thus likely that the cups were used and understood very differently in phase IX.

In this section I will establish that the cups had significance beyond Shijiahe. From phase V to VIII, the cups are widely distributed across the Middle Yangzi region and even into the middle reaches of the Yellow River. In phase IX, the number of sites with cups sharply decreased as did their distribution, which may mirror the changed meaning of the cups during this phase. In addition to mapping the distribution of cups, I will try to establish the practices their were used in and the way in which these may mirror practices at Shijiahe.

I conducted a rough presence/absence analysis for a large group of sites from the Middle Yangzi region. Table 5.1 includes only those sites that at some point in time yielded cups of the relevant type(s), even if only one. Unfortunately, due to the level of detail in which most sites were reported, only a rough attribution to archaeological cultures is possible, forcing us to aggregate phases, such as phase V and VI ('earlier'), and VII and VIII ('later').[7] Only phase IX is rather clear, as it covers, what is usually referred to as the Post-Shijiahe Culture. Consequently, only some general trends in terms of the distribution of the cups can be discerned and analysed.

During the 'earlier' period, corresponding to phases V and VI, cups were distributed widely (fig. 5.5).[8] These include sites in the vicinity of Shijiahe, east of the Han River, a number of sites in the western part of the Jianghan Plain and northwest

[7] At times, distinction between cups dated to the 'late Qujialing Culture' can be made and these may roughly be attributed by phase VI. Unfortunately, overall not much may be gained by subdividing cultures further for some sites when the majority of the dating is very general.
[8] 26 sites yielded such cups.

of Dongting Lake, including Chengtoushan. The find furthest to the south was made at the Gaokanlong site in the middle and upper reaches of the Yuan River. Moving toward the north, only one site in the Sui-Zao Corridor yielded a cup. More sites can be found in the Middle Han River area. Sites in Henan and Shanxi attest for the fact that cups were even transmitted far beyond the Middle Yangzi region.

About as many sites yielded cups during the 'later' period,[9] corresponding to phases VII and VIII, especially in the eastern Han River area, along the Middle Han River and northwest of Dongting Lake (fig. 5.6). Many sites from the previous period continue to have cups. Sites along the Tongbai and Dabie mountain ranges yield such cups for the first time. Also new is the appearance of a cup north of the Mufu Mountains and south of the Yangzi at Yaojialin, which is the only appearance of a cup in this area at any time. While no cups appear along the Yuan River in this period, one cup was found at Daiziping along the Xiang River south of Dongting Lake. Cups can be found at even more sites in Henan and Shanxi and even further afield at Yuchisi in Anhui, a site, which is a significant link in connection with the pointed-bottom vessels (see below).

During phase Shijiahe IX there are fewer sites with cups and in fewer subregions (fig. 5.7).[10] Cups were found at one site each east of the Han River, the western Jianghan Plain and northwest of Dongting Lake. At least one site in the Middle Han area contained a cup. They are no longer found in Henan, Shanxi or Anhui.

A number of general trends can be observed. During all three periods, cups tend to consistently appear in three areas: the Eastern Han River, the western Jianghan

[9] Cups were found at 29 sites. Given the ongoing fieldwork in the Middle Yangzi, this number may already be out of date now. As gauged from some preliminary reports and announcements, cups keep being found. The locations of the newly excavated sites reflect the general distributive patterns.
[10] 9 sites yielded cups.

Plain and the Middle Han River. With the exception of the Liyang Plain, cups rarely appear south of the Yangzi. Three sites in southeastern Hubei and along the Yuan and Xiang rivers in Hunan yielded cups. As will be further confirmed by the distributions of red pottery figurines and pointed-bottom vessels, movements toward the south appear less prevalent, which tends to match the suggestion made in Chapter 2 that southward movements were limited because of the extent of the Yunmengze, which may have been difficult to cross. The widest distribution appears to have occurred during the later period coinciding with increased numbers of cups at Shijiahe, especially at Sanfangwan.

While movement southward seems to have been limited, the opposite was the case for movements toward the north into Henan, Shanxi and Anhui during most periods. These general patterns are again reinforced by the observations made in relation to the pointed-bottom vessels discussed below. Although these are singular finds, the northern connection is remarkably persistent. For example, at one site north of the Yellow River in Shanxi, Dongguan, cups even appear during all phases but phase IX (table 5.1).

While the wide distributions of the cups indicates that these were an important part of people's lives at least during the earlier and later periods, a closer look at the contexts and practices of their use is required to establish whether any other parallels than just similarities of the general type of vessel exist between Shijiahe and the other sites. The reporting of the cups varies widely and the quantities recovered nowhere match those at Shijiahe. At most sites the cups are reported to have come from pits and cultural layers. No features parallel those at Shijiahe especially not Sanfangwan. While the ubiquitous occurrence of cups in pits, sometimes in conjunction with

pottery figurines, appears to mirror the pits at Dengjiawan and Xiaojiawuji, a detailed analysis is usually not possible.

Among the most prominent contexts of use at Shijiahe are the burials at Dengjiawan and Xiaojiawuji. Although not exhaustive, there is evidence from other sites where burials also contain such cups. For example, one burial at the Daiziping site south of the Dongting Lake in Hunan contained one cup.[11] This site was dated to the later period. Dating to the same period, cups were also found in two burials (M19, M32) at Qilihe, Fang Xian, in the Middle Han reaches (fig. 5.8).[12] Cups from the contemporary site of Xiazhai, Xichuan, Henan, are also said to have come from burials.[13] The distribution of these sites mirrors the wide distribution of cups during the later phase. For the earlier period, comparable evidence only comes from Chengtoushan. Six burials contained cups.[14] This small number stands out against the close to 500 burials dating to the same period at this site. Considering the sets of pottery buried with the deceased at Chengtoushan, which are quite different from those at Shijiahe, the appearance of the cups seems unusual, if not out of place. Maybe the cups should be seen as indexes of the long distance interactions, in which Chengtoushan was entangled, while people kept following different funerary practices overall. The appearance of pottery animal figurines during the later period affirms these long distance connections. At the other sites, for example the burials of the later phase at Qilihe, the burial customs at Shijiahe are paralleled much closer. However, Shijiahe-type sets do not appear, as only cups are placed into the burials, a situation, which is also occasionally observed at Shijiahe.

[11] Daiziping 1986: 68, fig. 3:5.
[12] Qilihe 2007: 67, 72.
[13] Chu Xiaolong and Cao Yanpeng 2011: 47.
[14] Chengtoushan 2007: 575, fig. 556:13-16.

These few examples suggest that at least at a few sites cups were used in similar practices to Shijiahe. I expect further confirmation from other sites in the light of the more thorough and more thoroughly reported excavations, which are currently happening in the Middle Yangzi region. Whether the placement in burials is matched by congruence in other practices as well remains to be seen. The wide distribution of the cups, especially at the time when Sanfangwan is most active, hints at the possibility that the importance of the cups in the religious life at Shijiahe was at least known, maybe even shared at some sites.

Cups may have been made locally throughout the region and do necessarily not originate from Shijiahe. While some sites yield cups of a fine pottery similar to those from Shijiahe, sometimes also coarser wares, some with thinner and some with thicker walls and also some coated in red colour appear. This impression is bolstered by variations in shape, as gauged from table 5.1, diverging from the cups at Shijiahe, especially in the case of the later cups. The earlier cups appear more uniform in shape than the later ones, which may reflect the higher skills required to make them as discussed in the previous chapter. Despite these differences between sites and divergences from Shijiahe, overall strong similarities between the cups at all sites exist intimating the existence of a consensus about general shape and decoration (see table 5.1). Regarding the sites in Henan, Shanxi and Anhui, it is likely that the cups were products of the Middle Yangzi that were moved northward.

In consequence, we may argue that it is likely that the practices at Shijiahe were at least occasionally shared, but maybe overall indexed by the cups. The cups were relevant beyond Shijiahe but only during the early and later periods. During phase IX, the discontinued practices, abandoned features and much lower quantities of cups at Shijiahe appear to be mirrored in their appearance at much fewer sites

overall. Maybe without the practices to bolster their popularity regionwide, long distance interaction focusing on the cups may have been discontinued.

Figurines and Interaction

In the previous chapter, I have argued that the red pottery figurines of animals and people were used in religious practices. In comparison with the practices involving the red pottery cups, which resulted in their wide distribution across Shijiahe (for example dozens of pits at Xiaojiawuji contain at least one) and, as I would add, across the Middle Yangzi region, the practices involving the figurines appear to result in their deposition in a more concentrated fashion, as seen at Dengjiawan, as if they were taken out of circulation.

In the following, I will show that this impression is also supported by the distribution of figurines across the Middle Yangzi region, which does not rival that of the cups. However, many researchers, in an extension of the specialised production argument, posit that the figurines were made for trade,[15] which is believed to be supported by the fact that they were not only found at Shijiahe, but also at other sites in the Middle Yangzi region and even beyond. Duan Yu goes even further by stating that the figurines were exchanged between elites.[16] As there is neither any evidence for the mechanisms nor for the people involved in exchanging the figurines, the term trade may not be appropriate. But there is evidence for figurines appearing at other sites as well, as they were found at many sites in the Middle Yangzi region and even at four sites in Henan (fig. 5.9). Their dating stretches across from phase VII to IX. Some of the sites were previously listed by others, but, after reviewing a larger

[15] Zhang Xuqiu 1992: 283-293; Song Yuqin 1995: 48; He Jiejun 2004: 370; Guo Lixin 2005: 122-123; Duan Yu 2007: 169 *et passim*.
[16] See previous note.

number of reports, it was possible to eliminate and add sites, the results of which are shown in table 5.2.

As discussed, the figurines appear at Shijiahe in phase VII and increased in number by phase VIIIa and especially in phase VIIIb. However, table 5.2 shows that there are earlier occurrences of pottery figurines, especially of animals. From two phases, predating phase VII, figurines come from unspecified contexts at Qujialing (fig. 5.10).[17] Among the five figurines three were identified as chickens, one may be a sheep or goat and one is unclear. Although all look very similar to those from Dengjiawan, they are made from different clay described as rather hard and yellow with a red coat in some cases, while another is grey-black and yet another is red. A comparable case is the site of Xiawanggang where two animal figurines, one chicken and one dog, were found in cultural layers.[18] Both are described as being of a coarse red pottery. These examples may be the precursors of the later figurines or accidental intrusions from later phases.[19]

Other figurines are contemporary to those at Dengjiawan. A particularly large amount was found at other loci at Shijiahe (table 5.2), but none match the quantities from Dengjiawan. The second largest amount, 29 animal figurines, was found at Xiaojiawuji with, once again, chickens and dogs being most numerous.[20] In general, chicken or bird and dog figurines appear most frequently at Shijiahe and other sites. Human figurines are a rare occurrence. Another commonality is that all were made of a fine red pottery. Also, all but one figurine come from either cultural layers or pits

[17] Qujialing 1965: 23 and pl. XIII, 71, 68, fig. 54:19 and pl. LIV:8.
[18] Xiawanggang 1989: 215 and pls 60:15, 21:2. One bird was found in the 'Yangshao' layers and seems unrelated to the later figurines (see Xiawanggang 1989: 51 and 52, fig. 48:9).
[19] One pottery animal collected at Chengtoushan was attributed to the Qujialing Culture (Chengtoushan 2007a: 592), a claim that cannot be substantiated, especially when the occurrences of similar, excavated figurines from later phases are considered. The figurine might be an intrusion from a later phase.
[20] I assume that more would have been discovered at other loci and sites had they been excavated on an equally large scale.

with the vast majority coming from cultural layers, i.e. unspecified contexts. Hence, not much can be inferred in terms of the practices involved. Only one figurine, of a chicken, was excavated from a burial at the site of Huachenggang in Hunan.[21] This is the only instance of a mortuary context containing a figurine. It is possible that the figurine is an intrusion from a later phase, but the inclusion in the funerary assemblage might have been a deliberate choice. Unfortunately, both possibilities cannot be fully investigated, as the burial was not reported in full. Statistically this instance does not appear significant. For phases VII and VIII, we observe that figurines were found at Shijiahe and five other sites. One, Xihuayuan, is located north of Shijiahe in the Sui-Zao Corridor, while another, Qilihe, lies even further north along a tributary of the Han River. Three other sites, including Chengtoushan, are located south of the Yangzi northwest of Dongting Lake.

For phase IX, the distribution is much wider. Although the excavators consider the phase IX animal figurines chance finds that actually date to an earlier phase due to their similarities with those from earlier periods,[22] there is evidence to maintain a phase IX date for the figurines as they occur in phase IX pits at Xiaojiawuji and other loci. Very similar figurines were also discovered at contemporaneous sites (see table 5.2), among them Luanshitan further up along the Han River. More finds were made in the Western Jianghan Plain, where figurines of phase Shijiahe IX are the only ones found (table 5.2, fig. 5.9). So far, there is no evidence for earlier ones there. Figurines do not continue to appear northwest of Dongting Lake, which is consistent with episodes of abandonment there. Significantly, figurines appear at four sites in river valleys in Henan during this phase (fig. 5.9), which mirrors the long-distance connections also seen in the distribution of

[21] Huachenggang 1983: 464 and 463, fig. 35:10, 15.
[22] Xiaojiawuji 1999: 264-265.

the jades (see below). Almost all figurines are made from fine red pottery and are intriguingly similar in shape to those at other sites and immediately recognisable.

How may we interpret such findings? The distribution of the figurines beyond Shijiahe shows that they were part of long-distance interactions, altogether not dissimilar from the cups. However, the figurines appear at much fewer sites compared to the cups. It is not until phase IX that there is a wider distribution. If we follow the argument made in the previous chapter that figurines were deposited in greater concentrations and less dispersed than the cups, this may explain their appearance at these few sites only. Nonetheless, figurines at other sites, including those in Henan, may have come from Shijiahe. Overall they are a more uniform assemblage than the cups, which may point to a single origin. Maybe they are products of Shijiahe and moved to other sites, which shared the practices involving the figurines with Shijiahe. The wider distribution during phase IX may point to the possibility that knowledge about their use was lost resulting in different practices of deposition and distribution.

Origins and Distribution of the Pointed-Bottom Vessels

As frequently mentioned in the previous chapter, the pointed-bottom vessels also have an external connection to them; in fact, they originate from Anhui and ultimately from Shandong. This realisation goes against many scholars who argue that the sets originate in the tube-shaped pottery of phases V and VI. As already indicated in relation to the red pottery cups (and the figurines), the pointed-bottom vessels deepen the impression of Shijiahe being embedded in long-distance interactions, in this case with direct and great impact on religious practices at Shijiahe.

The closest site with similar vessels is Yuchisi, Mengcheng, Anhui, whose pointed-bottom vessels, such as the one in figure 5.11, usually come from contexts

that were dated to the late phase of the Dawenkou Culture, probably about 2800 to 2600 BC.[23] Several points support a close connection between the vessels at Shijiahe and Yuchisi. First, the overall shape is very close, but the Anhui vessels can be 10 to 20cm taller. Secondly, the location of the mark on the vessel is also usually on its upper half. Thirdly, some of the marks are similar (fig. 5.12),[24] for example, those that may represent axes seem related to those on Shijiahe vessels resembling sickles/hooks. Also, the diamond-shaped mark appears on both. A final example is the circle topping a triangle found at Xiaojiawuji that may be related to the mark of a circle atop a three-pronged mark.[25]

But not only the vessels themselves bear strong similarities, also their contexts of deposition are very similar. As noted, in most cases, interlinked vessels were placed lying on the side on the ground forming rows (fig. 4.38). Yuchisi feature JS10 contains 12 vessels deposited just as at Shijiahe (fig. 5.13).[26] They were placed in two rows and interlinked mouth to bottom. These similarities do not only prove that the vessels probably came from the slightly earlier site of Yuchisi, but that the practice of depositing these in this way originates from there as well.[27] Significantly, at Yuchisi, such vessels were also used in a different way. Similar vessels appear in a number of buildings leading to the suggestion that they were used to prepare food for special events.[28]

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[23] Zhang Jiangkai and Wei Jun 2004: 130 *et passim*. The vessels from Anhui and Shandong are often referred to as *(dakou) zun*, while those from Shijiahe are often termed *gang* or *jiu*.
[24] Gao Guangren and Luan Fengshi 2004: 133-135.
[25] A further similarity is the interpretation of the marks from Shandong and Anhui as pictographs and thus as precursor of or an early form of Chinese writing, while others regard them as clan signs. For a summary, see Gao Guangren and Luan Fengshi 2004: 132-136. See also Yang 1999a: cat. no. 23; Demattè 2010.
[26] Yuchisi 2007: 100-102. The excavators simply noted the connection between this feature and Dengjiawan and Xiaojiawuji but did not go any further. Some of the marks were highlighted with red pigment, a practices that was not taken over at Shijiahe.
[27] Zhang Chi (2006) has made this point in an article on the 'influence' of the Dawenkou Culture on the Liangzhu Culture and the Qujialing-Shijiahe cultures.
[28] Liu Li 2004: 43.

At Yuchisi, similar vessels were also used as urns for children (fig. 5.14). Just as other vessels, for example steamers, jars or tripods, pointed-bottom vessels were placed in the burial pit mouth to mouth with another vessel, such as tripods, basins or jars. This custom was apparently not transmitted to Shijiahe, but similar burials at other Middle Yangzi sites may go back to an Anhui connection. The custom of burying children in two containers joint at the mouth, as seen at Diaolongbei and Yejiamiao, may derive from this connection (fig. 5.15),[29] but whether pointed-bottom vessels served as urns at Yejiamiao remains to be seen. The overall practice is reminiscent of that at Yuchisi.[30] The connection between Yuchisi and Shijiahe is further strengthened by the find of a red pottery cup dating to the later period (table 5.1). Consequently, it is safe to assume that close connections existed between Shijiahe and Yuchisi, which are more than 420km apart.

The connection embodied in the pointed-bottom vessels extends even further to the east to Shandong, where the earliest such vessels were found. Distributed along an axis east and southeast of the Tai, Lu, Yi and Meng mountain ranges, pointed-bottom vessels were found at Jingzhi, Sanlihe, Qianzhai, Lingyanghe, Dazhujiacun, Hangtou and Jianxin (fig. 5.16).[31] That these vessels are connected to those from Yuchisi was suggested by a scientific study of a number of vessels from Shandong and Anhui revealing that one of the tested specimen from Yuchisi matches that of examples from Lingyanghe, Juxian, more than 300km away, suggesting that the Yuchisi example may originate in Shandong.[32] Further connections are the similarities in shape and also the marks on the upper half of the body. Differences exist as to how the vessels were deposited in Shandong.

[29] See Diaolongbei 2006; Liu Hui 2010.
[30] Cf. Yuchisi 2001: 193 *et passim*; Yuchisi 2007: 185 *et passim*.
[31] See Wang Jihuai *et al.* 2001, who provide an excellent overview of the vessels, unfortunately missing the Shijiahe connection.
[32] Xu Anwu *et al.* 2000.

While contexts of deposition are impossible to assess at some sites, where many pointed-bottom vessels were part of surface collections, such as at Lingyanghe, Dazhujiacun and Qianzhai, many were excavated from medium to large pit burials, such as burial M17 at Dazhujiacun (fig. 5.17).[33] The burial is 3.3m long, 1.95m wide and 0.2m deep. The head of the deceased is oriented toward the southeast. The deceased was placed inside a wooden coffin in a supine extended position. 64 objects were placed inside the burial, about half outside the coffin including the pointed-bottom vessel, which was deposited at the feet end to the right of the deceased together with a number of other pottery vessels, such as jars of various types, a basin and a tripod. As with other similar burials, the pointed-bottom vessels have been variously interpreted as representing the status of the deceased and/or as vessels used for sacrifice or for making alcohol.[34]

Significantly, such vessels were not used in Shandong as containers for deceased children, although a mortuary connection remains. Using these vessels to bury the dead with or in them shows that religious concerns governed their use. By consequence, the concurrent use of pointed-bottom vessels as burial containers and in the set at Yuchisi supports the interpretation of the vessels' religious significance. Along with the notion of depositing the vessels in sets certain religious ideas were transferred to Shijiahe,[35] otherwise their final deposition would have been different. The fact that some pointed-bottom vessel sets at Shijiahe are different from the Yuchisi example shows that practices may have developed into a different direction at Shijiahe.[36]

[33] Dazhujiacun 1991: 169 and 171, fig. 4.
[34] See Wang Jihuai *et al.* 2001.
[35] It remains to be seen how the pottery of the vessels relates to those from Yuchisi, but so far the Shijiahe examples have not been tested.
[36] See Chapter 4.

Pointed-bottom vessels were not only found south and southeast of the above-mentioned mountain ranges in Shandong, at Yuchisi and Shijiahe, but also at other sites further illustrating that interaction plays a key role in fostering an understanding of them.[37] Among these sites is Beiyinyangying, Nanjing, Jiangsu,[38] where one vessel was found in a pit (fig. 5.18).[39] A similar vessel was found in a pit at Huacheng, Yanshi, Henan, dated to the Longshan Culture (fig. 5.19a).[40] And, finally, another, related vessel was excavated at the Qilihe site, Fang Xian, Hubei. It was recovered from an unspecified context and dated to late phase of Shijiahe Culture period I on the basis of stratigraphic association (fig. 5.19b).[41] The latter two are likely to belong to the group of the other pointed-bottom vessels, although they are closer in shape than decoration only.

These show that the geographical distribution of these vessels is very wide and that, in the Middle Yangzi region, pointed-bottom vessels were probably not limited to Shijiahe. While we have seen that Shijiahe is connected to Henan and Anhui through other objects during the phases in question, this is the first instance of it reaching Shandong, maybe indirectly via Yuchisi. A Shandong connection, as we shall see below, also existed during phase Shijiahe IX through jades.[42] Most importantly, these vessels were clearly used in religious practices and further underpin the impressions gained from other religious practices. Unlike the cups and figurines, which probably have their origins in the Middle Yangzi, the pointed-bottom vessels originate in Shandong, illustrating substantial two-way interactions.

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[37] Such vessels were supposedly found in a number of burials at Dawenkou (Wang Jihuai *et al.* 2001: 50), but close scrutiny of the typology suggests differently.
[38] Technically, according to conventional culture history, Beiyinyangyin does not belong to the Dawenkou Culture but to the Beiyinyangyin Culture (see Zhang Jiangkai and Wei Jun 2004).
[39] Beiyinyangying 1993: 87.
[40] Zhongguo Kexueyuan Kaogu Yanjiusuo Luoyang Fajuedui 1964: 34.
[41] Qilihe 2008: 132, fig. 96:1. This dating could make it a contemporary of the Shijiahe vessels.
[42] A discussion of the routes of transmission will follow in the conclusion of this chapter.

Jades of Phase IX

In the previous sections I have shown that objects, such as the red pottery cups and figurines continued to exist into phase IX and were distributed across the Middle Yangzi region and into Henan. These objects appear to have had their heyday in the previous phases and the associated practices may have changed in phase IX, as argued above. These changes are matched by changes in burial customs from interring people in pit burials to urns. Together with the urns, ornaments made from jade and other hardstones appear for the first time.[43] I will employ the example of these jades to illustrate that the directionality of interactions, mostly toward the north, continued, and that once more objects associated with certain religious practices, in this case burials, continued to play a major role in interactions. As jade is a new material in the Middle Yangzi region but was transformed into a regional idiom and re-transmitted, the jade ornaments add another layer of complexity to our understanding of interactions and Shijiahe's role in them.

Pre-Phase IX Jades

Prior to phase IX, throughout the third millennium, there is hardly any evidence for the existence of jade in the Middle Yangzi region and none for Shijiahe. A small number of jades was found at a few sites, usually in burials, attributed to the 'Qujialing Culture'. These pieces consist of axe blades and small adzes, *huang* pendants, rings and bracelets (fig. 5.20).[44] In types and numbers these are similar to those found in burials at a smaller number of sites attributed to the earlier 'Daxi

[43] Jade refers to nephrite or jadeite, but in China it is often used to embrace other hardstones as well, which are not jade strictly mineralogically speaking.
[44] For an overview, see Yang Jianfang 2006: 65-68.

Culture' in the fourth millennium (fig. 5.21).[45] The similarities of these jades to those found downstream at sites in Anhui and the Yangzi Delta have led to the intriguing suggestion that they originated from there or are local appropriations of these types,[46] which should merit more attention in future research. A more recent discovery is the cemetery site of Gushan, Wuxue, Hubei, which yields several dozens jade ornaments, typologically similar to those found at contemporary sites further downstream.[47] Dated to the mid-fourth to the mid-third millennium, these jades are very close to those from another site, Xuejiagang, Qianshan, Anhui (fig. 5.22a, b).

Closer in date to phase IX is the find of eleven jades at Aoshangwan in Qichun, north of the Yangzi and not far from Wuxue.[48] Much of the site had been destroyed, but cultural layers about 2m below the surface could be identified including some red scorched earth pieces. The finds, reported by Wang Zongyao, were collected at the site and include stone tools, pottery and jades. Among the eleven jades are two discs (*bi*), five rings (*huan*), three bracelets (*zhuo*) and one tube (*cong*) (fig. 5.23). Such types of jades are very common at 'Liangzhu' sites in the Lower Yangzi, especially the tube, which can be dated to around 2500 BC, and appears to stem from the Lower Yangzi, an assessment that seems correct despite the quality of the published photograph. Although it is possible that the jades were deposited at a later date and not during the Neolithic, the overall dating of what is left of the site is confirmed by the homogenous nature of the jade assemblage, all of which appear to be attributable to the 'Liangzhu Culture'. In addition, the accompanying stone tools and pottery also suggest a mid-third millennium date. The pottery was compared to

[45] Yang Jianfang 2006: 57-65.
[46] Yang Jianfang 2006: 64, 68.
[47] Gushan 2001: 92-95. At the cemetery of Saidun, Huangmei, near to Gushan, similar jades were found (Saidun 2010: colour pls 6, 17, 18).
[48] Wang Zongyao 1992. This site has not found any attention in previous scholarship.

that from the Shizixing site, Wei Xian, Shandong,[49] which was dated to around 2500 BC by Luan Fengshi.[50] Although still several centuries removed from the phase IX jades at Shijiahe and related sites, the existence of jades at the Gushan and Aoshangwan sites offers a potential route of transmission, possibly even through the Yangzi basin where Hubei, Anhui and Jiangxi meet, for the re-introduction of jade and its technology by phase IX, when jades are a novelty. Significantly, both sites are located in eastern Hubei and no similar finds were made to their west.[51]

Jade as Novelty

In addition to the material itself, jade technology at the high level as observed in the phase IX examples is without precedent in the region.[52] Specifically, the features of the often-seen faces (fig. 5.24), for example, were traced in relief lines, which is more difficult to achieve than incising the decoration. The relief was achieved by abrading the larger spaces around it, a much more labour- and time-consuming process than incising lines into the stone. This technique is often regarded as the defining characteristic of jades from the Middle Yangzi, i.e. possibly a regional phenomenon.[53] This level of craftsmanship suggests that there must have existed people with specialised knowledge and it is conceivable that they were not at home in the Middle Yangzi until phase IX, but may have come from elsewhere.

[49] Wang Zongyao 1992: 665; Shizixing 1984.
[50] Luan Fengshi 1997: 264.
[51] It is possible that the stone axes from the 'Qujialing Culture' site of Gujiapo in Yicheng may date to the Liangzhu Culture, as suggested by Shao Meihua, an expert on Lower Yangzi axes, who had the opportunity to see these on display in the Hubei Museum (Shao Meihua, personal communication, August 2011). Their study, just as the entire interaction involving stone and jade tools along the Yangzi, is a potentially fruitful research topic for the future.
[52] There is the possibility that the jades at Sunjiagang pre-date phase IX, but the same argument applies. For Xiaojiawuji, a jade cicada was found in pit H97, which was dated to before phase IX (Xiaojiawuji 1999: 386), so there is the distant possibility of an earlier arrival of the jades, unless this pit was also filled in phase IX.
[53] Jingzhou Bowuguan 2008: 12-13.

The same point can be made for the source of the material. The jades from Xiaojiawuji, for example, are fairly homogenous in colour and texture, and thus seem to have come from the same source, which might lie outside of the Middle Yangzi.[54] The design of the ornaments is also a novelty, especially the jade faces, tigers and bird pins, and appears to be an innovation of the Middle Yangzi (fig. 5.25). Significantly, similar jades appear in contexts beyond the Middle Yangzi at sites in Henan, Shaanxi, Shanxi and Shandong, all dated to about 2000 BC (fig. 5.26).

Phase IX Jades Beyond the Middle Yangzi

The first example is that of the Wadian site, Yuzhou, Henan. A jade bird pin was excavated from urn W1 (fig. 5.27a-c).[55] The pit also contained a jade adze and a pottery steamer but not inside the urn. The jades, especially the pin, the container itself, and the fact that an adult was buried, show strong similarities to the Middle Yangzi cemeteries at Xiaojiawuji, Liuhe and Zaolingang. Also, the dates match, as the urn was dated to phase Wadian II,[56] which is roughly contemporary with phase Shijiahe IX. There are more objects that illustrate a Middle Yangzi connection, such as the pottery bird, dated to Wadian III, which is identical to those from Shijiahe (fig. 5.28, table 5.2).[57] Phase Wadian III is dated to around 2000 BC, and phase II is probably only marginally older, although no absolute dates are available.[58] The identical nature of the Wadian burial and the geographical proximity to Shijiahe

[54] Only five samples were analysed from Xiaojiawuji showing that these are nephrite. Many of the ornaments were carved from nephrite, while other hardstones used were identified based on visual inspection as steatite, quartz (including other varieties such as chalcedonite and rock crystal) and turquoise (Xiaojiawuji 1999: 430-434; Jingzhou Bowuguan 2008: 11-12). A study with the explicit goal of identifying the source of the Xiaojiawuji jades was inconclusive (Wu Xiaohong *et al.* 2001).
[55] Wadian 2004: 36-37. A second urn burial was also excavated, which, despite confirming that this burial custom at this site was not exceptional, did not contain any jade.
[56] Wadian 2004: 129, fig. 152.
[57] Wadian 2004: 96. The figurine was found in pit H14. Another, identical bird figurine was excavated more recently (Fang Yanming 2009: 37).
[58] Wadian 2004: 131. There is an overlap of the latest dates for phase I and the earliest dates for phase III, leaving the dates unclear.

suggests that we observe the same phenomenon. Maybe the burial customs of the Middle Yangzi were also followed at Wadian for some people, although on a smaller scale.

Geographically and contextually more removed are other instances, in which related jades were found. In Shaanxi, two jade bird pins and a jade tiger head, again identical to Middle Yangzi pieces, were collected at Shimao, Shenmu, together with over 120 other jades (fig. 5.29).[59] Okamura Hidenori plausibly suggested a similar date of the Shijiahe and Shimao jades, probably around 2000 BC.[60] Unfortunately, the nature of their recovery precludes us from assessing this evidence any further, apart from being able to suggest that the final deposition of such jades at Shimao was the result of long-distance interaction with the Middle Yangzi. Another site in Shaanxi, Qingliangsi in Ruicheng, has similar restrictions, as it is largely unpublished. Among the 262 burials, most contained jades or lithics as burial goods.[61] Two of these jades are tiger heads that are very similar to those from the Middle Yangzi. Recently, the cemetery was dated to around 2000 BC, falling comfortably within our timeframe.[62]

More contextual information is available for tomb M22 at the Taosi site in Xiangfen, Shanxi, dated to the very end of the third millennium.[63] Taosi is one of the most important enclosed settlements in north-central China and was excavated on a large scale.[64] M22 was excavated in the southeastern area of the site in 2002 (fig. 5.30). It is one of the larger and more richly furnished ones, measuring 5 by 3.65m and 7m in depth. Although partly destroyed in a later period, 72 objects remained,

[59] Dai Yingxin 1988.
[60] Okamura Hidenori 1998: 84.
[61] Guojia Wenwuju 2005: 17-20.
[62] I am grateful to Qin Ling from Peking University, who provided me with images of the yet unpublished jade tiger heads and also informed me of the current dating of the site; see also Qin Ling 2009.
[63] Taosi 2003. This burial was dated to the middle period of the 'Taosi Culture', dated to 4100 to 4000 BP (He Nu 2011).
[64] For a compilation of much of the work at Taosi, see Jie Xigong 2007.

including 18 jades. The ornament, illustrated in figure 5.31 next to a piece from Liuhe, shows that both are almost identical. This ornament can also be directly linked to the heads, such as the one from Xiaojiawuji W6 (fig. 5.24), as their outlines are almost identical, but the former lacks facial features and is flat instead of in the round.[65] Again, as probably also at Qingliangsi and potentially at Shimao, the context of deposition is removed from those in the Middle Yangzi. While still interred in burials, their meaning and centrality in funerals has changed completely.

The last set of evidence comes from Shandong. One stone adze, found at Liangchengzhen, Rizhao, a late Neolithic enclosed site, is usually quoted as evidence for the Hubei/Hunan-Shandong connection and the carving in relief indeed outlines faces that are very similar to those found at Shijiahe and related sites (fig. 5.32).[66] It was dated to the 'Shandong Longshan Culture', conventionally given as 2600 to 2000 BC, due to its find spot. But as it was found by farmers and kept in one of their houses, no precise dating is possible. Its attribution to an archaeological culture gives it a wide temporal margin making it earlier than the examples from the Middle Yangzi, which in turn makes it possible to be considered as the origin of the latter. Lack of archaeological context, however, makes these assessments inadmissible. It is more likely that the adze is contemporaneous to the Middle Yangzi jades.

A connection can be made via a hair ornament found in a large burial at Zhufeng, Linqu, Shandong (fig. 5.33). The burial was dated to about 2000 BC based on the excavated pottery.[67] The hair ornament compares well with the two openwork ornaments from Sunjiagang, both of which were found in burial M14 (fig. 5.34a,b).

[65] Oddly this ornament is also called 'tiger head' (see Jingzhou Bowuguan 2008: cat. no. 62), despite its obvious connection with the heads.
[66] See Liu Guoyuan 1972 for the report on the adze and Jingzhou Bowuguan 2008: 18-19, which is one of the places where the mentioned argument was made.
[67] Yang 1999a: cat. no. 24. See Zhufeng 1990 for a full description of the burial, which also contained other jades, such as two axe blades, one knife and another jade pin related in decoration to the hair ornament.

The three pieces share the same openwork patterns as well as the incisions that trace and accentuate the openwork. In addition, the top part of the ornament from Zhufeng is very similar to the top part of other jades from Middle Yangzi as well as the jade from Taosi (figs 5.24, 5.31a).

The jades from sites in north-central China are contemporary with the Middle Yangzi jades. The former make a more scattered and random impression, by contrast to the fashion in which the latter were deposited. Across the Middle Yangzi, including Wadian, the burial fashion of these jades in urn burials is consistent, which is not the case for north-central China. Also, the quantities of these types of jades are higher. Higher amounts of each single type are found at Xiaojiawuji and the other cemeteries as opposed to the coincidental nature of the jades in the north. It therefore seems likely that they originate in the Middle Yangzi and interactions with the north resulted in their final deposition at these sites. This suggestion needs further substantiation by more detailed comparisons of the jades between the regions; especially the Shandong connection needs more work, as there are some stylistic differences between the way in which the faces were rendered on the stone axes from Rizhao and the jades from the Middle Yangzi, raising the possibility of local production for each. However, there is still the possibility that the Middle Yangzi jades are earlier should the date for Sunjiagang be confirmed, which would date the appearance of some of the jade to before phase IX.

However, as both Shandong and the Middle Yangzi throughout much of the third millennium are not known for prolific jade production, the question for the ultimate inspiration for the jades needs to be posed. As suggested by Deng Shuping, the source may lie in the Yangzi Delta, the 'Liangzhu Culture' with its most prolific

manufacture of jades.[68] Deng traces the triangular tip making up the top of the face ornaments back to the Yangzi Delta (fig. 5.24), and argues that it reached the Middle Yangzi via Shandong. While this an intriguing suggestion, it may explain one design feature but not the entire phenomenon. It does not account for why specifically the jade faces are so distinct from the Lower Yangzi. It cannot be a simple question of influences, but may be due to a wider set of interactions. Also, the Shandong link is probably not necessary. As we have seen, the Yangzi valley was crossed in earlier times and it cannot be excluded that this was still possible by the end of the third millennium. An impetus from the Yangzi Delta is highly likely, maybe even in terms of the material and craftsmen, as some types of jade in the Middle Yangzi look very similar to those found further downstream.

Indeed, some jades were found in the Middle Yangzi that have their origins, at least in terms of their shape, in the Yangzi Delta, as the following selected examples will illustrate. Discs with a circular perforation in the centre, known as *bi*, are a typical shape found in the Yangzi Delta from the late fourth to the end of the third millennium. A number of discs were found in the Middle Yangzi, for example, the ones collected at Luojiabailing and the ones excavated from Sunjiagang burials M9 and M14 (fig. 5.35).[69] They possibly stem from the Yangzi Delta or were inspired by discs from there.[70] Another example is the 'handle-shaped' object collected at Xiaojiawuji whose tiered reliefs on the surface are related to tubes and other jades from the Yangzi Delta (fig. 5.36a). Pieces of a similar shape with tiered relief decoration have come from sites there, such as Fuquanshan in Shanghai (fig. 5.36b).[71]

[68] Deng Shuping 2007.
[69] Jingzhou Bowuguan 2008: nos 134-137.
[70] Discs were also found at sites in Anhui, such as Xuejiagang and Lingjiatan, which, however, are much earlier, pre-3000 BC, and thus may not be the connecting link.
[71] Fuquanshan 2000: colour pl. 25:1.

The last examples are square tubes with circular perforation through the body, known as *cong*. One complete example was collected at Dujiagang, Anxiang, Hunan (fig. 5.37). While the basic shape is similar to those from the Lower Yangzi (fig. 5.38), the way in which it was fashioned on the outside is unusual and not known from there. Maybe it is a local version. A fragment of a tube, a corner to be precise, was found in urn WM41 at Zaolingang (fig. 5.39).[72] Another example that may have been fashioned from the corner of a tube is the well-published jade face from Xiaojiawuji W6, as suggested by Hayashi Minao (fig. 5.24).[73] Although in need of further substantiation, this is an intriguing suggestion. That such tubes were deliberately destroyed and continued to be used after fragmentation is proven by the piece from Zaolingang, which makes the suggestion regarding the W6 face more plausible. Tubes, though ultimately derived from or inspired by a source in considerable distance, were re-appropriated by people in the Middle Yangzi for specific local uses.[74] Despite these differences, it is clear that long-distance contacts, but maybe no direct contacts, possibly along the Yangzi, existed.

These contacts may have exposed those at Shijiahe and related sites to jade and encouraged the appropriation of the material, the technology, maybe also the craftspeople, and certain design features, while at the same time triggering distinct local responses as evidenced by the jades themselves, whose iconography and technology are an innovation. These jades were in turn deemed appropriate in giving expression to how people saw their world and the iconography may be an outcome of their worldview. Long-distance contacts thus may have provided a stimulus for people to rethink their ontologies or at least give these new forms of expression. But

[72] Jingzhou Bowuguan 2008: no. 139.
[73] Hayashi Minao 1998.
[74] Among these sources we have to consider other areas from where *cong* are known in around 2000 BC, for the area of the so-called Qijia Culture in the northwest. That contacts in this general direction may have existed is shown by Middle Yangzi jades appearing in Shanxi and Shaanxi.

this long-distance impact also triggered further interactions as can be seen in the jades that appear in north-central China, which are most likely derived from those along the Middle Yangzi or, in fact, are from this region. Finally, despite the break between phase IX and the earlier phases, the movement of interaction is again toward the north and northeast, although some movement downstream along the Yangzi may have occurred. Persistently, the general patterns and trends of interaction relate to items religiously charged as before.

Concluding Remarks: Connecting the Dots

The previous chapter discussed various religious practices in great detail further tracing the developments at Shijiahe during the third millennium. While the focus of the two previous chapters was on this site alone, this chapter contextualises these practices in relation to other sites in the Middle Yangzi region and beyond. The above has shown that similar objects occur at other sites and that it is likely that these were used in similar practices, as for example seen in the red pottery cups. Studying the religious practices from the perspective of interaction contributes to our understanding of the development of traditions of these practices.

The above affirms that interaction is an important aspect not just of enclosure construction and abandonment but also of other important social contexts. Religion is an important component of Shijiahe's relationship with other sites as the objects relating to religious practices are diagnostic of these relationships. As such, treating Shijiahe as exceptional in terms of its practices can be avoided by placing these into a wider regional context. The distributions of the objects in the various periods largely confirm the patterns seen at Shijiahe itself. For example, when the cups assume central importance at Sanfangwan, they are found at more sites. After Shijiahe was

abandoned, cups are found at fewer sites. Finally, taking interaction into account allows enlarging the scope of the enquiry and revealing patterns a purely local approach does not uncover. For example, instead of seeing the sets of pointed-bottom vessels as local development, a look beyond, at the parallel feature at Yuchisi, allows to trace the actual dynamics. Even before the discovery of the Yuchisi set, the external connections of these vessels were visible given that these have been known in Shandong for several decades.

In conclusion of this chapter, it is necessary to begin discussing the routes taken during the third millennium. The distribution maps produced in this chapter provide dots on the map, which is a first step at tracing interactions. The second step is to connect these dots creating the links of the interaction network, which is done in the following emphasising the importance of rivers. Li Feng's discussion of geographical accessibility and routes of transmission during the Western Zhou period basically also applies to the late Neolithic.[75]

Following Li Feng, we begin with the Nanyang Basin, which was an important conduit between north and south (fig. 2.6). It is linked to the Jianghan Plain through the Sui-Zao Corridor and the passage between the Jingshan and Dahong mountains. The basin also opens up into the eastern plain of Henan and further into its natural continuation, the northern reaches of the Huai River. The Yunmengze also existed during the Western Zhou and extended over 170km from Wuhan to Jiangling. Limited space for inhabitation was available between it and the Dabie, Dahong and Jingshan mountains.

As Li notes, the middle and lower reaches of the Yangzi are linked by the Yangzi, but transportation actually went north through the Huai River valley.

[75] Li 2006: 318-322.

Although it is possible, as suggest by Li, that the many marshes and river roads along the Yangzi between Jiangxi and Anhui made transportation almost impossible, there may have been times during the Neolithic when connections were possible via this route.[76] Transportation through the valleys of the Dabie Mountains was also possible.[77] The most important road for entering the Dongting Plain went through the Wuhan-Huangpi area between the Yunmengze and Dabie Mountains. But the Yangzi was a significant obstacle, which, for Li, explains the differences in bronze cultures north and south of the river and why the Western Zhou remained in the north.[78]

These major access routes and restrictions in access were also important during the Neolithic. As shown, the material culture associated with the religious practices shows clear movements northward or at least connections with regions to the north and northeast of Shijiahe. The routes of transmission could have been the same as during the Western Zhou period. As shown, all major routes of contact made use of valleys and rivers, just as postulated by Andrew Sherratt. As such, a stronger focus on interaction along rivers, no matter on or along rivers, should be considered for the Neolithic period in China as well; especially when China's riverine network is taken into consideration. Today, China's inland water transport network is the largest in the world with a navigable length of 123,495km among its over 5000 rivers. In 2007 the inland waterways transported 1.18 billion tons of cargo, or 1.6 trillion tons according to another source.[79] Since the advent of rail transport, this has taken over as major mode of transport with 2.2 trillion tons of freight transported in 2003 and probably even more since then, as there have been major upgrades to the

[76] See comments on the sites of Gushan and Aoshangwan.
[77] Shi Nianhai 1963: 73-76.
[78] Li 2006: 327.
[79] Trusted Sources 2008: ch. VI.

infrastructure. But, for much of China's past, river transport was likely the transport mode of choice.

When the climate and environment of the third millennium are also considered, fluvial transport seems even more probable. As shown in Chapter 2, throughout much of the third millennium the sea level was higher than at present. Higher sea levels imply broadening rivers, whose flow decreases in velocity and whose carrying capacity for sediments decreased. The result is the deposition of large quantities of sediment, which in turn raises the bed of the river, eroding its edges and finally overflowing of the edges. This flooding of the surrounding areas resulted in the development of large lakes and marshes, which was further amplified by melt water and monsoonal rains. While the development of such waterscapes might impede interaction with certain areas, such as across the Yangzi and the Yunmengze, overall higher rivers slow down their flow and make them easier to be used for transport.

Following on from this, we have to redefine our understanding of large and often enclosed sites, which are almost naturally seen as central places, as discussed in Chapter 1. For example, Gideon Shelach's study of the 43 Lower Xiajiadian settlements in the Chifeng region of Inner Mongolia has settlements converging hierarchically around a central place. Shelach made an attempt at clustering the sites in order to establish a settlement hierarchy (fig. 5.40).[80] However, a close look at their distribution illustrates that the rivers in the valleys beneath the sites are the rationale for understanding their distribution. The same is true for the 'Longshan Culture' sites in central Henan, which were mapped and integrated into settlement hierarchies by

[80] Shelach 1994.

Liu Li (fig. 5.41).[81] The hexagons disguise the obvious: most sites, including those 'major' enclosed ones, are located along rivers. These locations explain the distributions of sites and why some sites came to be more important than others, such as Shijiahe. While studies of settlement hierarchies can be useful, movements along rivers need to be accounted and may explain some of the distribution patterns of sites.

The distributions of the cups, animals, pointed-bottom vessels and jades only make sense when one follows the rivers and understands the access routes in and out of the Middle Yangzi area. The observation that the distribution of objects is generally northwards may have to do with the Jianghan Plain being largely covered in the Yunmengze, which renders movements southward more difficult, and of course the Yangzi itself is a formidable barrier. Movements into the Lower Yangzi area, where Anhui, Jiangxi and Hubei meet, were difficult but not impossible. These restrictions of movement also confirm why the late Neolithic Middle Yangzi sites, as shown Chapter 2, were distributed on higher terrain.[82]

As the example of the pointed-bottom vessels shows, we can see them travelling from Shandong into the Huai River plain where these were taken on at Yuchisi. From there they were taken down the Huai River plain and to Shijiahe via the Nanyang basin or across the Dabieshan. The jades may have moved in the opposite direction. Hence, Shijiahe has to be understood as part of a larger network and its position within that network had an impact on its development as a site. Shijiahe lies at the foothills of the Dahongshan between the Han River basin and the

[81] Liu 2004: 183.

[82] Later travel accounts, such as that by Thomas Wright Blakiston (1832-1891), who travelled up the Yangzi into its upper reaches in order to search for ports that could be opened for the British after they won the Opium War in 1860, state that during flood season in June the entire meandering section of the Yangzi from the Three Gorges downstream to Wuhan was flooded (Blakiston 1862). Even after more than two millennia of dyke building and attempts at restraining the floods, these were still able to flood much of the plain. It is difficult to imagine what the situation was like when no such hindrances for the floods existed.

Sui-Zao Corridor between the West and East River, just north of an area that has been prone to flooding. Its location thus has to do with environmental circumstances, e.g. the danger of flooding. The lake area south of the site presumably increased in size through floods on a regular basis. The southern and southwestern parts of the bank and ditch are only a few hundreds metres away from the lake area, that is, where an area below 30m a.s.l. begins, which must have bordered it directly. When, at times, the Yunmengze reached Tianmen County, in which Shijiahe is located, its location on somewhat higher ground makes sense. Combined with its location along minor rivers that lead to larger rivers, like the Han River, interaction becomes obvious as another important factor. Shijiahe's persistence as part of a network of interaction throughout the third millennium, including the period after the abandonment, as well as selecting this location for a Western Zhou enclosure does not seem surprising.

Chapter 6

CONCLUSIONS

This final chapter I begin by summarising the major findings of this thesis. This is followed by discussion of the two major paradigms dominating Chinese archaeology, which are culture history and social complexity, and of the ways in which this thesis has moved beyond these paradigms. The thesis concludes with a summary of its major themes.

Summary of Findings

The thesis aims at re-thinking one enclosure through a detailed study in order to show that no application of abstractions but thick descriptions of practices are required to tease out the nuances of the archaeological evidence and come to an explanation of the enclosure, which is entirely site-specific. These site-specific results are shown in the site narrative in Chapter 1, which holds together the disparate interpretations and complexities of the narrative detailed in the other chapters. Contrasting studies building on culture history or social complexity, I have proposed an alternative way of writing about Chinese archaeology.

In concluding this thesis, I will begin by detailing its results focusing on three major aspects of the history of Shijiahe:

1. the construction of the enclosure and its consequences for the site,
2. the abandonment of the site and its resettlement as well as
3. the wider regional contexts and implications of these developments.

Enclosure Construction and the Consequences

While largely focusing on the third millennium, I have emphasised the long history of inhabitation at Shijiahe. Before the construction of the enclosure the locus of Tanjialing was mainly used as a cemetery in the fourth millennium BC. While the enclosure is usually regarded as the next step in the occupational history, a careful unravelling of the sequence of features at the locus of Dengjiawan has shown that a cemetery existed there before the enclosure was built. The cemetery illustrates that the site was not chosen as location for the construction for an enclosure from the outset in phase V in the early third millennium (fig. 3.12). Both Tanjialing and Dengjiawan, located as they were at the confluence of two rivers before the enclosure construction (fig. 3.2), were significant for the people who decided to bury their dead there. Choosing the location may have been related to religious concerns and connected to notions about suitable places to bury the dead, although the earlier and later attitudes may not have been the same. The decision to construct the enclosure occurred slightly later, but it built on and can be regarded as an extension of this earlier history, a point not made before.

The religious significance of Shijiahe may have been directly related to the construction of the enclosure and is a point first made in this thesis.[1] At the same time, the enclosure construction may have been an attempt at shaping people's perception of the site. The enclosure fundamentally altered the landscape by, for example, redirecting the flow of two rivers and imposing a piece of monumental architecture onto an otherwise relatively flat land (figs 3.2, 3.5). This transformation of the lived in world must have had a lasting impression on people's ontologies. This impact of

[1] In fact, using a higher lying ground or even artificially constructed mounds as locations for cemeteries is often seen along the Yangzi River with examples in Anhui and around Lake Tai in the Lower Yangzi. Significantly, third millennium BC burial mounds in Zhejiang and Shanghai are often made of differently coloured soil layers, which resonated with the differently coloured layers of the bank at Shijiahe. Whether these parallels are more than coincidence remains to be seen.

monumentality and of large-scale changes to the landscape and environment on people requires more explicit consideration in the archaeology of China than it has received up to date.

Another important aspect discussed in this thesis is the ways in which the enclosure was constructed. The bank was carefully created out of layers of differently coloured soils that were piled up on top of each other, a fact neglected since the publication of the 1992 survey report. This colour sequence is so consistent that it allows for identifying the bank even at loci where the bank is no longer visible on the surface. From the enormous size of the enclosure and the way in which the bank and some of the surrounding mounds were built it is possible to postulate that the construction may have taken a long time, while still accomplished in phase V. At the same time it is unlikely to have been a constant process, but one with regular interruptions. Maybe it is time to move away from the image of chiefs or kings ordering the construction of a 'wall' to a view that espouses other motivations for constructing such monumental architecture, such as the religious significance of the site chosen. It is conceivable that someone or some people were in charge from time to time or that some exploited the motivations for construction in order to gain power, but these socio-political dimensions are not straightforwardly reconstructed and cannot be deduced from the existence of the enclosure alone.

Instead a focus on the process and practices of construction may be more helpful. The size of the enclosure suggests that a large group of people was involved. These may have congregated at Shijiahe over many years to work on the enclosure. Such activities may have fostered a strong sense of community and belonging, while at the same time encouraging the creation and communication of the mythology surrounding the site, which may have led to the enclosure construction in the first

place. Such process of construction may have led to the creation of traditions as mirrored in the surprisingly stable burial customs discussed in Chapter 4.

The construction of the enclosure may have encouraged an increase in population at Shijiahe, maybe drawing on the groups involved in its construction. They likely perpetuated the knowledge of the myths surrounding the site as well as the traditions created. This may be reflected in the burial customs. As argued in Chapter 4, these remained rather stable for three phases from phase V to VII, which was not noted previously. While some of the dead, especially infants and children, were buried in pottery urns, most adults were buried in pit burials, which saw an increase in the use of the *ercengtai* and secondary burial rites through time (tables 4.2, 4.3). Apart from the general structure of the burials, the composition of the burial goods remained constant. I identified two sets of pottery, one centred on red pottery cups and the other on high-necked jars. In phase V, they appeared in different burials, but from phase VI they were also placed in the same burial together. However, the former set is more often seen closer to the body, while the jars are usually placed closer to the feet of the deceased (e.g. fig. 4.22). Despite variations in this overall scheme, the placement of pottery in burials in sets and in certain positions shows remarkable continuities. I suggested that these continuities are a consequence of the construction of the enclosure.

But the burial customs also saw some greater variations, especially in phase VII. These tally well with the wider developments of the site in this phase. The bank is largely encroached upon by domestic and other activities, more loci surrounding the site are settled and the religious practices increase in scale, for example at Sanfangwan. Hence, while the construction of the enclosure may have triggered the

establishment of traditions, divergence from these traditions by phase VII can also be observed.

Based on current data, it is difficult to make sustained comments on the political and economic life at Shijiahe, but I have shown throughout that religion or at least some of its aspects as revealed through a careful study of ritualised practices that religious life at the site flourished. The practices, such as those centring on the tube-shaped pottery at Dengjiawan, were spatially closely linked to the burial customs (fig. 4.10). Later, it appears that the scale of practices increased as seen in the deposition of red pottery cups at Sanfangwan and the red pottery figurines at Dengjiawan and the sets of large pointed-bottom vessels at both Dengjiawan and Xiaojiawuji. Maybe Shijiahe developed into an important place for the performance of religious practices for a larger area. At the same time, religious practices, with the remarkable exception of the burial customs, did not remain stable. We see religious change, sometimes gradual, but eventually resulting in an increase in scale. Religious change was as much part of the fabric of Shijiahe's history as the continuity embodied in the burial customs.

Another aspect is the fact that the construction of the enclosure resulted in re-routing two rivers thereby manipulating patterns of flow of the landscape. Once the landscape was reconfigured no natural rivers remained as their patterns of flow were altered.[2] As noted, these practices may be related to the ways in which people perceived of their world and could be related to a religious mindset. Another reason might be the deliberate manipulation of flow in order to deal with the periodical flooding. Building the enclosure and the mounds may have helped to re-route torrents of water away from the inhabited and other parts of the site. As mentioned in Chapter

[2] For a helpful discussion of human-river entanglements, see Edgeworth 2011.

1, even until the 1950s when a canal was dug to the south of the site the area was regularly flooded through an expansion of the Beigang Lake (fig. 1.11). The enclosure might have worked as a form of mitigation, although the possibility as gauged from recent excavations that parts of the interior were waterlogged shows a more complex relationship with water.

Other enclosure functions can be envisioned. For example, defence cannot be ruled out and given the manipulation of water using the bank and ditch as part of an irrigation system is also a possibility. Many possible functions cannot be fully explained at present, but these have to be entertained. For example, in relation to defence, Chapter 1 has illustrated ways in which to re-think violence also for Chinese prehistory, which might be a promising avenue in future research. Overall, the more open approach embraced in this thesis has enabled a multidimensional view of the enclosure as it was investigated as an individual site from the angle of practices. Surprisingly, the usually less visible remains of religion have been more visible than other aspects of past lives.

The major conclusion to draw from this summary of findings is that the construction of the enclosure had significant impacts on the ways in which the site develops throughout the third millennium. While possibly (indirectly) related to earlier history of the enclosure, it re-shaped Shijiahe as a place and had consequences for the ways in which people perceived of the world. But these attitudes were also prone to change.

Abandonment and Re-Settlement

A second important, just as transformative episode in the history of Shijiahe is the site's abandonment, which I have fully proven in this thesis. While reasons for the

abandonment were discussed and largely dismissed in Chapter 1, I was able to show the abandonment to be a regional phenomenon shared by all other third millennium BC enclosures. However, the specific reasons for the abandonment remain obscure and await further work. I was able to show that phase IX at Shijiahe is an exception among Middle Yangzi enclosures and should be regarded as a re-settlement. Most other enclosures were not re-settled. By phase IX, Shijiahe appears to no longer have been perceived as an enclosure, as illustrated by the southeastern section of the bank, which was level with the surrounding surface by then (fig. 3.7).

The re-settlement coincides with the establishment of burials in urns as the norm for all deceased. In some of the urns the deceased were buried with jade ornaments, not seen before phase IX (fig. 5.25). These burial customs including the jades are shared with other sites as well. The overall material assemblage for phase IX at Shijiahe and throughout the Middle Yangzi gives a different impression from the usually postulated decline of the Middle Yangzi cultures. Discussing phase IX less from the angle of decline and collapse, but acknowledging the observed activities as representing some form of re-settlement may be more fruitful. A more lasting abandonment occurred after phase IX until the construction of the Tucheng enclosure in the early first millennium BC (fig. 1.2). The reasons for the abandonment after phase VIII and again after phase IX are not clear and require more data, but both can be acknowledged as a regional phenomenon.

Interactions and Regional Contexualisation

A third set of findings pertains to the interactions Shijiahe was entangled in during the third millennium. I have repeatedly framed the events at Shijiahe from a wider regional angle. Both the enclosure construction and the abandonment were

discussed in relation to interactions across the region. In Chapter 3, I even suggested that the *duizhu* technique of enclosure construction was transmitted from the Middle Yangzi region further downstream and into Shandong. Throughout the third millennium Shijiahe is entangled in interactions not just across the Middle Yangzi region but also reaching into the Middle Yellow River and Huai River areas. I have focused on sets of objects, which are very visible in the archaeological evidence across the Middle Yangzi and, as I have shown, are involved in religious practices. From the early third millennium to phase IX, objects relating to religious practices were also found at others sites. Be they the tube-shaped pottery with its limited distribution (fig. 5.4) or the red pottery cups with an increase in distribution over time, even reaching far-away sites (figs 5.5, 5.6, 5.7).

I have also shown that the red pottery figurines were widely distributed, although not as widely and in smaller quantities in comparison to the cups (fig. 5.9). In Chapter 5 I suggested that this reflects the different practices both are involved in with a focus on distribution for the cups and on concentration for the figurines. In addition, I have investigated the practices these objects were employed in at other sites in order to illustrate whether these have similarities to those at Shijiahe. Unfortunately, in most cases, the practices could not be traced with the exception of a number of burials, which contain red pottery cups suggesting that some sites share an understanding about the burial customs. This also hints at the possibility that some of the practices discussed for Shijiahe did not occur in isolation at this site alone.

The distribution maps of the cups and the figurines have shown another important aspect of the interactions. With the exception of few sites south of Lake Dongting the directionality observed in the distribution patterns from phase V to phase VIII is northward. Both cups and figurines are even found as far north as Henan

and one cup at Yuchisi in Anhui. Conspicuously, this directionality continues into phase IX after Shijiahe and the other Middle Yangzi enclosures were abandoned as seen in the distribution of jade ornaments. These even reach points further north and into Shandong (fig. 5.26).

But there is also movement in the opposite direction as exemplified by the pointed-bottom vessels originating in Shandong (fig. 5.16). As shown, the practices of placing them interlinked mouth to base originated from Yuchisi and were taken over at Shijiahe. In tracing the practices involving these vessels from Shijiahe via Yuchisi and back to Shandong, I have shown that these were religious in nature. Remarkably, these practices were entirely taken over at Shijiahe complementing the already rich sets of religious practices there. Shijiahe thus appears to have been entangled in networks of interactions with a strong focus on objects and practices relating to religion.

The intersection of religious practices at Shijiahe may be related to Shijiahe's favourable location in networks of interaction, a notion, which has not featured in any other discussions of the site. The site is located south of the Dahong Mountains and north of the Yunmengze and at the junction of rivers (fig. 2.6). It is ideally located to channel communication between the Han River valley and Sui-Zao corridor. Figure 1.5 shows that Shijiahe is not alone at this junction between terrains but other enclosed sites are also located there, which might not be a coincidence but a result of the same phenomenon of being located at favourable locations at routes of access and communication. Shijiahe just as the other sites may have become significant because of its beneficial locations. In terms of enclosure function, their role as nodes in interaction networks cannot be underestimated, especially in relation to rivers.

Culture History and Social Complexity: Challenging Dominant Paradigms

The above results tell a different narrative of Shijiahe than the usual accounts. The increase in nuance is due to that fact that a different chronological resolution was used. Instead of working from archaeological culture to archaeological culture, I proceeded from phase to phase achieving the desired higher chronological resolution. This allowed me to better trace the differences and similarities of practices between phases, hence enriching the picture of Shijiahe. The great advantage of this approach is that it sees continuities where other approaches see boundaries and it sees boundaries where other approaches find continuities, or in other words this thesis realises the importance of 'variation without boundaries and transformation without discontinuity'.[3] In light of this I will now discuss my approach and findings and their impact on the conventional approaches, which are culture history and historiography and social complexity, thereby highlighting the inadequacies of these approaches in more detail than accomplished in Chapter 1. A particular emphasis will be placed on discussing the culture-historical approach as it is the most persistent paradigm in Chinese archaeology.

Both culture history and with it historiography and social complexity have been as dominant as they have been limiting to make full sense of the Neolithic. Their wide acceptance in the field is more than sufficient encouragement to seek for alternatives and these will be suggested after introducing how both culture history and social complexity have shaped the debate with case studies pertaining to the Middle Yangzi Neolithic. Elements of social complexity approaches pertaining to the reasons for the construction of enclosures have been already discussed in Chapter 1.

[3] Mol and Law 1994: 658.

Culture History

The central concept, which dominates prehistoric archaeological practice in China, is that of an archaeological culture. Culture-historical archaeologists examine the characteristics of assemblages of objects and group those objects with similar traits together. The assemblages are termed 'archaeological cultures', which are the 'objectified or materially expressed norms of the culture or cultures that produced it'.[4] The uniformity of the artefact assemblage is explained with the notion of a normative culture, which postulates that a common and distinct set of norms binds the culture together, implying that it can be regarded as a rather monolithic block created out of the congruence of ideas and behaviours.[5] This view of culture ties in with the concept that different cultures represent different ethnic groups, and that the characteristics of these groups can be understood through their material correlates, and in consequence archaeological cultures are thought to represent ethnic groups.[6]

Such a view of prehistory dominated European archaeology from the early decades of the 20th century onwards, but fell out of favour with the rise of the 'New Archaeology' during the 1960s and has remained much out of favour ever since, although it has remained strong in some European countries. In China, however, culture history has been the central pillar of prehistoric archaeology since its inception in the 1920s. Prehistoric archaeology is culture history. Both form a nexus that to break has not been widely realised yet. The following discussions of the paradigm's weaknesses are one step in the direction of dismantling culture history as leading paradigm of Chinese archaeology along with its logical extension, historiography.

A Critique of Culture History

[4] Webster 2008: 13.
[5] Webster 2008: 12-13.
[6] Trigger 2006: 233.

Culture-historical research is preoccupied with classifying and categorising archaeological materials in order to 'document the historical development of cultures in various areas, through a study of relationships of form, temporal locus, and spatial locus exhibited by their representative artefacts'.[7] This approach to material culture was opposed by those scholars belonging to the processualist school of archaeology, who favour a more functionalist explanation of culture. They regard culture as an 'integrated system, made up of different functioning sub-systems, and as corollary, archaeological remains must be regarded as the product of a variety of past processes, rather than simply a reflection of ideational norms'.[8] Though recognising that culture-historical research has the potential of answering the questions of the 'what', 'where', and 'when' about archaeological remains, processualists favoured asking for the 'why' and 'how'. There was even more dissatisfaction with the culture-historians' approach to the issue of culture change, which was explained through the concepts of diffusion and migration. Cultural traits moved from place to place preferably through migration, which had an impact on the cultural assemblage. By contrast, processualists have been seeking to give a different explanation by stressing human behaviour, functional and ecological factors, which lead to society being seen as mostly determined by external factors.

The same dissatisfaction was shared by those scholars grouped under the label of 'post-processual archaeology' from the late 1970s onward. Despite their rejection of the processualists' systemic conception of society and their generalisations based on hypotheses testing, post-processualists shared with them the view that there is more to say about past societies than culture-history has to offer.[9] In any case, culture

[7] Webster 2008: 13.
[8] Jones 1997: 26.
[9] Shanks 2008: 135. This article provides a useful summary account of what makes up 'post-processual archaeology'.

history largely faded out of Anglo-American archaeology, now centring on a multitude of approaches to past societies. In other countries, the culture concept has remained quite prominent.[10]

The Culture-People Match

Critique of culture history is also directed at the 'culture-people match'.[11] This position holds that the identified cultural assemblages correspond to real ethnic or cultural units. One of its strongest proponents was the German scholar Gustaf Kossinna (1858-1931), who, during the early 20th century, attempted to trace the history of today's racial groups through continuity in material culture back to their prehistoric origins. The prominent British archaeologist Gordon Childe adopted a similar point of view.[12] Soon, but especially after the Second World War, race was distinguished from ethnicity and culture, and the notion of race basically lost its relevance in the archaeological discourse. However, the assumption that people can be equated with an archaeological culture was still prevalent. The view of culture remained a normative one, being strongly concerned with 'holism, homogeneity, order, and boundedness'.[13] People are thus believed to have created the archaeological record, which in turn serves as marker to identify and distinguish them from other groups. Culture history follows an empirical methodology by describing and grouping material traits into cultures, which was considered a very objective approach. This perception led to the one-to-one relationship between materials and peoples as being seen as equally objective.[14]

[10] For an overview of these countries, see Trigger 2006: 261-278.
[11] Duke 1996.
[12] Jones 2008: 322. Her article provides an excellent overview of the study of ethnicity in archaeology; see also Jones 1997.
[13] Jones 2008: 325.
[14] Jones 2008: 325.

The mentioned demise of culture history as dominant paradigm in archaeological research was accompanied by a decline of the importance of ethnic groups, although much research is still based on the classificatory framework established by culture historians. However, one of the final blows to the culture-people match in Anglo-American archaeology was dealt by Ian Hodder's ethnoarchaeological study of tribes in Kenya, in which he rejects any straightforward relationship between the boundaries of material culture and that of ethnicity.[15] In his study of female ear decoration employed by different tribes in Kenya's Lake Baringo area, Hodder attempted to investigate the extent to which material culture was used to express tribal differences. His argument is that such differences may be reflected in personal decoration, such as earrings, but are not reflected by other items of material culture, such as containers and tools, which are used across tribal boundaries. Consequently, the construction of archaeological cultures, which may reflect ethnic distinctions, is far from easy, if not impossible. Hence, not only the culture-people match is perceived as rather outdated and invalid, but also the concept of the archaeological culture has become less clearly defined and culture historians' claims of objectivity are generally considered as equally invalid. In this light, it is no surprise that some western scholars may regard the Chinese archaeologists' adherence to culture history with scepticism.

Culture History in China

Based on the work of western scholars, whose names came to be associated with important archaeological discoveries in China prior to the establishment of the

[15] Hodder 1982: 186-190. In recent years, the concept of ethnicity has found itself revived by studies postulating that ethnicity is a 'situational and dynamic process that can take diverse forms in different contexts of social interaction' (Jones 2008: 327), rather than being bounded, monolithic and geographically restricted. Other critiques of culture history are reviewed by Webster 2008 and Roberts and Vander Linden (2011).

People's Republic in 1949, culture history was adopted by Chinese archaeologists in their explorations of archaeological sites. The most important representative of this group of foreigners is the Swedish geologist, Johan Gunnar Andersson (1874-1960), whose interest in palaeontology and archaeology led to the discovery and excavation of China's first Neolithic site at the village of Yangshao, Henan Province, in 1921. The find assemblage, characterised by red pottery bowls and jars painted with black or brown patterns as well as polished stone tools, was termed 'Yangshao Culture', later conventionally dated to 5000 to 3000 BC.[16]

Xia Nai's Path-Breaking Paper

In 1949, the administration of archaeology, including fieldwork, research and education was centralised, systematised and extended across the nation, so that archaeology became a state-run enterprise.[17] This had little impact on the culture-historical aspect of Chinese archaeology. In an influential article, Xia Nai (1910-1985), the then-deputy director and later director of Institute of Archaeology of the Central Academy of Science (CAS; parts of which split off to become the Central Academy of Social Sciences [CASS] in 1977), laid out the guidelines of how to name archaeological cultures properly.[18] In an attempt to counter the insecurities of local archaeologists regarding this issue, he defined an archaeological culture as the physical and visible remains of a society, especially of a 'primitive society'. These remains, such as a certain pottery type, stone tools, bone implements and ornaments, may be unearthed together from a tomb or residential site, and this assemblage

[16] Andersson 1923; Ren Shinan and Wu Yaoli 2010: 206 *et passim*. See Chen Xingcan 1997 for a good overview of the early archaeological work in China up to 1949.
[17] Yang 1999b: 166; Chang 1981: 166.
[18] Xia Nai 1959.

together would merit being called a 'culture'.[19] He further states that the first site where such assemblage was found gives the culture its name; but, a new archaeological culture should not be assigned randomly and has to fulfil certain criteria: Its characteristics must distinguish it from other cultures. These are ideally found at more than one site, based on the acquisition of comprehensive knowledge on the particularities of a new culture's content through thorough study of the site where it was first identified.[20] In considering these guidelines, that would establish the standards for Chinese archaeology, it is important to realise that Xia based his assessment on Gordon Childe's *Piecing Together the Past*.[21] Having taken his doctorate from the Institute of Archaeology, University of London, Xia's familiarity with this approach was based on his studies in London at a time when this concept was popular.

From the above it becomes clear that the understanding of culture history is modelled quite precisely on its earlier European counterpart, including all normative assumptions, which justified the equation of archaeological cultures with ethnic groups and the notion that their spatio-temporal boundaries could be defined. Later on, other scholars followed Xia's three aspects of an archaeological culture, and suggested that such a culture is defined by similarities in time, space and material culture.[22] A recent symposium has illustrated the persistence of culture history within Chinese archaeology, and confirmed the validity of Xia's approach for Chinese archaeology.[23] It is especially noteworthy that this symposium was intended to push

[19] Xia Nai 1959: 169.
[20] Xia Nai 1959: 171-172.
[21] Xia Nai 1959: 171; see also Childe 1956: 123-128. Childe laid out explicitly what makes a material assemblage an archaeological culture. His impact should not be underestimated.
[22] See for example, An Zhimin 1986: 253; Yan Wenming 1997a: 78.
[23] Li Xuelai and Wang Minghui 2004.

forward the establishment and development of archaeological theory in China, with the concept of the archaeological culture as its central pillar.

Pottery Typology

Although the definition of an archaeological culture is supposed to be based on whole assemblages of archaeological finds, pottery typology is the *de facto* focus of analysis in China, with stone tools and other finds leading a secondary existence. In order to understand the study of prehistory in China, it is crucial to comprehend the importance of pottery typologies. The methodology employed was strongly influenced by the work of the Swedish archaeologist Oscar Montelius (1853-1921), whose first part of *Die älteren Kulturperioden im Orient und in Europa* on the typological methodology, published in 1903, was available in China in two translations.[24] Montelius is known for developing the method of seriation,[25] which is used for relative dating by reconstructing (evolutionary) typological changes of artefacts of various materials on the basis of variations in form and decoration. Subsequently, the various artefact types are cross-referenced to see which appear together in burials or hoards, in order to establish chronological relations. This methodology resulted in Montelius deriving chronological sequences first for the Scandinavian Bronze Age, and later for the European Neolithic, Bronze and Iron ages.

Su Bingqi (1909-1997), a former head of the archaeology department at Peking University, basically adopted Montelius' methodology for his own work, which, together with the stratigraphical excavation method, came to be regarded as

[24] Yu Weichao and Zhang Zhongpei 1984: 310.
[25] Trigger 2006: 224 *et passim*.

the building block of Chinese archaeology.[26] Su has received accolades for extending the Montelian approach into covering ever-larger units, such as artefacts, sites, archaeological cultures and even culturally-defined regions. No Chinese archaeologist can avoid this ingrained Montelian mindset, and scholars of the Neolithic are bound to not only discuss the (regional) development of archaeological cultures, but also engage in seriations of the excavated pottery. Typological sequences appear prominently in all Chinese archaeological reports. The information provided is used to reconstruct chronological sequences, often solely defined on the basis of evolutionary changes in pottery shapes. In a second step, these sequences are used to delimit archaeological cultures, both chronologically and geographically, or to position a site within a known archaeological culture.

A Culture-Historical Framework for the Middle Yangzi

In much the same manner as for any other region of China, the culture-historical approach was applied to the Middle Yangzi resulting in a sequence of archaeological cultures (for the late Neolithic) in the early 1990s that has been accepted by and large with some minor changes. The groundwork was laid by Zhang Xuqiu (born 1943), who wrote the first monograph clarifying the following cultural sequence along the Middle Yangzi for the fourth to third millennium: Daxi Culture – Qujialing Culture – Shijiahe Culture.[27] All names are based on the sites where the relevant assemblages were first discovered, such as the Daxi site in Wushan County, Chongqing, the Qujialing site in Jingshan, and the Shijiahe site in Tianmen, both

[26] Yu Weichao and Zhang Zhongpei 1984: 316-317. It should be added that Montelius' principles are still practiced, though his chronologies have been replaced.
[27] Zhang Xuqiu 1992. The Daxi Culture is pre-dated by the Chengbeixi Culture, which falls out of the scope of this thesis.

Hubei.[28] Typical critiques of the sequence surround the question when the Daxi Culture ended and the Qujialing Culture began as well as the recognition of a 'Post-Shijiahe Culture' for the time around 2000 BC. Also, a plethora of archaeological discoveries have led to the establishment of local variants of these cultures, some of which were later declared archaeological cultures in their own right expanding the sequence.[29] A more recent expanded sequence is shown in figure 1.13. As shown below, my approach to chronology discards the sequence of archaeological cultures as it is based on problematic assumptions as discussed and blurs the level of detail required. Therefore I will not relay the debates about the Middle Yangzi archaeological cultures in detail nor describe the individual archaeological cultures. But it should be noted that much effort was expended on refining the sequence leaving many other research questions on the sidelines.

It will be seen whether the days of culture history in China are numbered. The vast increase in archaeological data has diluted almost any cultural sequence ever derived. A single culture or a culture even with several variants can no longer grasp the myriad finds that challenge us to re-think our understanding of Neolithic China almost on a day-to-day basis. It is no wonder then that such overarching concepts as the recently proposed 'Daxi Period'[30] were derived to somehow find a term to encompass the evidence that was undermining the notion of a unified Daxi Culture.

Historiography

A second aspect of archaeology in China, which is intimately linked to culture history, is historiography, which Falkenhausen explains as follows:

[28] For early reports on these sites, see Sichuan 1961 for Daxi, and Qujialing 1965 for Qujialing.
[29] For an overview of these debates see Guo Lixin 2005: 24-39.
[30] Guo Lixin 2005: 39.

> 'In general, traditional Chinese historiography is focused upon the concerns of the ruler, and it propagates the court's official interpretations of historical events. That it is Sino-centric goes without saying. Beholden to a notion of uninterrupted cultural, ethnic and historical continuity, as well as unity, it propounds a unilinear sequence of events and is prone to disregard divergent (e.g. local) traditions. Many efforts are biography centred, and a strong, politically engendered moralizing tendency remains characteristic of much of Chinese history-writing to this day'.[31]

Continuity of history and a veneration of the written word are key features of archaeological interpretations. The perceived accuracy of texts, which in most cases postdate the events concerned, 'holds a double danger for archaeology. Not only does it steer the archaeological sample toward conformity with tradition by telling archaeologists where to look; it also tells us what to see'.[32] One of the main concerns in connection with the preceding critique of culture history is that not just any people, but those explicitly known from ancient texts are matched to archaeological cultures.

Matching Peoples to Cultures

How do Chinese scholars proceed when trying to match archaeological cultures to groups known from ancient texts? The basic assumption is that archaeological cultures faithfully represent groups of people (*minzu*), as these groups are believed to have created the material evidence summed up as archaeological cultures, as discussed for the culture-historical approach.[33] These groups are believed to be defined by a common language and culture, which is very much a normative view of culture. Therefore, the first step is to clarify the date, distribution and characteristics of the archaeological culture. In a second step, the antiquity, the region of activity and the cultural particularities of relevant ancient groups as recorded in the

[31] Falkenhausen 1993: 840.
[32] Bagley 1992: 229.
[33] Zhang Xuqiu 2004: 226-227. He bases his account on the work of Yan Wenming 1997a and Zhang Zhongpei 1994 [both not seen].

texts must be clarified.[34] Although some scholars sometimes caution against this approach,[35] it is still widely applied in China, both to the Neolithic and the Bronze Age, as exemplified by the equation of the Middle Yangzi archaeological cultures (Qujialing and Shijiahe) with the ancient tribe of the San Miao known from texts.[36]

Some imminent problems with this approach are obvious: the problematic notion that pottery assemblages (archaeological cultures) represent groups has already been discussed and does not need to be repeated here. In addition, backdating texts, which were written much later than the formation of the archaeological evidence in question, is hardly ever valid. The non-existence of any written texts from the time before ca. 1200 BC, for which we have the first evidence for writing on 'oracle bones' from the Anyang site in Henan, precludes us from making any such linkages, but so does the quite apparent time gap between the text and the materials. The size of the gap diminishes any reliability the text may have for this earlier period. Even if we, as Kristiansen and Larsson observe for the Mediterranean Bronze Age, acknowledge that the oral history of an event may amount to up to 500 years prior to writing it down,[37] this may still leave us with a gap of up to 2000 years in some cases, as seen in the relevant texts for the Middle Yangzi listed in table 1.5. The table shows that parts of the earliest text mentioning the San Miao, the *Shangshu*, were compiled in the Spring and Autumn period (770-476 BC), but most of the other texts were composed no earlier than the third to first centuries BC. The relevant archaeological evidence, however, was formed during the third millennium BC, so that no connection between the later texts and earlier historical events can be convincingly made. Despite these

[34] Zhang Xuqiu 2004: 227.
[35] See some of the contributions summarised in Li Xuelai and Wang Minghui 2004.
[36] The term 'tribe' (*buzu*) will be frequently used throughout this section as a direct translation from Chinese primary and secondary sources. Although a clear definition is lacking, it appears that it refers to a possibly ethnically distinct group of people as hinted at by the alternative use of the term 'group' (*jituan*).
[37] Kristiansen and Larsson 2005: 20-24.

issues with the approach, the fact that historiographical discussions conclude most books on the Middle Yangzi Neolithic is evidence for their persistence and the merit it has for Chinese scholars.[38] These issues are the consequence of how the past is constructed in present-day China with its focus on texts from the Yellow River regions, which define the agenda even for regions that were remote in the Neolithic.[39]

Consequences for the Late Neolithic Middle Yangzi

Armed with such methodological weaponry, Chinese scholars identified the Qujialing and Shijiahe cultures with the San Miao (Three Miao) tribes, an alliance of peoples living along the Middle Yangzi as derived, for example, from a passage from the 'Book of Wei' (*Wei ce*) in the *Zhanguo ce.*[40] From there, it is only a small step to understand the San Miao (and the corresponding archaeological cultures) as historical agents and trace their history through the ancient texts. Such an approach was pursued with regards to the Middle Yangzi in order to explain the genealogy of archaeological cultures (Qujialing – Shijiahe – Post-Shijiahe) during the third millennium and the relationship of the San Miao with the peoples believed to inhabit the Middle Yellow River, the so-called Hua Xia, under the leadership of the sage rulers and ancestors of the Chinese people Yao, Shun and later Yu, the alleged founder of the Xia dynasty (fig. 1.14). This relationship, thought to be characterised by almost constant conflict and warfare, begun during the time of Yao, continued during the rule of Shun and was

[38] See Zhang Xuqiu 1992, 2004; Meng Huaping 1997; He Jiejun 2004; Guo Lixin 2005.
[39] See Shanks and Tilley 1987 for examples how pasts are constructed through present-day lenses. See also White 1973.
[40] A translation of the passage can be found in Crump 1996: 354/355. Yu Weichao (1933-2003), a former head of the now National Museum of China, was the first to make the connection between the Qujialing Culture and the San Miao in his search for the origins of the polity of Chu that occupied large parts of the south during the first millennium BC (Yu Weichao 1980a, 1980b, 1982a, 1982b, 1984, 1987, 2000). Other scholars confirmed Yu Weichao's analysis and added the Shijiahe Culture as also belonging to the San Miao (Li Longzhang 1988; Zhang Xuqiu 1992: 318-323, 2004: 226-234; Meng Huaping 1997: 240-245; Lin Bangcun 1998; Gao Chongwen 2000; Dengjiawan 2003: 290-291; He Jiejun 2004: 464-474; Wang Jing 2007: 70-71).

brought to an end by Yu. For instance, a passage in the *Lüshi chunqiu* states that Yao fought the Miao at the banks of the 'Red Waters' (*dan shui*).[41] These 'Red Waters' are identified with the present-day river Danjiang in northern Hubei and southwestern Henan,[42] probably because both contain the character *dan* for red.[43] Shun is said to have continued what Yao started and allegedly died during one of his campaigns in the south, as relayed by both the *Huainanzi* and the *Li ji*.[44] As relayed in the mentioned passage from the *Zhanguo ce*, it was Yu who finally vanquished the San Miao.

The strong belief in the texts has immediate consequences for the interpretation of archaeological data as archaeological correlates for the reliability of these stories were identified. The region around the Danjiang is seen as crucial for judging the advances of the San Miao. The lower layers of some important sites in the region, such as Xiawanggang and Qinglongquan, are attributed to the Yangshao Culture, and thus as part of the territory occupied by Central Plains tribes, the Hua Xia, while the layers on top of the Yangshao finds are attributed to the Qujialing and Shijiahe cultures.[45] Hence, because of the northward incursions of the San Miao into Hua Xia territory, a conflict between both groups is believed to have broken out. Distributions of archaeological cultures, which are 'abstract concept[s], […] intellectual tool[s] rather than […] real work-piece[s]',[46] are mistaken to be exactly that, the 'real work piece[s]'. Archaeological cultures develop from heuristic tools into historical agents.

[41] For a translation of this passage from the 'Zhao lei', see Wilhelm 1928: 356. The San Miao are also sometimes referred to as the You Miao or simply the Miao.
[42] Zhang Xuqiu 2004: 233.
[43] Rivers tend to keep their names for a long period of time, which renders the identification with the Danjiang plausible, but not for the Neolithic but for the time when the *Lüshi chunqiu* was composed.
[44] The passages can be found in the *Huainanzi* (He Ning 1998: 1313), and the 'Tangong' of the *Li ji* (Legge 1885: 208). See also table 4.
[45] Zhang Xuqiu (2004: 233) makes this argument. The sites are reported in Xiawanggang 1989 and Qinglongquan yu Dasi 1991.
[46] Wagner and Tarasov 2008: 77-78.

Further, it is believed that pottery vessels from the mentioned sites dating to the period of the Post-Shijiahe Culture bear a strong Yellow River flavour, which is considered as evidence for exchange between the north and the south. Figure 1.15 illustrates some of the pottery shapes attributed to the Meishan type of the Henan Longshan Culture and their alleged Post-Shijiahe equivalents. According to Zhang Xuqiu, such similarity reflects the victory of the Hua Xia over the San Miao, whose material correlates, the Qujialing and Shijiahe cultures, were replaced with another archaeological culture, the Post-Shijiahe Culture. Thus, the appearance of the latter is considered to have directly resulted from the demise of the former.[47] In this way, ancient texts and results from culture-historically-oriented research feed into and explain each other. This example has immediate relevance for this thesis as it illustrates how interregional interaction is perceived.

In conclusion, the intimate marriage between historiography and culture history is a barrier to asking more serious questions as the texts prefigure what to expect from the archaeological evidence. The problematic assumptions of culture history are being perpetuated much to the detriment of the potential of the archaeological evidence. Below I will suggest a possible alternative route, which begins with ignoring the historical texts for the period in questions. In a second step it is necessary to challenge culture history by providing an alternative. Inspired by the work of Wagner,[48] I have suggested that much more detailed chronologies are needed that ignore the distinctions made by culture history in order to reveal continuities and changes between phases instead of cultures. Too long has culture history allowed for

[47] Zhang Xuqiu 2004: 233. See also discussion of the abandonment hypotheses in Chapter 1.
[48] Wagner 2006.

the prehistoric evidence to be perceived as change from culture to culture, which can be likened to how change is perceived between successive dynasties.[49]

Advantages of Approach of this Thesis over Culture History

In this thesis I have tried to move beyond the yoke of culture history in defining the narrative and interpretation of the archaeological evidence. As noted, culture-historical assemblages imply a certain objectivity, although their formation is actually a work of interpretation, which is reflected in the many debates in China on the make-up and boundaries of archaeological cultures. In this thesis, a focus on thick description dissolves this implied objectivity by acknowledging the significance of interpretations even in mere descriptions of the evidence.

Turning away from archaeological cultures as the root of explanations should have positive effects on several levels. First, the perception of time may change, as time may be seen as less analogous to dynastic change. Also, shorter units of time allow for more detailed analysis. Secondly, de-emphasising archaeological cultures may help us to re-think the geographical distribution of material culture. Presently, mapping an archaeological culture amounts to impressions of territoriality not unlike the territories of kingdoms and states in later periods. An emphasis on rivers and access routes allows for a greater appreciation of the actual topographies, for example. The site-based approach of this thesis also prevents sites from being marginalised if they do not fit the definition of any archaeological culture and do not allow for categorisation. The recent summary of the Neolithic period in China by Wu Yaoli and Zhu Naicheng relies on archaeological cultures, but leaves out important

[49] This poignant comparison was made by Francis Allard (personal communication, April 2010).

sites, which do not fit the paradigm.[50] A site-based approach allows for their inclusion as similarities and differences are not reduced to the more general terms of an archaeological culture.

Finally, the approach to (cultural) change espoused by the culture-historical paradigm is challenged in this thesis. A focus on thick description allows for envisioning change differently. The parallel between archaeological cultures and dynasties has been noted, but, importantly, potential continuities are disguised once changes from one assemblage of pottery to the other are described in culture-historical terms. Thick description and a phase-by-phase chronology allow recognising that changes in material culture do not imply discontinuity and that continuities exist despite a break in material culture. The change of focus is from cultures to practices thereby removing the agency from cultures.

Social Complexity

The second paradigm challenged in this thesis is that of social complexity. Much of the critique is covered in Chapter 1, where I focused settlement archaeology and the ways in which this approach has been utilised in China to cast enclosures in terms of urbanisation instead of seeing each enclosure in its own right. This discussion was central to the way in which enclosures are approached in this thesis. Here, I will briefly discuss the sources of the socio-evolutionary thinking that has existed in China before Western social complexity took hold showing that the acceptance of social complexity built on fertile ground. I will also discuss the popularity of the current search for the origins of Chinese civilisation.

[50] Wu Yaoli and Zhu Naicheng 2010. Also, regions without a clear or agreed-upon cultural sequence are left out.

To recap, the most dominant approach to the understanding of (social) complexity considers organisational complexity at the level of societal structure (socio-political organisation): 'complexity is […] a category, or a state of being that a society may or may not attain', such as the level of chiefdom or statehood.[51] In China, such investigations have become paramount especially in the past 30 years through intensified explorations into the 'origins of Chinese civilisation', most recently through a major multiyear project.[52] Pinpointing when past societies 'progressed' from a 'primitive (*yuanshi*)' (least complex) to a 'civilised (*wenming*)' (more complex) stage is considered of vital importance.[53]

Marxist Routes

Socio-evolutionary thinking is common in western archaeology.[54] In China, thinking in strong socio-evolutionary patterns is a consequence of adopting Marxism as dominant doctrine in 1949. Marx's theory of historical materialism became the guiding principle for investigations into Chinese history. It sees society progressing from a primordial egalitarian stage through several stages of class struggle until a final revolution leads to the establishment of communism, thereby overcoming the stage of capitalism. Consequently, the early stages were applied to prehistory and history. In keeping with the unilineal perspective of social evolution as proposed by Lewis Henry Morgan and adapted by Friedrich Engels, 'primitive' societies were found in the Neolithic.[55] These were thought to progress from a matriarchal clan

[51] Wynne-Jones and Kohring 2007: 3.
[52] The first results have been recently published in several edited volumes thematically divided into society and 'spiritual culture', technology and economy, and environment (Kejibu Shehui Fazhan Kejisi and Guojia Wenwuju Bowuguan yu Shehui Wenwusi 2009a, 2009b, 2009c). The compiled papers have usually been published years earlier and confirm the mainstream and established view that Chinese civilisation was established some time in the third millennium.
[53] Wagner and Tarasov 2008.
[54] See Chapman 2003.
[55] Tong 1995: 180.

organisation to a patriarchal society, that is, from an egalitarian to a stratified society. The subsequent Bronze Age societies would then represent slave societies and the later Chinese empires the feudal stages.[56]

This application has been quite rigid in nature. The theoretical issues, which such adherence to a 19th-century model of social evolution raises, have never been discussed.[57] While the value of Marxism for archaeology as such should not be directly dismissed, important Marxist issues, such as the economic base of the Neolithic people, did not enter the discussion as much as they probably should have.[58] To stress the way in which Marxism was applied to Chinese prehistory, it is striking, as Tong Enzheng noted that 'there is no book or paper published in China that systematically expounds what exactly constitutes Marxist/Maoist archaeological theory, or details its methodology'.[59] Developments in Marxist archaeology in other countries were not recognised either. Chinese archaeology had remained in the firm grip of political dogmatism for over thirty years and Marxist tenets have somewhat remained a backdrop in the scholars mind up to day.[60]

Some Chinese scholars, led by the eminent Su Bingqi, suggested models of social evolution, for example his progression scheme of *gucheng – guguo – guwenhua shidai* (the period of archaic towns, archaic states, and archaic cultures), later refined to the concept of *guguo – fangguo – diguo* (archaic states – regional states –

[56] Thorp 1980-81. Although this kind of vocabulary is rather outdated now – even in China, such approaches are still common, but the labels are different.
[57] But see Tong 1989 who openly questioned the theoretical basis of Morgan's model of ancient societies, who saw them progressing from the stage of 'savagery' through 'barbarism' to 'civilisation'. Tong further criticised Morgan's view of the development of the family, which was adopted by Engels.
[58] It appears that the focus has entirely changed by now as seen in the current obsession of Chinese archaeologists with food production.
[59] Tong 1995: 179.
[60] Although Marx is much less quoted in archaeological texts than before, Engels' work still enjoys much popularity, as the recent research on the origins of civilisation indicates. For example, Wang Wei, one of the lead researchers, who often sets the direction of the civilisations work, explicitly builds on Engels to lay the theoretical groundwork for the civilisations research (Wang 2007).

empire).[61] However, these approaches have not really caught on despite the lip service that is being paid to these stages in the literature by categorising archaeological cultures according to them. It appears that settlement archaeology in one form or another came to dominate the field.

Civilisation – New Buzzword[62]

Attempts at tracing the 'origins of Chinese civilisation' are the most recent emphasis in Chinese archaeology, especially in mainland China, but this is not an entirely new endeavour, indeed there has been a steady built-up of research with this very aim for the past 30 or so years. Only very recently, resources were funnelled into the 'Origins of Chinese Civilization Project' with the probable aim at an official final word on the issue.[63] This is maybe not very different from the 'Xia-Shang-Zhou Chronology Project' that officially established a chronology for China's early dynasties.[64]

But what is meant by 'Chinese civilisation', what is meant by 'Chinese' and what by 'civilisation'? A definition of the 'Chinese' component in the project's title has yet to be produced. The past 4000 years are deemed not problematic for a notion of 'Chinese', as, historically, the Three Dynasties, Xia, Shang and Zhou, are considered being 'Chinese' and this is believed to continue up to today. There appears to be a consensus as to what is meant by 'Chinese' for the earlier period up to ca. 5000 years ago. Increased interaction between the eastern regions during the 3rd millennium BC as noted by Wagner and Tarasov are deemed the source of what is

[61] Su Bingqi 1986, 1999.
[62] The following is based on a paper presented at a conference in honour of Professor Dame Jessica Rawson at Merton College, 11 June 2010 (Priewe 2010b).
[63] See Kejibu Shehui Fazhan Kejisi 2009a-c for a compilation of the most recent results.
[64] See Li 2002 for an overview.

'Chinese'.[65] In this way, the present has a place in the past, indeed the present appears to have conquered the past.

The term 'civilisation' has a different trajectory. The word that is used in China to render 'civilisation', *wenming*, has been around for quite a while. It appears in the 1st millennium BC texts of the *Yi jing*, *Li ji* and *Shangshu*, where its meaning implies a 'deep seated cultured or civilised state of mind, behaviour and being'.[66] No wonder it was seen as appropriate translation for the western concept of 'civilisation' in the early 20th century and has been used in this sense ever since. But how can the notion of civilisation be understood? The term is usually understood in two ways: First, as socio-evolutionary threshold: A society becomes a civilisation. Secondly, it is a state of being. One is either civilised or primitive. Both understandings of civilisation are intricately linked and embrace a clear notion of progress and more importantly both have positive connotations. Civilisation is a desired goal, a desired outcome of social evolution.

Tracing the beginnings of civilisation in China is clearly a search with these aims. Primitive society needs to be overcome. From conversations with archaeologists in China, it is clear that not all scholars in China subscribe to the usefulness of this concept or of the quest for the origins of Chinese civilisation. The scholarly community is truly diverse. However, articles in archaeological publications, disregarding their actual content, increasingly tend to show that the notion of civilisation is the new orthodoxy. They often close with phrases that highlight 'how so-and-so site, so-and-so region or so-and-so culture contributed to Chinese civilisation'. But the problem is the ways in which to identify civilisation and its elements archaeologically.

[65] Wagner and Tarasov 2008. See also Chapter 1 for a discussion of K.C. Chang's interaction sphere.
[66] Zhu Naicheng 2006: 1.

Current scholarship setting the standard for the civilisation project sees the formation of the state as the main element of the beginning of civilisation, which is congruent with Xia Nai's claim in the early 1980s that the beginning of civilisation is marked by tribal society crossing the socio-evolutionary threshold to a stratified state-level society.[67] The cardinal signs, as recently put by a leading archaeologist, is the 'beginning of differentiation between the noble and the lowly and between the poor and the rich', the 'division between mental work and physical labor' as well as the 'emergence of the stratum separated from labor and exclusively engaged in religious sacrifice and other administrative affairs.' It is argued that society, in entering the 'civilized stage', reaches a 'new level in material and spiritual culture', accompanied by the 'formation of autocratic royal power and the stratum of professional bureaucrats that serve it, the rise of the state, compulsory public power with the administration of society as the main function, and the institutionalization of the hierarchy of social strata and the standard of their members' behavior'.[68]

Societies in prehistoric China are supposed to be passing the threshold to civilisation sometime between 2500 and 1500 BC, the timeframe of the civilisation project, and since the Bronze Age cultures dating from around 2000 BC are already established as being in the realm of the highly civilised world, civilisation must have begun earlier. Spatially, there is a strong emphasis on large-scale late Neolithic and early Bronze Age sites in north-central China. Civilisation must have arisen in the mid-third millennium BC and evidence is mainly found along the Yellow River. However, elements deemed to be the basis of civilisation are also found in the fourth millennium, such as a highly-developed agriculture, earlier forms of social differentiation and a highly-developed culture. Other parts of China, also credited as

[67] Xia Nai 1985.
[68] Wang Wei 2007.

playing their role in the formation of Chinese civilisation, are currently being studied during the second phase of the project. All parts of eastern China have thus come together in creating a civilisation.

Archaeologically, this quest for civilisation places an increased emphasis on settlement patterns. Analyses of cemeteries were utilised to establish the existence of social hierarchies and differentiation, but the development of settlement archaeology, which just as the concept of civilisation is a western import, is considered as being crucial. Regional surveys establish hierarchies and relations between settlements feeding into notions about what kinds of settlement patterns reflect the existence of states. Large settlements surrounded by an enclosure, such as a ditch and a bank, are usually called 'cities' or even 'capitals' and are at the core of the project.[69] A good example for the emphasis on enclosures is Anhui province. Despite the existence of the site of Yuchisi in Mengcheng, which is surrounded by a ditch, and recognised as being of national importance, it was left out in the project. When a site surrounded by a bank was discovered at Sunjiacheng, Huaining, interest was generated and catapulted Anhui into the circle of potential contributors to Chinese civilisation.[70] These and other criteria have formed the basis to trace civilisation archaeologically. The many debates that have taken place in other countries on the validity of such conclusions have not been taken into account.

Before concluding this section, the civilisation project also produces many positive results, mainly in the form of new data: Many resources are poured into many important archaeological sites, among them quite a few where one may not have expected further fieldwork as they were placed under the protection of the cultural heritage laws. The project generates an abundance of new data from palaeobotany,

[69] See Chapter 1.
[70] Gong Xicheng, Anhui Institute of Cultural Relics and Archaeology, personal communication, 2009.

zooarchaeology, stable isotope analyses, close study of craft production, such as pottery, lithics and bronzes, palaeoecology and new radiocarbon dates.[71] These will further our understanding of these sites and the late Neolithic and early Bronze Age as a whole.

However, some deep concerns remain about this quest for Chinese civilisation. Civilisation is very much a concept and ideal of the modern, enlightened, capitalist western world. Endeavours such as colonialism were justified with the idea of civilisation. As noted by Thomas Patterson, white, male Europeans of high social status used the notion of civilisation to pit themselves against the numerous others, the uncivilised, the barbaric, the crude and rustic, the wild and savage.[72] Social differences at home and abroad were justified by invoking the ideals of civilisation. The ideas of hierarchy and inequality are being naturalised. Naturally, there are queries as to the role of the endeavour to locate the origins of civilisation in China. One may speculate that if the ideals of civilisation can be harnessed as explanation for past achievements, then civilisation is also good for today's China, which should be even further up on the socio-evolutionary ladder. I assume that there is a close relationship between the rising popularity of the search for civilisation from the 1980s and the opening-up of the country, so that the civilisation project is as much about the present as it is about past. These claims, however, require more in-depth research in order to be substantiated.

Advantages of Approach of this Thesis over Social Complexity

In this thesis, I have shown alternative pathways to enclosure construction, other than urbanisation and the like, through the example of Shijiahe, and suggested

[71] See Yuan and Campbell 2009 for some recent results.
[72] Patterson 1997.

an alternative understanding of the abandonment of the site. The alternative views are a direct consequence of a dissatisfaction with the current socio-evolutionary models, some of which have been discussed above. As such, this thesis deliberately avoids placing the developments at Shijiahe into the straightjacket of socio-evolutionary schemes. This approach is greatly inspired by Sherratt and his dismissal of stadial schemes. Hence, socio-evolutionary progress is not at the heart of this study. Instead, a practice-based approach through thick description is employed, which allows for a more concrete grasp of the archaeological evidence to show what people and things did. The results are more tangible than the abstractions usually seen in the social complexity models. Consequently, this approach is a conscious shift in priorities.

A shift away from the conventional approaches has several advantages. First, it allows for enclosures to be studied in their own right instead of subscribing to rather linear and universal models of progress, which automatically assume that enclosures had certain functions. These models appear rather simplistic in their explanations of why enclosures were constructed. Secondly, mirroring my statements regarding culture history, a different understanding of territoriality can be proposed. I suggest that the usual hexagons depicting the possible territories around a central place may not reflect actual territories. This impression is amplified by a third point, which is my stress on interaction in Sherratt's spirit. Interaction along rivers is of particular importance and allows us to explain site distributions along river courses. Future studies taking this into account might produce different social, political and material topographies. Finally, my approach does not marginalise religion in a society but places it centre stage.

In all, this thesis attempts achieving an understanding of a site at different scales, by placing a strong emphasis on the long-term nature of local developments,

while at the same time not neglecting the importance of interaction. This is in tune with what Roderick Campbell calls the coming 'historical turn' in archaeology, but has reached these conclusions independently.[73] The combination of what Campbell calls 'local particularities' and 'interregional histories' is the backbone of this work.

Final Remarks

In conclusion, I will briefly outline the major themes, which set this thesis apart from other work in Chinese archaeology. These are a focus on the long-term history of a site, the application of a phase-by-phase chronology, the focus on thick description in a practice-based approach, the re-thinking of enclosure construction as well as abandonment, the emphasis on religion, the stress on interaction, and, finally, the importance of rivers.

1. Long-term history of a site

   Despite a strong focus on the third millennium, this thesis acknowledges that the long-term history of a site needs to be considered if local particularities are to be more fully contextualised. Only a long-term approach is able to properly contextualise episodes of enclosure construction and abandonment by placing these into a wider historical perspective.

2. Chronologies challenged

   Instead of using archaeological cultures as the chronological anchor, this thesis employs shorter units termed phases. Moving from phase to phase reveals continuities and discontinuities at greater resolution.

3. Thick description and practice

[73] Campbell 2011.

Thick description acknowledges that all engagement with archaeological evidence has an interpretative element to it. Hence, I have not rigidly separated description and interpretation but fused in a discursive manner. This benefits the practice-based approach utilised in this thesis, especially in conjunction with the shorter chronological units. This overall approach is new in the field of Chinese archaeology and shown to be of benefit as seen in the subtle differences and similarities it can tease out.

4. Enclosure construction re-thought

   The full contextualisation allows rethinking the reasons for enclosure construction. Here, possible aspects relating to religion and the manipulation of the flow of water are considering based on a detailed study of the construction history of the enclosure. This approach goes hand in hand with re-envisioning the construction as a process as opposed to seeing the enclosure as an end product. Such appreciation of the temporal nature of the enclosure also allows realising changes in the significance of the enclosure through time as demonstrated in this thesis.

5. Abandonment re-thought

   This thesis regards the abandonment of enclosures as an interconnected regional phenomenon, which cannot simply be explained through warfare, environmental change, migration or other notions. While a 'rupture' in the archaeological evidence has been noted previously, this thesis, for the first time, has spelled out the differences of phase IX in comparison to the previous phase and re-envisioned phase IX as re-settlement showing that the causalities espoused in previous arguments are flawed.

6. Religion

Following Insoll, religion was moved to a conceptual position where it is regarded as a central, possibly defining aspect of all aspects of life instead of an epiphenomenon to political and economic issues. Religion and ritual have long been underappreciated in Chinese archaeology and require more serious consideration if we are to appreciate of the archaeological evidence more fully.

7. Interaction

   Interaction has been treated similarly to religion and, inspired by Sherratt's work, is emphasised in this thesis. Interaction has the power to explain dynamics between sites, uncover regional phenomena and the distribution of objects. Although the mechanisms of interaction are notoriously difficult to uncover, the acknowledgement of interaction and its proper study may be able to re-shape our understanding of Neolithic China. Its advantages over the concept of the interaction sphere, still dominating our impression of fourth to third millennium BC China, was discussed in Chapter 1.

8. Rivers

   Interaction alone without an understanding of the routes of communication establishes distribution maps of things but not networks and it is the latter, which should be aimed for.[74] As again inspired by Sherratt, rivers are seen as the central routes of communication in the Middle Yangzi region, which is probably also valid for other regions given China's extensive riverine network. Re-envisioning sites as situated along rivers as axes of communication fosters a better understanding of site distributions, why certain sites have become more important than others due to their position within the network and has allowed speculations

[74] See Knappett 2011.

about changes of the flow of water as deliberately created through the construction of an enclosure, for example.

Taken together these themes and approaches have allowed me to paint a more nuanced picture of Shijiahe challenging many long-established assumptions and explanations. As these assumptions and explanations have great currency in the field of Chinese archaeology my approach may have the potential to re-shape our understanding of other (enclosed) sites as well.

BIBLIOGRAPHY

Abbreviations (Chinese archaeological journals)

HNKGJK *Hunan kaogu jikan* 湖南考古辑刊

HXKG *Huaxia kaogu* 华夏考古

JHKG *Jiang Han kaogu* 江漢考古

JHLT *Jiang Han luntan* 江汉论坛

KG *Kaogu* 考古

KGXB *Kaogu xuebao* 考古學報

KGTX *Kaogu tongxun* 考古通讯

KGXJK *Kaoguxue jikan* 考古学集刊

KGYWW *Kaogu yu wenwu* 考古與文物

NFMZKG *Nanfang minzu kaogu* 南方民族考古

NFWW *Nanfang wenwu* 南方文物

SQYJ *Shiqian yanjiu* 史前研究

WW *Wenwu* 文物

WWCKZL *Wenwu cankao ziliao*文物参考资料

WWZLCK *Wenwu ziliao congkan* 文物资料丛刊

ZGWWB *Zhongguo wenwubao* 中國文物報

ZYWW *Zhongyuan wenwu* 中原文物

Allard, Francis (2001). “Mortuary Ceramics and Social Organization in the Dawenkou and Majiayao Cultures.” *Journal of East Asian Archaeology* 3:3-4: 1-22.

Andersson, J. G. (1923). “An early Chinese culture.” *Bulletin of the Geological Survey of China* 5: 1-68.

An Zhimin 安志敏 (1986). “Kaoguxue wenhua 考古学文化 (The archaeological culture).” In Zhongguo Dabai Kequanshu Chubanshe Bianjibu 中国大百科全书出版社编辑部 (ed.), *Zhongguo dabai kequanshu – kaoguxue* 中国大百科全书. 考古学 (China encyclopedia - Archaeology), p. 253-254. Beijing; Shanghai: Zhongguo Dabai Kequanshu Chubanshe.

An, Zhisheng, Stephen C. Porter, John E. Kutzbach, Wu Xihao, Wang Suming, Liu Xiaodong, Li Xiaoqiang and Zhou Weijian (2000). “Asynchronous Holocene optimum of the East Asian monsoon.” *Quaternary Science Reviews* 19: 743-762.

Anthony, David W. (1990). “Migration in Archeology: The Baby and the Bathwater.” *American Anthropologist*, *New Series*, 92:4: 895-914.

Anthony, David W. (1992). “The Bath Refilled: Migration in Archeology again.” *American Anthropologist*, *New Series*, 94:1: 174-176.

Arnold, Dean E. (1999). Advantages and disadvantages of vertical-half molding technology: Implications for production organization. In Skibo, J. M., and Feinman, G. M. (eds.), *Pottery and People: A Dynamic Interaction*, pp. 59–80. Salt Lake City: University of Utah Press.

Arnold, Philip J. (2000). “Working Without a Net: Recent Trends in Ceramic Ethnoarchaeology.” *Journal of Archaeological Research* 8:2: 105-133.

Bagley, Robert W. (1992). “Changjiang bronzes and Shang archaeology.” In *Proceedings of the International Colloquium on Chinese Art History 1991, Antiquities Part I*, pp. 214-55. Taipei: National Palace Museum.

Bagley, Robert W. (2004). “Anyang writing and the origin of the Chinese writing system.” In Stephen D. Houston (ed.), *The First Writing*, pp. 190-249. Cambridge: Cambridge University Press.

Baimiao 1994: Sanxia Kaogudui 三峡考古队 (1994). “Hubei Yichang Baimiao yizhi 1993 nian fajue jianbao 湖北宜昌白庙遗址1993年发掘简报 (Preliminary report on the 1993 excavation of the Baimiao site, Yichang, Hubei).” *JHKG* 1994.1: 22-34.

Baimiao 1996: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 (1996). “1985-1986 nian Yichang Baimiao yizhi fajue jianbao 1985－1986年宜昌白庙遗址发掘简报 (Preliminary report on the 1985-1986 excavations of the Baimiao site, Yichang).” *JHKG* 1996.3: 1-12, 54.

Banpo 1963: Zhongguo Kexueyuan Kaogu Yanjiusuo 中国科学院考古研究所 and Shaanxi Sheng Xi’an Banpo Bowuguan 陕西省西安半坡博物馆 (1963). *Xi’an Banpo: yuanshi shizu gongshe juluo yizhi* 西安半坡 : 原始氏族公社聚落遗址 (The Neolithic village at Banpo). Beijing: Wenwu Chubanshe.

Baodun 1997: Chengdu Shi Wenwu Kaogu Gongzuodui 成都市文物考古工作队, Sichuan Lianhe Daxue Kaogu Jiaoyanshi 四川联合大学考古教研室 and Xinjin Xian Wenguansuo

四川新津县宝墩遗址调查与发掘 (1997). “Sichuan Xinjin Xian Baodun yizhi diaocha yu shijue (Survey and trial excavation of the Baodun site, Xinjin County, Sichuan).” *KG* 1997.1: 40-52.

Barbour, George Brown (1935). *Physiographic History of the Yangtze*. Beijing: The National Geological Survey of China (under the Ministry of Industries and affiliated with the Academia Sinica) and the Institute of Geology of the National Academy of Peiping.

Beijing Daxue Kaoguxi Tan Shisi Nian Shiyanshi 北京大学考古系碳十四年实验室 (1996). “Tan shisi niandai ceding baogao (10) 碳十四年代测定报告（一0） (The tenth report on of radiocarbon dates).” *WW* 1996.6: 91-95.

Beiyinyangying 1993: Nanjing Bowuguan 南京博物馆 (1993). *Beiyinyangyin: xinshiqi shidai ji Shang Zhou shiqi yizhi fajue baogao* 北阴阳营：新石器时代及商周时期遗址发掘报告 (Beiyinyangyin: report on the excavations of the Neolithic and Shang/Zhou period site). Beijing: Wenwu Chubanshe.

Bell, Catherine (1992). *Ritual Theory, Ritual Practice*. New York; Oxford: Oxford University Press.

Bellwood, Peter (2005). *First Farmers: The Origins of Agricultural Societies*. Malden: Blackwell.

Bernbeck, Reinhard (1997). *Theorien in der Archäologie.* Tübingen, Basel: Francke.

Binford, Lewis R. (1971). “Mortuary Practices: Their Study and Their Potential.” In James A. Brown (ed.), *Approaches to the Social Dimensions of Mortuary Practices*, pp. 6-29. New York: Society for American Archaeology.

Blakiston, Thomas Wright (1862). Five Months on the Yangt-tsze. New York: Cambridge University Press [re-published in 2010].

Bourdieu, Pierre (1990). *The Logic of Practice.* Cambridge: Polity.

Bowden, Rob (2003). *The Yangtze*. London: Hodder Wayland.

Bradley, Raymond S. (1999). *Paleoclimatology: Reconstructing Climates of the Quaternary*. San Diego; London: Academic.

Bradley, Richard (2005). *Ritual and Domestic Life in Prehistoric Europe*. London: Routlegde.

Brück, Joanna (1999). “Ritual and Rationality: Some Problems of Interpretation in European Archaeology.” *European Journal of Archaeology* 2:3: 313-344.

Burmeister, Stefan (2000). “Archaeology and Migration: Approaches to an Archaeological Proofs of Migration.” *Current Anthropology* 41:4: 539-567.

Caldwell, Joseph R. (1977). “Interaction Spheres in Prehistory.” In Joseph R. Caldwell and Robert L. Hall (eds), *Hopewellian Studies*, pp. 133-143. Springfield: Illinois State Museum.

Campbell, Roderick B. (2009). “Toward a Networks and Boundaries Approach to Early Complex Societies.” *Current Anthropology* 50:6: 821-848.

Campbell, Roderick B. (2011). "The 'Chinese Bronze Age' and the Coming Historical Turn in Archaeology." Lecture given at the Institute of Archaeology, University College London, 9 June 2011.

Caojialou 1988: Wuhan Daxue Lishixi Kaogu Jiaoyanshi 武汉大学历史系考古教研室, Xiangfan Shi Bowuguan 襄樊市博物馆 and Yicheng Xian Bowuguan 宜城县博物馆 (1988). "Hubei Yicheng Caojialou xinshiqi shidai yizhi 湖北宜城曹家楼新石器时代遗址 (The Neolithic site of Caojialou, Yicheng, Hubei)." *KGXB* 1988.1: 51-73.

Carr, Christopher (1995). "Mortuary Practices: Their Social, Philosophical-religious, Circumstantial, and Physical Determinants." *Journal of Archaeological Method and Theory* 2:2: 105-200.

Carson, Michael and Michael Loewe (1993). "Lü shih ch'un ch'iu." In Michael Loewe (ed.), *Early Chinese Texts: A Bibliographical Guide*, pp. 324-330. Berkeley: Society for the Study of Early China and Institute of East Asian Studies, University of California.

Chang, Kwang-chih (1981). "Archaeology and Chinese historiography." *World Archaeology* 13:2: 156-169.

Chang, Kwang-chih (1986). *The Archaeology of Ancient China*. *4th Edition, revised and enlarged.* New Haven and London: Yale University Press.

Chang, Kwang-chih (1989). "An Essay on *Cong*." *Orientations* (June), pp. 37-43.

Chang, Kwang-chih (1999). "China on the eve of the historical period." In Michael Loewe and Edward L. Shaughnessy (eds.), *The Cambridge History of Ancient China: from the Origins of Civilisation to 221 BC*, pp. 37-73. Cambridge: Cambridge University Press.

Chaotianzui yu Zhongbaodao 2001: Guojia Wenwuju Sanxia Kaogudui 国家文物局三峡考古队 (2001). *Chaotianzui yu Zhongbaodao* 朝天嘴与中堡岛 (Excavations of the Chaotianzui and Zhongbaodao sites). Beijing: Wenwu Chubanshe.

Chapman, John (2000). *Fragmentation in Archaeology: People, Places, and Broken Objects in the Prehistory of South-eastern Europe*. London: Routlegde.

Chapman, Robert (2003). *Archaeologies of Complexity*. London: Routledge.

Chegushan 1986: Hunan Sheng Yueyang DiquWenwu Gongzuodui 湖南省岳阳地区文物工作队 (1986). "Huarong Chegushan xinshiqi shidai yizhi di yi ci fajue jianbao 花容车轱山新石器时代遗址第一次发掘简报 (Preliminary report on the first excavation of the Neolithic site of Chegushan, Huarong)." *HNKGJK* 1986, no. 3, pp.1-18.

Chen Wenhua 陈文华 (2002). *Nongye kaogu* 农业考古 (Agricultural archaeology). Beijing: Wenwu Chubanshe.

Chen Xingcan 陈星灿 (1997). *Zhongguo shiqian kaoguxueshi yanjiu* 中国史前考古学史研究 (1895-1949) (Research into the history of prehistoric archaeology in China [1895-1949]). Beijing: Sanlian Shudian.

Chen, Zhongyuan, Zhanghua Wang, Jill Schneiderman, Jin Tao and Yongli Cai (2005). "Holocene Climate Fluctuations in the Yangtze Delta of Eastern China and the Neolithic Response." *The Holocene* 15:6: 915-926.

Chengbeixi 2001: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 (2001). *Yidu Chengbeixi* 宜都城背溪 (Chengbeixi in Yidu). Beijing: Wenwu Chubanshe.

Chenghe 2008: Jingmen Shi Wenwu Kaogu Yanjiusuo 荆门市文物考古研究所 (2008). "Hubei Jingmen Shi Hougang Chenghe chengzhi diaocha baogao 湖北荆门市后港城河城址调查报告 (Report on the survey of the walled site of Chenge, Hougang, Jingmen City, Hubei)." *JHKG* 2008.2: 27-34.

Chengtoushan 2007a: Hunan Sheng Wenwu Kaogu Yanjiusuo湖南省文物考古研究所 (2007). *Li Xian Chengtoushan: xinshiqi shidai yizhi fajue baogao* 澧县城头山：新石器时代遗址发掘报告 (The Chengtoushan site in Li County: report on the excavation of a Neolithic site), 3 vols. Beijing: Wenwu Chubanshe.

Chengtoushan 2007b: Hunan Sheng Wenwu Kaogu Yanjiusuo湖南省文物考古研究所 and Guoji Riben Wenhua Yanjiu Zhongxin 国际日本文化研究中心 (2007). Li Xian *Chengtoushan: Zhongri hezuo Liyang pingyuan huanjing kaogu yu youguan zonghe yanjiu* 澧县城头山：中日合作澧阳平原环境考古与有关综合研究 (The Chengtoushan site in Li County: Joint Sino-Japanese environmental archaeology of the Liyang plain and related integrated research). Beijing: Wenwu Chubanshe.

Cheung I-Jen, William G. Boltz, and Michael Loewe (1993). "Kuo yu." In Michael Loewe (ed.), *Early Chinese Texts: A Bibliographical Guide*, pp. 263-268. Berkeley: Society for the Study of Early China and Institute of East Asian Studies, University of California.

Childe, Vere Gordon (1956). *Piecing Together the Past: The Interpretation of Archaeological Data*. London: Routledge & Paul.

Chu Xiaolong 楚小龙 and Cao Yanpeng 曹艳朋 (2011). "Henan Xichuan Xiazhai xinshiqi zhi Xia dai yizhi 河南淅川下寨新石器至夏代遗址 (Neolithic to Xia periods Xiazhai sites in Xichuan, Henan)." In Guojia Wenwuju 国家文物局 (ed.), *2010 Zhongguo zhongyao kaogu faxian* 2010中国重要考古发现 (Major archaeological discoveries in China in 2010), pp. 46-49. Beijing: Wenwu Chubanshe.

Crawford, Gary W. (2006). "East Asian Plant Domestication." In Miriam T. Stark (ed.), *Archaeology of Asia*, pp. 77-95. Blackwell.

Crump, J. I. (1996). *Chan-kuo ts'e*. Ann Arbor: Center for Chinese Studies, University of Michigan.

Dahecun 1996: Zhengzhou Shi Wenwu Gongzuodui 郑州市文物工作队 and Zhengzhou Shi Dahecun Yizhi Bowuguan 郑州市大河村遗址博物馆 (1996). "Zhengzhou Dahecun yizhi 1983, 1987 nian fajue baogao 郑州大河村1983、1987年发掘报告 (Report on the 1983 and 1987 excavations of the Dahecun site, Zhengzhou)." *KGXB* 1996.1: 111-142.

Dai Xiangming (2006). *Pottery Production, Settlement Patterns and Developments of Social Complexity in the Yuanqu Basin, North-Central China*. Oxford: Archaeopress.

Dai Yingxin 戴应新 (1988). “Shenmu Shimao Longshan wenhua yuqi 神木石峁龙山文化玉器 (Jades of the Longshan Culture at Shimao, Shenmu).” *KGYWW* 5-6: 239-250.

Daiziping 1986: Wu Ruzuo 吴汝祚 (1986). “Hunan Xiangxiang Daziping yizhi di er ci muzang de chubu pouxi 湖南湘乡岱子坪遗址第二次墓葬的初步剖析 (Initial anaylsis of the burial unearthed during the second excavation of the Daiziping site, Xiangxiang, Hunan).” *JHKG* 1986.2: 64-79.

Dazhujiacun 1991: Shandong Sheng Wenwu Kaogu Yanjiusuo 山东省文物考古研究所 and Ying Xian Bowuguan 营县博物馆 (1991). “Ying Xian Dazhujiacun Dawenkou wenhua muzang 营县大朱家村大汶口文化墓葬 (The Dawenkou Culture burials at Dazhujiacun, Ying County).” *KGXB* 1991.2: 167-206.

Demattè, Paola (1999). “Longshan-Era Urbanism: The Role of Cities in Predynastic China.” *Asian Perspectives* 39: 119-153.

Demattè, Paola (2010). “The Origins of Chinese Writing: the Neolithic Evidence.” *Cambridge Archaeological Journal* 20:2: 211-228.

Deng Hui 邓辉, Chen Yiyong 陈义勇, Jia Jingyu 贾敬禹, Mo Duowen 莫多闻 and Zhou Kunshu 周昆叔 (2009). “8500a BP yilai Changjiang zhongyou pingyuan diqu gu wenhua yizhi fenbu de yanbian 8500a BP 以来长江中游平原地区古文化遗址分布的演变 (Distribution patterns of the ancient cultural sites in the middle reaches of the Yangtze River since 8500a BP).” *Dili Xuebao* 地理学报 2009.9: 1113-1125.

Dengjiawan 2003: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所, Beijing Daxue Kaoguxuexi Shijiahe Kaogudui 北京大学考古学系石家河考古队, and Hubei Sheng Jingzhou Diqu Bowuguan 湖北省荆州地区博物馆 (2003). *Dengjiawan – Tianmen Shijiahe kaogu fajue baogao zhier* 邓家湾 – 天门石家河考古发掘报告之二 (Dengjiawan – The second report on archaeological excavations at Shijiahe, Tianmen). Beijing: Wenwu Chubanshe.

Deng Shuping 邓淑苹 (2007). “Yuangu de tongshen mima: ‘jie’ zi xing guan 远古的通神密码-介字形 冠 (An ancient theosophical code: the triangular headdress).” *Gugong wenwu yuekan* 故宫文物月刊, no. 286 (January 2007): 82-97.

Diaolongbei 2006: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 中国社会科学院考古研究所 (2006). *Zaoyang Diaolongbei* 枣阳雕龙碑 (The Diaolongbei site in Zaoyang). Beijing: Kexue Chubanshe.

Domrös, Manfred and Peng Gongbing (1988). *The Climate of China*. Berlin; New York: Springer-Verlag.

Dong Qi 董琦 (1995). “Lun Yu xinan, E xibei diqu Yu Xia shiqi de kaoguxue leixing 论豫西南、鄂西北地区虞夏时期的考古学类型 (Discussing the archaeological types of the Yu-Xia period in southwestern Henan and northwestern Hubei).” *NFWW* 3: 60-73.

Duan Yu 段渝 (2007). *Qiubang yu guojia qiyuan: Changjiang liuyu wenming qiyuan bijiao yanjiu* 酋邦与国家起源：长江流域文明起源比较研究 (The origins of chiefdoms and states:

comparative research into the origins of civilisation along the Yangzi River). Beijing: Zhonghua Shuju.

Duke, Philip (1996). "Culture-people hypothesis." In Brian M. Fagan (editor), *The Oxford Companion to Archaeology*. Oxford University Press. Available from http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t136.e0108 [accessed 2 August 2008].

Edgeworth, Matt (2011). *Fluid Pasts: Archaeology of Flow*. London: Bloomsbury Academic.

Falkenhausen, Lothar von (1992). "Serials on Chinese archaeology published in the People's Republic of China: a bibliographical survey." *Early China* 17: 247-295.

Falkenhausen, Lothar von (1993). "On the historiographical orientation of Chinese archaeology." *Antiquity* 67: 839-49.

Falkenhausen, Lothar von (2008). "Stages in the Development of 'Cities' in Pre-Imperial China." In Joyce Marcus and Jeremy A. Sabloff (eds), *The Ancient City: New Perspectives on Urbanism in the Old and New World*, pp. 209-228. Santa Fe: SAR Press.

Fang Jinqi (1991). "Influence of Sea Level Rise on the Middle and Lower Reaches of the Yangtze River since 12,100 BP." *Quarternary Science Reviews* 10: 527-536.

Fang Yanming 方燕明 (2009). "Henan Yuzhou Shi Wadian yizhi Longshan wenhua daxing juluo 河南禹州市瓦店遗址龙山文化大型聚落 (Large settlement of the Longshan Culture on the Wadian site in Yuzhou city, Henan)." In Guojia Wenwuju 国家文物局 (ed.), *2008 Zhongguo zhongyao kaogu faxian* 2008 中国重要考古发现 (Important archaeological discoveries made in China in 2008), pp. 34-37. Beijing: Wenwu Chubanshe.

Finlay, Nyree (2008). "Introduction." *World Archaeology* 40:2: 163-168.

Flad, Rowan (2004). *Specialized Salt Production and Changing Social Structure at the Prehistoric Site of Zhongba in the Eastern Sichuan Basin, China*. Unpublished PhD Dissertation. Los Angeles: University of California, Los Angeles.

Flad, Rowan (2007). "Rethinking the Context of Production through an Archaeological Study of Ancient Salt Production in the Sichuan Basin, China." *Archaeological Papers of the American Anthropological Association* 17:1: 108–128.

Flad, Rowan (2008). "Divination and Power: A Multiregional View of the Development of Oracle Bone Divination in Early China." *Current Anthropology* 49:3: 403-437.

Flad, Rowan and Chen Pochan (forthcoming). *Ancient Central China: An Archaeological Study of Centers and Periphery along the Yangzi River*. Cambridge: Cambridge University Press.

Flad, Rowan, Jing Zhanghua, Gwen Bennet, Chen Pochan, Li Shuicheng and Lothar von Falkenhausen (2008). "The Chengdu Plain Archaeology Project – Surveying Rice Paddies in the Search for the Origins of Sanxingdui." Paper presented at the 4th Worldwide Conference of the Society for East Asian Archaeology, Beijing, June 2008.

Fuller, Dorian Q. (2011a). “Sticky rice or chapatis? An archaeological exploration of the selective movement of crops across the culinary frontiers of Asia.” Lecture given at the Institute of Archaeology, University of Oxford, 23 February 2011.

Fuller, Dorian Q. (2011b). “Pathways to Asian Civilizations: Tracing the Origins and Spread of Rice and Rice Cultures.” *Rice* 4: 78-92.

Fuller, Dorian Q. and Qin Ling (2009). “Water Management and Labour in the Origins and Dispersal of Asian Rice.” *World Archaeology* 41:1: 88-111.

Fuller, Dorian Q., Emma Harvey and Qin Ling (2007). “Presumed Domestication? Evidence for Wild Rice Cultivation and Domestication in the Fifth Millennium BC of the Lower Yangtze Region.” *Antiquity* 81: 316–331.

Fuller, Dorian Q., Yo-Ichiro Sato, Cristina Castillo, Ling Qin, Alison R. Weisskopf, Eleanor J. Kingwell-Banham, Jixian Song, Sung-Mo Ahn and Jacob van Etten (2010). “Consilience of Genetics and Archaeobotany in the Entangled History of Rice.” *Archaeological and Anthropological Sciences* 2:2: 115-131.

Fuquanshan 2000: Shanghai Shi Wenwu Guanli Weiyuanhui 上海市文物管理委员会 (2000). *Fuquanshan – xinshiqi shidai yizhi fajue baogao* 福泉山－新石器时代遗址发掘报告 (The Fuquanshan site: Report on the excavation of a Neolithic site). Beijing: Wenwu Chubanshe.

Gaixia 2010: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo (2010). “Anhui Guzhen Gaixia Dawenkou wenhua chengzhi fajue 安徽固镇垓下大汶口文化城址发掘 (Excavation of the Dawenkou Culture walled site of Gaixia, Guzhen, Anhui).” www.kaogu.cn 2010-03-12 [accessed on 27 May 2011].

Gao Chongwen 高崇文 (2000). “Shilun Changjiang zhongyou yuanshi wenhua bianqian yu gushi chuanshuo 试论长江中游原始文化变迁与古史传说 (Discussing the changes in primitive cultures and ancient legends for the middle course of the Yangzi River).” In Yan Wenming 严文明 and Yasuda Yoshinori 安田喜宪 (eds), *Daozuo, taoqi he dushi de qiyuan* 稻作、 陶器和都市的起源 (The origins of rice agriculture, pottery and cities), pp. 189-197. Beijing: Wenwu Chubanshe.

Gao Guangren 高广仁 and Luan Fengshi 栾丰实 (2004). *Dawenkou wenhua* 大汶口文化 (The Dawenkou Culture). Beijing: Wenwu Chubanshe.

Gao Jiangtao 高江涛 (2011). “2009-2010 nian Henan Xiachuan Xiawanggang yizhi xin faxian yu shouhuo 2009－2010年河南淅川下王岗遗址新发现与收获 (New discoveries and results of the 2009-2010 work at the Xiwanggang site, Xichuan, Henan).” www.kaogu.cn 2011-01-31 [accessed 30 May 2011].

Gaokanlong 1992: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 and Huaihua Diqu Wenwu Gongzuidui 怀化地区文物工作队 (1992). “Huaihua Gaokanlong xinshiqi shidai yizhi 怀化高坎垅新石器时代遗址 (The Neolithic site of Gaokanlong, Huaihua).” *KGXB* 1992.3: 301-328.

Geertz, Clifford (1973). *The Interpretation of Cultures*. New York: Basic Books.

Goepper, Roger (ed.) (1995). *Das alte China: Menschen und Götter im Reich der Mitte 5000 v. Chr.-220 n. Chr.* München: Hirmer.

Gosden, Chris (1994). *Social Being and Time*. Oxford: Blackwell.

Gosden, Chris (1999). *Anthropology and Archaeology: A Changing Relationship*. London: Routledge.

Gosden, Chris (2004). "Aesthetics, Intelligence and Emotion: Implications for Archaeology." In Elizabeth DeMarrais, Chris Gosden and Colin Renfrew (eds), *Rethinking Materiality: The Engagement of Mind with the Material World*, pp. 33-40. Cambridge: McDonald Institute for Archaeological Research.

Gosden, Chris (2006). "Material Culture and Long-Term Change." In Chris Tilley, Webb Keane, Susanne Kuechler, Mike Rowlands and Patricia Spyer (eds), *Handbook of Material Culture*, pp. 425-442. London, Thousand Oaks: Sage.

Gosden, Chris and J.D. Hill (2008). "Introduction: Re-integrating 'Celtic' Art." In Dunca Garrow, Chris Gosden and J.D. Hill (eds), *Re-thinking Celtic Art*, pp. 1-14. Oxford: Oxbow.

Gosden, Chris and Gary Lock (1998). "Prehistoric Histories." *World Archaeology* 30:1: 2-12.

Graham, A.C. (1993). "Mo tzu." In Michael Loewe (ed.), *Early Chinese Texts: A Bibliographical Guide*, pp. 336-341. Berkeley: Society for the Study of Early China and Institute of East Asian Studies, University of California.

Guanmiaoshan 1983: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo Hubei Gongzuodui 中国社会科学院考古研究所湖北工作队 (1983). "Hubei Zhijiang Guamiaoshan yizhi di er ci fajue 湖北枝江关庙山遗址第二次发掘 (The second excavation of the Guanmiaoshan site, Zhijiang, Hubei)." *KG* 1983.1: 17-29.

Gu Haibin 顾海滨 (2007). "Cong Chengtoushan yizhi de zhiwu yicun kan Daxi wenhua the huanjing beijing 从城头山遗址的植物遗存看大溪文化的环境背景 (Gauging the environmental background of the Daxi Culture from plant remains from the Chengtoushan site." In Chengtoushan (2007b), pp. 107-114.

Guchengzhai 2000: Cai Quanfa 蔡全法, Ma Juncai 马俊才 and Guo Musen 郭木森 (2000). "Henan Sheng Xinmi Shi faxian Longshan shidai zhongyao chengzhi 河南省新密市发现龙山时代重要城址 (The discovery of the important Longshan Period walled site of Guchengzhai, Xinmi City, Henan)." *ZYWW* 2000.5: 4-9.

Guchengzhai 2002: Henan Sheng Wenwu Kaogu Yanjiusuo 河南省文物考古研究所 and Xinmi Shi Yanhuang Lishi Wenhua Yanjiuhui 新密市炎黄历史文化研究会 (2002). "Henan Xinmi Shi Guchengzhai Longshan wenhua chengzhi fajue jianbao 河南新密市古城寨龙山文化城址发掘简报 (Preliminary report on the excavation of the Longshan Culture walled site of Guchengzhai, Xinmi, Henan)." *HXKG* 2002.2: 53-82.

Gu Fang 古方 (ed.) (2005). *Zhongguo chutu yuqi quanji* 中国出土玉器全集 (The complete collection of jades unearthed in China), 15 vols. Beijing: Kexue Chubanshe.

Guojia Wenwuju 国家文物局 (2002). *Zhongguo wenwu dituji – Hubei fence* 中国文物地图集——湖北分册 (Atlas of Chinese cultural relics – Hubei). Xi'an: Xi'an Ditu Chubanshe.

Guojia Wenwuju 国家文物局 (2005). *2004 Zhongguo zhongyao kaogu faxian* 2004 中国重要考古发现 (Important archaeological discoveries made in China in 2004). Beijing: Wenwu Chubanshe.

Guojia Wenwuju 国家文物局 and Zhonghua Renmin Gongheguo Kexue Jishubu 中华人民共和国科学技术部 (2009). *Zaoqi Zhongguo – Zhonghua wenming qiyuan* 早期中国——中华文明起源 (Early China: The formative period of Chinese civilization). Beijing: Wenwu Chubanshe.

Guo Lixin 郭立新 (2005). *Changjiang zhongyou diqu chuqi shehui fuzahua yanjiu* 长江中游地区初期社会复杂化研究 (Initial social complexity in the middle reaches of the Yangzi River). Shanghai: Guji Chubanshe.

Guo Lixin 郭立新 (2009). "Jiedu Dengjiawan 解读邓家湾 (Interpreting Dengjiawan)." *JHKG* 2009.3: 45-57.

Guo Weimin 郭伟民 (2009). "Social complexity in the late Neolithic Middle Yangtze River: new evidence from Liyang Plain." Paper presented at the 19th Congress of the Indo-Pacific Prehistory Association, Hanoi, November/December 2009.

Guo Weimin 郭伟民 (2010). *Xinshiqi shidai Liyang yu Handong diqu de wenhua he shehui* 新石器时代澧阳与汉东地区的文化和社会 (Neolithic culture and society in the Liyang and Eastern Han regions). Beijing: Wenwu Chubanshe.

Gushan 2001: Hubei Sheng Jing-Jiu Tielu Kaogudui 湖北省京九铁路考古队 and Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 (2001). *Wuxue Gushan – xishiqi shidai mudi fajue baogao* 武穴鼓山——新石器时代墓地发掘报告 (The Gushan site in Wuxue: report on the excavation of a Neolithic cemetery). Beijing: Kexue Chubanshe.

Han Jianye 韩建业 (2002). "Xiefubei yu Sanmiao wenhua 斜腹杯与三苗文化 (Oblique belly-cups and the Sanmiao Culture)." *JHKG* 2002.1: 67-72.

Han Jianye 韩建业 and Yang Xingai 杨新改 (1997). "Wangwan sanqi wenhua yanjiu 王湾三期文化研究 (Research on the Wangwan III Culture)." *KGXB* 1997.1: 1-22.

Haojiatai 1992: Henan Sheng Wenwu Yanjiusuo 河南省文物研究所 and Yancheng Xushen Jinianguan 郾城县许慎纪念馆 (1992). "Yancheng Haojiatai yizhi de fajue 郾城郝家台遗址的发掘 (The excavation of the Haojiatai site, Yancheng)." *HXKG* 1992.3: 62-91.

Hassan, Fekri A. (1997). "The dynamics of a riverine civilization: A geoarchaeological perspective on the Nile Valley, Egypt." *World Archaeology* 29:1: 51-74.

Hayashi Minao 林已奈夫 (1998). "Guanyu Shijiahe wenhua de yuqi 关于石家河文化的玉器 (On the jades of Shijiahe Culture)." In Deng Cong 邓聪 (editor), *Dongya yuqi* 东亚玉器 (East Asian Jade: Symbol of Excellence), pp. 287-297. Xianggang: Xianggang Zhongwen Daxue Zhongguo Kaogu Yishu Yanjiu Zhongxin.

He Jiejun (1999). "Excavations at Chengtoushan in Li County, Hunan Province, China." *Indo-Pacific Prehistory Association Bulletin* 18: 101-103.

He Jiejun 何介钧 (2004). *Changjiang zhongyou xinshiqi shidai wenhua* 长江中游新时期时代文化 (Middle Yangzi River Neolithic cultures). Wuhan: Hubei Jiaoyu Chubanshe.

Hemudu 2003: Zhejiang Sheng Wenwu Kaogu Yanjiusuo 浙江省文物考古研究所 (2003). *Hemudu: xinshiqi shidai yizhi kaogu fajue baogao* 河姆渡：新石器时代遗址考古发掘报告 (Hemudu: report on the archaeological excavations of the Neolithic site). Beijing: Wenwu Chubanshe.

He Ning 何宁 (ed.) (1998). *Huainanzi jishi* 淮南子集释 (Compilation of and commentary on the Huainanzi). Beijing: Zhonghua Shuju.

He Nu (2011). "Exploring the Earliest State of China: New archaeological Evidence from Taosi." Paper presented at the Association for Asian Studies conference, Honolulu, HI, March/April 2011.

He, Y., Wilfred H. Theakstone, Zhang Zhonglin, Zhang Dian, Yao Tandong, Chen Tuo, Shen Yongping and Pang Hongxia (2004). "Asynchronous Holocene Climatic Change Across China." *Quaternary Research* 61: 52–63.

Hodder, Ian (1982). *Symbols in Action: Ethnoarchaeological Studies of Material Culture*. Cambridge: Cambridge University Press.

Hodder, Ian (1999). *The Archaeological Process: An Introduction*. Oxford: Blackwell.

Hodder, Ian and Scott Hutson (2003). *Reading the Past: Current Approaches to Interpretation in Archaeology. Third Edition.* Cambridge: Cambridge University Press.

Hou Xueyu (1983). "Vegetation of China with reference to its geographical distribution." *Annals of the Missouri Botanical Garden* 70:3: 509-549.

Huachenggang 1983: Hunan Sheng Bowuguan 湖南省博物馆 (1983). "Anxiang Huachenggang xinshiqi shidai yizhi 安乡划城岗新石器时代遗址 (The Neolithic site of Huachenggang, Anxiang)." *KGXB* 1983.4: 427-470.

Huanghe Xiaolangdi 1999: Henan Wenwu Guanliju 河南文物管理局 and Henan Sheng Wenwu Kaogu Yanjiusuo 河南省文物考古研究所 (1999). *Huanghe Xiaolangdi shuiku kaogu baogao 1* 黄河小浪底水库考古报告 1 (Archaeological reports on the Yellow River Xiaolangdi Reservoir I). Zhengzhou: Zhongzhou Guji Chubanshe.

Huanglianshu 1990: Changjiang Liuyu Guihua Bangongshi Kaogudui Henan Fendui 长江流域规划办公室考古队河南分队 (1990). "Henan Xichuan Huanglianshu yizhi fajue baogao 河南淅川黄楝树遗址发掘报告 (Report of the excavation of the Huanglianshu site, Xichuan, Henan)." *HXKG* 1990.3: 1-69.

Huang Tsui-mei (1992). *The Role of Jade in the late Neolithic Culture of China: The Case of Liangzhu*. Unpublished PhD Dissertation, University of Pittsburgh.

Hubei Museum 2007a: Hubei Sheng Bowuguan 湖北省博物馆 (ed.) (2007). *Qujialing – Changjiang zhongyou de shiqian wenhua* 屈家岭——长江中游的史前文化 (Qujialing – prehistoric culture in the middle reaches of the Yangtze). Beijing: Wenwu Chubanshe.

Hubei Museum 2007b: Hubei Sheng Bowuguan 湖北省博物馆 (ed.) (2007). *Panlongcheng – Changjiang zhongyou de qingtong wenming* 盘龙城——长江中游的青铜文明 (Panlongcheng – Bronze civilization in the middle reaches of the Yangtze). Beijing: Wenwu Chubanshe.

Hulsewé, A.F.D. (1993). "Shi chi." In Michael Loewe (ed.), *Early Chinese Texts: A Bibliographical Guide*, pp. 405-414. Berkeley: Society for the Study of Early China and Institute of East Asian Studies, University of California.

Ingold, Tim (1993). "The Temporality of Landscape." *World Archaeology* 25:2: 152-174.

Insoll, Timothy (1999). *The Archaeology of Islam*. Oxford: Blackwell.

Insoll, Timothy (2004). *Archaeology, Ritual, Religion*. London and New York: Routledge.

James, Simon (2007). "A Bloodless Past: The Pacification of Early Iron Age Britain." In Colin Haselgrove and Rachel Poper (eds), *The Earlier Iron Age in Britain and the Near Continent*, pp. 160-173. Oxford: Oxbow Books.

Jiangzhai 1988: Xi'an Banpo Bowuguan 西安半坡博物馆 , Shaanxi Sheng Kaogu Yanjiusuo 陕西省考古研究所 and Lintong Xian Bowuaguan 临潼县博物馆 (1988). Jiangzhai: Xinshiqi shidai yizhi fajue baogao 姜寨 : 新石器时代遗址发掘报告 (Report on the excavation of the Neolithic site at Jiangzhai). Beijing: Wenwu Chubanshe.

Jiao Tianlong (2010). "Population Migration and the Dynamics of Cultural Change in Prehistoric South China." Paper presented at the 75th Anniversary Meeting of the Society for American Archaeology, St. Louis, April 2010.

Jie Xigong 解希恭 (ed.) (2007). *Xiangfen Taosi yizhi yanjiu* 襄汾陶寺遗址研究 (Research on the Taosi site in Xiangfen). Beijing: Kexue Chubanshe.

Jijiaocheng 2002: Hunan Sheng Wenwu Kaogu Yanjiusuo 湖南省文物考古研究所 (2002). "Li Xian Jijiaocheng gu chengzhi shijue jianbao 澧县鸡叫城古城址试掘简报 (Preliminary report on the trial excavations at the ancient walled sites of Jijiaocheng, Li Xian)." *WW* 2002.5: 58-68.

Jimingcheng 1998: Jingzhou Bowuguan 荆州博物馆 and Jia Hanqing 贾汉清 (1998). "Hubei Gong'an Jimingcheng yizhi de diaocha 湖北公安鸡鸣城遗址的调查 (Survey of the Jimingcheng site, Gong'an, Hubei)." *WW* 1998.6: 25-30.

Jingnansi 1989: Jingzhou Diqu Bowuguan 荆州地区博物馆 and Beijing Daxue Kaoguxi 北京大学考古系 (1989). "Hubei Jiangling Jingnansi yizhi di yi, er ci fajue jianbao 湖北江陵荆南寺第一、二次发掘简报 (Preliminary report on the first and second excavations of the Jingnansi, Jiangling, Hubei)." *KG* 1989.8: 679-693.

Jingzhou Bowuguan 荆州博物馆 (2008). *Shijiahe wenhua yuqi* 石家河文化玉器 (Jade objects of the Shijiahe Culture). Beijing: Wenwu Chubanshe.

Jingzhou Diqu Bowuguan 荆州地区博物馆 (1987). "Hubei Jingmen, Zhongxiang, Jingshan, Tianmen si xian guyizhi diaocha 湖北荆门、钟祥、京山、天门四县古遗址调查 (Survey

of ancient sites in the four Hubei counties of Jingmen, Zhongxiang, Jingshan and Tianmen).” *WWZLCK* 1987.10: 44-54.

Jinluojia 1992: Macheng Shi Bowuguan 麻城市博物馆 (1992). “Macheng Jinluojia yizhi diaocha jianbao 麻城金罗家遗址调查简报 (Preliminary report on the survey of the Jinluojia site, Macheng).” *JHKG* 1992.3: 1-9.

Jinshi 1990: Hunan Sheng Jinshi Shi Wenwu Pucha Bangongshi 湖南省津市市文物普查办公室 (1990). “Hunan Sheng Jinshi Shi xinshiqi shidai yizhi pucha jianbao 湖南省津市市新石器时代遗址普查简报 (Preliminary report in the survey of Neolithic sites in Jinshi City, Hunan).” *KG* 1990.1: 11-19.

Jin Songan 靳松安 (2010). “Wangwan sanqi wenhua de nan jian ji qi xiangguan wenti 王湾三期文化的南渐及其相关问题 (The southern advance of the Wangwan III Culture and related questions).” *ZYWW* 2010.1: 31-38.

Johnson, Gregory A. (1977). “Aspects of Regional Analysis in Archaeology.” *Annual Review of Anthropology* 6: 479-508.

Jones, Siân (1997). *The Archaeology of Ethnicity: Constructing Identities in the Past and Present*. London and New York: Routledge.

Jones, Siân (2008). “Ethnicity: Theoretical approaches, methodological implications.” In R. Alexander Bentley, Herbert D.G. Maschner and Christopher Chippindale (eds.), *Handbook of Archaeological Theories*, pp. 321-333. Lanham, Md.; Plymouth: AltaMira Press.

Kamash, Zena (2008). “What Lies Beneath? Perceptions of the Ontological Paradox of Water.” *World Archaeology* 40:2: 224-237.

Keeley, Lawrence H. (1996). *War Before Civilization*. New York; Oxford: Oxford University Press.

Keeley, Lawrence H., Morisa Fontana and Russell Quick (2007). “Baffles and Bastions: The Universal Features of Fortifications.” *Journal of Archaeological Research* 15: 55–95.

Keightley, David N. (1998). “Shamanism, death, and the ancestors: religious mediation in neolithic and Shang China.” *Asiatische Studien* 52: 763-828.

Keightley, David N. (1999). “The Shang: China’s First Historical Dynasty.” In Michael Loewe and Edward L. Shaughnessy (eds), *The Cambridge History of Ancient China: From the Origins of Civilization to 221 BC*, pp. 232-291. Cambridge: Cambridge University Press.

Kejibu Shehui Fazhan Kejisi 科技部社会发展科技司 and Guojia Wenwuju Bowuguan yu Shehui Wenwusi 国家文物局博物馆与社会文物司 (2009a). *Zhonghua wenming tanyuan gongcheng wenji: shehui yu jingshen wenhua juan (I)* 中华文明探源工程文集社会与精神文化卷(I) (Collected works of the exploration into the origins of Chinese civilisation project: social and spiritual culture volume). Beijing: Kexue Chubanshe.

Kejibu Shehui Fazhan Kejisi 科技部社会发展科技司 and Guojia Wenwuju Bowuguan yu Shehui Wenwusi 国家文物局博物馆与社会文物司 (2009b). *Zhonghua wenming tanyuan gongcheng wenji: jishu yu jingji juan (I)* 中华文明探源工程文集技术与经济卷(I)

(Collected works of the exploration into the origins of Chinese civilisation project: technology and economy volume). Beijing: Kexue Chubanshe.

Kejibu Shehui Fazhan Kejisi 科技部社会发展科技司 and Guojia Wenwuju Bowuguan yu Shehui Wenwusi 国家文物局博物馆与社会文物司 (2009c). *Zhonghua wenming tanyuan gongcheng wenji: huanjing juan (I)* 中华文明探源工程文集环境卷(I) (Collected works of the exploration into the origins of Chinese civilisation project: environment volume). Beijing: Kexue Chubanshe.

Knappett, Carl (2011). *An Archaeology of Interaction: Network Perspectives on Material Culture & Society*. Oxford: Oxford University Press.

Kojima Shinji 小島 晋治 (2001). *Nyumon Chukoku no rekishi – Chugoku chugakko rekishi kyokasho* 入門 中国の歴史—中国中学校歴史教科書 (Introduction to Chinese history – history textbooks in Chinese middle schools). Tokyo: Akashi Shoten.

Kristiansen, Kristian and Thomas B. Larsson (2005). *The Rise of Bronze Age Society: Travels, Transmissions and Transformations*. Cambridge: Cambridge University Press.

Le Blanc, Charles (1993). "Huai nan tzu." In Michael Loewe (ed.), *Early Chinese Texts: A Bibliographical Guide*, pp. 189-195. Berkeley: Society for the Study of Early China and Institute of East Asian Studies, University of California.

Legge, James (1885). *The Sacred Books of China: The Texts of Confucianism. Part 4: The Li ki*. Oxford: Clarendon Press.

Levi, Jean (1993). "Han fei tzu." In Michael Loewe (ed.), *Early Chinese Texts: A Bibliographical Guide*, pp. 115-124. Berkeley: Society for the Study of Early China and Institute of East Asian Studies, University of California.

Li Duanyang 李端阳 and Chen Mingfang 陈明芽 (1994). "Hubei Xiaogan Shi gu wenhua yizhi diaocha jianbao 湖北孝感市古文化遗址调查简报 (Preliminary report of the ancient cultural site survey in Xiaogan city, Hubei)." *KG* 1994.9: 769-778.

Li Wenjie (1999). "Hubei Tianmen Shi Shihe Zhen Xiaojiawuji he Dengjiawan yizhi zhitao gongyi yanjiu 湖北天门市石河镇肖家屋脊和邓家湾遗址制陶工艺研究 (Research into the pottery production at the Xiaojiawuji and Dengjiawan sites in Shihe town, Tianmen city, Hubei)." *JHKG* 1999.1: 84-93.

Li Feng (2006). *Landscape and Power in Early China: The Crisis and Fall of the Western Zhou, 1045-771 BC*. Cambridge: Cambridge University Press.

Li Longzhang 李龙章 (1988). "Jianghan xinshiqi wenhua xitong shizu kao 江汉新石器文化系统氏族考 (Considering the clan affiliation of the system of archaeological cultures in the Jianghan region)." *JHKG* 1988.2: 115-123, 43.

Li, Xiaoqiang, John Dodson, Jie Zhou and Xinying Zhou (2009). "Increases of Population and Expansion of Rice Agriculture in Asia, and Anthropogenic Methane Emissions since 5000 BP." *Quaternary International* 202: 41–50.

Li Xiangsheng 李想生 (2005). "Shijiahe yizhi jiayang dongwu xulüe 石家河遗址家养动物叙略 (Discussion of animal domestication at the Shijiahe site)." *NYKG* 2005.1: 131-134.

Li Xinwei (2008). *Development of Social Complexity in the Liaoxi Area, Northeast China*. Oxford: Archaeopress.

Li Xuelai 李学来 and Wang Minghui 王明辉 (2004). " 'Kaoguxue wenhua yantaohui' jiyao "考古学文化研讨会"纪要 (Summary of the "Symposium of Archaeological Culture")." *KG* 2004.10: 84-88.

Li Xueqin (2002). "The Xia-Shang-Zhou Chronology Project: Methodology and Results." *Journal of East Asian Archaeology* 4:1-4: 322-333.

Li Yiyin 李宜垠, Hou Shufang 侯树芳 and Mo Duowen 莫多闻 (2009). "Hubei Qujialing yizhi baofen, tanxie jilu yu gu wenming fazhan 湖北屈家岭遗址孢粉、炭屑记录与古文明发展 (Pollen and charcoal records and the Qujialing site, Hubei, and the development of ancient civilisation)." *Gu Dili Xuebao* 古地理学报 2009.6: 702-710.

Lilou 1994: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo Henan yidui 中国社会科学院考古研究所一队 (1994). "Henan Ruzhou Lilou yizhi de fajue 河南汝州李楼遗址的发掘 (The excavation of the Lilou site, Ruzhou, Henan)." *KGXB* 1994.1: 63-97.

Lin Bangcun 林邦存 (1998). "Zailun Qujialing wenhua wei San Miao chuangzao de zaoqi wenhua 再论屈家岭文化为三苗创造的早期文化 (Re-discussing Qujialing Culture as being the early phase of the San Miao)." In Hubei Sheng Kaoguxuehui 湖北省考古学会 (ed.), *Hubei Sheng Kaoguxuehui lunwen xuanji (3)* 湖北省考古学会论文选集 （3） (Selected essays of the Archaeological Society of Hubei Province [3]), pp. 1-10. Wuchang: Jiang Han kaogu bianjibu.

Linduff, Katheryn, Robert D. Drennan and Gideon Shelach (2002-2004). "Early complex societies in NE China: the Chifeng International Collaborative Archaeological Research Project." *Journal of Field Archaeology* 29:1-2: 45-73.

Liu Anguo 刘安国 (1980). "Tianmen Shijiahe chutu de yi pi hong tao xiao dongwu 天门石家河出土的一批红陶小动物 (A batch of small red pottery animals excavated from Shijiahe, Tianmen)." *JHKG* 1980.2: 103, 30.

Liu Bin 刘斌 (2008). "Mojiaoshan Liangzhu yizhi guchengqiang de faxian yu fajue 莫角山良渚遗址古城墙的发现与发掘 (Discovery and excavation of ancient city-walls on the Liangzhu site at Mojiaoshan)." In Guojia Wenwuju 国家文物局 (ed.), *2007 Zhongguo zhongyao kaogu faxian* 2007中国重要考古发现 (Major archaeological discoveries in China in 2007), pp. 20-23. Beijing: Wenwu Chubanshe.

Liu Guoyuan 刘郭愿 (1972). "Ji Liangchengzhen yizhi faxian de liang jian shiqi 记两城镇遗址发现的两件石器 (Recording the discovery of two lithics at the Liangchengzhen site)." *KG* 1972.4: 56-57.

Liu Hui 刘辉 (2010). "Hubei Xiaogan Yejiamiao xinshiqi shidai yizhi fajue 湖北孝感叶家庙新石器时代遗址发掘 (Exacavtion of the Neolithic Yejiamiao site in Xiaogan, Hubei)." In Guojia Wenwuju 国家文物局 (ed.), *2009 Zhongguo zhongyao kaogu faxian* 2009中国重要考古发现 (Major archaeological discoveries in China in 2009), pp. 16-19. Beijing: Wenwu Chubanshe.

Liu Li 刘莉(1998). “Longshan wenhua de qiubang yu juluo xingtai 龙山文化的酋邦与聚落形态 (The chiefdoms and settlement patterns of the Longshan Culture).” *HXKG* 1998.1: 88-105.

Liu Li (2004). *The Chinese Neolithic: Trajectories to Early States.* Cambridge: Cambridge University Press.

Liu Li and Chen Xingcan (2001). “Settlement archaeology and the study of social complexity in China.” *The Review of Archaeology* 22:2: 4-22.

Liu Li, Chen Xingcan, Lee Yun Kuen, Henry Wright and Arlene Rosen (2002-2004). “Settlement patterns and development of social complexity in the Yiluo region, north China.” *Journal of Field Archaeology* 29:1-2: 75-100.

Longzui 2008: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 (2008). “Hubei Sheng Tianmen Shi Longzui yizhi 2005 nian fajue jianbao 湖北省天门市龙嘴遗址2005年发掘简报 (Preliminary report on the 2005 excavation at the Longzui site, Tianmen City, Hubei Province).” *JHKG* 2008.4: 3-30.

Lou Hang 楼航, Ge Jianliang 葛建良 and Fang Zhonghua 方中华 (2010). “Hangzhou Yuhang Yujiashan Liangzhu wenhua huanhao juluo yizhi 杭州余杭玉架山良渚文化环壕聚落遗址 (Moat-surrounded settlement-site of the Liangzhu Culture at Yujiashan in Yuhang, Hangzhou).” In Guojia Wenwuju 国家文物局 (ed.), *2009 Zhongguo zhongyao kaogu faxian* 2009中国重要考古发现 (Major archaeological discoveries in China in 2009), pp. 12-15. Beijing: Wenwu Chubanshe.

Lu, Tracey L-D (1999). “The Occurrence of Cereal Cultivation in China.” *Asian Perspectives* 45:2: 129-158.

Luan Fengshi 栾丰实 (1997). *Haidai diqu kaogu yanjiu* 海岱地区考古研究 (Archaeological research on the Haidai region). Ji’nan: Shandong Daxue Chubanshe.

Luanshitan 1986: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo Changjiang Gongzuodui 中国社会科学院考古研究所长江工作队 (1986). “Hubei Jun Xian Luanshitan yizhi fajue baogao 湖北均县乱石滩遗址发掘报告 (Report on the excavation of the Luanshitan site, Jun County, Hubei).” *KG* 1986.7: 586-596.

Lucas, Gavin (2005). *The Archaeology of Time*. London and New York: Routledge.

Luojiabailing 1994: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 and Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 中国社会科学院考古研究所 (1994). “Hubei Shijiahe Luojiabailing xinshiqi shidai yizhi 湖北石家河罗家柏岭新石器时代遗址 (The Neolithic site at Luojiabailing, Shijiahe, Hubei).” *KGXB* 1994.2: 191-229.

Lüwangcheng 1990: Xiaogan Diqu Bowuguan 孝感地区博物馆 (1990). “Hubei Dawu Lüwangcheng yizhi 湖北大悟吕王城遗址 (The Lüwangcheng site, Dawu, Hubei).” *JHKG* 1990.2: 31-43.

Lynn, Madeleine (ed.) (1997). *Yangtze River: The Wildest, Wickedest River on Earth*. Hong Kong, Oxford: Oxford University Press.

Mahuiying 1983: Luoyang Diqu Wenwu Baohu Guanlichu 洛阳地区文物保护管理处 (1983). “Henan Yichuan Mahuiying yizhi shijue jianbao 河南伊川马回营遗址试掘简报 (Preliminary report on the trial excavations of the Mahuiying site, Yichuan, Henan).” *KG* 1983.11: 1039-1041.

Majiayuan 1997: Hubei Sheng Jingmen Shi Bowuguan 湖北省荆门市博物馆 (1997). “Jingmen Majiayuan Qujialing wenhua chengzhi diaocha 荆门马家院屈家岭文化城址调查 (Survey of the Qujialing Culture city of Majiayuan at Jingmen).” *WW* 1997.7: 49-53.

Mangcheng 1999: Chengdu Shi Wenwu Kaogu Yanjiusuo 成都市文物考古研究所 and Dujiangyan Shi Wenwuju 都江堰市文物局 (1999). “Sichuan Dujiangyan Shi Mangcheng yizhi diaocha yu fajue 四川都江堰市芒城遗址调查与发掘 (Survey and excavation of the Mangcheng site, Dujiangyan City, Sichuan).” *KG* 1999.7: 14-27.

Mao Lin 茂林 (1985). “Tianmen Tanjialing yizhi fajue jianxun 天门谭家岭遗址发掘简讯 (Note on the exavations of the Tanjialing site at Tianmen).” *JHKG* 1985.3: 82.

Mauss, Marcel (1936). “Les techniques du corps.” *Journal de Psychologie* 32: 271-293.

Ma Xiaolin (2005). *Emergent Social Complexity in the Yangshao Culture: Analyses of Settlement Patterns and Faunal Remains from Lingbao, Western Henan, China (c. 4900-3000 BC)*. Oxford: Archaeopress.

McFadyen, Lesley (2006). “Building Technologies, Quick Architecture and Early Neolithic Long Barrow Sites in Southern Britain.” *Archaeological Review from Cambridge* 21:1: 117-134.

McFadyen, Lesley (2007). “Neolithic Architecture and Participation: Practices of Making at Barrow Sites in Southern Britain.” In Jonathan Last (ed.), *Beyond the Grave: New Perspectives on Barrows*, pp. 22-29. Oxford: Oxbow Books.

McFadyen, Lesley (forthcoming). *Between Material Culture, Architecture and Landscape: Archaeology, Architecture and Scale*. Oxford: Oxford University Press.

Meishan 1982: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo Henan erdui 中国社会科学院考古研究所二队 (1982). “Henan Linru Meishan yizhi fajue baogao 河南临蓐煤山遗址发掘报告 (Report on the excavation of the Meishan site, Linru, Henan).” *KGXB* 1982.4: 427-476.

Menbanwan 1999: Chen Shuxiang 陈树祥 and Li Taoyuan 李桃元 (1999). “Yingcheng Menbanwan yizhi fajue huo zhongyao chengyao 应城门板湾遗址发掘获重要成果 (Important results of the excavations of the Menbanwan site, Yingcheng).” *Zhongguo Wenwubao* 中国文物报 1999-4-4: 1.

Meng Huaping 孟华平 (1993). “Tianmen Shi Dengjiawan xinshiqi shidai ji Zhou dai yizhi 天门市邓家湾时代及周代遗址 (The Neolithic and Zhou period Dengjiawan site in Tianmen).” In Zhongguo Kaogu Xuehui (ed.), *Zhongguo kaoguxue nianjian 1993* 中国考古学年鉴1993, p. 204. Beijing: Wenwu Chubanshe.

Meng Huaping 孟华平 (1994). “Qianyi ‘ren bao yu xingqi’ 浅议‘人抱鱼形器’ (Discussion of ‘human holding fish figurines’).” *Zhongguo Wenwubao* 24 April 1994 [not seen].

Meng Huaping 孟华平 (1997). *Changjiang zhongyou shiqian wenhua jiegou* 长江中游史前文化结构 (Structure of the Middle Yangzi prehistoric cultures). Wuhan: Changjiang Wenyi Chubanshe.

Meng Huaping 孟华平 (2007). "2006 nian du nanfang diqu kaogu xin faxian – 8 Hubei Sheng 2006年度南方地区考古新发现－八。湖北省 (New archaeological discoveries in southern China in 2006 – 8 Hubei Province)." *NFWW* 2007.4: 51-54.

Meng Huaping 孟华平 and Zhang Chengming 张成明 (2007). "Hubei Tianmen Longzui xinshiqi shidai yizhi 湖北天门龙嘴新石器时代遗址 (Longzui site of the Neolithic age in Tianmen, Hubei)." In Guojia Wenwuju 国家文物局 (ed.), *2006 Zhongguo zhongyao kaogu faxian* 2006中国重要考古发现 (Major archaeological discoveries in China in 2006), pp. 24-26. Beijing: Wenwu Chubanshe.

Meng Huaping 孟华平, Huang Wenxin 黄文新 and Zhang Chengming 张成明 (2009). "Dahongshan nanlu shiqian juluo diaocha – yi Shijiahe wei zhongxin 大洪山南麓史前聚落调查——以石家河为中心 (Survey of prehistoric settlements on the Dahongshan foothills – taking Shijiahe as centre)." *JHKG* 2009.1: 3-23.

Meng Huaping 孟华平, Liu Hui 刘辉 and Deng Zhenhua 邓振华 (2011). "Tianmen Shijiahe yizhi fajue qude xin jinzhang – queren Shijiahe gucheng dongnanbu cunzai chenghang duiji 天门石家河遗址发掘取得新进展——确认石家河古城东南部存在城垣堆积 (New progress gained from the excavations of the Shijiahe site, Tianmen – confirming the existence of wall remains in the southeastern part of the Shijiahe ancient city)." *Zhongguo Wenwubao* 2011-10-7, page unknown.

Mengzhuang 2003: Henan Sheng Wenwu Kaogu Yanjiusuo 河南省文物考古研究所 (2003). *Hui Xian Mengzhuang* 辉县孟庄 (The Mengzhuang site of Hui County). Zhengzhou: Zhongzhou Guji Chubanshe.

Miaodigou yu Sanliqiao 1959: Zhongguo Kexueyuan Kaogu Yanjiusuo 中国科学院考古研究所 (1959). *Miaodigou yu Sanliqiao* 庙底沟与三里桥 (Miaodigou and Sanliqiao). Beijing: Kexue Chubanshe.

Mills, Barbara J. and William H. Walker (2008). "Introduction: Memory, Materiality, and Depositional Practice." In Barbara J. Mills and William H. Walker (eds), *Memory Work: Archaeologies of Material Practice*, pp. 3-23. Santa Fe: SAR Press.

Mo Duowen 莫多闻, Zhao Zhijun 赵志军, Xia Zhengkai 夏正楷, Zhu Cheng 朱诚, Lü Houyuan 吕厚远 and An Chengbang 安成邦 (2009). "Zhonghua wenming tanyuan gongcheng huanjing keti zhuyao jincheng (Important progress in the research into environmental issues of the exploration of Chinese civilisation project)." In Kejibu Shehui Fazhan Kejisi 科技部社会发展科技司 and Guojia Wenwuju Bowuguan yu Shehui Wenwusi 国家文物局博物馆与社会文物司 (2009c), *Zhonghua wenming tanyuan gongcheng wenji: huanjing juan (I)* 中华文明探源工程文集环境卷(I) (Collected works of the exploration into the origins of Chinese civilisation project: environment volume), pp. 1-27. Beijing: Kexue Chubanshe.

Mol, Annemarie and John Law (1994). "Regions, networks and fluids: anaemia and social topology." *Social Studies of Science* 24:4: 641-671.

Morrill, Carrie, Jonathan T. Overpeck and Julia E. Cole (2003). "A Synthesis of Abrupt Changes in the Asian Summer Monsoon since the last Deglaciation." *The Holocene* 13:4: 465–476.

Needham, Joseph with the collaboration of Wang Ling and Lu Gwei-Djen (1971). *Science and Civilization in China. Vol. 4, Physics and Physical Technology. Part 3 Civil Engineering and Nautics.* London: Cambridge University Press.

Oestigaard, Terje (2011). "Water." In Timothy Insoll (ed.), *The Oxford Handbook of the Archaeology of Ritual and Religion*, pp. 38-50. Oxford: Oxford University Press.

Okamura Hidenori 岡村 秀典 (1998). "Gongyuan qian er qian nian hou Zhongguo yuqi zhi kuozhang 公元前二千年后中国玉器之扩张 (The spread of jade in China after 2000 BC)." In Deng Cong 邓聪 (editor), *Dongya yuqi* 东亚玉器 (East Asian Jade: Symbol of Excellence), pp. 79-85. Xianggang: Xianggang Zhongwen Daxue Zhongguo Kaogu Yishu Yanjiu Zhongxin.

Okamura Hidenori 岡村 秀典 and Zhang Xuqiu 张绪球 (1997). "Kohoku Inshojo ishi kenkyu (I) 湖北阴湘城遗址研究（I） (Research on the Yinxiangcheng site, Hubei)." *Toho Gakuho* 東方學報 69: 459-510.

Okamura Hidenori 岡村 秀典，张玉石译 and 朱延平校 (1997). "Zhongguo xinshiqi shidai de zhanzheng 中国新时期时代的战争 (Warfare in Neolithic China)." *HXKG* 1997.3: 100-112.

Orser, Charles E. Jr. (1996). *A Historical Archaeology of the Modern World*. New York and London: Plenum.

Panlongcheng 2001: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 (2001). *Panlongcheng: 1963-1994 nian kaogu fajue baogao* 盘龙城：1963－1994年考古发掘报告 (The Panlongcheng site: report of archaeological excavation from 1963-1994). Beijing: Wenwu Chubanshe.

Parker Pearson, Mike (1999). *The Archaeology of Death and Burial*. Pheonix Mill: Sutton Publishing.

Patterson, Thomas (1997). *Inventing Western Civilization*. New York: Monthly Review Press.

Pearson, Richard J. (1981). "Social Complexity in Chinese Coastal Neolithic Sites." *Science* 213: 1078-86.

Pearson, Richard J. (1988). "Chinese Neolithic Burial Patterns: Problems of Method and Interpretation." *Early China* 13: 1-45.

Peebles, Christopher S. (1971). "Moundville and Surrounding Sites: Some Structural Considerations of Mortuary Practice." In James A. Brown (ed.), *Approaches to the Social Dimensions of Mortuary Practices*, pp. 68-91. New York: Society for American Archaeology.

Pei Anping (1998). “Notes on New Advancements and Revelations in the Agricultural Archaeology of Early Rice Domestication in the Dongting Lake Region.” *Antiquity* 72: 878-885.

Peng Minghan 彭明瀚 (2005). *Wucheng wenhua yanjiu* 吴城文化研究 (Wucheng culture research). Beijing: Wenwu Chubanshe.

Pengtoushan yu Bashidang 2006: Hunan Sheng Wenwu Kaogu Yanjiusuo 湖南省文物考古研究所 (2006). *Pengtoushan yu Bashidang* 彭头山与八十当 (The sites of Pengtoushan and Bashidang). Beijing: Kexue Chubanshe.

Pingliangtai 1983: Henan Sheng Wenwu Yanjiusuo 河南省文物研究所 and Zhoukou Diqu Wenwuju Wenwuke 周口地区文物局文物科 (1983). “Henan Huaiyang Pingliangtai Longshan wenhua chengzhi shijue jianbao 河南淮阳平粮台龙山文化城址试掘简报 (Preliminary report on the trial excavations at the Longshan Culture city site of Pingliangtai, Huaiyang, Henan).” *WW* 1983.3: 21-36.

Plog, Stephen (1976). “Measurement of Prehistoric Interaction between Communities.” In Kent V. Flannery (ed.), *The Early Mesoamerican Village*, pp. 255-272. New York; London: Academic Press.

Plog, Stephen (1978). “Social Interaction and Stylistic Similarity: A Reanalysis.” In Michael B. Schiffer (ed.), *Advances in Archaeological Method and Theory, vol. 1*, pp. 144-182. New York; London: Academic Press.

Pluciennik, Mark (2007). “Europe.” *Cambridge Archaeological Journal* 17:1: 95-98.

Pollard, Michael (1997). *The Yangtze*. London: Evans.

Pollard, Joshua (2008). “Deposition and Material Agency in the Early Neolithic of Southern Britain.” In Barbara J. Mills and William H. Walker (eds), *Memory Work: Archaeologies of Material Practice*, pp. 41-59. Santa Fe: SAR Press.

Ponseti, Marta and López-Pujol, Jordi (2006). “The Three Gorges Dam Project in China: history and consequences.” *Revista HMiC* 2006.4: 151-188.

Price, Neil (2011). “Shamanism.” In Timothy Insoll (ed.), *The Oxford Handbook of the Archaeology of Ritual and Religion*, pp. 983-1003. Oxford: Oxford University Press.

Priewe, Sascha (2010a). “Birds and beast: the life histories of late Neolithic jades along the Middle Yangzi River.” Paper presented at the 75th Annual Meeting of the Society for American Archaeology, St. Louis, Missouri, April 2010.

Priewe, Sascha (2010b). “The quest for the ‘origins of Chinese civilisation’.” Paper presented at the conference “The Place of China’s Past in China’s Present” in honour of Professor Dame Jessica Rawson, Merton College, Oxford, 11 June 2010.

Qilihe 2008: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 (2008). *Fang Xian Qilihe* 房县七里河 (The Qilihe site at Fang Xian). Beijing: Wenwu Chubanshe.

Qinglongquan yu Dasi 1991: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 中国社会科学院考古研究所 (1991). *Qinglongquan yu Dasi* 青龙泉与大寺 (The sites of Qinglongquan and Dasi). Beijing: Kexue Chubanshe.

Qin Ling (2009). "Jade as index of craft specialization and regional interaction in Neolithic China." Lecture given at the Institute of Archaeology, University College London, 10 December 2010.

Qingshuitan 1988: Wuhan Daxue Lishizi Kaogu Zhuanye 武汉大学历史系考古专业 (1988). "Qingshuitan yizhi 1984 nian fajue jianbao 清水滩遗址1984年发掘简报 (Preliminary report on the 1984 excavation of the Qingshuitan site)." *JHKG* 1988.3: 9.

Qujialing 1965: Zhongguo Kexueyuan Kaogu Yanjiusuo 中国科学院考古研究所 (1965). *Jingshan Qujialing* 京山屈家岭 (The Qujialing site at Jingshan). Beijing: Kexue Chubanshe.

Qujialing 1992: Qujialing Kaogu Fajuedui 屈家岭考古发掘队 (1992). "Qujialing yizhi di san ci fajue 屈家岭遗址第三次发掘 (The third excavation of the Qujialing site)." *KG* 1992.1: 63-96.

Qujialing 2008: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 and Jingshan Xian Bowuguan 京山县博物馆 (2008). "Hubei Jingshan Qujialing yizhiqun 2007 nian diaocha baogao 湖北京山屈家岭遗址群2007年调查报告 (Report on the 2007 survey of the Qujialing site group, Jingshan, Hubei)." *JHKG* 2008.2: 10-26.

Rawson, Jessica (1988). "A Bronze-Casting Revolution in the Western Zhou and Its Impact on Provincial Industries." In Robert Maddin (ed.), *The Beginning of the Use of Metals and Alloys*, pp. 228-238. Cambridge, Mass., London: MIT Press.

Rawson, Jessica (1990). *Western Zhou Ritual Bronzes from the Arthur M. Sackler Collections*. 2 vols. Washington, D.C.: Arthur M. Sackler Foundation; Cambridge, Mass.: Arthur M. Sackler Museum, Harvard University.

Rawson, Jessica (ed.) (1996). *Mysteries of Ancient China: New Discoveries from the Early Dynasties*. London: British Museum.

Ren Mei'e, Yang Renzhang and Bao Haosheng (1985). *An Outline of China's Physical Geography*. Beijing: Foreign Language Press.

Ren Shinan 任式南 and Wu Yaoli 吴耀利 (eds) (2010). *Zhongguo kaoguxue: Xinshiqi shidai juan* 中国考古学：新石器时代卷 (Chinese archaeology: Neolithic). Beijing: Shehui Kexue Chubanshe.

Richards, Colin (1996). "Henges and Water: Towards an Elemental Understanding of Monumentality and Landscape in Late Neolithic Britain." *Journal of Material Culture* 1:3: 313-336.

Richards, Colin and Julian Thomas (1984). "Ritual Activity and Structured Deposition in Later Neolithic Wessex." In Richard Bradley and Julie Gardiner (eds), *Neolithic Studies: A Review of Some Recent Research*, pp. 189-218. Oxford: BAR.

Riegel, Jeffrey K. (1993). “Li chi.” In Michael Loewe (ed.), *Early Chinese Texts: A Bibliographical Guide*, pp. 293-297. Berkeley: Society for the Study of Early China and Institute of East Asian Studies, University of California.

Roberts, Benjamin W. and Marc Vander Linden (2011). “Investigating archaeological cultures: material culture, variability, and transmission.” In B.W. Roberts and M. Vander Linden (eds), *Investigating Archaeological Cultures: Material Culture, Variability, and Transmission*, pp. 1-21. New York: Springer.

Saidun 2010: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 中国社会科考古研究所 (2010). *Huangmei Saidun* 黄梅塞墩 (Exavations of the Saidun site in Huangmei county). Beijing: Wenwu Chubanshe.

Saxe, Arthur A. (1970). *Social Dimensions of Mortuary Practices.* Unpublished Ph.D. Dissertation, University of Michigan, Ann Arbor.

Shanks, Michael and Christopher Tilley (1987). *Re-constructing Archaeology: Theory and Practice*. Cambridge: University of Cambridge.

Shanks, Michael (2008). “Post-processual archaeology and after.” In R. Alexander Bentley, Herbert D.G. Maschner and Christopher Chippindale (eds.), *Handbook of Archaeological Theories*, pp. 133-144. Lanham, Md.; Plymouth: AltaMira Press.

Shaughnessy, Edward L. (1993). “Shang shu (Shu ching).” In Michael Loewe (ed.), *Early Chinese Texts: A Bibliographical Guide*, pp. 376-389. Berkeley: Society for the Study of Early China and Institute of East Asian Studies, University of California.

Shelach, Gideon (1994). “Social Complexity in North China during the Early Bronze Age: A Comparative Study of the Erlitou and Lower Xiajiadian Cultures.” *Asian Perspectives* 33:2: 261-292.

Shelach, Gideon (1999). *Leadership Strategies, Economic Activity, and Interregional Interaction: Social Complexity in Northeast China.* New York: Plenum Press.

Shelach, Gideon (2001). “Apples and Oranges? Cross-Cultural Comparison of Burial Data from Northeast China.” *Journal of East Asian Archeology* 3:3-4: 53-90.

Sherratt, Andrew (1995). “Reviving the Grand Narrative: Archaeology and Long-term Change.” *Journal of European Archaeology* 3:1: 1-32.

Sherratt, Andrew (1996a). “‘Settlement Patterns’ or ‘Landscape Studies’? Reconciling Reason and Romance.” *Archaeological Dialogues* 2: 140-159.

Sherratt, Andrew (1996b). “Why Wessex? The Avon Route and River Transport in Later British Prehistory.” *Oxford Journal of Archaeology* 15:2: 211-234.

Shihe Kaogudui 石河考古队 (1990). “Hubei Sheng Shihe yizhiqun 1987 nian fajue jianbao 湖北省石河遗址群1987年发掘简报 (Preliminary report on the 1987 excavations of the Shihe site group in Hubei Province).” *WW* 1990.8: 1-16.

Shihe Kaogudui 石河考古队 (1994). “Hubei Tianmen Shi Dengjiawan yizhi 1992 nian fajue jianbao 湖北天门市邓家湾遗址1992年发掘简报 (Preliminary report on the 1992 excavation at the Dengjiawan site at Tianmen City, Hubei).” *WW* 1994.4: 32-41.

Shihe Lianhe Kaogudui 石河联合考古队 (1989). “Shihe yizhiqun 1987 nian kaogu fajue de zhuyao shouhuo 石河遗址群1987年考古发掘的主要收获 (Major results from the 1987 archaeological excavations of the Shihe site group).” *JHKG* 1989.2: 1-4.

Shijiahe 1992: Beijing Daxue Kaoguxi 北京大学考古系, Hubei Sheng Wenwu Kaogu Yanjiusuo Shijiahe Kaogudui 湖北省文物考古研究所石家河考古队, and Hubei Sheng Jingzhou Diqu Bowuguan 湖北省荆州地区博物馆 (1992). “Shijiahe yizhiqun diaocha baogao 石家河遗址群调查报告 (Report on the survey of the Shijiahe site group).” *NFMZKG* 1992.5: 213-294.

Shilong 1956: Shilong Guojiang Shuiku Zhihuibu Wenwu Gongzuodui 石龙过江水库指挥部文物工作队 (1956). “Hubei Jingshan, Tianmen kaogu fajue jianbao 湖北京山、天门考古发掘简报 (Preliminary report on the archaeological excavations at Jingshan and Tianmen, Hubei).” *KGTX* 1956.3: 11-21.

Shi Nianhai 史念海 (1963). *Heshanji* 河山记 (Record of rivers and mountains), vol. 1. Beijing: Sanlian.

Shizixing 1984: Weifang Shi Yishuguan 潍坊市艺术馆 and Weifang Shi Hanting Qu Tushuguan 潍坊市寒亭区图书馆 (1984). “Shandong Wei Xian Shizixing site fajue jianbao 山东潍县狮子行遗址发掘简报 (Preliminary report on the excavations of the Shizixing site, Wei Xian, Shandong).” *KG* 1984.8: 673-688.

Shuo Zhi 朔知 2008. “Anhui Huaining Sunjiacheng xinshiqi shidai yizhi yu chengyuan 安徽怀宁孙家城新石器时代遗址与城垣 (Neolithic site and city-walls at Sunjiacheng in Huaining, Anhui).” In Guojia Wenwuju 国家文物局 (ed.), *2008 Zhongguo zhongyao kaogu faxian* 2008中国重要考古发现 (Major archaeological discoveries in China in 2008), pp. 30-33. Beijing: Wenwu Chubanshe.

Sichuan 1961: Sichuan Changjiang Liuyu Wenwu Baohu Weiyuanhui Wenwu Kaogudui 四川长江流域文物保护委员会文物考古队 (1961). “Sichuan Wushan Daxi xinshiqi shidai yizhi fajue jilüe 四川巫山大溪新石器时代发掘记略 (A brief record of excavations at the Neolithic site of Daxi in Wushan, Sichuan).” *WW* 1961.11: 15-21, 60.

Skeates, Robin (2009). “Trade and Interaction.” In Cunliffe, Barry, Gosden, Chris and Joyce, Rosemary A. (eds), *The Oxford Handbook of Archaeology*, pp. 555-578. Oxford: Oxford University Press.

Song Yuqin 宋豫秦 (1995). “Shijiahe wenhua hongtaobei yu taosupin zhi gongyong 石家河文化红陶杯与陶塑品之功用 (The function of the red pottery cups and carved pottery objects of Shijiahe Culture).” *JHKG* 1995.2: 47-48.

Stark, Barbara L. (1995). “Problems in analysis of standardization and specialization in pottery.” In Mills, B. J., and Crown, P. L. (eds), *Ceramic Production in the American Southwest*, pp. 231-267. Tucson: University of Arizona Press.

Steponaitis, Vincas P. (1981). “Settlement Hierarchies and Political Complexity in Nonmarket Societies: The Formative Period of the Valley of Mexico.” *American Anthropologist New Series* 83:2: 320-363.

Su Bingqi苏秉琦 (1986). “Liao xi guwenhua gucheng guguo – jiantan dangqian tianye gongzuo de zhongda keti 辽西古文化古城古国-简探当前田野工作的重大课题 (Archaic cultures, archaic towns and archaic states in the west of the Liao River – discussing current important topics in fieldwork).” *WW* 1986.8: 41-44.

Su Bingqi苏秉琦 (1999). *Zhongguo wenming qiyuan xintan* 中国文秘过起源新探 (New discussion on the origins of Chinese civilisation). Beijing: Sanlian Shudian.

Sunjiagang 2000: Hunan Sheng Wenwu Kaogu Yanjiusuo 湖南省文物考古研究所 and Li Xian Wenwu Guanlichu 澧县文物管理处 (2000). “Li Xian Sunjiagang xinshiqi shidai muqun fajue jianbao 澧县孙家岗新石器时代墓群发掘简报 (Preliminary report on the excavation of a group of Neolithic burials at Sunjiagang, Li Xian).” *WW* 2000.12: 35-42, 62.

Sushangang 1990: Wuhan Daxue Lishixi Kaogu Jianyanshi 武汉大学历史系考古教研室, Huanggang Diqu Bowuguan 黄冈地区博物馆 and Macheng Shi Geming Bowuguan 麻城市革命博物馆 (1990). “Hubei Macheng Sushangang xinshiqi shidai yizhi 湖北麻城粟山岗新石器时代遗址 (The Neolithic site of Sushangang, Macheng, Hubei).” *KGXB* 1990.4: 439-473.

Tainter, Joseph A. (1973). “The Social Correlates of Mortuary Patterning at Kaloko, North Kona, Hawaii.” *Archaeology and Physical Anthropology in Oceania* 8: 1-11.

Taishanmiao 2001: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 and Hubei Sheng Shiyan Shi Bowuguan 湖北省十堰市博物馆 (2001). “Tanshanmiao xinshiqi shidai yizhi di yi ci fajue jianbao 太山庙新石器时代遗址第一次发掘简报 (Preliminary report on the first excavation of the Neolithic site of Taishanmiao).” *JHKG* 2001.2: 1-10.

Taojiahu 2001: Li Taoyuan 李桃元 and Xia Feng 夏丰 (2001). “Hubei Yingcheng Taojiahu guchengzhi diaocha 湖北应城陶家湖古城址调查 (Survey of the ancient city site of Taojiahu, Yingcheng, Hubei).” *WW* 2001.4: 71-76.

Tao, Jing Tao, Min-Te Chen and Shiyuan Xu (2006). “A Holocene Environmental Record from the Southern Yangtze River Delta, Eastern China.” *Palaeogeography, Palaeoclimatology, Palaeoecology* 230: 204–229.

Taosi 2003: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo Shanxi dui 中国社会科学院考古研究所山西队, Shanxi Sheng Kaogu Yanjiusuo 山西省考古研究所 and Linfen Shi Wenwuju 临汾市文物局 (2003). “Taosi chengzhi faxian Taosi wenhua zhongqi muzang 陶寺城址发现陶寺文化中期墓葬 (The discovery of a middle Taosi Culture burial at the Taosi city site).” *KG* 2003.9: 3-6.

Tenghualuo 2001: Nanjiang Bowuguan 南京博物馆, Lianyungang Shi Wenwu Guanli Weiyuanhui 连云港市文物管理委员会 and Lianyungang Shi Bowuguan 连云港市博物馆 (2001). “Jiangsu Lianyungang Tenghualuo yizhi kaogu fajue jiyao 江苏连云港藤花落遗址发掘纪要 (Summary of the excavation of the Tenghualuo site at Lianyungang, Jiangsu).” *DNWH* 2001.1: 35-38.

Thomas, Julian (2008). “The Mesolithic-Neolithic transition in Britain.” In Joshua Pollard (ed.), *Prehistoric Britain*, pp. 58-89. Oxford: Blackwell.

Thorp, Robert .L. (1980-81). “The Chinese Bronze Age from a Marxist perspective.” *Early China* 6: 97-102.

Thorp, Robert L. (2006). *China in the Early Bronze Age: Shang Civilization*. Philadelphia: University of Pennsylvania.

Tianmen Xian Bowuguan 天门县博物馆 (1987). “Tianmen Xian xinshiqi shidai yizhi diaocha 天门县新石器时代遗址调查 (Survey of Neolithic sites in Tianmen County).” *JHKG* 1987.4: 32-36.

Tianmen 1996: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 and Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 中国社会科学院考古研究所 (1996). “Hubei Tianmen Shi Shijiahe san chu xinshiqi shidai yizhi fajue 湖北天门市石家河三处新石器时代遗址发掘 (The Excavation of the three Neolithic sites at Shijiahe, Tianmen City, Hubei).” *KGXJK* 10: 48-88.

Tinglin 2002: Shanghai Bowuguan Kaogu Yanjiubu 上海博物馆考古研究部 (2002). “Shanghai Jinshan Qu Tinglin yizhi 1988, 1990 nian Liangzhu wenhua muzang de fajue 上海金山区亭林遗址1988、1990年良渚文化墓葬的发掘 (The 1988 and 1990 excavations of the Liangzhu Culture burials at the Tingling site, Jinshan District, Shanghai).” *KG* 2002.10: 49-63.

Tong Enzheng (1989). “Morgan’s model and the study of ancient Chinese society.” *Social Sciences in China* 10:2: 182-205.

Tong Enzheng (1995). “Thirty years of Chinese archaeology (1949-1979).” In Philip L. Kohl and Clare Fawcett (eds.), *Nationalism, Politics, and the Practice of Archaeology*, pp.177-197. Cambridge: Cambridge University Press.

Trigger, Bruce (1967). “Settlement Archaeology: Its Goals and Promise.” *American Antiquity* 32:2: 149-160.

Trigger, Bruce (2006). *A History of Archaeological Thought, 2nd ed*. Cambridge: Cambridge University Press.

Trusted Sources (2008). *China Infrastructure: Playing the Boom*. London: Trusted Sources Research and Network.

Tsien, Tsuen-hsuin (1993). “Chan kuo ts’e.” In Michael Loewe (ed.), *Early Chinese Texts: A Bibliographical Guide*, pp. 1-11. Berkeley: Society for the Study of Early China and Institute of East Asian Studies, University of California.

Tucheng 1986: Xiaogan Diqu Bowuguan 孝感地区博物馆 and Dawu Xian Bowuguan 大悟县博物馆 (1986). “Dawu Xian Tucheng gu yizhi tanjue jianbao 大悟县土城古遗址探掘简报 (Preliminary report on the excavation of the ancient site of Tucheng, Dawu County).” *JHKG* 1986.2: 1-9.

Underhill, Anne (1989). “Warfare during the Chinese Neolithic Period: A Review of the Evidence.” In Diana Claire Tkaczuk and Brian C. Vivian (eds), *Cultures in Conflict: Current*

Archaeological Perspectives, pp. 229-237. Calgary: University of Calgary Archaeological Association.

Underhill, Anne (1994). "Variation in Settlements during the Longshan Period of Northern China." *Asian Perspectives* 33:2: 197-228.

Underhill, Anne (2000). "An Analysis of Mortuary Ritual at the Dawenkou Site, Shandong, China." *Journal of East Asian Archaeology* 2:1/2: 93-127.

Underhill, Anne (2002). *Craft Production and Social Change in Northern China.* New York: Kluwer Academic Press.

Underhill, Anne (2006). "Warfare and the Development of States in China." Elizabeth N. Arkush and Mark W. Allen (eds), *The Archaeology of Warfare: Prehistories of Rading and Conquest*, pp. 254-285. Gainesville: University Press of Florida.

Underhill, Anne, Gary M. Feinman, Linda Nicholas, Gwen Bennett, Cai Fengshu, Yu Haiguang, Luan Fengshi and Fang Hui (1998). "Systematic, regional survey in SE Shandong Province, China." *Journal of Field Archaeology* 25:4: 453-474.

Verhoeven, Marc (2011). "The Many Dimensions of Ritual." In Timothy Insoll (ed.), *The Oxford Handbook of the Archaeology of Ritual and Religion*, pp. 115-132. Oxford: Oxford University Press.

Wadian 2004: Henan Sheng Wenwu Kaogu Yanjiusuo 河南省文物考古研究所 (2004). *Yuzhou Wadian* 禹州瓦店 (The Wadian site at Yuzhou). Beijing: Shijie Tushu Chuban Gongsi.

Wagner, Mayke (2006). *Neolithikum und frühe Bronzezeit in Nordchina vor 8000 bis 3500 Jahren: die nordöstliche Tiefebene (Südteil)*. Mainz am Rhein: Zabern.

Wagner, Mayke and Pavel E. Tarasov (2008). "The present perception of the origin of Chinese civilization." In Dieter Kuhn and Helga Stahl (eds.), *Perceptions of Antiquity in Chinese Civilization*, pp. 69-84. Heidelberg: edition forum.

Wangchenggang 1992: Henan Sheng Wenwu Yanjiusuo 河南省文物研究所 and Zhongguo Lishi Bowuguan Kaogubu 中国历史博物馆考古部 (1992). *Dengfeng Wangchenggang yu Yangcheng* 登封王城岗与阳城 (The sites of Wangchenggang and Yangcheng in Dengfeng). Beijing: Wenwu Chubanshe.

Wangchenggang 2007: Beijing Daxue Kaogu Wenbo Xueyuan 北京大学考古文博学院 and Henan Sheng Wenwu Kaogu Yanjiusuo 河南省文物考古研究所 (2007). *Dengfeng Wangchenggang kaogu faxian yu yanjiu (2002-2005)* 登封王城岗考古发现与研究(2002-2005) (Archaeological discoveries and research at the Wangchenggang site, Dengfeng [2002-2005]). Zhengzhou: Daxiang Chubanshe.

Wang Hongxing 王红星 (1998). "Changjiang zhongyou diqu xinshiqi shidai yizhi fenbu guilü, wenhua zhongxin de zhuanyi yu huanjing bianqian de guanxi 长江中友地区新石器时代遗址分布规律、文化中心的转移与环境变迁的关系 (The relationship between the distribution pattern of Neolithic sites, the movement of culture centres and environmental change in the Middle Yangzi River region)." *JHKG* 1998.1: 53-61,76.

Wangjiagang 1984: Hubei Sheng Jingjiang Diqu Bowuguan 湖北省荆江地区博物馆 (1984). "Hubei Wangjiagang xinshiqi shidai yizhi 湖北王家岗新石器时代遗址 (The Neolithic site of Wangjiagang, Hubei)." *KGXB* 1984.2: 193-220.

Wang Jihuai 王吉怀, Zhao Tianwen 赵天文 and Niu Ruihong 牛瑞红 (2001). "Lun Dawenkou wenkou dakou zun 论大汶口文化大口尊 (Discussing the wide-mouthed *zun* of the Dawenkou Culture)." *ZYWW* 2001.2: 45-54.

Wang Jing 王劲, Wu Ruisheng 吴瑞生 and Tan Duisi 谭堆四 (1955). "Hubei Jingshan Xian Shilong Guojiang Shuiku Gongcheng zhong faxian de xinshiqi shidai yizhi jianbao 湖北京山县石龙过江水库工程中发现的新石器时代遗址简报 (Preliminary report on the Neolithic sites discovered during Shilong Cross-River Reservoir Project in Jingshan County, Hubei)." *WWCKZL* 1955.4: 41-46.

Wang Jing 王劲 (2007). "Hou Shijiahe wenhua dingming de sikao 后石家河文化定名的思考 (Thoughts on the naming of Post-Shijiahe Culture)." *JHKG* 2007.1: 60-72.

Wang Tao (1999). "A City with Many Faces: Urban Development in Pre-Modern China." In Roderick Whitfield and Wang Tao (eds), *Exploring China's Past: New Discoveries and Studies in Archaeology and Art*, pp. 111-121. London: Saffron.

Wang Wei 王巍 (2004). "Gongyuan qian 2000 nian qianhou woguo da fanwei wenhua bianhua yuanyin tantao 公元前2000年前后我国大范围文化变化原因探讨 (Discussion of the large-scale changes that occurred in our country around 2000 BC)." *KG* 2004.1: 67-77.

Wang Wei (2007). "Some problems in the study of the origin of Chinese civilisation." In Anders Kaliff (ed.), *Archaeology in the East and the West: Papers Presented at the Sino-Sweden Archaeology Forum, Beijing in September 2005*, pp. 17-36. Sweden: Riksantikvarieambetet Och Statens.

Wang Yinping 王银平 (2008). "Changjiang zhongyou xinshiqi shidai wanqi de juluo jicha ji chengshi mingya 长江中游新石器时代晚期的聚落极差及城市萌芽 (Settlement hierarchies and the germination of cities in the late Neolithic along the Middle Yangzi)." *Zhongguo Lishi Wenwu* 中国历史文物 2008.6: 28-33.

Wang Zongyao 汪宗耀 (1992). "Hubei Qichun Aoshangwan xinshiqi shidai yizhi 湖北蕲春坳上湾新石器时代遗址 (The Neolithic site of Aoshangwan, Qichun, Hubei)." *KG* 1992.7: 663-665.

Webster, Gary S. (2008). "Culture history: a culture-historical approach." In R. Alexander Bentley, Herbert D.G. Maschner and Christopher Chippindale (eds.), *Handbook of Archaeological Theories*, pp. 11-27. Lanham, Md.; Plymouth: AltaMira Press.

Western Henan 1978: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo Luoyang Gongzuodui 中国社会科学院考古研究所洛阳工作队 (1978). "1975 nian Xiang xi kaogu diaocha 1975年象西考古调查 (1978 archaeological survey of western Henan)." *KG* 1978.1: 23-34.

White, Hayden (1973). *Metahistory: The Historical Imagination in Nineteenth-Century Europe*. Baltimore: Johns Hopkins University Press.

Wilhelm, Richard (1928). *Frühling und Herbst des Lü Bu We*. Jena: E. Diederichs.

Wu Xiaohong 吴小红, Zhao Chaohong 赵朝洪, Chang Xiangyang 常向阳, Zhu Bingquan 朱炳泉, Yang Bin 杨斌 and Shao Hongxiang 邵宏祥 (2001). "Xiaojiawuji yizhi Shijiahe wenhua wanqi yuqi yuliao chandi chubu fenxi 笑家屋脊遗址石家河文化晚期玉器玉料产地初步分析 (Initial analysis of the jade production area of the late Shijiahe Culture jades at the Xiaojiawuji site)." In Liu Conggui 刘聪桂 (ed.), *Haixia liang'an guyu xuehuiyi lunwenji* 海峡两岸古玉学会议论文集 (Proceedings of the Strait ancient jade conference), pp. 557-562. Taipei: Guoli Taiwan Daxue Chuban Weiyuanhui.

Wylie, Alison (1985). "The reaction against analogy." *Advances in Archaeological Method and Theory* 8: 63-111.

Wylie, Alison (1995). "Unification and convergence in archaeological explanation: the Agricultural Wave-of-Advance and the Origins of the Indo-European Languages." *The Southern Journal of Philosophy, Supplementary* 34: 1-30.

Wynne-Jones, Stephanie and Sheila Kohring (2007). "Socialising complexity." In Sheila Kohring and Stephanie Wynne-Jones (eds.), *Socialising Complexity: Structure, Interaction and Power in Archaeological Discourse*, pp. 2-12. Oxford: Oxbow Books.

Xiaji 1989: Yuanchangban Kaogudui Henan Fendui 原长办考古队河南分队 (1989). "Xichuan Xiaji xinshiqi shidai fajue baogao 淅川下集新石器时代遗址发掘报告 (Report of the excavation of the Neolithic site of Xiaji, Xichuan)." *ZYWW* 1989.1:1-19.

Xia Nai 夏鼐 (1959). "Guanyu kaoguxe shang wenhua de dingming wenti 关于考古学上文化的定名问题 (On the naming problem of cultures in archaeology)." *KG* 1959.4: 169-172.

Xia Nai 夏鼐 (1985). *Zhongguo wenming de qiyuan* 中国文明的起源 (The origins of Chinese civilisation). Beijing: Wenwu Chubanshe.

Xiaocheng 2007: Hubei Sheng Wenwu Kaogu Yanjiusuo 湖北省文物考古研究所 and Tianmen Shi Bowuguan 天门市博物馆 (2007). "Hubei Tianmen Xiaocheng chengzhi fajue baogao 湖北天门笑城城址发掘报告 (Report on the excavations of the walled site of Xiaocheng, Tianmen, Hubei)." *KGXB* 2007.4: 469-488.

Xiaojiawuji 1999: Hubei Sheng Jingzhou Diqu Bowuguan 湖北省荆州地区博物馆, Hubei Sheng Wenwu Kaogu Yanjiusuo Shijiahe Kaogudui 湖北省文物考古研究所石家河考古队, and Beijing Daxue Kaoguxuexi 北京大学考古学系 (1999). *Xiaojiawuji – Tianmen Shijiahe kaogu fajue baogao zhiyi* 肖家屋脊—天门石家河考古发掘报告之一 (Xiaojiawuji – The first report on the archaeological excavations at Shijiahe, Tianmen). Beijing: Wenwu Chubanshe.

Xiawanggang 1989: Henan Sheng Wenwu Yanjiusuo 河南省文物研究所 and Changjiang Liuyu Guihua Bangongshi Kaogudui Henan Fendui 长江流域办公室考古队河南分队 (1989). *Xichuan Xiawanggang* 淅川下王岗 (The Xiawanggang Site at Xichuan)." Beijing: Wenwu Chubanshe.

Xihuayuan 1991: Wuhan Daxue Suizhou Kaogu Fajuedui 武汉大学随州考古发掘队 (1991). "Suizhou Xihuayuan yizhi fajue jianbao 随州西花园遗址发掘简报 (Preliminary report of the excavations of the Xihuayuan site, Suizhou)." *JHKG* 1991.2: 15-22.

Xihuayuan yu Miaotaozi 1993: Wuhan Daxue Lishixi Kaogu Jiayanshi 武汉大学历史系考古教研室, Xiangfan Shi Bowuguan 襄樊市博物馆 and Suizhou Shi Bowuguan 随州市博物馆 (1993). *Xihuayuan yu Miaotaizi* 西花园与庙台子 (Excavation of the sites of Xihuayuan and Miaotaizi, Suizhou City). Wuhan: Wuhan Daxue Chubanshe.

Xishan 1999: Guojia Wenwuju Kaogu Lingdui Peixunban 国家文物局考古领队培训班 (1999). "Zhengzhou Xishan Yangshao shidai chengzhi fajue 郑州西山仰韶时代城址发掘 (Excavation of the Yangshao period walled site of Xishan, Zhengzhou)." *WW* 1999.7: 4-15.

Xu Anwu 徐安武, Yang Xiaoyong 杨晓勇, Sun Zaijing 孙在泾, Wang Changsui 王昌燧, Wang Jihuai 王吉怀, Liang Zhonghe 梁中合 and Chen Xingcan 陈星灿 (2000). "Dawenkou wenhua tao dakou zun chandi de chubu yanjiu 大汶口文化陶大口尊产地的初步研究 (Initial research into the production areas of the large-mouthed pottery *zun* of the Dawenkou Culture). *KG* 2000.8: 87-92.

Xuejiagang 2004: Anhui Sheng Wenwu Kaogu Yanjiusuo 安徽省文物考古研究所 (2004). *Qianshan Xuejiagang* 潜山薛家岗 (The Xuejiagang site at Qianshan). Beijing: Wenwu Chubanshe.

Yan Wenming 严文明 (1989). "Zhongguo xinshiqi shidai juluo xingtai de kaocha 中国新石器时代聚落形态的考察 (Investigation into the settlement patterns of the Chinese Neolithic)." In Qingzhu Su Bingqi Kaogu 55 Nian Lunwenji Bianjizu 庆祝苏秉琦考古五十五年论文集编辑组, Qingzhu Su Bingqi kaogu 55 nian lunwenji 庆祝苏秉琦考古五十五年论文集, pp. 24-37. Beijing: Wenwu Chubanshe.

Yan Wenming (1993). "Longshan shidai kaogu xin faxian de sikao 龙山时代考古新发现的思考 (Considerations on the new archaeological discoveries of the Longshan Age)." In Zhang Xuehai 张学海 (ed.), *Jinian Chengziyai fajue 60 zhounian guoji xueshu taolunhui wenji* 纪念城子崖发掘60周年国际学术讨论会文集 (Papers of the international academic conference in commemoration of the sixtieth year of the excavation of Chengziya site). Ji'nan: Qilu Shushe. [not seen]

Yan Wenming 严文明 (1997a). "Guanyu kaoguxue wenhua de lilun 关于考古学文化的理论 (On archaeological culture theory)." In Yan Wenming 严文明 (ed.), *Zouxiang 21 shiji de kaoguxue* 走向21世纪的考古学 (Towards an archaeology of the 21st century), pp. 78-93. Xi'an: Sanqin Chubanshe. [not seen]

Yan Wenming (1997b). "Juluo kaogu yu shiqian shehui yanjiu 聚落考古与史前研究 (Settlement archaeology and research into prehistoric society)." *WW* 1997.6: 27-35.

Yan Wenming (2000). "Wenming de shuguang – Changjiang liuyu zui gu de chengshi 文明的曙光——长江流域最古的城市 (The dawn of civilisation – the most ancient cities in the Yangzi basin)." In Yan Wenming (ed.), *Nongye fasheng yu wenming qiyuan* 农业发生与文明起源 (The origins of agriculture and the rise of civilization), pp. 99-106. Beijing: Kexue Chubanshe.

Yan Wenming (2008). "Zhongguo wenming qiyuan de yanjiu 中国文明起源的研究 (Research into the origins of Chinese civilisation." In Yan Wenming严文明 (ed.), *Zhongguo*

kaoguxue yanjiu de shiji huigu – xinshiqi shidai kaogu juan 中国考古学研究的世纪回顾 (Retrospective of century of archaeological research in China – the archaeology of the Neolithic period), pp. 70-78. Beijing: Kexue Chubanshe.

Yang Jianfang 杨建芳 (2006). *Changjiang liuyu yu wenhua* 长江流域玉文化 (Yangzi River jade culture). Wuhan: Hubei Jiaoyu Chubanshe.

Yang Quanxi 杨权喜 (1994). "Shilun Jianghan gu cheng de xingshuai 试论江汉古城的兴衰 (On the rise and demise of ancient cites in the Jianghan)." *JHKG* 1994.4: 35-40.

Yang Xiaoneng (ed.) (1999a). *The Golden Age of Chinese Archaeology: Celebrated Discoveries from the People's Republic of China*. New Haven; London: Yale University Press.

Yang Xiaoneng (1999b). "A History of Modern Chinese Archaeology." In Yang Xiaoneng (editor), *The Golden Age of Chinese Archaeology: Celebrated Discoveries from the People's Republic of China*, pp. 25-45. New Haven; London: Yale University Press.

Yang Xiaoneng (2004). "Urban revolution in late prehistoric China." In Yang Xiaoneng (ed.), *New Perspectives on China's Past: Chinese Archaeology in the Twentieth Century*, *vol. 1,* pp. 99-143. New Haven: Yale University Press; Kansas City: The Nelson-Atkins Museum of Art.

Yang Zhaoqing 杨肇清 (1997). "Shilun Zhengzhou Xishan Yangshao wenhua wanqi gu chengzhi de xingzhi 试论郑州西山仰韶文化晚期古城址的性质 (On the character of the city-site of the late Yangshao Culture at Xishan, Zhengzhou)." *HXKG* 1997.1: 55-59, 92.

Yaojialin 1983: Wuhan Daxue Lishixi Kaogu Zhuanye 武汉大学历史系考古专业, Xianning Diqu Bowuguan 咸宁地区博物馆 and Tongcheng Xian Wenhuaguan 通城县文化馆 (1983). "Hubei Tongcheng Yaojialin yizhi de shijue 湖北通城尧家林遗址的试掘 (Test excavation of the Yaojialin site, Tongcheng, Hubei)." *JHKG* 1983.3: 1-12, 62.

Yasuda Yoshinori, Toshiyuki Fujiki, Hiroo Nasu, Megumi Kato, Yoshimune Morita, Yuichi Mori, Masaaki Kanehara, Shuichi Toyama and Azusa Yanoa, Mitsuru Okuno, He Jiejun, Sonoko Ishihara, Hiroyuki Kitagawa, Hitoshi Fukusawaj and Toshiro Naruse (2004). "Environmental archaeology at the Chengtoushan site, Hunan Province,China,and implications for environmental change and the rise and fall of the Yangtze River civilization." *Quaternary International* 123-125: 149-158.

Yinxiangcheng 1997: Jingzhou Bowuguan 荆州博物馆and Fugang Jiaoyu Weiyuanhui 福岗教育委员会 (1997). "Hubei Jingzhou Shi Yinxiangcheng yizhi dongchengqiang fajue jianbao 湖北荆州市阴湘城遗址东城墙发掘简报 (Preliminary report of the excavations of the eastern wall of the Yinxiangcheng site in Jingzhou, Hubei)." *KG* 1997.5: 1-10, 24.

Yinxiangcheng 1998: Jingzhou Bowuguan 荆州博物馆 (1998). "Hubei Jingzhou Shi Yinxiangcheng yizhi 1995 nian fajue jianbao 湖北荆州市阴湘城遗址1995年发掘简报 (Preliminary report in the1995 excavations at the Yinxiangcheng site in Jingzhou, Hubei)." *KG* 1998.1: 17-28, 71.

Youziling 1994: Hubei Sheng Jingzhou Diqu Bowuguan 湖北省荆州地区博物馆 (1994). "Hubei Jingshan Youziling xinshiqi shidai yizhi de shijue 湖北京山油子岭新石器时代遗址

的试掘 (Test excavation of the Neolithic site of Youziling, Jingshan, Hubei).” *KG* 1994.10: 865-876, 918.

Yuan Jing 袁靖 (2001). “Zhongguo xinshiqi shidai jiachu qiyuan de wenti 中国新石器时代家畜起源的问题 (The problem of the origins of animal domestication in the Chinese Neolithic).” *WW* 2001.5: 51-58.

Yuan Jing 袁靖 and Meng Huaping 孟华平 (2003). “Miaoping yizhi chutu dongwu guge yanjiu baogao 庙坪遗址出土动物骨骼研究报告 (Report on the research on the excavated animals bones from the Miaoping site).” In Meng Huaping 孟华平 and Zhou Guoping 周国平 (eds), *Zigui Miaoping* 秭归庙坪 (The Miaoping site at Zigui), pp. 302-307. Beijing: Kexue Chubanshe.

Yuan Jing, Rowan Flad and Luo Yunbing (2008). “Meat-acquisition Patterns in the Neolithic Yangzi River Valley, China.” *Antiquity* 82: 351-366.

Yuan Jing and Rod Campbell (2009). “Recent archaeometric research on ‘the origins of Chinese civilisation’.” *Antiquity* 83: 96-109.

Yuan Sixun 原思训, Chen Tiemei 陈铁梅, Hu Yanqiu 胡艳秋, Meng Qingping 蒙清平 and Ma Li 马力 (1994). “Tan shisi niandai ceding baogao (9) 碳十四年代测定报告（九） (The ninth report of the radiocarbon dating measurement).” *WW* 1994.4: 89-95.

Yuchisi 2001: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 中国社会科学院考古研究所 (2001). *Mengcheng Yuchisi – Wanbei xinshiqi shidai juluo yicun de fajue yu yanjiu* 蒙城尉迟寺——皖北新时期时代聚落遗存的发掘与研究 (The Yuchisi site at Mengcheng: Research on and excavation of a Neolithic settlement in northern Anhui). Beijing: Kexue Chubanshe.

Yuchisi 2007: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 中国社会科学院考古研究所 and Anhui Sheng Mengcheng Xian Wenwuju 安徽省蒙城县文物局 (2007). *Mengcheng Yuchisi (di er bu)* 蒙城尉迟寺 （第二部） (The Yuchisi site at Mengcheng, part 2). Beijing: Kexue Chubanshe.

Yu Weichao 俞伟超 (1980a). “Guanyu Chu wenhua fazhan de xin tansuo 关于楚文化发展的新探索 (New explorations into the development of Chu Culture).” *JHKG* 1980.1: 17-30.

Yu Weichao 俞伟超 (1980b). “Xian Chu yu San Miao wenhua de kaoguxue tuice 先楚与三苗文化的考古学推测 (Archaeological inferences on proto-Chu and the culture of the San Miao tribes).” *WW* 1980.10: 1-12.

Yu Weichao 俞伟超 (1982a). “Guanyu dangqian Chu wenhua de kaoguxue yanjiu wenti 关于当前楚文化的考古学研究问题 (Concerning problems currently besetting the archaeological study of Chu Culture).” *HNKGJK* 1: 39-46.

Yu Weichao 俞伟超 (1982b). “Xunzhao ‘Chu wenhua’ yuanyuan den xin xiansuo 寻找‘楚文化’渊源的新绦索 (New clues in the search for the origins of ‘Chu Culture’).” *JHKG* 1982.2: 1-6.

Yu Weichao 俞伟超 (1984). “Chu wenhua de faxian yu yanjiu 楚文化的发现研究 (Discovery and study of Chu Culture).” In Chu Wenhua Yanjiuhui 楚文化研究会 (ed.), *Chu*

wenhua kaogu dashiji 楚文化考古大事记 (Chronology of major events in the archaeology of Chu Culture), pp. 1-14. Beijing: Wenwu Chubanshe.

Yu Weichao 俞伟超 (1987). "Chu wenhua de yanjiu yu wenhua yinsu de fenxi 楚文化的研究与文化因素的分析 (The study of Chu Culture and the analysis of its cultural elements)." In Chu Wenhua Yanjiuhui 楚文化研究会 (ed.), *Chu wenhua yanjiu lunji* 楚文化研究论集 (Collected essays on the study of Chu Culture), vol. 1, pp. 1-15. Wuhan: Jing Chu Shushe.

Yu Weichao 俞伟超 (2000). "Guanyu Chu wenhua xingcheng, fazhan he xiaowang guocheng de xin renshi 关于楚文化形成、发展和消亡过程的新认识 (New insights into the formation, development, and disappearance of Chu Culture)." In Zhongguo Lishi Bowuguan Kaogubu 中国历史博物馆考古部 (ed.), *Zhongguo Lishi Bowuguan Kaogubu jinian wenji* 中国历史博物馆考古部纪念文集 (Collected essays in commemoration of the Archaeology Department of the Museum of Chinese History), pp. 153-161. Beijing: Kexue Chubanshe.

Yu Weichao 俞伟超 and Zhang Zhongpei 张忠培 (1984). "Bianhouji 编后记 (Postscript)." In Su Bingqi 苏秉琦 (ed.), *Su Bingqi kaoguxue lunshu xuanji* 苏秉琦考古学论述选集 (Selected archaeological works of Su Bingqi), pp. 306-319. Beijing Wenwu Chubanshe.

Zaolingang yu Duijintai 1999: Hubei Sheng Jingzhou Bowuguan 湖北省荆州博物馆 (1999). *Zaolingang zu Duijintai – Jingjiang dadi Jingzhou Mashan duan kaogu fajue bagao* 枣林岗与堆金台—荆江大堤荆州马山段考古发觉报告 (Zaolingang and Duijintai - Report of excavations at the Mashan section at Jingzhou of the Jingjiang dyke). Beijing: Kexue Chubanshe.

Zhang Chi and Okamura Hidenori (1999). "Excavation of Cities: Shijiahe and Yinxiangcheng." In Roderick Whitfield and Wang Tao (eds), *Exploring China's Past: New Discoveries and Studies in Archaeology and Art*, pp. 87-94. London: Saffron.

Zhang Chi 张弛 (2003). *Changjiang zhongxiayou diqu shiqian juluo yanjiu* 长江中下游地区史前聚落研究 (Prehistoric settlement patterns of the middle and lower Yangzi River). Beijing: Wenwu Chubanshe.

Zhang Chi (2006). "Dawenkou wenhua dui Liangzhu wenhua ji Qujialing-Shijiahe wenhua de yingxiang 大汶口文化对良渚文化及屈家岭－石家河文化的影响 (The influence of the Dawenkou Culture on the Liangzhu Culture and the Qujialing-Shijiahe Culture)." *Zhejiang Sheng Wenwu Kaogu Yanjiusuo Xuekan* 浙江省文物考古研究所学刊, vol. 8: 14-22.

Zhang Chi (2008). "Shiqian juluo yu fangwu de yanjiu 史前聚落与房屋的研究 (Research of prehistoric settlements and buildings)." In Yan Wenming严文明 (ed.), *Zhongguo kaoguxue yanjiu de shiji huigu – xinshiqi shidai kaogu juan* 中国考古学研究的世纪回顾 (Retrospective of century of archaeological research in China – the archaeology of the Neolithic period), pp. 40-58. Beijing: Kexue Chubanshe.

Zhang Chi and Hung Hsiao-chun (2008a). "The Neolithic of Southern China – Origin, Development, and Dispersal." *Asian Perspectives* 47:2: 299-329.

Zhang Chi 张弛 and Hung Hsiao-chun 洪晓纯 (2008b). "Zhongguo huanan ji qi lingjin diqu de xinshiqi shidai caiji yulie wenhua 中国华南及其邻近地区的新石器时代采集渔猎文化

(Neolithic hunter-gatherer cultures in southern China and neighbouring regions).” *Kaoguxue yanjiu* 考古学研究 (Archaeology Studies) 7: 415–434.

Zhang Chi and Hung Hsiao-chun (2010). “The Emergence of Agriculture in Southern China.” *Antiquity* 84: 11-25.

Zhang Chi and Hung Hsiao-chun (2012). “Later Hunter-Gatherers in Southern China, 18000-3000 BC.” *Antiquity* 86: 11-29.

Zhang Hongbin 张宏斌 (2000). “ Lun Shangdai shenyou wangquan zhengzhi xia de fugu gainian 论商代神佑王权政治下的复古观念 (Discussion the concept of returning to the ancients from the perspectives of religion, royalty and politics in the Shang dynasty).” *Nankai xuebao (Zheshe ban)* 南开学报（哲社版）Nankai University Journal [Philosophy and Social Science Edition]) 2000.6: 46-52.

Zhang Jiangkai 张江凯 and Wei Jun 魏峻 (2004). *Xinshiqi shidai kaogu* 新时期时代考古 (Neolithic archaeology). Beijing: Wenwu Chubanshe.

Zhang Xiugui 张修桂 (1980). “Yunmengze de yanbian yu xia Jingjiang hequ de xingcheng 云梦泽的演变与下荆江河曲的形成 (Changes of the Yunmengze and the formation of the Jingjiang river bend).” *Fudan xuebao (Shehui kexue ban)* 复旦学报（社会科学版） (Fudan University Journal [Social Science Edition]) 1980.2: 40-48.

Zhang Xuehai 张学海 (1996). “Shilun Shandong diqu de Longshan wenhua cheng 试论山东地区的龙山文化城 (On the Longshan Culture cities in Shandong).” *WW* 1996.12: 40-52.

Zhang Xuqiu 张绪球 (1991). “Shijiahe wenhua de taosupin 石家河文化的陶塑品 (Carved pottery of Shijiahe Culture).” *Jianghan kaogu* 江汉考古 1991..3: 55-60.

Zhang Xuqiu 张绪球 (1992). *Changjiang zhongyou xinshiqi shidai wenhua gailun* 长江中游新石器时代文化概论 (An outline of the Middle Yangzi Neolithic cultures). Wuhan: Hubei Kejishu Chubanshe.

Zhang Xuqiu 张绪球 (2004). *Qujialing wenhua* 屈家岭文化 (The Qujialing Culture). Beijing: Wenwu Chubanshe.

Zhang Yingqiao 张应桥 (2005). “Woguo shiqian renlei zhishui de kaoguxue zhengming 我国史前人类治水的考古学证明 (Testimony to the archaeology of prehistoric water management in China).” *ZYWW* 2005.3: 22-77.

Zhang Yunpeng 张云鹏 (1957). “You Hubei Shijiahe yizhi fajue fangfa de zhuyao cuowu tan xuexi Sulian xianjin jingyan 由湖北石家河遗址发掘方法的主要错误谈学习苏联先进经验 (Studying the advanced experience of the Soviet Union by learning from the most important, methodological mistakes made during the excavation of the Shijiahe site, Hubei).” *KGTX* 1957.2: 68-73.

Zhang Zhongpei 张忠培 (1994). “Shizuxue yu kaoguxue de guanxi 氏族学与考古学的关系 (The relationship between the study of clans and archaeology).” In Zhang Zhongpei 张忠培, *Zhongguo kaoguxue shijian, lilun, fangfa* 中国考古学实践、理论、方法 (Practice, theory and method in Chinese archaeology). Zhengzhou: Zhongzhou Guji Chubanshe. [not seen]

Zhao Hui 赵辉 (1997). “Shijiahe yizhiqun de tianye diaocha fangfa 石家河遗址群的田野调查方法 (The methodology of the fieldwork survey of at the Shijiahe site group.” In Beijing Daxue Kaoguxi 北京大学考古系 (ed.), *Kaoguxue yanjiu 3* 考古学研究（三）(A collection of studies on archaeology 3), pp. 52-56. Beijing: Kexue Chubanshe.

Zhao Hui 赵辉 (2006). “Zhongguo wenming de shuguang 中国文明的曙光 (The dawn of Chinese civilisation).” Republished in Kejibu Shehui Fazhan Kejisi 科技部社会发展科技司 and Guojia Wenwuju Bowuguan yu Shehui Wenwusi 国家文物局博物馆与社会文物司 (2009a), pp. 34-77.

Zhao Hui 赵辉 and Wei Jun 魏峻 (2002). “Zhongguo xinshiqi shidai chengzhi de faxian yu yanjiu 中国新石器时代城址的发现与研究 (Discovery and research of the Chinese Neolithic walled sites).” *Gudai Wenming* 古代文明 vol. 1: 1-34.

Zhao Songqiao (1994). *Geography of China: Environment, Resources, Population, and Development*. New York, Chichester: John Wiley & Sons.

Zhao Xitao (1993). *Holocene Coastal Evolution and Sea-Level Changes in China*. Beijing: Haiyang Press.

Zheng Ping (1999). *China’s Geography: Natural Conditions, Regional Economies, Cultural Features*. Beijing: China Intercontinental Press.

Zheng Zhonghua 郑中华 (2000). “Lun Shijiahe wenhua de kehua fuhua 论石家河文化的刻划符号 (Discussing the carved symbols of the Shijiahe Culture).” *JHKG* 2000.4: 54-61.

Zhongguo Kexueyuan Kaogu Yanjiusuo Luoyang Fajuedui 中国科学院考古研究所洛阳发掘队 (1964). “Henan Yanshi “Huacheng” kaogu diaocha jianbao 河南严实“滑城”考古调查简报 (Preliminary report on the archaeological survey of the ‘Huacheng’ site, Yanshi, Henan).” *KG* 1964.1: 30-35.

Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 中国社会科学院考古研究所 and Zhongguo Shehui Kexueyuan Gudai Wenming Yanjiu Zhongxin 中国社会科学院古代文明研究中心 (2003). *Zhonggou wenming qiyuan yanjiu yaolan* 中国文明起源要览 (Review of the research into the origin of Chinese civilisation. Beijing: Wenwu Chubanshe.

Zhou Fengqin 周风琴 (1994). “Yunmengze yu Jingjiang sanjiaozhou de lishi bianqian 云梦泽与荆江三角洲的历史变迁 (Historical changes in the Yunmengze and Jingjiang delta).” *Hubo Kexue* 湖泊科学 1994.6 [not seen].

Zhou Guanglin 周光林 (1996). “Qianyi Shijiahe wenhua diaobi ren xiang 浅议石家河文化雕塑人像 (Preliminary discussion of the human figurines of the Shijiahe Culture).” *JHKG* 1996.1: 55-59.

Zhou Shunwu (1992). *China Provincial Geography*. Beijing: Foreign Language Press.

Zhu Cheng 朱诚, Yu Shiyong 于世永 and Lu Chuncheng 卢春成 (1997). “Changjiang Sanxia ji Jianghan pingyuan diqu quanxinshi huanjing kaogu yu yichang honglao zaihai yanjiu 长江三峡及江汉平原地区全新世环境考古与异常洪涝灾害研究 (The study of Holocene environmental archaeology and extreme flood disaster in the Three Gorges of the

Changjiang River and the Jianghan Plain).” *Dili xuebao* 地理学报 (Acta Geographica Sinica) 1997.5: 268-278.

Zhufeng 1990: Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo Shandong Gongzuodui 中国社会科学 院考古研究所山东工作队 (1990). “Shandong Linqu Zhufeng Longshan wenhua muzang 山东临朐朱 封龙山文化墓葬 (A Longshan Culture burial at Zhufeng, Linqu, Shandong).” *KG* 1990.7: 587-594.

Zhu Naicheng 朱乃诚 (2006). *Zhongguo wenming qiyuan yanjiu* 中国文明起源研究 (Research into the origins of Chinese civilization). Fuzhou: Fujian Remin Chubanshe.

Zoumaling 1998: Jingzhou Shi Bowuguan 荆州市博物馆, Shishou Shi Bowuguan 石首市博物馆 and Wuhan Daxue Lishixi Kaogu Zhuanye 武汉大学历史系考古专业 (1998). “Hubei Shishou Shi Zoumaling xinshiqi shidai yizhi fajue jianbao 湖北石首市走马岭新石器时代遗址发掘简报 (Preliminary report on the excavation of the Neolithic site of Zoumaling, Shishou, Hubei).” *KG* 1998.4: 16-38.

GLOSSARY OF CHINESE TERMS

Anhui	安徽
Anxiang	安乡
Anyang	安阳
Aojiaquan	敖家全
Aoshangwan	坳上湾
Baimiao	白庙
Baitang River	白糖河
Baiyinchanghan	白音长汗
Banpo	半坡
banzhu	版主
Baodun Culture	宝墩文化
Baotou	包头
Bashidang	八十当
Beidi	北堤
Beigang Lake	北港湖
Beiyinyangying	北阴阳营
Beiyinyangying Culture	北阴阳营文化
bi	碧
Bianxianwang	边线王
buzu	部族
Caojialou	曹家楼
Caoxieshan	草鞋山
Chadianzi	茶店子
Changmenchong	昌门冲
Changquan	长泉
Changsha	长沙
Chengbeixi Culture	城背溪
Chengdu Plain	成都平原
Chenghu	澄湖
cheng	城
chengbao	城堡
Chenghe	城河
chengshi	城市
Chengtoushan	城头山
Chengziya	城子崖
Chifeng	赤峰
Chinese Academy of Science	中国科学院
Chinese Academy of Social Science	中国社会科学院
Chongqing	重庆
Chu	楚
chu	锄

Chuodun	绰墩
cong	琮
Dabashan	大巴山
Dabieshan	大别山
Dagutai	打鼓台
Dahecun	大河村
Dahongshan	大洪山
Daiziping	岱子坪
Dajiang	大江
dan	丹
Danjiang	丹江
Dan shui	丹水
Dantu	丹土
Dashennongjia	大神农架
Dasi	大寺
Dawenkou Culture	大汶口文化
Daxi	大溪
Daxi Culture	大溪文化
Daxi Shiqi	大溪时期
Dayangzhou	大洋州
Dazhujiacun	大朱家村
Dengfeng	登封
Dengjiawan	邓家湾
Diaolongbei	雕龙碑
diguo	帝国
ding	鼎
Dingjiashan	丁家山
Dongguan	东关
Dongting Lake	洞庭湖
dou	豆
duanceng	断层
duizhu	堆筑
Dujiagang	渡家岗
Eastern Zhou	东周
East River	东河
ercengtai	二层台
Erligang	二里岗
Erlitou	二里头
fangguo	方国
Fang Xian	房县
Fanshan	反山
Fujian	福建
Funiushan	伏牛山
Fuquanshan	福泉山

Gaixia	垓下
gang	缸
Ganquan	甘泉
Gaokanlong	高坎垅
Gong’an	公安
Guangfulin Culture	广福林文化
Guanghan	广汉
Guangdong	广东
Guangxi	广西
Guanmiaoshan	关庙山
Guanpingyan	贯平堰
Guanshan	罐山
Guchengzhai	古城寨
gucheng	古城
guguo	古国
Guilin	贵林
Guoyu	国语
Gushan	鼓山
Gushuihe	谷水河
guwenhua	古文化
Guzhen	固镇
Han Fei zi	韩非子
hangceng	夯层
Hangtou	杭头
hangtu	夯土
Hangzhou Bay	杭州湾
Han period	汉代
Han River	汉水
Hemudu	河姆渡
Henan	河南
Henan Longshan Culture	河南龙山文化
Hougang	后岗
Huacheng	滑城
Huachenggang	划城岗
huchenghe	护城河
Huainanzi	淮南子
Huaining	怀宁
Huai River	淮河
Huanbei	洹北
huan	环
huang	璜
Huangguzhong	皇姑冢
Huangjinling	黄金岭
Huangjiashan	黄家山

Huangpi	黄陂
Huanglianshu	黄楝树
huanhao	环壕
Hua Xia	华夏
Hubei	湖北
Hubei Provincial Committee for the Management of Cultural Relics	湖北省文物管理委员会
hudong	互动
Hujiawan	胡家湾
Hunan	湖南
Husanjia	胡三家
huxingqi	壶形器
Inner Mongolia	内蒙古
Jianghan Plain	江汉平原
Jiangling	江陵
Jiangsu	江苏
Jiangxi	江西
Jiangzhai	姜寨
Jiankou	涧口
Jianxin	建新
jiaoliu	交流
Jijiahu	季家湖
Jijiaocheng	鸡叫城
Jimingcheng	鸡鸣城
Jinaohe	鸡脑河
Jingmen	荆门
Jingmen Museum	荆门博物馆
Jingnansi	荆南寺
Jingshan	京山
Jingshanpo	京山坡
Jingshanshan	京山山
Jingzhi	景芝
Jingzhou	荆州
Jingzhou Museum	荆州博物馆
Jinluojia	金罗家
jituan	集团
Jiujiang	九江
jizhi	祭址
jiu	臼
Juluo kaogu	聚落考古
Juxian	莒县
Juzhang Lake	沮漳湖
Kuahuqiao	跨湖桥
li	梨

lian	廉
lian	链
Liangchengzhen	两城镇
Liangzhu Culture	良渚文化
Li ji	礼记
Lilou	李楼
Liangbao	灵宝
Lingjiatan	凌驾滩
Lingnan	岭南
Lingyanghe	陵阳河
Linqu	临朐
Linru	临汝
Li River	澧水
Liuhe	六合
Li Xian	澧县
Liyang Plain	澧阳平原
Longshan Age	龙山时代
Longzui	笼嘴
Lower Xiajiadian Culture	夏家店下层文化
Lower Yangzi	长江下游
Luanshitan	乱石滩
Luojiabailing	罗家柏岭
Luoyang	洛阳
Luoyang spade	洛阳铲
Lushan	鲁山
Lüshi chunqiu	吕氏春秋
Lüwangcheng	吕王城
Mahuiying	马回营
Majiayuan	马家垸
Maojialing	毛家岭
Meishan	煤山
Meishan type	煤山类型
Menbanwan	门板湾
Mengcheng	蒙城
Mengshan	蒙山
Mengzi	孟子
Miao	苗
Miaodigou	庙地沟
Miaodigou III Culture	庙地沟三期文化
Miaoping	庙坪
Ming dynasty	明代
minzu	民族
Mojiaoshan	莫角山
Mozi	墨子

Mufushan	幕府山
Nanjing	南京
Nanlingshan	南岭山
Nanyang Basin	南阳盆地
Northern and Southern Dynasties	南北朝
Panjialing	潘家岭
Panlongcheng	盘龙城
Pearl River	珠江
Peking University	北京大学
pen	盆
Pengtoushan	彭头山
Pengtoushan Culture	彭头山文化
Pingliangtai	平粮台
Post-Shijiahe Culture	后石家河文化
Qianshan	潜山
Qianzhai	前寨
Qichun	蕲春
qie	且
Qilihe	七里河
Qin	秦
Qing dynasty	清代
Qinghai	青海
Qinghe	清河
Qingliangsi	清凉寺
Qinglongquan	青龙泉
Qingshui	清水
Qingshuitan	清水滩
Qinlingshan	秦岭山
Qiyuan	祈愿
Qujialing	屈家岭
Qujialing Culture	屈家岭文化
Rizhao	日照
Ruicheng	芮城
Ruzhou	汝州
Sanfangwan	三房湾
Sanfangwan Culture	三房湾文化
Sanlihe	三里河
San Miao	三苗
Sanxingdui	三星堆
Shandong	山东
Shandong Longshan Culture	山东龙山文化
Shaanxi	陕西
Shaan Xian	陕县
Shanghai	上海

Shang period	商代
Shangshu	尚书
Shanxi	山西
Shenmu	神木
Shibanchong	石板冲
Shibanxiangzi	石板巷子
Shihe	石河
Shi ji	史记
Shijiahe	石家河
Shijiahe Culture	石家河文化
Shijiahe yizhiqun	石家河遗址群
Shijiawan	史家湾
Shilong Guojiang Reservoir Project	石龙过江水库工程
Shilong Reservoir	石龙水库
Shimao	石峁
Shixianggou	尸乡沟
Shizixing	狮子行
Shun	舜
si	耜
Sichuan	四川
Songze	松泽
Spring and Autumn period	春秋
Sui-Zao Corridor	随枣走廊
Sunjiacheng	孙家城
Sunjiagang	孙家岗
Sushangang	粟山岗
Taishan	泰山
Taishang	台上
Taishanmiao	太山庙
Taiwan	台湾
Taiwang	台王
Tanjialing	潭家岭
Tanjiaxiang	谭家巷
Tangong	檀弓
Taosi	陶寺
Taosi Culture	陶寺文化
Taojiahu	陶家湖
Tenghualuo	藤花落
Tengzhou	藤州
Three Gorges	三峡
Tianjiachong	田家冲
Tianluoshan	田螺山
Tianmen	天门
Tianmen County Museum	天门县博物馆

Tongbaishan	桐柏山
Tucheng	土城
Wadian	瓦店
Wangchenggang	王城岗
Wangjiagang	王家岗
Wangjiatai	王家台
Wangguliu	王古溜
Wangjiadu	王家渡
Wangjiazhuang	王家庄
Wangjinglou	望京楼
Wangwan III Culture	王湾三期文化
Warring States	战国
Wei ce	魏策
Wei Xian	威县
wenming	文明
Western Zhou	西周
West River	西河
Wucheng	吴城
Wudangshan	武当山
Wuhan	武汉
Wulian	五莲
Wulingshan	武陵山
Wushan	巫山
Wuxue	武穴
Xiaji	下集
Xichuan	淅川
Xihuayuan	西花园
Xia dynasty	夏代
Xiangcheng	襄城
Xiangfen	襄汾
Xiang River	湘江
Xiaocheng	笑城
Xiaojiawuji	肖家屋脊
Xiawanggang	下王岗
Xia Xian	夏县
Xikangliu	西康留
Xin’an	新安
Xin’gan	新干
Xinhe	新河
Xinnongcun	新农村
Xinzheng	新郑
Xishan	西山
Xiwo	西沃
Xiyincun	西阴村

Xuefengshan	雪峰山
Xuejiagang	薛家岗
Xushuling	蓄树岭
Yandouziwan	堰兜子湾
Yanggu	阳谷
Yangjiashan	样家山
Yangjiawan	杨家湾
Yangjiazui	样家嘴
Yangshao	仰韶
Yangshao Culture	仰韶文化
Yangzi	扬子
Yangzi River	长江
Yanjiaguangling	晏家光岭
Yangjiazui	样家咀
Yanshi	偃师
Yanshi Shang cheng	偃师商城
Yao	尧
Yaojialin	尧家林
Yaoshan	瑶山
yazhang	牙璋
Yejiamiao	叶家庙
Yellow River	黄河
Yibin	宜宾
Yichang	宜昌
Yichuan	伊川
yiji	遗迹
yingxiang	影响
Yinxiangcheng	阴湘城
Yinxintai	印信台
Yinxu	殷墟
Yishan	峄山
You Miao	有苗
Youziling	油子岭
Yu	禹
Yuanqu	垣曲
Yuan River	沅水
yuanshi	原始
Yuchisi	尉迟寺
yue	钺
Yuhang	余杭
Yujia Lake	余家湖
Yujiashan	玉架山
Yunmeng	云梦
Yunmengze	云梦泽

Yu Xian	禹县
Yuzhou	禹州
Zaolingang	枣林岗
Zaoyang	枣阳
Zengpiyan	甑皮岩
Zhanguo ce	战国策
Zhangqiu	章丘
Zhao lei	召类
Zhejiang	浙江
Zhengzhou	郑州
Zhongbaodao	中堡岛
Zhongxiang	钟祥
Zhongyuan	中原
Zhongziping	冢子坪
Zhoujiawan	周家湾
Zhufeng	朱封
Zhunge’er	准格尔
zhuo	镯
Zigui	秭归
Zi River	渍水
Zoumaling	走马岭
zun	尊

TABLES

Chapter 1

Table 1.1. Chronology of enclosures in the Middle Yangzi. The grey areas illustrate the chronologies of the various enclosed sites in the Middle Yangzi region, grouped by subregion, in relation to the Shijiahe chronology. Dark grey areas indicate (possible) periods of enclosure construction. Question mark indicate periods that await confirmation.

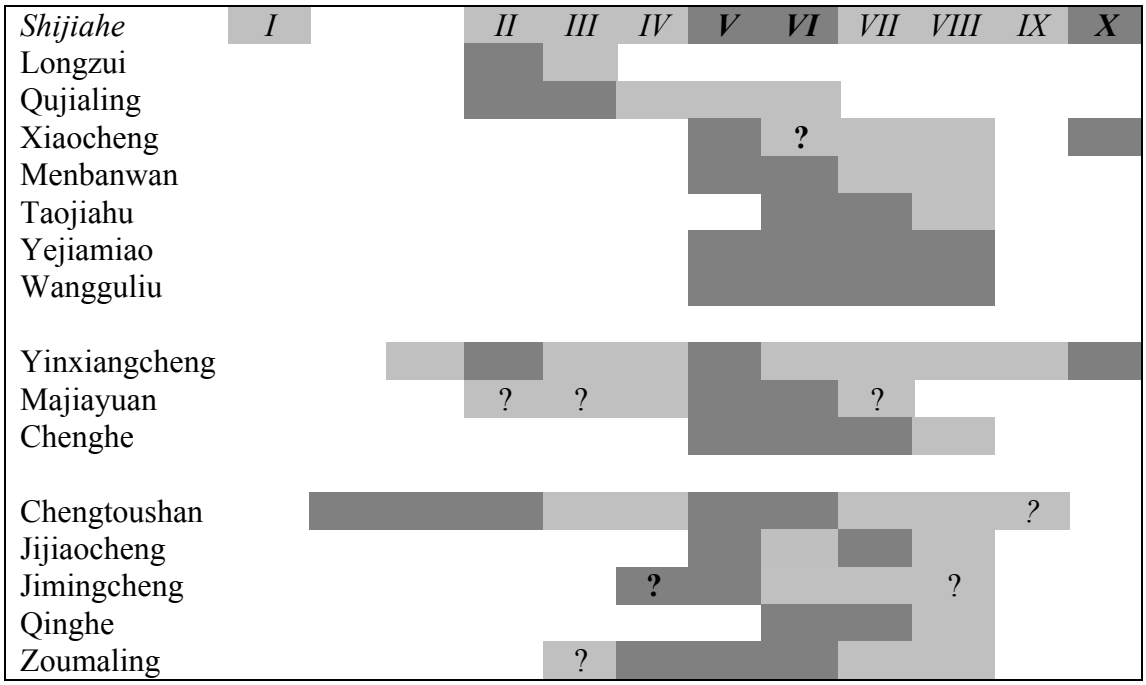


Table 1.2. Enclosed settlements in the Middle Yangzi River region. Relative dates of occupation and enclosure construction can be found in table 1.1.

Name, Location	**Size (m)**	**Area (10,000 m²)**	**Reference**
Shijiahe, Tianmen, Hubei	1000 x 1000	120	Shijiahe 1992
Longzui, Tianmen, Hubei	305 x 269	6	Longzui 2008
Zoumaling, Shishou, Hubei	370 x 300	7.8	Zoumaling 1998; Zhang Xuqiu 1994: 629-630
Chengtoushan, Li County, Hunan	310-320 (diameter)	9.6	Chengtoushan 2007a, 2007b
Jijiaocheng, Li County, Hunan	44 x 370	15	Jijiaocheng 2002
Majiayuan, Jingmen, Hubei	440 x 640 250 x 740	24	Majiayuan 1997
Chenghe, Hougang, Hubei	600-800 x 550-650	50	Chenghe 2008
Yinxiangcheng, Jiangling, Hubei	580 x 350	20	Okamura Hidenori and Zhang Xuqiu 1997; Yinxiangcheng 1997; Yinxiangcheng 1998
Menbanwan, Yingcheng, Hubei	550 x 400	20	Wang Hongxing 2003; Menbanwan 1999
Taojiahu, Gongan, Hubei	1000 x 850	67	Taojiahu 2001
Jimingcheng, Gongan, Hunan	500 x 400	15	Jimingcheng 1998
Qujialing, Jingshan, Hubei		70	Qujialing 2008
Yejiamiao, Xiaogan, Hubei		30	Liu Hui 2010
Xiaocheng, Tianmen, Hubei	250-350 x 146-305	63	Xiaocheng 2007
Wanguliu, Anlu, Hubei	700 x 350	24	Meng Huaping 2007: 51
Bashidang, Li County, Hunan			Pengtoushan yu Bashidang 2006

Table 1.3. Enclosures in eastern China from the 4th to 2nd millennium BC (October 2011).

Site	Date (of construction)	Culture	Type of enclosure	Dimensions
MIDDLE YANGZI (Hubei/Hunan)				
Bashidang, Li Xian, Hunan	5400-5100 BC		ditch, bank	3ha, asymmetrical rectangle, 200x160m; rampart 6m W from the base, 0.5-1m in extant height; ditch 3m in W from the top, 1.5m from the base, 300m artificial channel combined with a river, 1.5-2m D
Chengtoushan, Li Xian, Hunan	4000-2200? BC		ditch, later ditch and bank	8ha (inside ramparts), circular, 314x324m in diameter; rampart 5-6m in extant H; Daxi Culture: 10m in W from the base, over 2m in extant H; Qujialing Culture: 20m in W from the top, 26.8m in W from the base; ditch 35-50m in W, artificial channel combined with a natural river, 4m in depth, Daxi Culture ditch 10m in W, 1000m in length
Huachenggang, Hunan	?		ditch?	
Shijiahe, Tianmen, Hubei	early 3rd mil		bank and ditch	120ha (180h incl. enclosure), irregular rectangular with rounded corners, 1000-1200m in length, rampart 8-10m from the top, 50m in W from the base, 6m in extant H; ditch 80-100m, combined with a river
Longzui, Tianmen, Hubei	mid-4th mil		bank and ditch	6ha
Zoumaling, Shishou, Hubei	early 3rd mil		bank and ditch	7.8ha, irregular circular, 300m N-S, 370m E-W, rampart 20-27m in W, 4-5m in extant H; ditch 25-30m in W
Jijiaocheng, Li Xian, Hubei	early 3rd mil		bank and ditches	15ha (inside ramparts), irregular square with rounded corners, 370m N-S, 400m E-W, rampart 40-60m in W, 2-5m in extant H; ditch 40-70m in W
Jimingcheng, Gong'an, Hubei	early 3rd mil		bank and ditch	15ha, irregular circular, 500m N-S, 400m E-W, rampart 15m in W from the top, 2-3m in H, 30m in W from the base; ditch 20-30m in W, 1-2m in D
Yinxiangcheng, Jingzhou, Hubei	early 3rd mil		bank and ditch	20ha, rectangular with rounded corners, 500m N-S, 580m E-W, rampart 30-40m in W;
Majiayuan, Jingmen, Hubei	early 3rd mil		bank, ditch	24ha, trapezoidal with rounded corners, 640x300-400m, southern rampart 8m in W from the top, 5-6m in H, 35m in W from the base; ditch 30-50m in W, 4-6m in D
Menbanwan, Yingcheng, Hubei	early-mid 3rd mil		bank, ditch	20ha, rectangular, 550x400m, rampart 13.5-14.7m from the top, 40m at the base, 3.5m in extant H; ditch 59m in W, 1.8-2.5m in D
Taojiahu, Yingcheng, Hubei	early-mid 3rd mil		bank, ditch	67ha, irregular elliptical, 1000x850m, rampart 15-50 m in W, 0.7-3.5m in H; ditch 20-45m in W, artificial channel combined with river
Chenghe, Hougang, Hubei	3rd mil		bank, ditch	50ha
Qujialing, Jingshan, Hubei	early 3rd mil		ditch	70ha
Yejiamiao, Xiaogan, Hubei	3rd mil		bank and ditch	30ha
Wangguliu, Anlu, Hubei	3rd mil		?	24ha

Xiaocheng, Tianmen, Hubei	mid-3rd mil		bank and ditch	9.8ha
Zhangxiwan, Huangpi, Hubei	?		?	?
Hanchuan, Hubei	?		ditch	?
UPPER YANGZI				
Yufu, Wenjiang, Sichuan	?2400-2000/1800BC	Baodun	bank	40ha, hexagonal, ramparts above ground level, 280m NW, 600m S, 440m E, 370m W, rampart 15-20m in W, 2m in extant H
Gucheng, Pixian, Sichuan	?2400-2000/1800BC	Baodun	bank, ditch	32ha, rectangular, 650x550m, rampart 8-40m in W, 0.8-5m in extant H
Baodun, Xinjin, Sichuan	2700-2000BC	Baodun	bank	60ha, rectangular, 600x1000m, rampart 20-30m in W, 3-5m in extant H
Mangcheng, Dujiangyan, Sichuan	?2400-2000/1800BC	Baodun	bank	exterior enceinte 10ha, rectangular, 350m N-S, 310m E-W, exterior rampart 1-2m in H, 5-15m in extant W; interior enceinte 270 extant m W, 150m extant N, 210m extant S, interior rampart 5-20m in W, 1-3m in H
Shuanghe, Chongzhou, Sichuan	?2400-2000/1800BC	Baodun	bank, ditches	exterior enceinte over 10 or 11ha, rectangular, exterior rampart 2-3m in H, 18-30m in extant W, 325m N, 120m S, 500m E, interior rampart 18-30m in W, 2-3m in H, 270m N, 110m S, 420m E; ditch 12-20m in W, located between the two banks
Zizhu, Chongzhou, Sichuan	late 3rd mil	Baodun	bank, ditch?	exterior enceinte 20ha, square, exterior rampart 3-10m in extant W, interior rampart 400x400m, 5-25m in W, both ramparts 1-2m in extant H
MIDDLE YANGZI CONT'D				
Yuchisi, Mengcheng, Anhui		Dawenkou; also Longshan and Han finds	ditch	8ha, round, W 30m, max 4.65m D,
Gaixia, Guzhen, Anhui		late Dawenkou (construction date of enclosure), Longshan, Western Zhou, Warring States, Qin, Han period, Song	bank, ditch (from both Neolithic periods)	15ha, rectangular with rounded corners, re-used and repaired in Han
Sunjiacheng, Huaining, Anhui	from 2600BC	Zhangsidun type of Longshan	bank, no ditch found	25ha, rectangular with rounded corners, E-W 600m, N-S 300m, bank 1-3m H on inside, 2-5m H on outside, 12-20m W at base, 5-10m W at top
Zhuweicheng, Zhangzhu, Jiangxi	3700-2700 BC (Neolithic)	Neol (Fanchengdui Culture) - Eastern Zhou	bank	?
LOWER YANGZI				
Mojiaoshan, Yuhang, Zhejiang	maybe 2500 BC	late Liangzhu	bank	290ha, rectangular, W-E 1500-1700, N-S 1800-1900m, stone foundation, base W 40-60m, remaining H 4m,
Yujiashan, Yuhang, Zhejiang	3rd mil	mid-late Liangzhu	ditch	2.5ha, roughly square, 134x155m, 4.45-15.2m in W, 0.6-1.25m in D
MIDDLE YELLOW RIVER				

Xishan, Zhengzhou, Henan	3300-2800 BC	late phase of Yangshao (late Dahecun)	bank and ditch	3ha (inside rampart 1.9ha extant), circular, 180-200m in diameter, rampart 3-5m in W (11m in W from the corners), 1.75-2.5m in extant H; ditch 4-11m in W, 3-4.5m in D
Xi'an, Banpo, Shaanxi	5th or 4th mil?	Yangshao	ditch	0.3ha; 5-6m W
Jiangzhai, Lintong, Shaanxi	5th or 4th mil?	Yangshao	ditch	? 2m D
Wayaogou, Tongchuan, Shaanxi	4900-3800BC	Yangshao Culture (Banpo period)	ditch	5ha
Xiyincun, Xiaxian, Shanxi	3900-3600BC	Miaodigou Culture; Xiwangcun Culture; Miaodigou II Culture	Miaodigou Culture ditch	3ha
Dadiwan, Qin'an, Gansu	5th or 4th mil?	Yangshao + Xiwangcun cultures	Yangshao ditch	?
Hougang, Anyang, Henan	2600-2100BC	Hougang II Culture	bank	10ha, rampart 2-4m in W, 70m in extant length
Wangchenggang, Dengfeng, Henan	2400-2200 BC	Wangwan III	bank and ditch	30ha, rectangular, 600x620m,
Guchengzhai, Xinmi, Henan	2600-1900BC	Wangwan III	bank, ditch	17.65ha, rectangular, 500x353x370m, above ground rampart 9.4-40m in W, 7-16.5m in H, underground portion of rampart 60-102m in W, 10m in D; ditch 34-90m in W, 4.5m in D
Mengzhuang, Huixian, Henan	2600-2100BC	Hougang II Culture	bank, ditch	13ha, trapezoidal, 375x340m, rampart 8-10m in W from the top, 13m in W from the base, 3.5m in extant H; ditch 20m in W, 3.8-4.8m in D, trench (inside rampart) 6-8m in W, 3m in D
Pingliangtai, Huaiyang, Henan	2600-2000BC	Wangyoufang Culture	bank, ditch	3.4ha, square, 185x185m, rampart 8-10m in W from the top, 13m in W from the base, 3.5m in extant H
Haojiatai, Yancheng, Henan	2600-1900	Wangwan III	bank, ditch	3.6ha, rectangular, 220m N-S, 164m E-W, rampart 5m in W, 0.8m in extant H
Xinzhai, Xinmi, Henan	2600-1900	Wangwan III	?	?
Taosi, Xiangfen, Shanxi	2600-2000BC	early-mid Taosi Longshan	bank	270ha, rectangular, 1500m N-S, 1800m E-W, rampart 7-10m in W, adjunct enceinte 100 000sqm; smaller enceinte 560,000sqm, 1000m N-S, 560m E-W, western rampart 4.2m in W, 1.5m in extant H, underground portion of rampart 1.4m in D, 4.25m in W
Zhoujiazhuang, Jiangxian, Shanxi	2600-2000BC and maybe later	several; Longshan ditch; mid-late Taosi period; maybe abandoned after Erlitou period	ditch	20ha, E ditch 2000m long,
Wadian, Yuzhou, Henan	2100-1900BC?	late Longshan (late Wangwan III)	ditch	100ha, W ditch 210m remain, probably originally 400m, W 30m, remaining D 2.4m, S ditch 960m remain, probably originally 1000m, W 24-27m, 16-18m at bottom, remaining D 2-3m, river in E and N; totally enclosed are 40ha
Yangguangzhai, Gaoling, Shaanxi	3900-3600BC	Miaodigou (date of ditch), Banpo IV	ditch, possibly with bank	24.5ha, trapezoidal, L 1945m, W 6-9m, max 13m, D 2-4m,
Xiawanggang, Xichuan, Henan	5th or 4th mil?	Yangshao, Qujialing, Longshan, Erlitou, Western Zhou,	bank and ditch (Yangshao)	?

		Han-Wei		
Linyou, Baoji, Shaanxi	c. 2000BC	Longshan	bank	?
Puchengdian, Pingdingshan, Henan	2600-1600BC	late Longshan, early Erlitou; also Zhou finds made	Longshan: bank and ditch; Erlitou: at least bank	20ha, Longshan: 41,000sqm; Erlitou: 52,000sqm
Shiluoluoshan, Jiaxian, Shaanxi	2500BC	late Miaodigou II	bank, ditch	STONE, two enceintes, no. 1 atop hill 3ha, no. 2 at hill slope 6ha; irregularly square with rounded corners; enclosure L 1000m; ditch, 10m in W, 6.4m in D
Houzhaizimao, Wubu, Shaanxi	2500BC-?	Miaodigou II to early Longshan	hills no. 1 and 2 with stone enclosures, ditches	21ha
LOWER YELLOW RIVER				
Xiaojingshan, Zhangqiu, Shandong	6300-5400BC	Houli	ditch	5ha, L 1130m
Wangjiazhuang, Yanggu, Shandong	very late 4th mil - late 3rd mil BC	Dawenkou to Shandong Longshan	bank, ditch?	4h, rectangular, 360m N-S, 120m E-W
Xikangliu, Tengzhou, Shandong	3000 BC	Dawenkou	bank, ditch?	3.5ha, square with rounded corners, 195m N-S, 185m E-W
Huangguzhong, Yanggu, Shandong	3rd mil BC	Dawenkou to Shandong Longshan	bank, ditch?	6ha, rectangular, 400m N-S, 150m E-W
Jingyanggang, Yanggu, Shandong	2300-2000BC	Shandong Longshan	bank	38ha incl. rampart, irregular rectangle, 1150x300-400m, rampart 20-25m in W
Jiaochangpu, Chiping, Shandong	2300-2000BC	late Shandong Longshan	bank of phase I, rebuilt in phase II	16-17ha, elliptical, 470-520x320-350m; ditch 5ha, 230m W-E, 180m N-S
Wangji, Dong'e, Shandong	3rd mil BC	Shandong Longshan	bank	3.7ha, rectangular with rounded corners, 320m N-S, 120m E-W
Qianzhao, Dong'e, Shandom	3rd mil BC	Shandong Longshan	bank, ditch?	5.3ha; rectangular with rounded corners
Dawei, Chiping, Shandong	3rd mil BC	Shandong Longshan	bank, ditch?	3ha, rectangular, 200m N-S, 150m E-W
Lepingpu, Chiping, Shandong	3rd mil BC	Shandong Longshan	bank, ditch?	c. 3.5ha, square with rounded corners, 170m N-S, 200m E-W
Shangzhuang, Chiping, Shandong	3rd mil BC	Shandong Longshan	bank, ditch?	3ha +
Chengziya, Zhangqiu, Shandong	2600BC	Shandong Longshan	bank, ditch?	20ha, irregular rectangle, 540m N-S, 445m E-W, rampart 7m from the top, 7m in H, 14m in W from the base
Dinggong, Zouping, Shandong	2500-2000 BC	Shandong Longshan	bank, ditch	10-11ha, square with rounded corners, 350m N-S, 310m E-W, rampart 20m in W, 1.5-2m in extant H; ditch 3m deep

Tianwang, (Tonglin) Linzi, Shandong	2300-2000BC	mid-late Shandong Longshan	bank, ditch	17ha, rectangular with rounded corners, 450m N-S, 400m W-E, interior enceinte 13-16m in W, 3.5-4m in extant H; ditch 10m in W, 1.5-1.8m in extant depth
Bianxianwang, Shouguang, Shandong	2300-2000BC	middle phase (interior rampart) to late phase (exterior rampart) of Shandong Longshan	banks	interior enceinte 1ha, square with rounded corners, 100x100m; exterior enceinte 5.7ha, square with rounded corners, 240x240m
Dantu, Wulian, Shandong	3rd mil BC	late Dawenkou to middle Shandong Longshan	bank, ditch	Dawenkou phase: 9.5ha, rectangular, 400x300m, rampart 5m in W, 1m in H; early Shandong Longshan: 11ha, rectangular, 450x300m, rampart 10m in W, 1.5m in extant H; middle Shandong Longshan: 18ha, rectangular, 500x400m, rampart 12m in W, 1.6m in extant H; Dawenkou phase ditch 10m in W, 2.5m in depth; early Shandong Longshan ditch 20m in W, 3m in depth; middle Shandong Longshan ditch 28m in W, 3m in depth
Longlou, Tengzhou, Shandong	3rd mil BC	Shandong Longshan	bank, ditch?	2.5ha, square, 175x150m
Liangchengzhen, Rizhao, Shandong	2300-2000	Shandong Longshan	Several ditches and possible bank	site covers 100-200ha
Yaowangcheng, Rizhao, Shandong		Shandong Longshan	?	?
Tenghualuo, Lianyungang, Jiangsu	2300-2000BC	early and mid Longshan	bank, ditch	exterior enceinte: 14ha, rectangular, 435-325m, rampart 21-25m in W, 1.2 in H; interior enceinte: 4ha, square, 207x209m N-S, 190-200m E-W, rampart 14m in W, 1.2m in H; ditch surrounding exterior rampart, 7.8-8m in extant W, 0.8m in D
Fangcheng, Feixian, Shandong		Shandong Longshan	?	?
Nanying, Huangdao, Shandong		early-mid Longshan; also late Shang finds	ditch	0.8ha remaining
Pangjiazhuang, Pingdu, Shandong		Longshan	ditch	?
INNER MONGOLIA				
Laohushan, Liangcheng, IM	2500-2300 BC	Laohushan	bank	STONE, 13ha, irregular triangle, 600m N-NE, 405m W-SW, rampart 0.3-2m in W with two short portions 5m in W, 0.3-0.7m in extant H, earthen foundation 1.5-2m in W, 1m in extant H
Xibaiyu, Liangcheng, IM	2500-2300 BC	Laohushan	bank	STONE, 9ha, irregular triangle, 380m N-NE, 480m W-SW, rampart 0.7-5m in W, 0.1-0.5m in etxant H, earthen foundation 1.5m in W, 1-2.5m in extant H
Bancheng, Liangcheng, IM	2500-2300 BC	Laohushan	bank	STONE, 6.2ha, half circular, 310m N-S, 200m E-W, rampart 0.5-0.6m in W, 0.3-0.5m in extant H, earthen foundation 2-5m in W
Damiaopo, Liangcheng, IM	2500-2300 BC	Laohushan	bank	STONE, 25ha?, rampart 100m in extant length, 0.4m in W, 0.4m in extant H
Yuanzigou, Liangcheng, IM	2500-2300 BC	Laohushan	?	?

Weijun, Baotou, IM	2800-2500 BC	Laohushan (Ashan Culture)	bank	STONE, 0.8ha in each zone, irregular, 3 zones, eastern zone 65x120m, 1500m E-W
Ashan, Baotou, IM	2800-2500 BC	Laohushan (Ashan Culture)	bank	STONE, 5ha, irregular, 2 zones, eastern zone 260x120m, western zone 240x50-120m
Xiyuan, Baotou, IM	2800-2500 BC	Laohushan (Haishengbuliang)	bank	STONE, irregular rectangle, 150x90m
Shamujia, Baotou, IM	2800-2500 BC	Laohushan (Ashan Culture)	bank	STONE, size? 2 zones, eastern zone 70x70m, western zone 80x60m
Heimaban, Baotou, IM	2800-2500 BC	Laohushan (Ashan Culture)	bank	STONE, 2ha, 2 zones, eastern zone 110x70m
Natai, Baotou, IM	2800-2500 BC	Laohushan (Ashan Culture)	bank	STONE, 80x90m
Zhaizita, Zhun'geer, IM	2800-2500 BC	Laohushan (Ashan Culture)	bank	STONE, 5ha, irregular rectangular, 290x120-175m
Zhaizishang, Zhun'geer, IM	2800-2500 BC; c. 2000 BC	Laohushan (Haishengbuliang); Dakou I Culture	bank, ditch	STONE, 3ha
Xiaoshawan, Zhun'geer, IM	2800-2500 BC	Laohushan (Ashan Culture)	bank	STONE, 0.4ha, two ramparts, no. 1: 37m in length, 2.9m in W from the top, 3.3m in W from the base, 0.7m in extant H; no. 2: 41m in length, 3.5m in W from the top, 4.2m in W from the base, 1.6 in extant H
Baicaota, Zhun'geer, IM	3300-2800 BC	Laohushan (Haishengbuliang)	bank	STONE, size? 240 in extant length, rampart 0.85-0.9m in W, 0.85-0.95m in extant H
Houchengzui, Qingshuihe, IM	2800-2500 BC	Laohushan	bank	STONE, 40ha?, rampart 0.8-1.2m in W, 0.5m in extant H
Maluta, Qingshuihe, IM	2800-2500 BC	Laohushan (Ashan Culture)	bank	STONE, 4ha, 130m extant in N, 92m extant in S
Xinglongwa, Aohanqi, IM	6200-5400	Xinglongwa	ditch	3ha, 2m W, round,
Baiyinchanghan, Linxi, IM	6200-5400	Xinglongwa	two ditches	3ha, enclosed area 1ha, 1m W,
Xitai, Aohanqi, IM		Hongshan	ditch	?, irregular rectangular
BRONZE AGE				
Wucheng, Jiangxi	c. 1300 BC	Wucheng	ditch	40ha, inside encl. 61.3ha, ditch 6.5m W, 3m D,
Dongxiafeng, Xiaxian, Shanxi	around 1600BC	Miaodigou II, Erlitou, Erligang	bank and ditch (early Shang)	25ha
Yuanqu, Shanxi	1600-1400BC	Lower to Upper Erligang	bank and ditch	13.3ha
Shixianggou, Yanshi, Henan	1600-1400BC	early Shang	bank and ditch	190ha
Zhengzhou, Henan	1600-1400BC	Erligang	bank; inner bank; outer bank (parts of southern and western sections left)	2000ha
Panlongcheng, Huangpi, Hubei	1600-1400BC	Erlitou, Erligang (encl.)	inner bank with ditch, and (possible) outer bank (or dike)	inner 7.54ha
Fucheng, Jiaozuo, Henan	1600-1400BC	Erligang	bank	?

Huanbei, Anyang, Henan	maybe 1400BC	Longshan-late Shang; date of enclosure?	bank	400ha
Anyang	1300-1050BC	late Shang	no enclosure	
Erlitou	1800-1600	Erlitou	no enclosure	
Sanxingdui, Guanghan, Sichuan	1200-900BC	early Shang to early Zhou	Bank, ditch?	300ha
Wangjinglou, Xinzheng, Henan	1800-1400	Erlitou (phase 2, also phase 3 and 4 finds), Erligang (xiaceng 1 to shangceng)	bank, ditch (Erlitou), interior and exterior bank and ditch (Erligang)	37ha (Erligang), outer enclosure 168ha (Erligang date, construction may have begun in Erlitou),
Dongbajia, Chifeng, IM	2300-1600BC	Lower Xiajiadian	bank	STONE; irregular rectangle
Xindian, Chifeng, IM	2300-1600BC	Lower Xiajiadian	bank	STONE
Xishangen, Chifeng, IM	2300-1600BC	Lower Xiajiadian	bank	STONE; 1ha
Dadianzi, Aohanqi, IM	2300-1600BC	Lower Xiajiadian	bank	STONE; 6ha, rectangular with rounded corners
Sanzuodian, Chifeng, IM	2300-1600BC	Lower Xiajiadian	?	?
43 stone-enclosed sites discovered in 1964 survey, Chifeng, IM	incl. Dongbajia, Xindian, Sanzuodian,	Lower Xiajiadian (enlcosure dates); some with Upper Xiajiadian finds; some W States-Han finds;	bank	max 10ha; average 1-2ha

Table 1.4. Site narrative.

Phase	General developments	Enclosure 'interior'	Enclosure 'exterior'
I	*Tucheng* pottery sherds – first inhabitation?	N/A	N/A
II III	*Tanjialing* 23 pit burials, 8 urn burials, 23 pits		
IV	*Tanjialing* pits	N/A	N/A
V	*Dengjiawan* Cemetery and other features - re-settlement **Construction of** - re-routing of rivers - differently-coloured layers of soil - enclosure construction across the Middle Yangzi	**bank, ditch and** *Dengjiawan* Cemetery (11 pit, 2 urn burials) - establishment of stable burial customs until phase VII Tube-shaped pottery and other religious practices at *Dengjiawan* *Tanjialing* 6 buildings (residential activities) Other occupied loci: *Xushuling* *Huangjinling?* *Sanfangwan*	**mounds** *Xiaojiawuji* No burials 2 pits, 1 building Occupied loci: *Jingshanpo* *Wangjiatai* *Luojiabailing* *Xiaojiawuji* *Changmenchong* *Guanshan*
VI		Bank constructed in southeastern corner *Dengjiawan* 41 pit burials, 13 urn burials Continuities of religious practices at *Dengjiawan* *Tanjialing*: buildings Other occupied loci: *Xushuling* *Huangjinling?* *Sanfangwan*	*Xiaojiawuji* 37 pit burials, 5 urn burials Occupied loci: *Jingshanpo* *Wangjiatai* *Luojiabailing* *Xiaojiawuji* *Changmenchong* *Guanshan*
VII		*Dengjiawan* 42 pit burials, 8 urn burials Red pottery figurines	*Xiaojiawuji (phase VII=VIII)* 23 pit burials, 9 urn burials, 6 buildings, 409 pits pits, 22 ditches, 1 well, 1 road, 2 kilns

		Tanjialing Residential activities Red pottery cups at *Sanfangwan* Other occupied loci: *Xushuling* *Huangjinling*	Other occupied loci: *Jingshanpo* *Tianjiachong* *Hujiawan* *Zhoujiawan* *Yangjiaguangling* *Yangjiaxinchang?* *Maojialing* *Wangjiatai?* *Taishang?* *Aojiaquan* *Yangjiazui* *Beidi* *Xinhe* *Luojiabailing* *Yangjiawan* *Changmenchong* *Shibanchong* *Tandouziwan* *Tanjiaxiang* *Guboshu?* *Yinxintai*
VIII	- phasing out of pit burials - dominance of urn burials - residential etc activities encroaching upon bank - more loci beyond ditch settled	*Dengjiawan* 1 pit burial, 15 urn burials Red pottery figurines 4 sets of pointed-bottom vessels Red pottery figurines *Tanjialing* Residential activities Red pottery cups at *Sanfangwan* Other occupied loci: *Xushuling* *Huangjinling*	*Xiaojiawuji (phase VII=VIII)* 23 pit burials, 9 urn burials, 6 buildings, 409 pits pits, 22 ditches, 1 well, 1 road, 2 kilns 7 sets of pointed-bottom vessels Other occupied loci: *Jingshanpo* *Tianjiachong* *Hujiawan* *Zhoujiawan* *Yangjiaguangling* *Yangjiaxinchang?* *Maojialing* *Wangjiatai?* *Taishang?* *Aojiaquan* *Yangjiazui* *Beidi* *Xinhe* *Luojiabailing* *Yangjiawan* *Changmenchong* *Shibanchong* *Tandouziwan* *Tanjiaxiang* *Guboshu?* *Yinxintai*

	Abandonment **- also enclosures elsewhere in the Middle Yangzi**	**Abandonment**	**Abandonment**
IX	Re-settlement (Re-)Apperance of jade as burial good / ornaments **Abandonment**	Occupied loci: *Xushuling* *Sanfangwan* - residential activities?	*Xiaojiawuji* 77 urn burials *Tucheng* 1 urn burial *Husanjia* 1 urn burial *Tanjiaxiang* Several urn burials Other occupied loci: *Tandouziwan* *Panjialing* *Husanjia* *Taishang* *Aojiaquan* *Beidi* *Xinhe* *Luojiabailing* *Xinnongcun*

Table 1.5. Frequently cited texts mentioning the San Miao.

Text	Content	Probable compilation date	Reference
Shangshu (Documents from Antiquity)	Addresses by kings of their ministers	Some parts date to the Spring and Autumn period (770-476 BC)	Shaughnessy 1993
Guo yu (Discourses of the State)	Recounts the sayings of rulers and important persons from a variety of Spring and Autumn period states	4th century BC	Cheung *et al.* 1993
Han Feizi (Master Han Fei)	Theory of state power	Lifetime of Han Fei (c. 280-233 BC)	Levi 1993
Lüshi chunqiu (Spring and Autumn of Mr. Lü)	Miscellany	c. 239 BC in Qin State	Carson and Loewe 1993
Mozi	On 5th century BC Mohism	Before 2nd century BC (end of Mohism)	Graham 1993
Huainanzi (The Masters of Huainan)	Collections of essays on scholarly debates, incl. ancient myths, at court before 139 BC	c. 139 BC	Le Blanc 1993
Shi ji (Records of the Historian)	History of China from mythical times to the day of the author, Sima Qian	Han period, Sima Qian's lifetime (?145-?86 BC)	Hulsewé 1993
Li ji (Records of Ritual)	Ritualist's anthology of ancient usages, prescriptions, definitions and anecdotes	1st century BC	Riegel 1993
Zhanguo ce (Discourses of the Warring States)	Description of the Warring States, 475-221 BC	Compiled from earlier materials during the end of the first century BC	Tsien 1993

Chapter 2

Table 2.1. Chronology of Shijiahe integrating the loci of Tanjialing, Dengjiawan and Xiaojiawuji as given in Shihe Kaogudui 1990.

Period	Tanjialing	Dengjiawan	Xiaojiawuji
1	IIIT1106(6) M13 M17 M75?		
2	IIIT1106(5)b IIIT1106(5)c M3 M4 M7 M9 M14 M15 M75?		
3	IIIT1106(4)a IIIT1106(4)b IIIT1106(4)c IIIT1106(5)a H15 H22		
4	IIIT1106(3)b IIIT1106(3)c H18 M75?	AT506(5) AT203(4) M75 H11 H72 H79 H88 H89 H90 H94	
5	H23	M2 M54 M58 M72 H5	
6		AT307(5) AT409(3) H30 H41 H47 H48 M17 M18 M23 M40	M7
7		AT304(2) H32 H54 H67 H69 M32	AT1(3)c H12 H32
8			T2(2) T5(2) T7(2) H1 H11 H18

			H25 HG2(1)

Table 2.2. Chronology of Shijiahe.

Conventional archaeological cultures Phases by locus	Cheng-beixi 6th millennium BC	Daxi 4th millennium BC			Qujialing 3000 -		Shijiahe 2500? BC		Post-Shijiahe c. 2000 BC	Western Zhou c. 1050 – 771 BC	Eastern Zhou 770 – 221 BC
Shijiahe	**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X**	**XI**
Tanjialing		I	II	III	IV	V	VI				
Dengjiawan					I	II	III	IV a+b			V
Xiaojiawuji					I	II	III	IV	V		VI
Tucheng	I						?		II	III	
Sanfangwan					?	I	II	III	IV		
Luojiabailing						I	II	II	III		
Survey (all loci after Shijiahe 1992: 275)					I	I	II	II	III		

Table 2.3. Radiocarbon dates for Shijiahe calibrated with OxCal.

Uncalibrated Date BP (5,568 half-life)	Calibrated Date Range BC	Laboratory No.	Reference	Material	Excavated feature	Phase
5039±80	3974 BC (95.4%) 3661 BC	BK87901	Yuan Sixun *et al.* 1994: 90	Charcoal	Dengjiawan, T21(4)	Shijiahe V/VI
4811±80	3763 BC (95.4%) 3374 BC	BK87092	Yuan Sixun *et al.* 1994: 90	Charcoal	Dengjiawan, H9	Shijiahe V
4379±75	3336 BC (95.4%) 2887 BC	BK90141	Beijing Daxue Kaoguxi Tan Shisi Nian Shiyanshi 1996: 92	Charcoal	Xiaojiawuji, H430	Shijiahe VI
4427±80	3342 BC (95.4%) 2912 BC	BK89045	Xiaojiawuji 1999: 348	Charcoal	Xiaojiawuji, H42	Shijiahe VII/VIII
4282±100	3327 BC (95.4%) 2580 BC	BK90142	Xiaojiawuji 1999: 348	Charcoal	Xiaojiawuji, H434	Shijiahe VII/VIII
4132±100	2917 BC (95.4%) 2467 BC	BK89037	Xiaojiawuji 1999: 348	Charcoal	Xiaojiawuji, H42	Shijiahe VII/VIII
4015±70	2864 BC (95.5%) 2309 BC	BK89038	Xiaojiawuji 1999: 348	Charcoal	Xiaojiawuji, H98	Shijiahe VII/VIII

Table 2.4. Radiocarbon dates from other Middle Yangzi sites. Calibrated with OxCal.

	Uncalibrated Date BP (5,568 half-life)	Calibrated Date Range BC	Laboratory No.	Reference	Material	Excavated feature
1	5820±80	4881 BC (95.4%) 4488 BC	BK87013	Yuan Sixun *et al.* 1994: 93	Charcoal	Bianfan site, T30(8)
2	5175±80	4232 BC (95.4%) 3791 BC	BK87010	Yuan Sixun *et al.* 1994: 93	Charcoal	Bianfan site, T47(2)A
3	4951±160	4223 BC (95.4%) 3368 BC	ZK2398	Qujialing 1992:94	Charcoal	Qujialing site, T5(5)surface
4	4830±140	3964 BC (95.4%) 3195 BC	ZK2397	Qujialing 1992: 94	Charcoal	Qujialing site, 89M2 bottom
5	4369±200	3628 BC (95.4%) 2492 BC	ZK430	Guo Weimin forthcoming	Charcoal	Qinglongquan site, F1D2
6	4213±150	3339 BC (95.4%) 2461 BC	ZK429	Guo Weimin forthcoming	Charcoal	Qinglongquan site, T13(6)
7	4097±95	2904 BC (95.4%) 2411 BC	ZK91	Guo Weimin forthcoming	Charcoal	Huanglianshu site, F11 layer 2
8	4073±160	3082 BC (95.4%) 2143 BC	ZK125	Guo Weimin forthcoming	Rotten wood	Qujialing site, late period 2
9	4024±100	2876 BC (95.4%) 2296 BC	ZK124	Guo Weimin forthcoming	Charcoal	Qujialing site, later period 1
10	4466±180	3637 BC (95.4%) 2678 BC	ZK551	Guo Weimin forthcoming	Charcoal	Qilihe site, F8 below south wall
11	4262±200	3499 BC (95.4%) 2310 BC	ZK549	Guo Weimin forthcoming	Charcoal	Qilihe site, IT7A(3)
12	4252±120	3329 BC (95.4%) 2494 BC	ZK552	Guo Weimin forthcoming	Charcoal	Qilihe site, F8 below northern platform
13	4010±90	2872 BC (95.4%) 2292 BC	ZK550	Guo Weimin forthcoming	Charcoal	Qilihe site, IT7B(4)
14	3893±120	2852 BC (95.4%) 2028 BC	BK84070	Guo Weimin forthcoming	Charcoal	Jinaohe site, H2
15	3777±120	2566 BC (95.4%) 1890 BC	BK84072	Guo Weimin forthcoming	Charcoal	Jinaohe site, H1
16	3845±140	2849 BC (95.4%) 1907 BC	BK87071	Guo Weimin forthcoming	Charcoal	Chadianzi site, H21
17	3748±85	2459 BC (95.4%) 1947 BC	BK84066	Guo Weimin forthcoming	Charcoal	Chadianzi site, T1(5)

18	3660±85	2291 BC (95.4%) 1775 BC	BK84052	Guo Weimin forthcoming	Charcoal	Shibanxiangzi site, T11(3)
19	3718±130	2475 BC (95.4%) 1769 BC	BK84069	Guo Weimin forthcoming	Charcoal	Chadianzi site, H18

Chapter 4

Table 4.1. Pit and urn burials at Dengjiawan and Xiaojiawuji.

	Dengjiawan		Xiaojiawuji	
	Pit burials	Urn burials	Pit burials	Urn burials
Shijiahe V	11	2	0	0
Shijiahe VI	41	13	37	5
Shijiahe VII	42	8	23	9
Shijiahe VIII	1	15		
Shijiahe IX	0	0	0	77

Table 4.2. Burials with and without *ercengtai* at Dengjiawan and Xiaojiawuji.

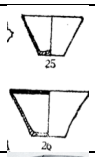
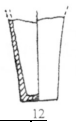
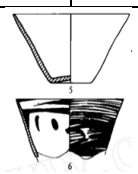
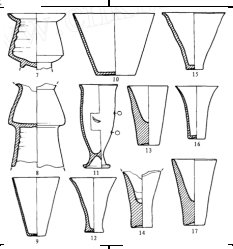
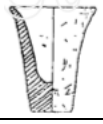
	With *ercengtai*	%	Without *ercengtai*	%
Shijiahe V	0	0	11	100
Shijaije VI (Dengjiawan)	14	34.2%	27	65.8%
Shijiahe VI (Xiaojiawuji)	7	19%	30	81%
Shijiahe VII (Dengjiawan)	13	32.5%	29	67.5%
Shijiahe VII (Xiaojiawuji)	4	17%	19	82%

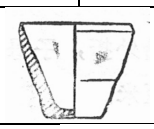
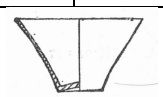
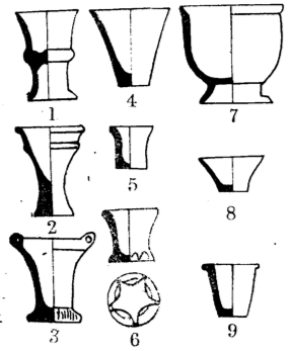
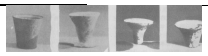
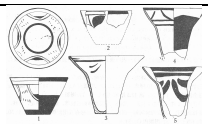
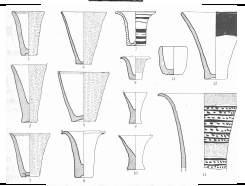
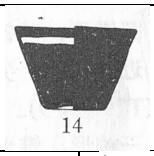
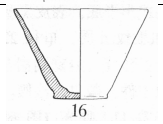
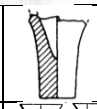
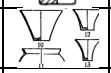
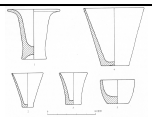
Table 4.3. Body treatment at Dengjiawan and Xiaojiawuji.

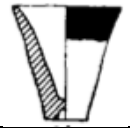
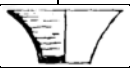
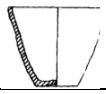
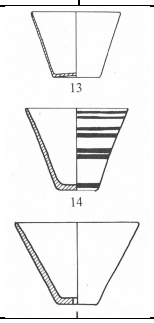
	Primary	%	Secondary	%	Unknown	%
Shijiahe V	8	73%	1	0.9%	2	18.1%
Shijiahe VI (Dengjiawan)	19	46.3%	11	26.8%	12	29.3%
Shijiahe VI (Xiaojiawuji)	11	29.7%	15	40.5%	11	29.7%
Shijiahe VII (Dengjiawan)	12	30.2%	10	23.6%	20	46.5%
Shijiahe VII (Xiaojiawuji)	4	17.4%	15	65.2%	4	17.4%

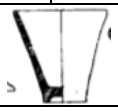
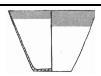
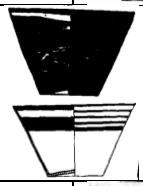
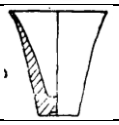
Chapter 5

Table 5.1. Relative chronology of sites with red pottery cups. Question marks question whether cups could be dated to this phase based on the culture-historical attributions found in the reports. The table and accompanying distribution maps are based on material that was accessible by end of August 2011.

	Daxi	Qujialing	Qujialing	Shijiahe	Shijiahe	Post-Shijiahe	Sources and remarks
Shijiahe phases	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	
Eastern Han River							
Shijiahe							
Dengjiawan		X	X	X	X		See figs 4.12, 4.14
Xiaojiawuji		X	X	X	X	X	See figs 4.13, 4.15, 4.16
Sanfangwan				X	X	X?	See fig. 4.17
Other sites							
Youziling							Youziling 1994: 875, fig. 10:25-26
Qujialing				X?			Qujialing 1965: 34, fig. 24:3, pls 39, 40, 41
Liuhe							Liuhe 1987: 17, fig. 15:7-8; 22, fig. 18:10
Taojiahu							Taojiahu 2001: 74, fig. 5:12
Xiaocheng							Xiaocheng 2007: 477, fig. 9:5-6; 481, fig. 14:9-17
Xihuayuan							Xihuayuan 1991: 16, fig. 2:10; 18, fig. 3:1; 19, fig. 4:18

	Daxi	Qujialing	Qujialing	Shijiahe	Shijiahe	Post-Shijiahe	Sources and remarks
Shijiahe phases	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	
Middle Han River							
Xiawanggang							Xiawanggang 1989: 196, fig. 195:7; 225, fig. 220:8; 257, fig. 249:5
Xiaji							Xiaji 1989: 7, fig. 11
Huanglianshu							Huanglianshu 1990: 37, fig. 39:8-11; 56, fig. 59:8, 10, 12
Qinglongquan							Qinglongquan yu Dasi 1991: 62, fig. 54 :16 ; 87, fig. 75 ; 119, fig. 101
Dasi							Qinglongquan yu Dasi 1991: 180, fig. 142:14; 187, fig. 145:16
Taishanmiao							Taishanmiao 2001: 9, fig. 11:2
Caojialou							Caojialou 1988 : 69, fig. 16 :10, 12, 13
Luanshitan						X?	Luanshitan 1986: 593, fig. 11:9
Qilihe							Qilihe 2008: 114, fig. 82; 161, fig. 113; 217, fig. 155

	Daxi	Qujialing	Qujialing	Shijiahe	Shijiahe	Post-Shijiahe	Sources and remarks
Shijiahe phases	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	
Northeastern Hubei							
Jinluojia							Jinluojia 1992: 6, fig. 5:8
Tucheng							Early-mid Longshan Tucheng 1986: 6, fig. 5:23-26
Sushangang							Sushangang 1990: 454, fig. 14:18; 468, fig. 20:33
Lüwangcheng							Lüwangcheng 1990: 35, fig. 7:24
Southeastern Hubei							
Yaojialin							Yaojialin 1983: 9, fig. 8:18
Northwest of Dongting Lake							
Zoumaling							Zoumaling 1998: 33, fig. 20:4, 30, fig. 14:7
Chengtoushan							Chengtoushan 2007a: 575, fig. 556:13-16
Chegushan							Chegushan 1986: 13, fig. 14:1
Huachenggang							Huachenggang 1988: 455, fig. 29:5; 463, fig. 35:8
Jijiaocheng						X?	Jijiaocheng 2002: 66, fig. 12:11
Upper/Middle Yuan River							
Gaokanlong							Gaokanlong 1992: 319, fig. 18:9

	Daxi	Qujialing	Qujialing	Shijiahe	Shijiahe	Post-Shijiahe	Sources and remarks
Shijiahe phases	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	
Middle and lower Xiang River and Dongting south bank							
Daiziping							Daiziping 1986: 68, fig. 3:5; He Jiejun 2004: 283
Western Jianghan plain							
Zhongbaodao							Chaotianzui yu Zhongbaodao 2001: 167, fig. 52:6; 203, fig. 73:5; 232, fig. 90:2
Guanmiaoshan							Guanmiaoshan 1983: 26, fig. 10:14; 1981: 296, fig. 7:1
Qingshuitan							Qingshuitan 1983: 14, fig. 17:7
Jinaohe							Chengbeixi 2001: 192, fig. 124:1-2
Yinxiangcheng							Okamura Hidenori and Zhang Xuqiu 1996: pl. IV:4
Baimiao							Baimiao 1996: 7, fig. 8:7
Jingnansi							Jingnansi 1989: 683, fig. 5:10

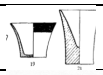
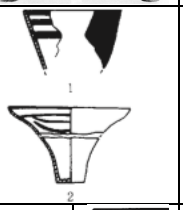
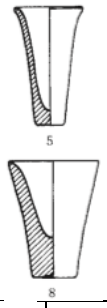
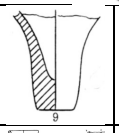
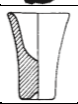
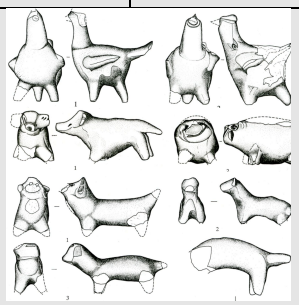
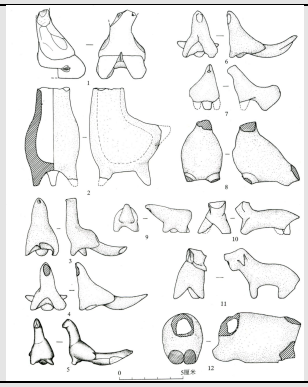
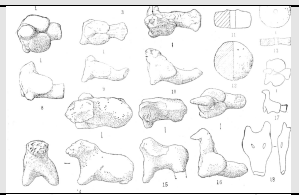
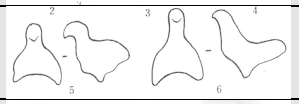
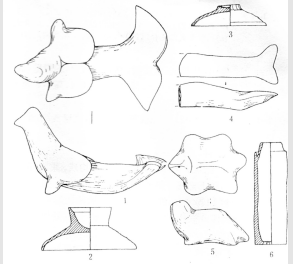
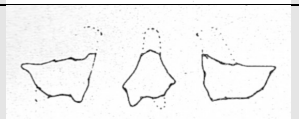
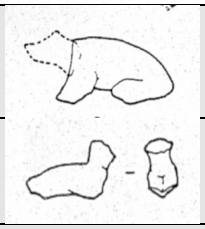
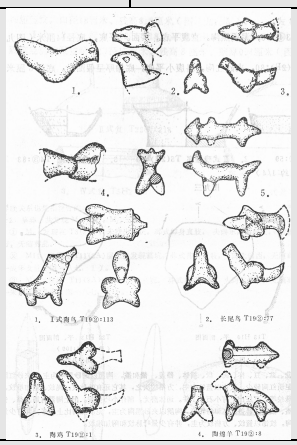
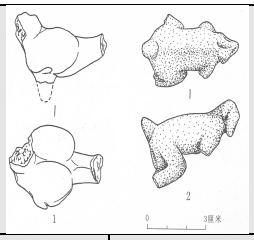
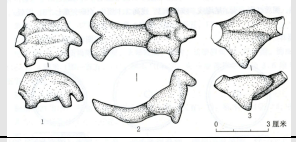
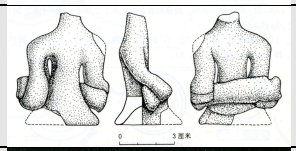
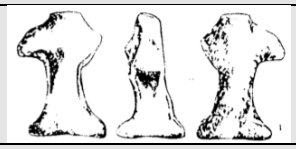
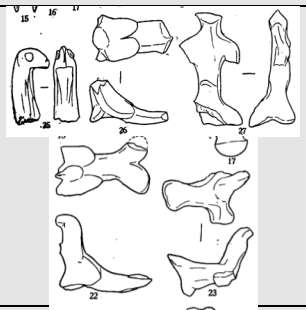
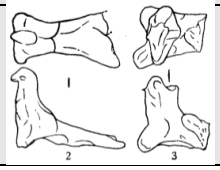
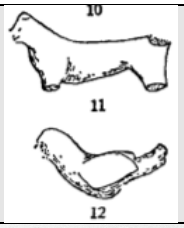
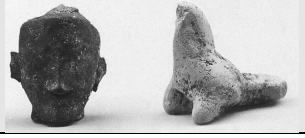
	Daxi	Qujialing	Qujialing	Shijiahe	Shijiahe	Post-Shijiahe	Sources and remarks
Shijiahe phases	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	
Non-Middle Yangzi sites							
Henan Yu Xian Gushuihe							Western Henan 1978: 29, fig. 8:19, 21
Henan Shaanxian Miaodigou							Miaodiqou yu Sanliqiao 1959: pl. 67:1-3
Henan Lingbao Jiankou							Han Jianye 2002: 68, fig. 3:1-2
Shanxi Yuanqu Gucheng Dongguan							Han Jianye 2002: 68, fig. 3:3, 5, 8
Henan Xin'an Zhongziping							Huanghe Xiaolangdi 1999: 357, fig. 269:9
Henan Qiyuan Changquan							Huanghe Xiaolangdi 1999: 72, fig. 62:1, 6
Anhui Mengcheng Yuchisi							Han Jianye 2002 : 68, fig. 3 :6
Henan Zhengzhou Dahecun							Dahecun 1996: 116, fig. 7 :17
Henan Xiangcheng Taiwang							Han Jianye 2002: 68, fig. 3:7
Henan Xin'an Xiwo							Han Jianye 2002: 68, fig. 3:9; Huanghe Xiaolangdi 1999: 406, fig. 316:11

Table 5.2. Relative chronology of sites with pottery figurines. Question marks question whether figurines could be dated to this phase based on the culture-historical attributions found in the reports. The table and accompanying distribution maps based on material that was accessible by end of August 2011.

	Sites by area	Qujialing		Shijiahe		Post-Shijiahe	References
	Shijiahe phasing	**V**	**VI**	**VII**	**VIII**	**IX**	
	Eastern Han River						
1	*Shijiahe*						
	Dengjiawan			X	X		See figs 4.36, 4.37, 4.38, 4.39
	Xiaojiawuji						Xiaojiawuji 1999: 216, fig. 164, 217, fig. 166, 219, fig. 167, 205, fig. 200
	Luojiabailing					X?	Luojiabailing 1994: 221, fig. 21:8-10, 14-18
	Guanpingyan					X?	Tianmen 1996: 50, fig. 2:5-6
	Shibanchong					X?	Tianmen 1996: 63, fig. 11:1, 4, 5
	Sanfangwan						Shijiahe 1992: 227, fig. 12
	Tandouziwan						Shijiahe 1992: 247, fig. 32
	Maojialing						Shijiahe 1992: 262, fig. 50

	Sites by area	Qujialing		Shijiahe		Post-Shijiahe	References
	Shijiahe phasing	**V**	**VI**	**VII**	**VIII**	**IX**	
	Others						
2	Qujialing	X	X				See fig. 4.41
3	Xihuayuan						Xihuayuan yu Miaotaizi 1993: 62, fig. 95:1-5; 113, fig. 184
	Middle Han River						
4	Xiawanggang						One bird dated to Yangshao Culture, but could be later Xiawanggang 1989: 52, fig. 48:9
5	Luanshitan						Luanshitan 1986: 593, fig. 11:7-8
6	Qilihe						Qilihe 2008: 132, fig. 96:6
	Dongting NW bank						
7	Huachenggang						Huachenggang 1983: 463, fig. 35:10

8	Chengtoushan						Qujialing Culture attribution unconvincing Chengtoushan 2007a: 592, fig. 569:5; 648, fig. 607
9	Dagutai				X		Jinshi 1990: 19 [not illustrated]
	Sites by area	Qujialing		Shijiahe		Post-Shijiahe	References
	Shijiahe phasing	**V**	**VI**	**VII**	**VIII**	**IX**	
	Western Jianghan Plain						
10	Chadianzi						Chengbeixi 2001: 224, fig. 157
11	Wangjiadu						Chengbeixi 2001: 248, fig. 177
12	Shibanxiangzi						Chengbeixi 2001: pl. 78:7-8
13	Jijiahu					X	
14	Baimiao						Baimiao 1994: 29, fig. 11
	Non-Middle *Yangzi River sites*						
15	Henan Ruzhou (Linru) <u>Meishan</u>						Meishan 1982: 440, fig. 12:25-27, 454, fig. 22:22, 23
16	Henan Ruzhou <u>Lilou</u>						Lilou 1994: 91, fig. 27 :2,3

17	Henan Yichuan <u>Mahuiying</u>						Mahuiying 1983 : 1039, fig. 2:11, 12
18	Henan Yuzhou <u>Wadian</u>						Fang Yanming 2009: 37

ILLUSTRATIONS

Chapter 1



Figure 1.1. Locations of Shijiahe and other sites mentioned in Chapter 1.

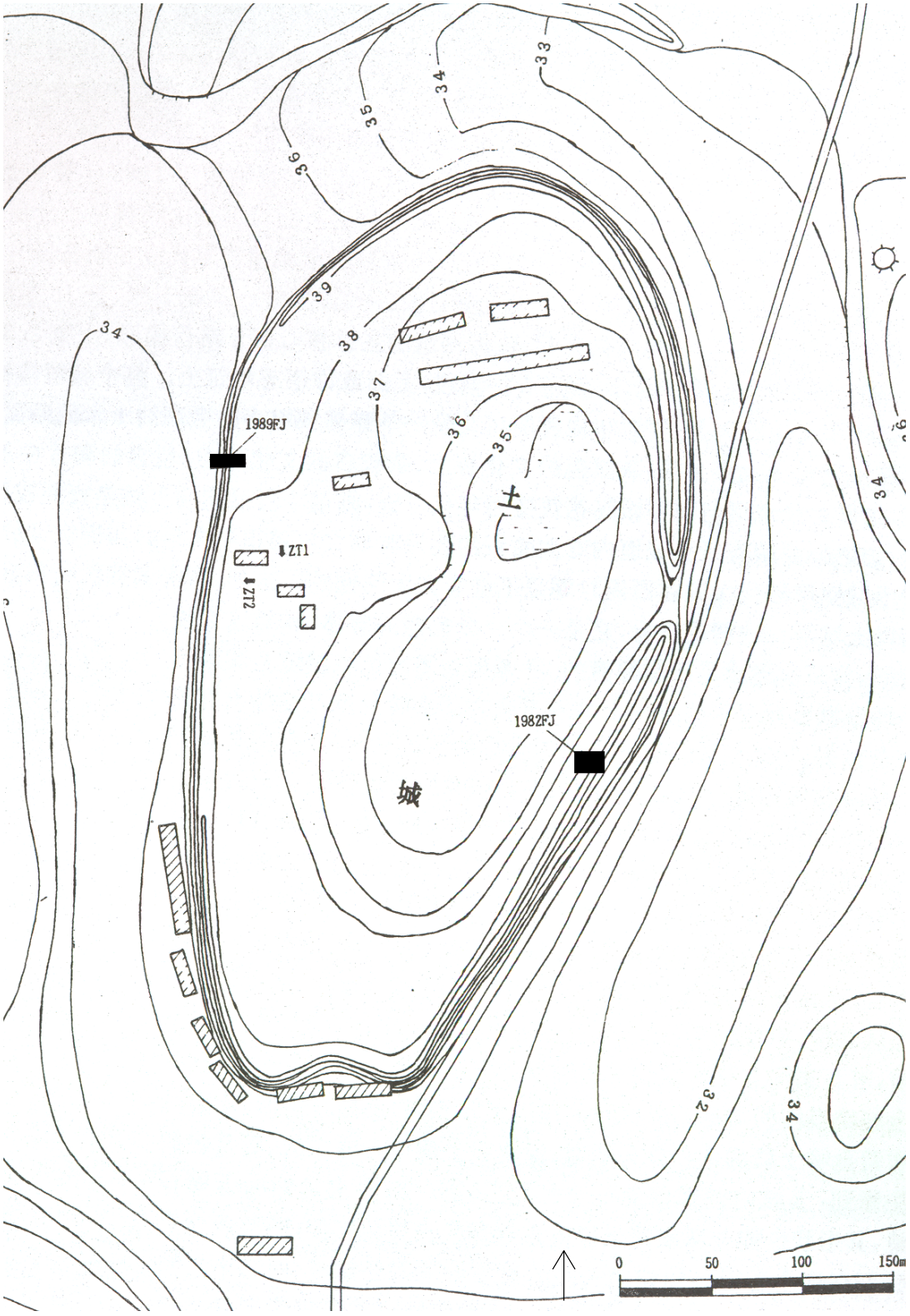


Figure 1.2. The locus of Tucheng. The black rectangles mark excavatesd areas. After Shijiahe 1992: 237, fig. 21.



Figure 1.3. View from Sanfangwan toward Tanjialing across rice fields, Shijiahe. Photo by author, July 2009.

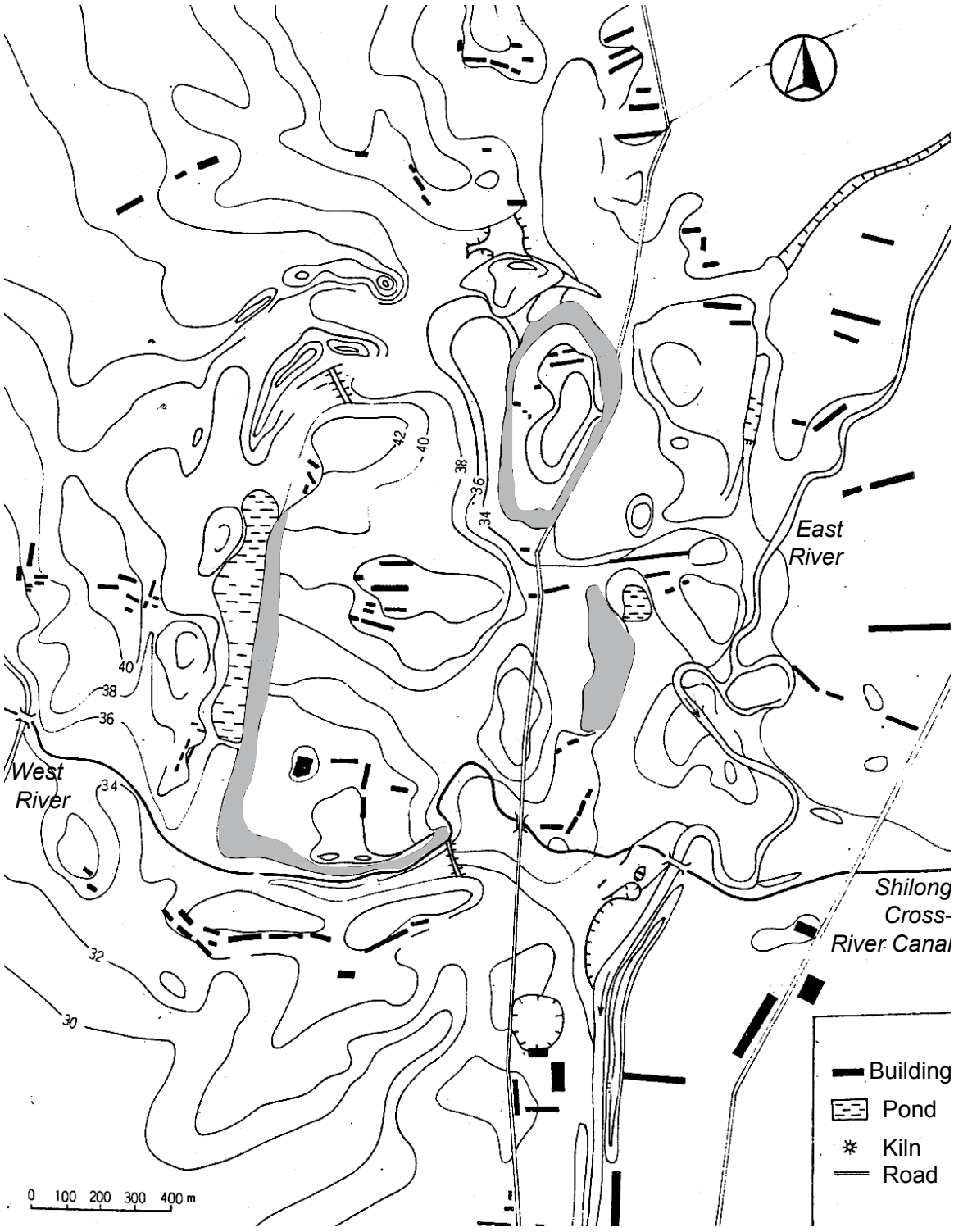


Figure 1.4. The enclosures at Shijiahe. The grey areas mark the banks of Tucheng and Shijiahe. After Shijiahe 1992: 218, fig. 3.

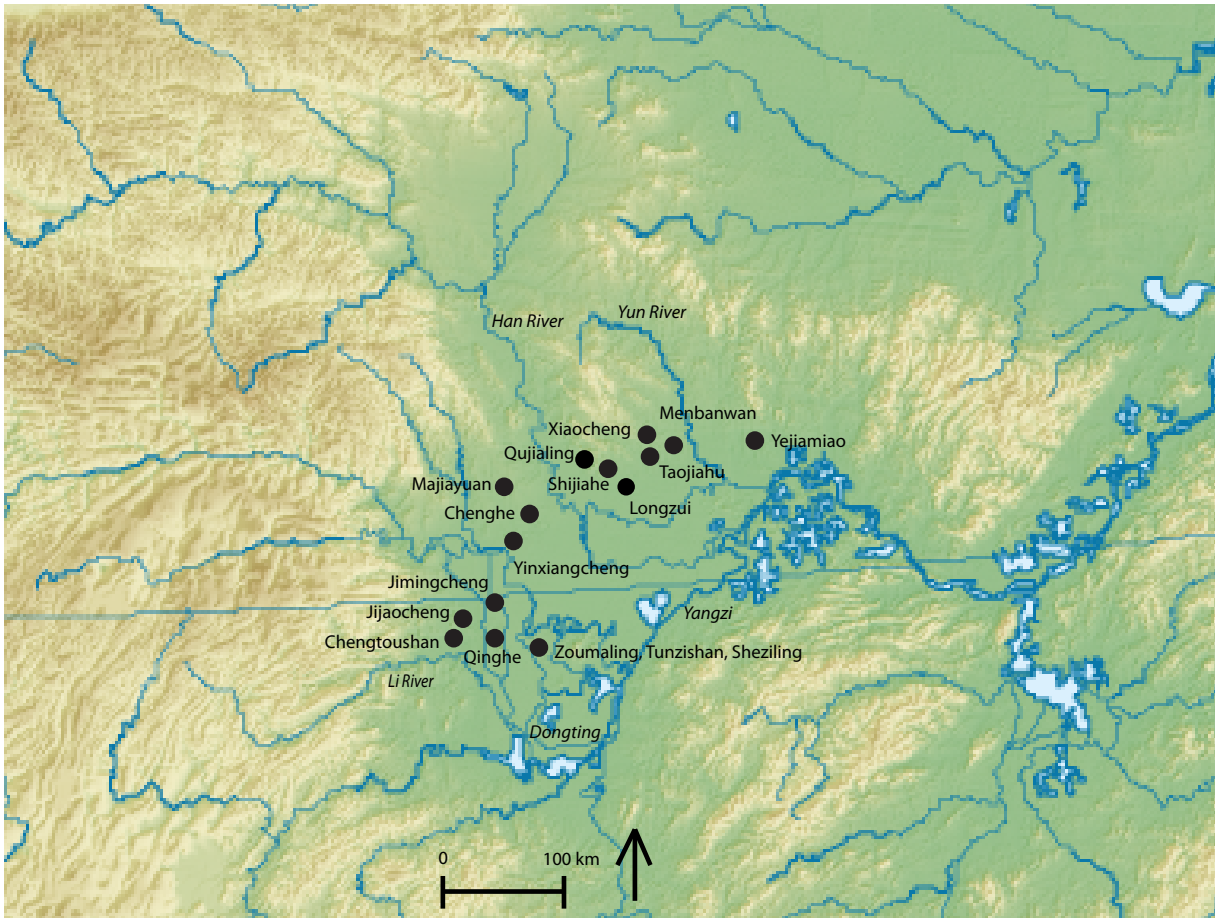


Figure 1.5. Locations of enclosures in the Middle Yangzi region.

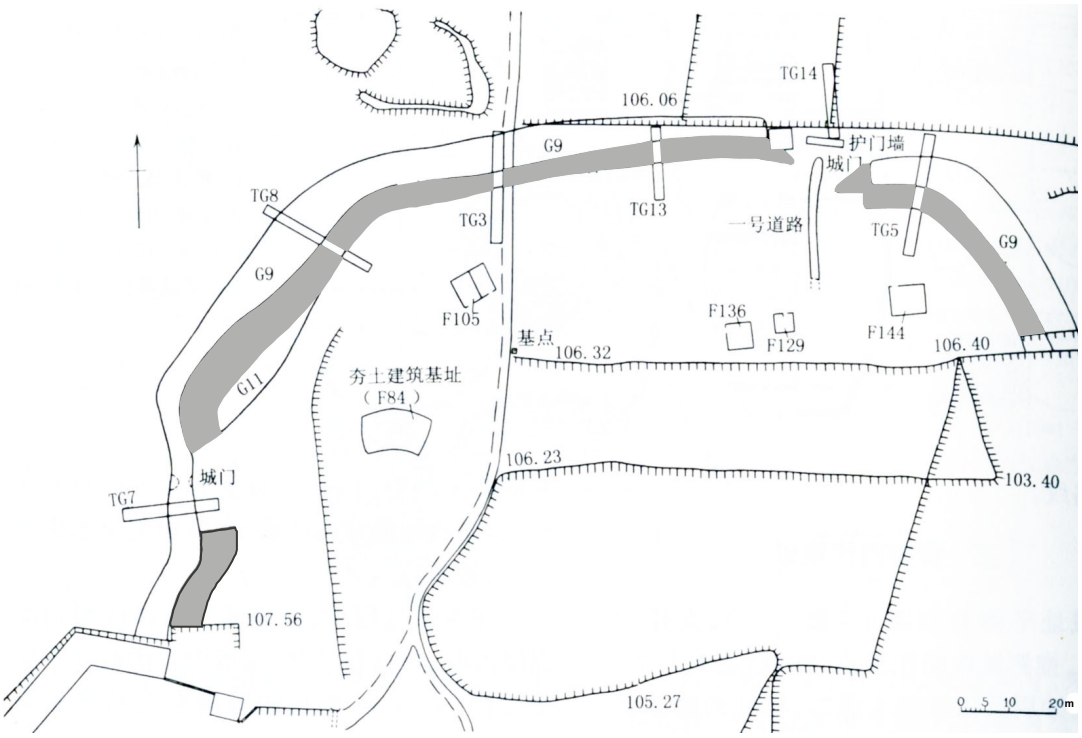


Figure 1.6a. The enclosure at Xishan, Zhengzhou, Henan. Grey colour shows the bank. The ditch is marked 'G'. After Xishan 1999: 29, fig. 10.

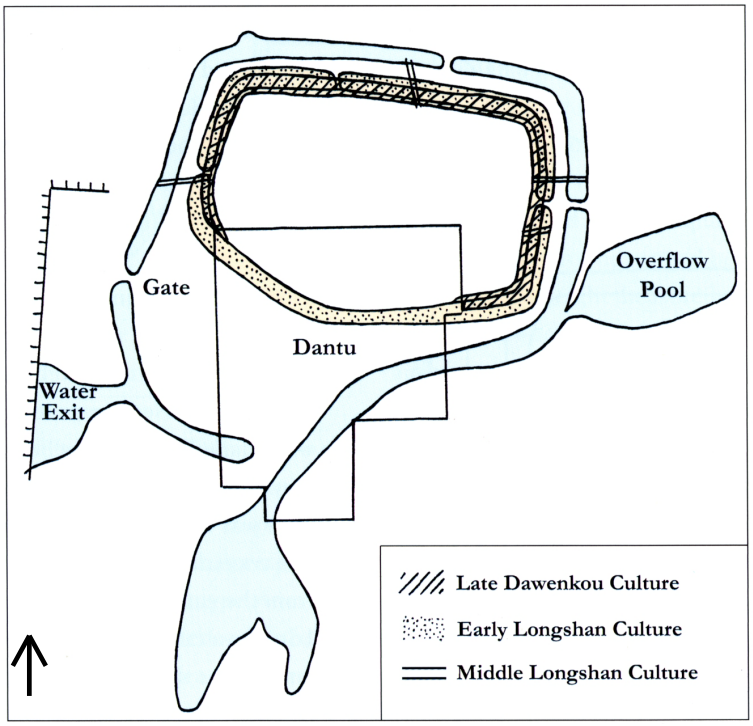


Figure 1.6b. The enclosure at Dantu, Wulian, Shandong. The Dawenkou enclosure measures 400 by 300m. After Yang 2004: 109, fig. 3-11b.

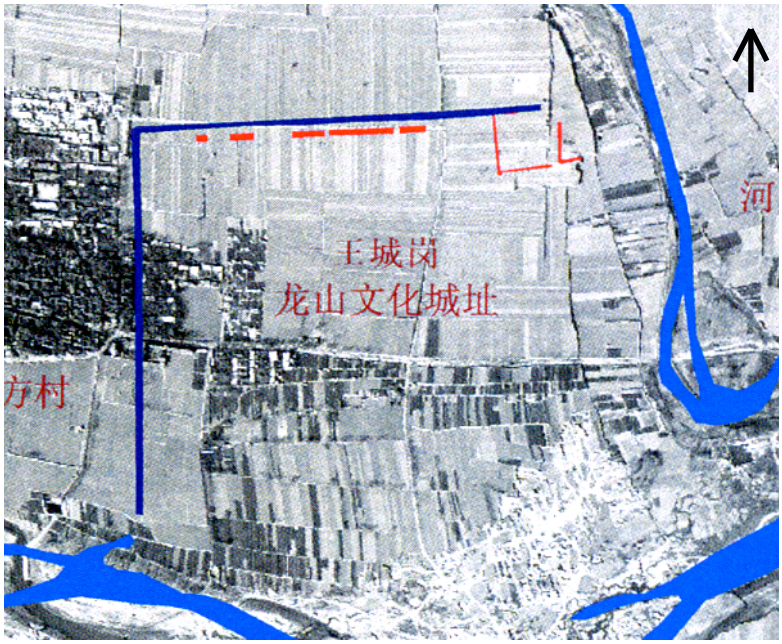


Figure 1.6c The enclosure(s) at Wangchenggang, Dengfeng, Henan. The blue line indicates the location of the recently discovered ditch, the broken red line the accompanying bank and the right lines at a right angle show the previously known enclosure. The northern section of the ditch extends c. 620m. After Wangchanggang 2007: colour pl. 5.

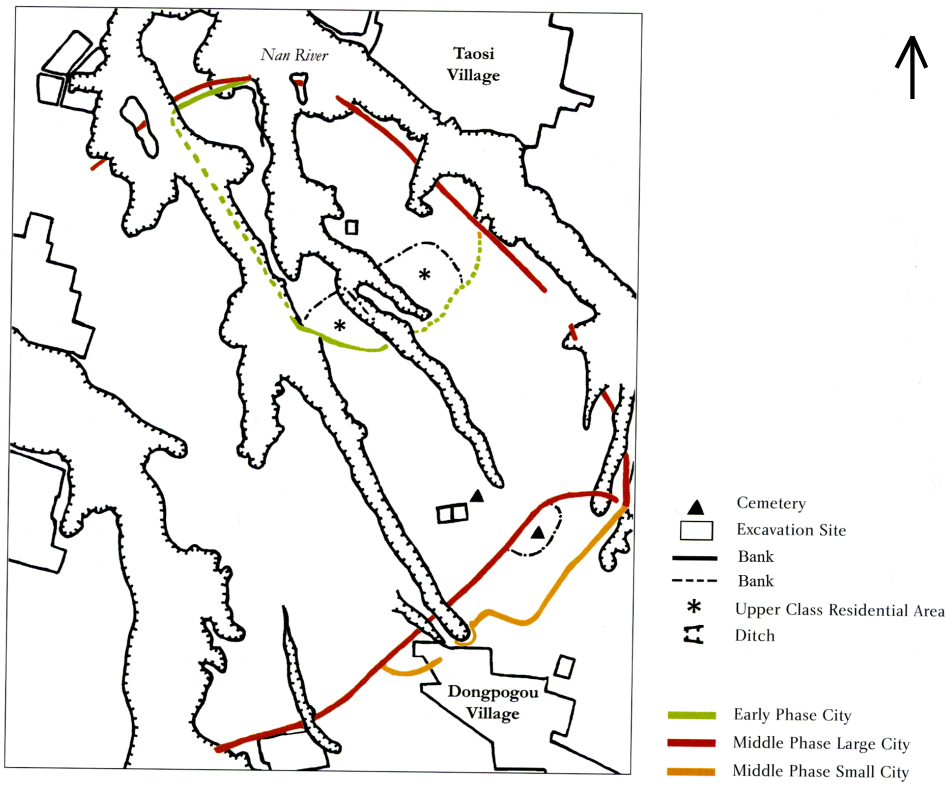


Figure 1.6d The enclosure at Taosi, Xiangfen, Shanxi. The enclosures measures 1500m north to south. After Yang 2004: 114, fig. 3-18.

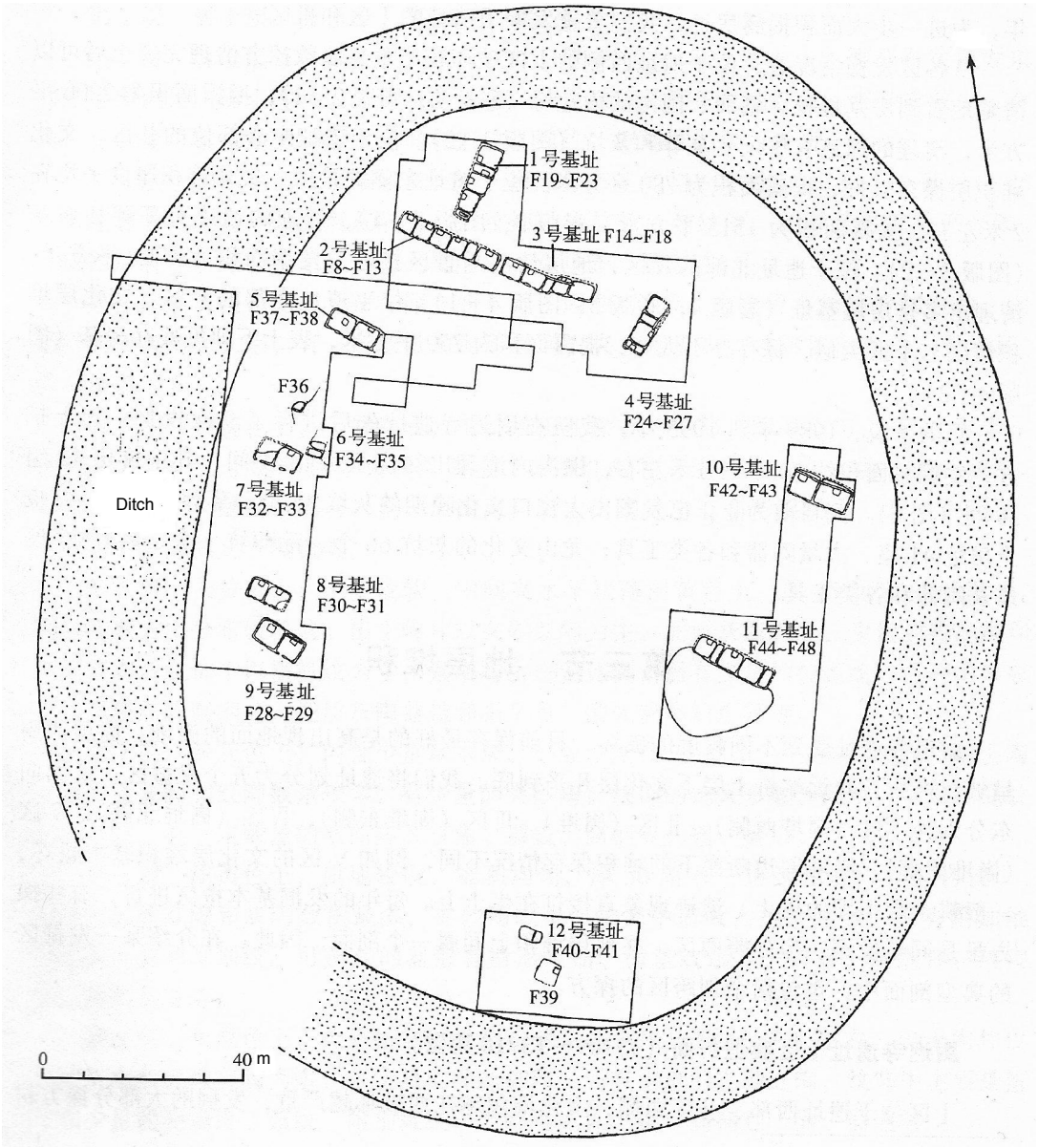


Figure 1.7. Yuchisi, Mengcheng, Anhui, showing the ditch and rows of buildings (marked F). After Yuchisi 2001: 5, fig. 5.



Figure 1.8. Profile of the bank at Sunjiagang, Huaining, Anhui. After Shuo Zhi 2009: 32.



Figure 1.9. The enclosure of Mojiaoshan, Yuhang, Zhejiang. The square indicated by red lights shows the enclosure of Mojiaoshan. The highlighted feature above is another possible human-made bank. Photo taken by author in the Liangzhu Museum, Yuhang, Zhejiang, July 2009.

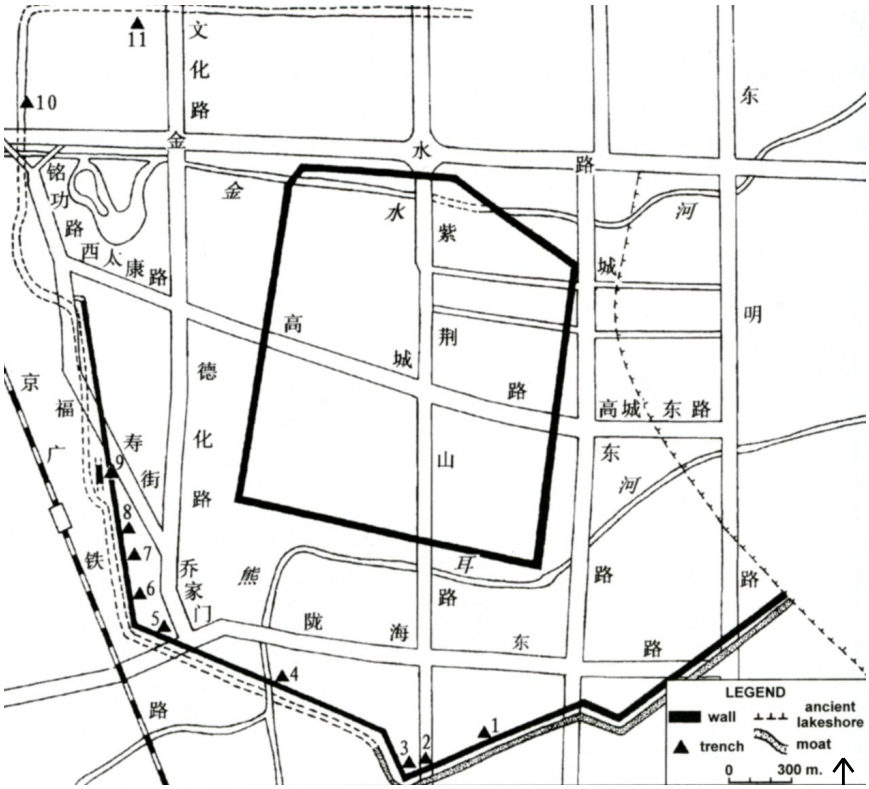


Figure 1.10a. The double enclosure at Zhengzhou, Henan. After Thorp 2006: 66, fig. 2.1.

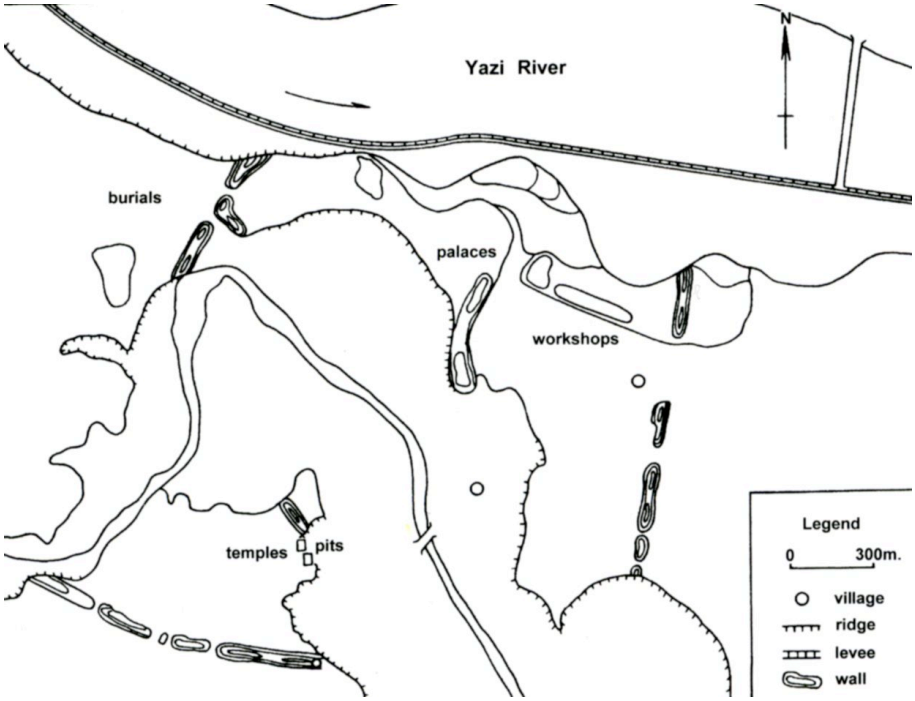


Figure 1.10b. The enclosure of Sanxingdui, Guanghan, Sichuan. After Thorp 2006: 235, fig. 5.11.

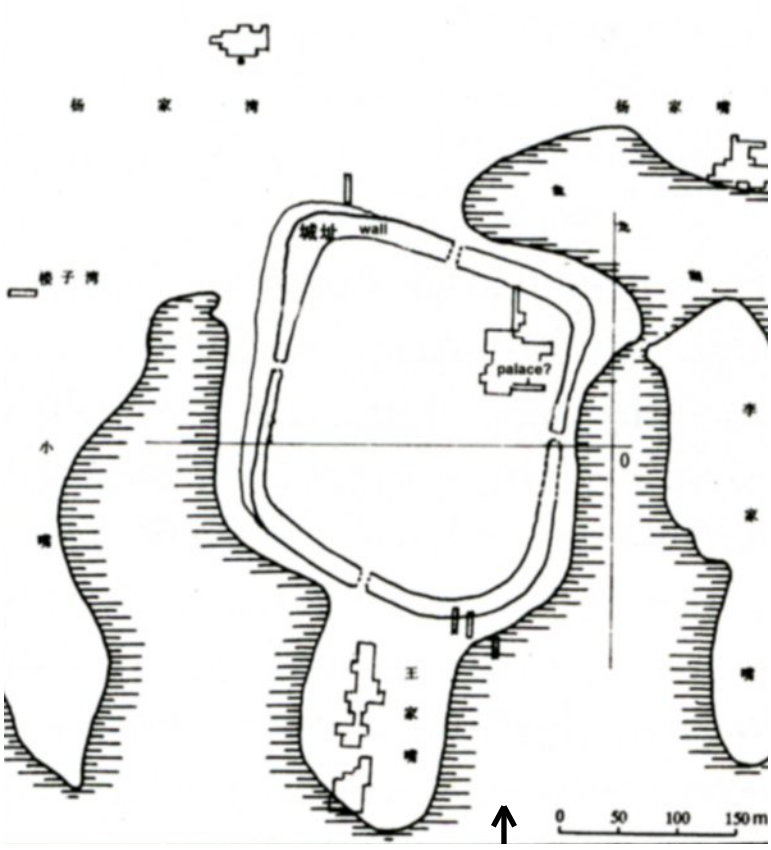


Figure 1.10c. The enclosure of Panlongcheng, Huangpi, Hubei. After Thorp 2006: 74, fig. 2.6(a).

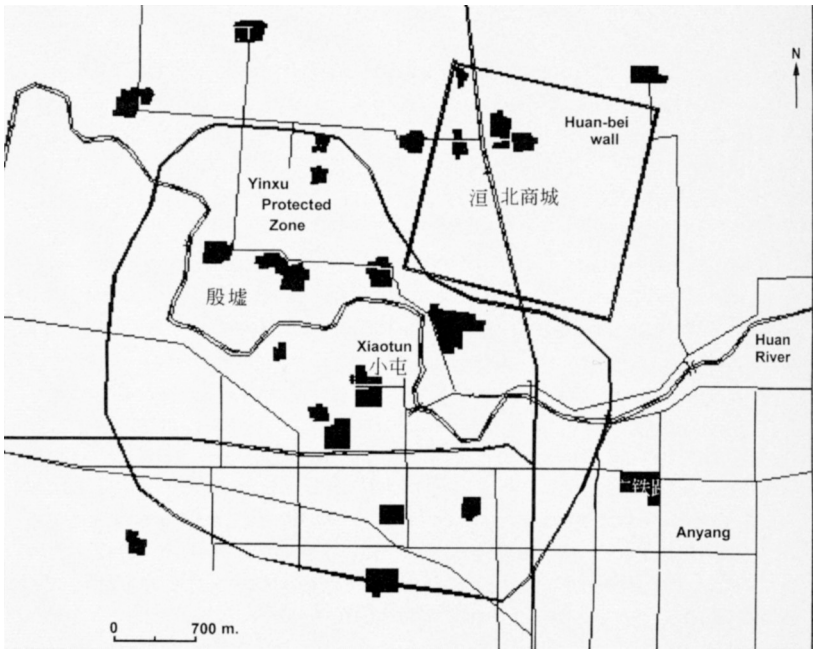


Figure 1.10d. The Huanbei enclosure, Anyang, Henan. After Thorp 2006: 132, fig. 3.5.

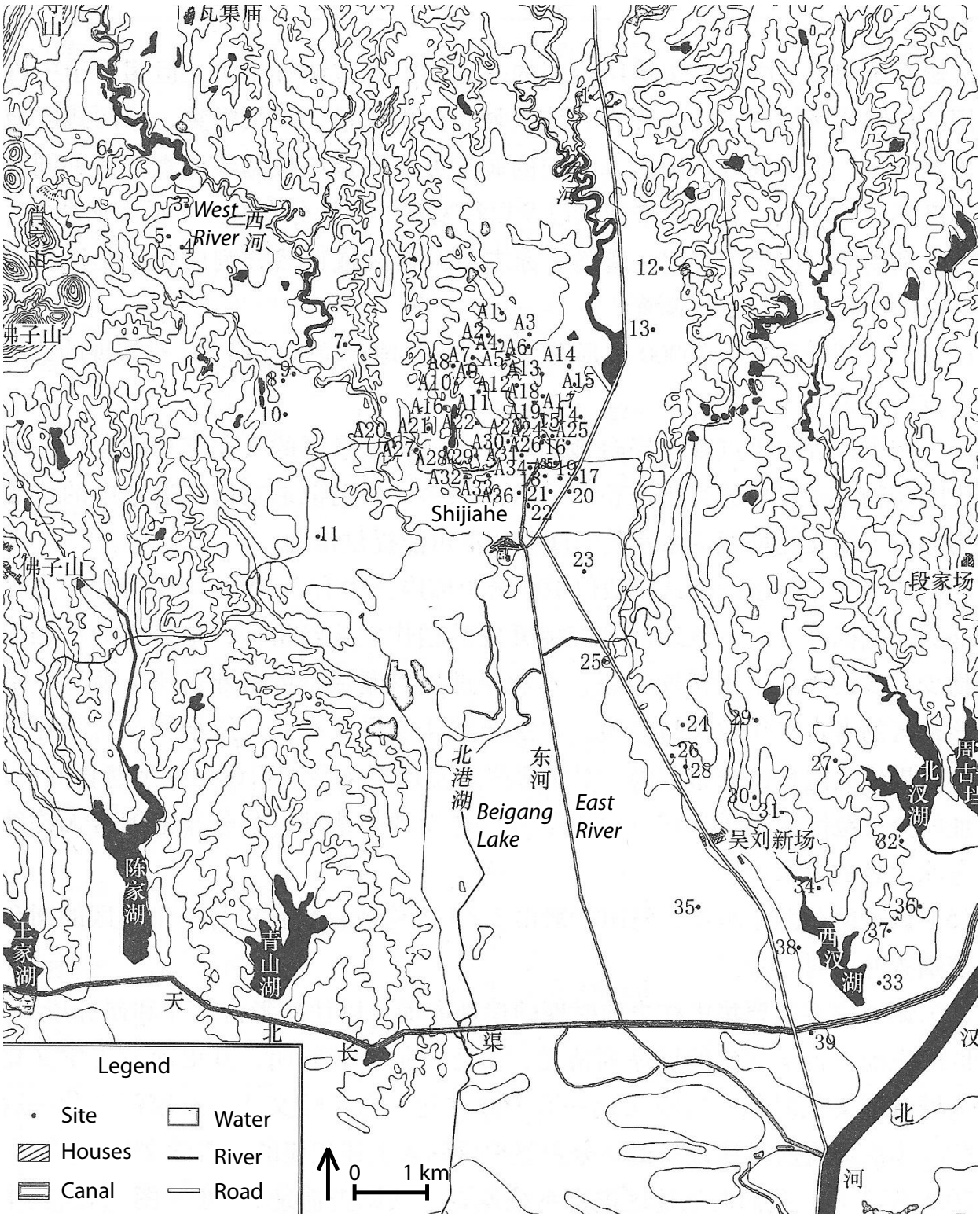


Figure 1.11. Shijiahe (point cloud) between the West and East rivers. The figure also shows the locations of the recently surveyed sites in this area. After Meng Huaping *et al.* 2009: 5, fig. 2.

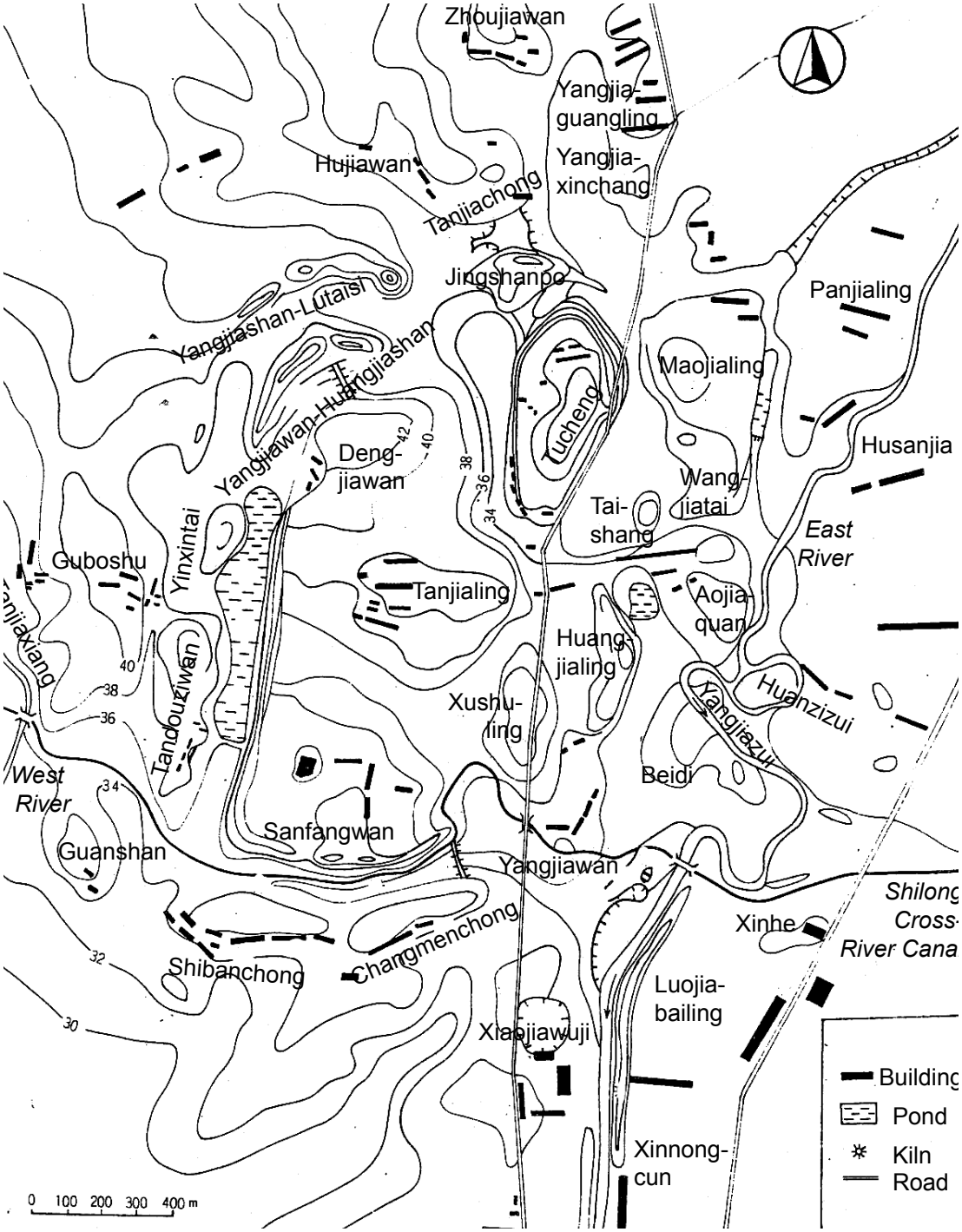


Figure 1.12. Loci at Shijiahe that were excavated and mentioned in the text. After Shijiahe 1992: 218, fig. 3.

	Age	Periodisation		Western Hubei and Three Gorges subregion	Lake Dongting subregion	Eastern Han River sub-region	Other subregions
4300	Daxi Age / Period	Early			Tangjiagang Culture		
4100			I*	Daxi Culture			
3900		Middle	II*			Youziling Culture	
3700			III*				
3500							
3300		Late	IV*				
3100				Pre-	Qujialing	Culture	
2900	Qujialing Period	Early		Qujialing Culture			
2700		Late					
2500	Shijiahe Period	Early		Shijiahe Culture			
2300		Middle					
2100		Late					
BC		Post-Shijiahe Culture		Post-Shijiahe Culture			

*Periodisation of the Guanmiaoshan type of Daxi Culture

Figure 1.13. The Middle Yangzi sequence of archaeological cultures translated from Guo Lixin 2005: 77, fig. 1-21.

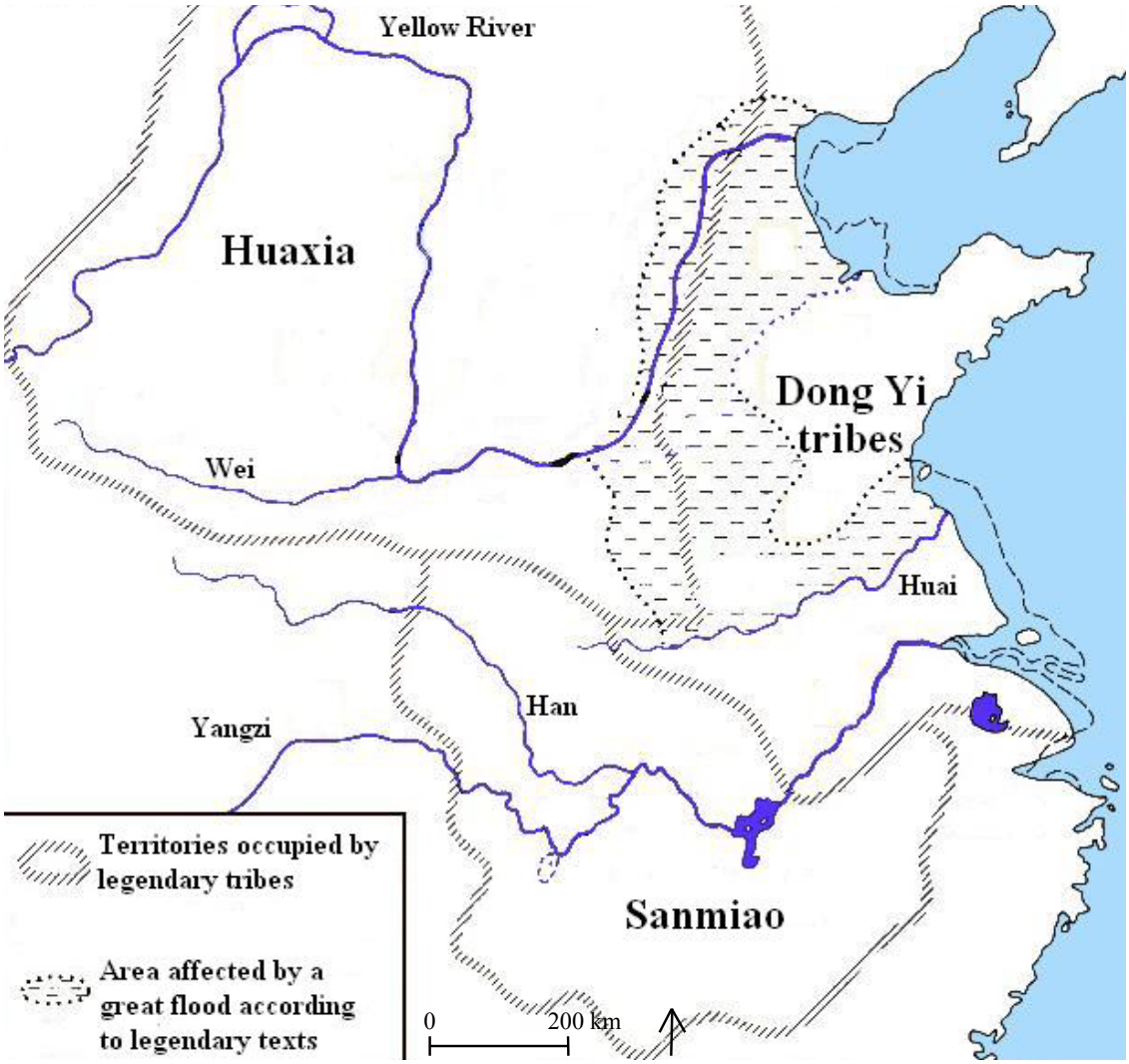


Figure 1.14. Alleged distribution of ancient tribes according to late first millennium BC texts. Adapted from Kojima Shinji 2001.

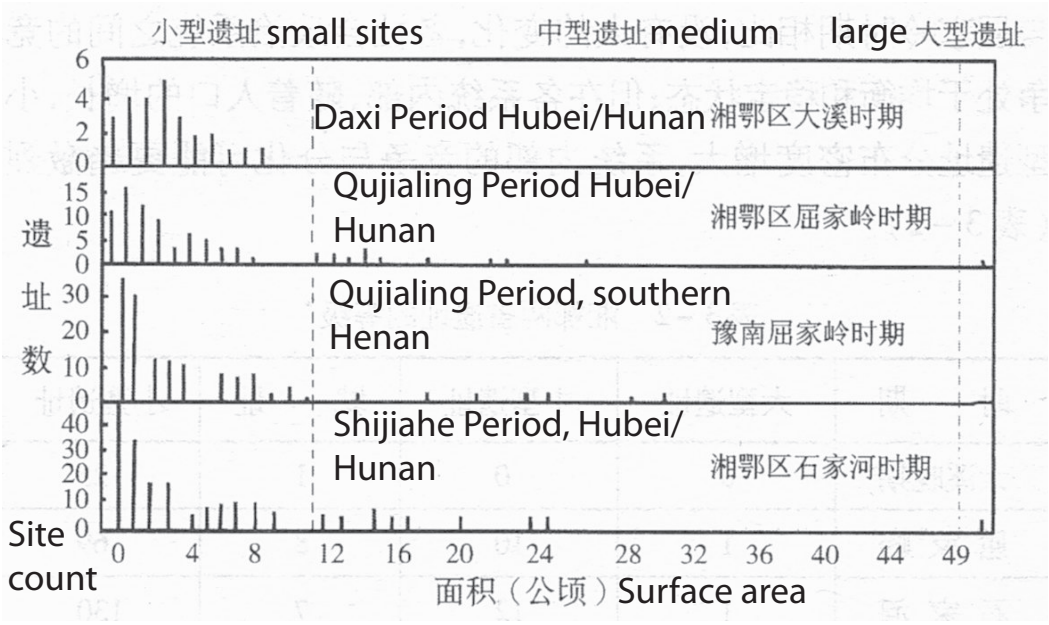


Figure 1.15a. Settlement hierarchies From Guo Lixin 2005: 203, fig. 3-25.

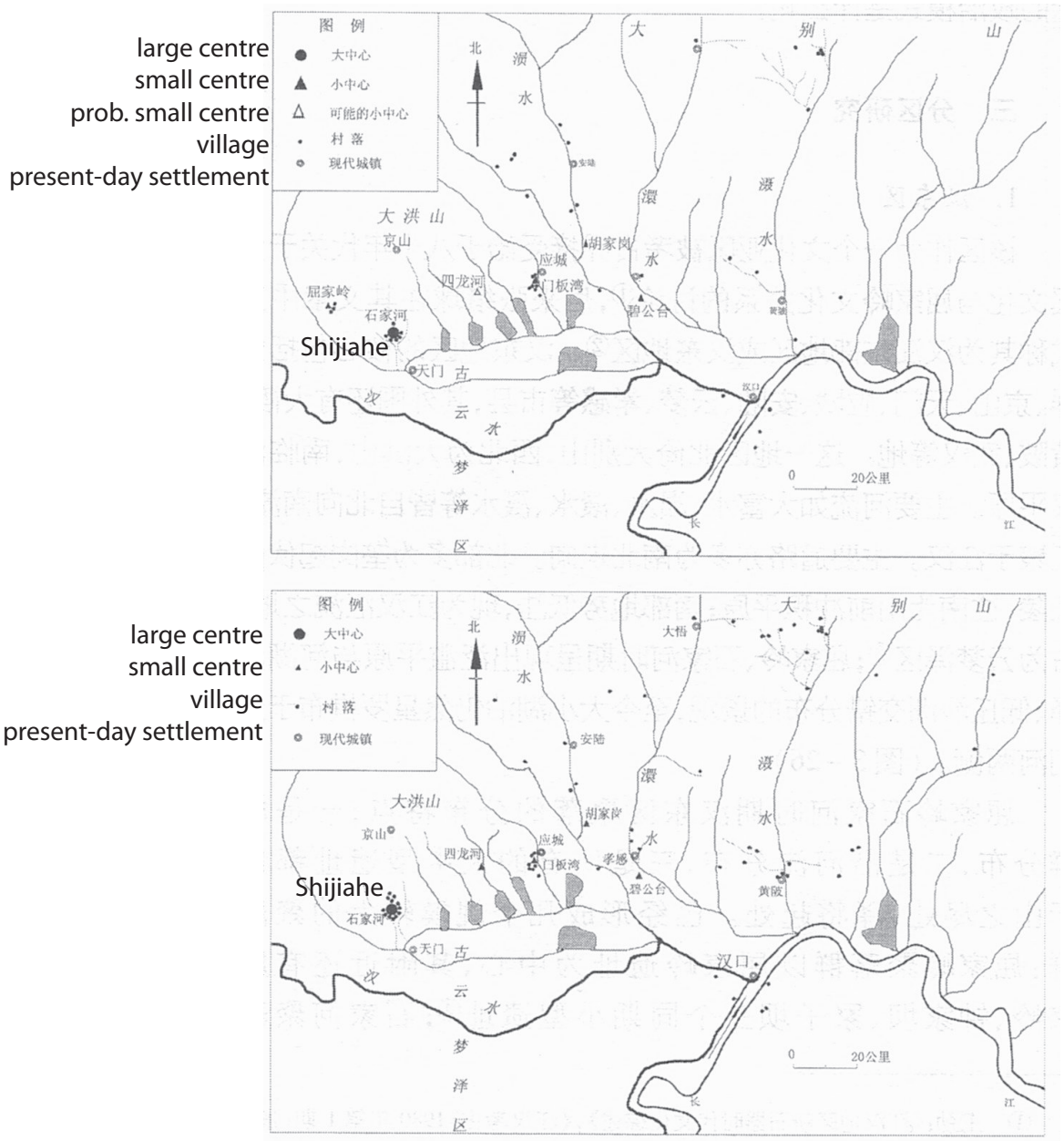


Figure 1.15b. Distribution of settlements during the Qujialing and Shijiahe periods. From Guo Lixin 2005: 206, fig. 3-26.

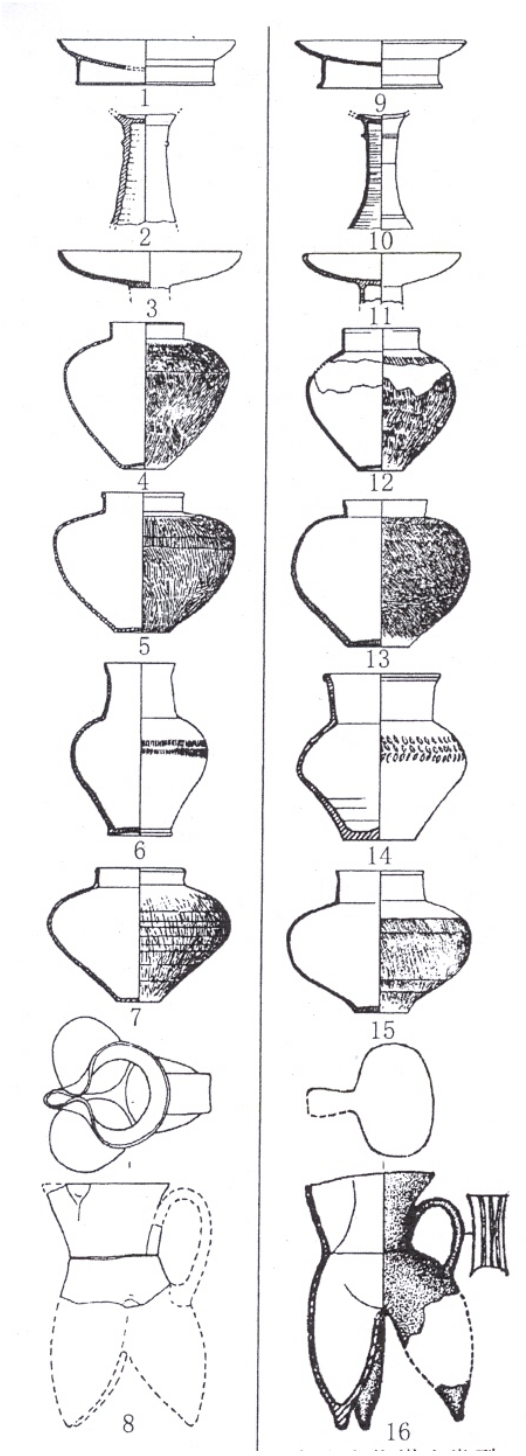


Figure 1.16. Comparison of pottery shapes between the ‘Post-Shijiahe Culture’ and the ‘Meishan type’ of the ‘Longshan Culture’. After Wang Jing 2007: 68, fig. 5.

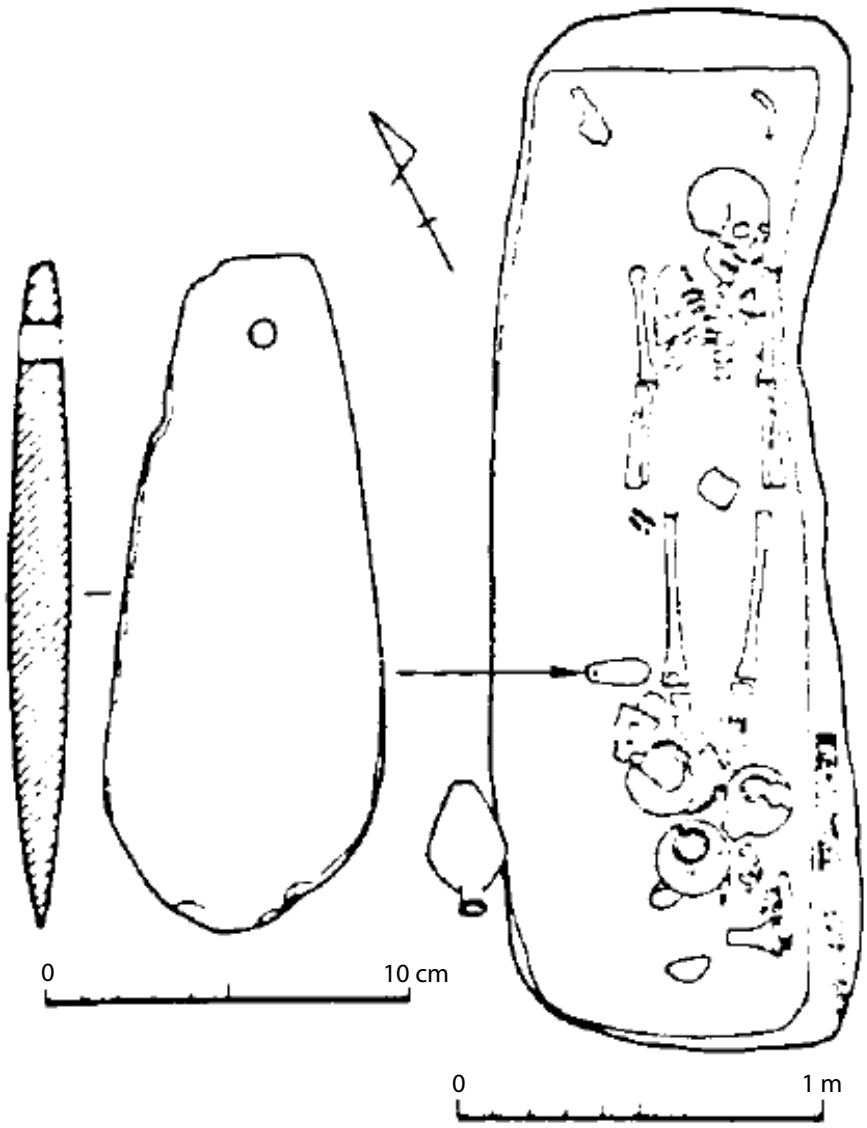


Figure 1.17. Stone axe blade from burial no. 4 at Beishouling, Shaanxi. After Okamura Hidenori *et al.* 1997: 107, fig. 10.

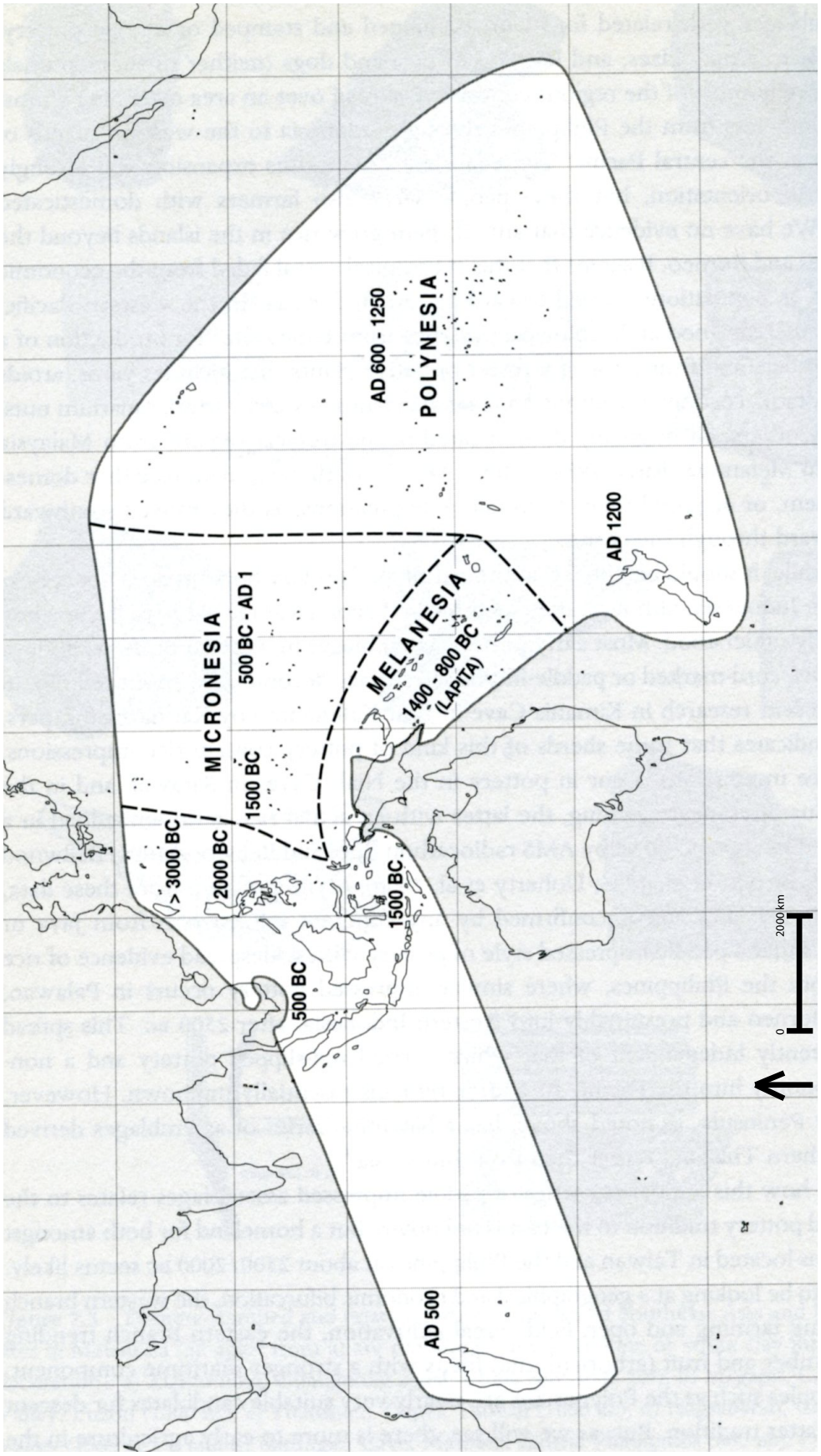


Figure 1.18. The Austronesian dispersal. After Bellwood 2005: 140, fig. 7.4.

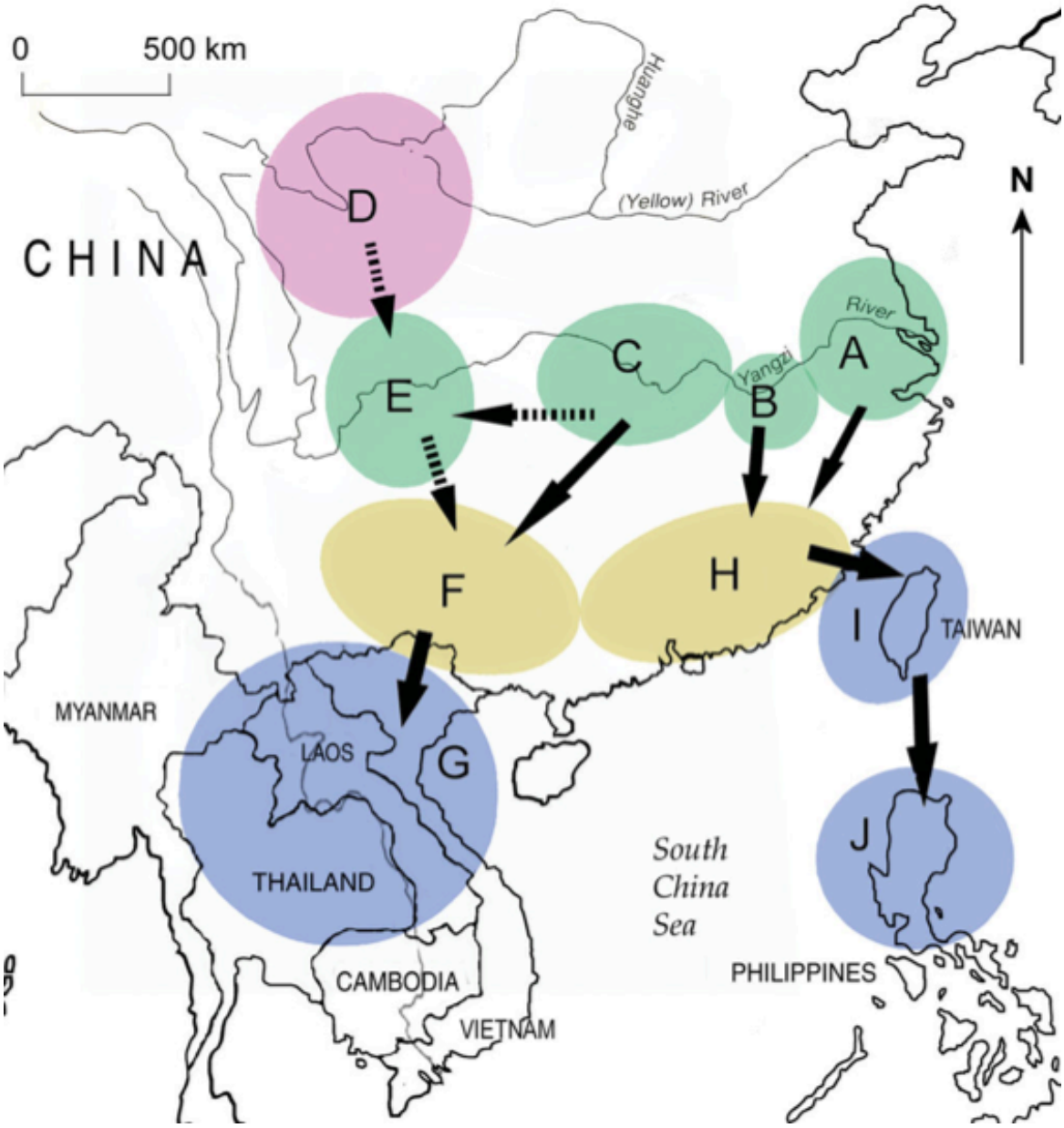


Figure 1.19. Farming proposal from China to Southeast Asia proposed by Zhang Chi and Hung Hsiao-chun. The letters indicate geographical regions: Lower Yangzi (A), Anhui/Jiangxi (B), Middle Yangzi (C), northern Sichuan (D), Chengdu Plain (E), Guangxi (F), Vietnam and Thailand (G), Fujian and Guangdong (H), Taiwan (I), the Philippines (J). The colours indicate the arrival of rice from 3000-2000 BC; the further south the later. After Zhang and Hung 2010: 18, fig. 2.



Figure 1.20. Plan of the excavated rice field at Chengtoushan. After Fuller and Qin 2009: 98, fig. 4.

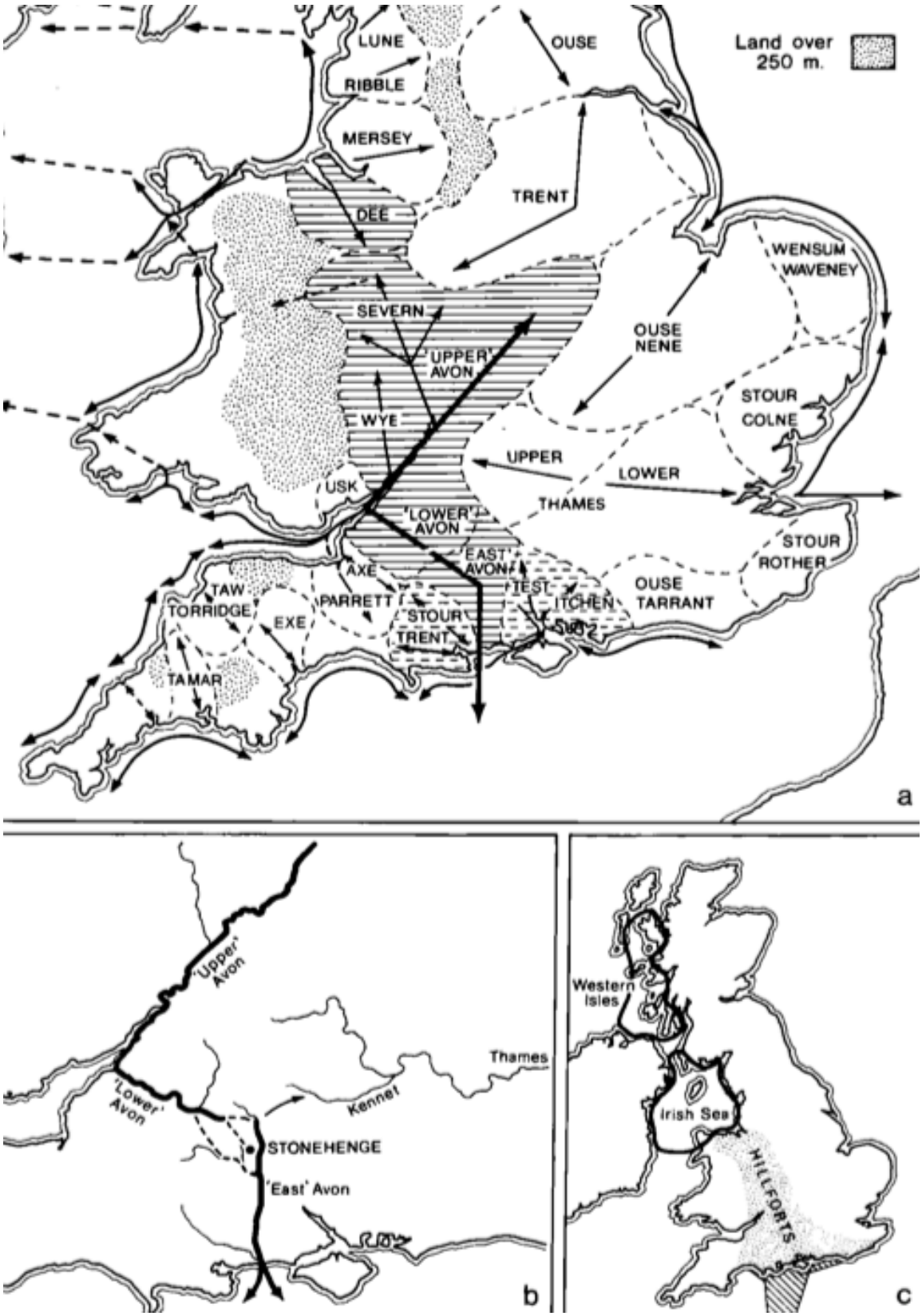


Figure 1.21. a. River-catchments and axes of movement in southern England; b. Linkages between the three Avons: northern, middle and southern routes; c. Cunliffe's 'hillfort zone'. After Sherratt 1995: 215, fig. 2.

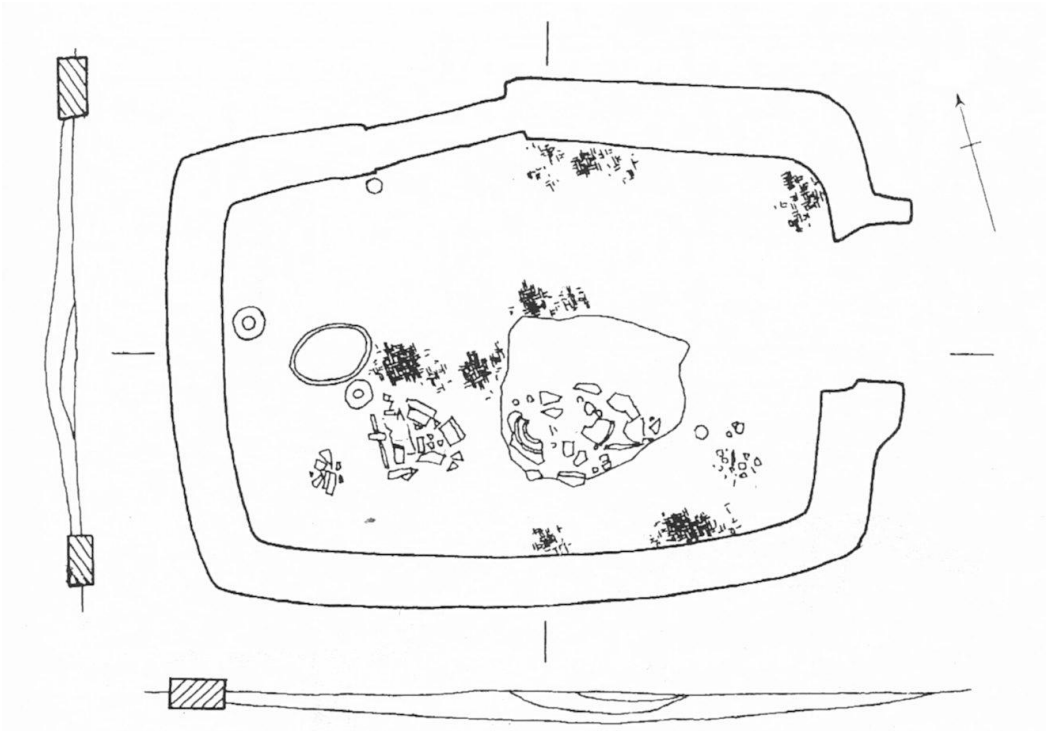


Figure 1.22a. House F1, Tanjialing, Shijiahe, Tianmen, Hubei, probably dating to Shijiahe IV and/or V. Length 4.76m, width 3.34m, thickness of walls 0.35-0.4m. After Zhang Xuqiu 2004: 163, fig. 29.

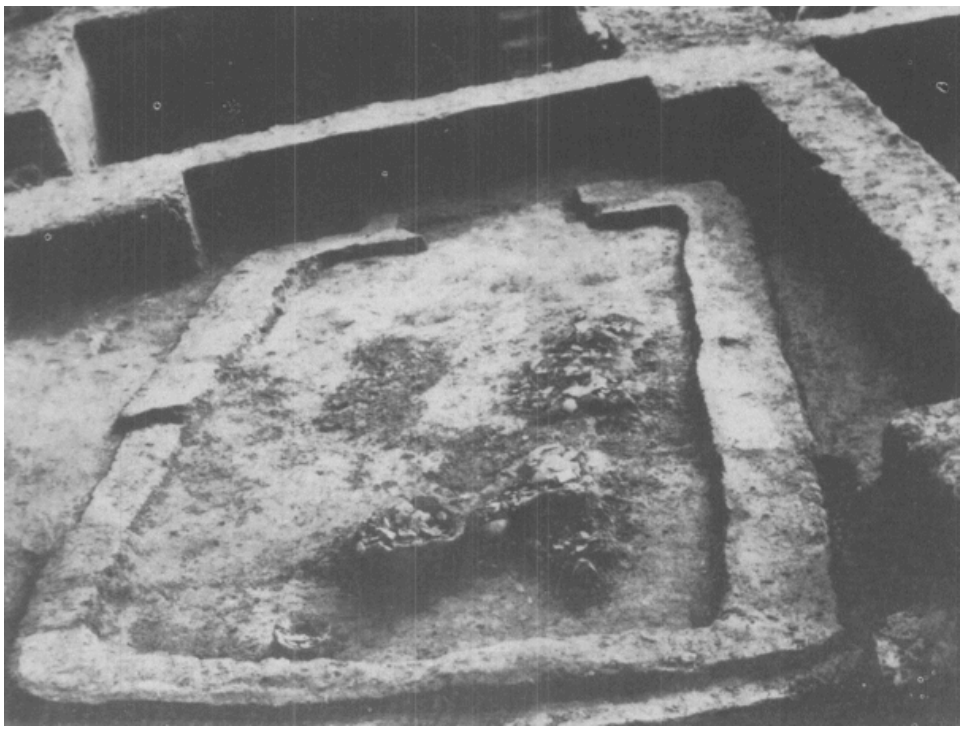


Figure 1.22b. Photo of house F1 at Tanjialing. After Shihe Kaogudui 1990: pl. 1:2.

BC	U. Yellow R.	M. & L. Yellow R. and Huai R.				M. & L. Yangzi R.	
	Gansu	Shaanxi	Shanxi	Henan	Shandong	Hubei	Jiangsu
1100	Regional	Shang &		Shang		Shang & regional Bronze cultures	
1500	Bronze cultures	Proto-Zhou					
2000	Qijia Machang Banshan	Erlitou & regional cultures	Erlitou & regional cultures	Erlitou & Xiaqiyuan	Yueshi	Erlitou & regional cultures	
2500	Majiayao	Late Longshan			Dawenkou	Shijiahe	Liangzhu
3000		Early Longshan				Qujialing	
	Yangshao	Yangshao			Beixin	Daxi	Majiabang Hemudu
5000							
6500	Dadiwan I	Laoguantai		Peiligang	Houli	Chengbeixi	Kuahuqiao
7000							

Figure 2.1. Table of the Neolithic archaeological cultures. After Liu 2004: 4, fig. 1.1.

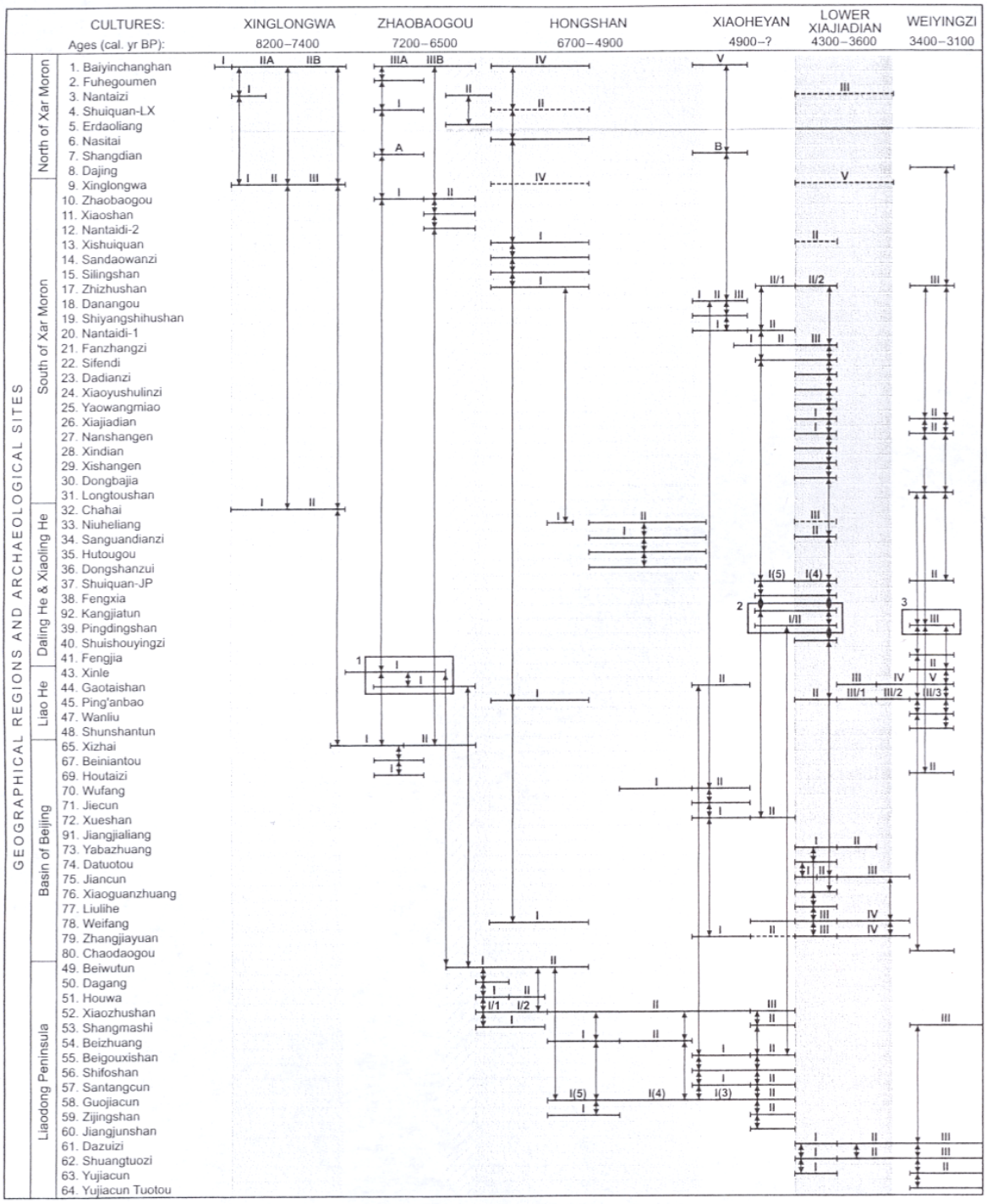


Figure 2.2. Chronology of archaeological sites in northeastern China as compiled by Mayke Wagner. After Wagner 2006: 258, fig. 258.

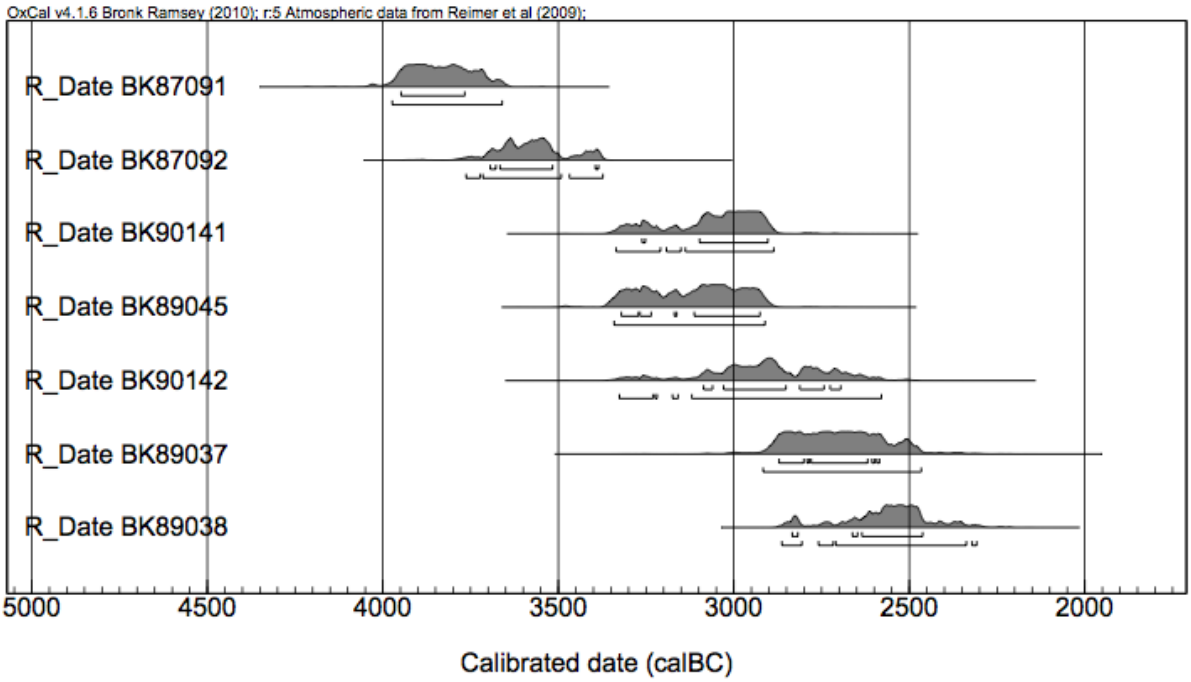


Figure 2.3. Shijiahe radiocarbon sequence corresponding to table 2.3.

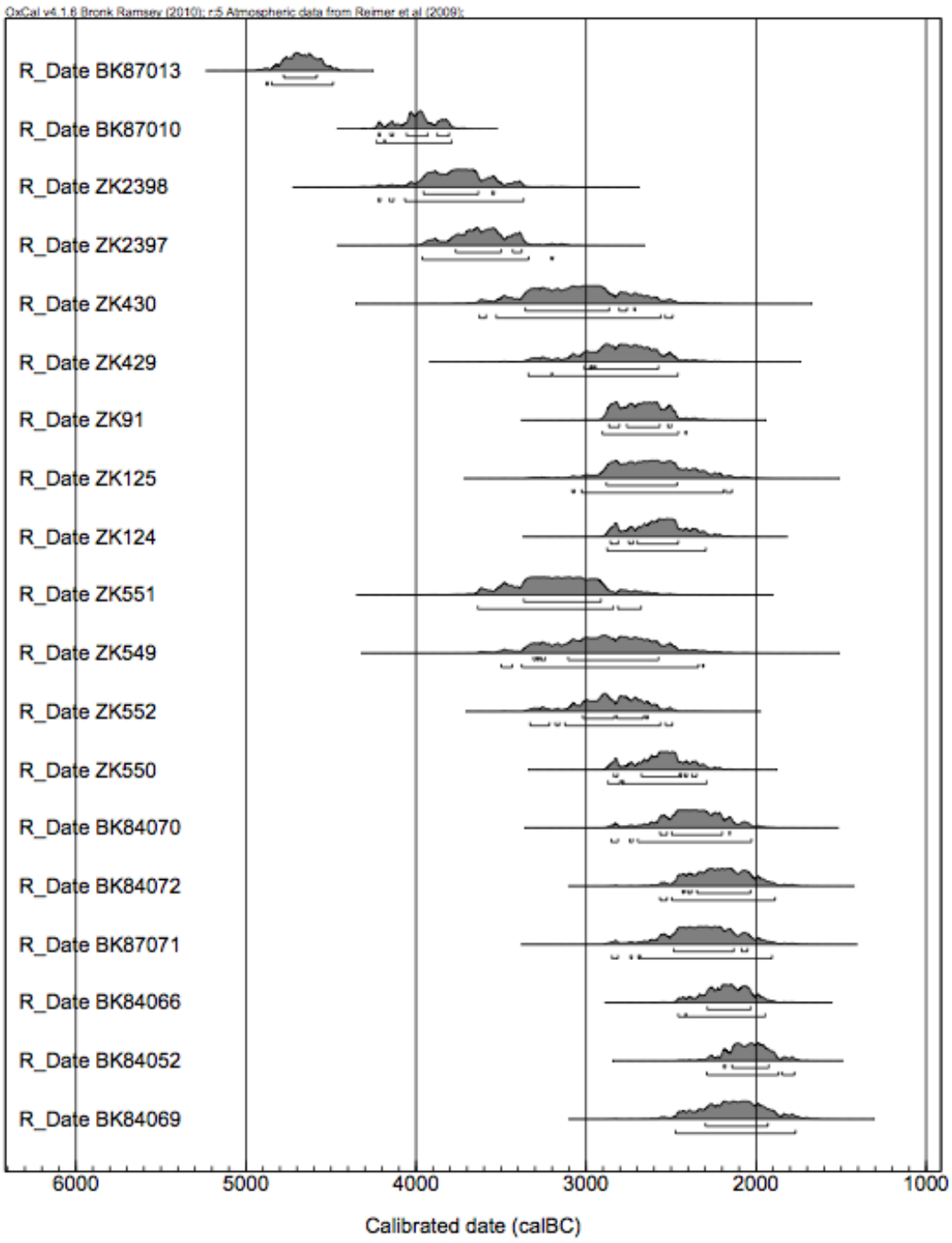


Figure 2.4. Radiocarbon sequence based on dates taken from Eastern Han River sites, corresponding to table 2.4.

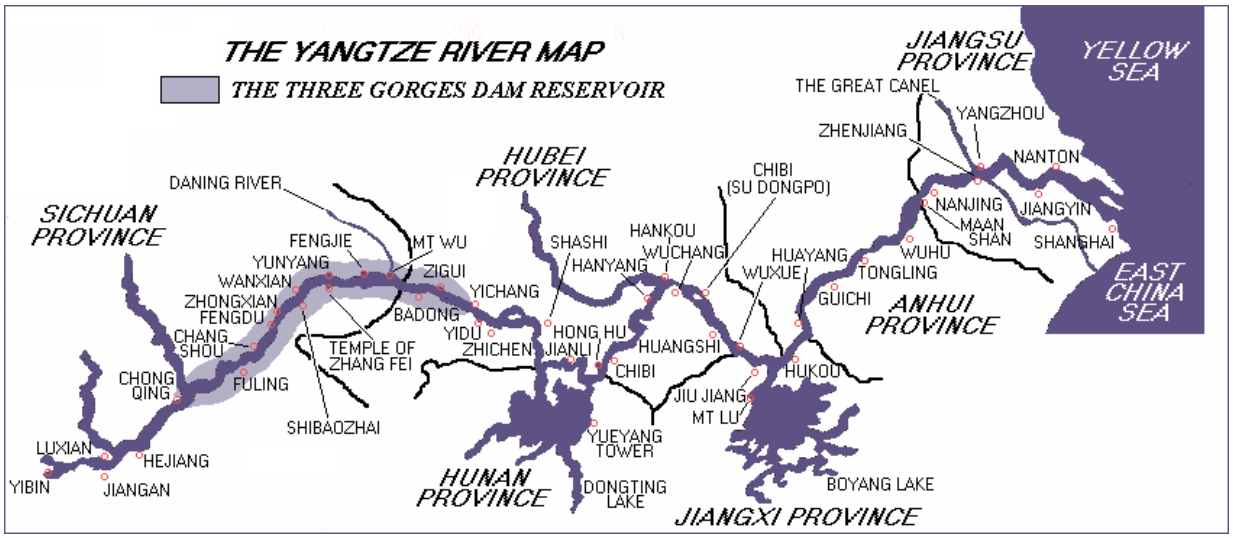


Figure 2.5. The Yangzi River, excluding the upper reaches. Drawn by Christine Yunn-Yu Sun. Taken from www.solidsoftware.com.au/Yangtze/Default.htm (accessed on 4 August 2011).

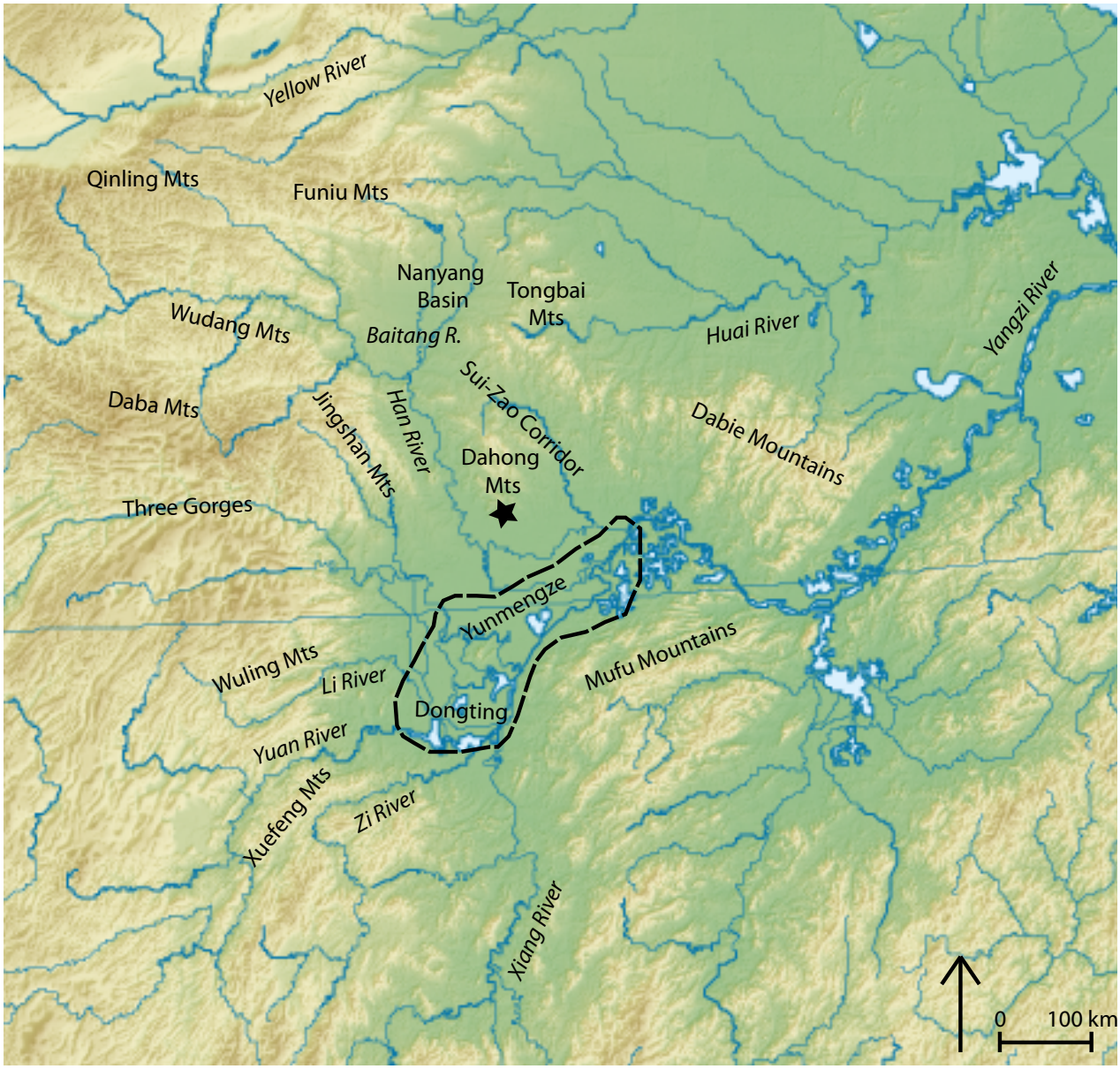


Figure 2.6. Topography of the Middle Yangzi River region, incl. the possible extent of the Yunmengze (after Li 2006: 320-321, Map 18). The star shows the location of Shijiahe.

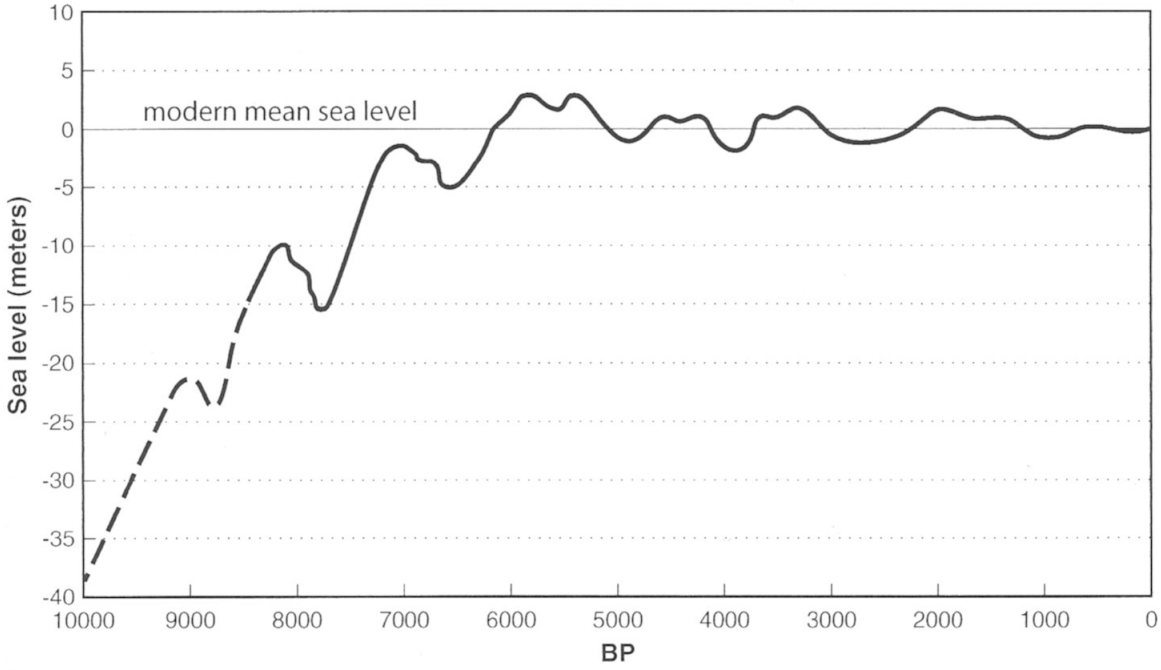


Figure 2.7. Sea levels from the Neolithic until the present day. After Liu 2004: 29, fig. 2.6.



Figure 3.1. The suspected course of the northwestern and northern bank section as revealed by coring at Dengjiawan indicated by dashed lines. Additional dashed lines to Tucheng and at Huangjinling show the likely course of the bank. After Dengjiawan 2003: 18, fig. 9.

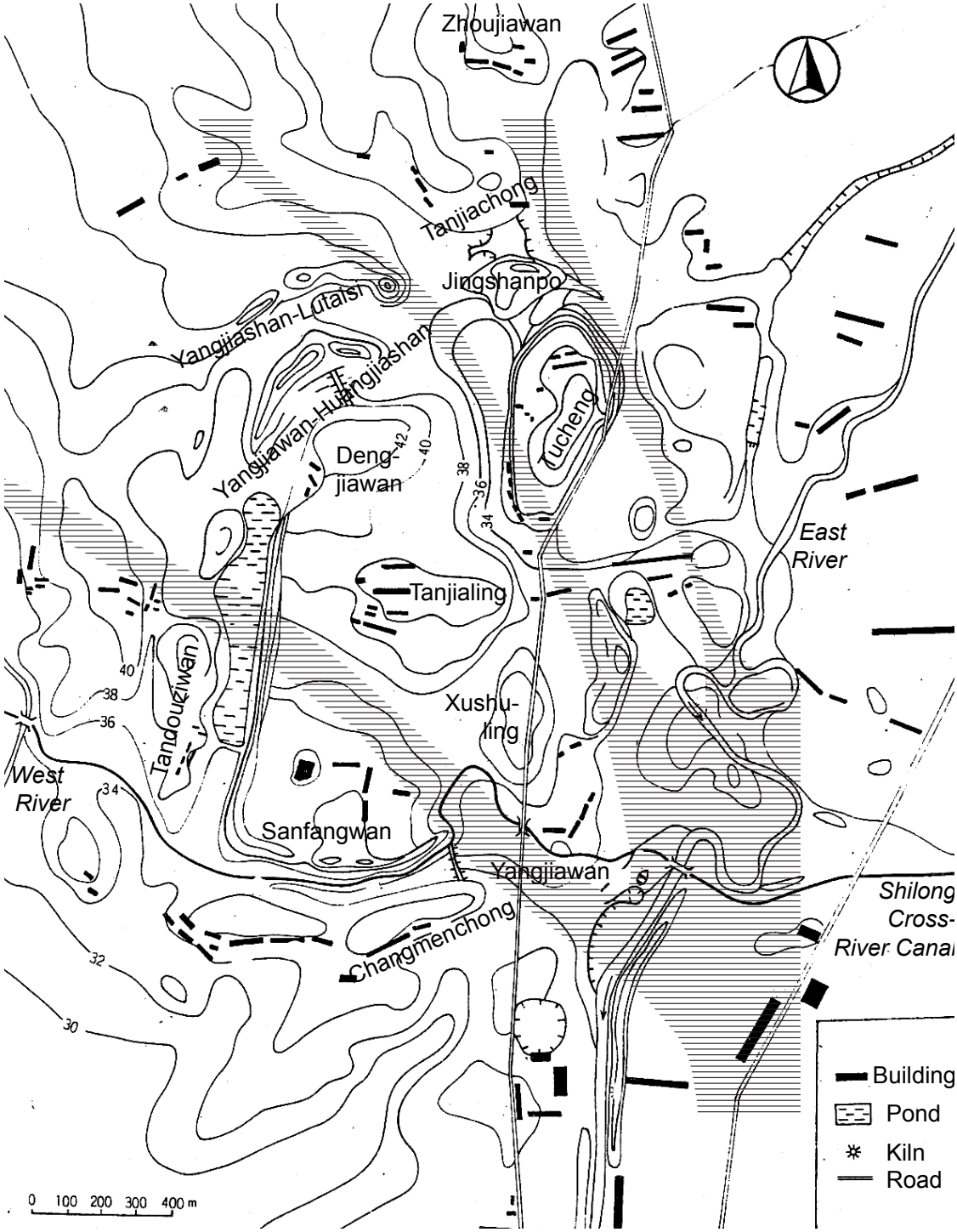


Figure 3.2. Shijiahe with marked loci that were parts of the site around 5000 years BP. Adapted from Shijiahe 1992: 218, fig. 3. The dashed lines show the course of rivers prior to enclosure construction (taken from Shijiahe 1992: 285, fig. 67).

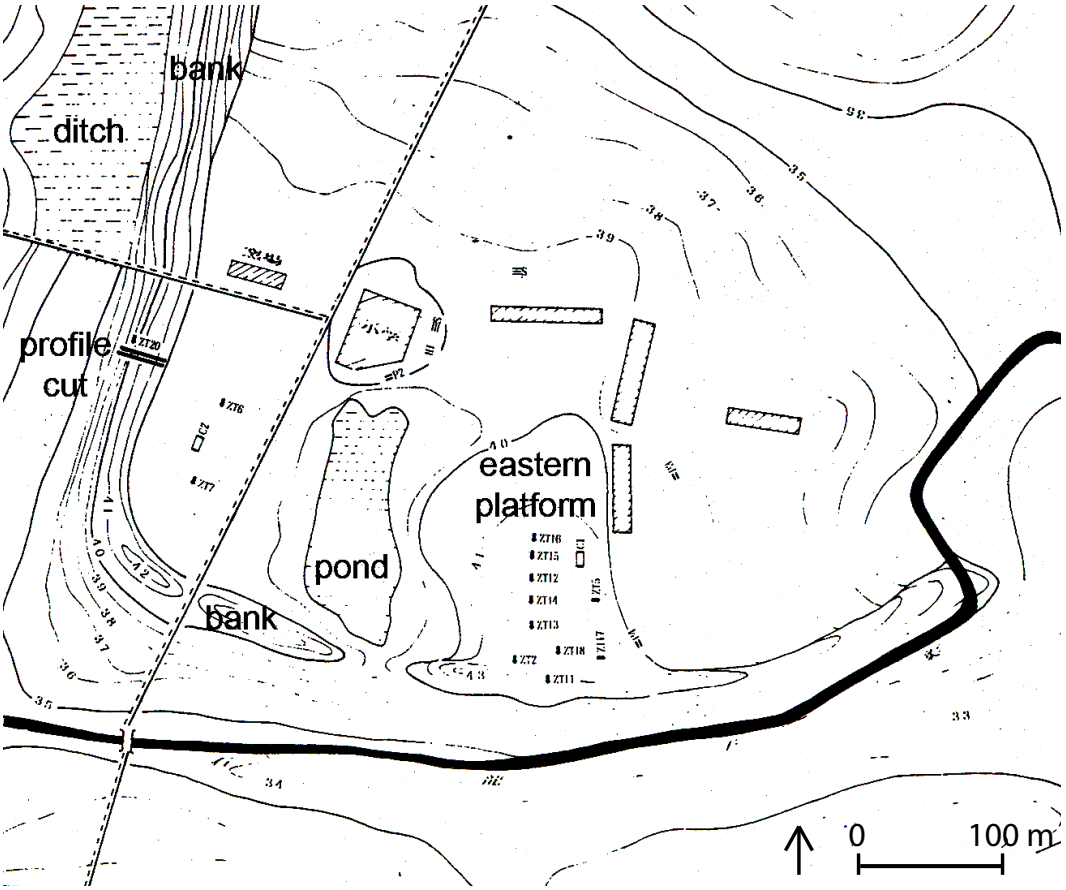


Figure 3.3. The locus of Sanfangwan. The Shilong Cross-River Canal is highlighted in black. After Shijiahe 1992: 220, fig. 4.

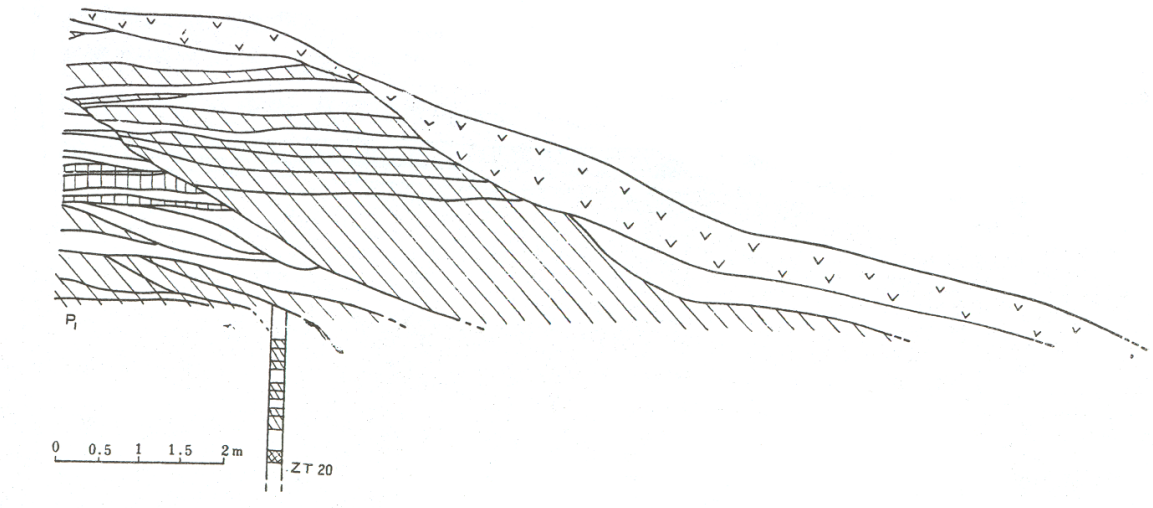


Figure 3.4. East-West profile of the outer rampart at the western section of the bank as seen from the north at Sanfangwan. After Shijiahe 1992: 221, fig. 5.

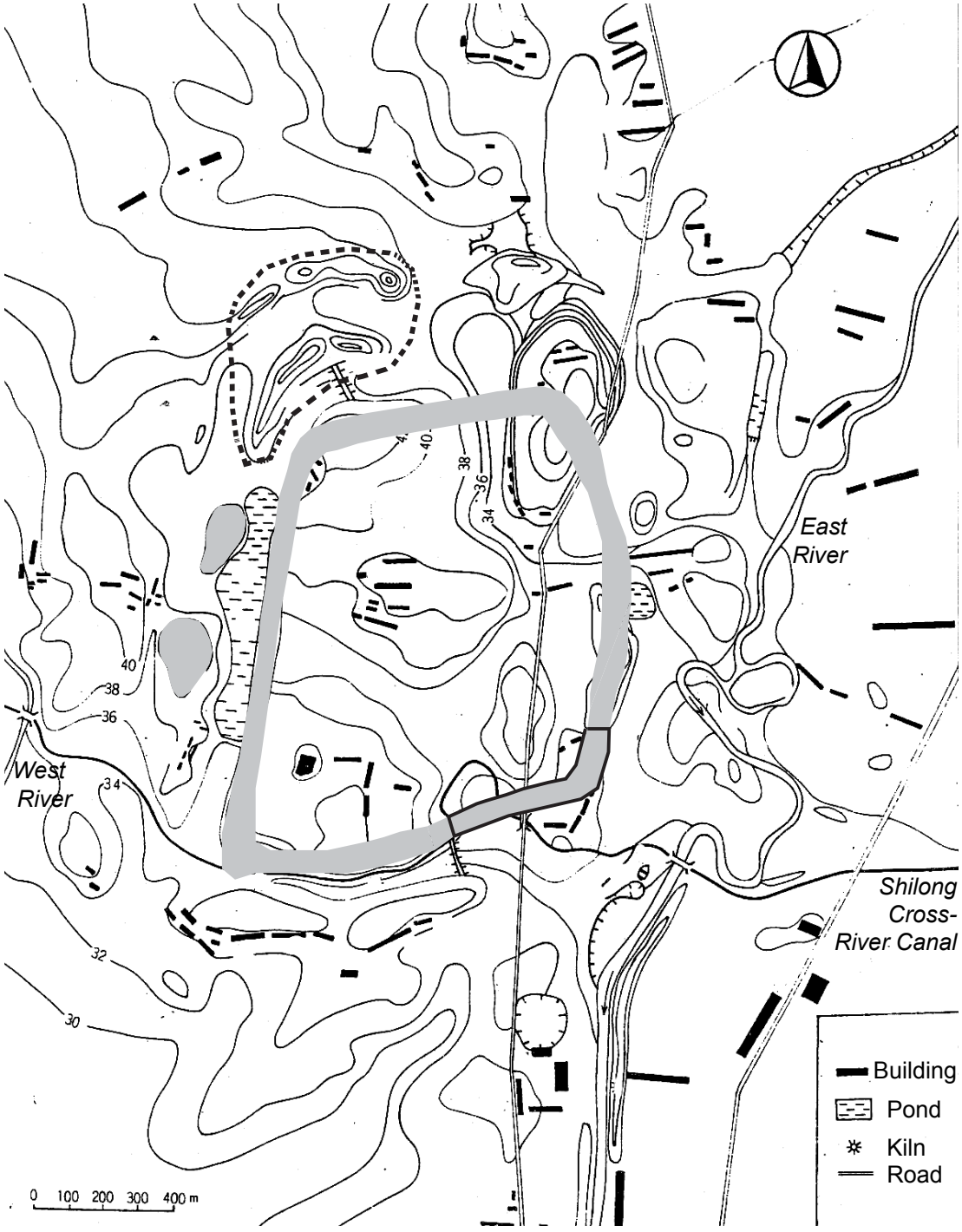


Figure 3.5 Extent of the enclosure during phase VI. The extension of phase VI in the southeastern is highlighted in bold. Mounds with similar coloured layering are shown. The dashed line shows the potential location of a similar phenomenon but the exact location is not clear. Adapted from Shijiahe 1992: 218, fig. 3.

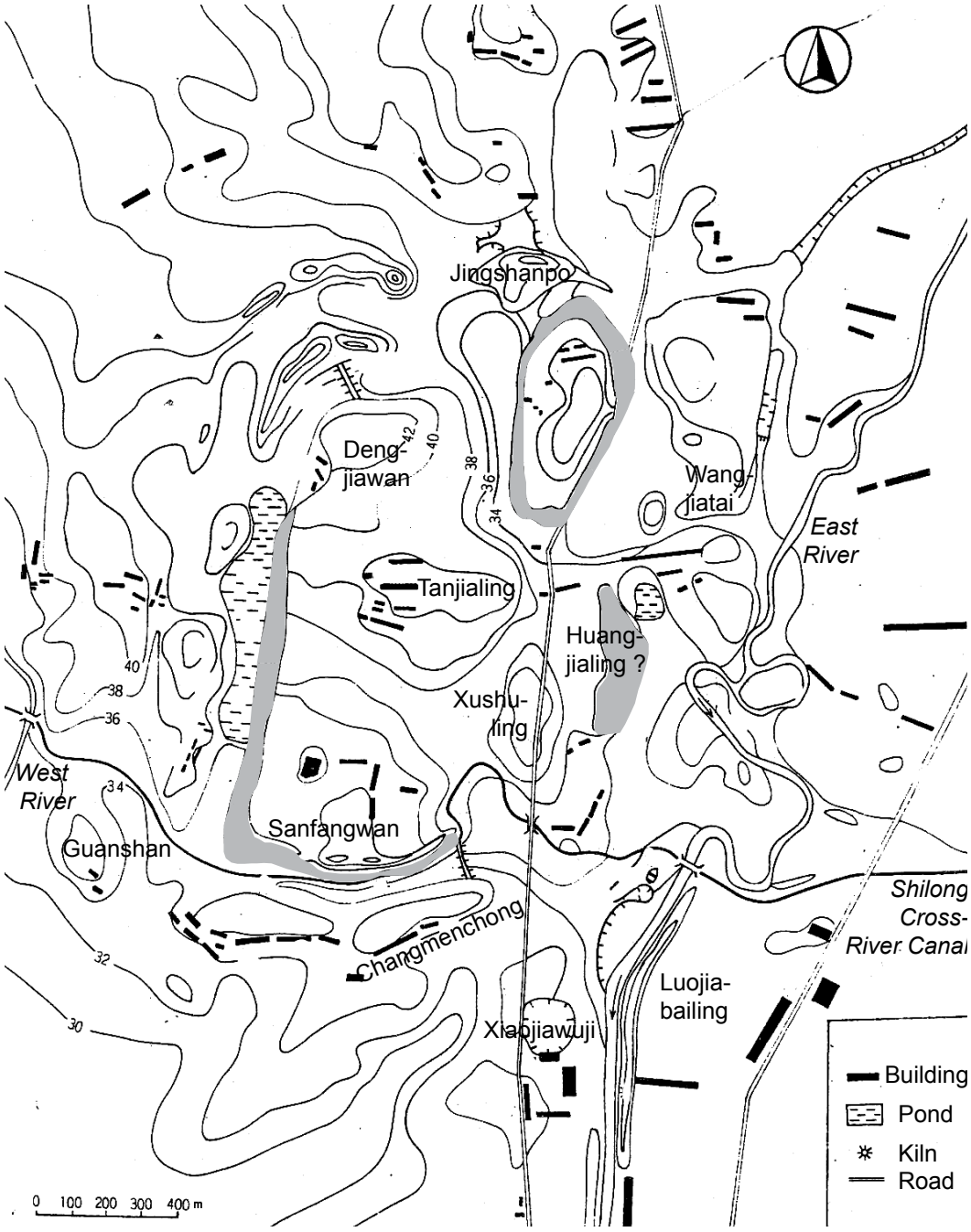


Figure 3.6. Occupied loci during the phases Shijiahe V and VI. Adapted from Shijiahe 1992: 218, fig. 3.



Figure 3.7. Bank section in the southeastern corner of Shijiahe excavated in 2011, seen from north to south. The layers with two labels shows the layers of the bank superseded by layer dating to phase IX. After Meng Huaping *et al.* 2011: fig. 1.

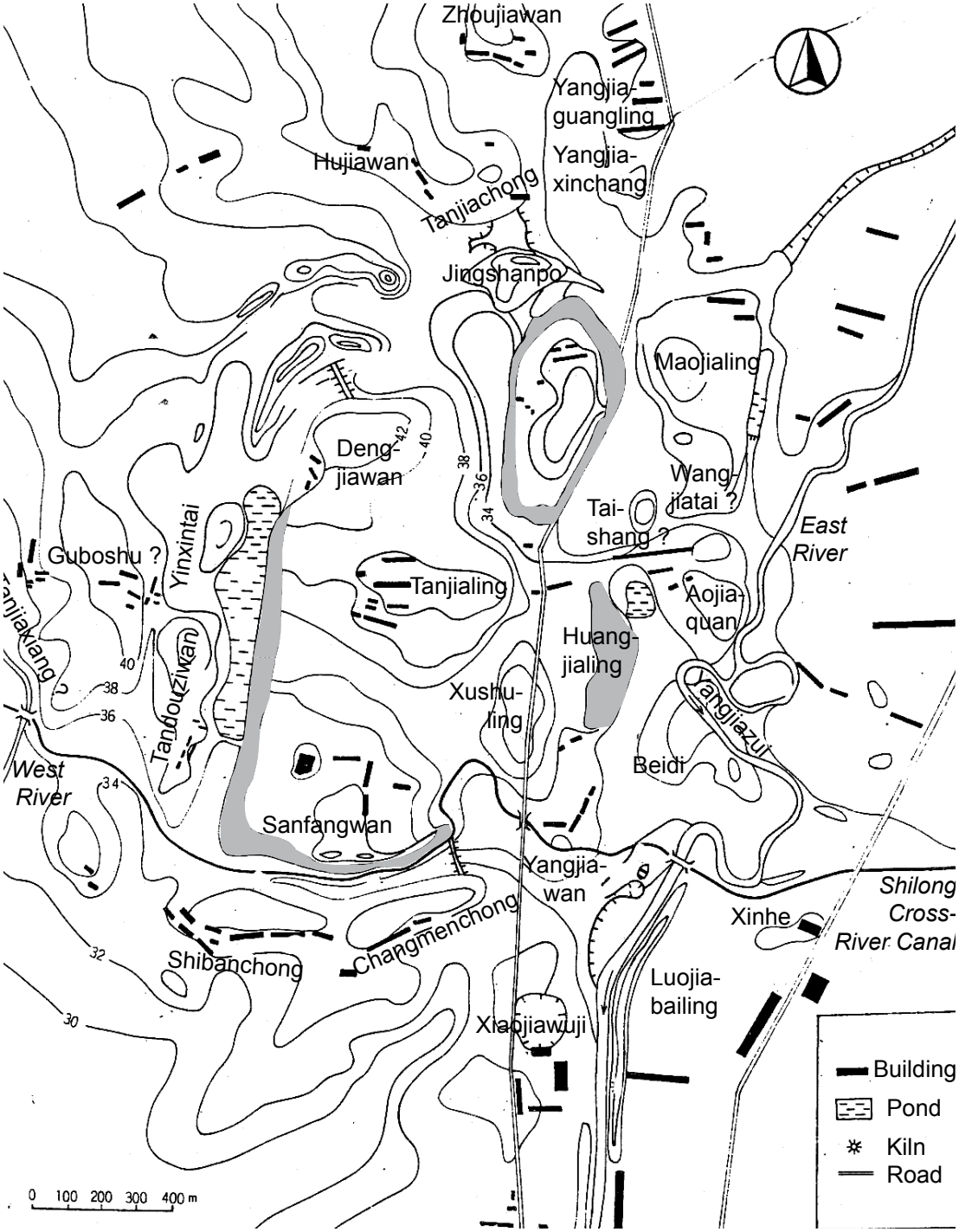


Figure 3.8. Occupied loci during the phases Shijiahe VII and VIII. Adapted from Shijiahe 1992: 218, fig. 3.

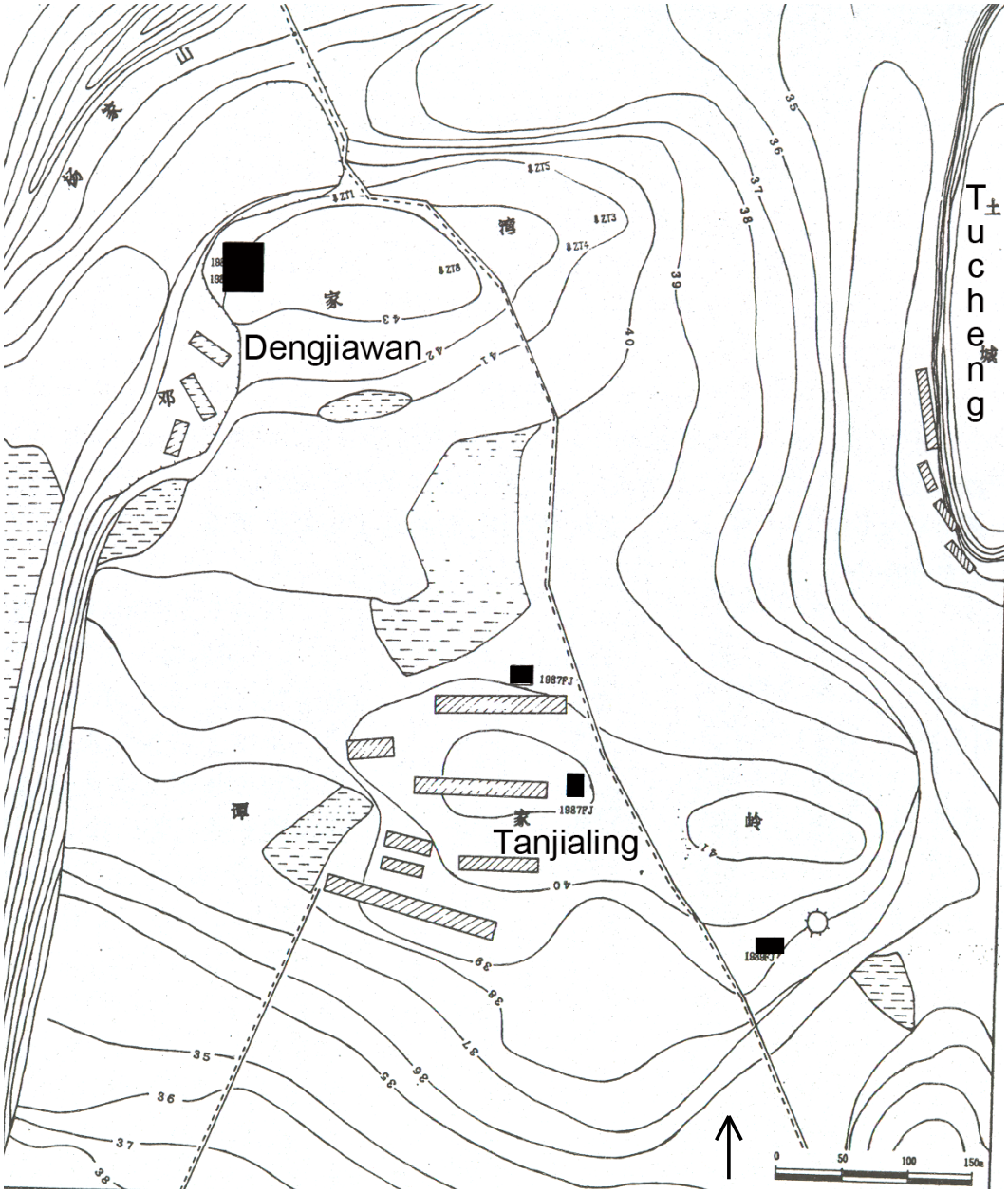


Figure 3.9. The loci of Dengjiawan and Tanjialing. Black rectangles mark excavated areas. After Shijiahe 1992: 229, fig. 14.

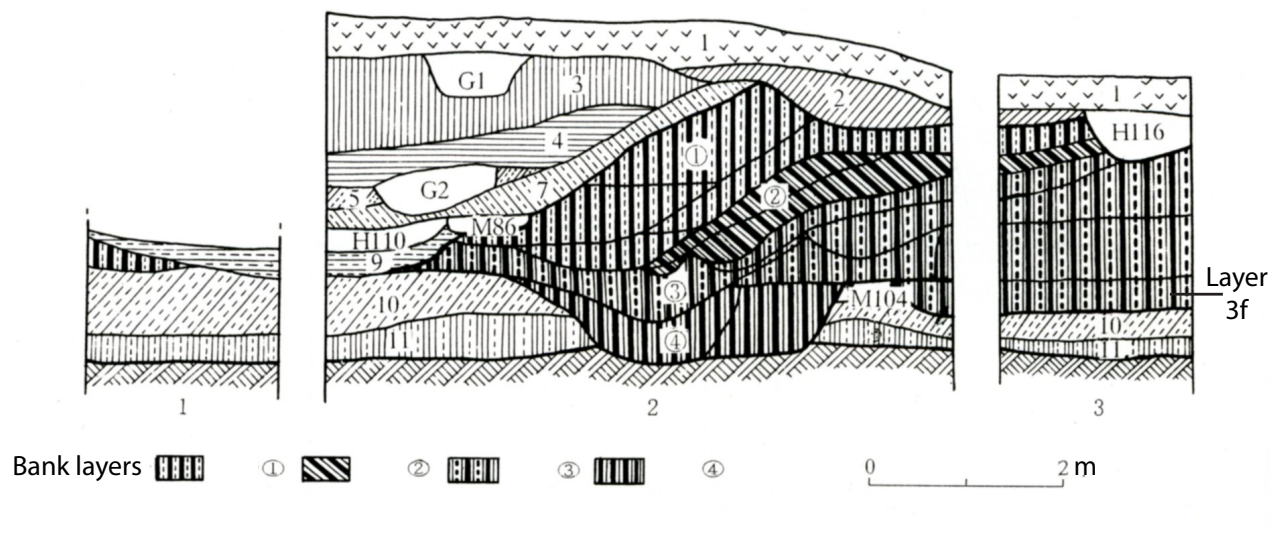


Figure 3.10. Cross-section of the inner bank section (east-west) at Dengjiawan. After Dengjiawan 2003: 16, fig. 8.

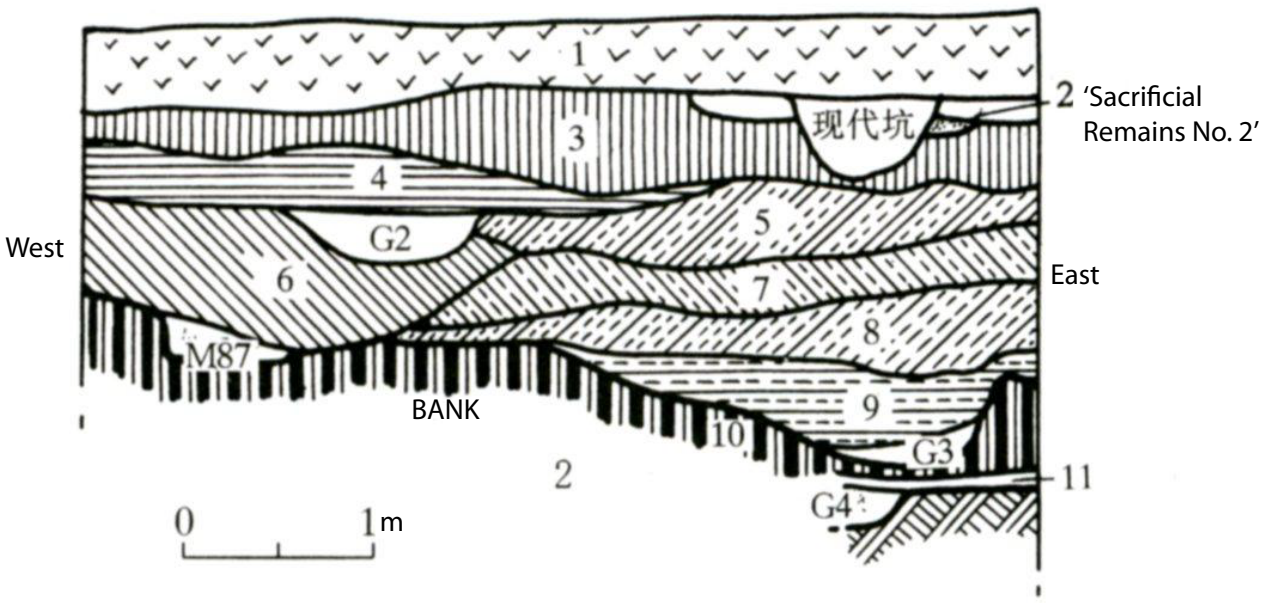


Figure 3.11. Dengjiawan trench T7. After Dengjiawan 2003: 16, fig. 8.

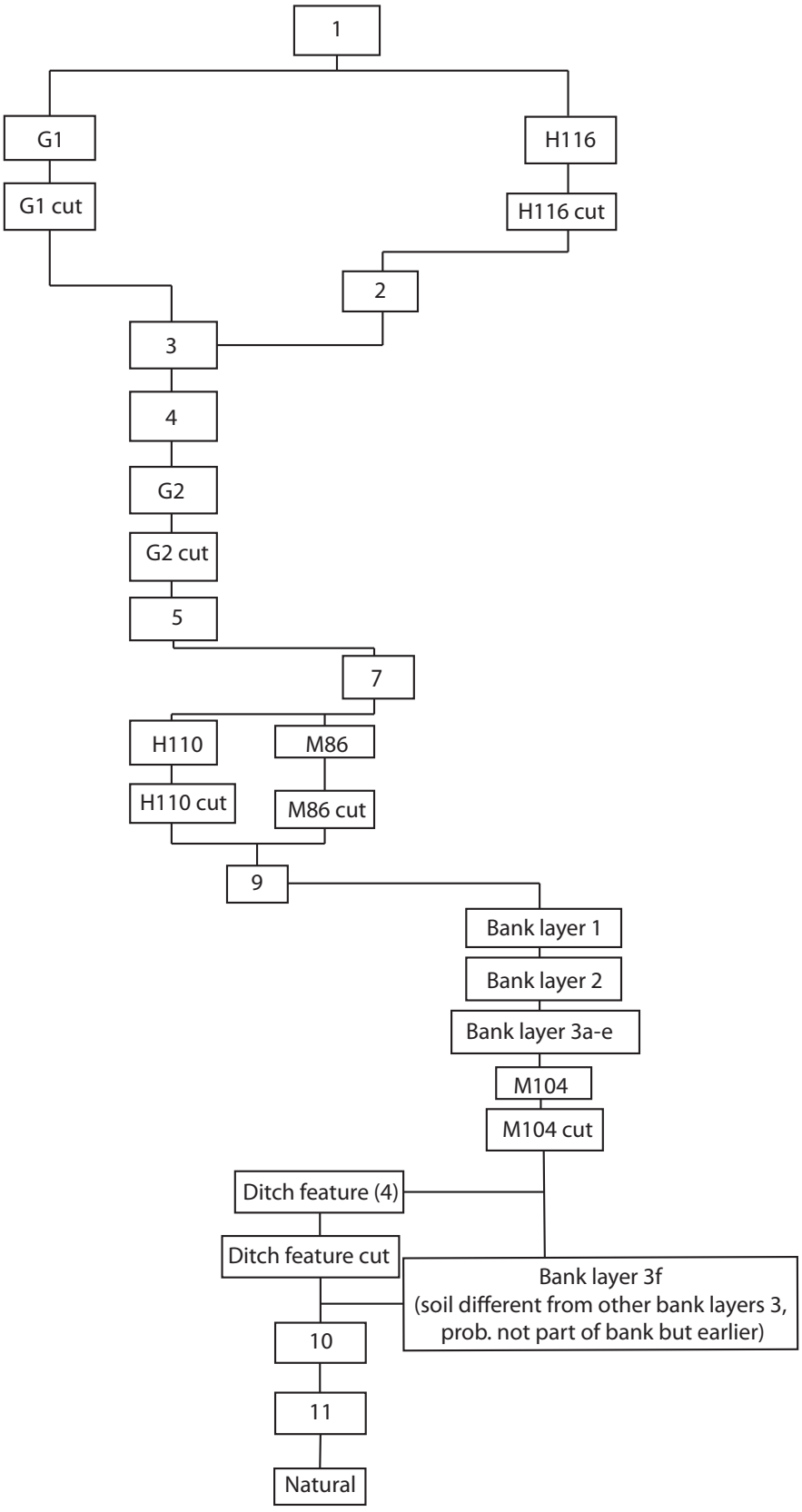


Figure 3.12. Harris matrix of the Dengjiawan bank profile (fig. 3.10) incorporating the revised notions about dating

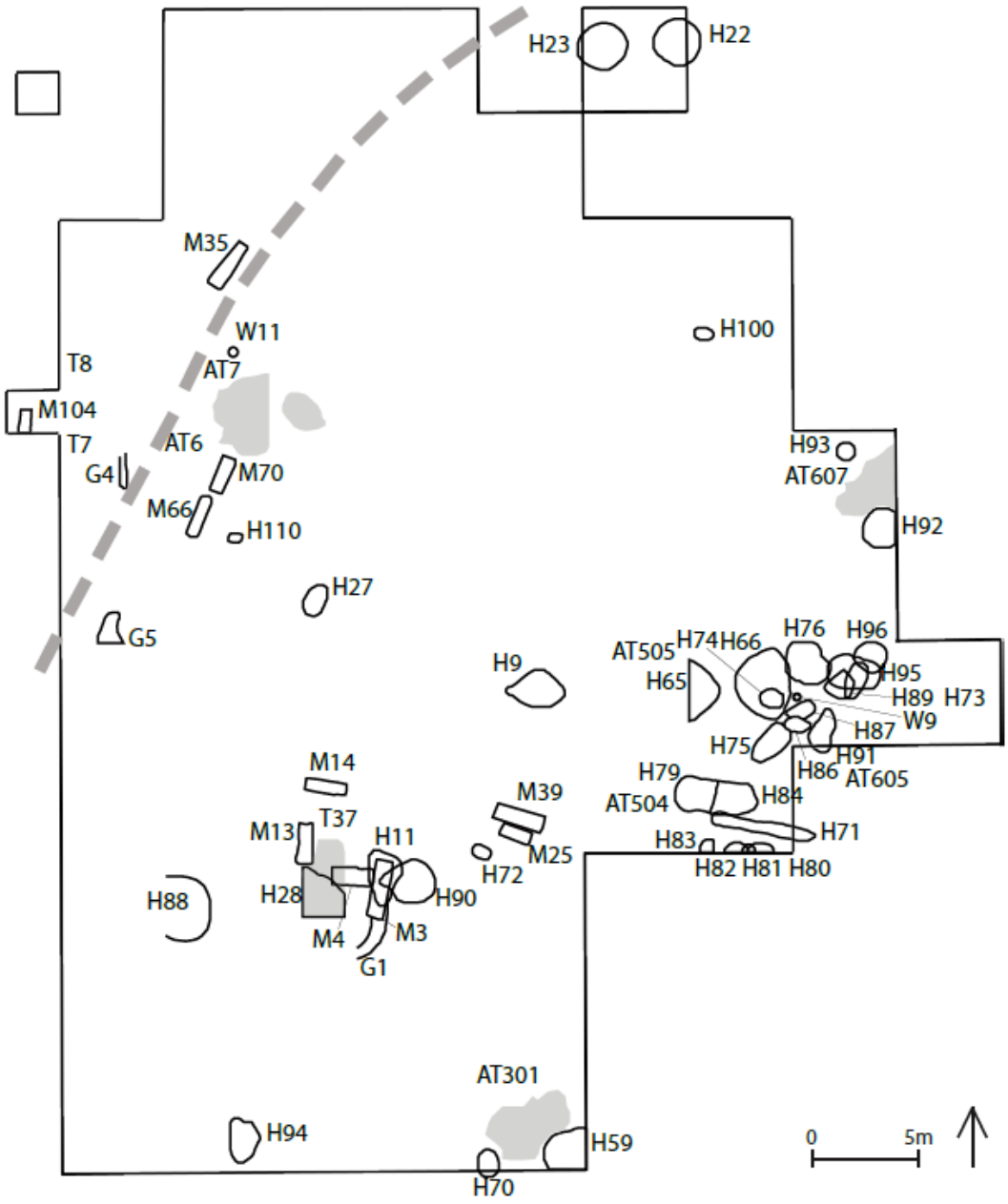


Figure 3.13. Features at Dengjiawan during phase V. The grey dashed line indicates the approximate extent of the bank. The grey patches show the locations of tube-shaped pottery. Based on Dengjiawan 2003: 15, fig. 7.

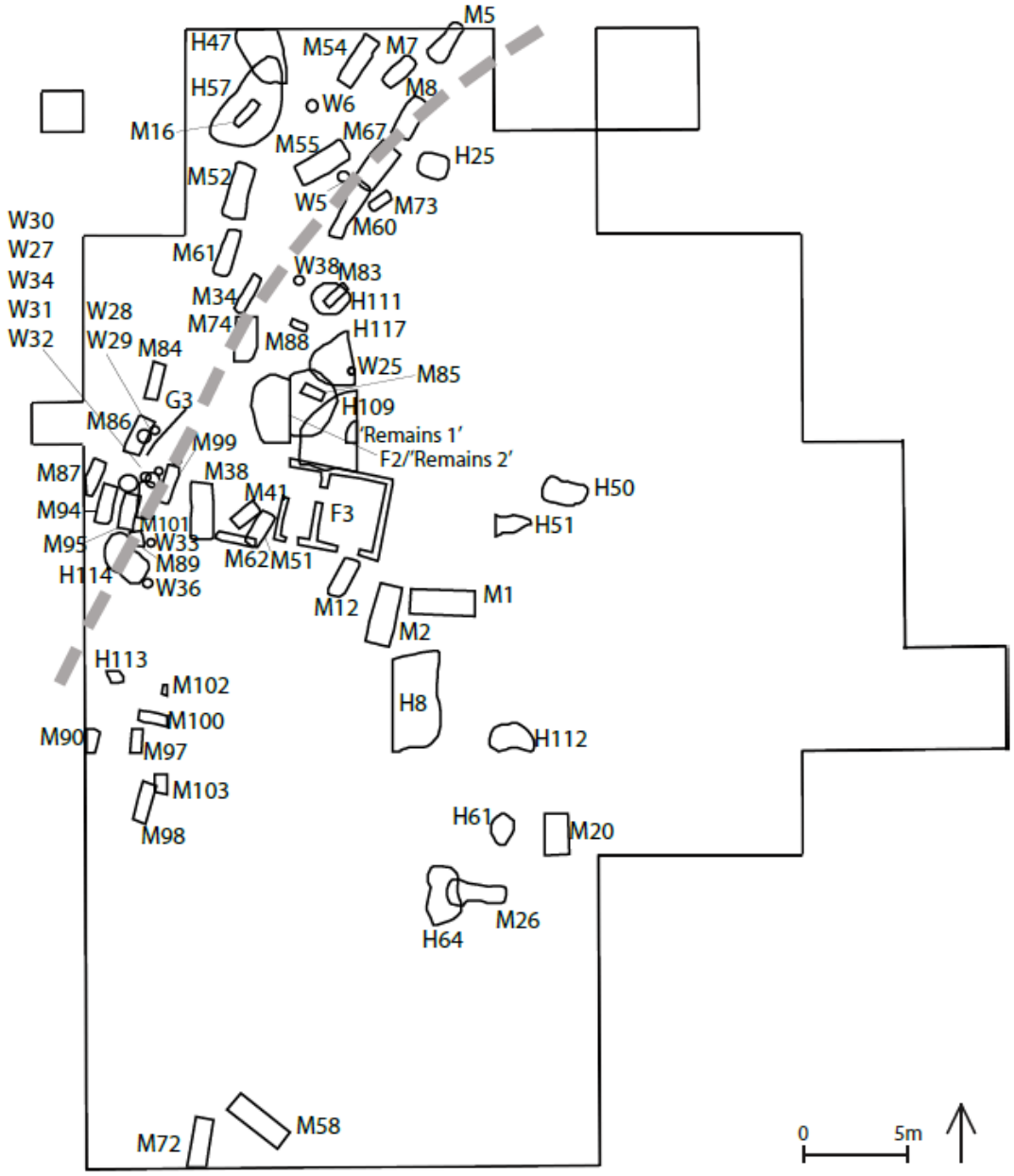


Figure 3.14. Features at Dengjiawan during phase VI. The grey dashed line indicates the approximate extent of the bank. Based on Dengjiawan 2003: 15, fig. 7.

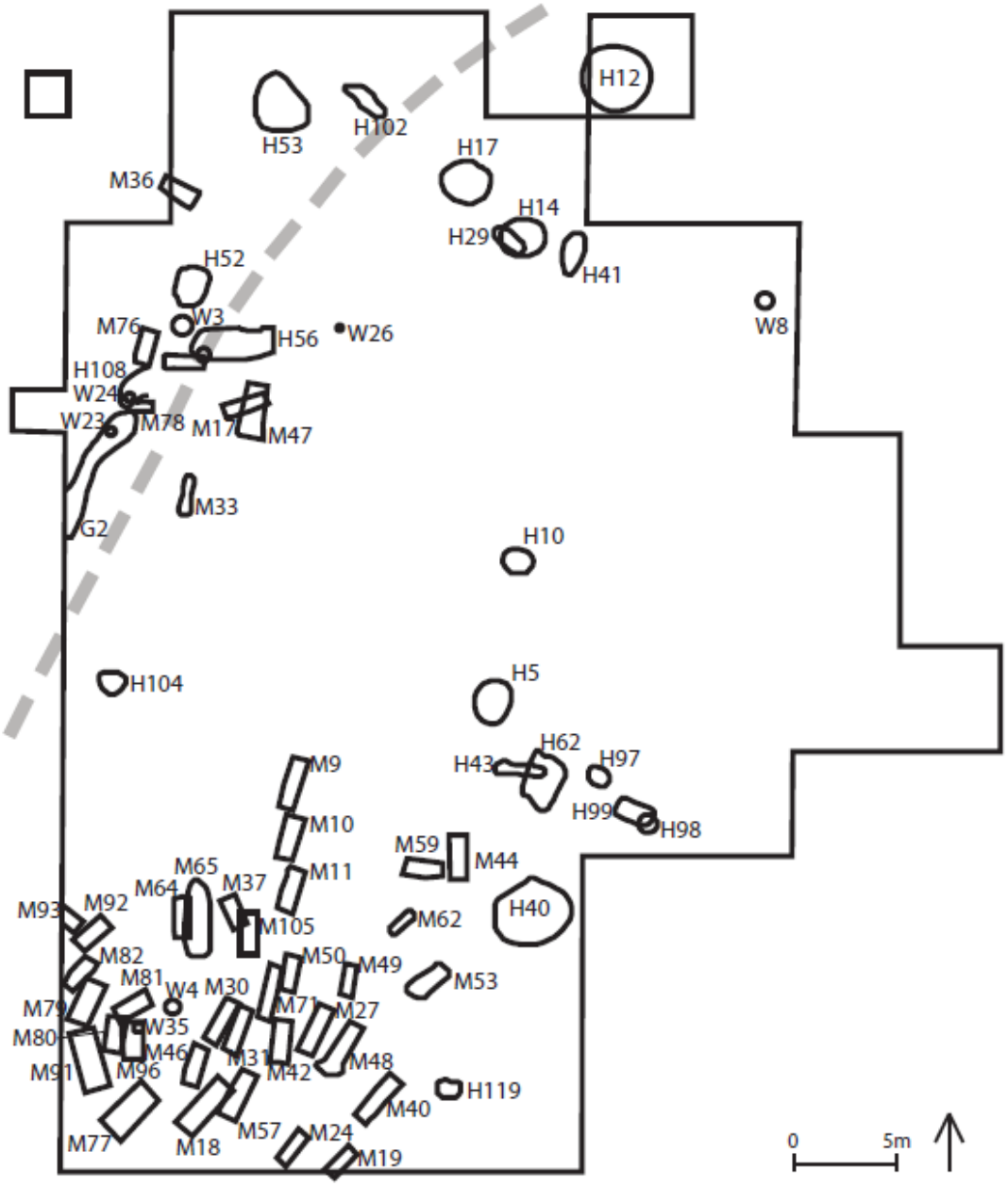


Figure 3.15. Features at Dengjiawan during phase VII. The grey dashed line indicates the approximate extent of the bank. Based on Dengjiawan 2003: 138, fig. 118.

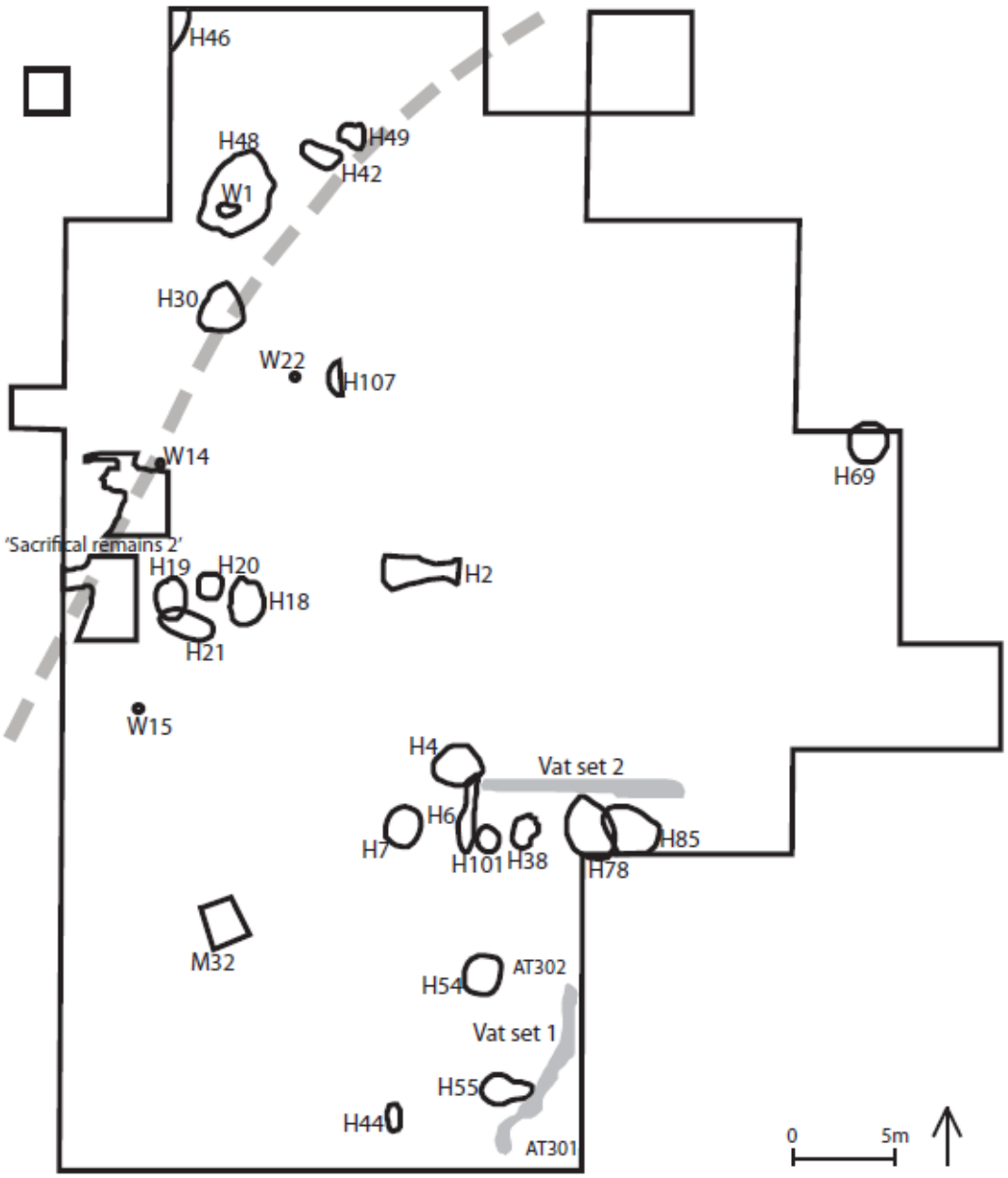


Figure 3.16. Features at Dengjiawan during phase VIIIa. Based on Dengjiawan 2003: 138, fig. 118.

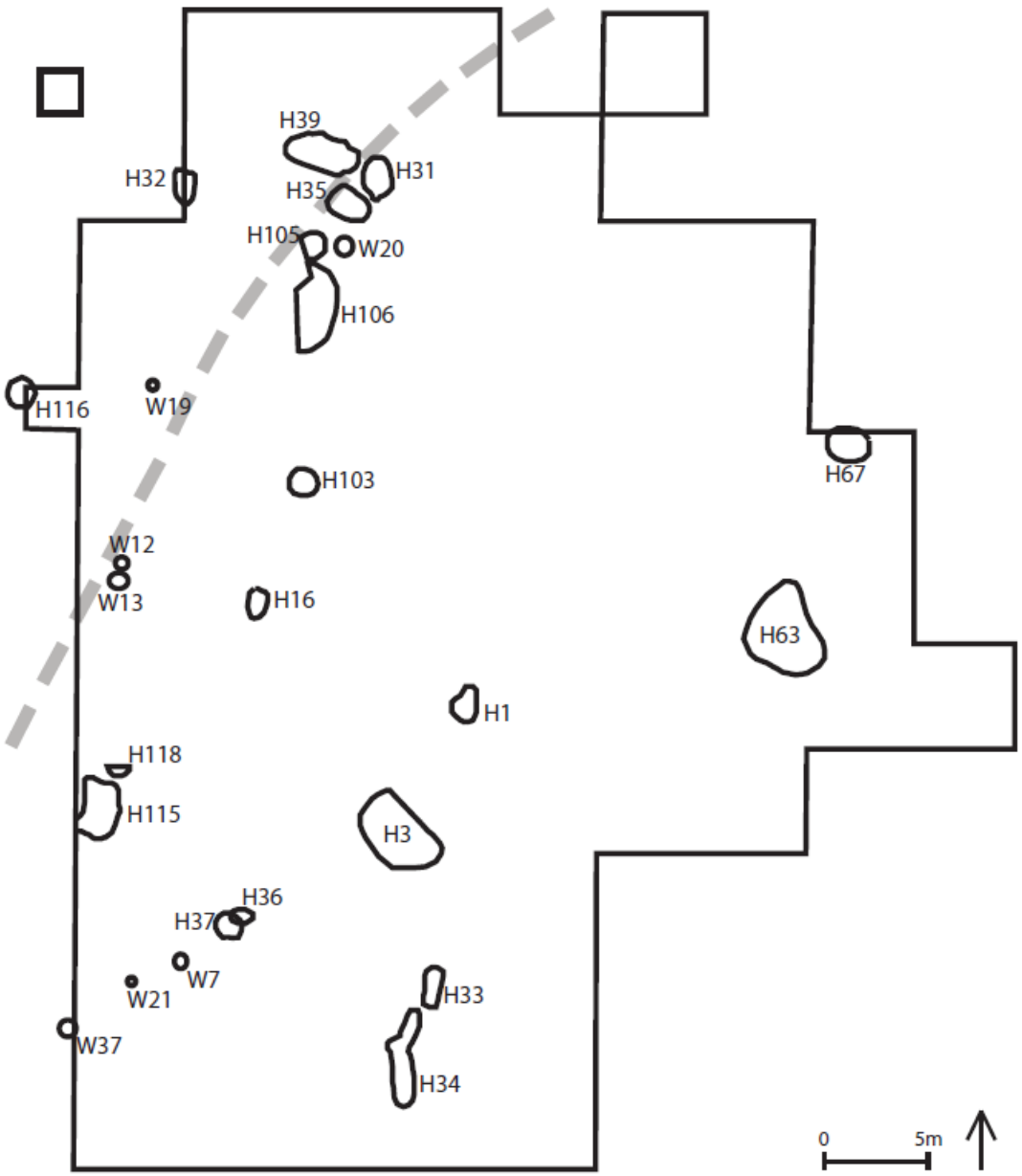


Figure 3.17. Features at Dengjiawan during phase VIIIb. Based on Dengjiawan 2003: 138, fig. 118.



Figure 3.18. Burial M13, Tanjialing, Shijiahe, Tianmen, Hubei, phase II. Length 2m, width 0.6m, depth 0.1m, 273°. After Shihe Kaogudui 1990: 8, fig. 20.



Figure 3.19. Urns W5 and W6, Tanjialing, Shijiahe, Tianmen, Hubei, probably phase II or III. After Shihe Kaogudui 1990: 9, fig. 21.

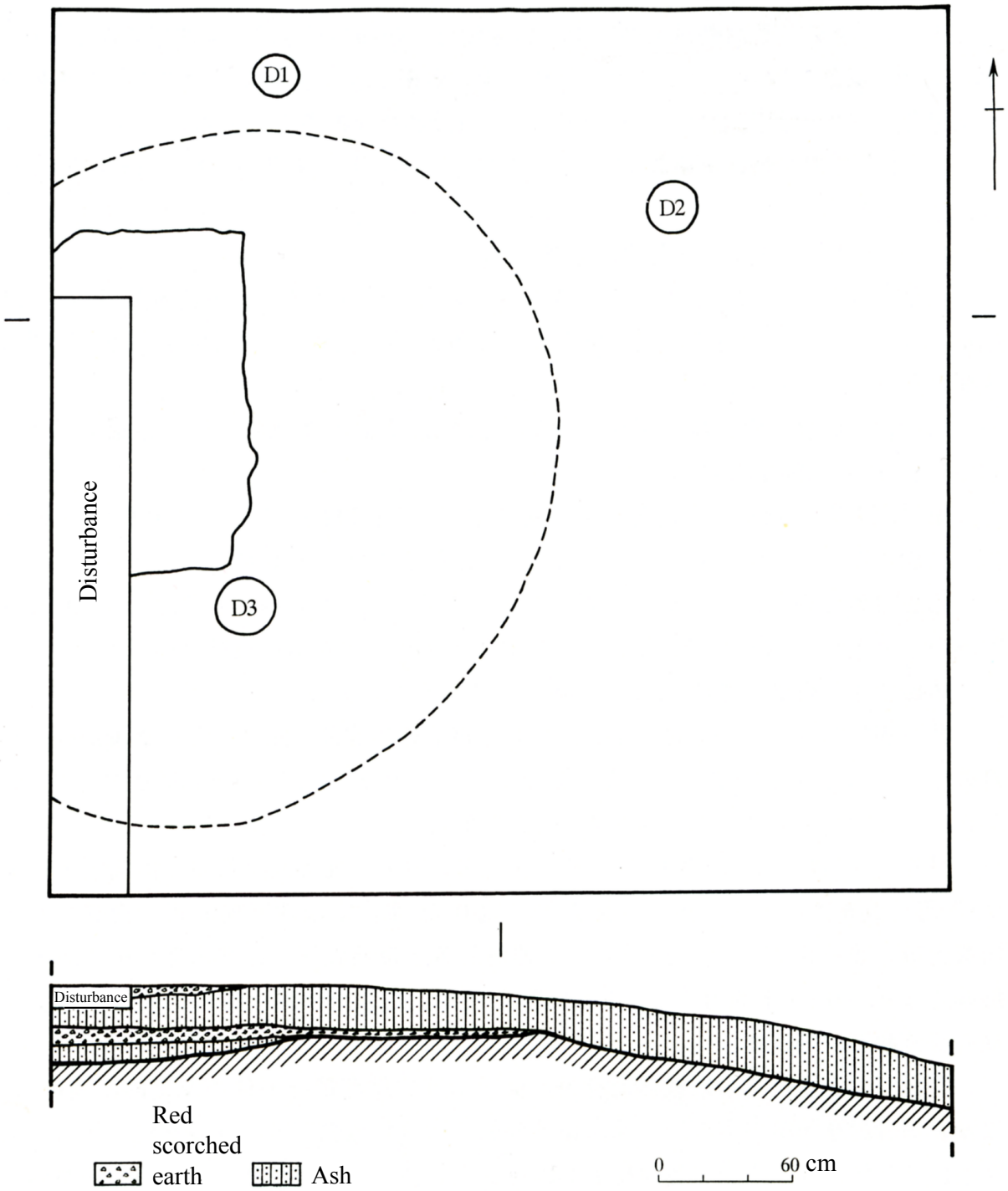


Figure 3.20. ‘Remains no. 2’ at Dengjiawan, phase VI. D1, D2 and D3 are postholes. After Dengjiawan 2003: 32, fig. 23.

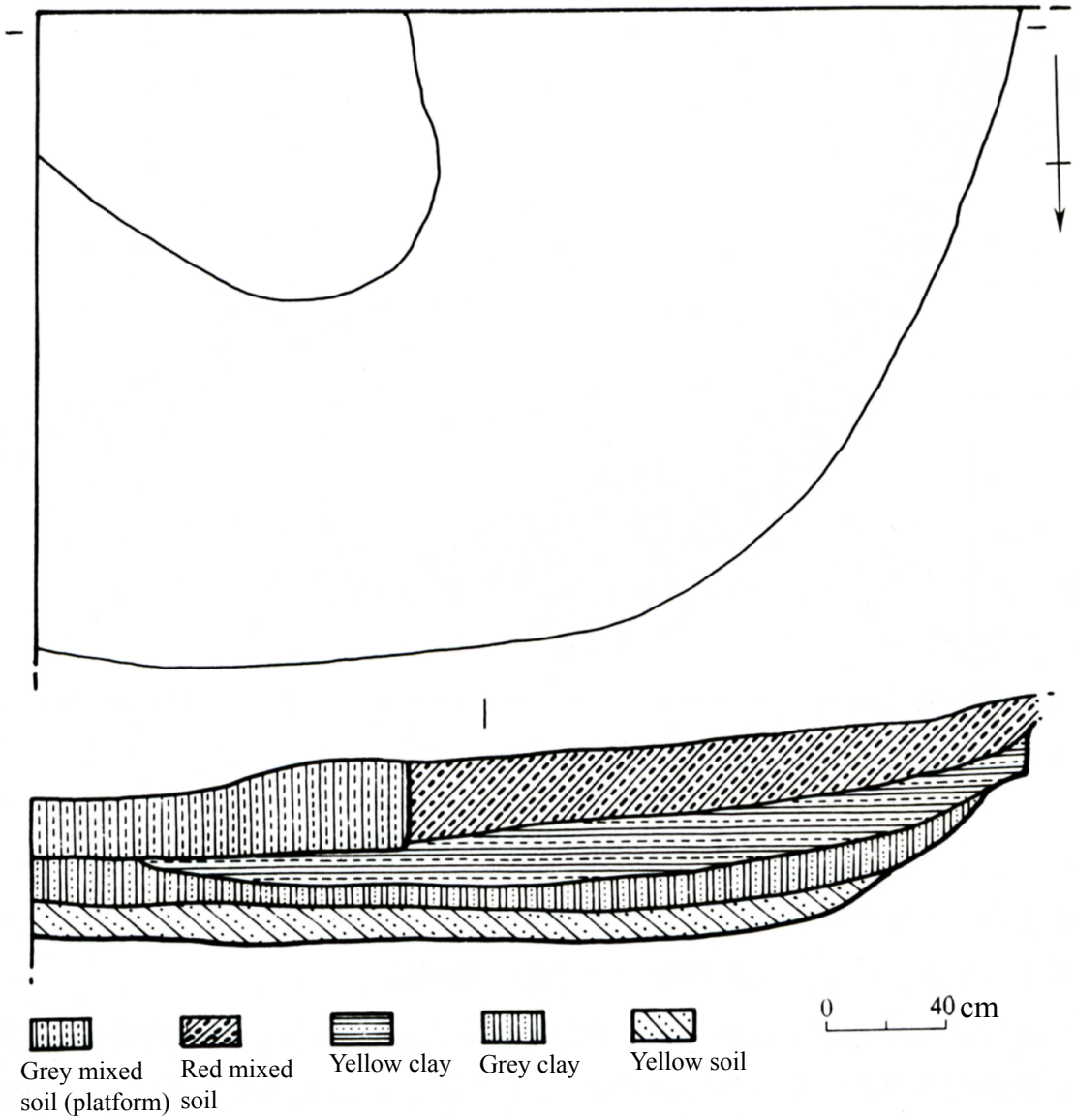


Figure 3.21. ‘Remains no. 1’ at Dengjiawan, phase VI. After Dengjiawan 2003: 30, fig. 22.

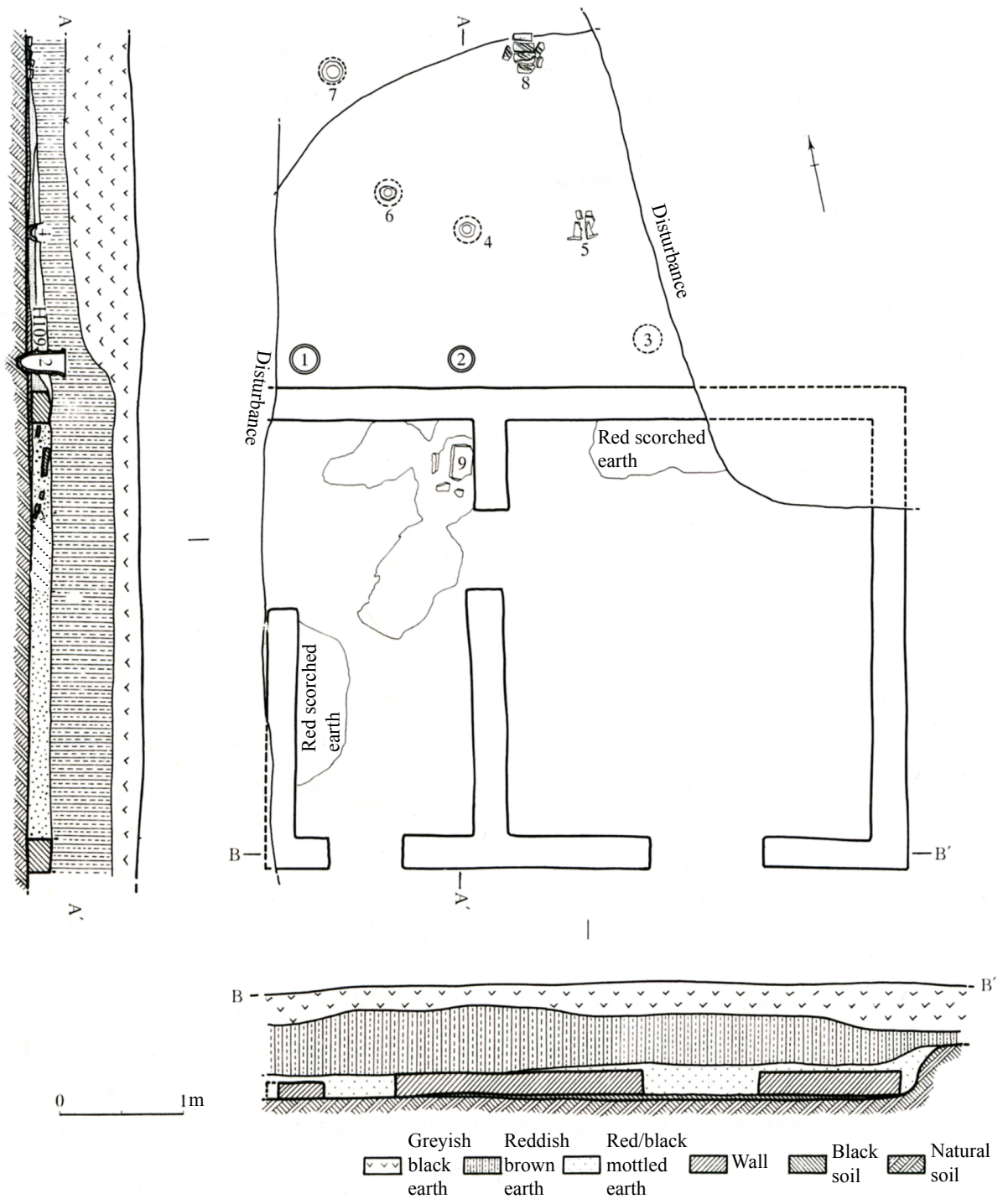


Figure 3.22. Building F3 at Dengjiawan, phase VI. Nos 1 to 9 are pottery pointed-bottom vessels. After Dengjiawan 2003: 19, fig. 10.

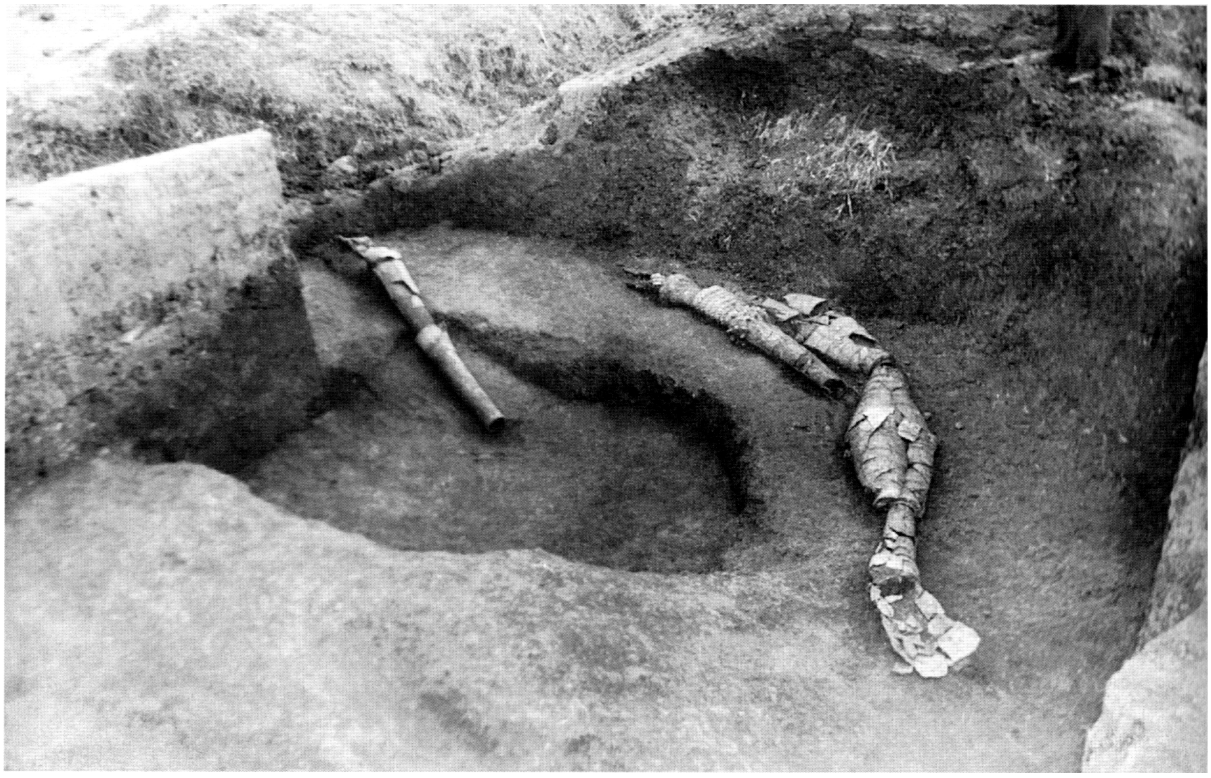


Figure 3.23. Feature with tube-shaped pottery (grid AT301) at Dengjiawan, Shijiahe, dated to phase Shijiahe V. For dimensions, see fig. 4.2a, b. After Dengjiawan 2003: pl. 2:2.

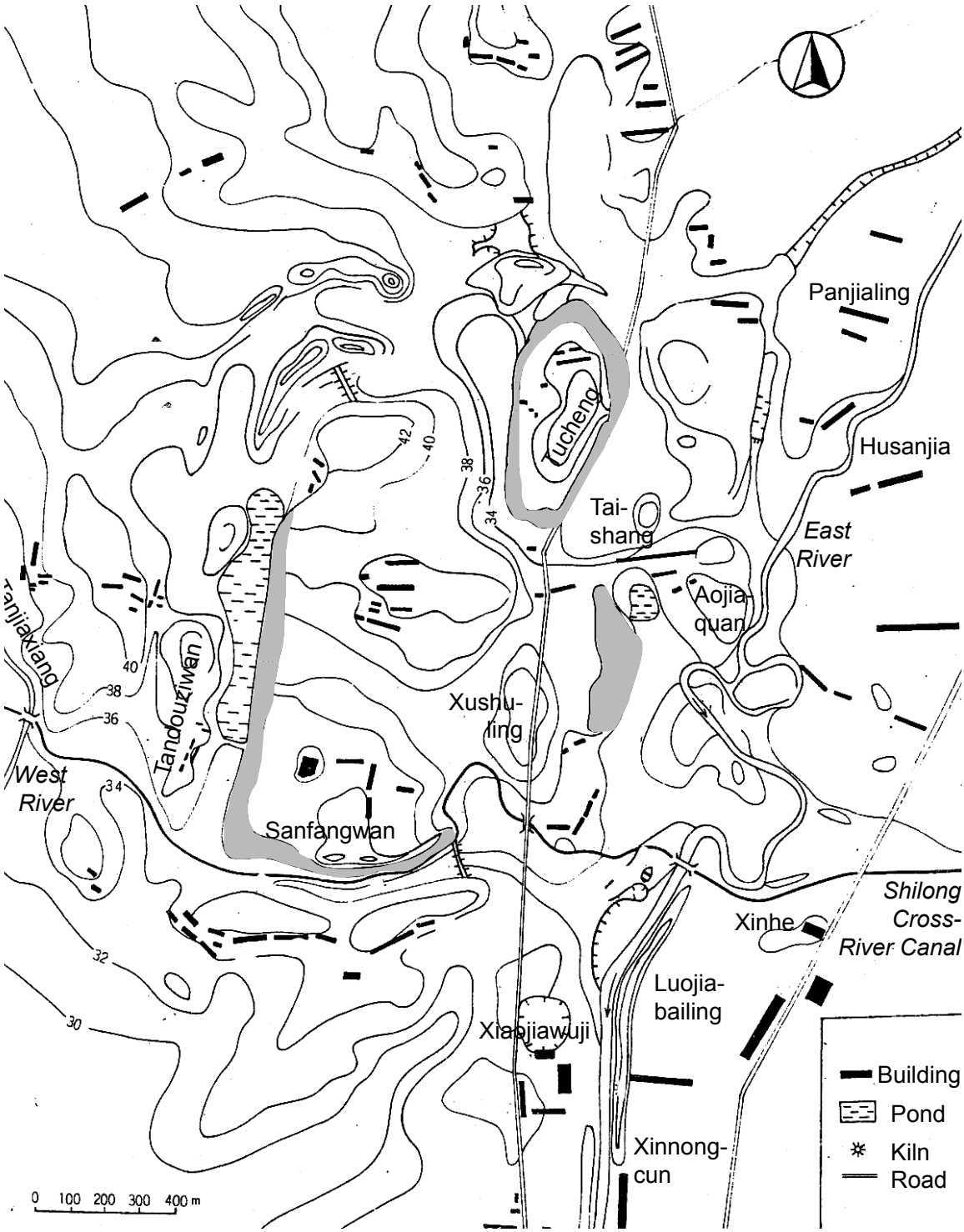


Figure 3.24. Occupied loci during phase Shijiahe IX. Adapted from Shijiahe 1992: 218, fig. 3.

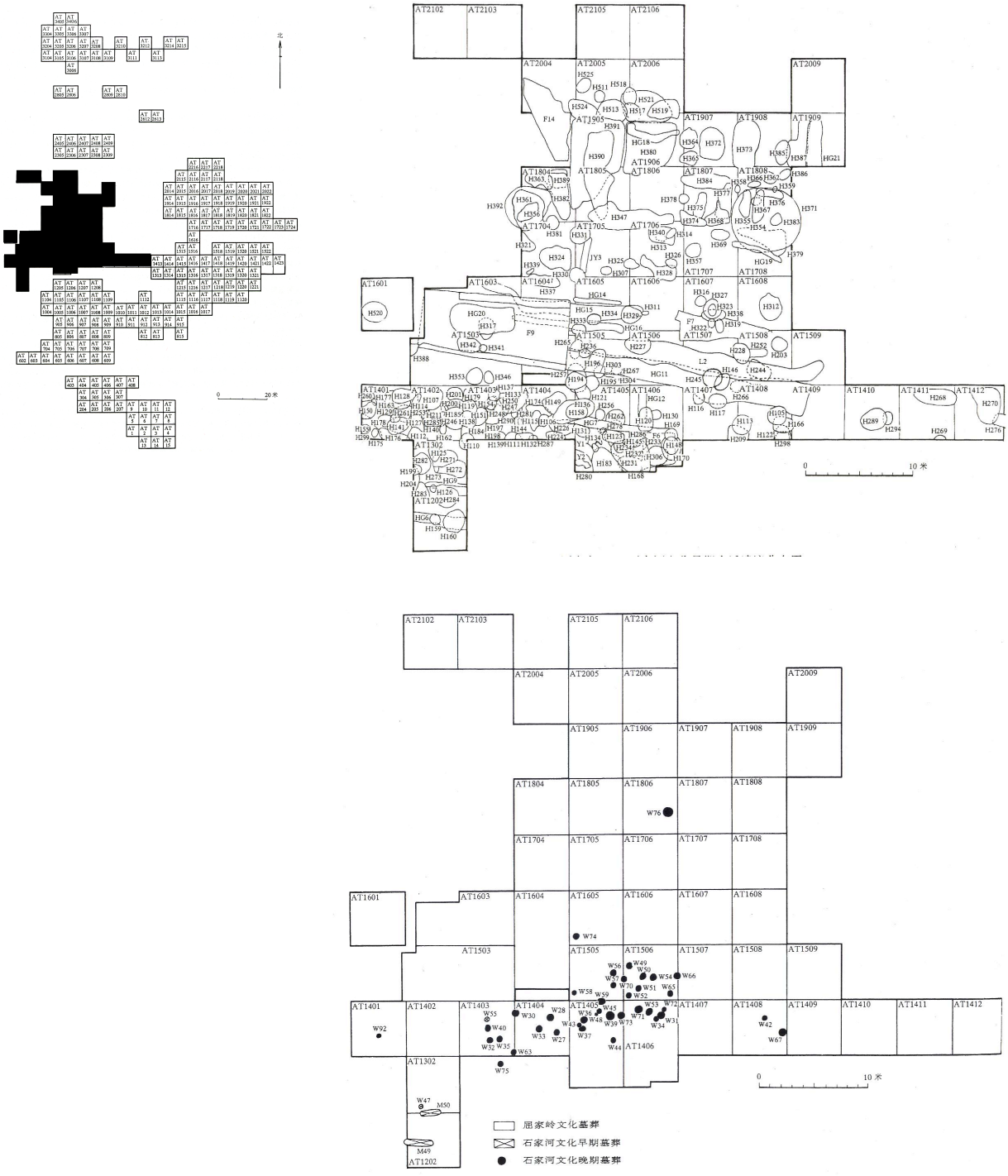


Figure 3.25. Excavated area ‘D’ at Xiaojiawuji.
Top left: Trenches at Xiaojiawuji [box grid, each box measures 5x5m], Area ‘D’ hightlighted in black
Top right: Area ‘D’ during phases VII and VIII
Bottom right: Area ‘D’ during phase IX; the black dots indicate locations of urn burials. Note: Other phase IX features are not depicted.
After Xiaojiawuji 1999: 5, fig. 3, 103, fig. 76, and 60, fig. 41.

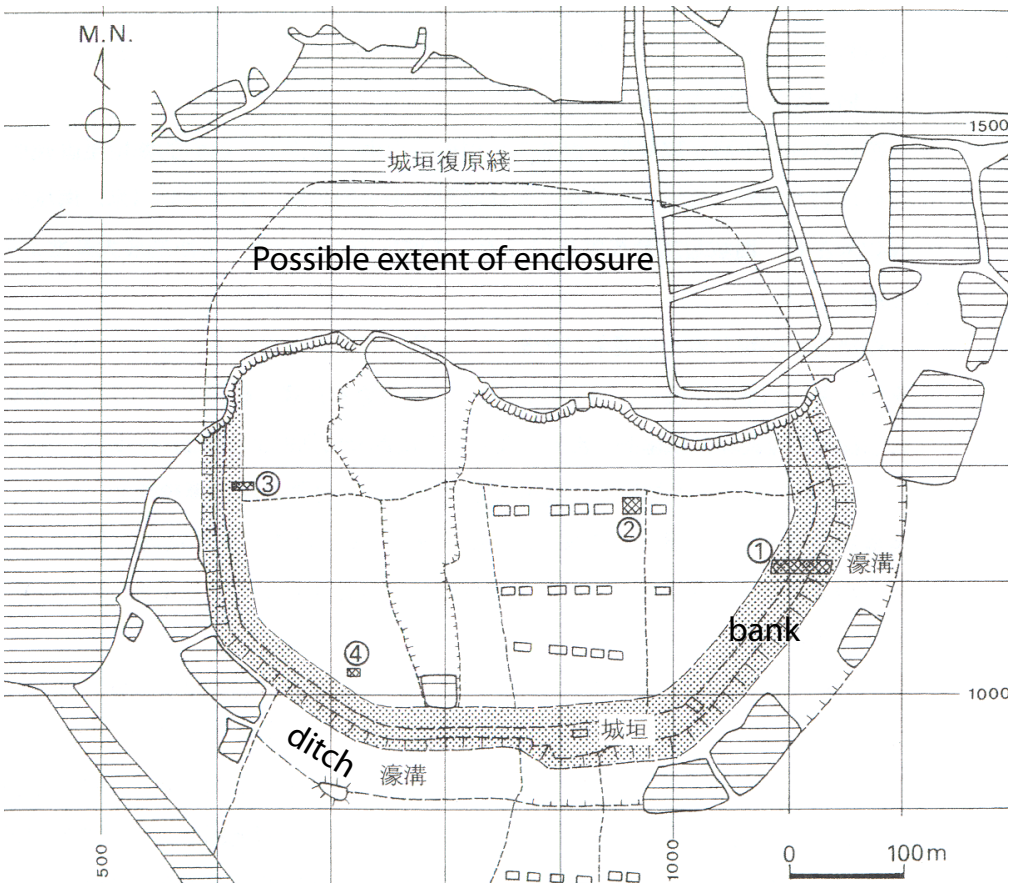


Figure 3.26. Yinxiangcheng, Jiangling, Hubei. After Okamura Hidenori and Zhang Xuqiu 1997: 501, fig. 10.

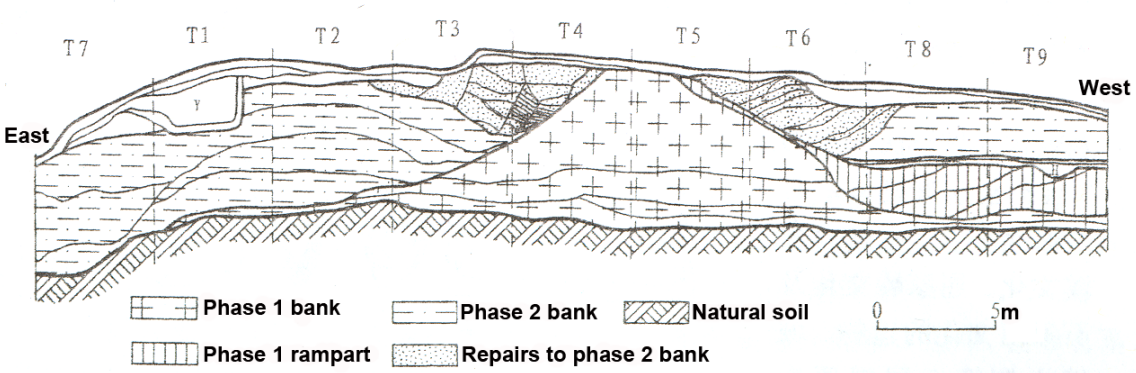


Figure 3.27. Profile of the eastern bank (east to west) at Yinxiangcheng. After Yinxiangcheng 1997: 5, fig. 5.



Figure 3.28. The Chengtoushan site with the location of the excavation trenches (grids) and the present extent of the enclosure. After Chengtoushan 2007a: 10, fig. 5.

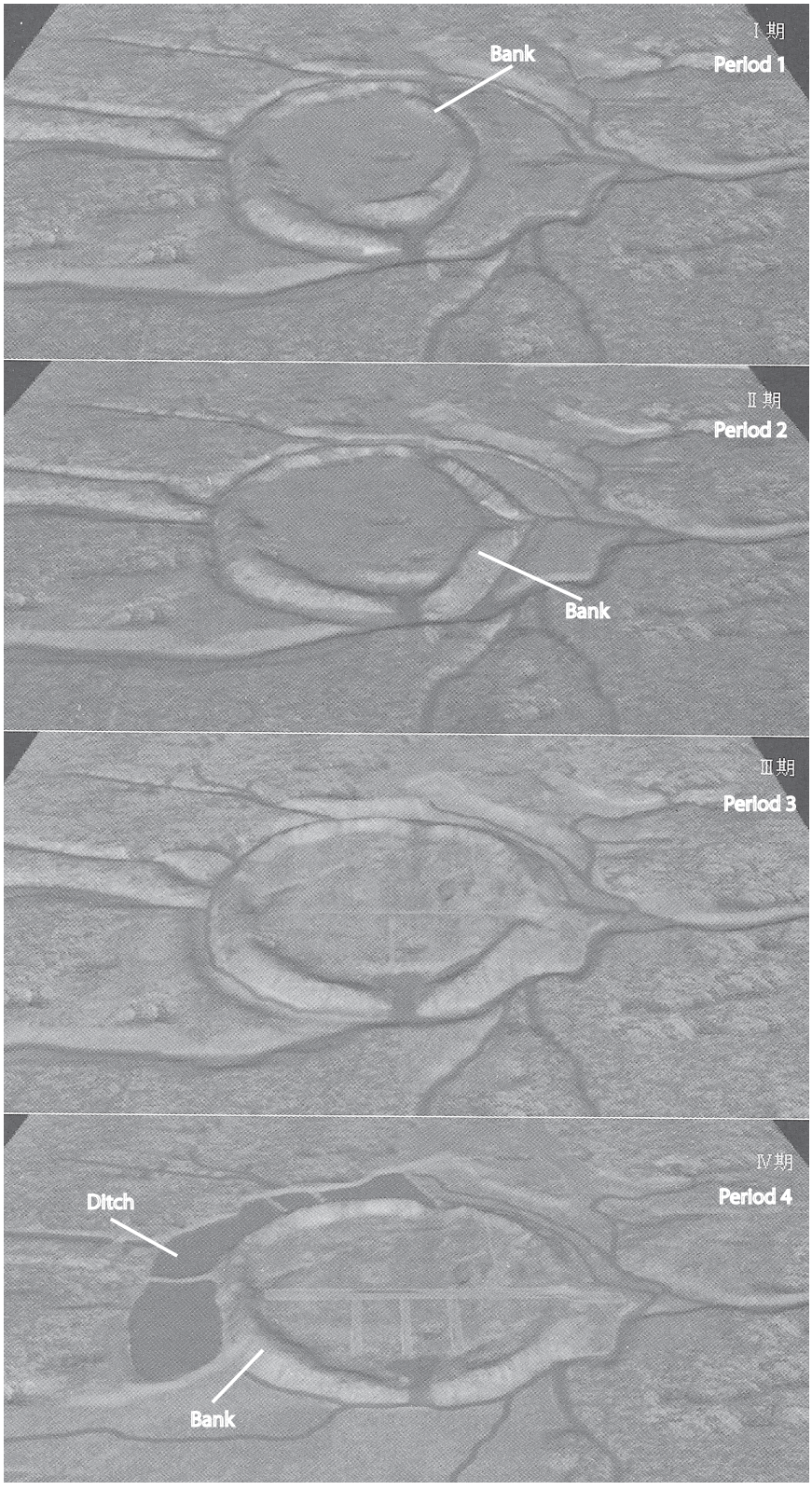


Figure 3.29. Development of the enclosure at Chengtoushan. The diameter of the latest enclosure measures 310-320m. After Chengtoushan 2007b: 178, fig. 7.

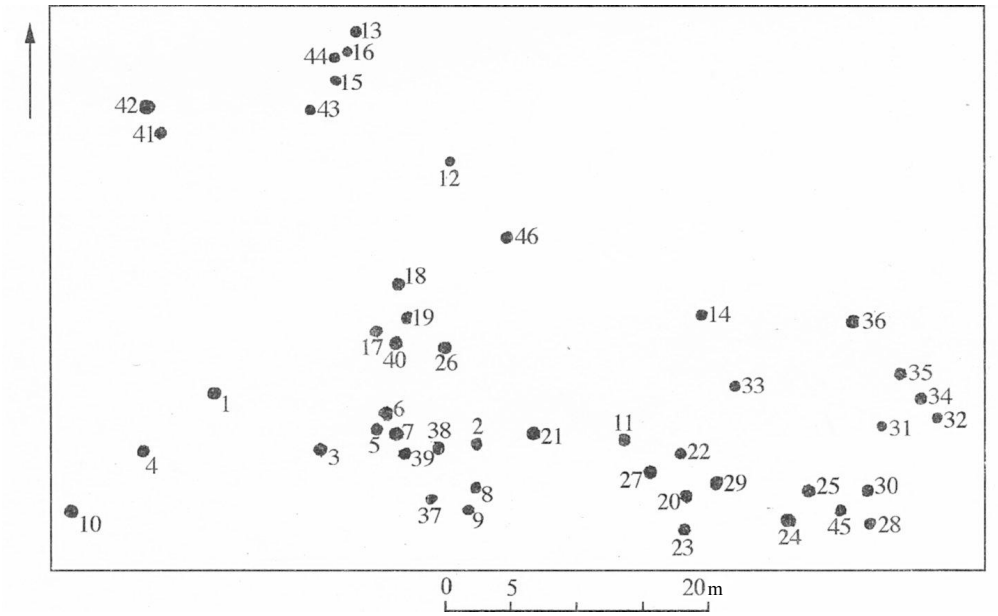


Figure 3.30. Distribution of urn burials at Zaolingang. After Zaolingang yu Duijintai 1999: 6, fig. 3.

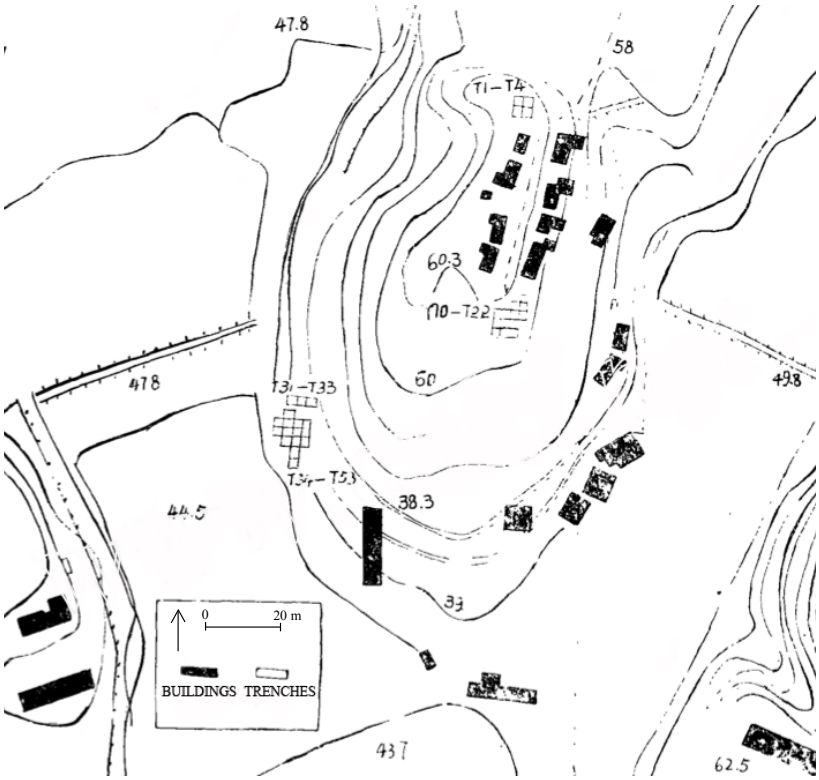


Figure 3.31. Trenches at Liuhe. After Liuhe 1987: 2, fig. 2.

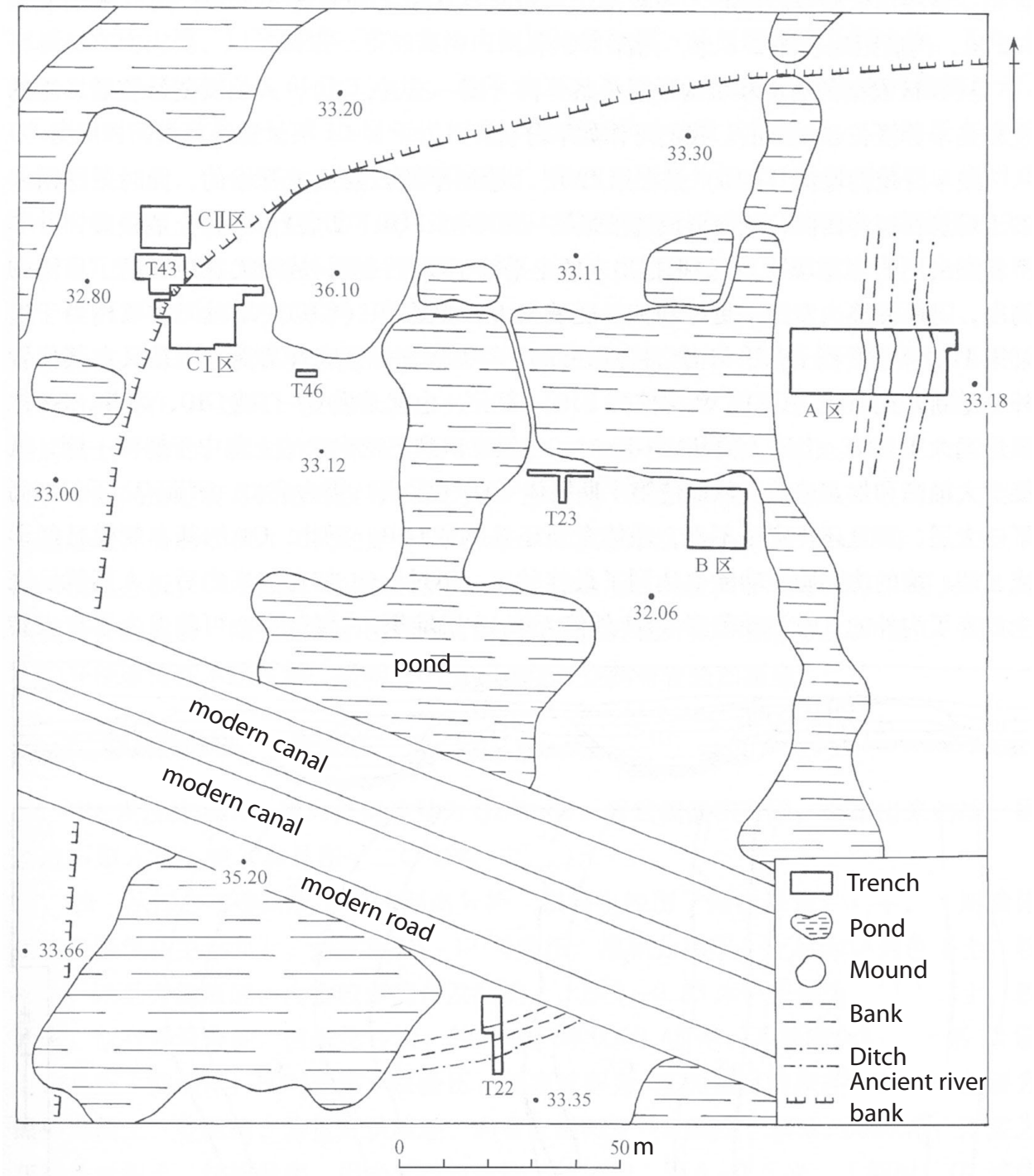


Figure 3.32. The enclosure at Bashidang, Li Xian, Hunan. After Pengtoushan yu Bashidang 2006: 225, fig. 134.



Figure 3.33. Additional sites mentioned in Chapters 3 to 5.



Figure 4.1. Tube-shaped pottery from Dengjiawan. Height 157cm. After Rawson 1996: cat. no. 11.



Figure 4.2a. Tubes in trench AT301. After Dengjiawan 2003: colour pl. 2:1.

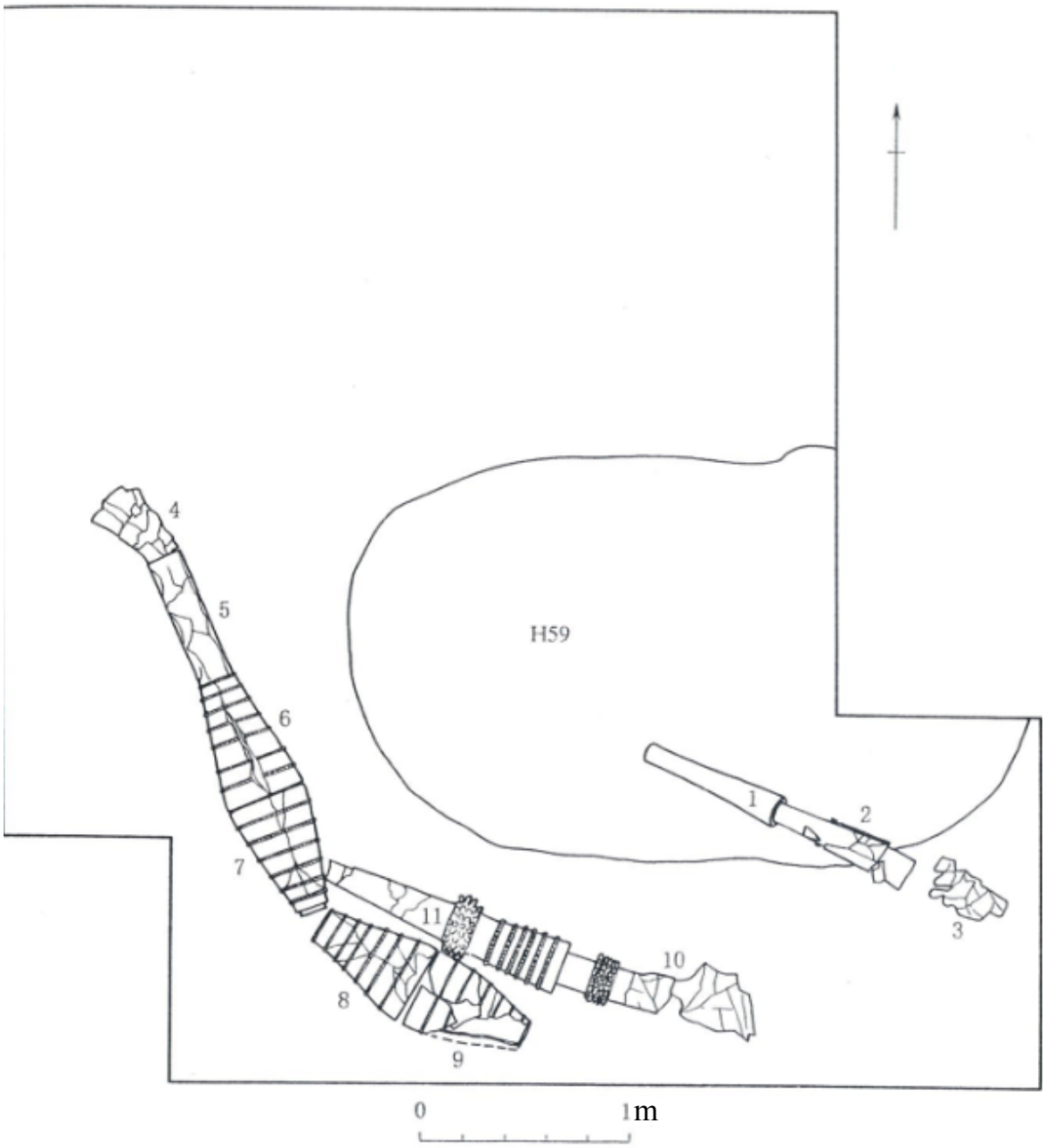


Figure 4.2b. Drawing of trench AT301, Dengjiawan. After Dengjiawan 2003: 29, fig. 21.

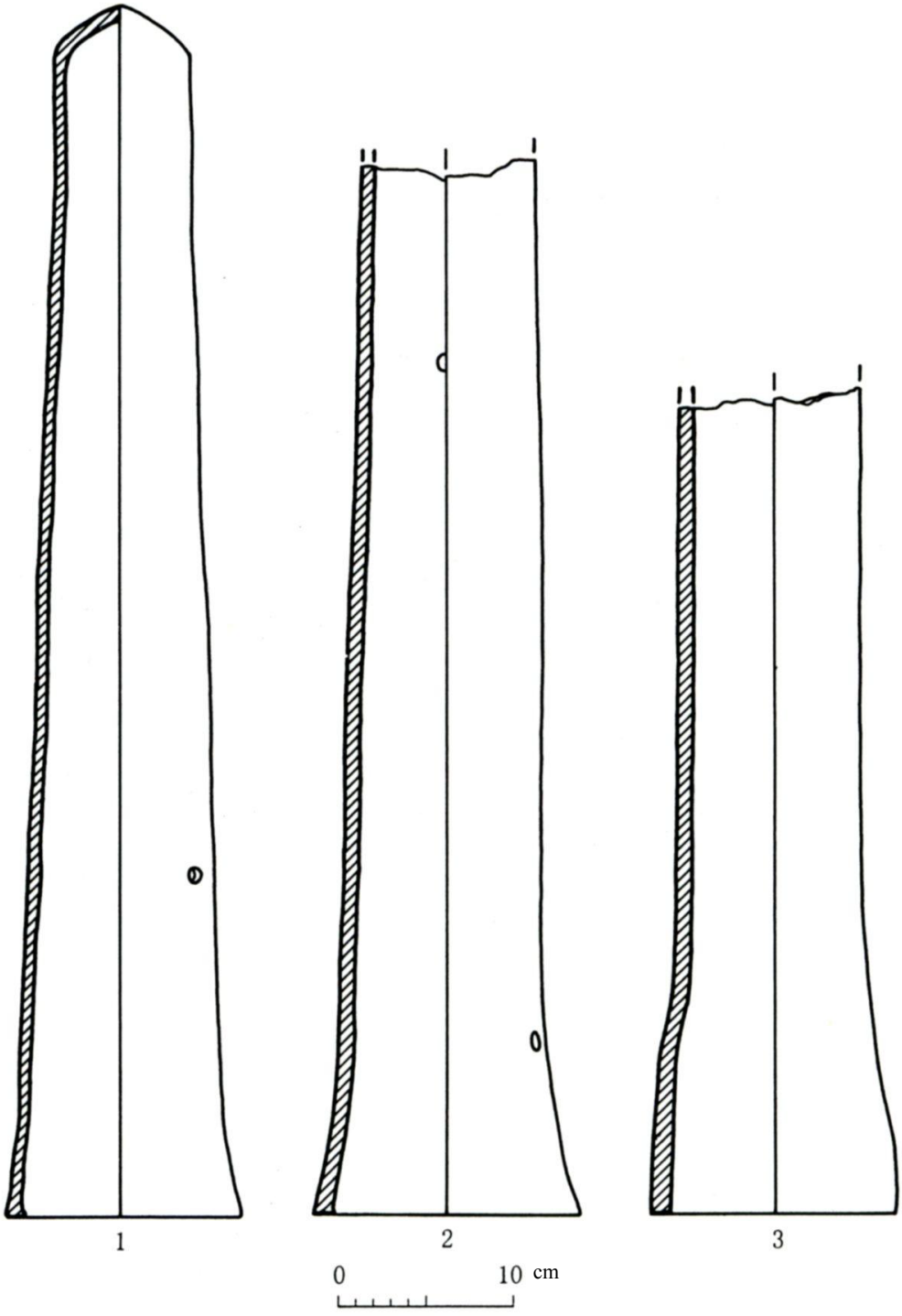


Figure 4.3. Tube-shaped pottery of type A from Dengjiawan. After Dengjiawan 2003: 62, fig. 41.

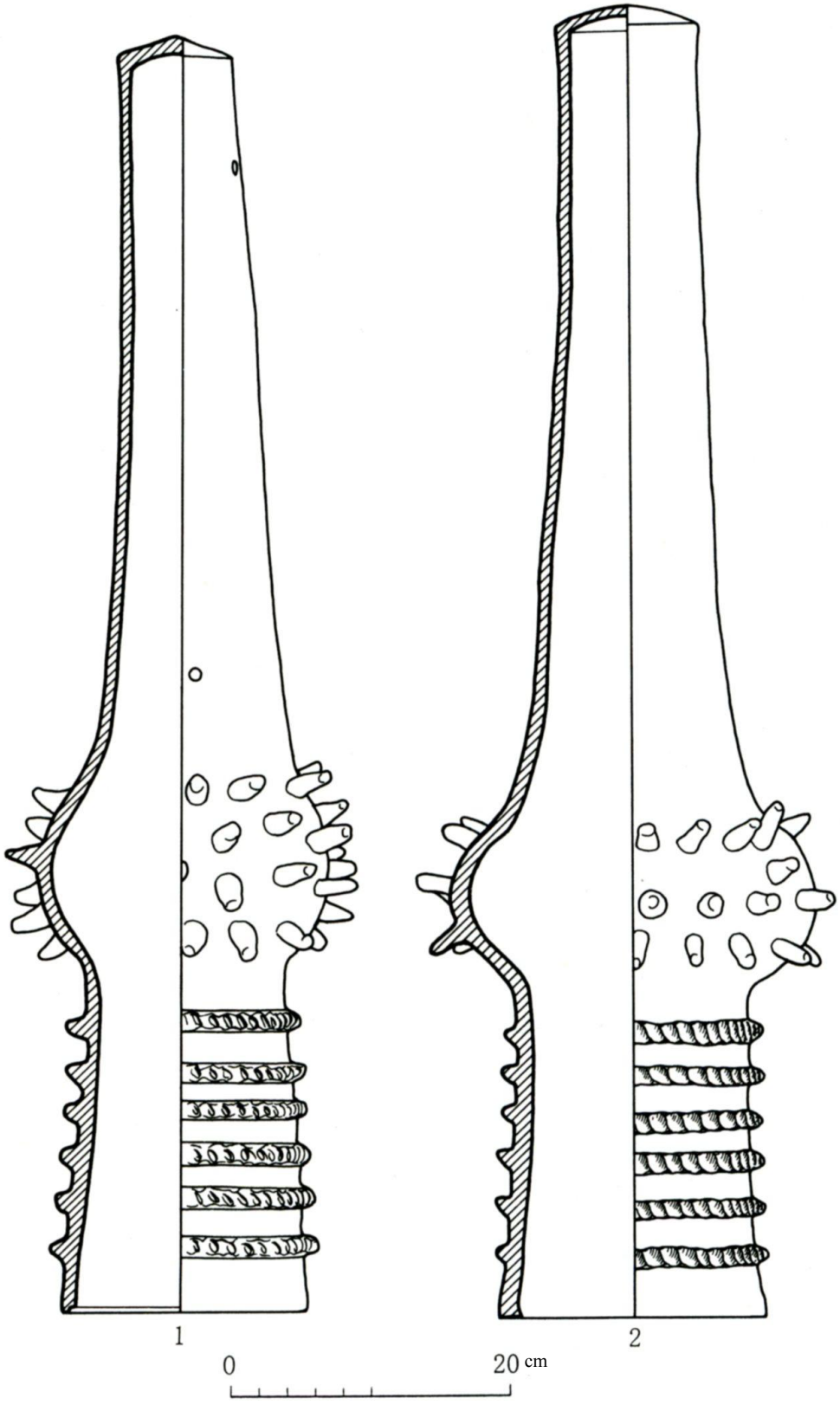


Figure 4.4. Tube-shaped pottery of type B. After Dengjiawan 2003: 63, fig. 42.

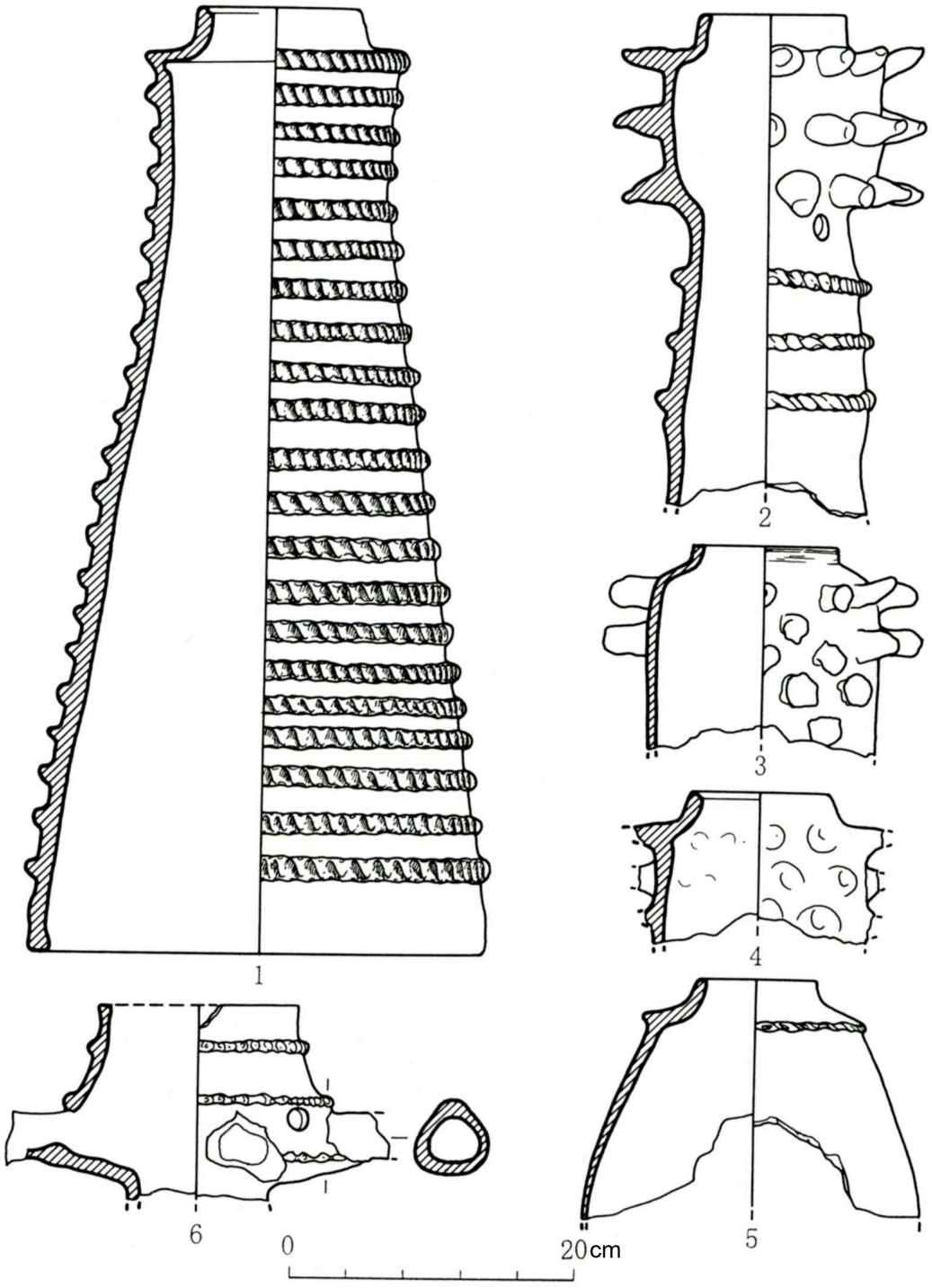
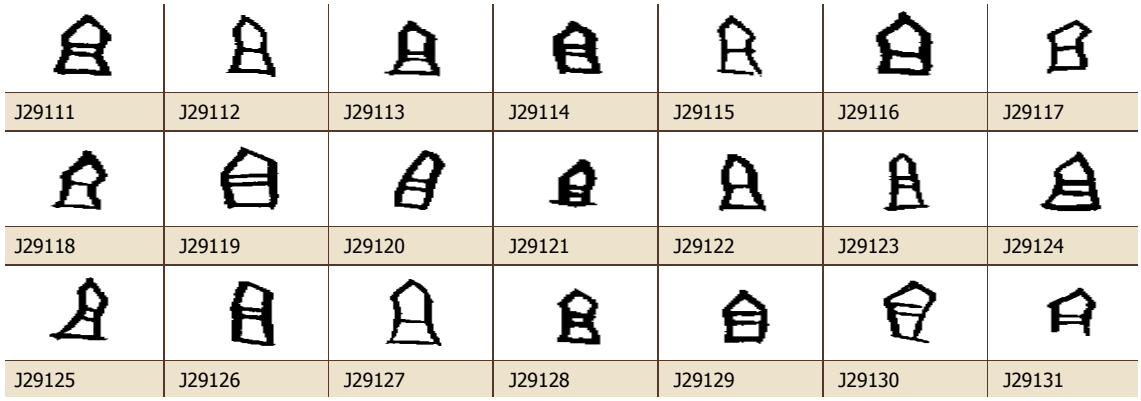
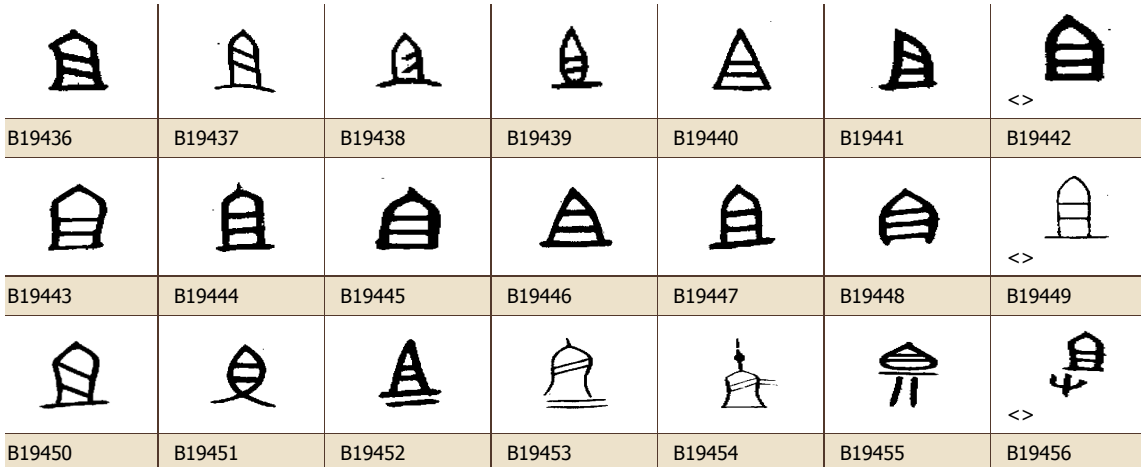


Figure 4.5. (a) nos 2-4: Type D; (b) no. 1: Type C; (c) no. 6: 'odd' piece. (d) no. 5: Type E. After Dengjiawan 2003: 66, fig. 45.



Oracle bone characters



Bronze inscription characters

Figure 4.6. Etymology of the character *qie*. From www.chinese etymology.org (accessed 28 May 2011).



Figure 4.7. Tubes in trench AT607 at Dengjiawan. Dimensions unclear. After Dengjiawan 2003: colour pl. 1.

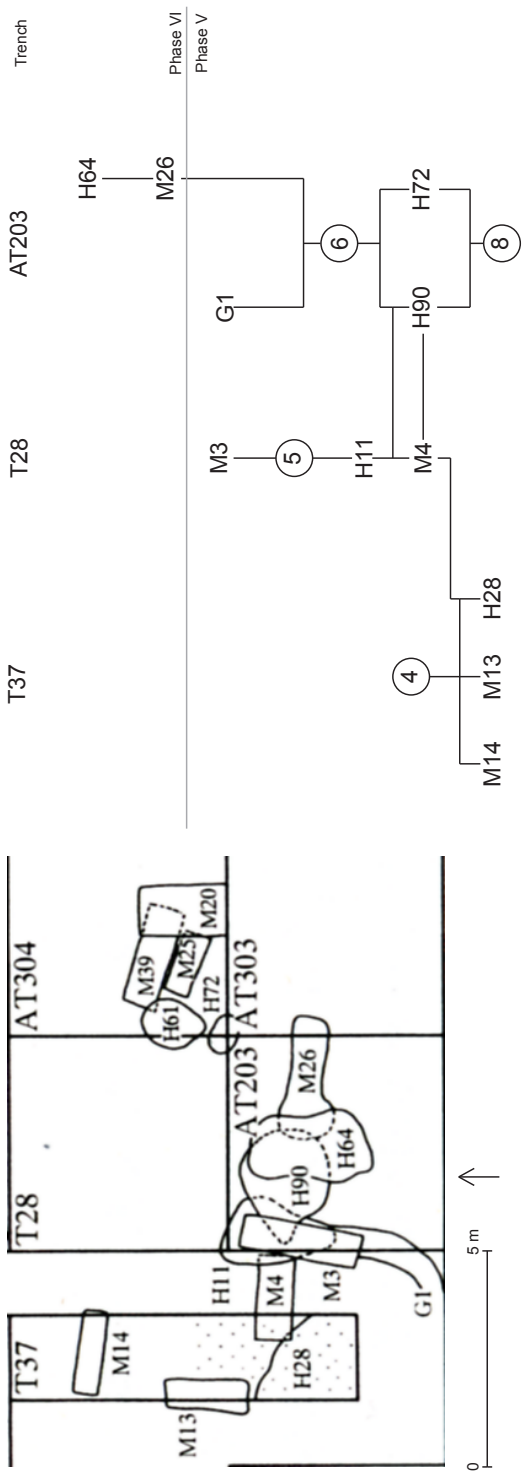


Figure 4.8. Harris Matrix of the features in trenches T37, T28 and AT203 at Dengjiawan, phases V to VI. Connections by horizontal line denote contemporary features. Connections by vertical lines denote features cutting into each other. Numbers in circles are stratigraphic layers, M = burials, H = pits, G = ditchs. The dots surrounding H28 on the plan show the distribution of tube-shaped pottery. The exact relationships of features and of layers in different trenches are accurately portrayed (no mention in original report). After Dengjiawan 2003: 15, fig. 7.

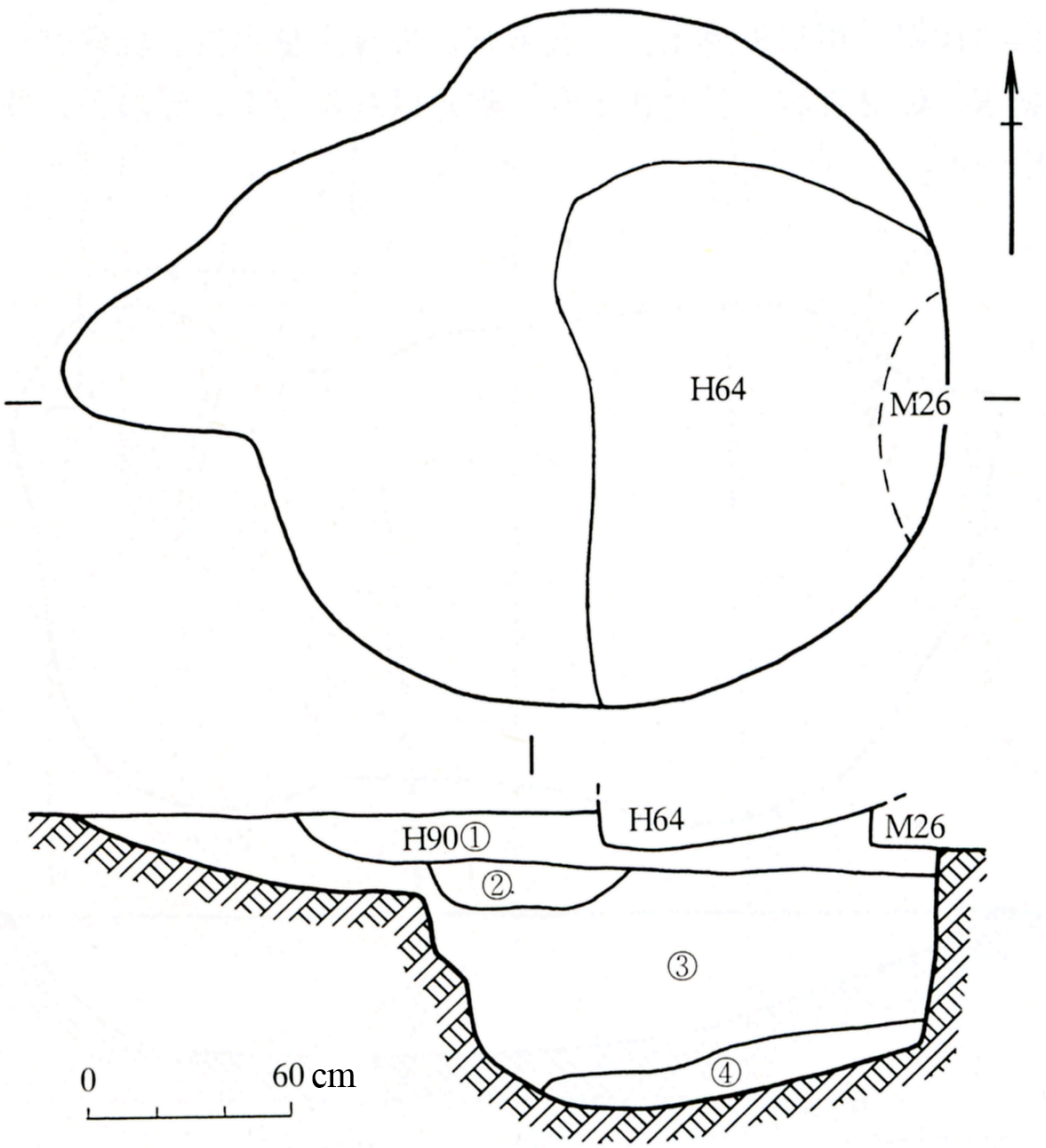


Figure 4.9. Pit H90, Dengjiawan, phase V. Numbers in circles are layers of pit fill. After Dengjiawan 2003: 23, fig. 16.

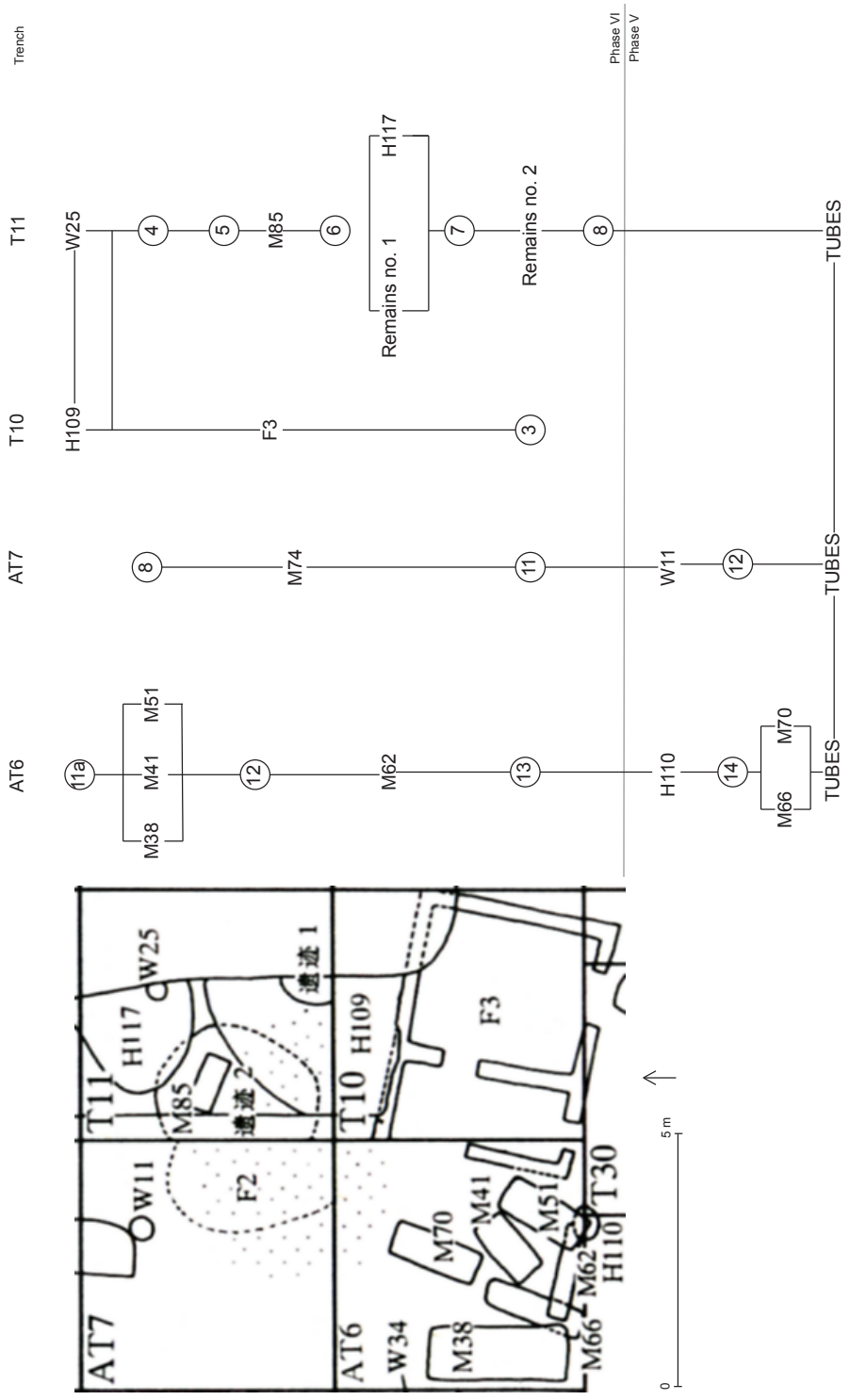


Figure 4.10. Harris Matrix of the features in trenches AT6, AT7, T10 and T11 at Dengjiawan, phases V to VI. Connections by horizontal line denote contemporary features. Connections by vertical lines denote features cutting into each other. Numbers in circles are stratigraphic layers, M = burials, H = pits, G = ditchs. The dots surrounding F2 on the plan show the distribution of tube-shaped pottery. The exact relationships of features and of layers in different trenches are accurately portrayed (no mention in original report), including building F2. After Dengjiawan 2003: 15, fig. 7.

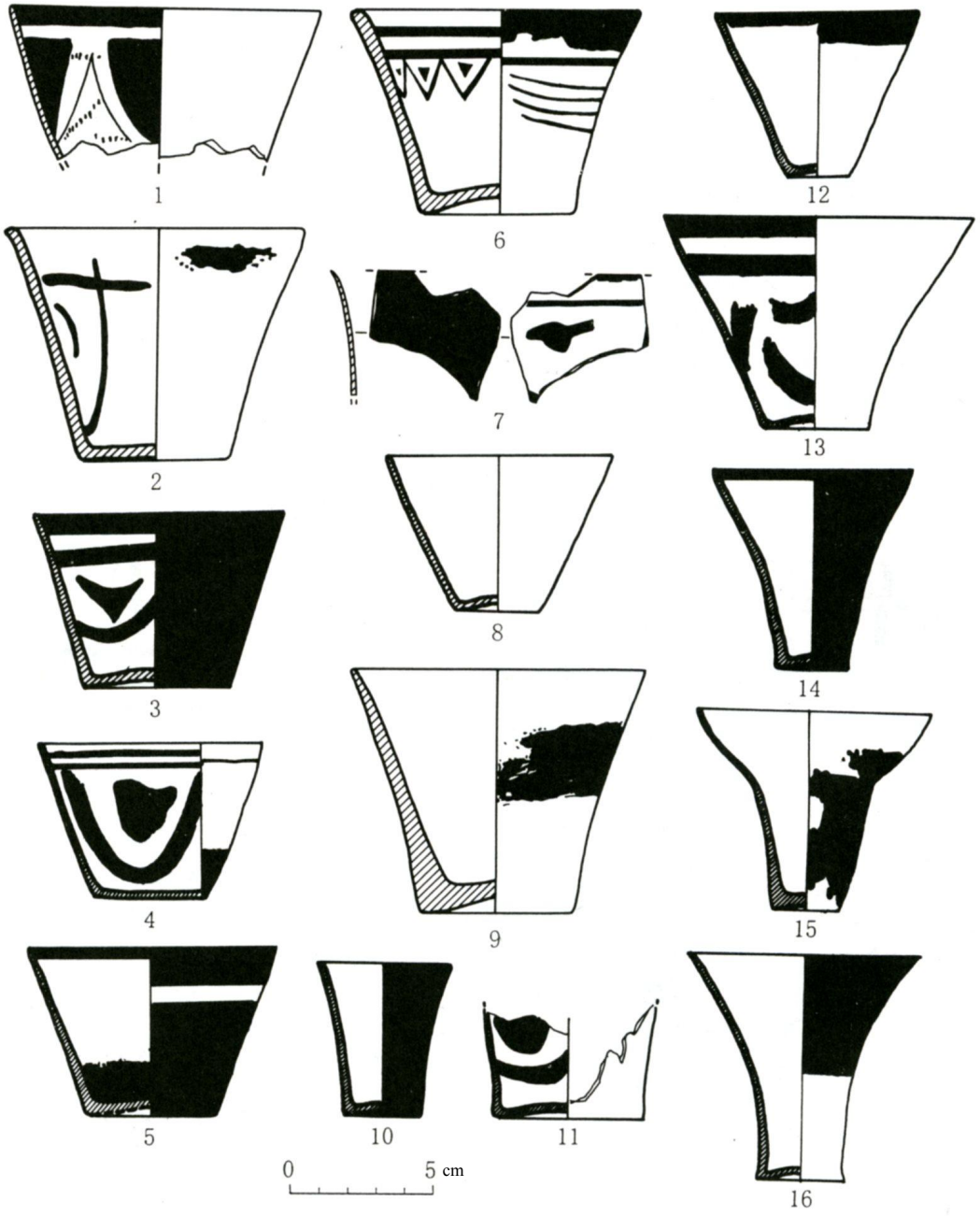


Figure 4.11. ‘Earlier cups’ from Dengjiawan. After Dengjiawan 2003: 50, fig. 33.

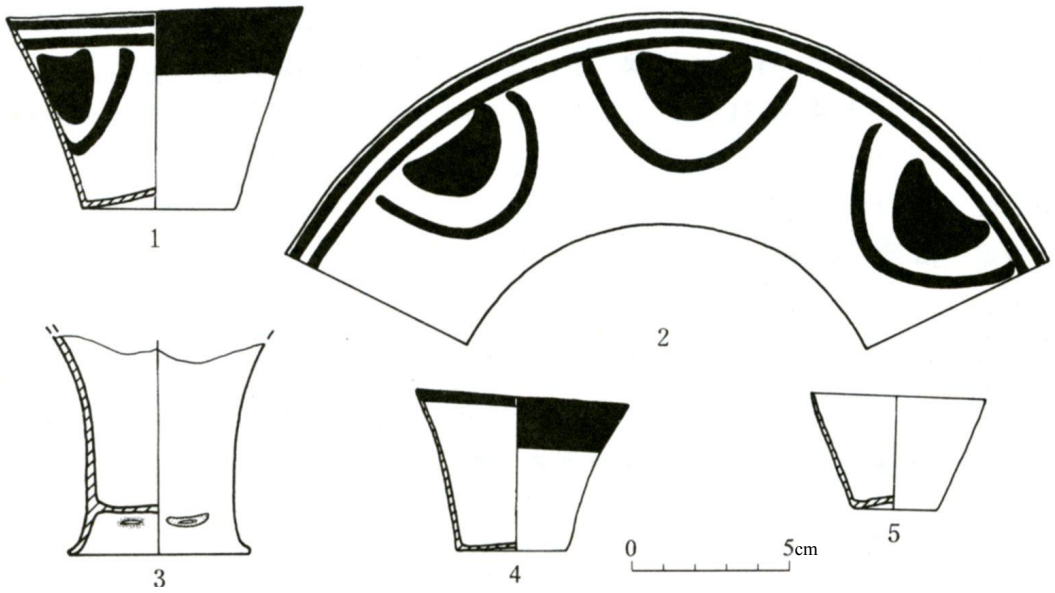


Figure 4.12. Phase VI cups from Xiaojiawuji. After Xiaojiawuji 1999: 39, fig. 25.

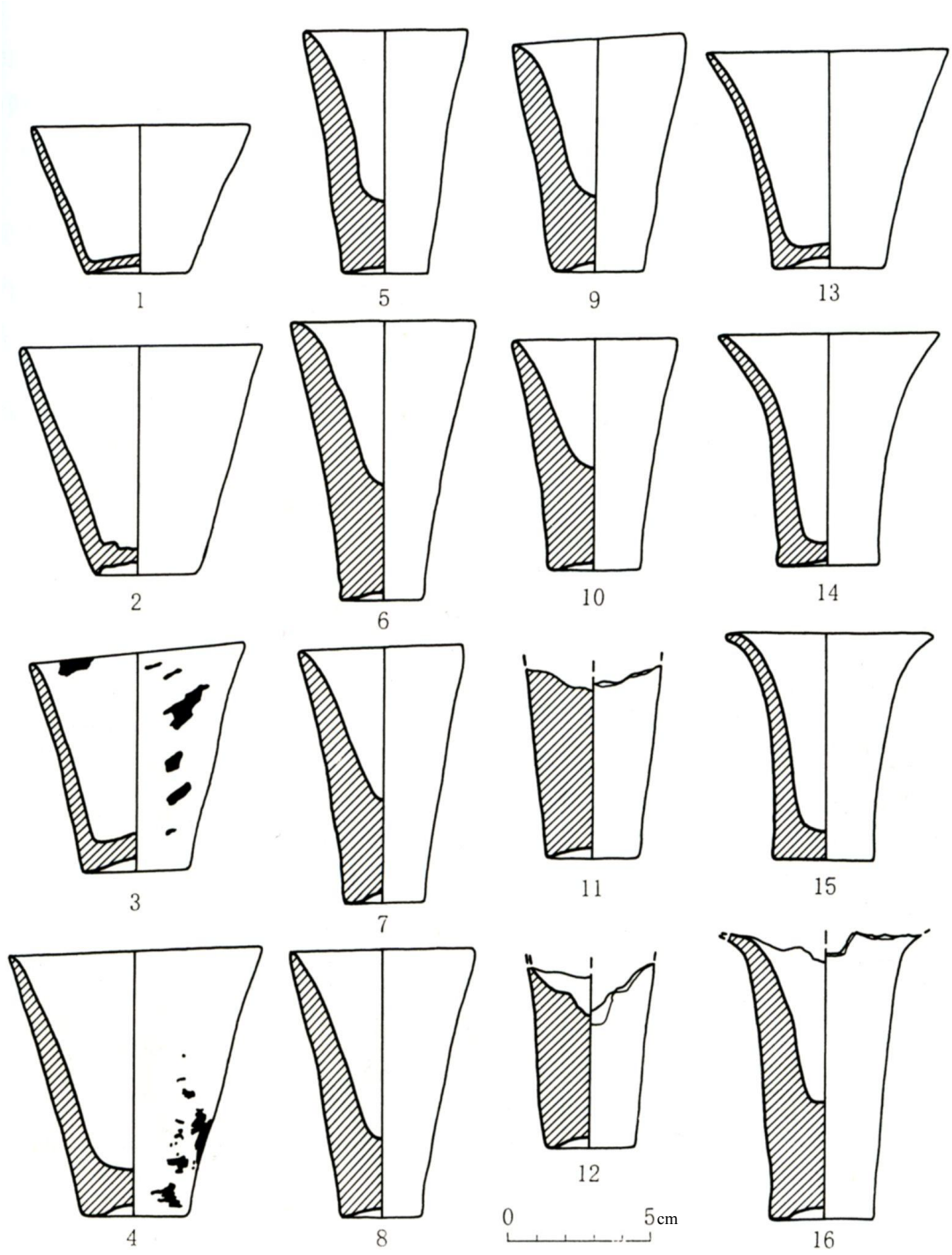


Figure 4.13. ‘Later cups’ from Dengjiawan. After Dengjiawan 2003: 169, fig. 140.

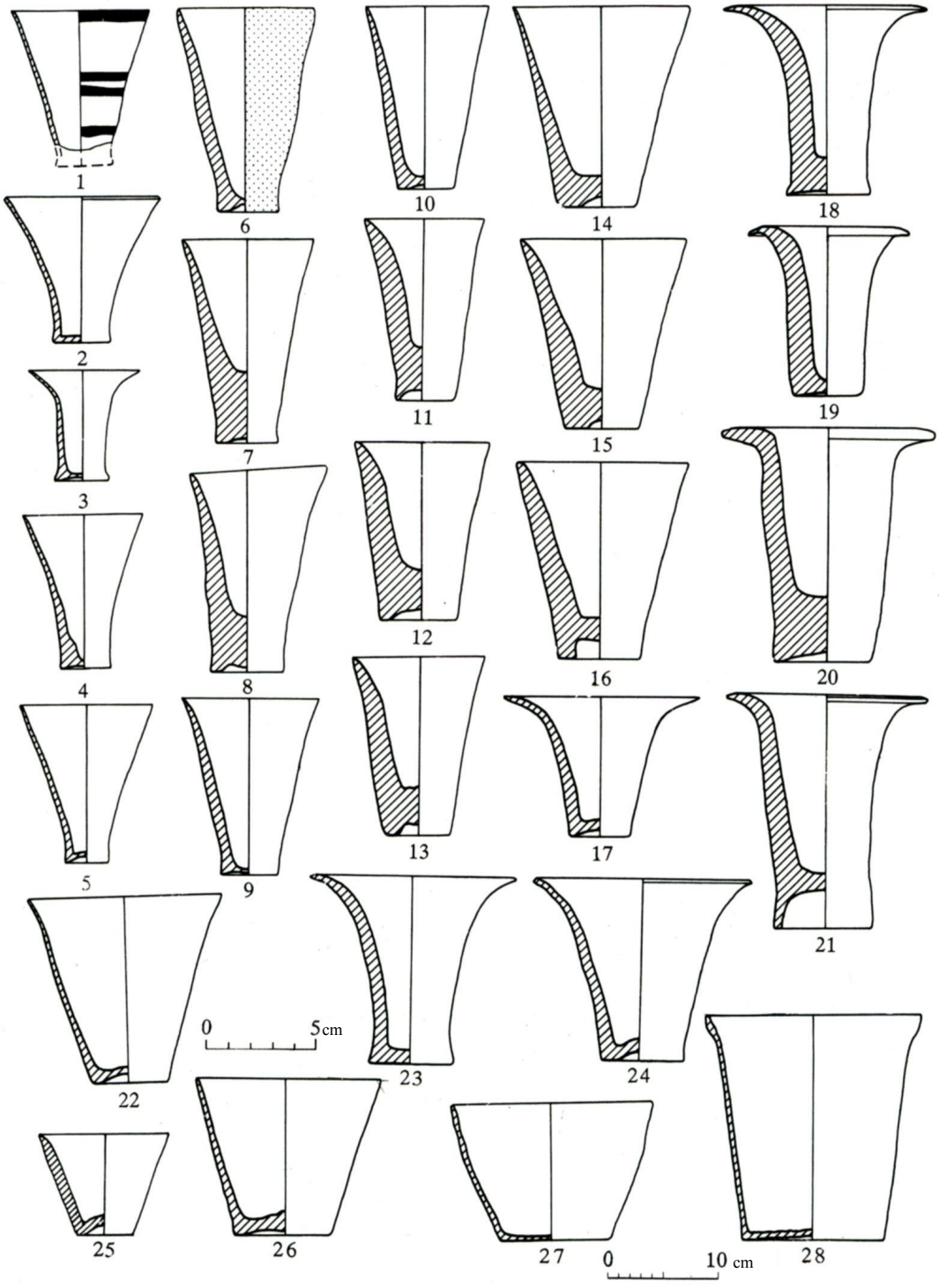


Figure 4.14. ‘Later cups’ from Xiaojiawuji. After Xiaojiawuji 1999: 193, fig. 150.

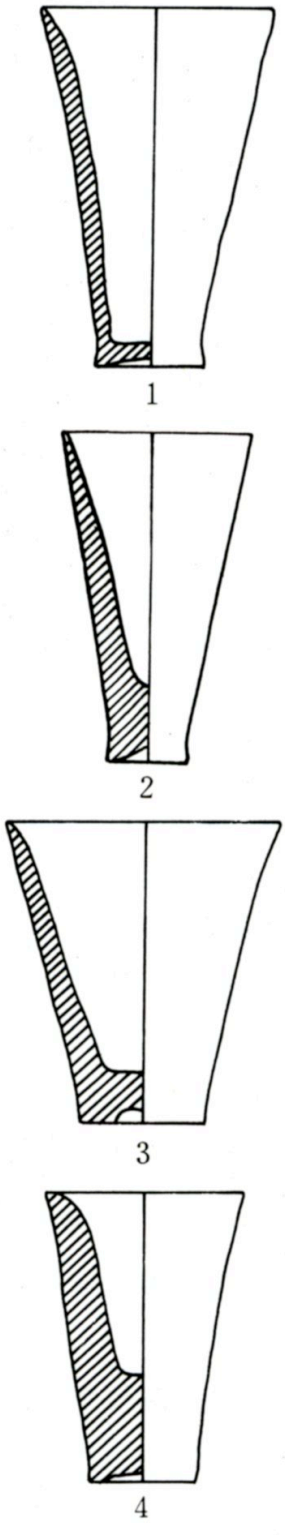


Figure 4.15. Phase IX cups from Xiaojiawuji. Height of tallest 9.8cm. After Xiaojiawuji 1999: 256, fig. 194:1-4.

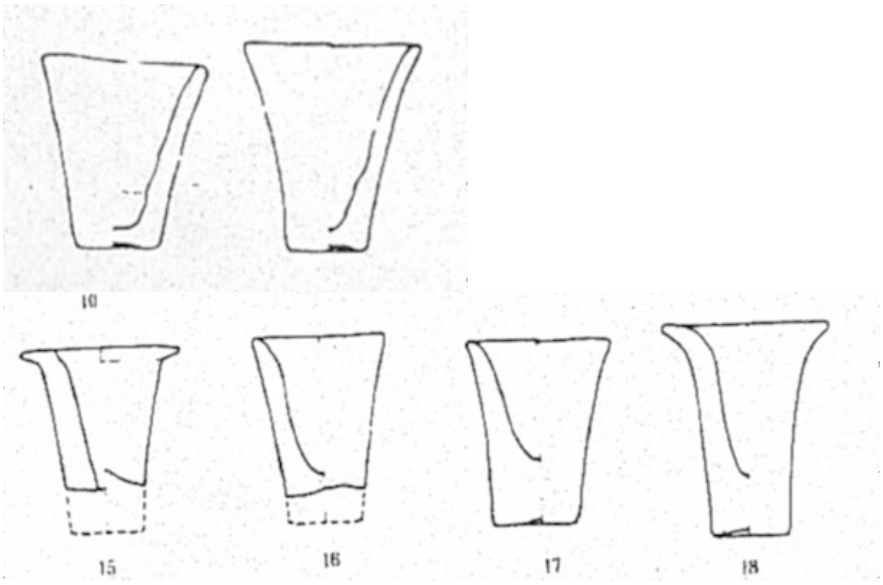


Figure 4.16. Cups collected at Sanfangwan, dated to the early ‘Shijiahe Culture’. Dimensions unclear. After Shijiahe 1992: 227, fig. 12 and 228, fig. 13.

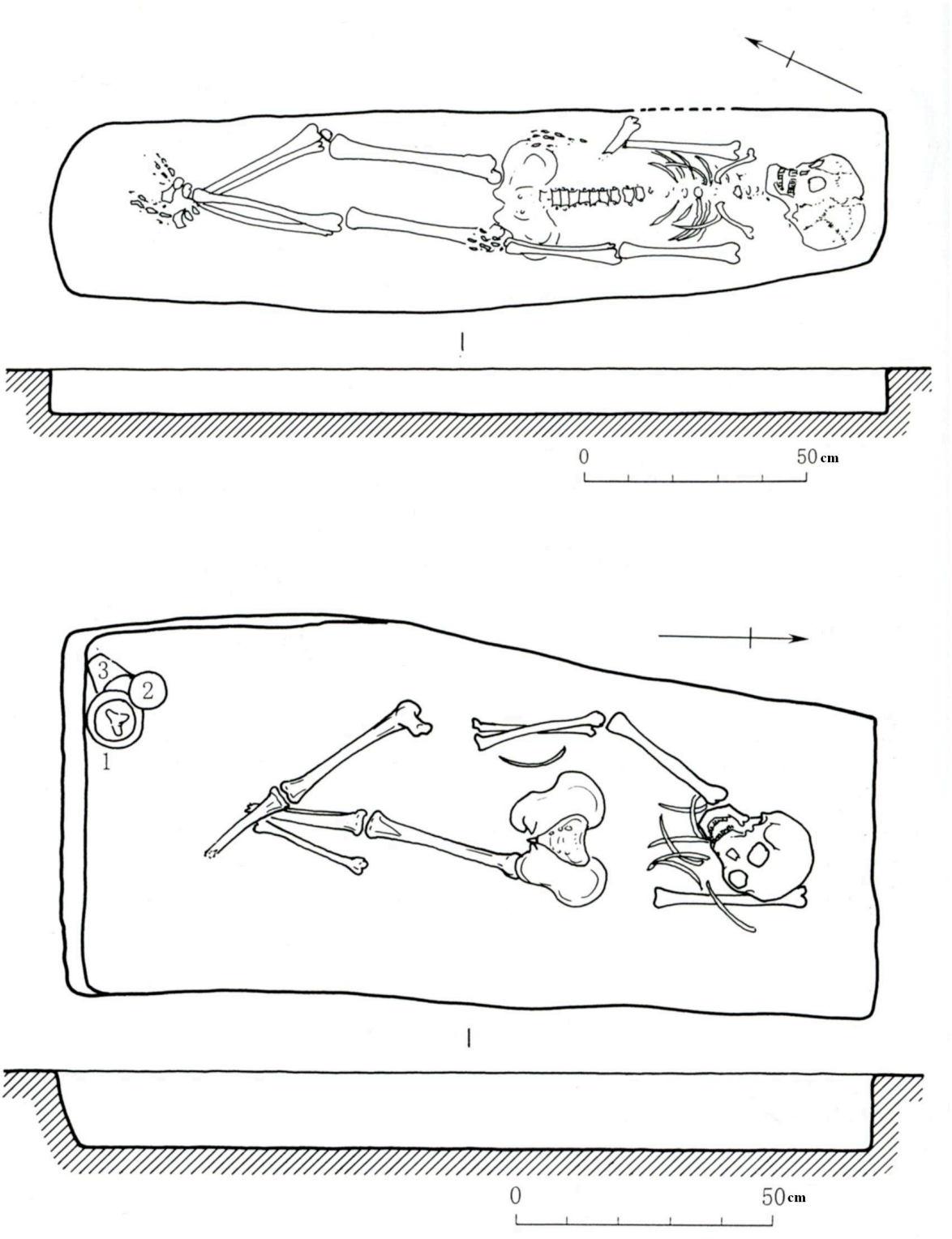


Figure 4.17. (a) Phase V pit burial M66, Dengjiawan; (b) Phase V pit burial M13, Dengjiawan. After Dengjiawan 2003: 94, figs 76, 77.

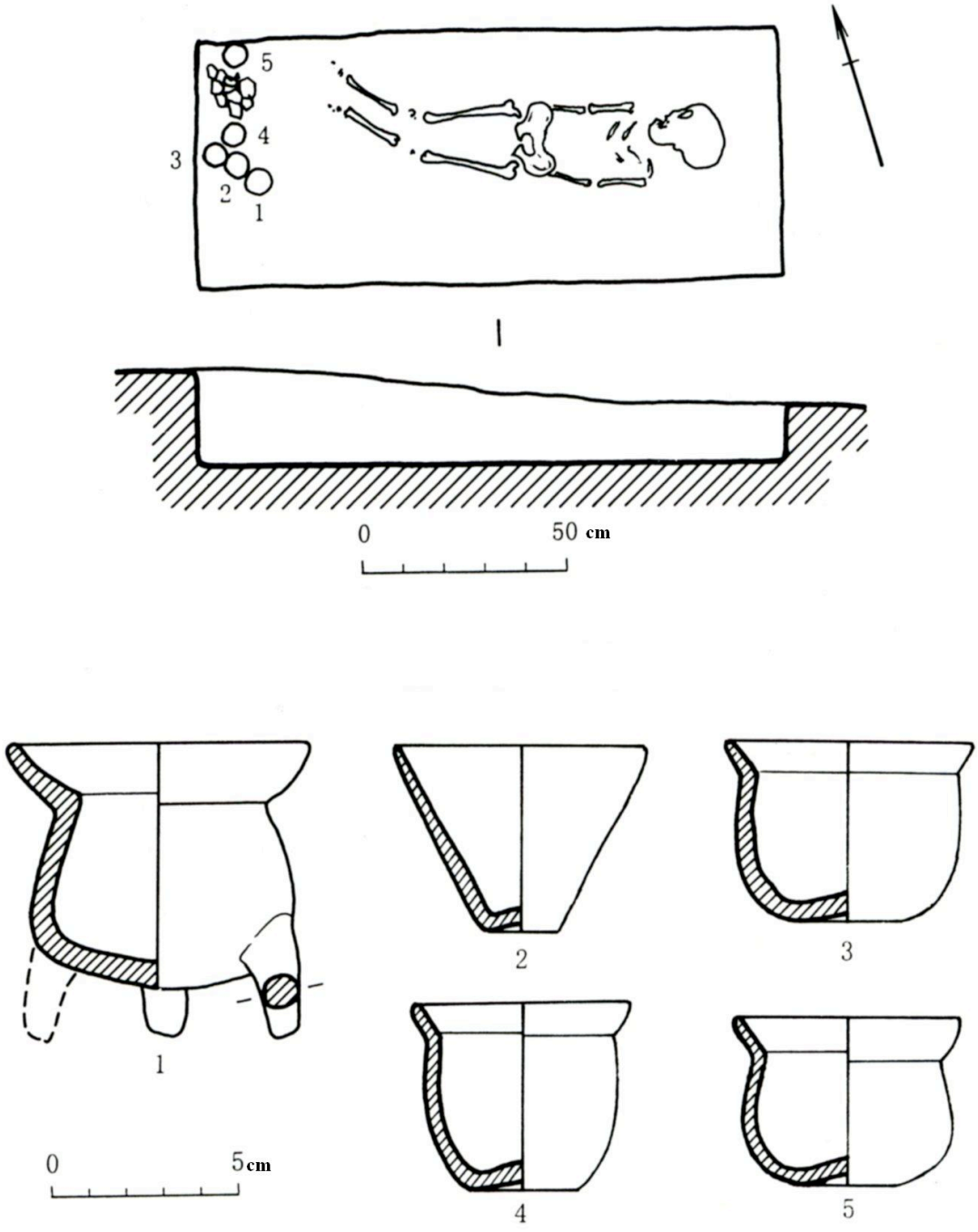


Figure 4.18. Phase V pit burial M25. After Dengjiawan 2003: 85, figs 59, 60.

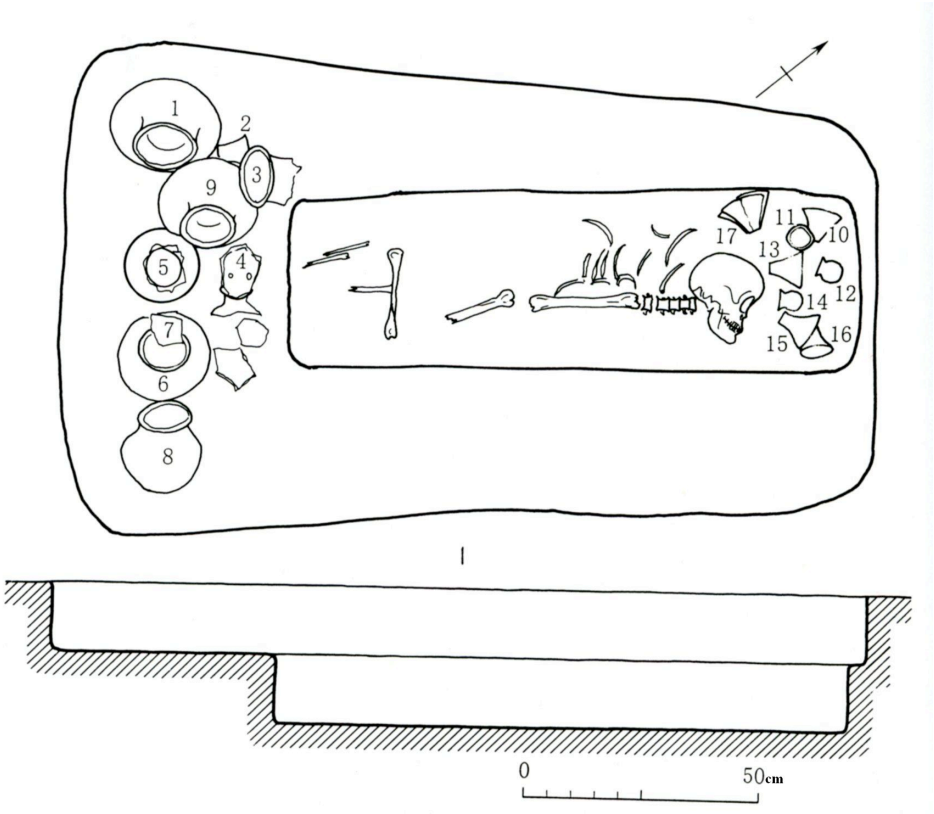


Figure 4.19a. Phase VI pit burial M7, Dengjiawan. After Dengjiawan 2003: 98, fig. 81.

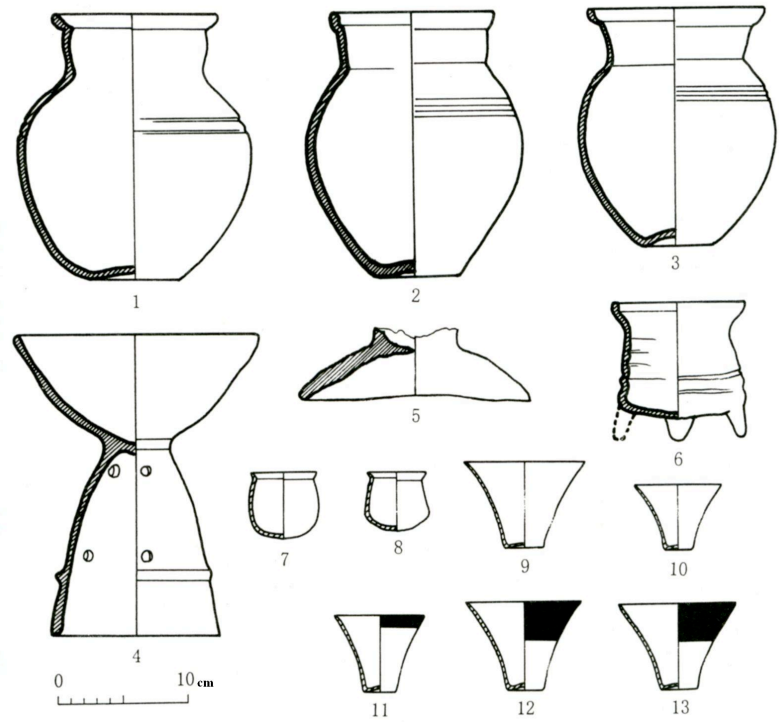


Figure 4.19b. Pottery buried in M25, phase VI, Dengjiawan. After Dengjiawan 2003: 99, fig. 82.

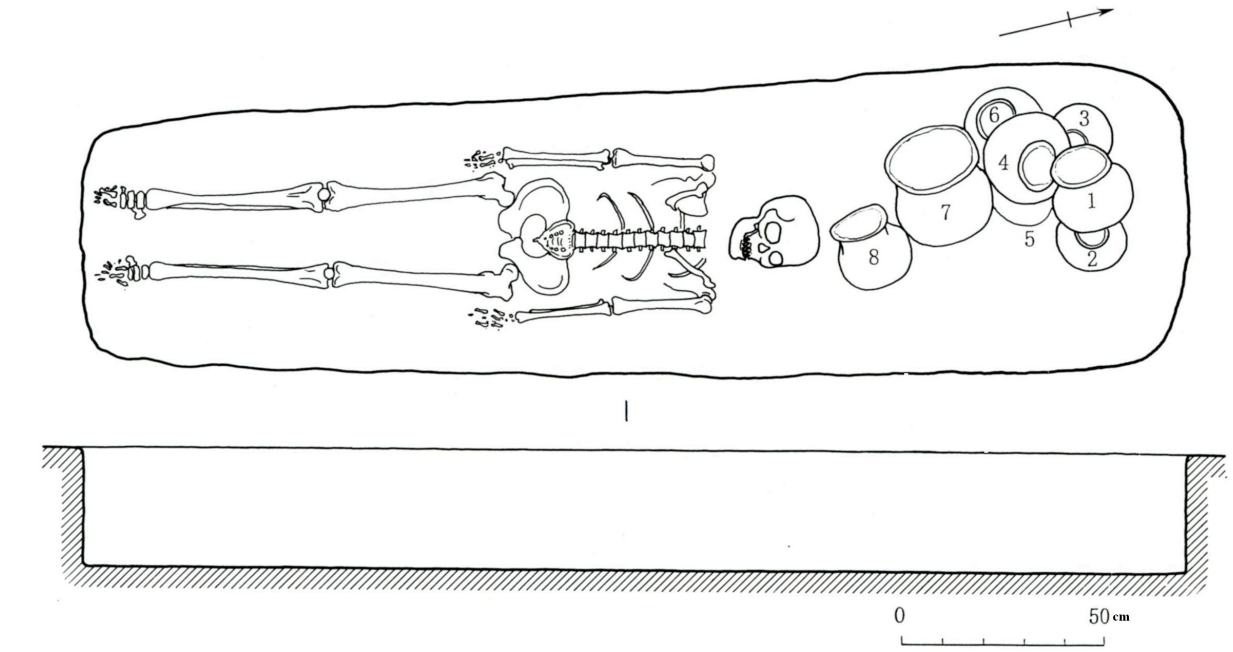


Figure 4.20a. Phase V burial M3, Dengjiawan. After Dengjiawan 2003: 92, fig. 73.

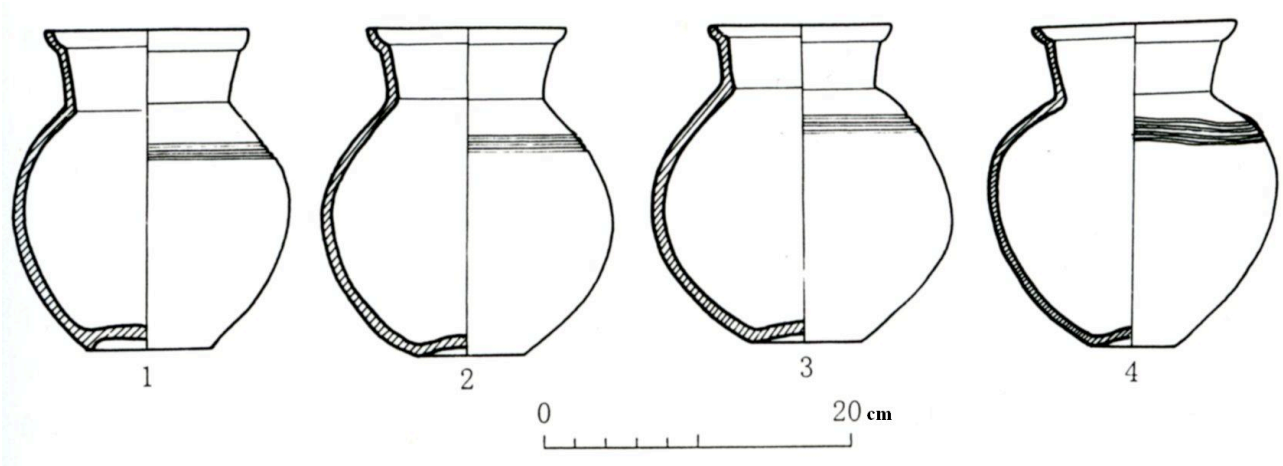


Figure 4.20b. High-necked jars from M3, Dengjiawan. After Dengjiawan 2003: 93, fig. 74.

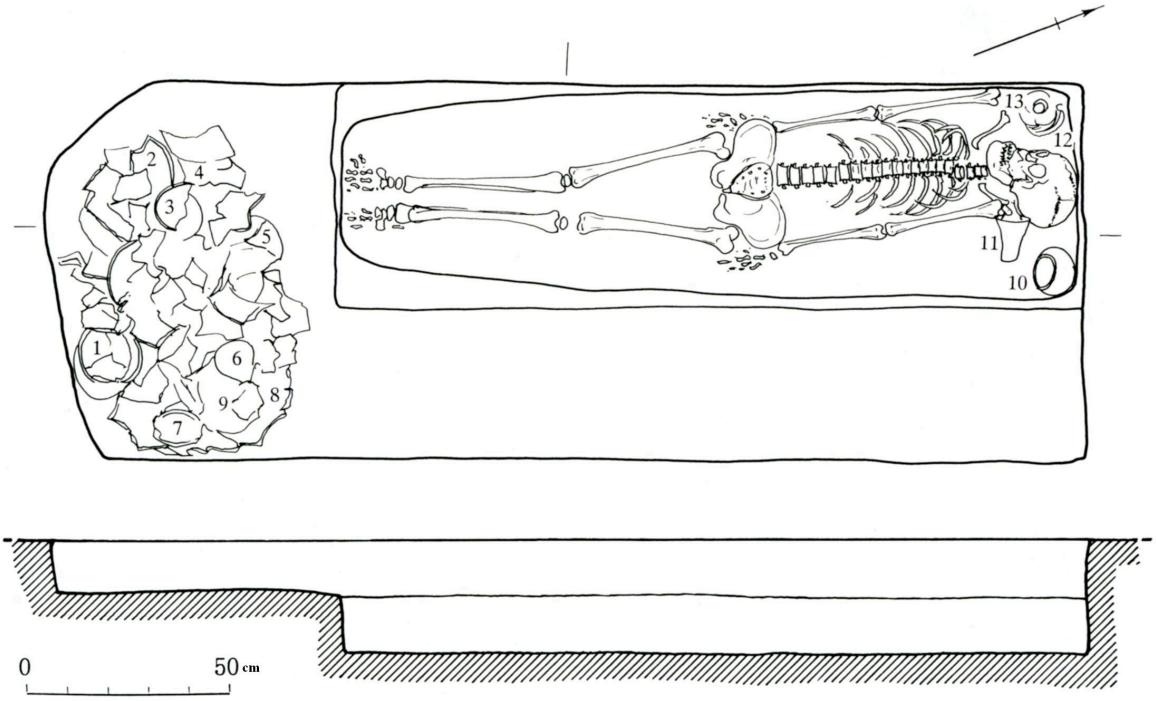


Figure 4.21a. Phase VI burial M54, Dengjiawan. Dengjiawan 2003: 105, fig. 88.

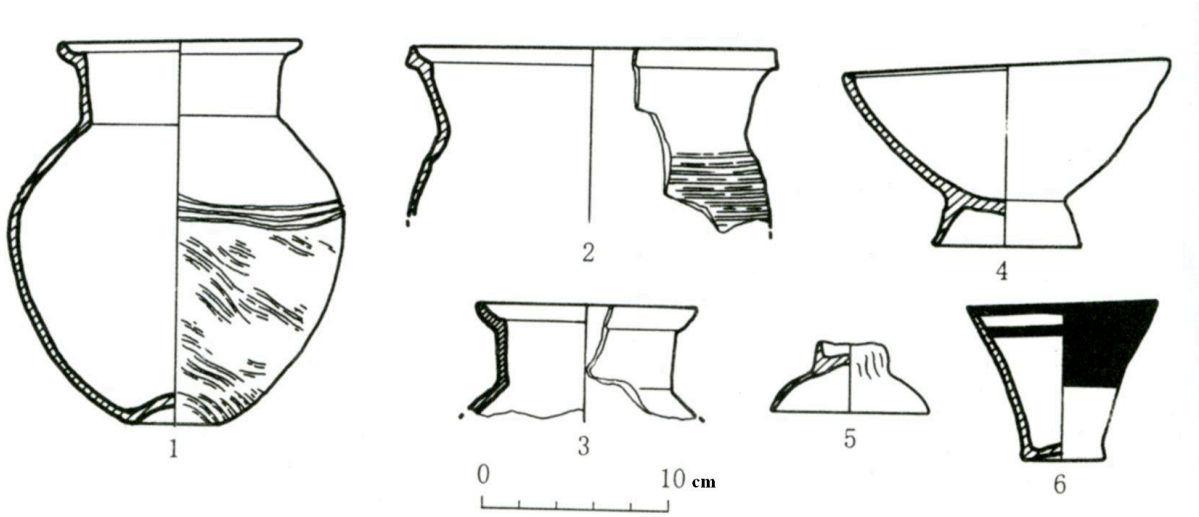


Figure 4.21b. Pottery from M54, Dengjiawan. After Dengjiawan 2003: 105, fig. 89.

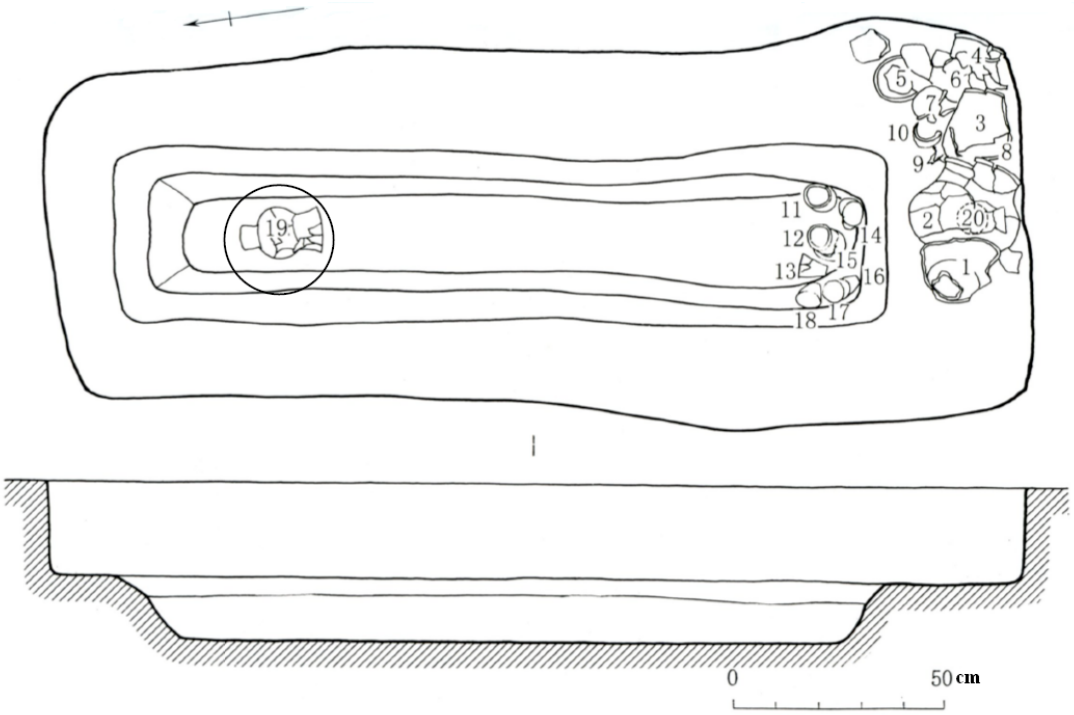


Figure 4.22a. Phase VI burial M52, Dengjiawan. The *huxingqi* is circled. After Dengjiawan 2003: 103, fig. 86.

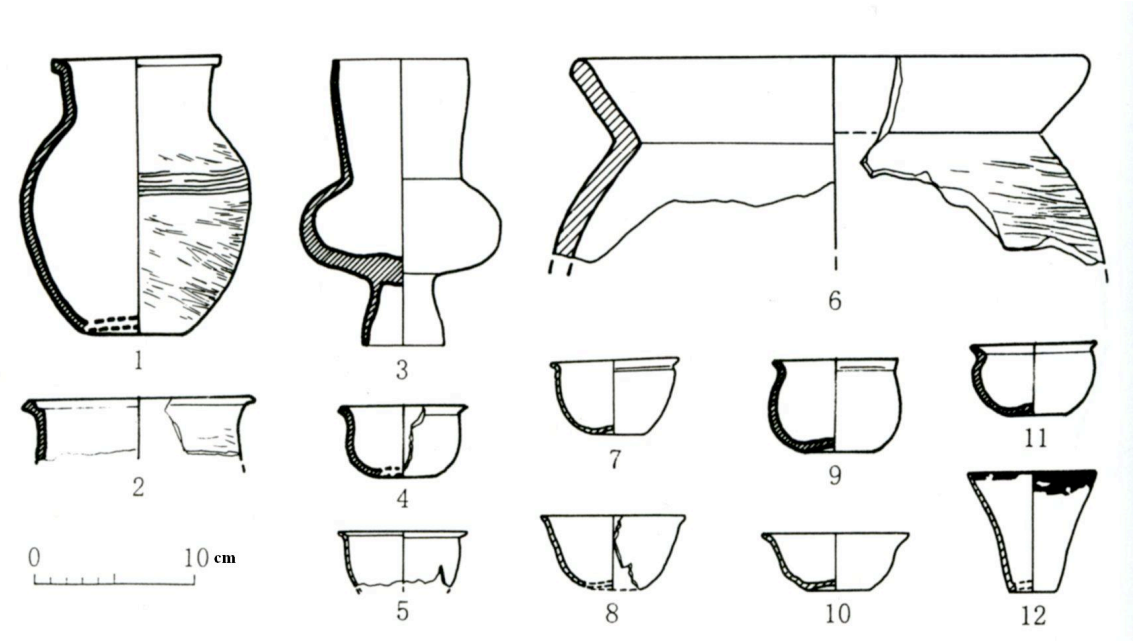


Figure 4.22b. Number 3 is the *huxingqi* from burial M52, Dengjiawan. After Dengjiawan 2003: 103, fig. 87.

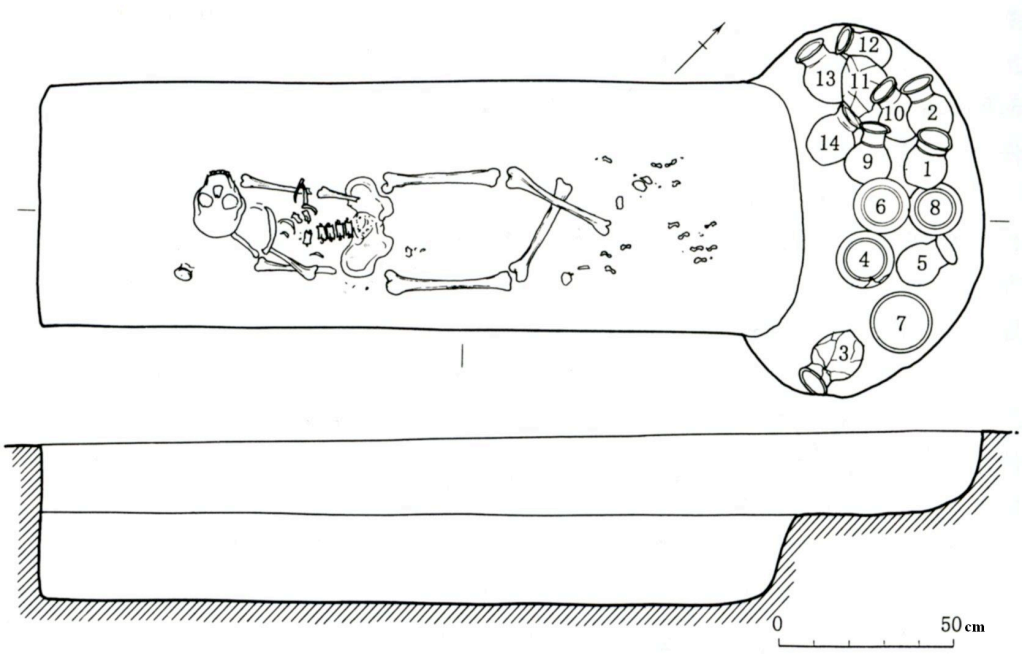


Figure 4.23a. Phase VII burial M48, Dengjiawan. After Dengjiawan 2003: 256, fig. 211.

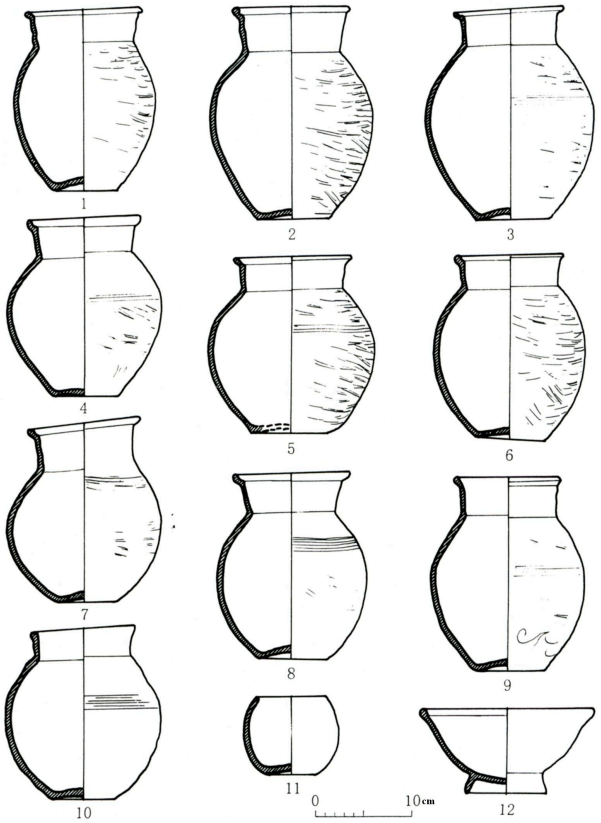


Figure 4.23b. Pottery from burial M48, Dengjiawan. After Dengjiawan 2003: 257, fig. 212.

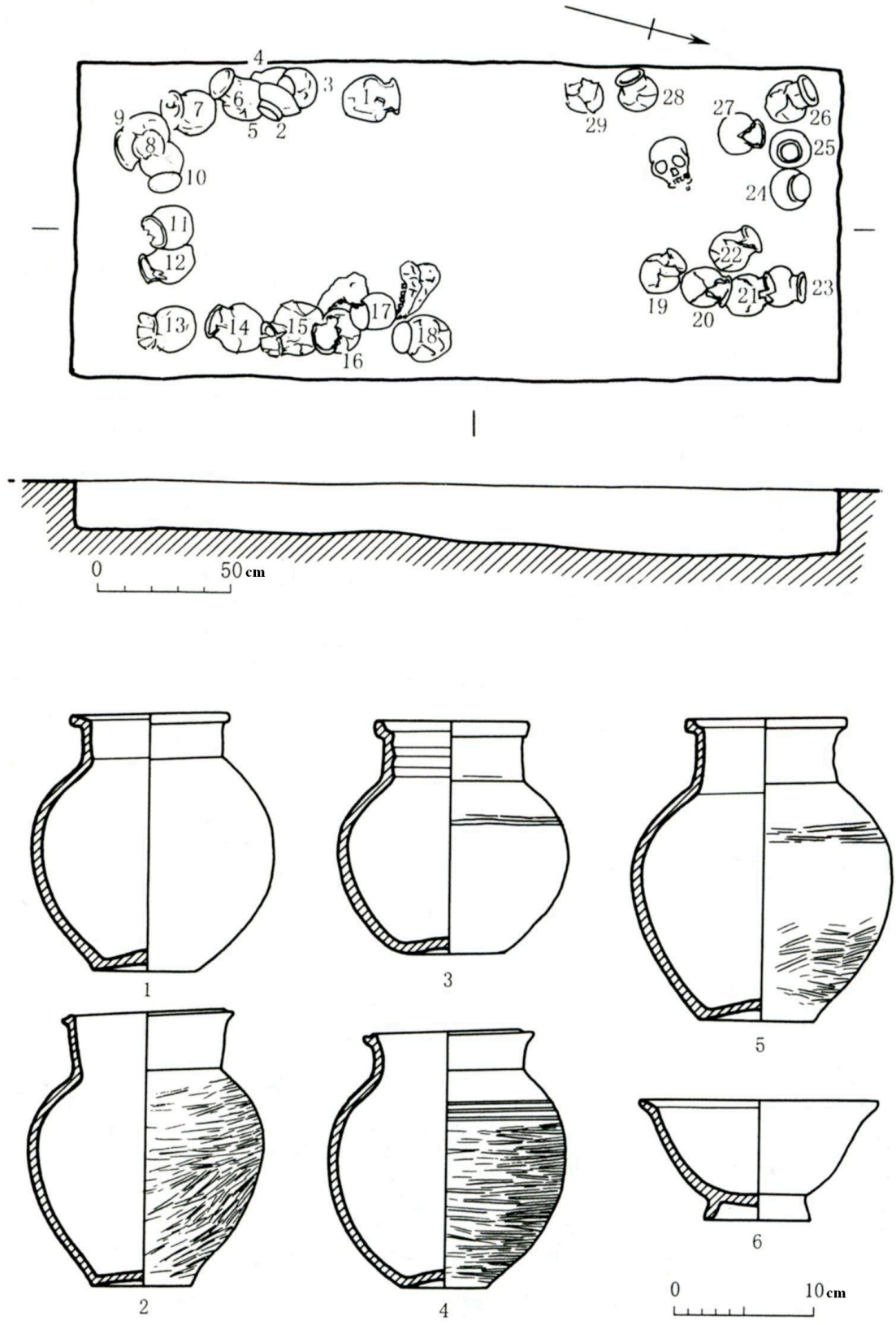


Figure 4.24. Phase VII burial M91 and its pottery, Dengjiawan. After Dengjiawan 2003: 251, figs 203, 204.

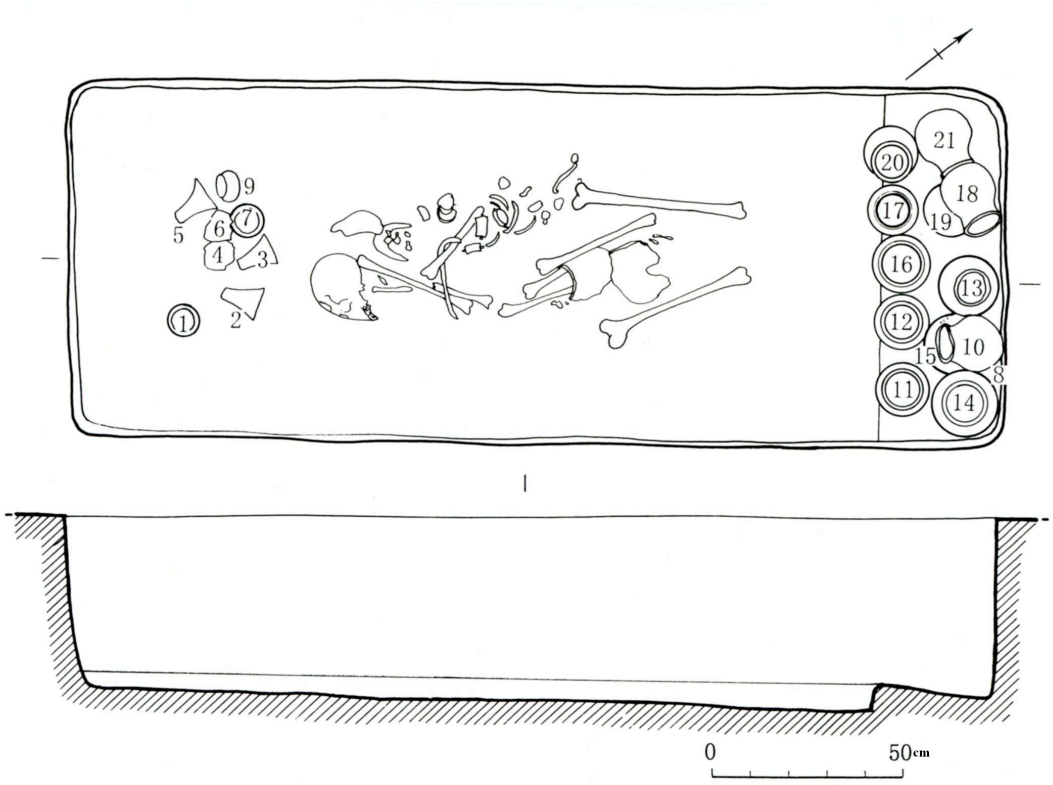


Figure 4.25a. Phase VII burial M40, Dengjiawan. After Dengjiawan 2003: 253, fig. 207.

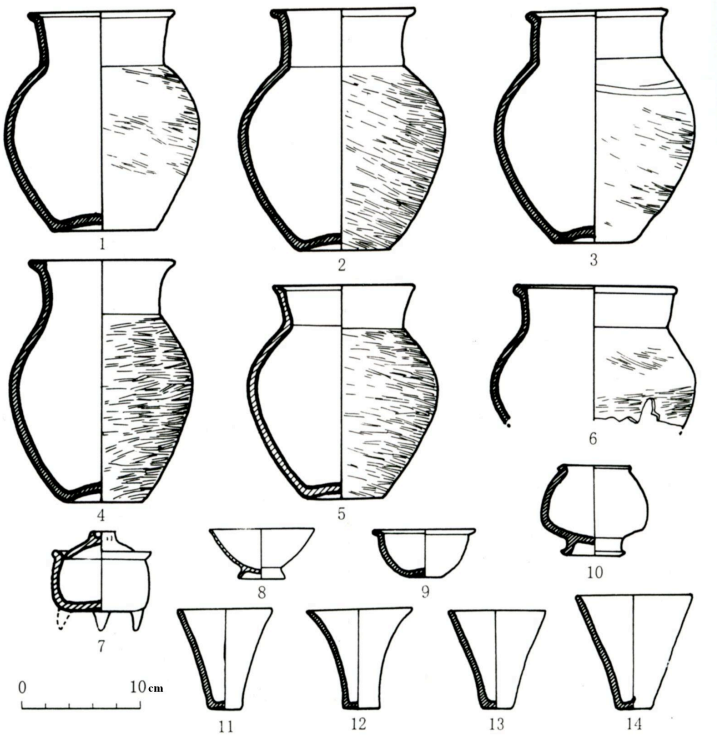


Figure 4.25b. Pottery from burial M40, Dengjiawan. After Dengjiawan 2003: 254, fig. 208.

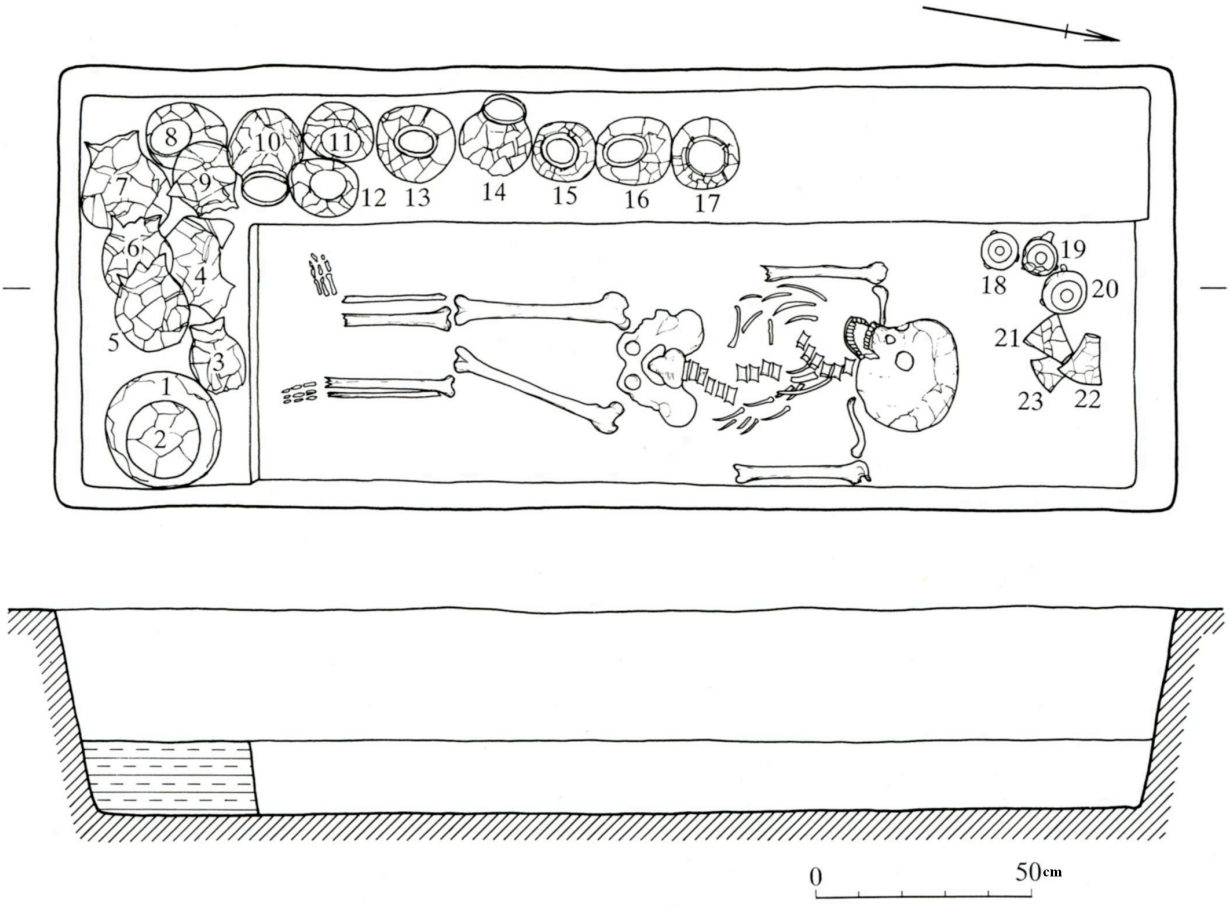


Figure 4.26. Phase VII burial M11, Xiaojiawuji. After Xiaojiawuji 1999: 279, fig. 211.

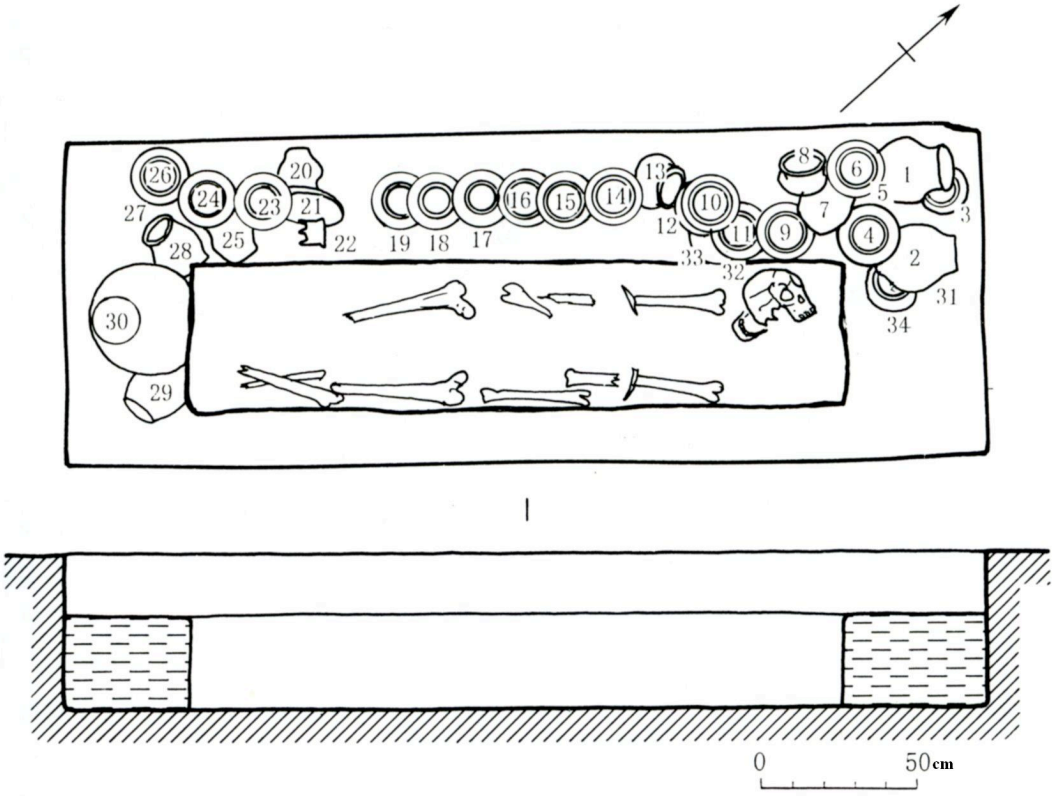


Figure 4.27a. Phase VII burial M18, Dengjiawan. After Dengjiawan 2003: 203, fig. 219.

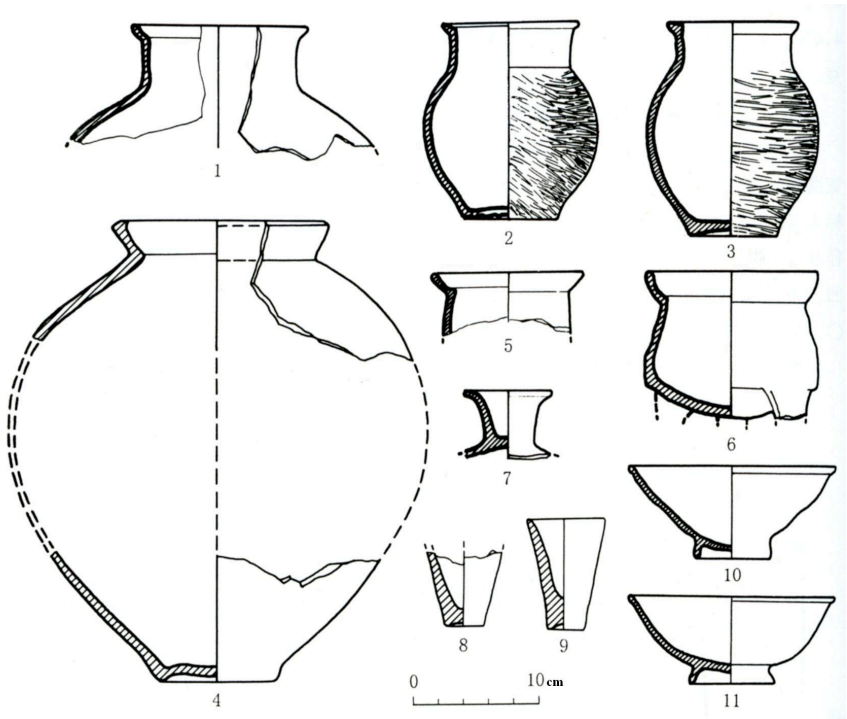


Figure 4.27b. Pottery from M18, Dengjiawan. After Dengjiawan 2003: 204, fig. 220.

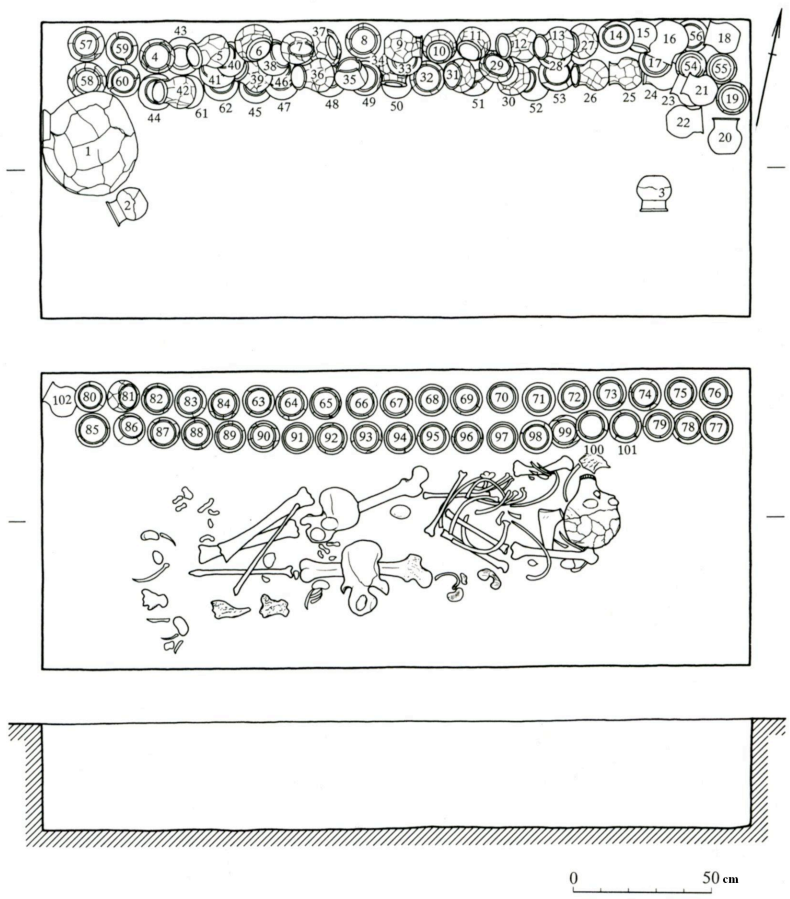


Figure 4.28a. Phase VII burial M54, Xiaojiawuji. After Xiaojiawuji 1999: 284, fig. 216.

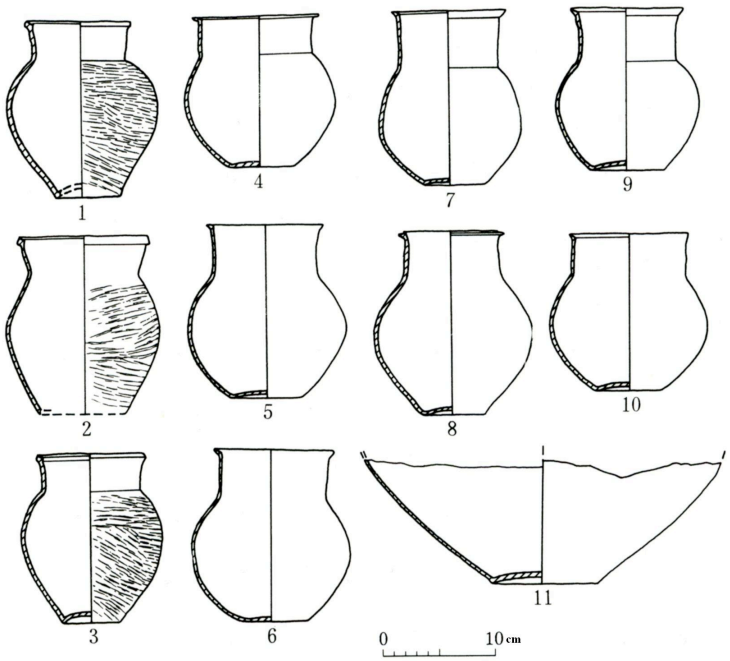


Figure 4.28b. Pottery from M54, Xiaojiawuji. After Xiaojiawuji 1999: 285, fig. 217.

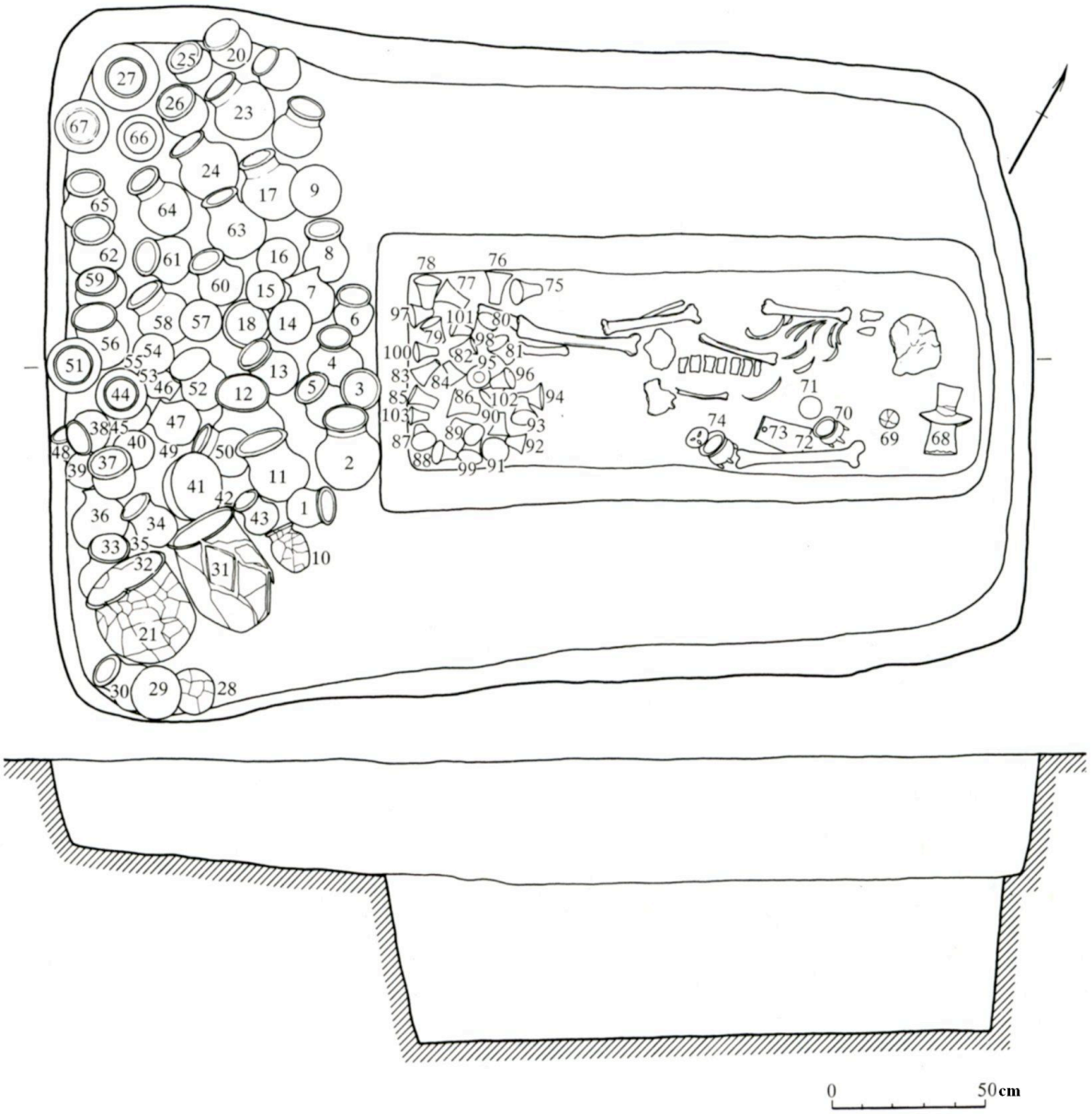


Figure 4.29a. Phase VII burial M7, Xiaojiawuji. After Xiaojiawuji 1999: 275, fig. 207.

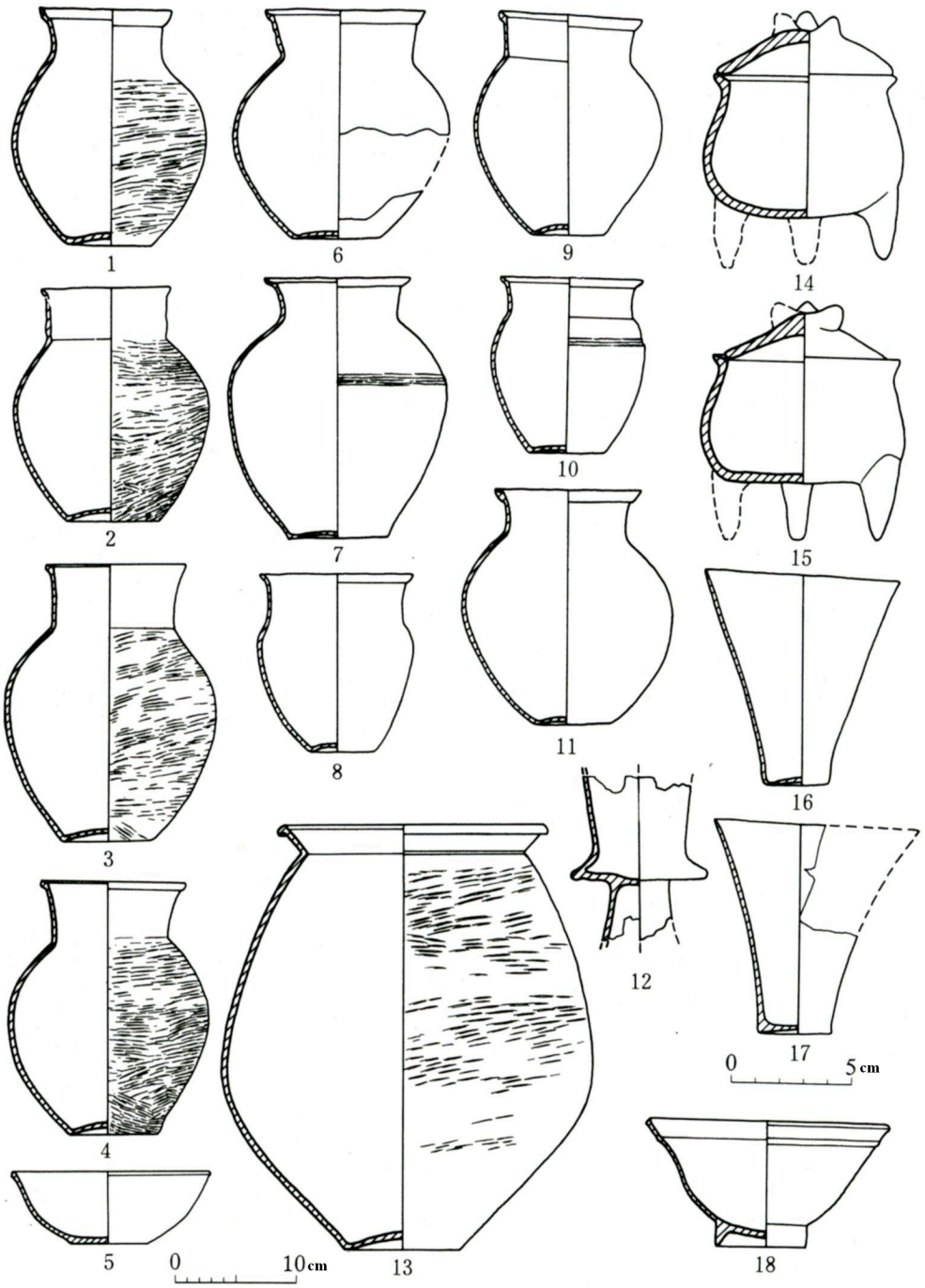


Figure 4.29b. Pottery from M7, Xiaojiawuji. After Xiaojiawuji 1999: 276, fig. 208.

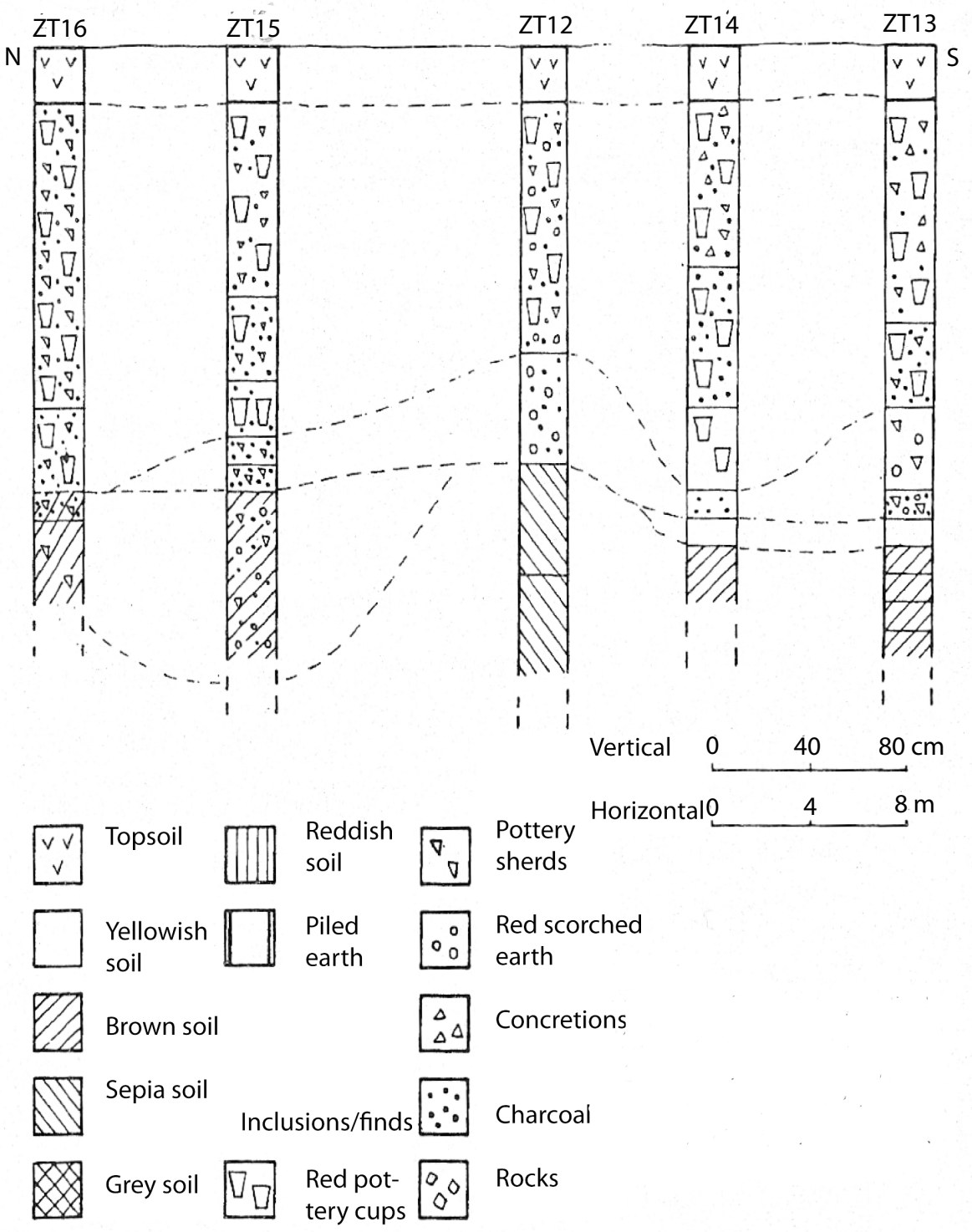


Figure 4.30. Coring results from Sanfangwan showing the layers containing the cups. After Shijiahe 1992: 226, fig. 11.

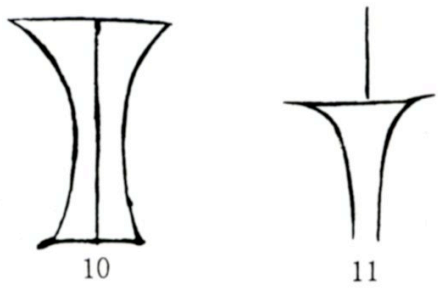


Figure 4.31. Marks on pottery vats from Dengjiawan believed to depict cups. After Dengjiawan 2003: 234, fig. 185:10, 11.



Figure 4.32. Selection of pottery figurines in human shape. Maximum height 10cm. After Dengjiawan 2003: colour pl. XIV.



Figure 4.33. Various pottery animal figurines from Dengjiawan.
Bird: height 4cm, length 6cm; bird with forked tail: length 6.5cm; chicken: height 8.5cm, length 7.4cm; horned mammals: max height 4.8cm; tortoise: length 6.4cm; monkey: height 6cm; elephants: max height 7cm, max length 8.5cm; 'tapir': height 9.8cm.
After Hubei Museum 2007a: 96-97.

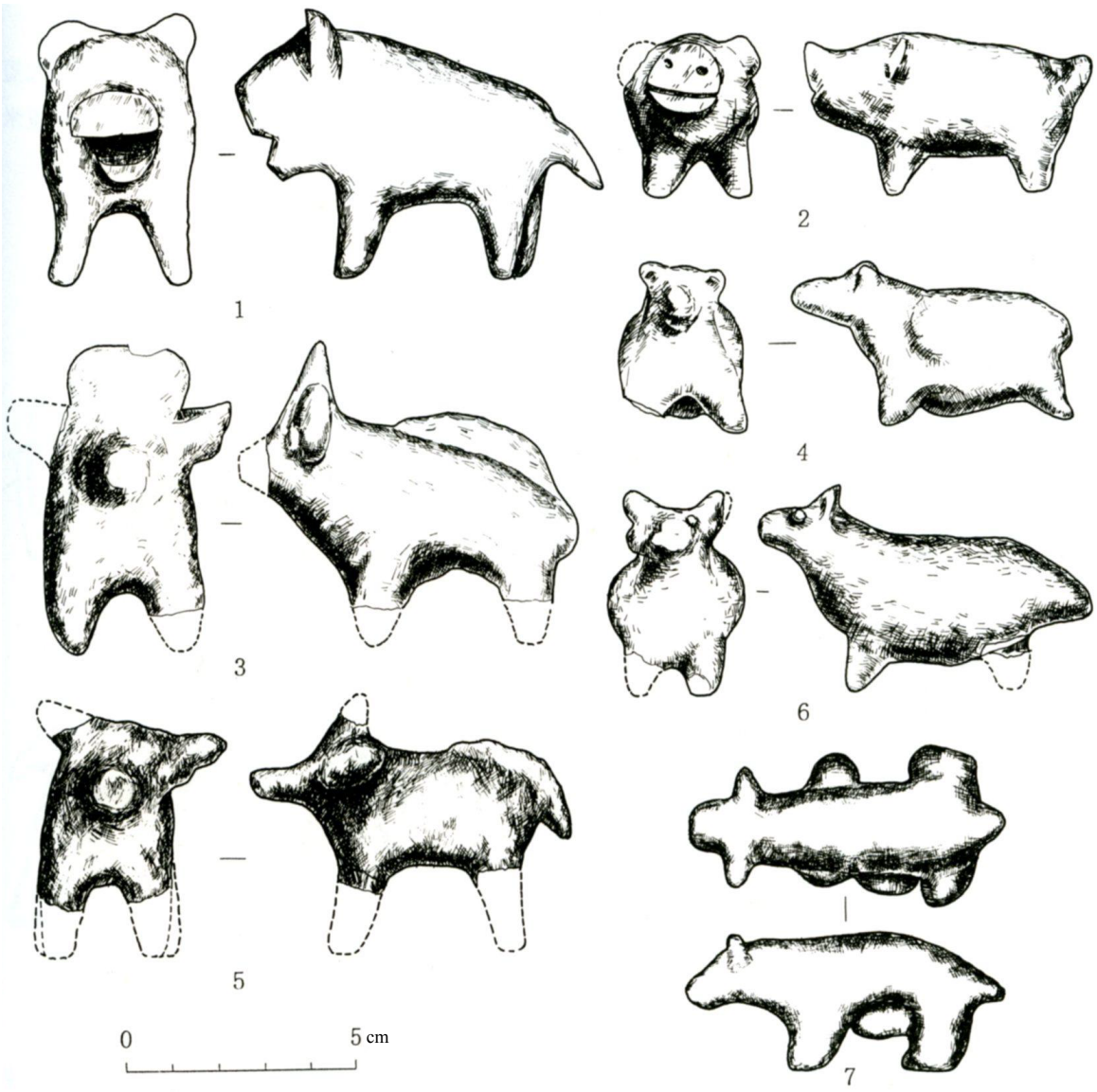


Figure 4.34. Figurines of pigs, Dengjiawan. After Dengjiawan 2003: 195, fig. 158.

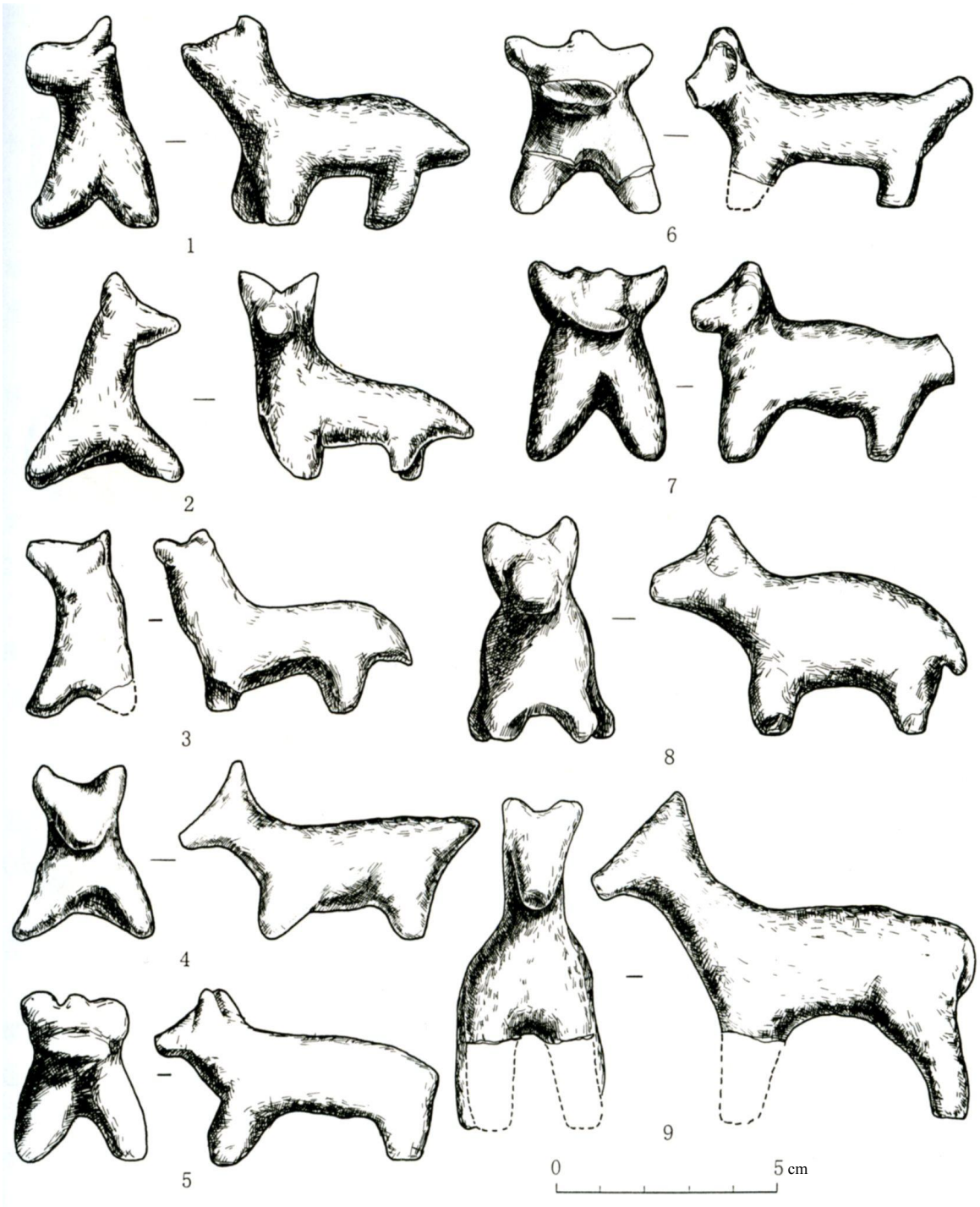


Figure 4.35. Figurines of standing dogs. After Dengjiawan 2003: 187, fig. 152.

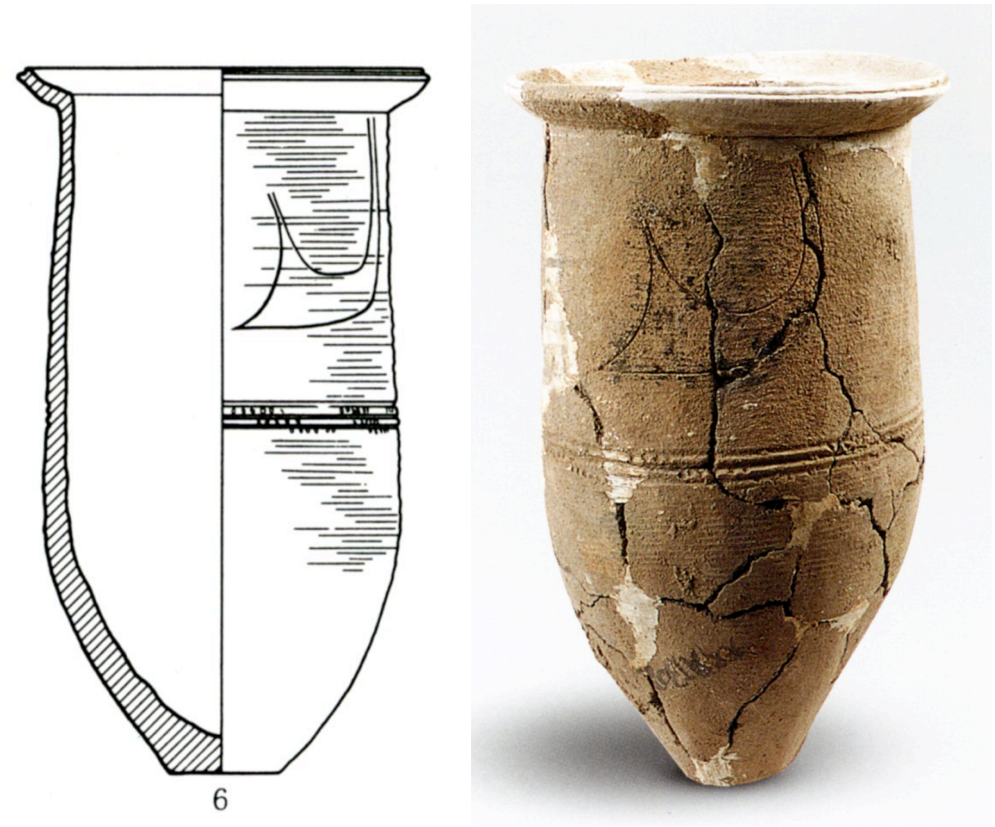


Figure 4.36. Pottery pointed-bottom vessel from set no. 1, phase VIII, Dengjiawan. Height 50cm, mouth diameter 28.8cm, maximum diameter 26cm. After Dengjiawan 2003: 157, fig. 132:6 and colour pl. XIII:1.

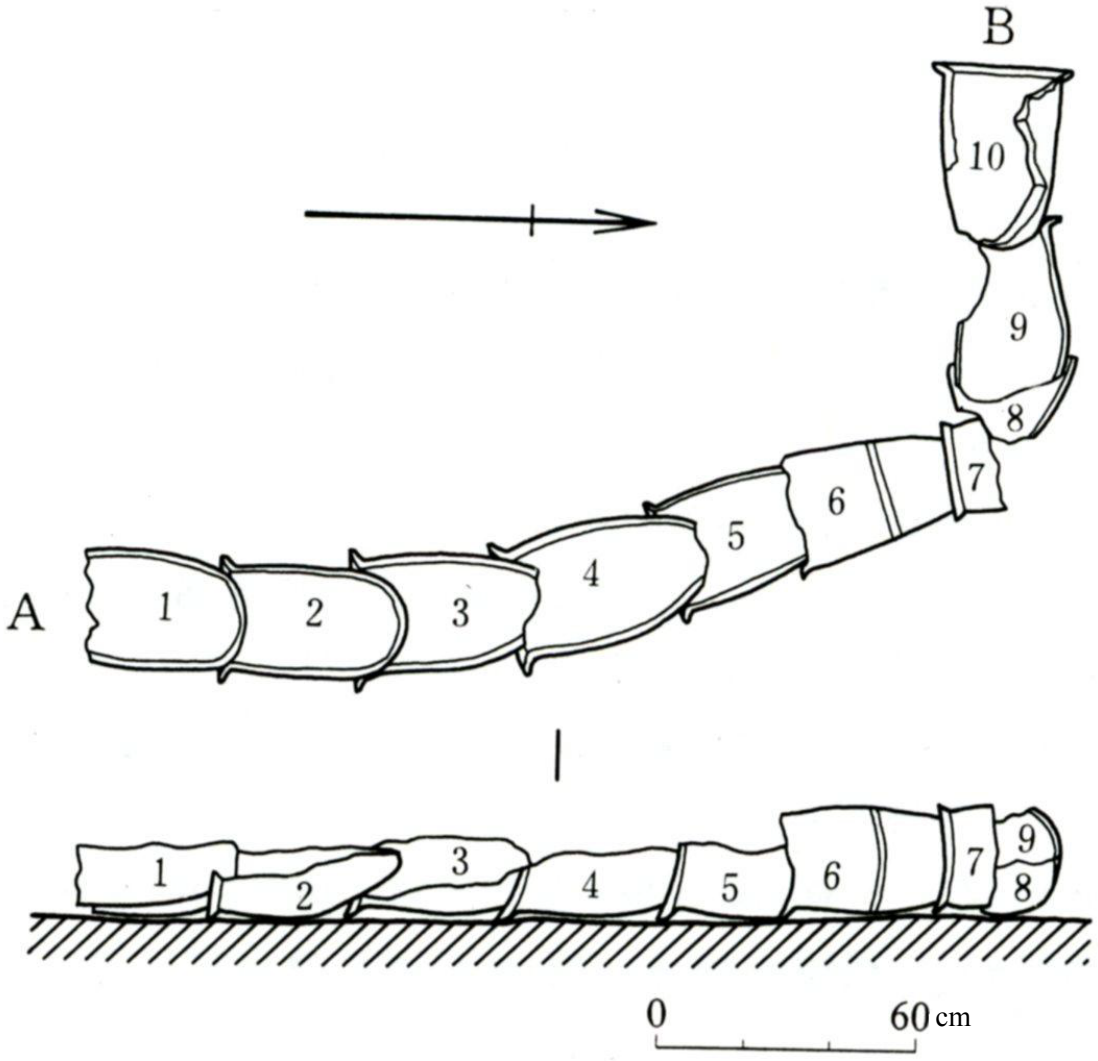
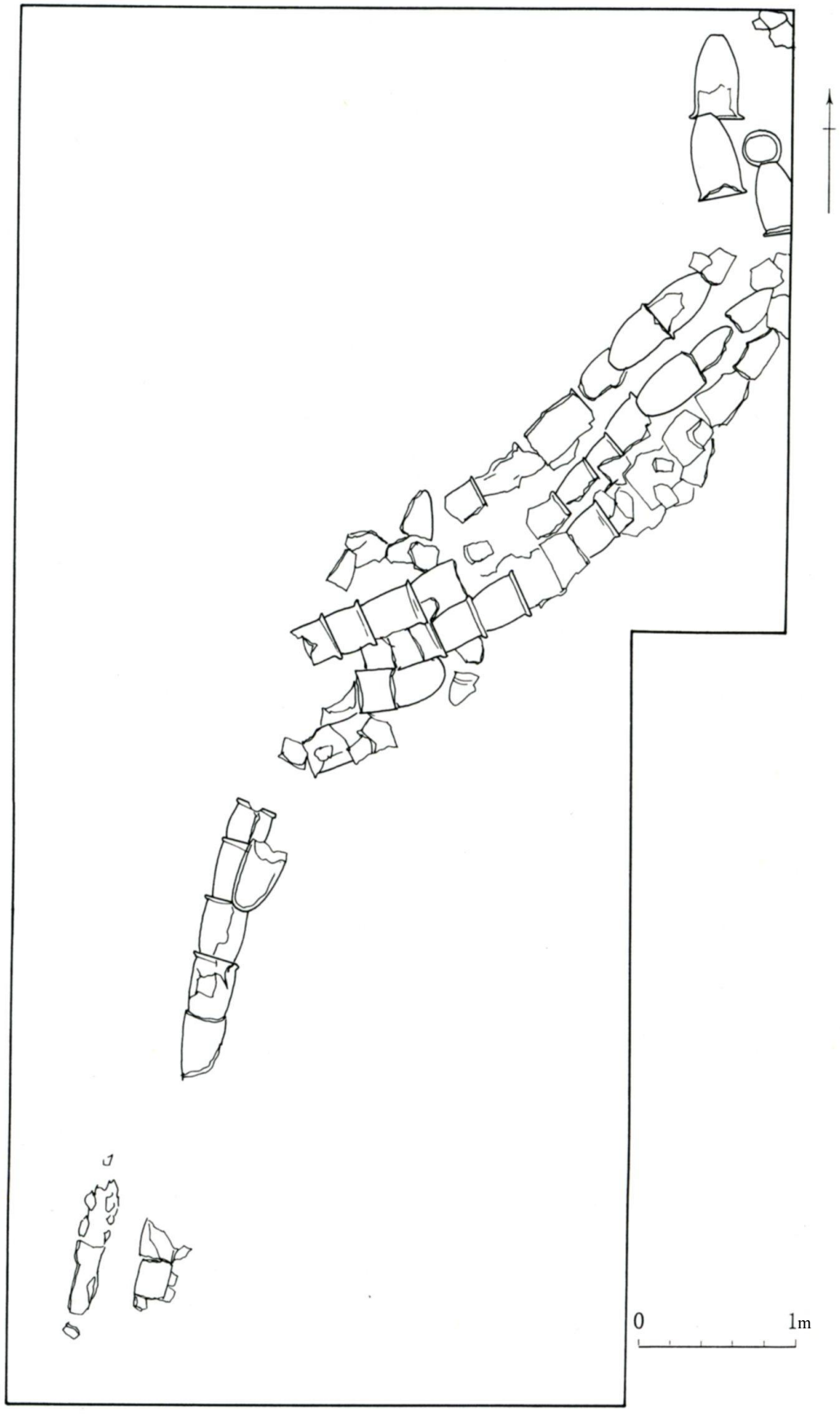


Figure 4.37. Pointed-bottom vessel set JY4, Xiaojiawuji. After Xiaojiawuji 1999: 130, fig. 101.



a



b

Figure 4.38a,b. Pointed-bottom vessel set no. 1, Dengjiawan. After Dengjiawan 2003: 140, fig. 120 and colour pl. 9.

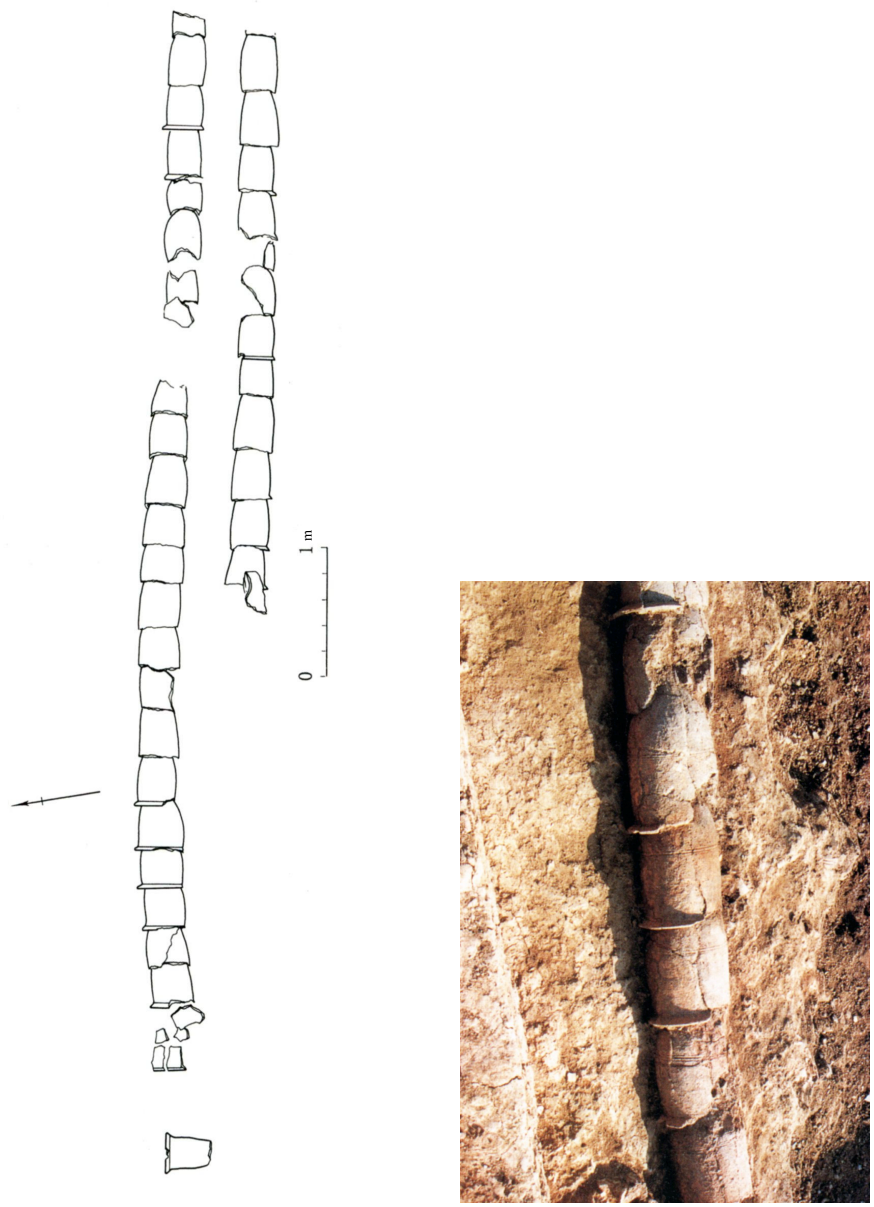


Figure 4.39. Pointed-bottom vessel set no. 2 at Dengjiawan. After Dengjiawan 2003: 142, fig. 121 and colour pl. 11:2.

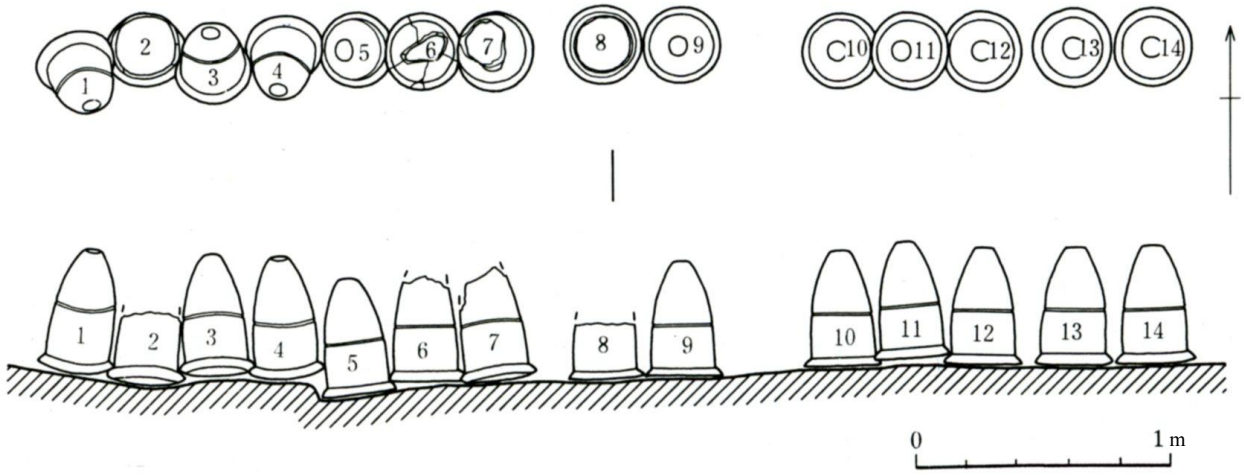
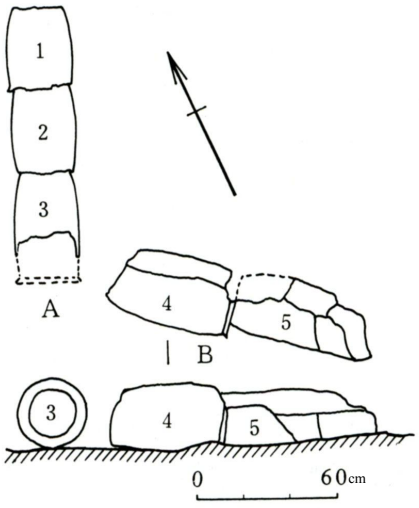
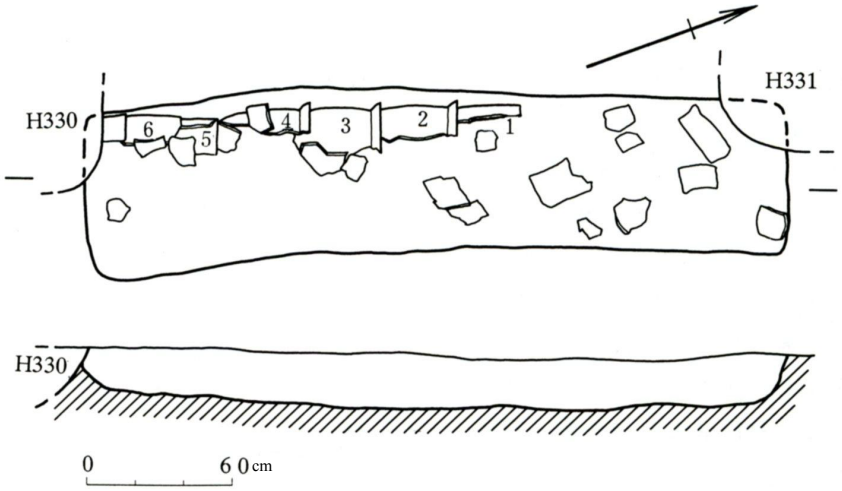


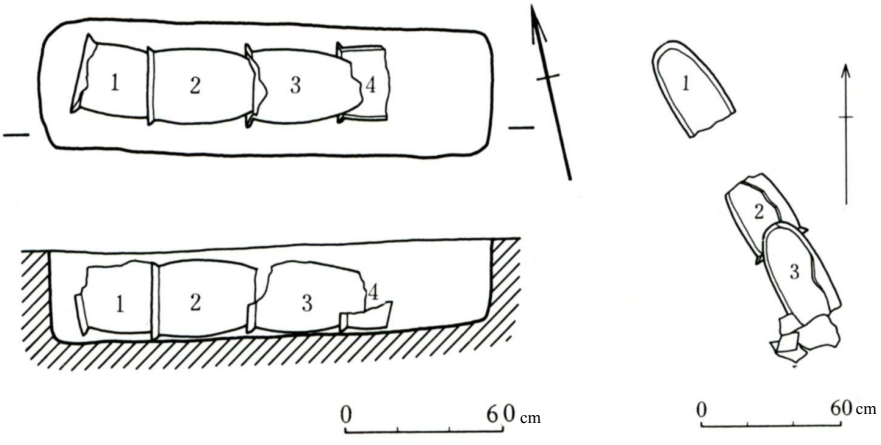
Figure 4.40. Pointed-bottom vessel set JY7, Xiaojiawuji. After Xiaojiawuji 1999: 131, fig. 104.



JY4



JY3



JY5 JY6

Figure 4.41. Pointed-bottom vessel sets JY1, JY3, JY5 and JY6, Xiaojiawuji. After Xiaojiawuji 1999: 129, fig. 99, 130, fig. 100, and 131, figs 102, 103.

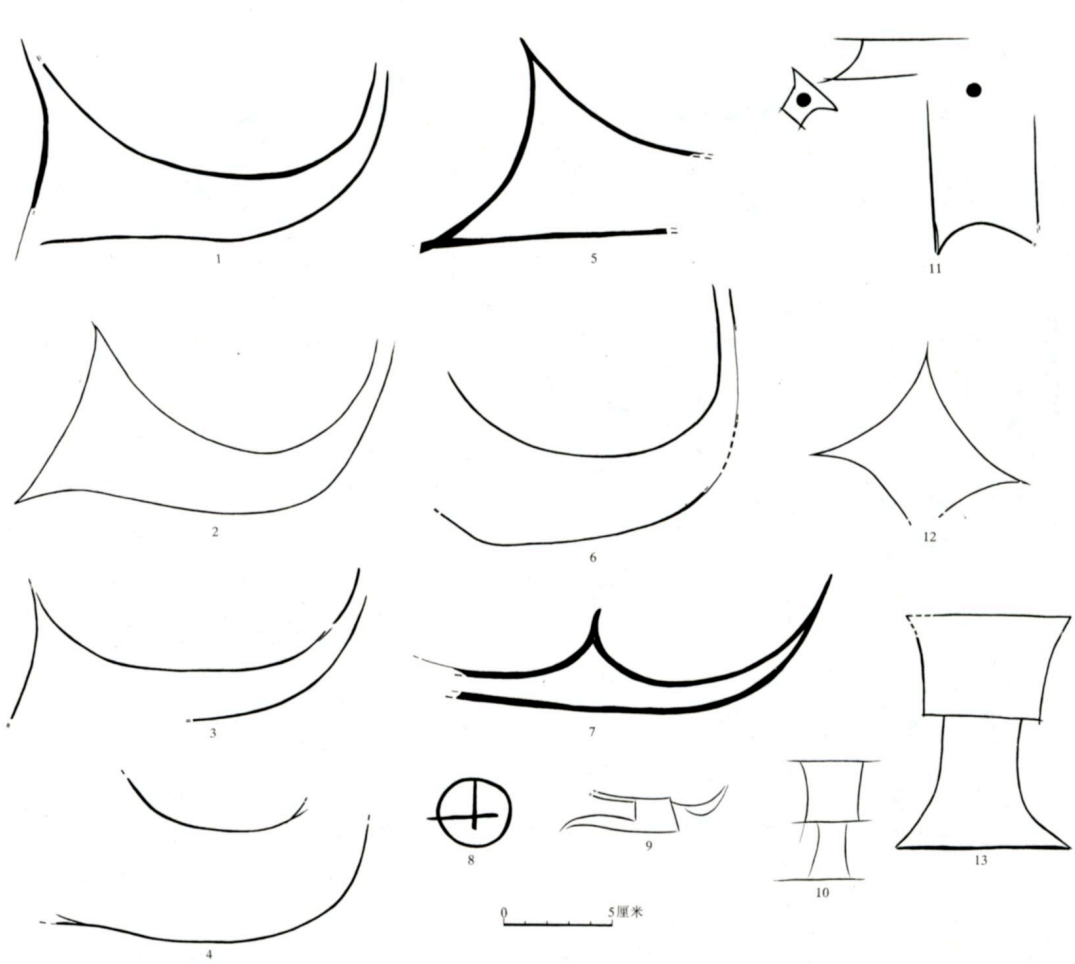


Figure 4.42. Hook-shaped marks on pointed-bottom vessels at Xiaojiawuji. After Xiaojiawuji 1999: 220, fig. 168.

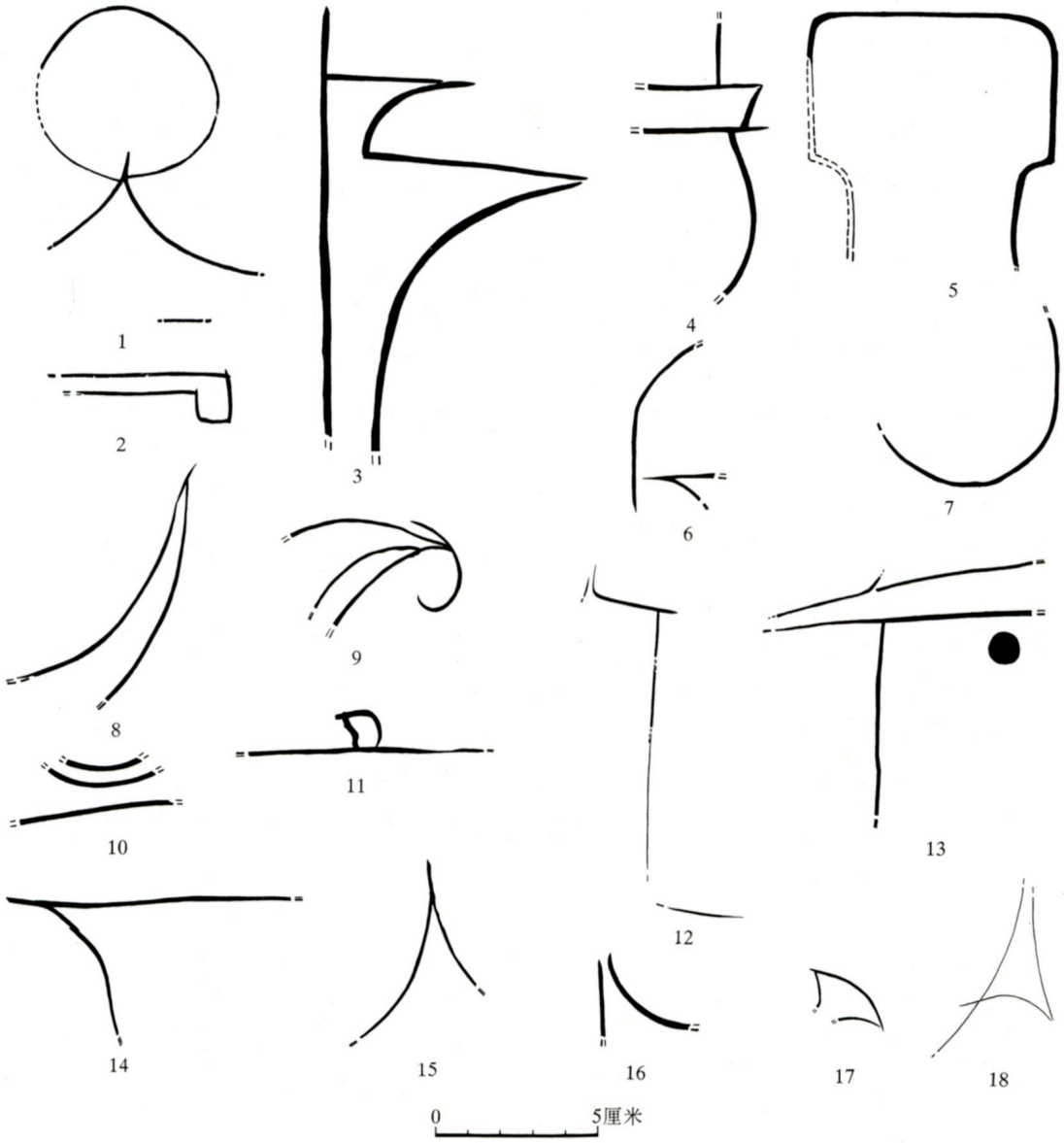


Figure 4.43. Selection of marks found at Xiaojiawuji. After Xiaojiawuji 1999: 224, fig. 171.

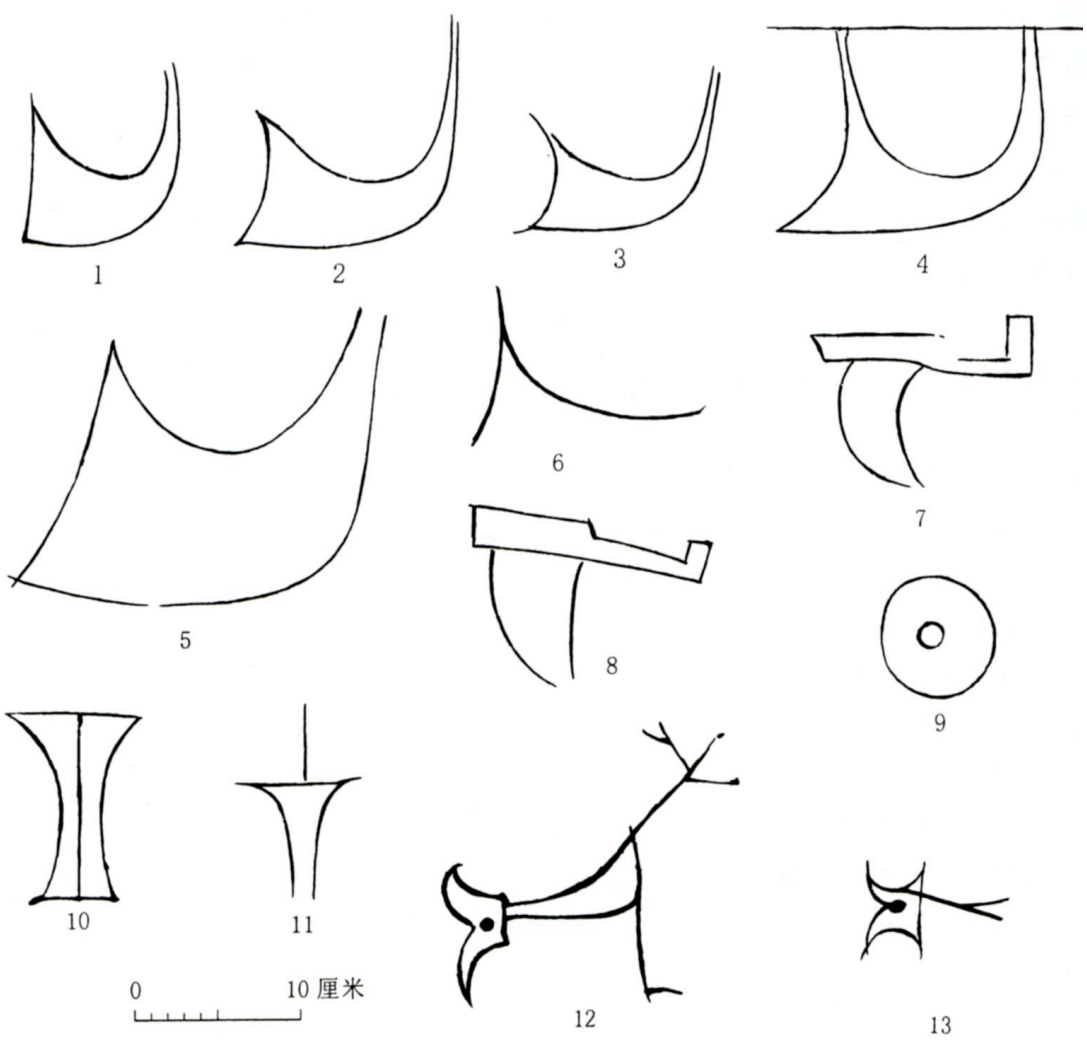


Figure 4.44. Marks from Dengjiawan. After Dengjiawan 2003: 234, fig. 185.

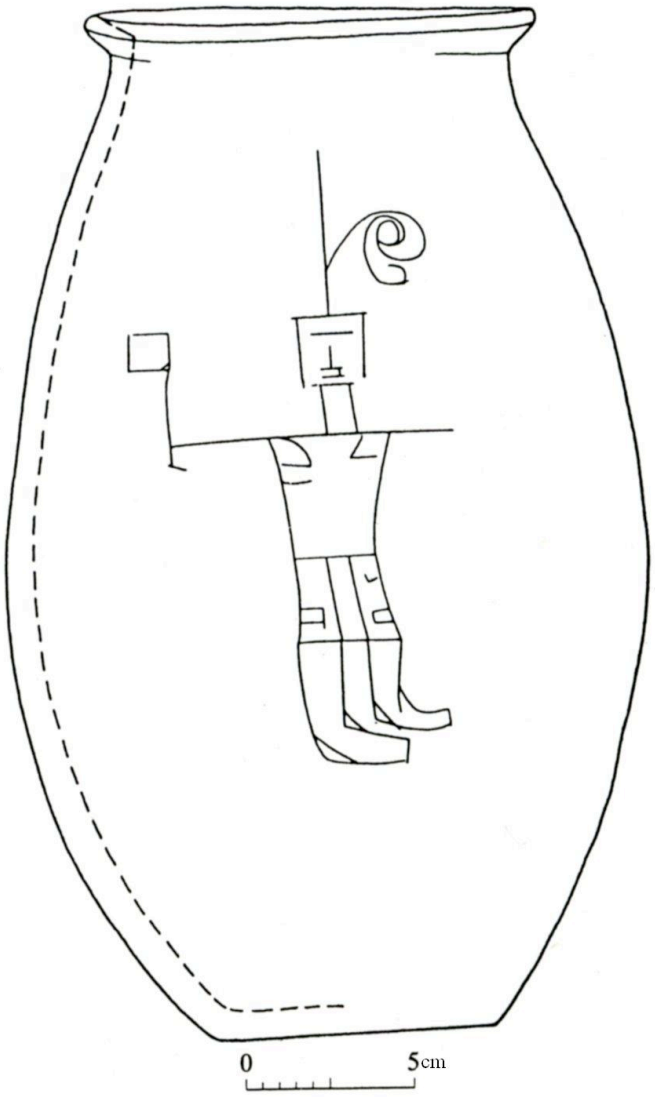


Figure 4.45. Pottery vessel with marks depicting a person wielding an axe, Xiaojiawuji. After Xiaojiawuji 1999: 161, fig. 127.

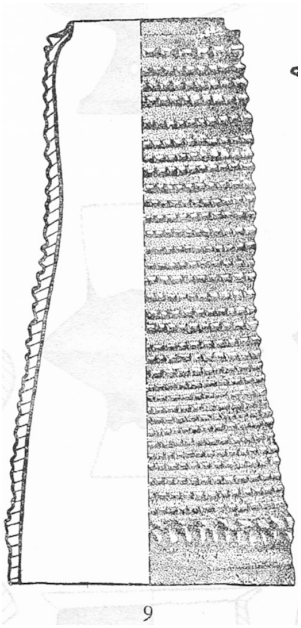


Figure 5.1. Type C tube from Qujialing. Height 64.5cm, maximum diameter 32.7cm. After Qujialing 1965: 61, fig. 48:9.

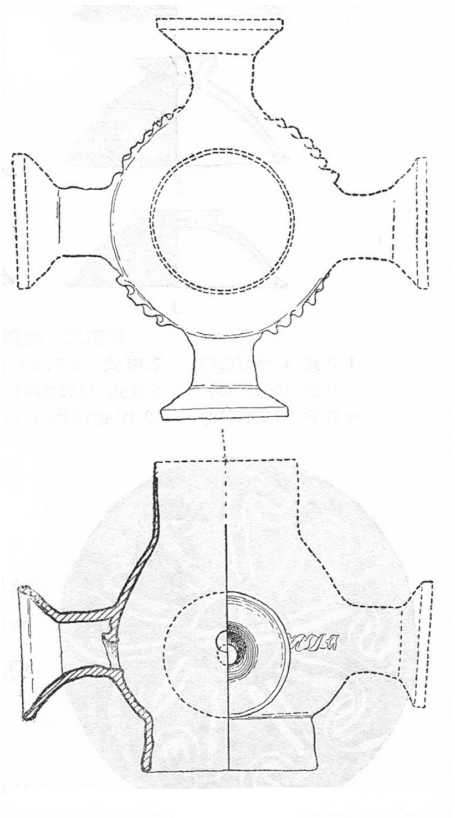


Figure 5.2. 'Odd' tube from Qujialing. Height 20cm. After Qujialing 1965: 65, fig. 51.

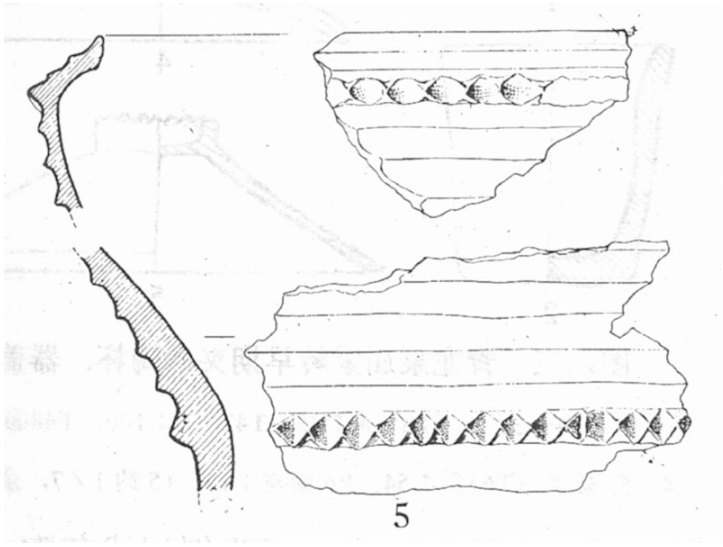


Figure 5.3a. Possible fragment from a tube, Qinglongquan. After Qinglongquan yu Dasi 1991: 71, fig. 61:5.

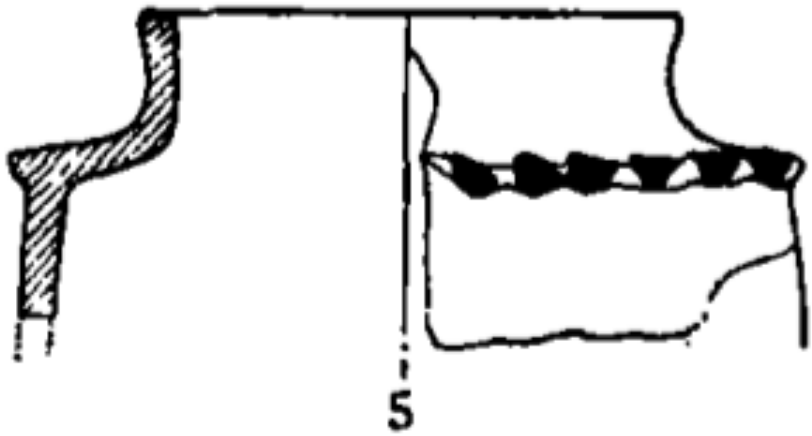


Figure 5.3b. Possible part of a tube, Wangjiagang. After Wangjiagang 1984: 215, fig. 13:5.

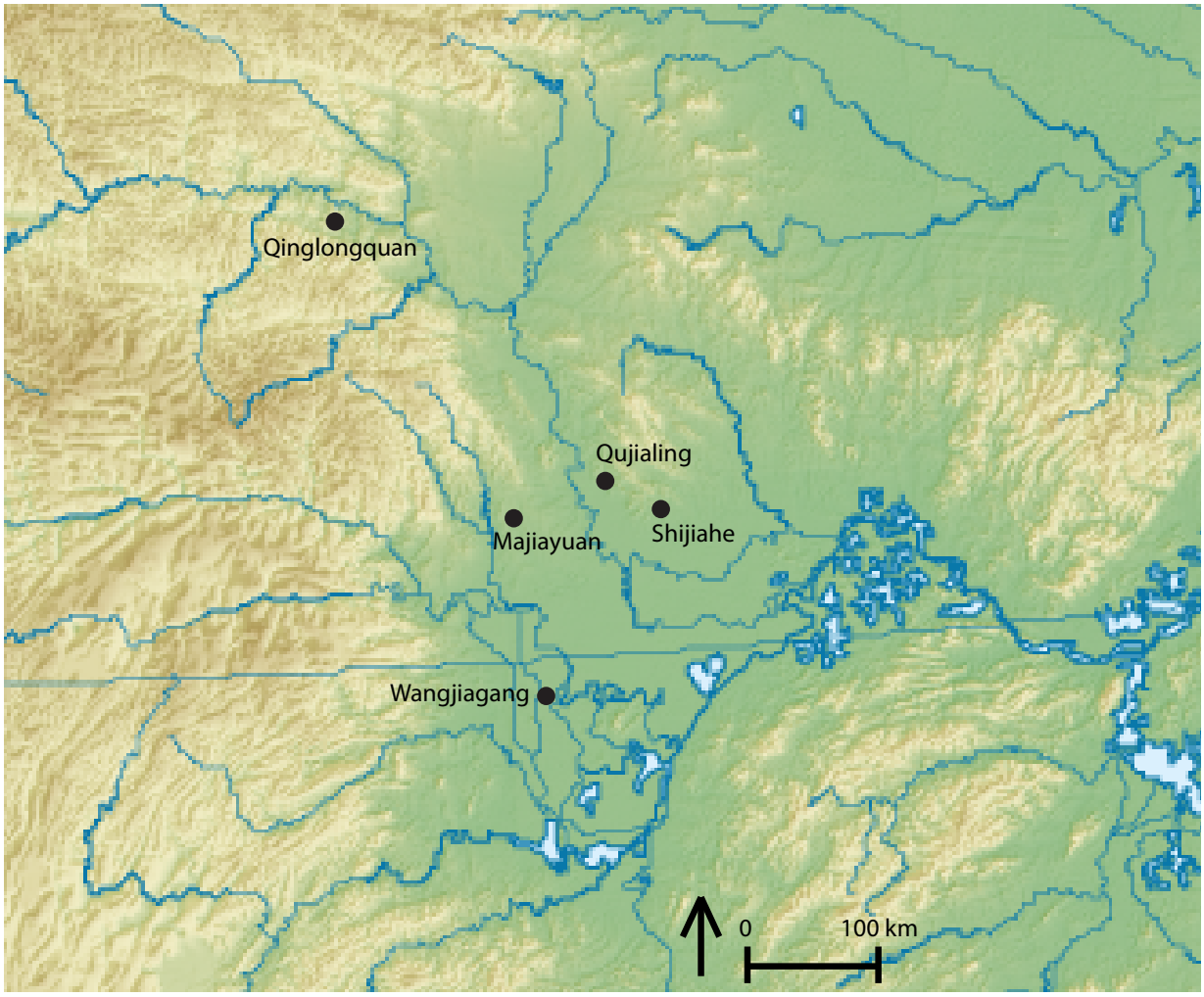


Figure 5.4. Distribution of sites with pottery tubes across the Middle Yangzi.

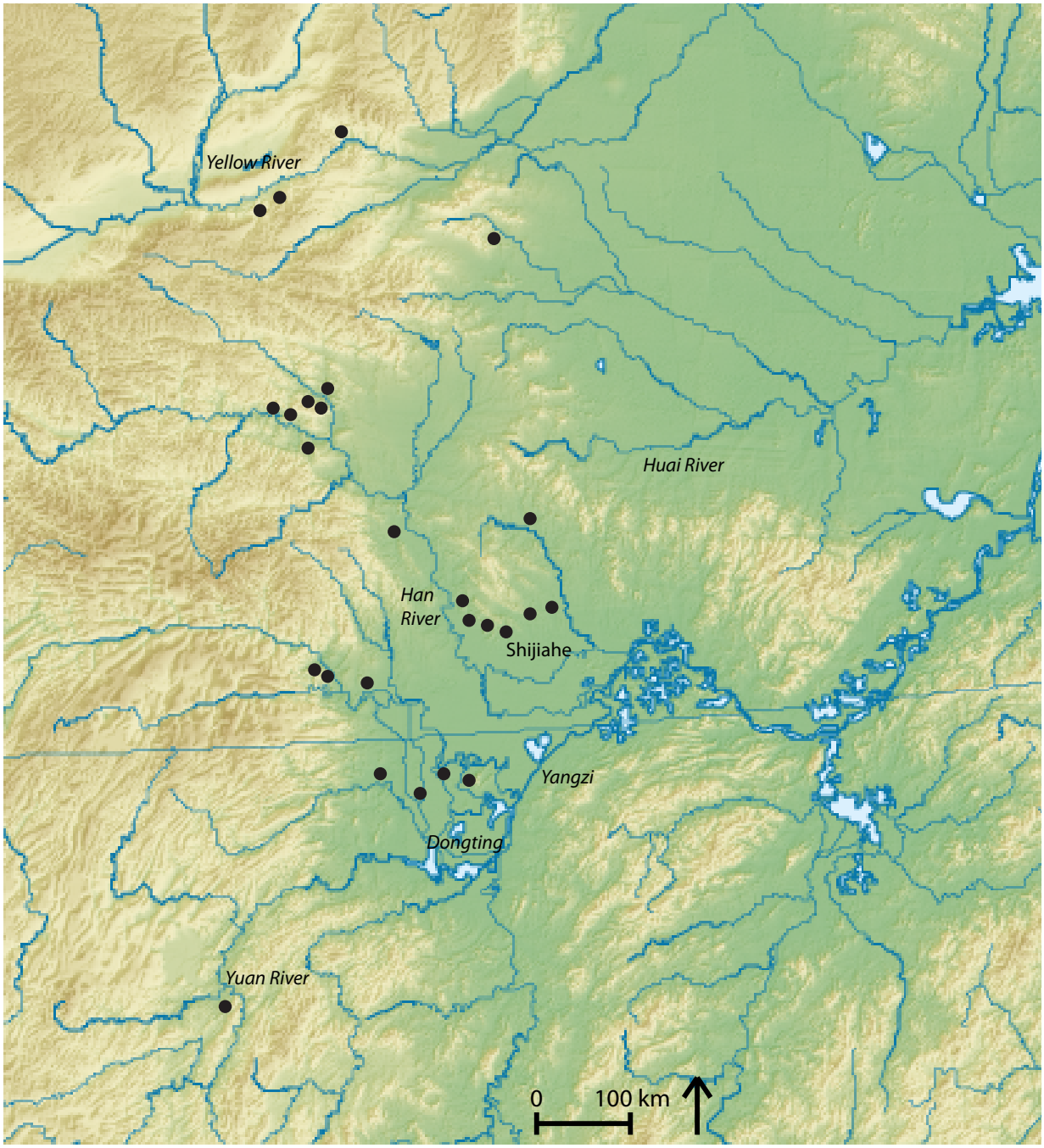


Figure 5.5. Distribution of ‘early’ red pottery cups.

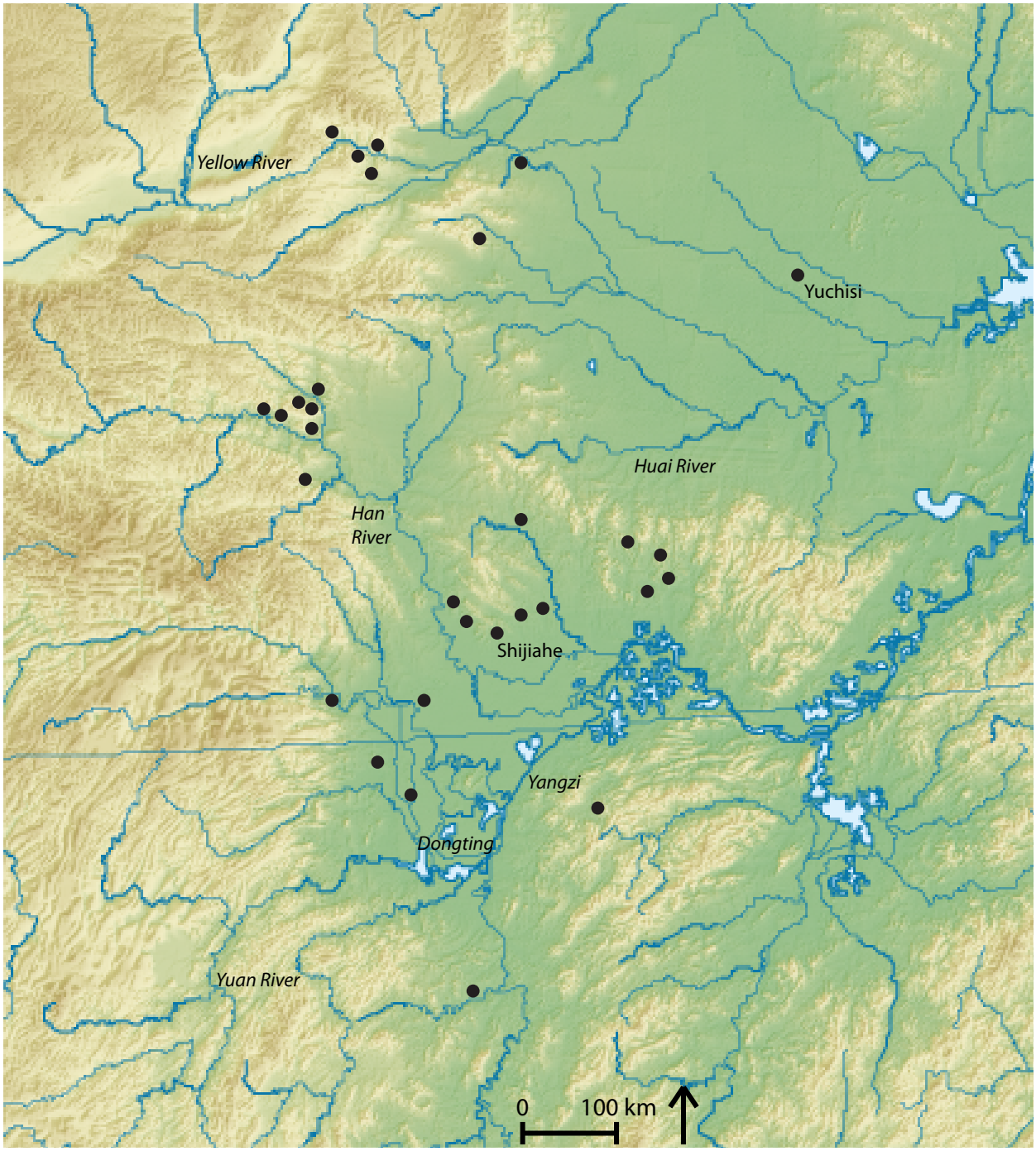


Figure 5.6. Distribution of 'later' red pottery cups.

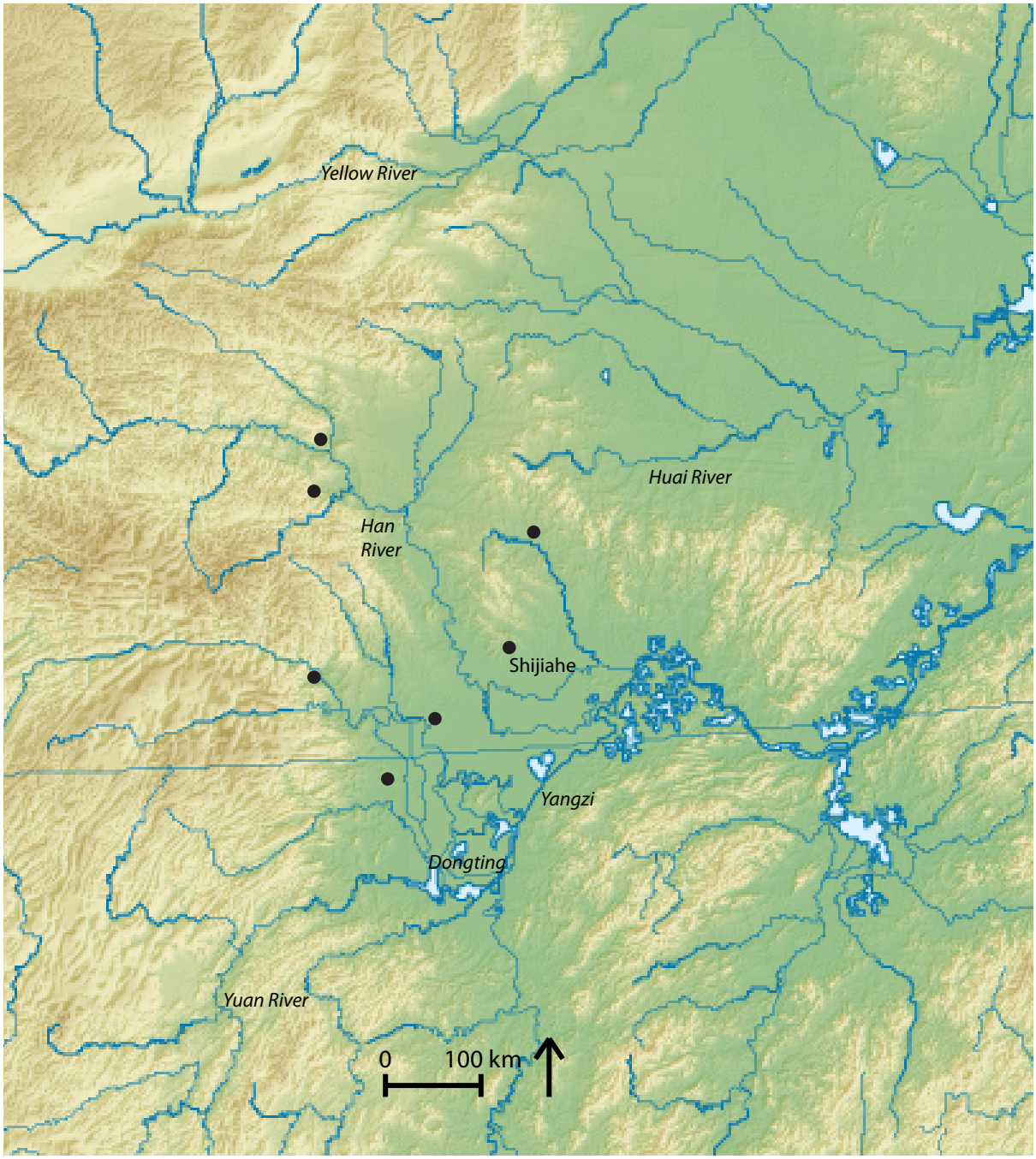


Figure 5.7. Distribution of phase IX red pottery cups.

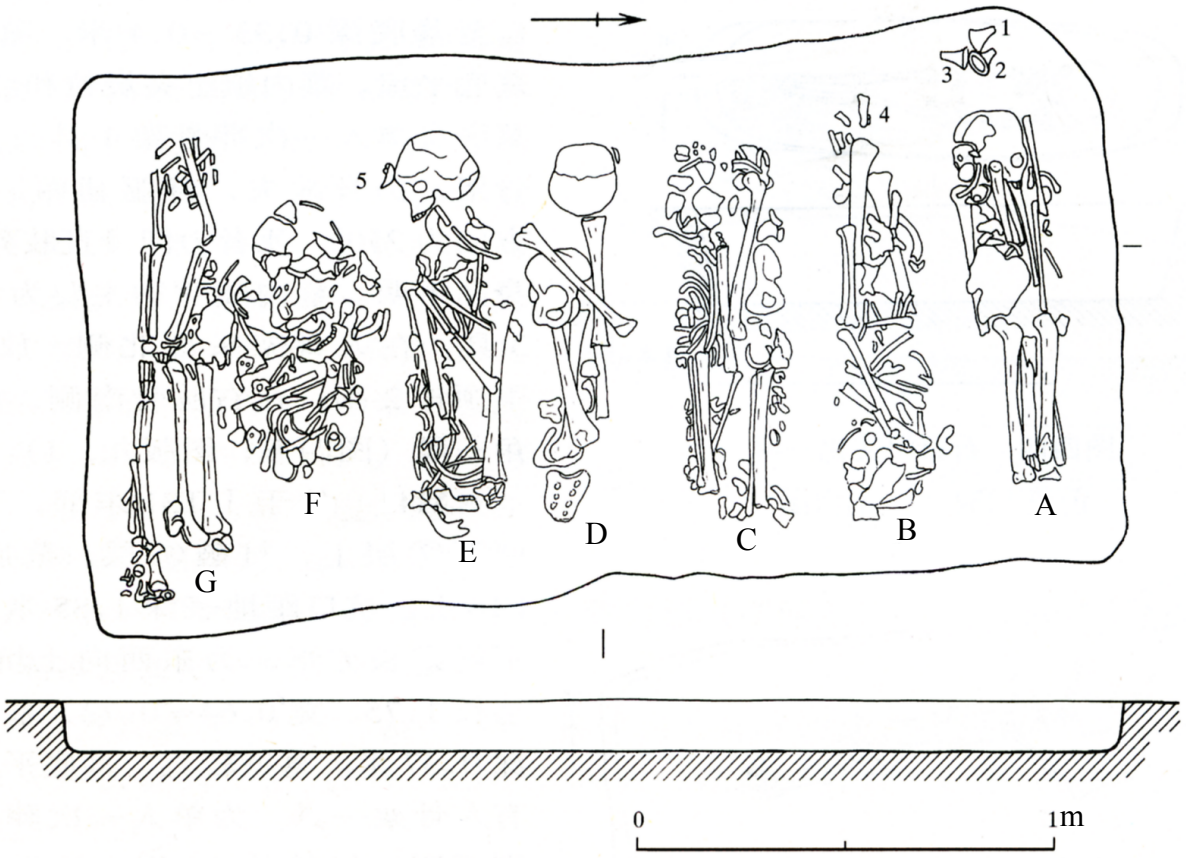


Figure 5.8. Burial M19 from Qilihe, Fang Xian, Hubei. A-G = skeletal remains; 1-3 = red pottery cups; 4, 5 = pig mandibles. After Qilihe 2008: 67, fig. 43.

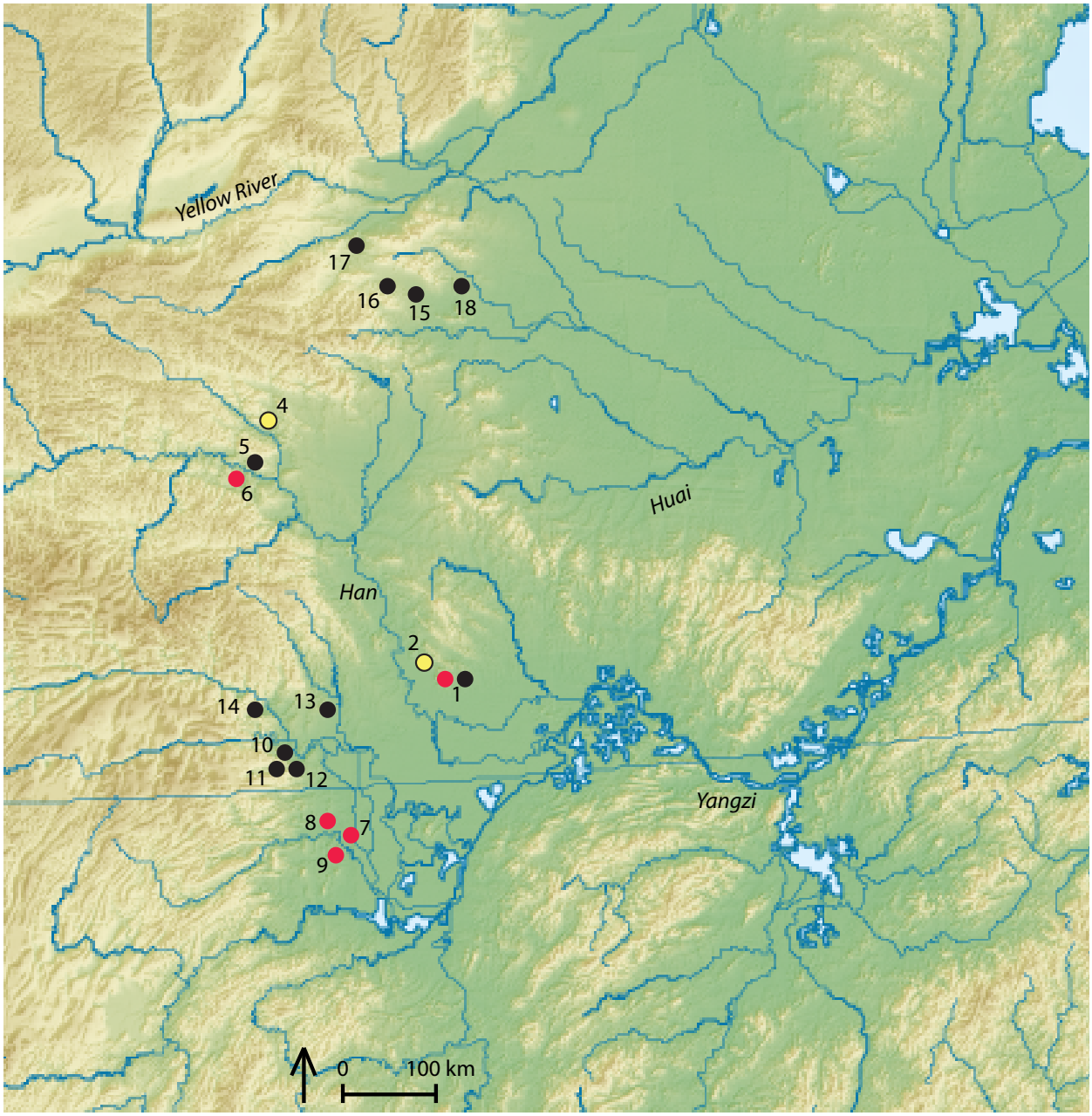


Figure 5.9. Distribution of figurines. Yellow dots = phase V/VI (early) figurines; red dots = phase VII/VIII (later) figurines; black dots = phase IX figurines (cf. table 5.2).

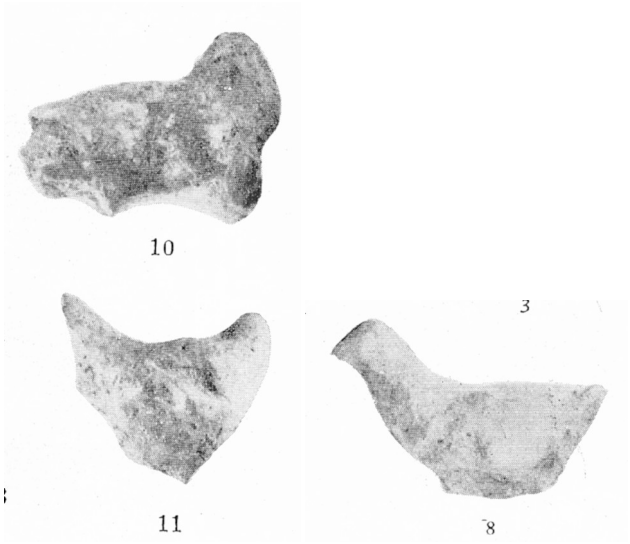


Figure 5.10. Figurines discovered at Qujialing. After Qujialing 1965: pl. XIII:10, 11 and pl. LIV:8.

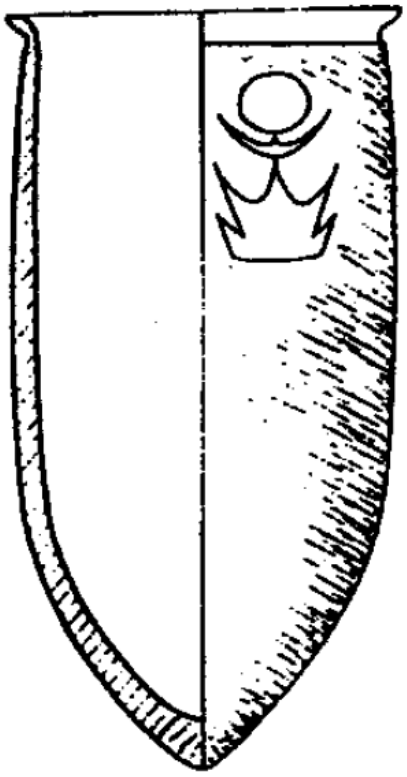


Figure 5.11. Pottery pointed-bottom vessel from Yuchisi M96. Height 67.5cm, mouth diameter 35cm. After Wang Jihuai *et al.* 2001: 51, fig. 8:5.

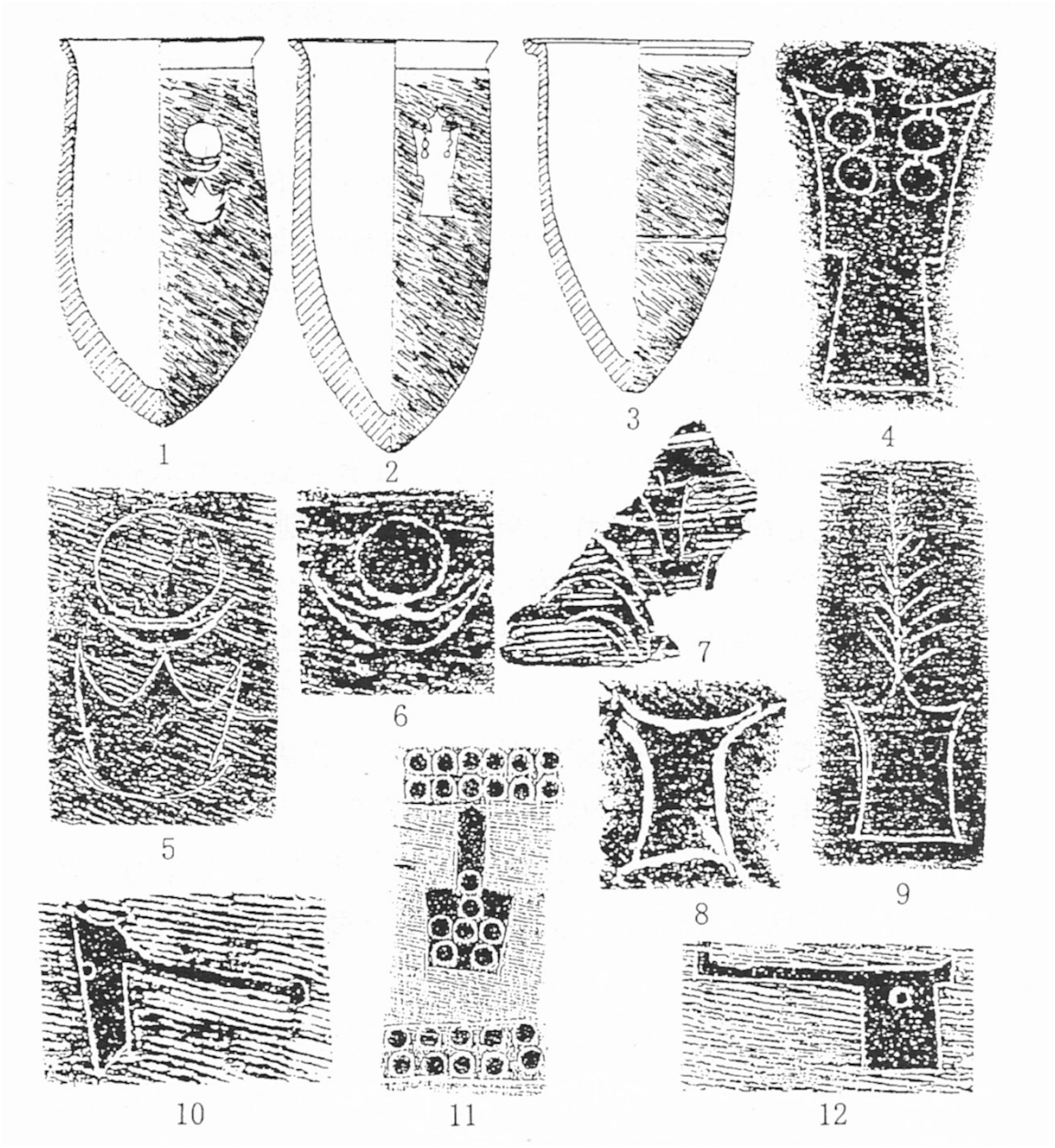
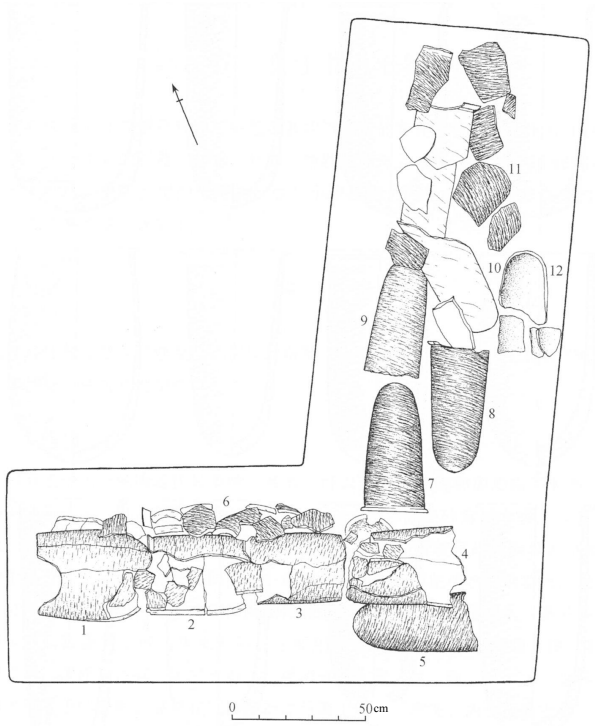


Figure 5.12. Marks on pottery pointed-bottom vessels at Yuchisi and sites in Shandong. After Gao Guangren and Luan Fengshi 2004: 134, fig. 34.



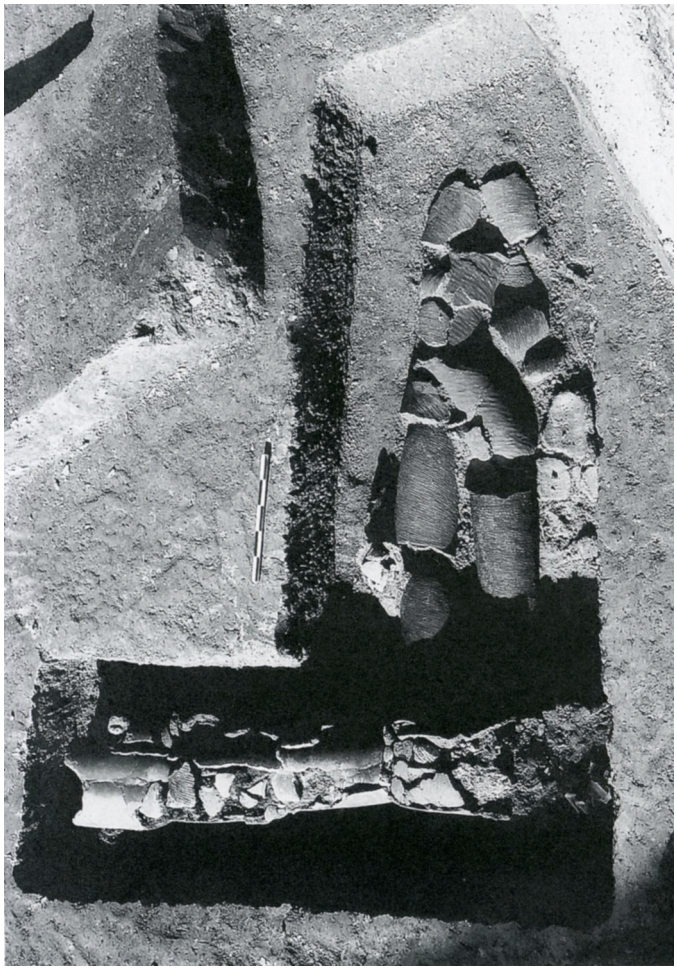


Figure 5.13. Pointed-bottom vessel set JY10 at Yuchisi. After Yuchisi 2007: 101, fig. 70 and colour pl. 29:1.

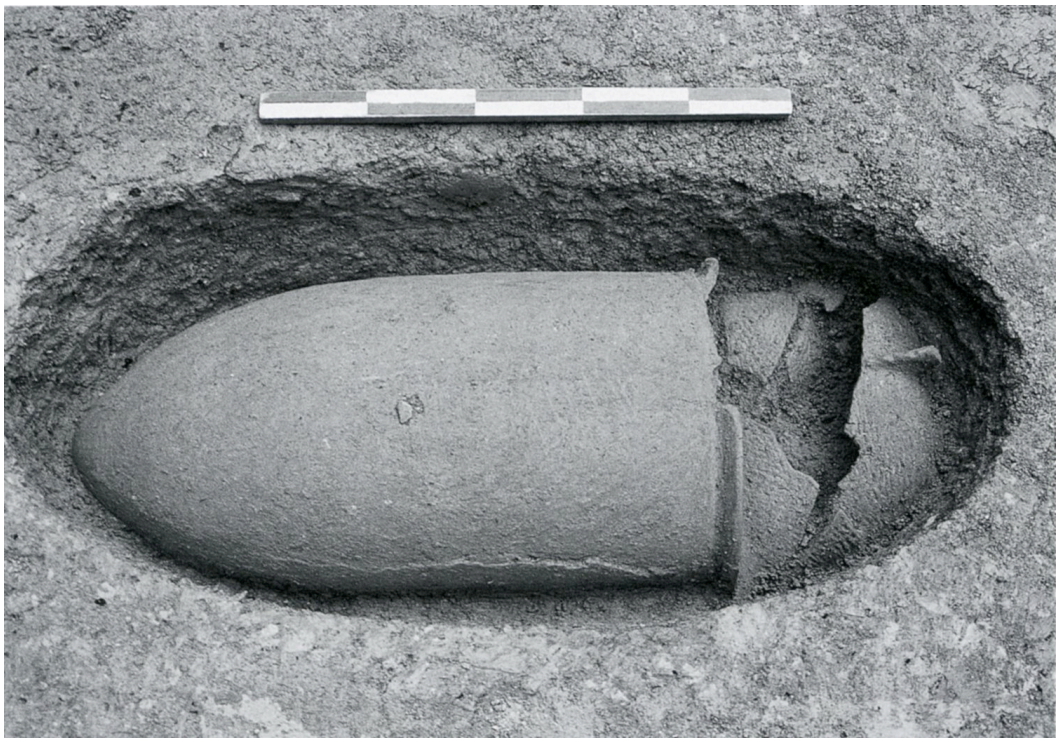


Figure 5.14. Urn burial M289 at Yuchisi. After Yuchisi 2007: pl. 100:2.



Figure 5.15. Urn burial excavated at Yejiamiao. After Liu Hui 2010: 19.



Figure 5.16. Distribution of pointed-bottom vessels.

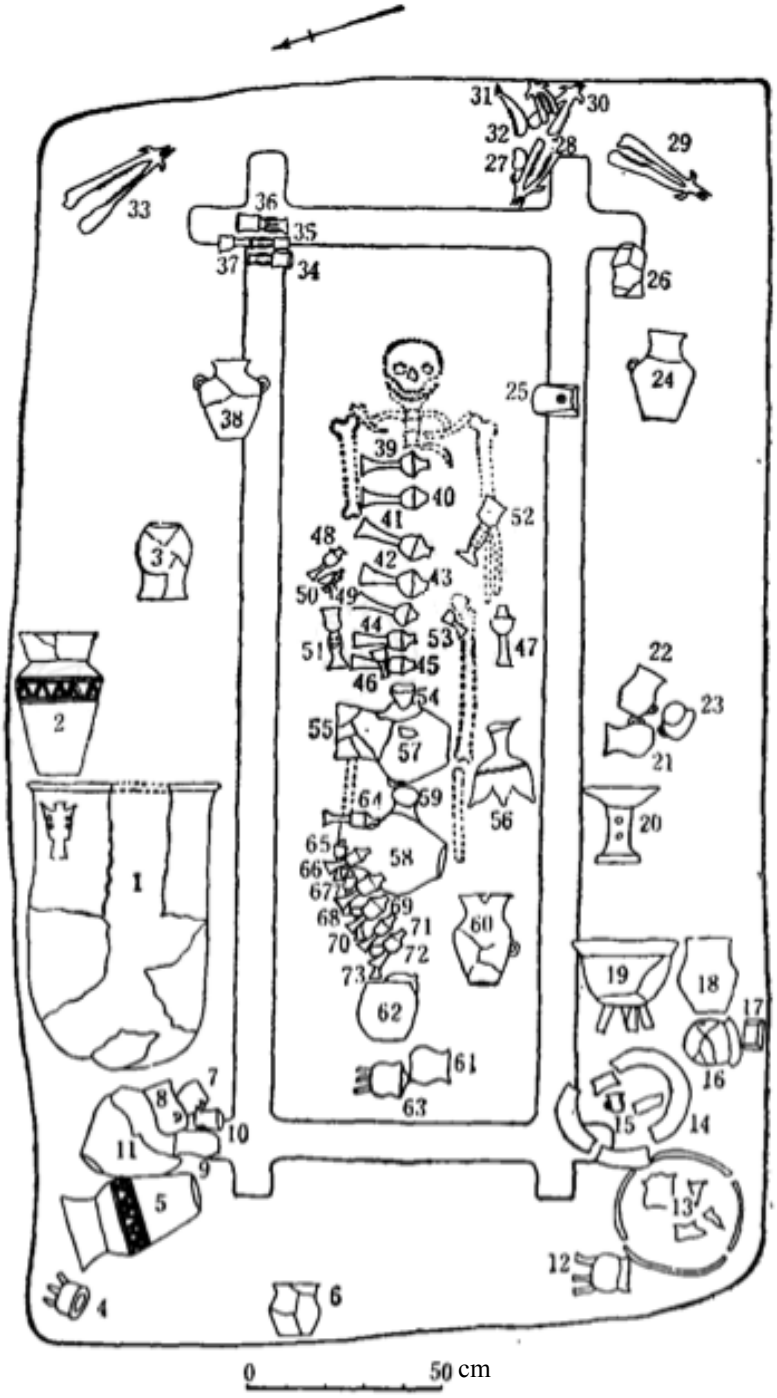


Figure 5.17. Burial M17 at Dazhujiacun. The pointed-bottom vessel is number 1. After Dazhujiacun 1991: 171, fig. 4.

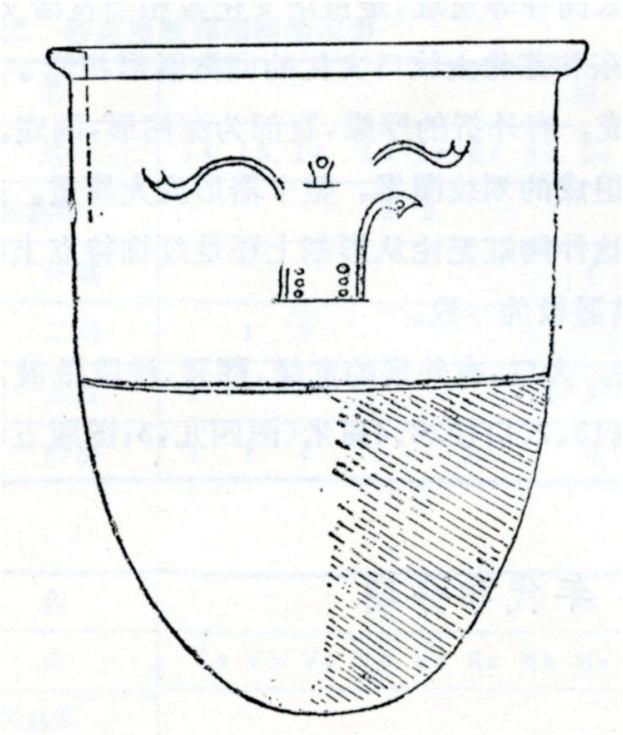


Figure 5.18. Pottery pointed-bottom vessel found at Beiyinyangying. Height 52.8cm, mouth diameter 42cm. After Beiyinyangying 1993: 87, fig. 49:1.

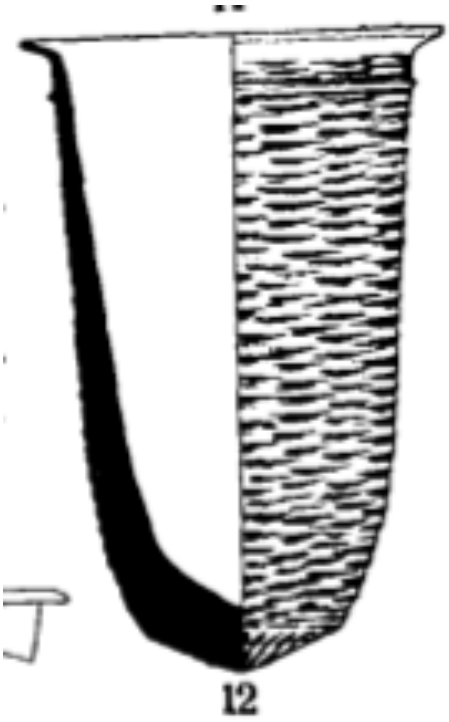


Figure 5.19a. Pottery pointed-bottom vessel found at Huacheng. Height 51cm, mouth diameter 39cm. After Huacheng 1964: 34, fig. 8:12.

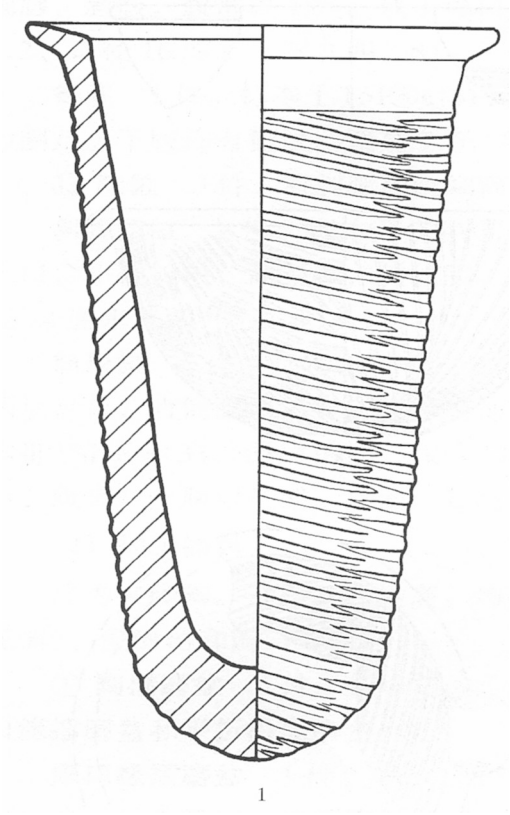


Figure 5.19b. Pottery pointed-bottom vessel found at Qilihe. Height 38.8cm, mouth diameter 24.8cm. After Qilihe 2008: 132, fig. 96:1.

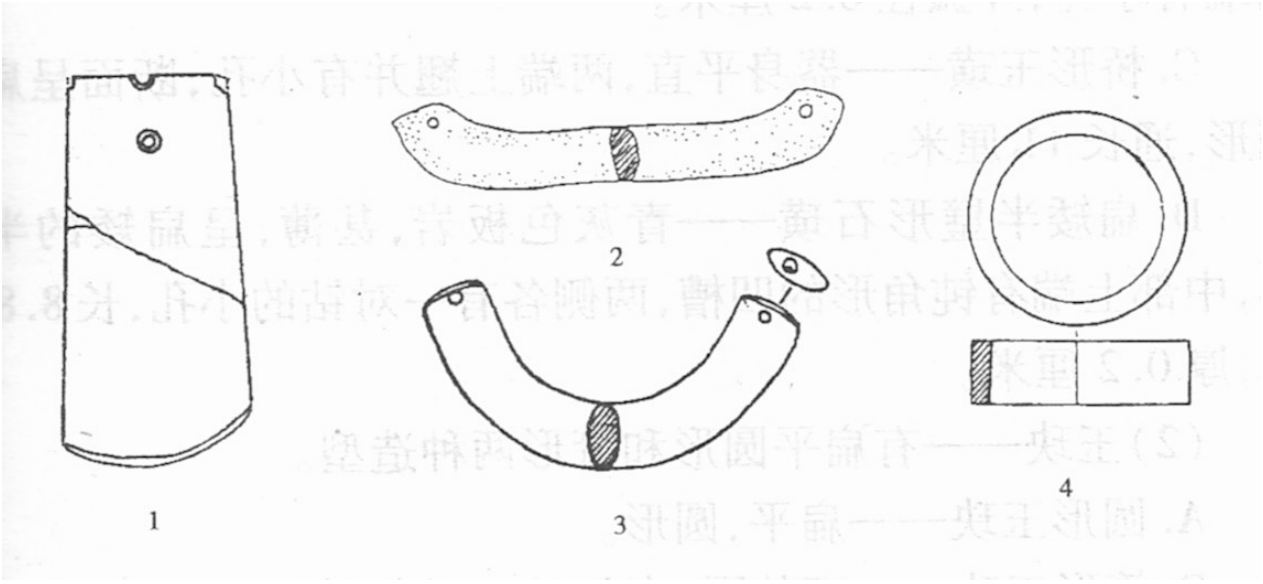


Figure 5.20. 'Qujialing Culture' jades found in the Middle Yangzi. Not to scale. After Yang Jianfang 2006: 67, fig. 4-8.

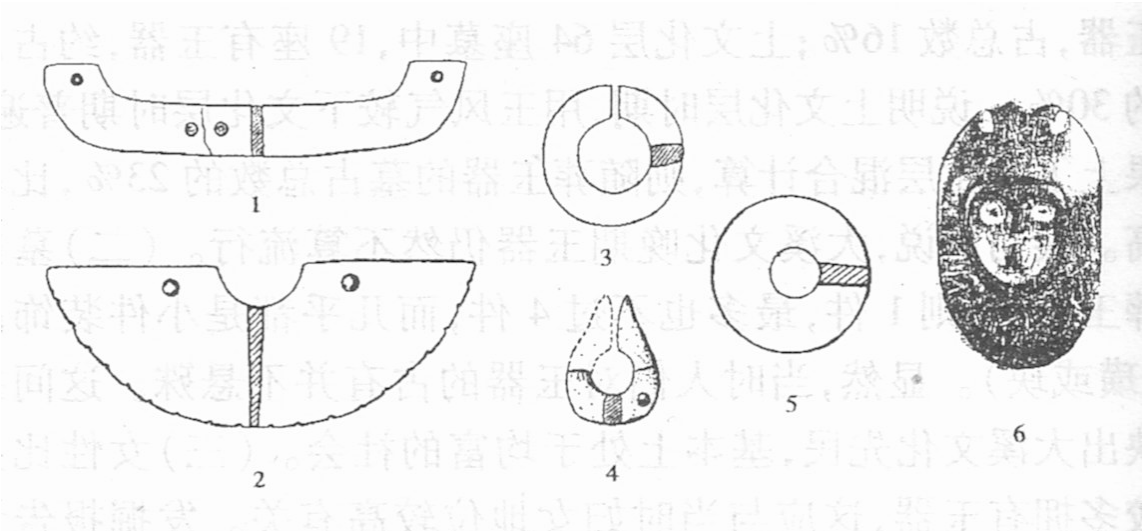


Figure 5.21. ‘Daxi Culture’ jades found in the Middle Yangzi. Not to scale. After Yang Jianfang 2006: 62, fig. 4-7.

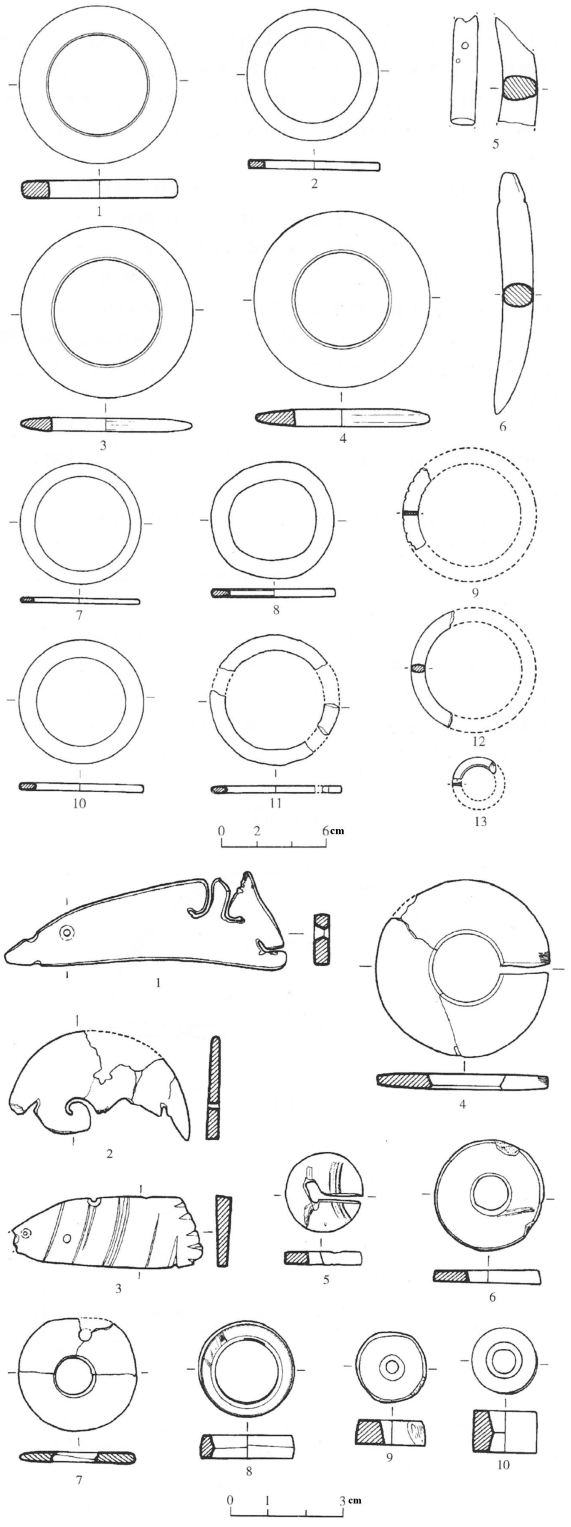


Figure 5.22a. Selected jades from the Gushan site. After Gushan 2001: 94, fig. 49 and 96, fig. 50.

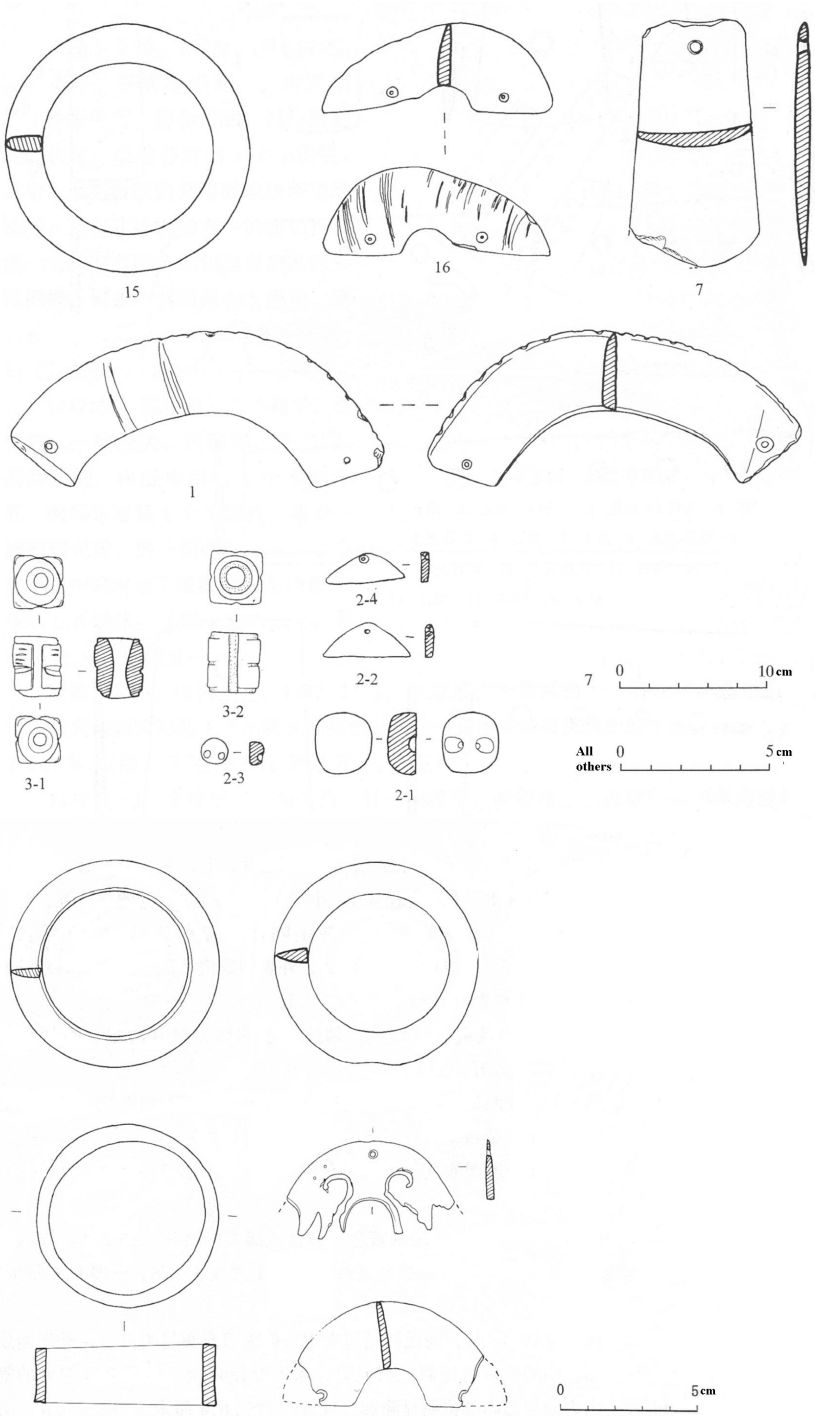


Figure 5.22b. Selected jades from the Xuejiagang site. After Xuejiagang 2004: 142, fig. 136 and 338, fig. 366.

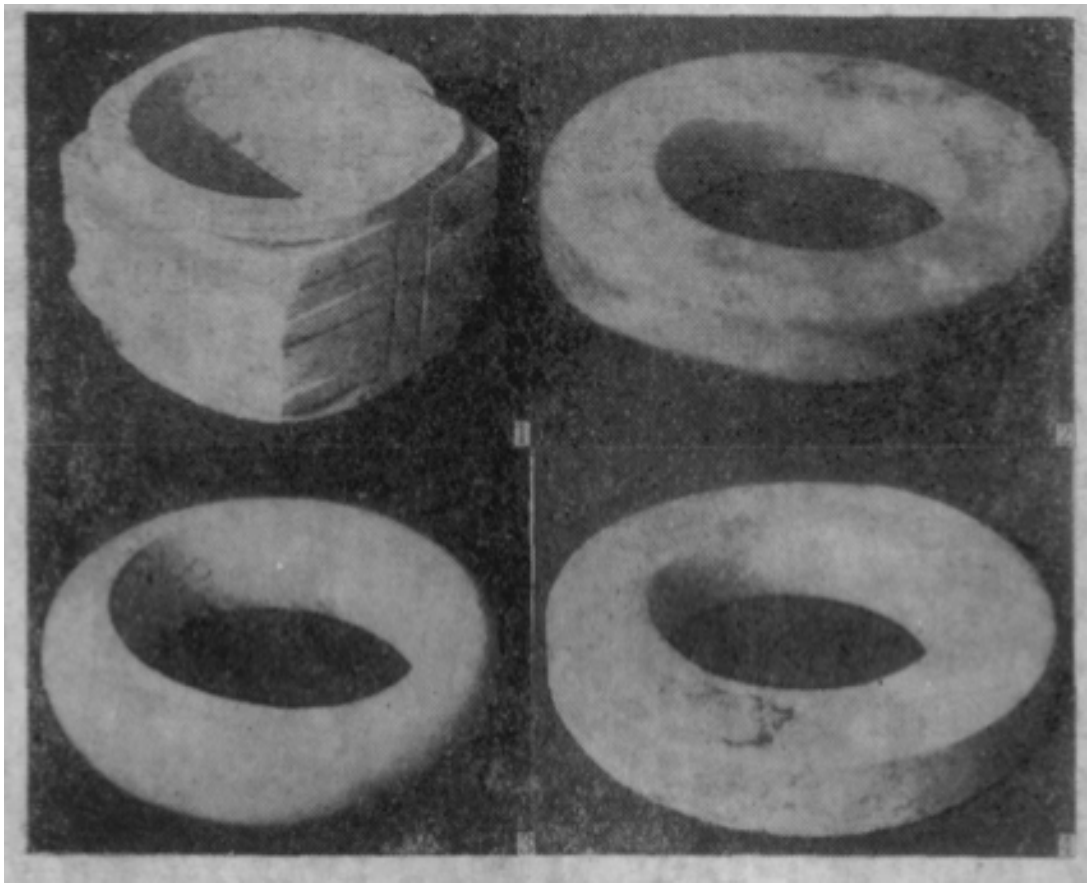


Figure 5.23. Jades found at Aoshangwan. After Wang Zongyao 1992: 665, fig. 5.

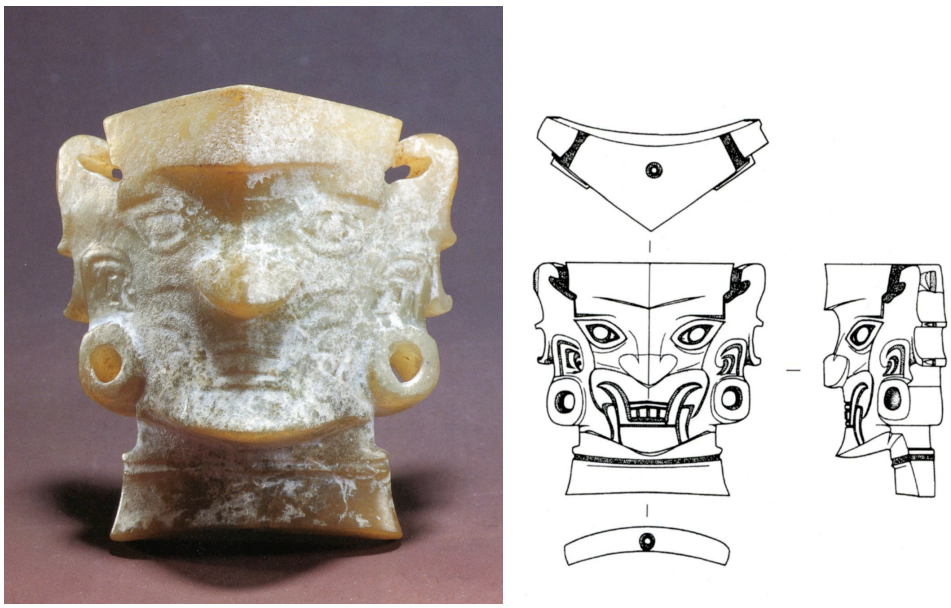


Figure 5.24. Jade face from urn W6, Xiaojiawuji. Length 3.7cm, width 3.6cm. After Xiaojiawuji 1999: colour pl. 1 and Jingzhou Bowuguan 2008: 26.



Figure 5.25. Selected jades from Xiaojiawuji and Zaolingang.
After Jingzhou Bowuguan 2008: nos 2 (face, W6, length 2.85cm, width 2.2cm), 50 (tiger, W6, length 2.1cm, width 3.6cm), 16 (cicada, W6, length 2.6cm, width 1.9cm), 57 (head, W6, length 2.8cm, width 3.3cm), 97 (bead, W6, length 2.7cm), 108 (pendant, W6, length 4.8cm), 117 (plaque, W6, diameter 3.3cm), 129 (*huang*, W6, length 4.7cm), 73 (bird pin from Zaolingang WM1, length 5cm).



Figure 5.26. Distribution of Shijiahe phase IX jades.

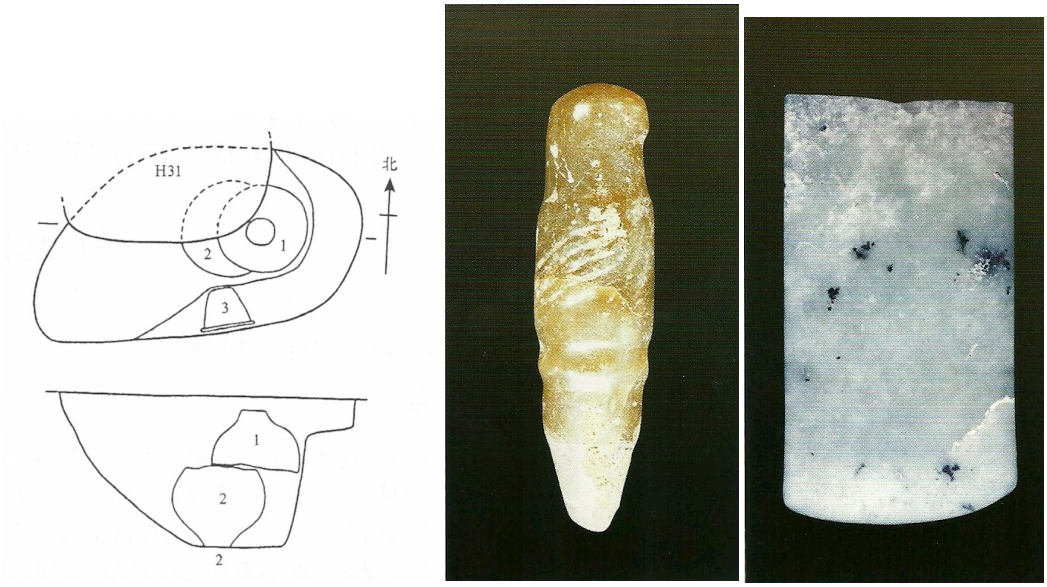


Figure 5.27. Urn W1 and jades buried with urn. Pit: width at mouth 1-1.8m, depth 0.8m; bird: height 6.3cm; adze: length 7.6cm, width 4cm. After Wadian 2004: 37, fig. 33:2 and colour pls 2, 4.



Figure 5.28. Pottery figurines found at Wadian. Dimensions not available. After Fang Yanming 2009: 37.



Figure 5.29. Selected jades form Shimao. After Gu Fang 2005: vol. 14, p. 24 (bird pin, length 6.5cm); Jingzhou Bowuguan 2008: 6, fig. 5 (tiger, dimensions not available)



Figure 5.30. Burial M22, excavated at Taosi. 5x3.65m, depth 7m, 140°. After Taosi 2003: 4, fig. 1.



a



b

Figure 5.31. (a) Jade ornament, M22, Taosi, Xiangfen, Shanxi, Width 6.4 cm. After Gu Fang 2005, vol. 3: 47. (b) Jade ornament, urn W9, Liuhe, Zhongxiang, Hubei, Width 4.1 cm. After Jingzhou Bowuguan 2008: cat. no. 62.

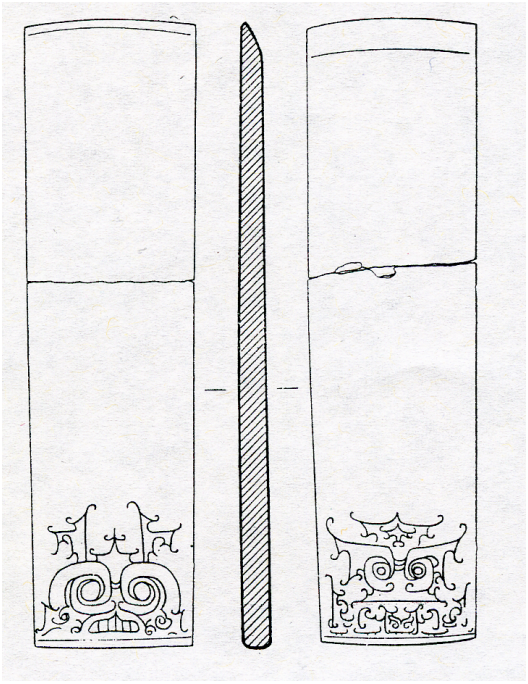


Figure 5.32. Stone adze collected at Liangchengzhen. Length 17.8cm. After Liu Guoyuan 1972: 57, fig. 2.

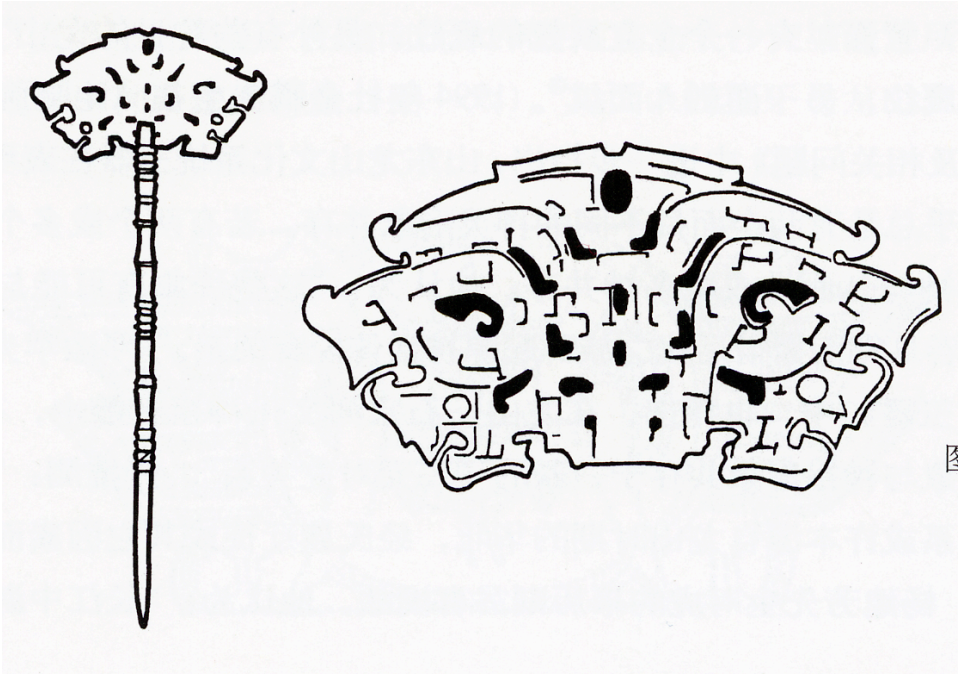


Figure 5.33. Jade hair ornament, M202, Zhufeng, Linqu, Shandong. Total length of pin 23cm, ornament length 9cm. After Jingzhou Bowuguan 2008: 16, fig. 17.

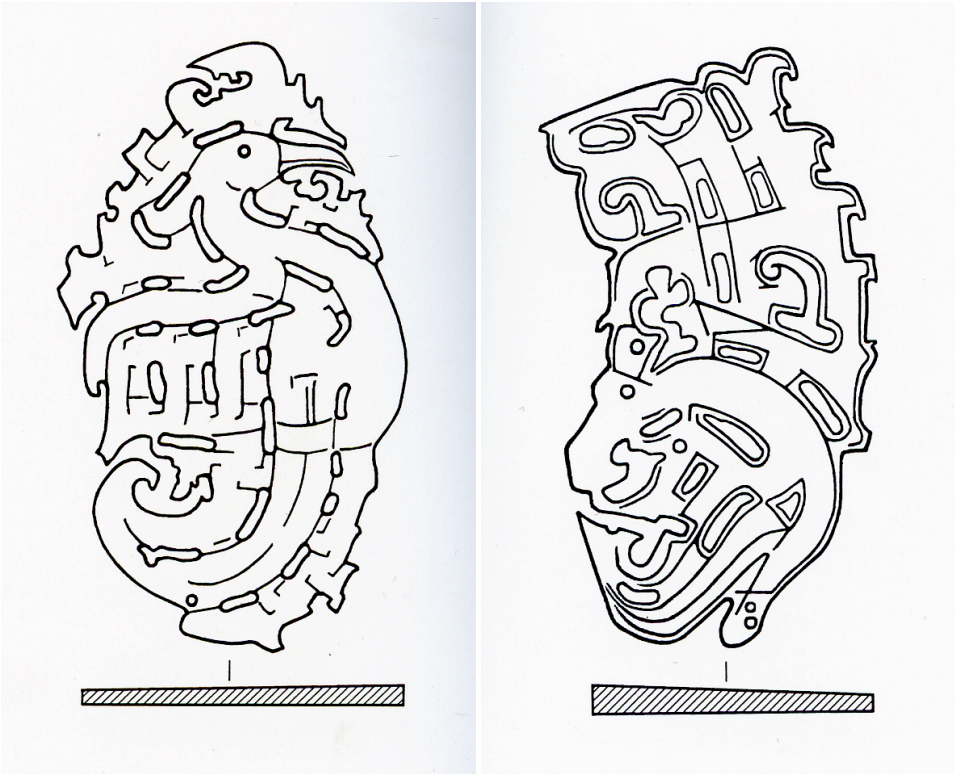


Figure 5.34. (a) Jade ornament, M14, Sunjiagang, Li Xian, Hunan, Length 9.1 cm. After Jingzhou Bowuguan 2008: cat. no. 65. (c) Jade ornament, M14, Sunjiagang, Li Xian, Hunan, Length 11.6 cm. After Jingzhou Bowuguan 2008: cat. no. 67.



Figure 5.35. (a) Jade disc from Luojiabailing. Diameter 14.5cm. After Jingzhou Bowuguan 2008: cat no. 134. (b) Jade disc from Sunjiagang. Diameter 16.3cm. After Jingzhou Bowuguan 2008: cat no. 135.



Figure 5.36. (a) Jade handle-shaped objects from Xiaojiawuji. Length 6.5cm. After Jingzhou Bowuguan 2008: cat. no. 86. (b) Jade handle-shaped object from Fuquanshan. Length 15.1cm. After Fuquanshan 2000: colour pl. 25:1.



Figure 5.37. Jade tube collected at Dujiagang. Height 7cm. After Jingzhou Bowuguan 2008: cat. no. 138.



Figure 5.38. Jade tube from burial M20, Fanshan, Zhejiang. Height 9.5cm. After Gu Fang 2005: vol. 8, p. 75.

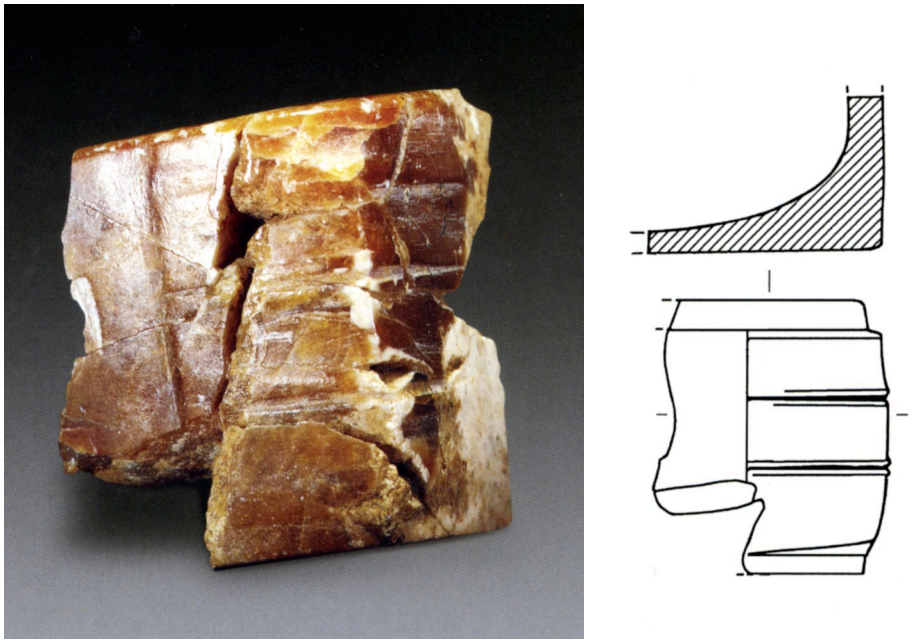


Figure 5.39. Corner of a jade tube excavated from an urn burial at Zaolingang. Height 3.3cm. After Jingzhou Bowuguan 2008: cat. no. 139.

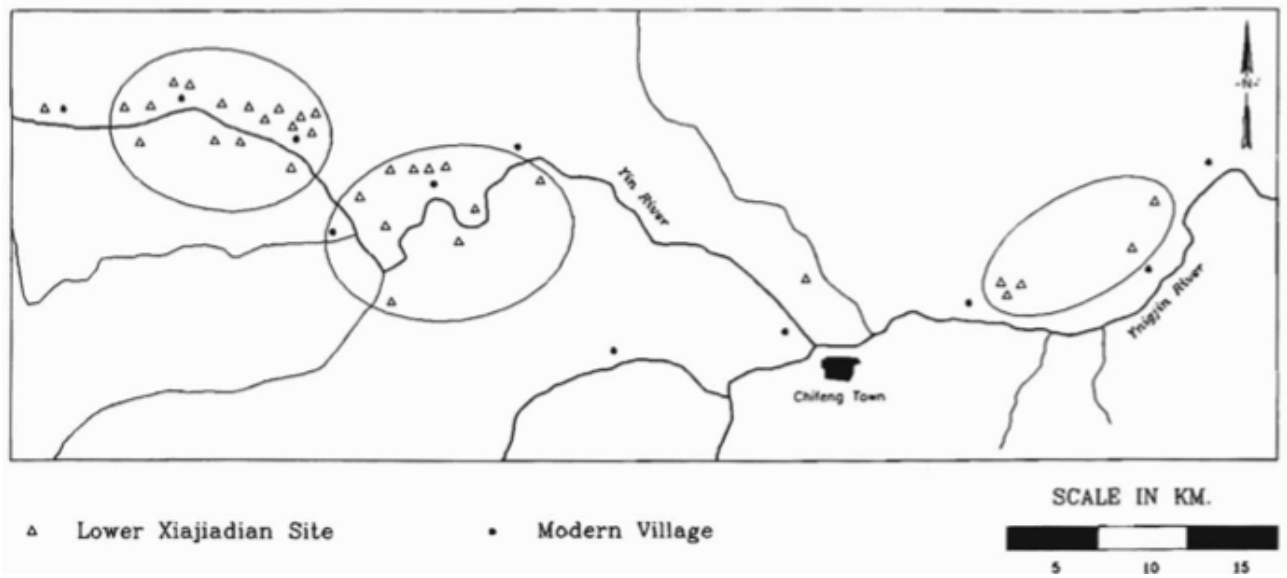


Figure 5.40. Distribution of 'Lower Xiajiadian Culture' enclosures in the Chifeng area. After Shelach 1994: 269, fig. 5.

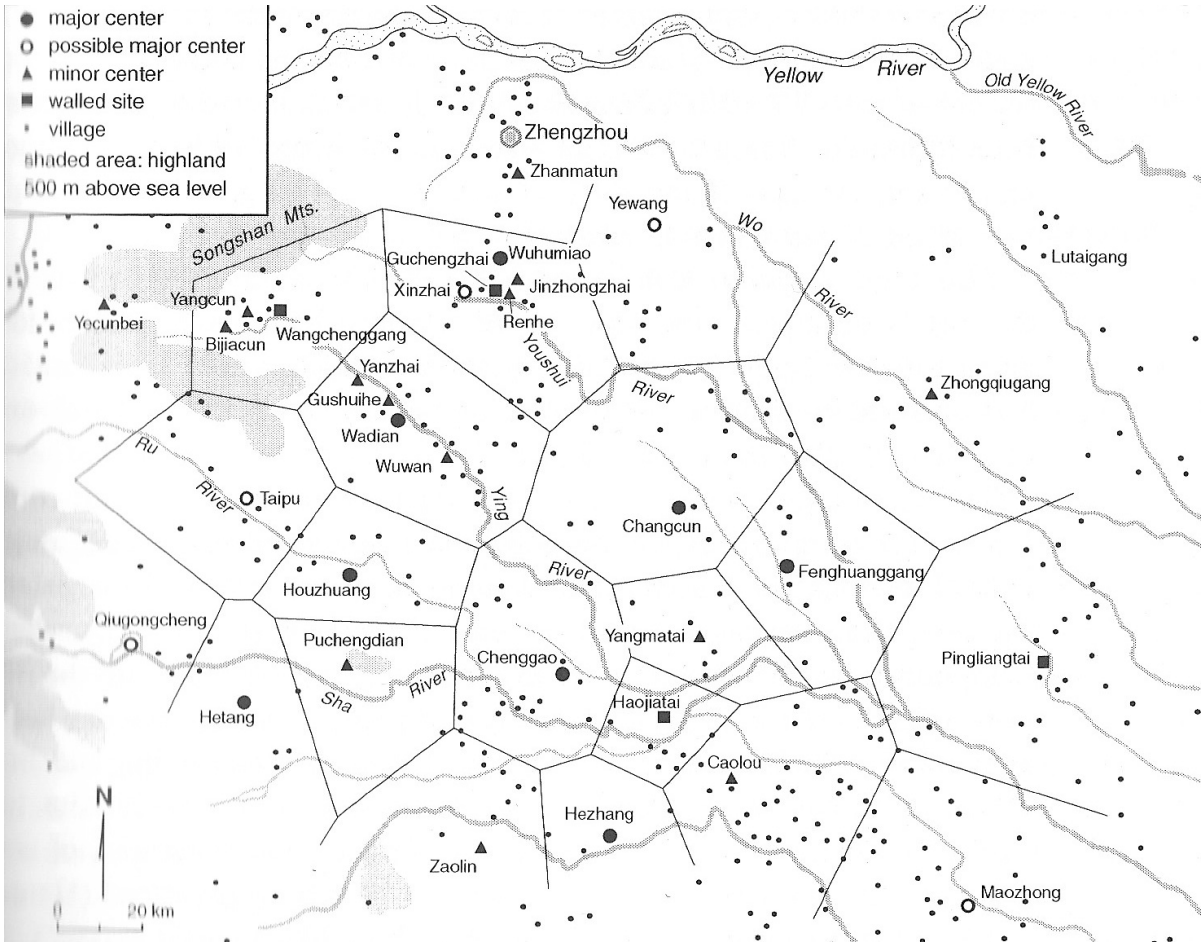


Figure 5.41. Distribution of 'Longshan Culture' settlements in Henan. After Liu 2004: 183, fig. 6.16.