Cultural Interactions during the Zhou Period (c.a. 1000-350 B.C.): A Study of Networks from the Suizao Corridor

Beichen Chen
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A thesis submitted for the degree of Doctor of Philosophy
University of Oxford
Michaelmas Term 2016

Abstract

This thesis concerns about cultural interactions during the Zhou period of China (c.a. 1000-350 B.C.) between the Suizao corridor (near the present-day Yangtze River region) and its contemporaries within or outside the Zhou realm. It mainly, but not exclusively, concentrates on bronze ritual vessels from the Suizao corridor, and discusses the underlying social and political relations between the dominant cultures and the regional ones in this particular area (the Zeng state for example), which are central to understanding the ways in which the dominant cultures joined their disparate territories into a whole. Newly excavated archaeological evidence show that there were at least three periods when people in the Suizao corridor learned about the current traditions employed elsewhere, which are: 1) Yejiashan period (from the 11th to 10th century B.C.); 2) post-Ritual Reform period (from the mid-9th to mid-7th century B.C.); and 3) Marquis Yi's period (from the mid-6th to mid-4th century B.C.). In these periods, local people in the Suizao corridor were involved in networks of enormous and constantly changing complexity, in which people, objects, practices, and ideas were mixed together through interregional contacts. The choices of local people in adopting foreign materials and ideas from either the dominant cultures or other places heavily depended on the subjective view of their social identity, which can be constructed, maintained, or transited to adapt to different social and political environments.

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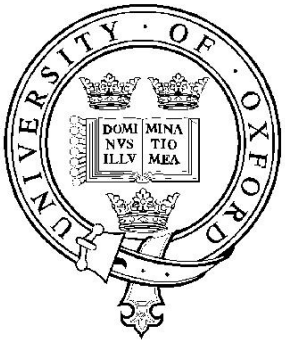

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CHAPTER I – Introduction

1-1 Introduction

The Mountains of Qinling 秦嶺 and marshes of the Huai 淮 River are collectively recognised as China's north-south boundary,[1] covering most of the present-day south Shaanxi 陝西, north Hubei 湖北, north Anhui 安徽, and north Jiangsu 江蘇 province (Fig. 1-1.1).[2] This boundary is normally referred to as a dividing line of the northern

[1] The boundary here is normally marked between 32 and 35 degrees north latitude.
[2] Three geographical terms – *North China*, *South China*, and *Central Plains*, closely related to this north-south boundary, are especially relevant to our discussion in this thesis. The term North China normally refers to the present-day provinces Qinghai 青海, Gansu 甘肅, Shaanxi, Shanxi 山西, Hebei 河北, Liaoning 遼寧, Shandong 山東, Inner Mongolia, northern Henan 河南, Jiangsu 江蘇, and Anhui. The term South China often includes the provinces Sichuan 四川, Hubei, Hunan 湖南, Jiangxi 江西, Zhejiang 浙江, Fujian 福建, Guangdong 廣東, Guangxi 廣西, and Yunnan 雲南. The term Central Plains (Zhongyuan 中原 in Chinese) generally refers to the present-day Henan province, especially the areas centred on the middle reaches of the Yellow River.

wheat-growing region and the southern rice-growing regions,[3] but based on other elements that invite comparison, it can be sometimes extended southwards, reaching the Yangtze 揚子 River region.[4] From prehistoric times, interregional communications, such as movements of people, materials, languages, symbols, and rituals, have had numerous impacts on this natural boundary. Multiple itineraries used by travellers for crossing the mentioned rivers and mountain ranges indicate that permeable geographical boundaries did not hinder mobility. The wide distribution of Bronze Age cultures from both north and south China[5] demonstrates long-distance maritime and overland connections no later than the second millennium BC, running through the later Shang 商 (c.a. 1600-1050 BC) and Zhou 周 periods (c.a. 1050-221 BC).

The Suizao corridor 隨棗走廊 in northern Hubei province,[6] located in the middle of this geographical boundary, has been involved in extensive trade and exchange networks with both north and south China (Fig. 1-1.1). A flat riverbank and extended

[3] Buck 1937: 9.

[4] The 'other elements' here not only refers to the differences of natural factors, such as average annual temperature or precipitation, but also to the differences of cultural factors, such as local people's dietary habits and personality types. Although the boundaries vary, most of them are not far from the natural line marked by the Qinling Mountains and the Huai River.

[5] For a distribution map of China's important archaeological centres dated to the Shang and Zhou periods, see Fig. 1-1.1.

[6] The Suizao corridor is a northwest-southeast flat valley in north Hubei province, which is named after the two present-day cities – Suizhou 隨州 and Zaoyang 棗陽 at the two ends of the valley. It is sandwiched by the north Tongbai 桐柏 Mountain and the south Dahong 大洪 Mountain, and endowed by waterways used for transport, such as the west Huayang 華陽 River, and the east Yun 涢 River, as well as their numerous tributaries. From the map, the Suizao corridor has been richly provided with both overland routes to the north and waterways to the south and west. For further discussion, see the section 'Geographical background' below.

river network make the corridor into a liveable area for large social groups and settlements. In the past five years, excavations here have kept updating our understanding of the local material culture, and revealed a well-connected and unusually long-lasting social group, known as the state of Zeng 曾,[7] which was present in the corridor for over 600 years, from no later than the 10th century BC to the 4th century BC. After the importance of the Zeng was noticed, close attention was paid to this state, and many questions have been raised in the academy, such as: why the Zeng was here in the Suizao corridor; what made it happen; why did it keep going; and how far or how close was its relationship with the dominant culture in different periods?

The current thesis aims to give thought to these questions. It mainly, but not exclusively, focuses on what are known as Chinese ritual bronzes,[8] as the inscription on them are

[7] Current evidence of Zeng-related large cemeteries at the ruler's level (for example at Yejiashan 葉家山, Leigudun 擂鼓墩, Wenfengta 文峰塔 in Suizhou, and Guojiamiao 郭家廟 in Zaoyang), and settlement remains accompanied by them (such as the Miaotaizi 廟台子 site in Suizhou, the Zhoutai 周臺 site and the Zhongyizhai 忠義寨 site in Zaoyang) suggests a strong and long-lasting Zeng state existed in the Suizao corridor from the early Western Zhou to mid-Warring States period (for distribution of Zeng–related remains, see Fig. 1-4.1). In the meantime, it also suggests that, for some reasons, the location of the Zeng capital was likely to have changed with the movement of Zeng people, at least twice in the Zhou period (first from Suizhou to Zaoyang at the end of the Western Zhou period, and then from Zaoyang back to Suizhou after the early Spring-and-Autumn period), but until it was defeated by Chu 楚, the Zeng state had never left the Suizao corridor. For further discussion, see Zhang 2009b: 11-12, and Fang 2016: 86-88.

[8] Ritual vessels made of bronze (an alloy of copper, tin, and usually lead as major elements) are commonly found in high-standard tombs and hoards in both central and regional communities during the Shang and Zhou periods. Nearly all of them were made by piece-mould casting, a casting technique initialised and developed in the Central Plains, which was extremely complicated and thus very difficult to transfer from one place to another. For further discussion see the section 'Producing bronzes' in Chapter II.

closely related to their owners' social and ritual practice,[9] and the making and usage of such bronzes can be seen as a source of evidence that the local group was in contact with the customs either of the dominant Zhou culture or of other regional traditions. Based on the comparison between the local tradition and its contemporaries from other parts of the ancient China, this thesis pays special attention to the social identity of Zeng people and the ways in which it changed over time. Central to this study is illumination of the shifting patterns of interregional contact in different periods manifest in the material culture from the Suizao corridor, and exploration of how the strategic location of the corridor, especially its closeness to metal sources along the Yangtze River region, may have stimulated such networks and have protected the local group from being invaded or annexed by others.

The first two sections of this introductory chapter explain the social and archaeological backgrounds of the Zhou dynasty, with special emphasis on the latest archaeological discovery of the main Zeng state cemeteries. It then locates the Suizao corridor in a larger geographical framework, and highlights its position on the southern borderland of the Zhou culture, as well as its close relationship with the regions of the northern and south-western parts of China. In the next section, it sets out a literature review related

[9] In most of the archaeological discoveries dated to the Shang and Zhou periods, only a small percentage of bronzes are found with inscribed Chinese characters, and only roughly half of these bronze inscriptions carry useful information, such as 'who made this vessel for whom', normally with their owners' or the patrons' surnames and their relationship with each other. So, through these inscriptions, though not so large in number, we may be able to approach the social identity of the vessel owners, and further of the social group that they belonged to.

to the current Zeng study, and then a description of the main research approaches and framework. A short paragraph stating the thesis structure is at the end of this chapter.

1-2 Social background

Zhou and regional states

As one of the early major dynasties of ancient China, the Zhou held power from around 1050 to 771 BC (known as the Western Zhou 西周 period),[10] and then continued as a minor state till 256 BC (known as the Eastern Zhou 東周 period),[11] the activities of which are seen from both textual and archaeological sources.[12] To rule the vast territory,

[10] The whole Western Zhou period, starting with the conquest of Shang and ending with the fall of the principal Zhou capital, is conventionally divided into three subperiods: early, middle, and late, based on three broad developmental stages in the style of Zhou bronzes. Each of the subperiods approximately corresponds to the succession of Zhou kings: 1) early Western Zhou period – King Wu 武 (1049/1045-1043), Duke of Zhou (1042-1036), Cheng (1042/1035-1006), Kang (1005/1003-978), and Zhao 昭 (977/975-957); 2) middle Western Zhou period – King Mu 穆 (956-918), Gong 恭 (917/915-900), Yì 懿 (also known as Yih, 899/897-873), and Xiao 孝 (872?-866); 3) late Western Zhou period – King Yí 夷 (865-858), Li 厲 (857/853-842/828), Gong He 共和 (regency, 841-828), Xuan 宣 (827/825-782), and You 幽 (781-771), see Chen 1945: 55, and the absolute dates for Western Zhou kings proposed by Edward Shaughnessy, see Shaughnessy 1991: xix. Though disputed, historians also see these periods as developmental stages: 1) early Western Zhou expansion; 2) mid-Western Zhou transition; and 3) late Western Zhou decline, see Shaughnessy 1999: 307-330. The Zhou royal family maintained power for almost 300 years, until the mid-eighth century, when one of its capitals was sacked by the Marquis of Shen 申 and a group of outsiders – the Quanrong 犬戎. For further discussions of the fall of Western Zhou, see Shirakawa 1992, Yang 2003, and Li 2006a.

[11] Traditionally the Eastern Zhou is further divided into the Spring-and-Autumn period (Chunqiu 春秋: 771 – 476 BC) and the Warring States period (Zhanguo 戰國: 475 – 221 BC). After the capital was taken, the Zhou royal house had much weaker authority and relied on lords of the regional states for protection, especially during their flight to the eastern capital. From then on the Zhou kings only held nominal power with little control over their small royal domain until the Zhou was terminated by the Qin 秦 state in 256 BC. See Hsu 1999: 545-550, and Lewis 1999: 632-640.

[12] Recent Zhou studies critique the traditional understanding of the socio-political situation in Western and Eastern Zhou period. Some scholars suggest that the extent of

the Zhou employed a balance between a rigorous, disciplined mode of central government and an ethical, kin-based mode of control network.[13] On one hand, they set up an innovative administration system, with multiple capitals (also known as government branches or royal residences), numerous lineage centres,[14] and their affiliated settlements (*yi* 邑 in Chinese),[15] organised by the government and their appointed chief officials.[16] On the other hand, numerous small regional states[17] were

centralised political control exercised by the Western Zhou authority has been greatly exaggerated, and the vaunted fragmentation of the political structure in Eastern Zhou period was probably overemphasised. For further discussion, see Falkenhausen 1999b: 543.

[13] See a discussion in Creel 1970: 423-424, followed by Li Feng in his book of Western Zhou bureaucracy, see Li 2008a: 42-95, and 235-270.

[14] The term 'lineage' here is a general English translation of the Chinese term '*zongzu* 宗族', 'a consanguineal kin group comprising persons who trace their common relationship through patrilineal links to a known ancestor' according to Paul Chao. See Chao 1983: 19.

[15] This administration area is also known as the 'Zhou royal domain', or the general term 'Zhou centre'. After the initial Zhou residence – Zhou-under-Qi (Qizhou 岐周) near Qi 岐 Mountain, Hao 鎬 (sometimes Feng 豐 is also counted) was made the Zhou capital – Zongzhou near the present-day Xi'an 西安 in King Wu's reign. Then King Cheng 成 set up a new government branch – Chengzhou 成周 (also known as Luoyi 洛邑 – the Settlement on the Luo) at present-day Luoyang (about 300 miles east of Xi'an). Having established this new eastern capital, the Zhou kings did not abandon earlier centres, but perambulated within the network of all the three royal capitals from time to time, see Khayutina 2008: 26-28.

[16] The chief officials could be appointed by people from families other than the Zhou royals, such as members of the Wei 微 family, see further discussion in Beijing 1992: 58-92. Ritual bronzes cast for four generations of their family were found near the Zhou centre at present-day Fufeng 扶風, Shaanxi. WW 1978.3: 1-18.

[17] The term 'regional state', which sometimes can be equal to the term 'regional polity', is a conventional English translation of the Chinese term '*zhuhouguo* 諸侯國' or '*fangguo* 方國' in the Zhou period. It normally refers to those social groups with a certain size of population and amount of farmland, but located some distance away from the Zhou centre, where most of the population, farmland, temples and cemeteries were located. However, this translation is often criticised, as the definition of 'polity' or 'state' in English is not synonymous with the definition of '*zhuhouguo*' or '*fangguo*' in Chinese. In his book about Western Zhou state and bureaucracy, Li Feng discusses the negotiations of the term 'regional state', and further suggests its social hierarchy, which normally contained four levels: 1) regional rulers and their families; 2) elites; 3) Zhou and non-Zhou immigrants; and 4) local residents. See Li 2008a: 235-270.

set up on the basis of ties of kinship, which were under control of the elites with different social backgrounds.[18] By examining the surnames of the ruling families of these regional powers in a geopolitical sense, a wide-reaching kin-based network of Zhou has been reconstructed by researchers, as illustrated in Fig. 1-2.1. Many scholars believe that at the beginning of the Western Zhou period, the Zhou rulers sent out their trusted royal kinsmen and relatives to establish regional states in an effort to ensure loyalty and to maintain Zhou authority over the territory.[19] Most of the key points with rich agricultural lands and of strategic importance were occupied by the Jī 姬 lineages, who shared the same surname, or, in a deeper sense, shared common 'collective memory'[20] with the Zhou royal family, such as the rulers of Guo 虢 state[21] in Henan and of Jin 晉 state[22] in Shaanxi. Meanwhile, the presumably 'less important' lands that surrounded the royal residences and the major Jī lineage-controlled areas were allocated

[18] Based on the Western Zhou regional states, Maria Khayutina makes a distribution map with sources such as *Zhongguo Lishi Dituji* 中國歷史地圖集, evidence of migration, extension, and marriage of lineages, and '*new finds that permit to adjust localisations based on traditional sources*'. See the map in Fig 1-2. For further discussions, see Khayutina 2010b: 6-16.

[19] Shaughnessy 1999: 311-313, and Li 2006a: 66-76.

[20] The key idea of the term 'collective memory' can be seen in Coser 1992. For further discussion about the collective memory of the Jī-surnamed Zhou people, see the section 'Research framework' below.

[21] The Jī-surnamed Guo state is traditionally recognised as two states: Eastern Guo at Henan and Western Guo at Shaanxi, founded by Guozhong 虢仲 and Guoshu 虢叔, two brothers of King Wen 文 at the very beginning of the Western Zhou period. Western Guo was then relocated to Henan with the flight of Zhou royalty around 771 BC. The Guo rulers were believed to hold administrative positions in court through successive generations. See Beijing 1999a: 534-538, and further discussion in Li 2006a: 251-262.

[22] The Jī-surnamed Jin state was a major power founded in the early Western Zhou period at Shanxi, and split into three successor states: Han 韓, Zhao 趙 and Wei 魏 around 450 BC, marking the beginning of the Warring States period, see Beijing 2004b.

to the non-Jī states, such as the Kui-surnamed 媿 Peng 倗 state in Shanxi,[23] and the Mi-surnamed 羋 Chu state in the Yangtze River region (Fig. 1-2.1).[24] Regardless of whether they belonged to the same social group, the non-Jī lineages were sometimes able to join the Zhou family by marrying a Jī-surnamed elite,[25] by being bestowed a royal surname,[26] or, as some scholars believe, by pretending to be one.[27]

The Suizao corridor had been part of Zhou territory since the 11th century BC,[28] with at least two regional powers, the Zeng state and the E 鄂 state,[29] controlling or partly

[23] For the brief report of the excavation of the Peng state cemetery in Hengshui, Jiang xian, in Shanxi province, see WW 2006.8.

[24] Despite the establishment of large numbers of small states with non-Jī surnames, only very few of them, such as the Chu, survived in the successive years of tangled warfare in the Spring-and-Autumn and Warring States period. Chu is recorded as a significant power towards the end of the Western Zhou. It was based in the Yangtze region, and expanded northward by annexing territories of the Zhou peoples in the Han 漢 River region and a number of non-Zhou states in the Huai River valley. The Chu state absorbed an increasing number of neighbouring regional polities, and managed to set up a rival alliance system modelled upon that of the Zhou. Many of its conquests were documented in transmitted texts, such as *Zuo zhuan* 左傳 (*Zuo's Tradition*) and *Shi ji* 史記 (*Records of the Grand Historian*). The Chu state will be further defined and discussed in Chapter IV, as after the early Spring-and-Autumn period, it had gradually invaded the Suizao corridor, and finally took the Zeng capital no later than the mid-Warring States period. See Hsu 1999: 556, Beijing 2005b: 310-321, and Falkenhausen 2006a: 263-265.

[25] Chen 2006.

[26] Zhu 1990: 28-29.

[27] Very few scholars suggest that some of the seemingly Jī-surnamed regional powers we know were actually not Jī-surnamed in the first place. For some reasons, a few non-Jī lineages gave up their surname at some point, and claimed to be Jī-surnamed. For related examples, see discussion in Tani 2013: 1077-1073.

[28] Li *et al*. 2011.

[29] The location of the Jí-surnamed 姞 E state remained uncertain until 2007, when the Yangzishan 羊子山 excavation revealed an early Western Zhou E Marquis tomb at the Suizao corridor. The site is very close to the Yejiashan Zeng cemetery (only 17 miles in between), so most people believe that the Zeng and E must have lived side by side in the early Western Zhou period. For further discussion, see Zhang 2011a. In 2013, a Spring-and-Autumn E Marquis cemetery was confirmed at Xiaxiangpu 夏响铺,

controlling the area. Unlike the E ruling family, who is believed to be a non-Jī lineage, the surname of the Zeng rulers has been long debated. Until early 2011, most scholars agreed that the Zeng rulers were '100% Jī-surnamed' in the Spring-and-Autumn and later periods,[30] but this viewpoint was heavily challenged when the Yejiashan excavation revealed a number of non-Zhou features later that year,[31] for example the 'date inscription (*ri ming* 日名 in Chinese)' inscribed on some of the Yejiashan bronzes.[32] Indeed, clarifying the social group to which the Zeng belonged is one of the fundamental steps to understand the social identity of the people from the Suizao corridor, as well as their implicit relationship with the Zhou royalty in both the material and spiritual dimensions.

Nanyang 南陽 basin, suggesting that E may have relocated from Hubei to Henan from the middle or late Western Zhou period. For further discussion of the E state, see the section 'Major archaeological sites' in Chapter II.

[30] See Shu Zhimei's 舒之梅 argument based on two *ge* 戈 inscriptions from a Spring-and-Autumn Zeng tomb in Shu and Liu 1982. Zhang Changping 張昌平 agrees with this viewpoint in his book of Zeng bronzes, but he ends his discussion by citing Shu's original sentence with double quotations. It seems Zhang still has some hesitation on this point. Zhang 2009b: 346-347.

[31] For further discussion of the non-Zhou patterns in the Yejiashan cemetery, see Chapter II; and for the brief report of the first Yejiashan excavation from 2010 to 2011, see WW 2011.11.

[32] The 'date inscription' normally refers to the ten characters of '*tiangan* 天干' (sometimes translated as 'celestial stems'): *jia* 甲, *yi* 乙, *bing* 丙, *ding* 丁, *wu* 戊, *ji* 己, *geng* 庚, *xin* 辛, *ren* 壬, and *gui* 癸, which were used to record dates on oracle bones or bronzes in the late Shang period. See Li Boqian's 李伯謙 argument in Li *et al*. 2011: 65-67, who is inspired by Zhang Maorong's 張懋鎔 paper 'Zhou people did not use date inscriptions', see Zhang 1993. However, more and more discoveries in the Jī-surnamed Zhou states show otherwise. For example, in the Ying 應 state, a bronze ritual vessel 'Ying Gong 應公' *ding*, found in Pingdingshan 平頂山 M8, Henan province, shows that the King Wu of Zhou also had a date inscription '*ri ding* 日丁' in his name. See Ying Gong *ding* and other similar examples in Wang 2014: 69.

Ritual and religion [33]

A nested structure is recognised between the material world and the spiritual world: a burial assemblage is part of a funeral service; a funeral service is part of a set of rituals by which the living deal with the deceased; and a set of rituals is part of a religion, constructed by an underlying belief system which involves supernatural beings.[34]

On the grounds of a ritual tradition partially inherited from the Shang and from earlier periods,[35] the Zhou authority developed a new form of belief system to govern the vast territory and unite the regional states,[36] which was basically a bronze-based system with special emphasis on ancestral worship, formalised by a series of ritual rules and performances, and materialised by bronze ritual vessels[37] and the inscriptions on them.[38] The usage of these inscribed vessels was also nested. For one thing, they were

[33] Most researchers do not pay attention to either the definitions of 'ritual' and 'religion', or the distinction between them, which cause many misconceptions in the field. See Li Feng's definition of ritual: 'ritual is a set of acts performed not for their utilitarian value but for their symbolic meaning in a common proceeding prescribed by a religion or by the tradition of a community'. See Li 2008: 11-20, footnote no.59 in particular.
[34] Morris 1992: 1-2.
[35] See the spiritual connections between 'people and god' in Shang and earlier periods in Chang 1983: 56-80, and Keightley 1999: 251-268.
[36] As the conquerors from the north-western borderland, and as the new ruler, the Zhou had wanted to demonstrate to its people that they were the one who had been granted the legitimacy to rule the land. To claim such legitimacy, an exclusive belief system of Zhou (similar to the Shang system in its features, but different in nature) was needed, so the notion of 'the Mandate of Heaven' was put forward by the Zhou ruling class, which will be further discussed later in this section.
[37] 'Bronze ritual vessels' are normally in forms of food and drinking containers, including *ding* 鼎, *gui* 簋, *li* 鬲, *yan* 甗, *fu* 簠, *dou* 豆, *jue* 爵, *jia* 斝, *gu* 觚, *zun* 尊, *zhi* 觶, *hu* 壺, *you* 卣, *lei* 罍, *he* 盉, and some uncommon types. They were cast in sections of clay moulds, the technique of which is also known as the Chinese mould casting, a very sophisticated technique requiring high-level ceramics and metallurgy. For the mould casting, see a recent paper on Anyang 安陽 mould research in Yue *et al*. 2011.
[38] 'Bronze inscriptions' are among the earliest forms of Chinese writing. They are

used as practical containers to offer at formal banquets (for example meat and alcohol containers) to the ancestors of the family, and to be buried with their owners so that they could continue to offer such banquets in the afterlife.[39] In view of that, they were also envisaged as carriers to assist communication between the living and the deceased in sacrifices of which the Zhou ancestors were supposed to partake.

The Zhou kings and their royal ancestors in the main line of descent were endowed with supremacy under the Zhou belief system. Unlike the earlier Shang kings, who normally sought approval or assistance from the High God (*Di* 帝),[40] in the Zhou period, the highest power had been passed on to the Zhou kings themselves. No later than King Cheng's 成 reign, the term 'Mandate of Heaven (*Tian ming* 天命)' had been added into the bronze inscriptions, which often occurred with the names of King Wen and King Wu.[41] This was done probably to remind both the Jī and non-Jī people that their

found on ritual bronzes from the Shang to Zhou dynasty and even later, normally recording the names of the vessel owner and descriptions of their honours or achievements. See Qiu 1988: 45-46, Zhu and Xu 1996: 15-20, and Falkenhausen 2006b: 343-345. They can be found inside ritual vessels or on their surface, ranging in length and complexity from less than 10 characters; 'who makes the vessel for whom', to hundreds of words; the narratives of victories in battle or the details of services rendered to the Zhou royal house. Moreover, bronze inscriptions have several features that also enable them to be dated. The long narratives often contain historical data, such as the names of kings or important events, which can be correlated with transmitted texts, but they also provide valuable information about local calligraphic styles, linguistic content and shared names, which can allow even the briefest descriptions to be dated. See Shaughnessy 1991, 1999, and Rawson 1999b.

[39] Rawson 1999b: 364-368.

[40] See Keightley 1999: 251-268.

[41] '*Tian ming*': Heaven had given Zhou a mandate to rule. See bronze inscriptions in this period such as the He 何 *zun* inscription (Beijing 1984: no. 6014). As outsiders, the Zhou kings seemed anxious to look for moral support for their conquest of the Shang, and to claim the rightfulness of their ruling. See related texts in the *Shang shu* 尚書

ancestors served under the first Zhou kings, who were given a mandate to rule by Heaven. As descendants, they should follow in the footsteps of their ancestors, taking their current Zhou king as the very one with Heaven's mandate to rule. Through royal assemblies and formal banquets, this message spread out with the ritual bronzes. Those who attended these events, either the Jī or the non-Jī lineages, would have become well familiar with the contents of these bronze inscriptions, as well as the related performances and ritual practices. It is very likely that the Zhou ancestral worship and political legitimacy were bonded together, and the relationship between the Zhou and its regional states was consolidated in this process.

1-3 Archaeological background

Shortly after the conquest of the Shang,[42] a far reaching state control of Zhou authority had stimulated production and circulation of valuable materials over the Zhou realm, as seen in the general consistency of burial goods in various places.[43]

(*Venerated Documents*, also known as the *Shu jing* 書經, *Classic of Documents*) in Shaughnessy 1999: 314-315, and Luo 2012: 4-7.

[42] Around 1050 BC, after the conquest of the late Shang polity (c.a. 1250-1050 BC), the Zhou power came to control some of North China from its centre in the west (primarily in the present-day Shaanxi province) across the Central Plains of China in the east, ruling from the present-day Wei River valley to the middle Yellow River basin, and then to the vast lands of the northern China plains, which covers over 300,000 square kilometres, including parts of present-day Hebei, Henan, Shandong, and part of Shanxi, Jiangsu and Anhui province.

[43] Most of the burial goods and the ways they were used in ritual and burial occasions can be seen as a complex, which had been introduced as a 'package' into different places, and integrated with the local material culture to form their own traditions. The term 'ritual and burial occasions' here refers to the habitual use of certain types of tombs, their structures and positions in a whole cemetery, and related arrangements for ritual activities, which may have been heavily affected by local people's ritual and burial tradition, and thus can be seen as indicators of different groups of people. Another term

Jī-surnamed Zhou Burials

Archaeologists have found almost no evidence of any Zhou royal burials so far, so they have had to switch their attention to the second best choice – the Jī-surnamed state cemeteries – to understand burial traditions initiated in the early Western Zhou period. According to the known burials in the confirmed Jī-surnamed regional states,[44] their burial practice took over proto-Zhou features (for example the shaft pit with north-south orientation), with elements adopted from Shang burials, such as wooden coffin (*guan* 棺) and coffin chamber (*guo* 槨),[45] sloping ramp (*mudao* 墓道),[46] upper platform

here, 'package', was elaborated by Stuart Piggott in 1992, who used it to describe the introduction of the chariot to China and other parts of Eurasia. In Piggott's argument, the spread of chariots is not as simple as acquiring the animals and artefacts. A whole set of features make a package, including both natural resources (like the proper pasturage, hay, grain and other fodder for the high-performance horses) and human resources (such as skilled stable staffs for horses, constructional and maintenance staffs for chariots, and well-trained charioteers for combats). See Piggott 1992: 45-49, and Rawson 2013b: 7-8.

[44] The major Jī-surnamed Western Zhou cemeteries here include: the Wei 衛 state cemetery at Xincun 莘村, Xunxian 濬縣, Henan province (Beijing 1964); the Yan 燕 state cemetery at Liulihe 琉璃河, Fangshan 房山, Beijing 北京 (KG 1984.5, KG 1990.1, Beijing 1995, and Su 2000); the Guo state cemetery at Shangcunling 上村嶺, Sanmenxia 三門峽, Henan province (HXKG 1992.3, WW 1995.1, and Beijing 1999a); the Ying 應 state cemetery at Pingdingshan 平頂山, Henan province (HXKG 1988.1, and HXKG 1992.3a); and the Jin state cemetery at Beizhao 北趙, Shanxi province (WW 1994.1, WW 1994.8a, WW 1994.8b, and WW 1995.7); the Rui 芮 state cemetery at Liangdaicun 梁帶村, and Hancheng 韓城, Shaanxi province (Beijing 2010).

[45] A confused nomenclature of *guan* and *guo* and their English translations appear in most archaeological reports. To avoid conflicts, in the current thesis, *guo* refers to the wooden chamber or the outermost wooden coffin, and the rest of the inner ones are all named *guan*. Notably, most of privileged burials were found with two or more *guan*, one nested inside another.

[46] The *mudao* refers to the sloping ramps towards the side of a shaft pit, ranging from one to four ramps per burial. See a list of burials with *mudao* in Beijing 1959: 535. In the Western Zhou period, only the most privileged burials were equipped by one or more ramps, but there is no firm evidence that the number of ramps was directly determined by the rank of the tomb occupant. See further discussion in Zhang 2009a.

(*ercengtai* 二層台)[47], chariot and horse pit (*chema keng* 車馬坑),[48] and waist pit (*yaokeng* 腰坑) in few cases.[49] So, though certainly not all, the majority of the Jī-surnamed Zhou burials shared common characteristics as follows: a vertical shaft tomb deployed with a wooden coffin chamber and a series of nested coffins lying at the bottom of a north-south rectangular pit, sometimes equipped by one or more chariot and horse pits, and sloping ramps. Although placed on the upper platform in some cases, bronze ritual vessels were normally arranged between the wooden chamber and the coffin, accompanied by groups of other funeral objects, such as weapons, pottery, high-fired ceramics, and lacquer wares. Inside the inner coffin, complex strings of beads and jade plaques were often found with the tomb occupant.[50]

[47] The *ercengtai* is normally characterised by a half-metre high platform against the wall of a shaft, which can be made during digging (*shengtu* 生土 *ercengtai* in Chinese), or can be constructed after the pit bottom is finished (namely *shutu* 熟土 *ercengtai* in Chinese). If there was no intention to place burial goods on the platform, then it would be built much narrower than those with the purpose of being so used to display items, see the narrow platform in Jin Marquis cemetery and Guo cemetery in WW 1995.7 and Beijing 1999a.

[48] The *chema keng* is characteristically a collective term referring to the individual burials of chariots and/or horses up to the Shang period, which sometimes can be divided into two terms – *che keng* 車坑 (chariot pit), and *ma keng* 馬坑 (horse pit). The largest Western Zhou chariot and horse pit known so far is K1 at the Jin Marquis cemetery, buried with 48 chariots and over 100 horses. For an exclusive report of the pit K1, see WW 2010.2.

[49] The *yaokeng* refers to a pit in rectangular or oval shape, set under the ground of the tomb pit, beneath the waist of the tomb occupant, and normally equipped with a sacrificial dog, or very occasionally with sacrificial human or burial goods. Although they started in the late Neolithic period, the waist pits are normally seen as a late Shang tradition, adopted by their successors in the early Zhou period, but much fewer than in the Shang period, see Wang 2006b.

[50] For the examples of strings of beads and jade plaques, see further discussion of the Jin cemetery in Huang 2004, and of the Rui cemetery in Rawson 2013b.

The Jin Marquis cemetery in southern Shanxi province provides a good example of how a Jī lineage arranged their family cemetery over generations. As shown in Fig. 1-3.1, the whole cemetery is evidently self-contained, with three general rows of burials. Approximately in north-south orientation, most of the tombs came in pairs on the basis of successive generations of Jin rulers and their consorts. Coffin chambers, double wooden coffins, and sloping ramps were frequently encountered when excavating these burials. Starting from the east of the cemetery, later generations were usually buried to the west of their forefathers, separated by an assorted chariot and horse pit between adjacent pairs. Inside the shaft pit, bronze and pottery vessels were normally placed in the space between the wooden chamber and the coffin, while jade or other objects were placed inside the inner coffin.[51]

Non-Jī-surnamed Zhou Burials

The Western Zhou burial tradition of the non-Jī lineages[52] was complicated. The related tombs were often a mixture of Shang traditions, local traditions, and even some foreign ideas from beyond the Zhou borders. The Shang burial traditions, rarely applied in the Jī-surnamed burials, were better preserved among the non-Jī lineages, such as the east-

[51] For an example of this arrangement, see M62 in Fig. 1-3.2.

[52] The major non-Jī-surnamed Western Zhou cemeteries here include: the Baicaopo 白草坡 site at Lingtai 靈臺, Gansu province (KGXB 1977.2); the Yu 㑚 state cemeteries at Baoji 寶雞, Shaanxi province (Beijing 1988); the Peng 倗 state cemetery at Hengshui 橫水, Jiangxian 絳縣, Shanxi province (WW 2006.8); the E state cemetery at Yangzishan, Suizhou, Hubei province (Zhang 2011a); the Ba 霸 state cemetery at Dahekou 大河口, Yicheng 翼城, Shanxi province (Xie 2012); the Shigushan 石鼓山 site at Baoji, Shaanxi province (WW 2013.2).

west orientation (Fig. 1-3.3), and a general use of waist pits (Fig. 1-3.4).[53] On the other hand, some characteristics of the non-Jī burials, such as the use of niches (*bikan* 壁龕, see Fig. 1-3.5 and Fig. 1-3.6)[54] and inclined tunnels (*xiedong* 斜洞), were extremely rare among the Zhou burials. Taking the inclined tunnels in Dahekou M1 for instance,[55] as shown in Fig. 1-3.7, four tunnels, in an inclined manner, were constructed next to the four corners of the shaft pit, connecting the ground surface with the middle of the pit wall. The tunnels seem to have been smoothed, but no rope marks or other tool marks were left on their inner surface. Therefore, archaeologists are still confused about the exact purpose of these tunnels and about the reasons why they were constructed like this.[56] But for now, at least one point is clear: such a structure was not a Zhou custom.

[53] For example: 1) the east-west oriented burials at cemeteries of Yu state (Fig. 1-3.3) in Shaanxi, Peng state and Ba state in Shanxi; 2) the massive use of waist pits at Hengshui, Dahekou, and Baicaopo site (Fig. 1-3.4) in Shanxi and Gansu. In some cases, burial goods were placed inside the coffin chamber, but the non-Jī lineages also preferred to place their bronze ritual vessels on the upper platform (Fig. 1-3.3).

[54] See examples applied at Shigushan site (Fig. 1-3.5) in Shaanxi and Dahekou site (Fig. 1-3.6) in Shanxi. The *bikan* are the niches burrowed horizontally in the pit wall, normally onto or at some distance above the upper platform. In some cases, at Shigushan for example, *bikan* was associated with a special type of pottery *li*, named *gaoling daizu li* 高領袋足鬲 in Chinese (a tripod *li* with high neck and stout legs, distributed in Shaanxi and Gansu province, see Su 1948). The same situation is also seen in Shigushan M4 (excavated in 2013, see WW 2016.1: 4-52), Zhuanglang 莊浪, Gansu province (Beijing 2006b), and Qishan and Fengxi 澧西, Shaanxi province (KG 1976.1, 1984.9), suggesting that the mentioned burials here might have belonged to the same group of people with non-Jī traditions, WW 2013.2.

[55] Including the Dahekou case, there are only three examples of similar inclined tunnels known so far, all found in the past ten years: one in Hubei (Zeng cemetery at Yejiashan), and two in Shanxi (Ba cemetery at Dahekou, and Peng cemetery at Hengshui), see WW 2006.8, WW 2011.11a, and Xie 2012. In 1986, archaeologists found a large tomb in the Yan cemetery at Beijing Liulihe. It seems to have a similar tunnel-like structure at each corner (Fig. 1-3.8), but the tunnels measured at least one meter in diameter, and are described as sloping ramps, see KG 1990.1: 20-21.

[56] The excavators at Shanxi give three explanations of the use of these tunnels: 1) to place the coffin/coffin chamber with ropes through the tunnel; 2) to help refill the pit with earth through the tunnel; and 3) to help the spirit go out through the tunnel. See

Rather than being imposed by the dominant culture, these tunnels and the related practice are more likely to have been chosen by the people of the locality. If these non-Jī lineages did learn the idea from some groups other than the Zhou, the social connection between them must have been tight, as they maintained their non-Zhou identities by this practice.[57]

Burials in the Suizao corridor

Since the 21st century, a number of large cemeteries found in the Suizao corridor have been well excavated and published.[58] Three of them, all associated with the Zeng state, are especially relevant to this thesis: 1) the Yejiashan cemetery in Suizhou, dated to the 11th–10th century BC;[59] 2) the Guojiamiao cemetery in Zaoyang, dated to the 9th–mid-7th century BC;[60] and 3) the Wenfengta cemetery in Suizhou, dated to the 6th–5th century BC.[61] Each of the following chapters will focus on one of them.

Xie 2012: 17-19. But none of these explanations make perfect sense in the face of the evidence we see today.

[57] Later in Chapter II, this non-Jī practice will be used to illustrate how much the Zeng state practice resemble those of the non-Jī.

[58] Not only the newly excavated cemeteries mentioned here, but also excavations in the last 40 years also provide a number of key hints on understanding of the local burial traditions, such as the Leigudun cemetery, excavated in 1978, 1982 and 2003 (Beijing 1989, Beijing 2008 and KG 2003.9.), the Sujialong 蘇家壟 cemetery, excavated in 1966 and 2008 (WW 1972.2 and JHKG 2011.2), and the Jiuliandun 九連墩 cemetery excavated in 2002-2003 (JHKG 2003.2, and Beijing 2007a).

[59] For the 2011 excavation of the Yejiashan cemetery, see brief reports (including tombs M1, M2, M27, M65) in JHKG 2011.3, WW 2011.11a, KG 2012.7; for brief information and burial goods of the later excavations after 2013 (including tombs M28, M111, M50), see a Yejiashan catalogue in Beijing 2013.

[60] For the 2002-2003 excavation of the Guojiamiao cemetery, see a primary report in Beijing 2005b.

[61] For brief reports of the Wenfengta excavation, see JHKG 2013.1, and KG 2014.7.

Since 2011, archaeologists have excavated a large-scale, early Western Zhou cemetery at Yejiashan with 147 burials. As highlighted in Fig. 1-3.9, most of the tombs at the ruler's level were placed on a highly visible mound, surrounded by middle-sized and smaller burials. Like other contemporary Zhou burials in north, the locations of all the important burials had been carefully arranged. Starting with a possible ruler's tomb M1 in the north part of the cemetery, three pairs of major burials of later generations, all east-west oriented, were arranged in two orderly rows running north to south.[62] Coffin chambers and single wooden coffins were conventional settings. Waist pits are only seen in the earliest generations M1 and M3, while sloping ramps and horse pits were employed for the later and largest burials M28 and M111. In most of the cases, weapons and the vessels in bronze, ceramic, lacquer and stoneware were placed in groups on the upper platform. Jade, chariot and harness ornaments were found inside the inner coffin.

The early Spring-and-Autumn Guojiamiao cemetery was first found in 2002, which is located at the other end of the corridor, about ten miles southeast of Zaoyang city and 50 miles northwest of Suizhou city.[63] Most of the burial traditions in the previous

[62] The east-west orientation of Zeng burials, though was not a typical Zhou choice of burial practice, seems to be very stable in the Zeng state, which can be observed archaeologically all through the six centuries of Zeng history.

[63] In 1972 and 1983, two individual burials were found in the Caomenwan 曹門灣 area (see KG1975.4, and JHKG 1983.3), only 300 metres to the south of Guojiamiao cemetery. Due to the distance, the Caomenwan area is recognised as part of the Guojiamiao cemetery. To differentiate them, in the Guojiamiao primary report, they are named separately after their initials (Caomenwan: CM-; Guojiamiao: GM-). See Beijing 2005b: 4-7. In 2014-2015, another rescue excavation took place at the Caomenwan area, and revealed 28 burials. For further details, see JHKG 2015.3.

Yejiashan period seem to have been continued here. There are in total 25 tombs, two chariot pits and one horse pit excavated in this cemetery, all arranged in east-west orientation. Sitting on the higher ground, the largest burials GM21 and GM17 are believed to belong to a couple, possibly a Zeng ruler and his consort. Each of them has a rounded tomb pit with a sloping ramp to its east (highlighted in Fig. 1-3.10). GM21 was equipped with a coffin chamber and double coffins, and GM17 had a single coffin plus a small compartment to the south of its wooden chamber. The whole cemetery started with GM21 (dated to the end of the Western Zhou period), and later burials were normally placed to the south of the earlier ones. All the burials here had long been looted in a seemingly organised way, so apart from a small compartment of GM17, most of the burial goods were gone or heavily disturbed. From what is left of them today, the bronzes, ceramic vessels, chariot and horse ornaments and weapons are normally found between the wooden chamber and coffin, while the jade, carnelian beads and smaller bronze ornaments are next to the occupant.

The Wenfengta cemetery, newly excavated in 2012, is situated in the southern part of Suizhou city,[64] three miles southeast of the Leigudun 擂鼓墩 cemetery.[65] As with the

[64] The main body of Wenfengta cemetery was excavated in 2012, see JHKG 2013.1, and KG 2014.7. Before that, three individual burials, Wenfengta M1, M2 (2009), and M3 (2011) were found 100 metres southwest of the 2012 Wenfengta site, see JHKG 2014.4a. All the mentioned burials are located in the Yidigang 義地崗 area, where a number of Zeng burials have been found in the past 30 years.

[65] The Leigudun cemetery is normally referred to as the general area where the famous Leigudun M1 (tomb of Marquis Yi of Zeng 曾侯乙墓) and M2 are located. However, the name 'Leigudun' is actually the name of a mound next to the high ground of M1 and M2, and the name of their own mounds is East Tuanpo 東團坡 and West Tuanpo

situation at Guojiamiao, this cemetery had also been heavily looted in early periods. The 2012 excavation revealed 54 shaft tombs, two chariot and horse pits, and one horse pit. Most of the burials, though not all, adopted an east-west orientation as well, and were arranged approximately from north to south (Fig. 1-3.11). Some larger burials were equipped with waist pits and sloping ramps. The largest burial, M18 in the south part of the cemetery, is especially interesting for its cross-shaped tomb structure. With a stepped sloping ramp to its south, the main coffin chamber of M18 was surrounded by four square compartments, one on each side.[66] The main chamber contains a nest of three inner coffins, and a round waist pit with a pottery vessel inside. Outside the tomb pit, there are three additional pits (two by two metres) to its east, north, and west. Most of the surviving burial goods in M18 are found in the east compartment, and in the additional pits.[67]

These recent discoveries have outlined a long-lasting Zeng state all through the Zhou dynasty. Although its continuity between Yejiashan and later periods still remain in doubt,[68] most scholars are nudging towards the conclusion that the Zeng, as a Zhou

西團坡, see KG 2003.9, and Beijing 2008: 1-7.

[66] The east compartment is the only one that survived without being looted in the past. Over 70 bronzes are found inside this compartment, ranging from *ding*, *gui*, *li*, to *jian*, and square *hu*.

[67] The instalment of compartments (or storages as some scholars believe) is occasionally found in tombs dated to the Spring-and-Autumn period (such as the compartment in Guojiamiao GM17). Meanwhile the idea was widely spread in Warring States period (such as Pingshan 平山 M1 in Zhongshan 中山 state cemetery, see WW 1979.1), especially the Chu-related burials, the Leigudun M1 for example. However, such a cross-shaped arrangement in Suizhou is one of a kind in this period.

[68] There are clear 'gaps' between the Yejiashan and later periods. For example: 1) the calligraphy of the character 'Zeng' in bronze inscription was changed from '' in

regional power, was sustained in the Suizao corridor from no later than 1000 to 350 BC.[69] If that was the case, the related studies may be able to reveal the development process of a local material culture over a relatively long period of time, thereby reflecting the changes of social identity of the people lived in the Suizao corridor in the negotiations between locals and their contemporaries.

1-4 Geographical background

Situated on the south boundary of the Zhou realm (Fig. 1-1.1), the Suizao corridor had been inevitably involved in the interactions between the northern Zhou or non-Zhou groups and the social groups along the Yangtze River region and further south.[70] In this sense, the current section focuses on an extended river network, which will be defined and discussed below. The communications within this network are likely to have been driven by the demand for metal or other precious resources. An interactive research method will be thus applied to explain the flow of raw material, intermediate goods, and the employment of similar artefacts found in different social groups.[71] Therefore,

Yejiashan to the later ''; 2) the possible change of surname of the Zeng rulers from non-Jī in Yejiashan period to Jī in later periods. The related issues will be discussed further in Chapter II.

[69] WW 2011.11: 64-77.

[70] Although it is still not clear whether in the Shang and Zhou periods there was a massive transmission of copper ore from the Yangtze River region to the north, the discovery of the large-scale mining and smelting sites in Hubei Tonglüshan 銅綠山 and Anhui Tongling 銅陵 has made it hard to deny that the widely distributed bronze cultures in the north, or at least some of them, may probably have had some metal sources from the south. See reports of the mentioned sites in Beijing 1999b and KG 2013.6.

[71] Take the study of metal flow for instance. In recent years, the ways of using chemical and archaeological data as indicators to trace movement of both metal and artefacts have been widely used in related studies, such as the FLAME project (FLow of Ancient

the geographical relations of archaeological sites and the communication channels between them become extremely important to the current study.

The Suizao corridor

The Suizao corridor is situated in the gap between the foothills of the Qinling Mountains and the plain west of the main area of the Huai River. In addition to the land access through the Nanyang 南陽 basin to its north (Fig. 1-1.1), the corridor is also well connected to its west and southeast by series of major waterways. As illustrated by Fig. 1-4.1, the locations of the Zeng-related burials show that they were likely to be moving around on the basis of the river network. To facilitate the discussion, the corridor is divided into three zones on the basis of local rivers: 1) *Central zone* in the Suizhou area, based on the tributaries and the upper and middle reaches of the Yun River; 2) *South-eastern zone* in the Jingshan 京山 area, based on the tributaries and the lower reach of the Yun River; and 3) *North-western zone* in the Zaoyang area, based on the tributaries of the Han River.

The *central zone* is normally considered as the core of the Suizao corridor, as this

Metals across Eurasia) at the School of Archaeology, Oxford. In a recent paper, Jessica Rawson, as one of the project partners, suggests that in Shang period, 'large and elaborate castings... from Sanxingdui and... Hunan, Jiangxi and Anhui, suggest that at least some of these distinctive bronze industries must have been based upon large and stable supplies of metal', see Pollard *et al*. 2017. Their burial goods show that the Shang did not have allegiance from these regional powers who may have controlled metal sources along the Yangtze River. If the following Zhou people wanted to access these sources, allegiance from the neighbouring areas was essential, and the Suizao corridor was apparently one of the favourite places that the Zhou would have needed.

particular area has been a rich source of archaeological remains from the whole Zhou period (Fig. 1-4.1a).[72] All the key sites are distributed along the major waterway – the Yun River and its network of six main tributaries: four of them, the Zha 淶, Jue 溮, Piao 漂, and Quan 泉 come from the Tongbai Mountains; and the other two, the Jun 均 and Lang 浪, rise in the Dahong Mountains.[73] With the help of this river network, the importance of this zone is self-evident: to the west of the central zone, the river Zha is closely connected with rivers in the north-western zone; to its north, the Jue and Piao almost reach the region of the Huai River on the other side of the Tongbai Mountains; to its south, the Yun, Jun and Lang, as well as the two rivers in the south-eastern zone, all originate in the same mountainous area, very close to each other. Therefore, it is believed that the Yun may have been used as the primary route of transportation for people to communicate through the Suizao corridor.

Only a few sites are confirmed in the *south-eastern zone*, all dated from the late Western Zhou to the early Spring-and-Autumn period (Fig. 1-4.1b).[74] As in the central zone, the

[72] The locations of the main burials in the central zone are as follow: 1) Yangzishan, Yejiashan in the early Western Zhou period; 2) Xiongjialaowan 熊家老灣 (WW 1973.5), Hejiatai 何家台 (KG 1982.2), Taohuapo 桃花坡 (WW 1982.12), Xuguang Zhuanwachang 旭光磚瓦廠 (JHKG 1985.1), Wudian 吳店 (WW 1989.3), Yidigang (JHKG 1994.2), and Huangtupo 黃土坡 (KG 2007.8) from the late Western Zhou to the early Spring-and-Autumn period; and 3) Leigudun, Wenfengta in the Warring States period.

[73] These six tributaries are only chosen for the convenience of discussion, as they are very close to the archaeological sites nearby. They do not represent all the tributaries of the Yun River in the Suizao corridor.

[74] The locations of the main burials in the south-eastern zone are as follows: Sujialong, Xibeitai 西北台 (JHKG 1983.1), Yingcheng 應城 Zhuanwachang 磚瓦廠 (JHKG 1996.4).

most convenient route of communication here would be by the main channel of the River Yun. With its help, people were able quickly to reach the possible mineral priority areas at Daye 大冶 Tonglüshan near the present-day Wuhan 武漢 on the bank of the Yangtze River.[75] In the meantime, its tributaries, Zhang 漳 and Dafu 大富, also provide an alternative way from the corridor to its southeast. Although sparsely distributed, the sites located in the transitional areas between the Dahong Mountains and the lower reaches of the Yun imply a certain degree of communication between the mountainous area and the open plains.

As an important gateway from the Yangtze region to both the Central Plains (via the Nanyang basin) and to southwest China (via the Han River or the Yangtze River),[76] the *north-western zone* also contains rich burials dated from the late Western Zhou to the Warring States period (Fig. 1-4.1c).[77] The west-flowing Huayang goes down the north side of the Dahong Mountains, joins the Gun 滾 and then goes further west, meeting the Bai 白 and soon running into the Han River. Most of the tributaries of the mentioned three rivers rise in Tongbai Mountains, running away from the mountainous regions to

[75] Within an area of eight square kilometres, archaeologists have found hundreds of tunnels and shafts with wooden structures, copper-smelting stoves, tools and tons of slag, indicating that the Tonglüshan was possibly a large-scale mining and smelting site with rich underground deposits, which may have been functional from the Western Zhou period to the Han period. For the primary report of the Tonglüshan site, see Beijing 1999b.

[76] For the relative positions of the mentioned places and rivers, see Fig. 1-1.1.

[77] The locations of the main burials in the north-western zone are as follows: Xiaoxiguan 小西關 (WW 1973.5), Duanying 段營 (KG 1975.4), Zhoujiagang 周家崗 (KG 1984.6), Guojiamiao (Beijing 2005b) from the late Western Zhou to early Spring-and-Autumn period; and Jiuliandun (JHKG 2003.2, and Beijing 2007a) in the mid-Warring States period.

its southwest, and interrupting, or, at least showing down, the direct on-land communication between the Huayang region and the Nanyang basin in the north to a large degree. Therefore, it is likely that the best choice for travel between the Suizao corridor and the northwest was along the main channels of the Huayang and Gun to reach the confluence of the three rivers (Fig. 1-4.1c). Then the river network provided two choices for a route further west: 1) to enter directly the Hanzhong 漢中 basin via the Han river valley; and 2) to go further south via the Han River, entering the Yangtze region, and then turn west to the Sichuan basin via the Yangtze River.

Arc of territory

Given the close ties between the Suizao corridor and southwest China through the main rivers, it is necessary to take into account of interaction with the 'outsiders', those who lived on or beyond the boundaries of the Shang and Zhou 'metropolitan area'.[78] The arc of territory, or a literal translation from its original term – 'the crescent-shaped cultural-communication belt (*banyuexing wenhua chuanbodai* 半月形文化傳播帶)',[79] refers to the vast lands of mountain and highland regions, covering most of the areas from present-day Yunnan, Qinghai, Sichuan, the south of Gansu and Hexi 河西 corridor,

[78] The term 'outsider' and people from the 'metropolitan area' are two relative concepts. The latter normally refers to China's Central Plains and the surrounding areas, including the main cities such as Zhengzhou 鄭州, Panlongcheng 盤龍城 and Anyang in Shang period, and the regional states of Jin, Wei and Yan in the Zhou period, see Rawson 1998: 115. Notably, before the conquest of Shang, the Zhou people themselves had also been seen as outsiders to the authority in the Central Plains. See Rawson 1989.
[79] See the original definition of the arc of territory in Tong Enzheng's 童恩正 paper in Tong 1986. Also see Rawson's reinterpretation in Rawson 2013a, and 2013b.

to Shaanxi, Shanxi, Hebei and further to Inner Mongolia and Liaoning (Fig. 1-4.2). A wide range of local groups are believed to have been moving around in this broad area of mainly elevated terrain. Although the whole area is vast, similar materials and burial traditions were often borrowed from one another, such as the wide use of stone tombs,[80] and the long-distance spread of bronzes with animal-related designs.[81] This crescent-shaped region is therefore treated as a whole geographic unit, sharing similar traditions internally, while never ceasing to interact with central China and other regions in East Asia.

The idea of the arc as a 'cultural-communication belt' has been further supported by a number of new archaeological discoveries, such as the southern style triangular bronze *ge* 戈 found at the Yu cemetery in Shaanxi,[82] and the discovery of northern style bronze weapons at the Yangtze region in west Sichuan.[83] In the meantime, many researchers have continuously added new dimensions to the current understanding of the arc. Focusing on the early types of pottery *li*, Miyamoto Kazuo 宮本一夫 discusses the interactions between central China's farming zone and the north farming-pastoral transitional region.[84] After years of excavation in Shaanxi province, Xu Tianjin 徐天進 points out that the Zhouyuan 周原 and its neighbouring areas are not only the birthplace

[80] Tong 1986: 23-24.
[81] Tong 1986: 30-31.
[82] Beijing 1988.
[83] SCWW 2012.3.
[84] Here the distribution of pottery *li* refers to China's Great Wall region, ranging from the west Liaoning, south parts of Inner Mongolia and Shanxi, to the Wei River valley in Shaanxi, Miyamoto 2006: 109-111.

of Zhou, but also a crossroad of cultural interaction between the Central Plains and other regions.[85] Jessica Rawson uses a number of unusual burial goods found at the Rui state cemetery in Shaanxi to discuss the shared features within the arc, and their connections with areas outside the Zhou centres.[86] Using the arc as a clue, Anke Hein investigates the archaeological materials from southwest China, including western Sichuan, northwest Yunnan and eastern Tibet, and discusses their long-distance connections to north China.[87] In light of these studies, the current thesis, while focusing on waterway communication, will also discuss what this arc of territory contributed to the local material culture in northern Hubei province.

The extended river network

To this thesis, the arc of territory provides an important means of communication to bridge China's north and south, not from the eastern plains of China, but from the western mountainous region (Fig. 1-1.1). To be specific, it shows a close relationship in the material culture between the north – the Wei River valley, and the south – the Yangtze River region (Fig. 1-4.3). When the notion of the arc was first introduced, similar choices of population movement and human activities were mostly attributed to

[85] Xu 2006.
[86] Many of the shared features were used by peoples in present-day Xinjiang, Mongolia and Siberia. See discussions of the use of miniature bronzes in Rawson 2013a. The unusual burial goods here also include alien types of ceramic vessels and hanging beads from trapezoidal plaques, see Rawson 2013b.
[87] Here the south-western materials refer to stone graves, double-handled jars, and 'animal style' designs in bronze work and decoration, see Hein 2014: 4-6.

the similarity of the natural environment.[88] However, except for a few scholars,[89] the rivers' contribution to the arc of territory is rarely noted, although waterway transportation is normally considered as one of the most convenient and cost-efficient means in ancient times.

Fig. 1-4.4 shows a sketch of river network along China's west and south boundary, which is abstracted from Fig. 1-4.3. Both north and south China have their own river courses running from the west mountainous region to the east plains: 1) the Wei River and Yellow River in the north, connecting the Zhou royal domain with the Central Plains; 2) the Yangtze River in the south, connecting the Sichuan basin with the Lianghu 兩湖 Plains.[90] But the north-south paths that connect the two main river regions are quite rare. One of them, perhaps the only direct waterway route, is by the south-flowing Jialing 嘉陵 River within the arc. This river provides a significant north-south expressway, communicating from the Wei River valley to the Yangtze River region.[91]

[88] The natural environment here refers to solar radiation, air temperature and moisture, rainfall, animal and plant resources. See Tong 1986: 33-34.

[89] Such as Jessica Rawson, who has pointed out the important of waterway communication between Shaanxi and Sichuan (using the main rivers from Sichuan, going up, rounding the Qinling Mountains from its west, and arriving at Shaanxi), see Rawson 1989: 82-83.

[90] The Lianghu Plains are named after the two provinces Hubei and Hunan. It is composed of the Jianghan 江漢 Plains in Hubei and the Dongting 洞庭 Plains in Hunan, separated by the Yangtze River. Although there is no assurance that the river system in Zhou period was the same as it is today, the received texts have pictured a much wetter land in Hubei and Hunan, with rich river and lake resources, which was together called the Yunmeng ze 雲夢澤 (Mere of Yunmeng), generally located in the north of Yangtze River and along the Han River region. See Zou 1993: 32-35.

[91] Although the Jialing River does not directly reach the Wei River valley, it starts high in the Qinling Mountains, very close to the source of a small tributary of the Wei River. This tributary, named Qingjiang 清姜 River, runs towards the northeast, and meets the

It also passes by the west end of the Hanzhong basin, where the southeast-flowing Han River has its origin.[92] The Han is able to swiftly reach the Suizao corridor, and further the Lianghu plains in the middle reaches of the Yangtze region. As described in previous sections, the locals from the Suizao corridor, and possibly other people from further south, had already well recognised the importance of rivers in the Bronze Age. Unlike the Shang people who based themselves in the Central Plains, the Zhou, who originated in the arc of territory, were likely to have a better connection than the Shang with the south, and therefore, a better chance to acquire the knowledge of how to take advantage of the river network.

1-5 Literature review

Before introducing the main methodology to be applied in this thesis, it is necessary to get a general sense of the development of Chinese archaeology (Chinese bronze studies in particular), their strengths, weaknesses, and the resulting Zeng studies.

The current understanding of the study of Chinese bronzes has two major sources: 1) the traditional studies of Chinese bronze and stone (*Jinshixue* 金石學 in Chinese) and Antiquarianism (*Guqiwuxue* 古器物學 in Chinese), which started from the Song 宋

Wei River right at the Baoji city. From a present-day satellite's view, the two rivers are connected by a zigzag mountain road, with a distance of only 10 kilometres or less. Further information and the geography of the area can be found at *Google Maps 2014*: https://www.google.co.uk/maps/place/Jialingjiang, 02/12/2014.

[92] The overland linear distance between the Jialing River and the source of Han River is less than 30 kilometres. For further information of this route, see *Google Maps 2014*: https://www.google.co.uk/maps/place/Hanjiang, 02/12/2014.

dynasty (960-1279 AD), focusing on documentary evidence and basic features of bronzes, for example their inscriptions and decorations; 2) Art History and Archaeology from the West, which were first introduced to China in the early 20th century,[93] concentrating on material evidence and context, such as the making of bronzes, their usage in ritual performance, and their burial environment. Additionally, the tendency to follow traditional historiography, as a 'by-product' of the major sources, also constitutes an indispensable element in current bronze studies.[94]

As the social group who had actual control over the Suizao corridor for centuries, the state of Zeng was likely to be more powerful and influential than any other coexisting groups in this area, so the Zeng tradition can be seen as a representative of the local material culture to a large extent. In this sense, Zeng history and the study of Zeng bronzes are important sources for us to understand the Suizao corridor and the people who lived in it. The following sections are set to review the research history of Zeng bronzes, to see how the current understanding of the Zeng material culture has been formed.

Traditional studies of Zeng bronzes

Bronze and stone studies in China and the later Antiquarianism had developed in the Song dynasty and the Qing 清 dynasty (1636-1912 AD), when collecting and

[93] The first archaeology-based excavations in China all took place in 1920s. For further discussion, see the section 'Archaeological approaches' later in this section.
[94] See further discussion in the section 'Tendency towards historiography' below.

cataloguing antiquities were in vogue.[95] The greatest achievements of these early studies were catalogues of bronze collections,[96] which included rich information covering the basics of a bronze vessel, for example the shape, decoration, inscription and the place it was first found. Their authors, however, often ignored the importance of these features. Most of them concentrated only on the bronze inscriptions and on how to interpret them in a documentary context.[97] Examples include some Zeng bronzes first catalogued by Xue Shanggong in 1144 (Fig. 1-5.1),[98] and then by Ruan Yuan 阮元 in 1804 (Fig. 1-5.2).[99]

[95] After the Tang 唐 dynasty (618-907 AD), traditional Chinese painting and calligraphy had been greatly developed (Vainker 1996: 8-9). With this trend, the popularity of collecting antiques among the literati also gave fresh impetus to public attention on bronzes. Antiquarians thus begin to treat bronzes seriously and publish their works with the developed printing technique at that time.

[96] Representative works of these two periods include Lü Dalin's 呂大臨 (1044-1091) *Kaogutu* 考古圖, Wang Fu's 王黼 (1079-1126) *Bogu Tulu* 博古圖錄, Xue Shanggong's 薛尚功 *Lidai Zhongding Yiqi Kuanzhi Tulu* 歷代鐘鼎彝器款識圖錄 in the Song dynasty. The Qing catalogues *Xiqing Gujian* 西清古鑒 and *Ningshou Gujian* 寧壽古鑒, both commissioned by the Emperor Qianlong 乾隆 who supported studies of ancient bronzes and made major collections in the Palace.

[97] Such an attitude of Jinshixue has a far-reaching impact on the related studies, such as the study of Chinese bronzes, which can still be seen in recent works of Chinese archaeology, for example the tendency to emphasis historiography, and the over-dependence on typology.

[98] The earliest documented Zeng bronzes - the Zeng shi ji fu 曾師季𠂤 *pan* was recorded by Xue Shanggong in his *Lidai Zhongding Yiqi Kuanzhi Tulu*, but the character 'Zeng' was not recognised, which thus remained absent until the Qing dynasty. For the original record, see Beijing 1986b: 165.

[99] Ruan Yuan (1764-1849), in the late Qing dynasty, recorded two new Zeng bronzes in his *Jiguzhai Zhongding Yiqi Kuanzhi* 積古齋鐘鼎彝器款識: Zeng bo shu 曾伯𡳿 *fu* and Zeng zhong 曾仲 *pan*, see Beijing 1937: 69-70. Unlike his predecessors, Ruan had successfully recognised the character 'Zeng 曾', and creatively linked it to the documented 'Zeng 鄫' state, which was a Si-surnamed 姒 state, regarded as 'the seed of Xia 夏' and arguably located in present-day Shandong province. For further discussion, see Qu Wanli's 屈萬里 comment on the bronze *fu* in Qu 1962: 337-341.

Entering the twentieth century, possibly influenced by the development of modern archaeology, the location of the Zeng capital became an important topic of discussion. In his 1940 book, Zeng Yigong 曾毅公 (1903-1991) claimed that the known Zeng bronzes must have belonged exclusively to a documented Zeng 鄫 state in Shandong.[100] Such an arbitrary conclusion may have been caused partially by the related transmitted texts and partially by Zeng Yigong's own conjecture, as it was difficult to locate where the bronzes come from under the circumstances back to 1920s. In fact, as some scholars point out, Zeng Yigong may have consciously avoided recording some Zeng bronzes that undermined his argument in this catalogue.[101] In the same period, two scholars, Guo Moruo 郭沫若 (1892-1978) and Yang Shuda 楊樹達 (1885-1956) suggested that at least some of the Zeng bronzes in Zeng Yigong's catalogue might have come from a Zeng state in south China, possibly related to the Chu state.[102] On this basis, Liu Jie 劉節 (1901-1977) further indicated that there might have been more than one Zeng state in the Zhou period.[103]

[100] The original publisher of Zeng Yigong's book: *Shandong Jinwen Jicun Xian Qin Bian* 山東金文集存先秦編 is unclear. For a republished version, see Zeng 1980.
[101] Zhang 2009b: 3.
[102] In 1933, inspired by a newly excavated bronze square *hu*, inscribed with 'Zeng ji Wuxu 曾姬無卹' from Anhui province, Guo Moruo and Yang Shuda successively concluded that most of the Zeng bronzes should have come from Shandong. Meanwhile, for the rest of the Zeng bronzes which cannot be associated with the northern tradition, they classified them together as the bronzes that belonged to the Zeng state near the southern Chu region. See Guo 2002: 207-211, Zhang 2011e: 116-117, and 128-129, Yang 1952: 70-71, 118, 121 and 149.
[103] Liu 1958: 108-140. Despite being challenged, Liu's viewpoint was soon followed by many other scholars. One of the topics is a debate on Zeng's surname, focusing on two possible surnames Jī and Si. See Li Xueqin's discussion in WW 1980.1: 54-58.

Tendency towards historiography

When modern archaeology was introduced into China in the early 1920s, it did bring new viewpoints and methods into the study of Chinese bronzes.[104] Nonetheless, the related fields seemed still to be captured by old research habits, especially by the Chinese bias towards historiography.[105] It is basically a tendency that most Chinese scholars working on archaeological material, consciously or unconsciously, paid excessive attention to the historical texts. This phenomenon became particularly obvious after Wang Guowei 王國維 (1877-1927) proposed his approach of 'dual attestation (*erchong zengjufa* 二重證據法)' in 1925,[106] which, as some scholars believe, was basically an approach of using excavated materials to underpin transmitted texts. It is hard to dispute that Chinese scholars have benefited greatly from this strategy, as China has been a text-rich country for much of its long history. But at the same time it has chained Chinese scholarship to a traditional narrative that may not be at all accurate.[107]

In the past two or three decades, the study of the Zeng state is a good case to illustrate this tendency of historiography. The transmitted texts may have misled researchers by

[104] For example the importance of fieldwork was first raised in the early 20th century.
[105] K.C. Chang was one of the first scholars to stand out and criticise this tendency in Chinese archaeology, see Chang 1981: 156-169, which is followed by Lothar von Falkenhausen, see Falkenhausen 1993b: 839-849.
[106] See the original text in Wang 1994: 3.
[107] The Chinese archaeologists have often failed to make full use of the archaeological evidence, but have tried to 'proofread' the written documentation with their first-handed excavated materials. See Falkenhausen's critique on Xia Nai's 夏鼐 '*Xiayi lishixue* 狹義歷史學 (History in the narrow sense)', Falkenhausen 1993b: 839.

providing too much distracting information but few details about the very Zeng state that researchers wanted to know about. One of the representatives is a 37-year debate of the 'Mystery of Zeng' (*Zeng guo zhimi* 曾國之謎), raised by Li Xueqin 李學勤 shortly after the discovery of Marquis Yi's tomb in 1978.[108] According to Li's argument, the *Zuo zhuan* mentioned names of a number of Spring-and-Autumn regional states located to the north of the Han River. All of their names can also be seen on the inscribed bronze ritual vessels, except for one – the presumably most powerful state – Sui 隨.[109] Meanwhile, with the increasing number of the excavated Zeng burials, researchers have gradually realised that the state of Zeng had the most widely distributed bronze remains in the same region, but had not been documented in any of the transmitted documents. Therefore, Li became confused about why the documented Sui occupied areas had so many high-standard Zeng tombs buried there. Back in the 1970s, Li was probably one of the first scholars who paid serious attention to this situation, and attempted to demonstrate that the Zeng state from palaeographic sources and the Sui state from the transmitted texts referred to the same regional power.[110] However, although Li and his followers have done a large amount of work, none of the possibilities they have presented so far seems to be really persuasive.[111] In fact, with the new discoveries found

[108] See Li 1978: 1, and Li 1990: 146-150. Some archaeologists believe that a particular bronze inscription found in the newly excavated Zeng cemetery at Wenfengta, Suizhou, are able to close this debate. The related issues will be discussed further in the section 'Wenfengta cemetery' in Chapter IV.
[109] For related records, see the sixth year of Duke Huan in *Zuo zhuan* (左傳·桓公六年).
[110] The main supporters of this viewpoint are Li Xueqin and Shi Quan. They claim that Zeng and Sui were the same state with two names. See Li 1978, and Shi 1988.
[111] See some of the assumptions of the 'Mystery of Zeng' in Zhang 2009b: 7-10.

in the Suizao corridor, such as the collected and excavated Sui bronzes (Fig. 1-5.3),[112] many of their assumptions have already been seriously challenged.

Archaeological approaches

The most essential improvement made by modern archaeological approaches over previous studies is the emphasis on the context in which materials have been found.[113] One of its consequences in China is that scholars' attention was gradually diverted from historical documents to systematic fieldwork. This process began in early 1920s with J. G. Andersson's (1874-1960) surveys and excavations in Beijing Zhoukoudian 周口店,[114] and Henan Yangshao 仰韶.[115] Later in that decade, Li Ji 李濟 (also known as Li Chi, 1896-1979), as China's first anthropologist and archaeologist, combined both the traditional Chinese disciplines and Western archaeological approaches in his fieldworks, for example the Shanxi Xiyin 西陰 excavation in 1926,[116] and the Henan Anyang 安陽 excavations from 1928 to 1937.[117] However, although they demonstrated the

[112] In Wenfengta excavation, the first excavated Sui bronzes – a bronze *ge* was found with the inscription 'Sui dasima Xianyou zhi xing *ge* 隨大司馬獻有之行戈', showing that it belonged to an official (Dasima) of the Sui state, see KG 2014.7: 30-31. Another example is a Sui zhong Naijia *ding* 隨仲嬭加鼎, published by Cao Jinyan 曹錦炎 in 2011 (JHKG 2011.4a). Since this Sui *ding* was not recovered in an archaeological context, Zhang Changping made a comprehensive analysis on this vessel and confirmed that it was a typical Chu style *ding*, cast in the middle of Spring-and-Autumn period (Zhang 2011c).
[113] See Renfrew 2000: 11.
[114] See Andersson 1923.
[115] Andersson was the first man who revealed literally China's first prehistoric site at Yangshao, Henan. His discovery was later named the Yangshao culture (c.a. 5000-3000 BC). See Andersson 1934.
[116] See Li 1927.
[117] See Li 1977, and Chen 1997: 145-151.

effectiveness of field methods in investigating Chinese antiquity, deep-rooted academic habits in China were not easy changed within the following few decades. As Li pointed out in his 1966 paper, though the archaeological data provided in the contemporary reports were essential, most of the conclusions drawn by Chinese archaeologists did not either reinforce or diminish the former understanding of the materials.[118]

Here I take the Zeng studies, again, as an example. From the 1950s to the 1980s, most of the Zeng burials marked in the distribution map (Fig. 1-4.1) had already been excavated and published. But apart from listing newly excavated materials, the majority of the related archaeological reports or publications failed to show sufficient concern for the material-based Zeng state, while almost unanimously dedicating themselves to searching for clues of the Zeng state in texts. For example, the reports of excavations in Sujialong, Xinye 新野 and Zaoyang had all linked their first-hand materials to the text-based Si-surnamed Zeng state.[119] The Liujiaya and Leigudun M2 reports, probably affected by the 'Mystery of Zeng', had treated its excavated Zeng materials directly as evidence of the Sui state.[120]

Such historiographical tendencies had been extremely popular in most of the archaeological reports down to the late 1980s, until the primary report of Leigudun M1 was published in 1989, which is considered as a 'comprehensive expression' of the

[118] See Li 2008: 89-91.
[119] See WW 1972.2: 49-50, WW 1973.5: 18, and KG 1975.4: 225.
[120] See KG 1982.2: 141, and WW 1985.1: 16-36.

study of Marquis Yi's tomb.[121] From then on, especially after the millennium, archaeologists have made great progress in improving the presentation of their work from different layers and angles. The series of Yejiashan reports is a good reflection of the trend.[122] Among the brief reports of the Yejiashan excavation, archaeologists use different ways to provide illustrations of the tomb structure, burial goods, and their locations. In the very first report in 2011, the chief excavator, Huang Fengchun, tried an old-fashioned way to group their materials by categories (for example all the available bronzes, ceramics, and jade formed three individual sections), so the same type from different tombs can be directly compared and discussed. But then the following reports went back to the prevalent 'tomb by tomb' form, as it is still considered as a better way of presenting the nature of a tomb, as well as of the whole cemetery.[123] The excavation team also published an individual paper to gather different opinions from a number of scholars (such as Li Xueqin, Li Boqian, Zhang Changping, and others) who have specialised in Western Zhou archaeology.[124] It is a very successful attempt, which is probably one of the most efficient ways to improve our understanding of the nature of the Yejiashan cemetery.

[121] Unlike others, after the regular contents (such as burial conditions, materials, and dating), this report spends a whole chapter and most of its appendices to discuss the context of ancient music, casting technology, palaeography, arts and crafts (Beijing 1989: 471-486). It also sets out a number of scientific studies on Marquis Yi's bronzes, such as the metallographic analysis of the chime bells and the technical analysis of the *zun-pan* vessel (see discussions of chime-bells in Beijing 1989: 618-623, see *zun-pan* in Beijing 1989: 646). Although most of its images failed to present detailed information of the burial materials, this report can still be considered as one of the most representatives of archaeological report in 1980s.
[122] See WW 2011.11a, JHKG 2011.3, KG 2012.7, and Beijing 2013.
[123] The inedited Yejiashan primary report (2018) is also in the 'tomb by tomb' form.
[124] See WW 2011.11b.

Chinese Zeng studies

Like the studies of other regional states, serious researches of the Zeng state also began in 1980s. Using typological approaches, Zhou Yongzhen 周永珍 made the first chronological sequence of Zeng bronzes in 1980.[125] By comparing the Zeng bronzes (from Suizhou, Zaoyang, Jingshan and Xinye) with those from the northern regions, she divided them into seven groups, and concluded that all the Zeng bronzes can be dated from the late Western Zhou to the late Warring States period. Moreover, those dated before the late Spring-and-Autumn period presented typical styles of Zhou central culture.[126] Following her work, Shu Zhimei and Liu Binhui 劉彬徽 further pointed out the high similarity on bronzes between Zeng and Chu in the Warring States period.[127]

Many scholars have made contributions to Zeng studies since then, such as Li Xiandeng's 李先登 inscriptional work,[128] Shi Quan's 石泉 study on Zeng territory,[129] and Chen Qianwan's 陳千萬 work on casting technology.[130] The most important

[125] See Zhou 1980.
[126] The discoveries of Zeng bronzes before the 1980s left a number of 'blanks' in chronology, especially in the mid and late Spring-and-Autumn period. Zhou Yongzhen's chronology was thus not a strictly continuous one, but a list of different batches of excavated Zeng bronzes in a time sequence. See Zhou 1980.
[127] In both the articles in 1982 and 1984, Shu Zhimei and Liu Binhui compared the shapes, decorations and inscriptions on Marquis Yi's *ding* vessels, as well as other bronzes, and discussed the close relations between Zeng and Chu state after the Warring States period. See Shu and Liu 1982, Liu 2001: 60-64, and 104-111.
[128] Li argues that different writing styles of the character 'Zeng' can be used to separate the Zeng state from Hubei and the one from Shandong, see Li 2001b.
[129] Use transmitted texts, Shi indicates that the capital of Zeng was located not at the Suizhou area, but at Anju between Suizhou and Zaoyang, see Shi 1988.
[130] Based on first-hand materials from Guojiamiao, Chen argues that the shape and

studies came from the early 1990s, when Yang Baocheng 楊寶成 and Zhang Changping successively made detailed chronologies of Zeng bronzes. Both of them agreed that the Zeng bronzes first followed the tradition of the Zhou vessels and later adopted the Chu style around the middle or late Spring-and-Autumn period, but they had a disagreement in the chronology before the late Western Zhou period. Zhang Changping dated the earliest Zeng bronzes to the late Western Zhou period,[131] while in Yang's opinion, the first known Zeng bronzes also included some Shang and early Western Zhou bronzes found in the Suizhou area.[132] Now we know that the Yejiashan excavation did indeed reveal an early Western Zhou Zeng state, but back in the 1990s, Yang's viewpoint was less convincing, especially when he did not provide any evidence as to why those early bronzes would be included into his chronology. Therefore, most people believed in Zhang's more cautious work, and his viewpoint became the mainstream in the academy.[133] On that basis, Zhang published a comprehensive study of Zeng bronzes in 2009,[134] in which he collects nearly all the available Zeng-related material evidence, and discusses in great detail the cultural interactions between Zeng and other regional groups, such the Zhou royal house, the Chu state, and the other regional cultures. Zhang's work does lay a good foundation for later Zeng studies. Yet, it is slightly less than comprehensive, as he did not give enough weight to the geographical advantages

casting technique of the Guojiamiao bronzes, especially weapons and chariot and horse fittings, were very similar to the north Guo state. See Beijing 2005b: 396-402.

[131] The bronzes here refer to the related discoveries from Xiongjialaowan, Taohuapo and three other locations, see JHKG 1992.3: 60-66.

[132] ZYWW 1991.4: 16-22.

[133] Beijing 2007c: 10-18.

[134] See Zhang 2009b.

of Zeng, nor was the source of the Zeng state's great wealth sufficiently explored. Zhang was also not able to avoid the negative effects from the historiographical tendency. In the discussion of the 'Mystery of Zeng', he made a 'reasonable assumption' to reconcile the material-based Zeng state with the document-based Sui state, by suggesting that the Sui state had occupied another document-based 'Zeng 繒' state, and then decided to abandon its state name and claimed itself as the state of 'Zeng 曾'.[135] Such an interpretation seems to reflect his evasive attitude towards this issue,[136] as he did not explain the reason why both of the states of 'Zeng 繒' and Sui chose to cast the same character 'Zeng 曾' on their own bronzes, rather than using their state names. In fact, even he, himself, admitted that this view was more textual based rather than material based, which would perhaps be overturned by new materials in the future.[137]

Western contributions

The academic interest in Chinese bronzes in the West can be traced back to the first half of the 20th century. The early serious works in Chinese art history and archaeology that have been done by the Western scholars were much earlier than those in China. They include Bernhard Karlgren's (1889-1978) chronological work of the Shang and Zhou period in the 1930s,[138] and Max Loehr's (1903-1988) five-style typology of

[135] Zhang 2009b: 372-390.
[136] For this view, see Li Boqian's critique on Zhang's assumption in WW 2011.11: 66.
[137] This viewpoint is according to unpublished materials based on notes of a private conversation with Professor Zhang Changping at Wuhan University, Wuhan, Hubei province, 03/07/2012.
[138] Karlgren 1935.

Shang bronze decorations in 1960s.[139] Following in their footsteps, more Western scholars have made essential contributions to the study of Chinese bronzes with their acute insights. Take three representative figures for instance: starting with the bronze hoards in Shaanxi, Jessica Rawson introduced the concept of Ritual Reform in the late 1980s;[140] Edward L. Shaughnessy used Zhou bronzes to discuss the development of bronze inscriptions in the early 1990s;[141] and Robert Bagley studied the pattern-block casting technology on the basis of bronze products and clay debris from the Houma foundry in the mid-1990s.[142] Their works enriched the current study of Chinese bronzes from various standpoints. In the meantime, a number of synthetic books were published in succession, such as the studies of Chinese bronzes from the Arthur M. Sackler Collections,[143] Loewe and Shaughnessy's edition on the *Cambridge History of Ancient China*,[144] Jenny So's edition of Bronze Age music,[145] and Falkenhausen's book on Bronze Age Chinese society. Also, there were a number of Western Zhou studies, such as Hsu and Linduff's book on Western Zhou civilization,[146] and Li Feng's two books on the Western Zhou regime.[147]

[139] Loehr 1968.
[140] See Rawson 1988 and 1989.
[141] Shaughnessy 1991.
[142] See Keyser 1979, Bagley 1995 and 1996.
[143] There are in total three volumes of the Sackler collections published over an eight-year span. For further information of the Sackler collections, see the Shang volume in Bagley 1987, the Western Zhou volume(s) in Rawson 1990, and the Eastern Zhou volume in So 1995.
[144] Shaughnessy 1999.
[145] So 2000.
[146] See Xu and Linduff 1988.
[147] See Li 2006a and 2008.

Due to the outstanding cultural features of the Zeng bronzes, most of those synthetic studies have mentioned the Zeng state and its bronze remains. But rather than embarking on a comprehensive analysis or further discussions of the archaeological context of the whole Zeng state, Western scholars have concentrated more on specific aspects, such as the study of musical instruments, tomb structures, and casting technology. Most of these studies have been inspired by the discoveries in Leigudun M1 – the tomb of Marquis Yi of Zeng. For example: 1) the study of chime-bells: starting with his 1993 book,[148] Falkenhausen have published a series of bell studies, from the history of individual bells to the development of inscriptions and technology on musical assemblages in the Zhou period;[149] 2) the study of irregular tomb structure: as one of the first multi-chamber tombs with four compartments, Marquis Yi's tomb chamber is often referred to as an 'underground house',[150] 'subterranean palace',[151] or replicas of domestic and social surroundings;[152] 3) the study of lost-wax casting technique: based

[148] A tone study of chime bells, especially on Marquis Yi's bells, see Falkenhausen 1993a: 244-255.

[149] In these books, Falkenhausen emphasises the rites, technology and political matrix, and challenges the tone-related records in transmitted texts, thus underlining the importance of music performance in ritual practice See Falkenhausen 1989, 1991, 1992, 1993a, 1995, 2000 and Falkenhausen and Rossing 1995.

[150] Based on the number of victims and the functions of burial materials, Wu Hung 巫鴻 emphasised the different functions of the rooms between the ruler's 'ritual orchestra' in the formal audience hall and those 'informal performances' in his private quarter. See Wu 2010: 38-39.

[151] Falkenhausen pointed out that all the imitated doors, windows, and other constructed or painted architectural elements in Marquis Yi's tomb reflected the notion of 'subterranean house or palace'. See Falkenhausen 200: 306-308.

[152] See Rawson 1999a: 30-31. Rawson suggested that the burial practices in the Eastern Zhou period had generated new variations of the ideal life, and some of its features might come from the south, see Rawson 1998: 123-125. For discussions of southern images on bronzes, see also Rawson 2002.

on observation of Marquis Yi's *zun-pan*, Bagley suggested that both the traditional mould casting and the new lost-wax casting methods can be observed on this vessel, and the latter was probably imported in the Warring States period.[153] Rawson further suggested that China's brief interest in lost-wax casting might come from further north or west, reaching central China by way of the Yangtze River or some similar routes.[154] On the basis of these studies, the next section will introduce a few basic concepts in current archaeological theory, and attempt to put the fragmented ideas together in a coherent manner to understand the Zeng state and the social group they belonged to.

1-6 Research approach

Towards interregional similarities in material remains in the Zhou period, rather than marking points on a map, archaeologists are expected to bring interpretations to the underlying motivations behind them. Focusing on relations between people and the material world,[155] the current thesis intends to treat the people in the Suizao corridor as

[153] The lost-wax casting did not replace the traditional mould casting, but only had a limited use on detailed elements like the openwork attachments. See further discussion in Bagley 1987: 44-45.

[154] See Rawson 2006: 75 and 85. In the past five years, an intense debate about the casting techniques used on the fine openwork decorations on the *zun-pan* vessel was started among Chinese scholars. One group claims that those openwork decorations were made by the traditional piece-mould method, while another group insists that it was cast by the lost-wax technique. The details of this debate will be discussed later in Chapter IV.

[155] As John Robb suggests, material things are a medium through which we create ourselves and understand other people, see Robb 2005: 6. Underground materials have been used by archaeologists as the main tool to approach people and their relationships in the pre-modern period. Three basic relations are thus emphasised as the theoretical framework of this thesis: 1) the relations between people and materials; 2) the relations between different groups of people; and 3) the relations between materials.

groups of 'indigenous inhabitants',[156] who lived on the boundary of the Zhou realm, but were closely related to the dominant culture. The main factors regulating local people's behaviour were in essence their identities and positions within the network of cultural interaction. Together, they generated the preference and expectations of individuals in their lives and afterlives,[157] or triggered changes when the geopolitical environment altered.[158]

Social identity

The choices of individuals' burial and ritual behaviour were not determined only by themselves, but evolved through interactions between individuals and the material world to which they belonged. In other words, individuals did not only exist through their own body or consciousness, but were habituated and prompted by 'an exterior environment'.[159] To give expression to symbolic concepts, the materiality of the constructed exterior environment conditioned and facilitated the behaviours of those participating in ritual through the use of 'divine images' or the construction of 'sanctuaries',[160] which, in the current Zeng study, are provided by the bronze-based

[156] In most of the Zeng-related studies, the Zeng people are often arbitrarily regarded as Jī-surnamed Zhou people from the north, see some scholars' opinions in WW 2011.11b. Only a few scholars discuss them from a local perspective. For a similar viewpoint, see Shu and Liu 1982: 72-73.
[157] In Pierre Bourdieu's argument, people's identity affects their social practice. It underlines the choices of their burial and ritual behaviours, such as using certain burial forms, owning and displaying bronze vessel sets, and performing in ritual occasions. For further discussion, see Bourdieu 1977: 78-80.
[158] The Zeng choice to follow Chu instead of Zhou in the Spring-and-Autumn period is good example of such alternation. For further discussion, see Chapter IV.
[159] Miller 2005: 5.
[160] Renfrew 2005: 160.

ritual system with a core of ancestral worship of the first kings of the Jī-surnamed Zhou royal family (from King Wen and then King Wu, who was given a mandate to rule by Heaven). Such worship of common ancestors was shared within the Jī lineages, which strengthened the social bonding between them, and set an example to follow for those non-Jī groups who wanted to work with the Zhou. However, even in the closest non-Jī groups among the Zhou neighbours, such as the Yu state near the Zhou centres,[161] the materiality of non-Jī environments were different from the Jī-surnamed. So, even if similar ritual bronzes had been used in both Jī and non-Jī practices, their burial and ritual behaviours may have been varied.

In this sense, social identity becomes crucial to our discussion, especially to the Zeng people and the social group to which they belonged.[162] In archaeological studies, social identity is normally used to describe the dialectic relationship between similarity and difference of social groups, and the negotiation between internal and external identification of them.[163] The social identity of the local groups in the Suizao corridor is visible archaeologically through their burial assemblages, which reflect their ritual

[161] For the primary report of the Yu state cemetery, see Beijing 1988.
[162] From the Western Zhou on, the social identity of individuals in regional states was initially divided into the Jī and non-Jī groups. See the discussion in section 1-3 above.
[163] In Richard Jenkins's theory, there are two basic threads running through his definition of identity: 1) identity is a process and/or a practical accomplishment; and 2) individual and collective identities can be understood in the model of the dialectical interplay of the process of making internal and external definitions. Jenkins 2008: 46. The differentiation of individual identity and collective identity are especially helpful in the current study, as the Zhou practice can be seen as an external process to represent the collective identity of the Zhou in general, and each of its followers must have negotiated with this process, and decided to what degree they wanted to adopt it on one hand, while keeping their internal practice to show their individual identity on the other.

and burial behaviours, following the external definition given by the dominant Zhou practice, and the internal understanding of their own tradition. Identities are more tellingly exposed when 'cross-cultural conversions' took place, which is an overall change of a society, normally accompanied with new social, economic, and religious institutions.[164] This notion may be helpful here, as it can be used to signify a process by which peoples adopted or adapted foreign cultural traditions.[165] Towards conversions, the individual and collective identities of the local people might largely influence their choices of what traditions or to what degree did they want to adopt to support new cultural alternatives.[166]

Social group and boundary studies

The material culture observed archaeologically in the Suizao corridor is so diverse that

[164] The notion of 'cross-cultural conversion' has various forms, which are collectively defined as a 'process of syncretism that blended indigenous and foreign cultural traditions, and the phenomenon of resistance to foreign cultural challenges'. For further discussion, see Bentley 1993: 6-9.

[165] China's adoption of Western modernity is a good example. In contemporary Chinese culture studies, the Western modernity in China, started by European force of arms during the 19th and 20th centuries and soon fixed with aspects of the traditional Chinese imperial system, is 'both a product of Chinese history and an alternative to Western paradigms'. For further discussion, see Valentine 2006.

[166] According to Jerry Bentley, rather than a single dynamic, conversion analysis turns up three patterns: 1) conversion through voluntary association; 2) conversion induced by political, social, or economic pressure; and 3) conversion by assimilation. These served as roads, penetrating boundaries and enabling regional traditions to spread their influences to new people. Syncretism is another aspect that Bentley emphasises in this process. He suggests that 'the simple effort of communicating beliefs and values across cultural boundary lines almost inevitably entailed a certain amount of syncretism, since the explanation of foreign concepts required some degree of comparison and assimilation to familiar ideas'. Therefore, large-scale conversion always involved some degree of syncretism rather than wholesale acceptance of an alien system of beliefs and values. See Bentley 1993: 7-15.

researchers have to look for an effective way to understand the social identity of the local people, as well as the relationship between the local group and the Zhou royalty or other regional groups. Given the unique location of the Suizao corridor, an ethnicity study, especially its methodology combined with boundary studies,[167] offers a good way to approach our research questions. Current ethnicity studies contain two sub-fields in general: 1) social studies, which discuss ethnic or racial relations; and 2) anthropological studies, which discuss the essentials of ethnicity itself.[168] As ethnicity and racial issues are not quite relevant to the current study, some key concepts in the ethnicity study, such as 'ethnos' and 'ethnic group' or 'ethnic community' will not be specified here. Instead, a more general term – 'social group' will be used to refer to those groups of people who lived in different areas in the Zhou realm, which, as mentioned above, have been basically divided into the Jī-surnamed groups, the non-Jī groups, and mixed groups.[169] However, as we shall discuss later in the following paragraphs, this classification is not necessarily congruent with the objective nature of a social group (blood-related for example), but is sometimes determined by people's subjective social identification.

[167] The subject 'boundary study' here basically refers to the studies related to boundaries or borders across the social sciences, which has been associated with the studies of social identity, cognition, immigration, racial and ethnic group positioning and many other subjects. For a recent discussion of the boundary study, see Lamont and Molnár 2002.
[168] Wang 2006: 5.
[169] Sometimes a Zhou regional state may have had more than one sub-group, such as the Liulihe Yan state cemetery, which contains at least two sections with different burial traditions. See Beijing 1995, and Su 2000.

Before the 1960s, researchers usually discussed a social group from the objectivist's point of view, with an emphasis on the internal characteristics within a group. They suggested that a social group was a group of people with shared language, social organization, physical and cultural features, or other related characteristics, and, in turn, these common objective factors, as social identifications, could be used to define a social group.[170] In later studies, however, this method received strong criticism as researchers discovered that these shared factors are often very hard to provide help in distinguishing one group from another.[171] Unfortunately, until now this flawed approach has still had a strong effect on current Zhou studies, especially on the definition of the Jī-surnamed Zhou practice. Since the most representative Zhou royal burials cannot be seen clearly in archaeological remains, it seems that the only way to distinguish the Jī practice from the non-Jī is based on their common characteristics and interests.[172] But with the accumulation of archaeological materials, more and more scholars have started to realise that these shared factors are not enough to define the

[170] Naroll 1964: 283-291.

[171] For the related criticism, see Barth 1969: 10-15. Here we use one of the simplest examples to illustrate this problem. People from China use Chinese characters (*hanzi* 漢字) in their writings, which can be seen as an objective factor representing this group of people. Meanwhile Japanese people also use Chinese characters (*kanji* 漢字) in their writings, but of course one cannot say that Chinese and Japanese people belong to the same social group. In fact, it is difficult in practice to use objective factors to define a social group. As Michael Moerman points out in his 1965 book, such definitions from objectivists' viewpoint cannot be consistently observed. Instead, changing of recognition is often the norm. See Moerman 1965: 1215-1230.

[172] Some of the Jī-surnamed characteristics in common come from examples shared among the Jī-surnamed groups, such as the use of the upper platform in tombs and the north-south burial orientation. Sometimes they also come from the counter-examples among the non-Jī groups, such as the avoidance of using waist pit and date inscriptions. For further discussions of the Zhou practice of the Jī or non-Jī groups, see the section 'archaeological background' above in this chapter.

Zhou group properly, as most of them had not been exclusively used in the Jī-surnamed families. To overcome the disadvantage of this method, researchers started to discuss the related issues through a subjective way, which was adopted from the post-1960s ethnicity studies with an emphasis on the boundary of a group. Rather than shared characteristics, subjectivists propose that the main factor that defines a social group is at its boundary,[173] and sub-groups from the borderland are able to subjectively adjust their social identifications to define the social group they belong to, and to distinguish others.[174] In this sense, it may have been possible for a non-Jī group to give up its identity, and subjectively change its social identification to transfer to a Jī-surnamed group.[175]

Such a transformation of social identification is an issue of great complexity in boundary studies. In terms of different understandings of how the social identification

[173] The boundary here refers to not only the spacial boundary, but also the abstract social boundary. For further discussion, see Barth 1969: 15-16.

[174] One of the first contributors to this subjective approach is Edmund Leach. In his 1964 book, he uses two different local groups - the Kachin and the Shan who live in the northern part of Burma, to examine different interpretations of the same myth, and further discusses the local political system. As a by-product of this study, he suggests that the difference between Kachins and Shans is not a difference of ethnic, cultural or racial type, but 'a difference of ideal' in the eyes of Kachins. Sometimes Kachins can become Shans if they subjectively adopt the Shan way of thinking. See Leach 1964: 279-292. This observation is very helpful in boundary studies. To the Kachins, those people who think they are Shans are still the same people they knew, but the new Shans have subjectively drawn a boundary between themselves and the Kachins. Similarly, those who stay inside the boundary of Kachins also tend to think of the difference between the Kachin and Shan as being a difference of ideal, and thus distinguish Shans subjectively.

[175] The prompting here could be from outside, such as the Zhou king's command, or could be from inside, such as the group members' decision. The current study will further discuss the related issues later in Chapter II, focusing on the material culture of the Suizao corridor in the early Western Zhou period.

has been formed and transferred, the subjectivists are split into two opposing camps: 1) the instrumentalists, who view social identification as an ever-changing instrument that can be situationally formed, maintained, and transferred under stressful circumstances, such as social conversions, and political or economic resource competitions;[176] and 2) the primordialists, who argue that the subjective identification of a social group comes from its members' 'primordial attachment', an innate, inheritable sense, such as language, custom, and blood ties.[177] In some related studies, the notion of 'collective memory' has been introduced to reconcile the conflicts between the two. In this framework, the 'history' of a social group is seen as its collective memory, which on the one hand is of primordial importance to keep the group together, while on the other hand can be used as an instrument, which can be constructed, changed, or forgotten under certain external circumstances.[178] In a recent study of China's north-western

[176] See Haaland 1969: 68-69. During the Shang and Zhou period, the external circumstances of a regional social group could have changed from time to time, such as the replacement of Shang, and the several crisis that the Zhou authority had been through. The instrumentalists' approach provides us a good way to understand how the regional power had reacted towards the change of external condition, which will be stressed and further discussed later in Chapter III, following one of the major social conversions in mid-late Western Zhou period.

[177] The 'primordial attachment (or primordiality)' here is used to tie individuals to a social group that they grew up with, see Keyes 1981. In the current study, the primordial attachment can be used to highlight the essential differences between the Jī and non-Jī identities. For example, the image of King Wu was different in the eyes of the Jī and non-Jī groups in terms of their primordial attachments. In their ritual and burial practices, both the groups could have used bronzes directly referring to King Wu, or his achievements, but the primordial attachments to the non-Jī identity may have prevented those people appreciating the symbolic meanings of the ritual bronzes in the same way as the Jī-surnamed groups did.

[178] The collective memory is especially relevant to our discussion in Chapter IV, which will be used to highlight the underlying connections between the Zeng state and the strong Zhou central power long past, and further to differentiate the Jī-surnamed Zeng people from the Chu people with a non-Jī identity.

borderland, this method is used to discuss the relationship between the Zhou and outsiders after the conquest of Shang. According to the received texts, the early Western Zhou court had repeatedly emphasised terms like 'agriculture', 'settlement', and 'pacifism' on different occasions, aiming to use these social characteristics to set a boundary between their own groups and those 'non-agricultural', 'mobile', and 'combative' outsiders, though the Zhou themselves were the same 'non-agricultural', 'mobile', and probably 'combative' outsiders to the west of Shang people before the great conquest.[179] For the Zhou people, the conquest of Shang had transferred their subjective social identification from the 'people of the western land (*xitu zhiren* 西土之人 in Chinese)' to the actual controller of the Central Plains. The title of 'outsiders' no longer applied. So whether it was real or not, such claims of 'agriculture', 'settlement', and 'pacifism' can be seen as instruments to gain recognition from the agricultural groups on one hand, while establishing a social boundary for the outsiders on the other.[180]

Movement of material

'How things travelled?' is also important to our discussion. Normally in forms of trade and exchange,[181] material movement took many shapes in ancient times, occurring as

[179] In the proto-Zhou period before 1050 BC, the Zhou people who lived in the north-western boundary of the Shang territory had also been seen as outsiders to the Shang authority. For further discussion, see Rawson 1989.
[180] For their legendary origin in Zhou collective memory, see Wang 2006: 145-148.
[181] Archaeologically speaking, trade and exchange are recognised by identifying artefacts and connecting them to their place of origin, noting spatial distribution and stylistic patterns. Dillian and White 2010: 7. In Colin Renfrew's definition, exchange occurred as internal trade, between individuals within a social or a geographic unit, or

barter, remunerated transactions, and direct or indirect interactions between groups and individuals.[182] Intertwined with social relations, exchange is seen as a part of social process, functioning to provide or redistribute resources, maintain alliances, and establish prestige and status.[183] It thus generated a communication network, maintained by items of exchange value, including not only subsistence materials, but also other items carrying important symbolic values.[184] Apparently, the bronze ritual vessels, as common and pervasive as they were buried in tombs and hoards throughout the whole Zhou period, are of both exchange value and symbolic value to the individuals in the Zhou period. Their nature as luxuries, exotics, and high quality artefacts with social meanings, made the ritual bronzes one of the most desirable consumer goods at that time,[185] driving trading activities, and leading both to the intensification of local production for exchange, and to the emergence of wider systemic structures.[186]

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as external trade, which was exchange between individuals of different social or geographic units. Renfrew 1984: 86.

[182] There are other more informal ways of trade and exchange, such as heirlooms, gifting, and collecting souvenirs, which resulted in the situation that similar materials could travel not only from one place to another, but also from one period to the next. Dillian and White 2010: 4.

[183] Hodder 1982: 200, and Renfrew 1984: 91.

[184] Notably, such an ideological dimension here is a crucial aspect to examine trade and exchange, such as symbolism, information flow, and social change, see Earle 1982: 3. In the Zhou period, dowries, royal gifts, can be seen as exchangeable items of symbolic values, while along with these items, some activities of the Zhou king, such as making military communications and fieldtrips, inviting people to royal ceremony, sending out government officials as overseers, can also be included in the communication network in general.

[185] The tradable or exchangeable goods here, as seen in the Shang and Zhou burials, also include jade, beads, cowrie shells, and certain types of lacquer wares and pottery.

[186] In an interactionism approach, Andrew Sherratt uses three correlated aspects of concerns to interpret communications: ‘the relative rarity of condition, the movement of goods, and the social meaning of goods’, see Sherratt 1995: 10. At the current stage, archaeologists know very little about how much bronzes were traded, but as ritual bronzes fulfilled all the three criteria that Sherratt lists, it is very unlikely that the

The advanced waterway communication in the Yangtze River region in the Shang and Zhou period may have originated in such a context.[187] In fact, waterways exerted a significant influence on social interaction and the development of complexity from the prehistoric period:[188] physically they were critical in travel, navigation, boundary demarcation, and the exchange of goods;[189] and socially, they played important roles as both obstacles and conduits to hinder and facilitate movements.[190] Take examples in the current study: 1) on the one hand, the marshes of the Huai River served as a natural boundary that shaped and delimited social interaction between north and south China; 2) on the other hand, waterways such as the rivers in the Yangtze region and the Jialing River in the arc directed and speeded the flow of people, goods, and information in several directions, providing important routes and destinations for potential patterns of social contact and interaction, and allowing distant communities to participate in large social aggregates.[191] Such long-distance communication is normally seen as a chain-like system, a combination of a number of shorter routes, linking key areas, nodal points,

bronzes had not been included in the regional communication network in the Shang and Zhou period.

[187] See a discussion of early forms of trade and exchange in the prehistoric period along the Yangtze River region in He 2014a.

[188] In Sherratt's view, water-transport is more cost-effective than overland carriage. The access to rivers and seas should be one of the most critical aspects in the growth of urban communities. See Sherratt 1995: 13.

[189] The goods here especially refer to the valuable materials that travelled over long distances in small amounts, such as metals, and other valuable materials in small quantity and suitable to be carried on and off boats.

[190] O'Shea 2011: 162

[191] Howey 2007: 1841.

and bodies of water.[192] As a long, narrow strip of river valley, the ancient Suizao corridor had been no doubt a major nodal point in the lines of communication from long before the Zhou period, monitoring and controlling the movements between the Yangtze region and either north China or the arc of territory.[193]

Representation

In discussion of the relationship between people and the material world, the meaning of objects is an unavoidable issue, and the notion of representation, also known as the representational system, seems to offer an appropriate way to understand the issue. The aim of a representational system, in a common sense, is to use signs (such as language, images, and practices) to produce and exchange meanings, which, as some scholars point out, works by two subsystems: 1) a conceptualising process (between objects and concepts) – clustering and organising various elements and information to form a mental map; and 2) a signifying process (between concepts and signs) – using signs such as sound and words that carry meanings to represent the concepts.[194]

[192] See Sherratt's example of the three rivers Avon in Sherratt 1996a. He likens this chain-like system to a series of exchange-relays (involving many changes of ownership along the way), and further points out that 'such a set of riverine routes belongs to a term of relatively high-value low bulk trade, before the development of volume traffic requiring fully marine transport. When trading reaches this larger volume and density, the whole topology of transport networks changes, and certain areas lose their importance in the network', Sherratt 1996b: 216.

[193] Articulations or nodal points here refer to the particular geographic locations such as confluences, rapids, portage sites, and river mouths, where movement would necessarily be slowed down or halted. Such places, as parts of the whole waterways communication network, are visible archaeologically through rich burials, river finds, and other remains like monuments and fortifications. See Brose and Greber 1982.

[194] Representational systems consists not of individual concepts, but of different ways of clustering, organising, classifying concepts, and of establishing complex relations

Although the complete representational system seems to be initially discussed through a semiotic approach, we can use at least part of it to help us understand objects in an archaeological context. As we know, through interactions of different social groups, an object is able to travel a long distance, however, the meaning on it can hardly do so. In other word, it is relatively easy to have a foreign object, but the ideas of what it is, and how to use it, are not easy to acquire. The representational system provides a reasonable explanation for it. According to the second subsystem above, the meaning of an object is emphasised as a result of the signifying process, which is constructed and fixed by a coding-and-decoding system.[195] That is to say that, on one end, different ways of coding and decoding may have been the main issue that stops the meaning from traveling with the object from one social group to another.[196] On the other end, amidst the acceptance of a foreign object, if the ideas of what the object is, and how to use it, are exactly the same as that in the original context, the receiver's group and the giver's group are highly likely to have the same coding-and-decoding system, and further, they may have shared the same tradition, and may have even belonged to the same group of people.[197]

between them, such as the use of principles of similarity and difference to establish relationships between concepts, or to distinguish concepts from one another. For further discussion, see Hall 1997: 17-19.

[195] See an example of Ferdinand de Saussure in Culler 1976, and a further discussion of the coding-and-decoding system on 'bell' will be carried out in Chapter III.

[196] A group of three bronze *zun* with metropolitan style found in Sanxingdui, Sichuan province, may have been formed in such a context. For further discussions and details of these imported bronze vessels, see Bagley 2001: 140-149.

[197] These are of course two extreme precedents. In the real world, most of the cases are in between. For examples from the Suizao corridor, see discussion in Chapter III.

This thesis intends to take the approach of historical archaeologists to understand cultural interactions through a consumerism approach,[198] focusing on the choices that the local group of the Suizao corridor made in selecting foreign materials and ideas available through trade and exchange activities within the extended river networks.[199] Archaeological evidence shows that, in different periods of the Zhou dynasty, the local taste in commodities and ideas varied, reflecting not only the contemporary consumer preference or exotic allure, but also the implication of locals' social identity, and their recognition of the contemporary political situation. Combining with three important cross-cultural conversions in Zhou history,[200] the current thesis uses the latest discovery of three Zeng cemeteries to investigate how the local social groups as well as their choices changed with time.

1-7 Research framework

The three key cemeteries at Yejiashan, Guojiamiao, and Wenfengta mentioned in the background section not only show the general adoption of the burial tradition of the Zeng state itself, but also mark three different periods in the history of the Suizao corridor, in which the local burial behaviours, such as the use of standard tomb structure, bronze inscriptions and ritual vessels demonstrate that the social group quite precisely

[198] Dillian and White 2010: 6.
[199] See the section 'The extended river network' above.
[200] All the periods are chosen to represent three major cross-cultural conversions: 1) the early Western Zhou period (after the conquest of Shang); 2) the late Western Zhou period (after the Ritual Reform); and 3) the Warring States period (after the competition of main regional powers). See further descriptions in the section 'Research framework' below.

followed the current burial and ritual practice employed elsewhere within or outside the Zhou realm. In this sense, the interaction network of the Suizao corridor will be discussed in three phases: 1) Period I – c.a. 1000–900 BC; 2) Period II – c.a. 850–650 BC; and 3) Period III – c.a. 650–350 BC.[201]

Period I

The first period is generally dated to the early Western Zhou period from the 11th to 10th century BC. The Yejiashan Zeng state cemetery and Yangzishan E state cemetery form the centrepiece of the discussion. Bronzes from both cemeteries can be directly divided into two groups – Shang and Zhou – on the basis of their inscriptions. The Shang group includes the inscribed bronzes with dates or clan names, such as the 'Fu Gui 父癸' *gui*,[202] and ' Zi □子' *zhi*,[203] which are common in Shang period in terms of their content and calligraphy. The Zhou group, on the other hand, contains the inscribed bronzes with titles like 'Marquis of E 鄂侯' or 'Marquis Jian of Zeng 曾侯諫', indicating that their owners saw themselves as rulers of a Zhou regional polity.

Typologically speaking, the ritual vessels from the two cemeteries also fall into different groups. First of all, some bronzes are similar to the very standard bronzes from

[201] Although these three periods are selected on the basis of the chronological sequence of the Zeng state, the lifespan of Zeng as a group of people is not necessarily restricted to these periods. In fact, the character 'Zeng', either as a place name or a family insignia, may have been in existence long before the Zhou period. For further discussion of the Zeng observed in oracle-bone scripts, see Yu 1999: 27.
[202] Yejiashan M65: 53, JHKG 2011.3.
[203] See bronzes no. 27 of Yangzishan M4 in Beijing 2009.

the Zhou metropolitan area, such as the Yu state in Shaanxi,[204] and the Yan state in Beijing.[205] If we take the example of the rounded *ding*, as shown in Fig. 1-7.1, the left Yejiashan *ding* shows overall identical features with others, which have been recognised as 'typical early Western Zhou bronzes' and dated to the period 'between King Cheng (1042/35-1006 BC) and King Kang 康 (1005/3-978 BC)'.[206] Secondly, although most of the bronzes here present standard design and casting techniques, some special casting habits that are different from those of the majority are still visible, such as the overuse of spacers on some *ding* vessels, suggesting that they may represent a provincial casting tradition in the corridor.[207] Thirdly, some special bronzes, like those with 'flamboyant style'[208] or those with a bell suspended on their underside[209] by contrast with those in the metropolitan area, were fairly popular in the corridor. Fig. 1-7.2 shows a collection of flamboyant style bronzes, including a *gui* from Zhifangtou, a *zun* from Baoji, and three *lei* from Zhuwajie, Yangzishan, and Yejiashan, indicating a

[204] WW 1983.2: 1-11 and Beijing 1988. Though Yu state is located in the Zhou royal domain, and some of the Yu bronzes are fairly traditional Zhou bronzes, the Yu state itself is still considered as an outsider. See further discussion of Yu's multiple links with the Western Asia in Rawson 2010a: 19-24.
[205] Beijing 2000b: 3-302.
[206] See Beijing 1988, and Beijing 2000b.
[207] See Zhang Changping's discussion in WW 2011.11: 64-77.
[208] 'Flamboyant style' bronzes belonged to a very unusual bronze casting tradition in China's western or south-western regions, including Shanxi, Shaanxi, Gansu, and Sichuan, all located in the arc of territory and relatively far away from the Central Plains. As an important aspect on ritual bronzes, the flamboyant style will be particularly introduced and discussed in Chapter II.
[209] In this example, little bronze bells are cast on the underside of bronze ritual vessels, normally obscured inside the square base (such as the square-based *gui* from Shaanxi Baoji, or high ring-foot, such as the *lei* from Hubei Suizhou) of a vessel, by the flake-like foot (such as the *zu* from Liaoning Kazuo), or by the downward projecting decorations (such as the double-ram *zun* in the British Museum – early China collection), so in most of the cases, viewers cannot tell whether a bell is equipped or not unless a ringing sound is heard.

clear sign that the bronzes from the corridor might have been closely connected to the outsiders through the extended river network.[210]

In this period, a regional consistency in bronze styles is confirmed among different regional polities all over the Zhou realm, which is thought to be the consequences of direct contact with the Zhou royal domain after the conquest of Shang. In the Suizao corridor, such straightforward links were visible as well. But in the meantime, similarities among those 'flamboyant' bronzes also suggest some contacts between the corridor and China's southwest regions, which derived not from the metropolitan area, but from the southern Yangtze region.[211]

Period II

The second period, dated from the mid-9th to mid-7th century BC, can also be seen as the post-Ritual Reform period. It started from the end of mid-Western Zhou period, marked by an institutional change, known as the Ritual Revolution or Ritual Reform.[212]

[210] Related sites: see the Zhifangtou 紙坊頭 site at Baoji, Shaanxi in Beijing 1988; see the Zhuwajie 竹瓦街 site at Peng xian 彭縣, Sichuan in WW 1961.11.
[211] In her discussions around 1990, Jessica Rawson argues that the Zhuwajie bronzes might represent the intermediary between the middle Yangtze and the early Zhou style. See Rawson 1989: 79-87, and Rawson 1990: 30. At that time, Zhuwajie was the isolated example of 'flamboyant' bronzes, so not everybody was convinced by this idea. See opposition in Falkenhausen 2001: 185-187. However, after the discoveries of the similar style in Yangzishan and Yejiashan in the following years, there is every reason to believe that the Suizhou area was another important nodal point within the arc of territory. More importantly, those flamboyant bronzes seem more likely to be one of the key intermediaries between the north and south.
[212] For the emergence of this concept – 'Ritual Revolution' see Rawson 1989: 87-93, which has been followed up by Lothar von. Falkenhausen with the name 'Ritual Reform' in later publications, see Falkenhausen 1997 and 2006. This change in vessel

It was a cross-regional transformation, which took place as seen in a relatively sudden change in casting and usage of ritual vessels. New vessel assemblages, new quantities of offering food or drink, and new performances in ritual and burial practice were instituted across the Zhou realm around 850 BC, and were then basically kept stable in the following two hundred years or so. Such a complex reform across most of the known regional states must have been consciously adopted. Among all the archaeologically observable differences,[213] the most representative change is the replacement of the older varied bronzes with new sets of matching vessels (*ding* and *gui* for example). Though the Suizao corridor was distinct from the Zhou royal domain, it seems that the local material culture was directly affected by this reform, seen by the simultaneous application of the matching sets (Fig. 1-7.3), as happened also in the Guo and Jin states in the metropolitan area.[214] It is thus suggested that the previous

type is considered as an interregional ritual rearrangement in shapes, decoration, function and ritual practice. From the comparison of the numbers of ritual vessels between different polities, it may be possible to detect the different response in each state, reflecting the relationship between the Zhou centre and those regional polities in this period.

[213] See the five aspects of the vessel change in Rawson 1988: 230. Further details and complementary aspects that related to this reform will be discussed in Chapter III.

[214] There is a common misperception in the study of matching sets. Take the *ding* vessel in Fig. 1-6.3 for example. If we judge the owner's social status by the vessel quantity only, as many archaeologists do, it is very easy to jump to a conclusion that 'the occupant of Sujialong M1 had a higher rank than the rulers from the contemporary Jin and Guo state'. Transmitted texts, like the *Li ji* 禮記 (see Loewe 1993), state that the vessel quantity in a ritual set was correlated to the social ranks of the owner; the more vessels, the higher the social rank they had (for a further discussion see Falkenhausen 2009: 43-64). However, this assumption can be easily challenged by comparing sets in several tombs (see Fig. 1-7.3): 1) the Guo ruler had seven inscribed *ding* in his set, but his son who is supposed to have had a lower status than him, was also buried with a set of seven *ding* (see the set of Guo Ji 虢季 *ding* in Beijing 1999a: 30-34; see the set of Guo prince *ding* in Beijing 1999a: 321-324); 2) the Jin Marquis had a set of five *ding*, but only two were inscribed and of good quality (see the *ding* set in M93 in WW 1995.7: 25); 3) In the Sujialong set, only two out of the nine *ding* were found with inscriptions,

connections in Period I were still maintained between the Suizao corridor and the royal domain.

Period III

The third period is dated from the late Spring-and-Autumn to the mid-Warring States period (from the mid-6th to mid-4th century BC). It is widely accepted that with the decline of Zhou royal house in this period, the formal regional states were relieved of the restraint of the Zhou, and become more independent one after another. In the Suizao corridor, with the expansion of Chu, the previous lands of Zeng at Zaoyang and Jingshan area were occupied by Chu people,[215] and the Zeng centre moved back to the Suizhou area, where its old capital had been in the first period.[216] Headed by Leigudun M1 and Wenfengta M33, a number of high-level tombs with rich burial goods in this period have been excavated in this area, and many of them were more than equal with the finest finds from the contemporary powerful states, like the Chu and Jin.

Both the southern artistic effects and the northern technical effects occurred on Suizao bronzes in this period. On the one hand, most of the bronzes found in the Leigudun cemetery present typical characteristics from the Yangtze region: 1) the combinations

and the rest of them were believed to be 'replicas' of poor quality (see Zhang 2009b: 182-189). Therefore, the vessel quantity did not necessarily reflect the social status of Sujialong's occupant.

[215] See more discussion on Chu's occupation of the Suizao corridor in JHKG 1984.4: 91-92, and JHKG 2007.1: 80-86.

[216] This move and the reduction of Zeng territory may not simply be due to the occupation of Chu, because shortly after the move, its material remains showed that Zeng had more wealth and obtained higher casting technologies than ever before.

of *jian-fou*[217] 鑑缶 (Fig. 1-7.4a) and *zun-pan*[218] 尊盤 (Fig. 1-7.4b), the idea of which is also seen in those Chu-related burials from Hubei and Anhui (Fig. 1-7.4c);[219] and 2) the interlaced openwork decorations on certain Zeng bronzes (normally seen as traces of lost-wax casting method), which are also seen on the Chu bronzes from Xiasi 下寺 in Henan.[220] On the other hand, a typical northern casting tradition, the pattern-block technique,[221] is also observable in the corridor. With a more effective way, this casting method was used to create repetitive patterns on bronzes, most of which are believed to be products of the Houma foundry in Shanxi. It seems that this technique may have been used for the bronzes from the Suizao corridor as well. Fig. 1-7.5 shows two typical examples (a Houma product and a bell from Marquis Yi's burial assemblage),[222] and highlights their repetitive pattern pieces. Although decorative styles are different, the

[217] The bronze *jian-fou* is a combination of a square *fou* (a wine container) and a square *jian* (a large basin). When putting them together, the space between them could be used to store ice or hot water, in order to regulate the wine's temperature inside the *fou*. See related description in the exhibition hall at the Hubei Museum.
[218] The bronze *zun-pan* is a combination of a round *zun* (a wine container) and a round *pan* (a large basin).
[219] See Jiuliandun in Beijing 2007a, and Shouxian in Beijing 1956.
[220] See Xiasi in Beijing 1991b. Those finest decorative units (measured one centimetre or less) were too tiny to be cast by China's traditional mould casting method. The primary report of Leigudun M1 thus concluded that this kind of decorations were probably executed by a special lost-wax casting technique, which was not a Chinese tradition and probably imported to China in the Zhou period, see Beijing 1989: 646.
[221] See Bagley 1995: 46-54, and 1996: 50-58.
[222] See Jinshengcun 金勝村 report in Beijing 2004a. As indicated in Fig. 1-7.5a, a *lei* vessel from Jinshengcun carried repeated pattern pieces. As seen at the edges of an incomplete piece, there was not enough space to attach a complete pattern. The pattern piece had thus to be cut down to fit the rest of the space. The same situation is seen on the Marquis Yi's bronzes. Fig. 1-7.5b also shows a *bo* bell out of the 65 chime bells, and one of its surfaces was fully covered by the clipped pattern pieces (highlighted in Fig. 1-7.5b), indicating the decoration here may be used the same technique applied on the *lei* above. This special casting technique was first discussed by Barbara Keyser (see Keyser 1979), and then elaborated by Robert Bagley, see further discussion of pattern-block technique in Bagley 1995 and 1996.

shared casting tradition reveals a deeper level of communication between the corridor and the north.

For this period, the bronzes found in the Suizao corridor are so advanced and sophisticated that we may need to consider the possibility that this area may have been acting as a bronze casting centre or as a more important stronghold in this period. Along with its advantageous position in the extended river network, the corridor people must have had strengths in bronze casting, and kept in close touch with both northern and southern casting traditions.

1-8 Thesis structure

Previous research, both the Chinese disciplines and Western perspectives, have helped us draw a baseline for understanding the material culture of the Suizao corridor in Zhou period. Thanks to the massive new materials excavated in recent years, archaeologists have been inspired to ask questions that are very different than those posed fifteen years ago. The research questions have evolved from state location, the mystery of Zeng and Sui, to scientific researches of metal flow, and incorporate discussion of identity, meaning, social status, and sources of power. Such a shift of concern is a significant change from early scholarship that simply linked materials to texts, or producers to consumers. Instead, archaeologists are now dealing with a dynamic system through the exchange of material culture in an extended network. By presenting the shifting patterns of interregional contact in the mentioned three periods, the rest of this thesis will be

divided into four parts. Each of the contact periods will form an individual chapter: 1) Chapter One: the Yejiashan period, concentrating on the Yejiashan and Yangzishan cemeteries; 2) Chapter Two: the post-Ritual Reform period, focusing on the Guojiamiao and Sujialong cemeteries; 3) Chapter Three: Marquis Yi's period, centring on the Leigudun and Wenfengta cemeteries. These three main chapters will be followed up by a short conclusion at the end of the thesis.

CHAPTER II – Yejiashan Period

From the 11th to 10th century B.C.

2-1 Introduction

As soon as the Zhou took over the Central Plains at the turn of the first millennium BC, the far reaching state control[223] of Zhou authority stimulated new production and

[223] It is believed that considerable progress of the governance structure had been made by the Zhou central government to control the whole state. For an organisational map of the Western Zhou government, see Li 2008a: 50. Comparing with the Shang incipient bureaucracy, the Zhou had a more sophisticated institution. The governance structure had three levels in the Zhou centres (including Zhou kings, Dukes, and government divisions) and four levels to control the Zhou regional states (including ruling family, social elite, Zhou and non-Zhou immigrants, and indigenous population). For further discussion of the Shang case, see Keightley 1999: 286-288. For the bureaucracy within the Zhou central government, see Li 2008a: 42-95, and for the cases of the Zhou regional states, see Li 2008a: 235-270, especially a model of regional governance structure on page 244. The Zhou state control and the relationship among its regional powers are also discussed by Maria Khayutina, see Khayutina 2008, and 2010b. For further discussion, see the section 'Social background' in Chapter I.

circulation of prestige goods[224] over much of the Zhou realm. Focusing on the bronze ritual vessels found in the Suizao corridor, the current chapter discusses some local groups' capacity for independent bronze production, and their positions within the early Western Zhou trade and exchange network. It argues that not only prestige goods, raw material, such as metal ingots, and intermediate goods, such as clay moulds/models, may also have been important components in this network, which offered local groups not only the means of production and high-standard products, but also different forms of social ideology, coming from both the dominant Zhou culture, and from the areas beyond its boundary.

The current chapter also pays special attention to local people's identity, particularly to members of the ruling family of the early Western Zhou Zeng state, who were buried in the Yejiashan cemetery. Using the current boundary study,[225] this chapter argues that it may have been the Zeng people's own decision to gradually identify their social group as a regional power of a wider Zhou community, being based in one of the southernmost

[224] The 'prestige goods' here refer to not only the common high value artefacts in the Shang and Zhou period (such as bronze, jade and lacquer products, weaponry, chariot and horse fitting), but also the unique or exotic items, rare and from a distance. Their prestige nature, value, and a sense of the exotic may overlap in some cases. In fact, exotic items are very important in the Yejiashan cemetery, such as high-fired ceramics (possibly from the lower reaches of the Yangtze River region), carnelian beads (possibly from north-western China), and elephant tusks (possibly from the Sichuan area), but currently only the high-fired ceramics (only very few of them) have been included in the existing Yejiashan reports (see WW 2011.11: 32-33, and JHKG 2013.4: 50). The rest of the exotic items still wait to be published.

[225] In the current boundary study, researchers (subjectivists to be specific) propose that the main factors that define a social group can be seen at its boundary, which are determined by people's subjective social identification. For further discussion, see a section 'Social group and boundary study' in Chapter I.

areas in the Zhou territory. In this sense, the construction of the social identity of the Zeng people may have gone through at least three stages of development: a non-Zhou identity in the first place; then still a non-Zhou identity but granted with a Zhou title; and finally a Zhou identity.

2-2 Major archaeological sites

Since the 1970s, continuous discoveries in present-day north Hubei province have revealed a unique local burial tradition within and adjacent to the Suizao corridor. All the local archaeological remains dated to the early Western Zhou period are situated in the central zone of the corridor, near the riverbanks not far from present-day Suizhou city.[226] As showed in Fig. 2-2.1, two locations are especially pertinent to the discussion: 1) the Yangzishan site of the E state, ten miles west of Suizhou; and 2) the Yejiashan site of the Zeng state, seven miles northeast of Suizhou.[227] Given the coexistence of E and Zeng, the two states are seen as geographically close counterparts, and will also be introduced separately in the current section.

The Yangzishan site

Yangzishan is located on the north bank of the River Yun, where three rivers meet. Unlike other early Western Zhou centres, this area has only revealed three

[226] For names of the related sites and a list of the correspondent burial goods inside each burial, see Tab. 2-1.
[227] Since no primary report of have been published at the current stage, the research data of the two sites have been collected from four main sources: 1) brief archaeological reports; 2) museum catalogues; 3) conference notes; and 4) fieldtrip records.

archaeological sites: 1) a chance find in 1975;[228] 2) a middle-sized tomb M1 in 1980;[229] and 3) an elite burial M4 in 2007.[230] Among their burial goods, though few in number, some inscribed bronzes were found with titles 'E Hou (Marquis of E)' and 'E zhong 鄂仲 (lord of E)',[231] indicating that their owners may have been rulers or local elites of the E state, and also suggesting that the Yangzishan area was possibly a state cemetery of the documented Jí-surnamed 姞 E polity.[232]

[228] Marked as '1975-Yangzishan', this possible tomb, found in a farmland development without any burial remains recorded, held four bronze vessels. Two key characters – 'E Hou 鄂侯 (Marquis of E)' were inscribed on a handled *zun*, indicating that the vessel owner may have been a ruler of the state of E. See KG 1984.6: 510-514.

[229] M1 is a partly damaged tomb of a north-south orientation, containing seven bronze vessels, four weapons and seven accessories or fittings. See WW 1982.12: 51-57.

[230] This particular burial has had a wide impact among Chinese archaeologists since it is thought to have held a set of E bronzes with strong regional characteristics. However, the full account of its burial goods and other details await publication. It is reported that at least 27 bronze vessels were confirmed in this tomb (Huang *et al*. 2011: 84), but only 20 of them were reported individually in a catalogue – *Suizhou Chutu Wenwu Jingcui* 隨州出土文物精粹 (see Beijing 2009), including four with inscriptions of 'Marquis of E'. The reason why the M4 report has not been published is partially explained in the preface of the 2009 catalogue. According to the author, shortly before the excavation in 2007, M4 had been heavily looted, and all the mentioned bronzes had been stolen and then recovered by local police, so even the local archaeologists have no evidence of the whole burial assemblage in this tomb.

[231] Apart from the E-related inscriptions, a few bronzes (drinking vessels mostly) are also found with individual clan insignias (one clan name in 1975-Yangzishan, two in M1, and two in M4, three of which also have date inscriptions). The 'clan insignia', differing from typical characters in bronze inscriptions, for example the insignia '' found on a *jue* vessel in 1975-Yangzishan, are believed to be mainly used to claim the clan names of the vessel owners in the late Shang period, and then passed down to their successors in the following early Western Zhou period (see Qiu 2000: 65-70). Some scholars believe that both clan insignia and date inscriptions were strictly used only by Shang people (see Zhang 1993, and Zhang 1995b), but more and more counter-examples (such as the inscription on 'Ying Gong 應公' *ding*) have shown that even Jī-surnamed Zhou elites have occasionally used such Shang traditions (see Wang and Wang 2000, and Wang 2014).

[232] See Li 2010: 41. As a non-Jī lineage, the surname Jí of the E elites has been known to archaeologists for a long time. At least three late Western Zhou *gui* vessels (two vessels and one lid), recorded in texts, carry the same inscriptions 'E Hou zuo wang Jí ying *gui* 鄂侯作王姞媵簋, wang Jí qi wannian zizi sunsun yongbao 王姞其萬年子子孫永寶'. They have thus been identified as dowry for the E lord's daughter (Jí-

Although the burial traditions of E still remain uncertain,[233] the elite burial, M4, provides rich information of salient features of a particular style of ritual bronzes, namely the 'flamboyant style',[234] which is rare but well-known in China's western and south-western regions.[235] As showed in Fig. 2-2.2, the vessels *zun* (no. 31), *you* (no. 32), and square *lei* (no. 35) can be seen as typical flamboyant style bronzes, which have irregularly shaped animal masks (Fig. 2-2.2a),[236] and huge flanges with continuous T-shaped (or half T-shaped) vertical hooks or other variants (Fig. 2-2.2b).[237] Notably, as showed in Fig. 2-2.2c, the square *lei* also has a small decorated bell suspended on its underside, which was presumably able to produce a ringing sound when the vessel was

surnamed) when marrying a Zhou king. See Liu 1980: 87-88, and Zhang 1995a: 87.

[233] The burial traditions refer to the cemetery layout, tomb structure and orientation. M1 is the only tomb provided with burial information in its brief report. Based on its north-south orientation, some scholars believe that other burials in this cemetery may have had the same orientation (Beijing 2013: 276). But of the three burials, M1 is the only one there does not have any bronzes with inscriptions that directly link to the state of E. So generally speaking, both the layout and orientation of the E burials in Yangzishan cemetery still remain uncertain at current stage.

[234] In two successive papers in the 1990s, Jessica Rawson defines the bronzes with projecting horns, realistic animal-shaped motifs (such as buffalo heads), and hooked flanges as the 'flamboyant style bronzes', and links these special features found at the Yu cemetery, Baoji, Shanxi (Beijing 1988), to similar ones from Hunan, Sichuan, and the Wei River region. She argues that this style of bronzes originated before the early Western Zhou period and related to the arc area lying outside the range of metropolitan Shang culture. See Rawson 1989: 79-87, and Rawson 1990: 30.

[235] The regions here include Shanxi, Shaanxi, Gansu, and Sichuan. All these areas are associated with the arc of territory, far from China's Central Plains.

[236] In contrast with the ordinary animal mask – '*shoumian wen* 獸面紋' in Chinese, this irregularly shaped version normally referred to as '*shenmian wen* 神面紋 (god masks)'. See Zhang 2011a, and 2011b.

[237] Since there is no archaeological report on M4, these vessels are indexed by numbers in the main catalogue. For example: *lei* (no. 35), *zun* (no. 31), *you* (no. 32), *ding* (no. 72), and *gui* (no. 96). According to Li Xueqin, there may be an unpublished *you* vessel, identical to the no. 32 but of a smaller size, and uninscribed. See Li 2010: 40.

moved.[238] Like the flamboyant style iconic features, these bells are also rarely seen in the metropolitan areas, but were fairly common in Shaanxi province in the early Western Zhou period.[239]

The Yejiashan Zeng cemetery

The Yejiashan site, located between the south bank of the River Piao and a local village named Jiangzhaicun 蒋寨村 (Fig. 2-2.1), was first discovered by villagers at the end of 2010. In the next year, a rescue excavation was undertaken by the Suizhou Museum and the Archaeological Institute of Hubei,[240] followed by another excavation in 2013.[241] There are in total 140 tombs and seven horse pits excavated in this cemetery. Apart from tombs M1 and M2,[242] which had been partially disturbed before the 2011 excavation, all the rest are reported to be intact burials. Five major ones are particularly

[238] A collected E vessel from the Shanghai Museum also has an underside bell. With the inscriptions 'E shu zuo bao zun yi 鄂叔作宝尊彝', this square-based *gui* vessel is considered as a typical early Western Zhou vessel, which has close relationship with the E state in Hubei province, see WW 1959.10, and Li 2008b: 6.

[239] These bells on the underside will be further discussed later in this chapter to support the argument of independent production of the local bronzes in the corridor.

[240] The 2011 excavation, also known as the first season of Yejiashan excavation, revealed 63 tombs and one horse pit, including large tombs such as M1, M2, M27, and M65 (M1 and M2 were disturbed/looted). M25 and M28 were also noticed by the excavators in 2011, but due to the modern buildings above them, their excavations were suspended until next season. See JHKG 2011.3, WW 2011.11, and KG 2012.7.

[241] In 2013, the second season of Yejiashan excavation revealed 75 tombs and six horse pits, including the largest tomb of this site – the M111, and the major tombs left by previous excavations. See Beijing 2013.

[242] As one of the earliest burials in this cemetery, M1 (see Fig. 2-2.3b) is considered by the excavators as one of the major burials, based on the amount of the high-level ritual bronzes in this tomb. Though being disturbed, seven out of nine *ding* vessels here have the character 'Shi 尔' in their inscriptions, indicating the name of the tomb occupant. Therefore, given his high-level ritual bronzes, Shi is regarded by the excavators as the very first state ruler in this cemetery, even if he did not use the title 'Marquis' in the inscriptions of his bronze vessels. See Beijing 2013: 148-149.

emphasised – that of the Zeng lords in M65, M28, and M111, and of their possible consorts in M2, and M27 (Fig. 2-2.3a).[243] These burials are identified by a number of inscribed bronzes, carrying such titles as 'Zeng', 'Hou (Marquis)',[244] 'Zeng Hou (Marquis of Zeng)', 'Zeng Hou Jian (Marquis Jian of Zeng)', and 'Zeng Hou Kang 犺 (Marquis Kang of Zeng)'.[245] Although a few bronzes, drinking vessels in particular, are also found with the Shang style, family insignia and/or date inscriptions,[246] the 'Marquis' inscriptions strongly suggest a close relationship of the Zeng lords with Zhou practice. However, as we shall discuss later in this chapter, neither the Jī nor non-Jī surnames can be found in these inscriptions, so whether the elites at Yejiashan were as

[243] The identification of the female tomb to be paired up with M111 has been heavily debated, as no burials to the east match the size of M111. Archaeologists pick out two potential tombs, M46 and M50 (see Fig. 2-2.3b), but none of them show firm evidence that their owner was a consort of the tomb occupant of M111.

[244] In most of the cases, the Chinese term 'Hou 侯' here is translated as 'Marquis' in English, referring to the ruler of a Zhou regional state. Meanwhile, some scholars also argue that the title 'hou' may have been used to refer those people who based on borderland doing patrolling work ('Siwang 伺望' in Chinese) since the Shang period, see Xu 2011: 51-52. But in both of the cases, those people referred to as a 'hou' were likely to be associated with the Zhou central power.

[245] Not many direct links can be found between certain titles and tomb occupants, since inscribed bronzes with the same title often appear in more than one burial. For example, in total there are 16 bronzes with the inscription of 'Zeng Hou Jian': one in M3; three in M65; three in M2; and nine in M28 (see Table one in Zhang 2014: 67). Presumably, if all these bronzes were cast for the same person at the same time, the Marquis Jian could be regarded as the occupant of the earliest tomb of the four, see KG 2012.7: 51, and Zhang 2013b: 282. But given the fact that 'Zeng Hou Jian' vessels in M28 substantially exceed the numbers in other three tombs, the excavators have reconsidered their view in previous publications (WW 2011.11, and KG 2012.7), and argue that the Marquis Jian may have been the occupant of M28, but most of the scholars still believe that Jian was buried in M65. The excavator's opinion was presented by the chief excavator – Huang Fengchun at the 2013 Yejiashan conference in Hubei Wuhan (30/12/2013), which is published in Zhang Changping's paper, see Zhang 2013b: 277.

[246] The Yejiashan excavation revealed a number of clan emblems, often inscribed on drinking vessels, but all of them are very small in quantity. For example, M1 has three kinds of clan emblems: '', '', '' on four vessels: a *jue*, two *gu*, and a *jia*, all of which are drinking vessels in Shang style. See Beijing 2013: 148-165.

members of the Zhou royal lineage of Jī or non-Jī-surnamed 'outsiders' still remains uncertain.[247] For this reason, the features of their burial goods and related practice, as well as their relations with other regional traditions, become especially important to the discussion of who these elites were and how they saw themselves.

All of the major tombs at the Yejiashan site are distributed on the north-south axis of the site, oriented east-west,[248] and surrounded by middle-sized and smaller burials (Fig. 2-2.3).[249] The chief excavator argues that the locations of all the major burials had been carefully arranged, laid out starting in the north, with M1, and then going south, in order with an arrangement in three general groups, one after another: M65 and M2; M28 and M27; M111 and M46 or M50.[250] The major tombs all have wooden coffin chambers at the bottom of vertical shaft pits, with single or double wooden inner coffins,[251]

[247] The surname issues are especially relevant to the discussion of social identity of the Zeng people. For further discussion and some examples of the importance of the Jī and non-Jī surnames, see a section 'social identity' in Chapter I.

[248] All the burials in this cemetery are arranged with the occupant's head towards the east, unlike that for the Jī-surnamed Zhou practice (normally in north-south orientation). Similar east-facing examples in early Western Zhou have also been found in the non-Jī burials in Shanxi province, such as the Ba cemetery at Dahekou, Yicheng (Xie 2012), and the Peng cemetery at Jiangxian, Hengshui (KG 2006.7: 16-21).

[249] But ignoring their orientation, the layout logic of Yejiashan cemetery accords with the general regulation of a standard Zhou cemetery, see Sun 1998.

[250] This chronological sequence of the main burials is accepted by more archaeologists. See WW 2011.11, and KG 2012.7, Beijing 2013, Zhang 2013b, Zhang and Li 2014, Zhu 2014. But due to similarities on burial goods, some major burials, such as M28 and M65, are difficult to separate chronologically. Therefore, in some later papers, a few scholars in the field of ancient literatures challenge the current dating, and claim that M111 was the first Zeng ruler buried in this cemetery, and the later generations should be distributed in order from south to north (from M111 to M28, and then to M65, see a cemetery plan in Fig. 2-2.3). For further discussion of this viewpoint, see Han 2014a and Han 2014b.

[251] Due to decay, the quantities of coffin are not clear in some primary tombs, such as M28 and M111. But the remains show that both inner coffins from the two tombs had

surrounded by upper platforms against the pit walls.[252] Two of the earliest burials (M1 and M3) have waist pits (Fig. 2-2.3c),[253] and six major ones (M65, M25, M28, M111, M46, M50) have 'inclined tunnels' next to the pit edge, connecting the ground and pit walls (Fig. 2-2.3d).[254] The largest tombs M111 and M28 are situated at the highest point of the cemetery,[255] each with a sloping ramp towards its west,[256] accompanied by one

been painted, see Beijing 2013: 262-263. For further discussion of painted coffin as a burial feature of late Shang and early Western Zhou, see Wang 1996: 35.

[252] Most of the burial goods are found on the platforms in a deliberate arrangement. The bronze ritual vessels, for instance, were normally placed on the head side of the coffin, divided into food vessels, drinking vessels, and water vessels. Such a tradition also appears in contemporary Zhou tombs in the north, such as the burials at Baicaopo, Lingtai, Gansu (KGXB 1977.2: 99-130), at Zhangjiapo 張家坡, Xi'an, Shaanxi (Beijing 1965), and at Liulihe, Fangshan, Beijing (Su 2000: 3-302).

[253] See KG 2012.7: 32. Such waist pits and sacrificial dogs are believed to be a Shang practice retained by certain groups in the early Western Zhou period, see examples at Baicaopo, Lingtai, Gansu (KGXB 1977.2: 99-130), at Liulihe, Beijing (Su 2000: 3-302), at Beiyao 北窯, Luoyang, Henan (Beijing 1999c), at Qucun 曲村, Quwo 曲沃, Shanxi (Beijing 2000), and at Jiangxian, Shanxi (Xie 2012).

[254] Each of the six burials contains four to seven inclined tunnels with cross-sections in circular, square or oval shapes. See Beijing 2013: 263. As with the east-west orientation, the only places, that shared these tunnels with Yejiashan, are also located in Shanxi, in the Peng state and Ba state, see KG 2006.7: 18-19, and Xie 2012. There is also a similar example found in Beijing Liulihe M1193, but the 'tunnels' here are exposed without top (see Fig. 1-3.8), and some researchers believe they may have been used as sloping ramps, see KG 1990.1: 20-21.

[255] It is reported that tomb M111 very unusually held nineteen *ding* and twelve *gui*. However, by the end of 2015, only five *ding* and two *gui*, and some of the most representative burial goods, such as a five-part set of chime-bells (the bell-related discussions are put in Chapter IV to form a section of Zeng taste of bells), had been published. For the partially published M111 burial goods, see Beijing 2013: 112-146.

[256] Similar ramps are very common as in the Jin Marquis cemetery at Beizhao (WW 1993.3: 11-30, WW 1994.1: 4-34, WW 1994.8:4-21, 22-33, and WW 1995.7: 4-39). In previous research, the number of ramps is often referred to as a status symbol of the regional rulers (Han 2000: 108-109). As suggested by the Yejiashan excavators, there are at least three Zeng lords buried in M65, M28, and M111, but only two of them have ramps. Therefore, the number of ramps at the Yejiashan site seems not to be in consistent with the occupants' social status as state rulers. Indeed, in the Zhou period, such features like ramps, painted coffins, and bronze ritual sets, as well as their quantities in burials, reflected the occupants' wealth, which, to some extent, was related to the occupant's power and social status. However, these features are not necessarily correlated with specified ranks in the Zhou hierarchy, but some complexes determined by various factors. See related discussions in Falkenhausen 2006a: 98-111, and Rawson

or more horse pits.[257] Overall, such traditions of using shaft pits, coffin chambers, platforms, and ramps in burial practice match those of the known Zhou polities, implying an adoption of Zhou burial practice to a significant degree.

The Yejiashan burial assemblage was also in the Zhou style. Although a certain number of drinking vessels that had been popular in the Shang period, such as *jue*, *jia*, and *gu*, were maintained, the burial goods show a strong preference for the Zhou taste of food vessels. Headed by *ding* and *gui*, inscribed food containers are overwhelmingly emphasised in all the major burials, most of which are indistinguishable from the 'metropolitan bronzes'.[258] Meanwhile, as with the Yangzishan site, some special features, especially the flamboyant style bronzes (Fig. 2-2.4), complicate our understanding of the Zeng state. Imaginary animal-shaped lids on *lei* (Fig. 2-2.4a),[259] T-shaped flanges (also known as hooked flanges) on *lei* (Fig. 2-2.4b),[260] projecting

2013b: 8-10.

[257] The occupant in M28 seems to be the first ruler to set horse pits next to his tomb. There are in total seven horse pits in the cemetery, five of which are located at next to M28 and M111, see K1-7 in Fig. 2-2.3.

[258] The term 'metropolitan bronzes', as the name implies, refers to the bronzes made and used in the metropolitan areas (see the definition of the areas in Chapter I). The term normally refers to the Anyang bronzes and the standard early Western Zhou bronzes, which are traditionally understood as the ritual vessels with standard designs that had been widely employed in the Shang and Zhou realms, including a range of vessel shapes, such as wine vessels *jue*, *gu*, *zhi*, *zun*, *you*, *jia*, and food vessels *ding*, *gui*, *li*, and *yan*. Most of them have very similar appearances, with a solemn, restrained model, representing the highest grade of the contemporary ritual standards. In most of the cases, metropolitan bronzes are decorated with zoomorphs, such as eye-based animal facial features and bodies or their variants. See more discussion of zoomorphs on Shang bronzes and their possible origins in Neolithic jade caving in Rawson 1990: 26.

[259] For the two *lei* vessels (M111: 120, M111: unknown), see Beijing 2013: 132-135.

[260] For the two *lei* vessels (M27: 01, M27: 02) here, see Beijing 2013: 216-219. Notably, these *lei* and the *lei* showed in Fig. 2-2.4a all belonged to the flamboyant style, which

horns on *he* and *lei* (Fig. 2-2.4c),[261] bells on the underside of *lei* and *gui* (Fig. 2-2.4d),[262] and some special-shaped weapons,[263] were all popular in the Arc on the north and west, but were rarely seen in the Zhou metropolitan area.[264] Intact burials and careful excavations make it possible to get rich information from other materials that compose the burial assemblage as well,[265] such as jade, lacquer, pottery, stoneware, and some very rare materials like carnelian and elephant tusks.[266] The discovery of these materials strongly suggest that the Zeng many have been or wanted to be fully integrated into the Zhou ritual practice in North China on the one hand, while continuing to seek for foreign or exotic items by communicating with social groups from remote regions on the other.

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will be discussed further below.

[261] For the *he* vessel (M28: 166), see Beijing 2013: 96-99, and for the two *lei* vessels (M27: 01, M27: 02), see Beijing 2013: 216-219.

[262] For further information of the vessels with underside bells, see three *lei* vessels (M28: 177, M27: 01, M27: 02) in Beijing 2013: 92-95, and 216-219, and three the *gui* vessels (M50: 14, M111: 67, M126: 9) in Beijing 2013: 230.

[263] For examples of Yejiashan weapons, see a triangle *ge* (M28: 65), a cross-shaped *ji* 戟 (M28: 75), and a curved *yue* 鉞 (M65: 09) in Beijing 2013: 44-45, and 106-107.

[264] Take the exaggerative style *lei* vessels from M1, M27, M28 and M111 for instance. They are found with flamboyant flanges and/or knobs on top as realistic or imaginary animal heads. Similar examples can only be found in their neighbour Yangzishan site, and also in some distant regions such as Zhuwajie in Sichuan and Kazuo in Liaoning, all within the arc or territory.

[265] Apart from M111, the burial assemblages from all the mentioned tombs have been published. Although most of their assemblages have been broken up and published separately in several brief reports, it is possible to collect the whole ritual vessel assemblage in most of the key tombs. See JHKG 2011.3, WW 2011.11, KG 2012.7, and Beijing 2013.

[266] Carnelian beads in early Western Zhou burials are seen as foreign items showing contacts with the Inner Asia. See Shaanxi examples in Rawson 2013a. Elephant tusks, though have not been mentioned in any of the formal Yejiashan reports so far, imply a contact to some earlier Shang sites further southwest, such as Jinsha 金沙 and Sanxingdui in Sichuan, which had large collections of elephant tusks, see Chengdu 2000 and Beijing 2005a.

To sum up, the sites of Yangzishan and Yejiashan in the Suizao corridor reveal two Zhou regional powers – the E state and the Zeng state, living side by side in the southernmost reaches of the Zhou territory around 1000 BC. Both of their burial complexes, the ritual displays in particular, show a taste for objects with several origins, which can be linked to similar traditions located hundreds of miles away. Such interregional similarity was, and sometimes still is, discussed under a 'normative model',[267] being interpreted to be a result of the spread of ideas through contact, or migration of peoples in general.[268] It seems that so much attention has been put on the two ends of interaction, but not enough either on the movement in between, or on the reasons behind it. Therefore, the following sections are set to look at the material flows, especially the flow of metal and final products, of the early Western Zhou bronze industry, concentrating on its dynamic process, especially the ways in which bronzes were produced, circulated, used, and buried, in order to understand the social identity of the people lived in the Suizao corridor.

[267] The supporters of 'normative model' normally see a culture as a set of subjective norms, including all the ideas in a society, which could modify people's social behaviour. Such norms or shared ideas could be expressed in material remains. In the meantime, characteristic traits are highlighted to represent a society or a culture, and their differences are used to be compared with others. See Johnson 1999: 15-20. As discussed in the previous chapter, such an objective approach is very useful in underlining shared characteristics from one social group to another, but not quite helpful to understand the social identity of a social group. For the disadvantage of this approach, and for an example of shared Zhou norms, see a section 'Social identity' in Chapter I.

[268] Hodder 1978a: 3, and Johnson 1999: 18.

2-3 Production and circulation of bronzes

Although it is almost certain that the Zhou authority had stimulated a new way of producing and circulating bronzes after the conquest of Shang, the homogeneity on both the late Shang and early Western Zhou bronzes, especially the similar decorative styles and casting techniques applied on them, shows that China's bronze industry in this political transition period seems to have seen no comprehensive changes.

Producing bronzes

Bronze alloy and its manufacture are regarded as the core competence of the state in the Shang and Zhou period.[269] No later than the 15th century BC, craftsmen were able to use the piece-mould casting method[270] to create various shapes of bronze vessel with complex decorations, such as ground spirals, ribbons and motifs in relief,[271] and three-dimensional knobs such as horned animal heads. Such processes required different groups of professionals working on separate tasks. They may have been designated to live near casting foundries with fixed abodes,[272] and maybe even faced restrictions on

[269] An entry of the thirteenth year of Duke Cheng in *Zuo zhuan* (左傳·成公十三年) records: '國之大事，在祀與戎', which highlights two significant national affairs in Bronze Age China – sacrifice and warfare. Both of them were closely related to bronze manufacture.
[270] Piece-mould casting is named after the sections of clay mould pieces, which were used to cast bronze products through China's Bronze Age. For details see definitions of 'model' and 'mould' in the footnote of the next paragraph.
[271] The term 'motif' here refers to a unit of design seen on the surface of the bronzes. For instance, the animal masks in Fig. 2-2.2; a full motif unit of an animal mask includes pairs of eyes, eyebrows, horns, ears, a nose and a mouth.
[272] See discoveries of craftsmen's settlements next to bronze foundries at Beiyao in KG 1981.7, and at Zhangjiapo in Beijing 1963.

their movements.[273] So, few scholars believe that bronze manufacture was monopolized by the central government.[274] However, studies of bronze vessels from the Yangtze region and further south shows that in the Shang and Zhou period, craftsmen in the south were capable of producing versions of metropolitan bronzes from time to time.[275] They generally copied shapes and decorative schemes from the north, but could not, or more likely did not wish to, adopt their inscriptions.[276]

A recent discovery of clay moulds at Xiaomintun, Henan Anyang,[277] sheds light on the background of bronze production during the transition period between Shang and Zhou, relevant to this chapter in two respects. On one hand, some of the Xiaomintun clay fragments are found with fingerprints on the reverse side of their decorated surfaces, which were very likely to be caused by craftsmen's fingers when they pressed half-dried clay 'moulds' onto a 'model' to copy motifs from it.[278] This process, as some

[273] According to the transmitted texts, such as *Guo yu* 國語 (*Sayings of the States*), *Guan zi* 管子, *Zhou li*, and *Zuo zhuan*, some scholars believe that the craftsmen with same expertise should have lived together, and inherited their skills and occupations from their fathers, which may not have been even lightly changed over generations. See Yuan 2009: 69-70.
[274] Yuan 2009: 69.
[275] Rawson 1988: 233.
[276] Shi 1999: 41-42.
[277] KGXB 2006.3, and KG 2007.1.
[278] The notions of 'mould' and 'model' are extremely important to understand the piece-mould casting. A mould is made of the object to be cast, which should be identical with the final product, and a mould is something taken of the model which is then cut in sections to release the model. After firing, all the mould pieces were reassembled to form the outer mould for casting. Another essential clay part is the core, which is placed inside the mould to provide the vessel's cavity. Either by removal of the model's surface, or by an individual one, the core was made a little smaller than the model. The size difference may have been the thickness of the final product.

archaeologists believe, provides hard evidence of 'motif replication'.[279] The relations between clay model and mould have been widely discussed since 1980s, especially with respect to the question of whether a motif is made on model or on mould.[280] Statistics about the Xiaomintun discovery show that the local craftsmen may have used a far greater number of moulds than models in their casting process.[281] In this sense, archaeologists make a 'one-to-many' hypothesis ('*yimo duoqi* 一模多器' in Chinese) that the same motif could have been duplicated from individual models to more than one mould.[282] This idea seems to be correct in the case of making small pieces of

[279] Yue Hongbin 岳洪彬 and Yue Zhanwei 岳佔偉 argue: 'the backside of the hollowed clay model is full of finger prints... on which the main motif of animal masks and the ground spirals were all copied from a master model. Only the negative lines on the masks had been further processed because of the loss of detail after copying', see Yue and Yue 2014: 93, especially the fingerprints showed in figure 3. This casting process seems to be associated with the later 'pattern-block' casting technique represented by the products of the Houma foundry after the middle Spring-and-Autumn period. For this technique, see the discussion in Chapter IV. Most scholars believed that no 'pattern-block' of any kind was used before this period, except Noel Barnard. In his 1961 paper, Barnard suggested that most of the bronze decoration was possibly produced as 'ready-made blocks' in positive relief, which could be then fixed onto the model before the whole outer mould was made. Barnard seems to be one of the first scholars who noticed the process of the 'pattern-block' casting method before it was seriously proposed by Keyser in 1979, and he further applied this method not only to Eastern Zhou bronzes, but also Shang and Western Zhou products, see Barnard 1961: 144-145. But this argument was not supported by other scholars because of lack of evidence at that time.
[280] Robert Bagley is one of the first scholars who made detailed discussions on this topic, see Bagley 1987, 1990, and 1995. As he points out, between the Erligang 二里崗 and the earlier phases of Anyang, either model or mould could be used as motif carriers. But from the late Shang to the mid-Western Zhou period, craftsmen preferred to use models to make major motifs, which would be then transferred onto moulds, and refined with extra details afterwards. This idea is challenged by Lukas Nickel. Based on some examinations on some Zhouyuan moulds with Xu Tianjin, Nickel suggests that most of the motifs on bronzes should be made on moulds rather than models. For Lukas Nickel's argument see Nickel 2006, and for Bagley's response see Bagley 2009. Xu Tianjin's viewpoint here refers to an unpublished paper based on two of Xu's talks about the Shigushan discoveries at Oxford, 06/02/2014, and at UCL, 26/02/2014.
[281] See Yue *et al*. 2012.
[282] The models here were in clay or in other perishable organic materials like wood. For a summary of the term of '*yimo duoqi*', see Yue and Yue 2014: 98.

decorative components on vessel or certain types of weapon, since actual moulds are seen in excavations.[283] Meanwhile, a similar process was also possibly used in casting identical vessels, although, as they point out, firm evidence has not been shown in the Xiaomintun discovery at the current stage. But still, we can gain some insight from Xiaomintun that no later than the end of the Shang period, craftsmen were capable of transferring motifs from a single model to multiple moulds.

The Xiaomintun discovery also introduces a 'new style' of Shang casting, including elements such as a square base (possibly for a *gui* vessel) with vertical parallel lines and dragon schemes (Fig. 2-3.1a); a body of a rounded vessel (possible for a hook-flanged *ding* vessel) with vertical lines, triangular motifs, and dragon profiles (Fig. 2-3.1b);[284] and a rectangular pendant hanging beneath a handle (possibly for a *gui* vessel) with profiles of animal claw and tail (*chui'er* 垂珥 in Chinese, Fig. 2-3.1c). Most of the bronzes with these features used to be regarded as typical Zhou style products, originating in the Shaanxi Baoji area, as no similar examples have been seen in the previous Shang tradition or any earlier practice.[285] But now, as some scholars

[283] The small pieces of decoration components here refer to models of a human mask, *ding* legs, and animal-shaped handles. The weapon-related examples include models of spearhead, and moulds of arrowhead. For related images, see Yue and Yue 2014: 93-95, especially figure 3 and 4.

[284] The *ding* vessel showed in Fig. 2-3.1b also has hooked flanges, which, though we have no direct evidence, implies that the flamboyant style decorations have a chance to be included in this 'new style' of Anyang craftsmen.

[285] The reason why these bronzes may have been cast in present-day Shaanxi province is because ritual vessels with similar features have been exclusively excavated in Shaanxi Baoji, such as the newly excavated Shigushan site (with two important burials M3 and M4), or been looted from the adjacent areas, such as the famous case of Doujitai 鬥雞台 (also known as Daijiawan 戴家灣). The Doujitai bronzes were reportedly

suggest,[286] it is more likely that these features were locally invented or improved by the very last Anyang craftsmen, who possibly continued to work for the Zhou patrons after the leadership transition.[287] The Zhou people may have valued this new Shang style very much, and that is probably why it was common in both the Zhou centres and its regional polities, but not in any of the Anyang period sites.[288]

Circulating bronzes

If we are to discuss the spread of the early Western Zhou metropolitan bronzes to the Suizao corridor, it is necessary to consider firstly the wider issue of the circulation of bronzes in this period. After taking over the Shang craftsmen and their cutting-edge bronze casting techniques with the conquest, it did not take long for Zhou people to produce their own high-standard metropolitan bronzes as good as their predecessors in Anyang. Therefore, it is not a surprise to archaeologists that a Zhou-period burial contains two kinds of almost identical ritual bronzes, one of which is found with a Shang style clan emblem, and the other with the name of a Zhou Marquis.[289]

looted by a local warlord Dang Yukun 黨玉昆 in 1928. Thirteen of them have been passed through a variety of owners, and eventually housed in the Metropolitan Museum of Art in New York. For further information of the Doujitai bronzes, see Liu 2006. For the brief reports of Shigushan M3 and M4, see WW 2013.2, and WW 2016.1.

[286] See Li Yung-ti's argument in Li *et al*. 2007a.

[287] Some scholars further suggest that after the conquest of Shang around 1050 BC, the Xiaomintun site was probably still functional, serving as a major bronze casting foundry in Henan for some years, until King Cheng and the Duke of Zhou started the second conquest to put down Wugeng's 武庚 rebellion, see Lu 2011: 69.

[288] Take Kang Hou 康侯 *gui*, currently housed in the British Museum, for instance. Though the shape and decoration of this *gui* belonged to the Xiaomintun 'new style', its inscription shows that a Jī-surnamed elite was given a gift of territory after the successful defeat of a rebellion by the Shang, see Rawson 1992: 61-62.

[289] Here in Yejiashan cemetery we have an example to illustrate this situation. In M2,

For the Shang bronzes that are found in a Zhou tomb, there are two main viewpoints to explain this situation. Some scholars argue for a notion called 'dividing up of Shang booty (*fenqi* 分器 in Chinese)',[290] which refers to actions of looting and redistributing Shang bronzes (as well as jade and other valuable materials) after the conquest of Anyang. Large numbers of Shang bronzes with multiple family insignia and date inscriptions or other Shang style inscriptions were seized by Zhou and its allies. They were scattered and given to meritorious people as rewards, then brought to a variety of places, and ultimately entombed with their owners. The 'new style' Shang bronzes found in Doujitai and Shigushan, Shaanxi Baoji may be as a result of the *fenqi*.[291] Another possibility to explain this issue relates to the Shang people who defected (either actively or passively) and were accepted by the Zhou. As part of the Zhou, these Shang groups were able to obtain Zhou bronzes and other prestige goods, while sometimes they still needed Shang bronzes for their inherited Shang style ritual and burial activities. The cemetery arrangement that partly different from the Zhou practice in Beijing Liulihe may have been the result of this situation.[292] In this sense, the earlier burials at

there are two *ding* vessels 'Fu Yi 父乙' *ding* and 'Zeng Hou Jian 曾侯諫' *ding*, which share the same shape and decoration, but have different casting background in terms of their inscriptions. For a visual comparison, see Fig. 2-5.1.

[290] See Hwang 2012, and 2013.

[291] These Shang bronzes are believed to have been transported to the Wei River region by Zhou people or their allied forces after the conquest of Shang. Xu Tianjin examines the Shigushan bronzes and suggests that those inscribed bronzes with Shang inscriptions were looted, being brought back to Shaanxi by the Jiangrong 姜戎, one of the Zhou allied forces. Unpublished material based on notes of two of Xu's talks on the Shigushan discoveries at Oxford, 06/02/2014, and at UCL, 26/02/2014.

[292] In Liulihe Yan cemetery, people used two separate burial practices in different sections of a cemetery, which are believed to belong to different social groups, possibly

Yejiashan cemetery (M1 and M3) may also have had a similar background of Shang tradition.

For the bronzes of Zhou people, on the other hand, those with narrative inscriptions are normally believed to have been cast in the royal foundries, and the ways in which they were circulated are closely related to Zhou state control. Previous inscriptional studies show that, in order to keep their command over the long term, the Zhou court had intentionally maintained close ties with its regional rulers and officials. Several means are recorded on bronzes by which the central government entered into contact with its regional states, such as launching joint military activities,[293] doing perambulations of the Zhou realm,[294] bringing regional rulers or officials to royal ceremonies and

the Shang people and the Zhou people. For further discussion of this situation, see Beijing 2000b: 128-129.

[293] In the whole Western Zhou period (especially its early days), military activities were the most common occasions to see the central court and the regional states engaged with each other. Either protecting the regional states from potential threats by the royal armies, or providing military assistance in campaigns by the regional states, a number of those military communications were recorded in bronze inscriptions found so far. We can take the Chen Jian 臣諫 *gui*, unearthed in southern Hebei province as an example. Its inscription indicates that an official from the Xing 邢 state (named Chen Jian) had been fighting under the command of the Zhou king. It suggests that in the early period of the Western Zhou state, the regional polities might need the joint operation of the royal forces and the regional troops to secure a victory. See KG 1979.1: 23-26.

[294] The bronze inscriptions that specify the king's locations suggest that Zhou kings frequently moved around their realm and engaged in various activities from the main royal residences of Zhou, even at the end of the Western Zhou period when the state power had been weakened. Also, the inscriptions with location references show how often the kings stayed in places other than their residences, not only on the way to or from a military campaign, but in connection with religious activities, administrative appointments, or sometimes without any other known objective beyond meeting their subjects. For example, the Shi Hu 師虎 *gui* from the Shanghai Museum, the inscription of which indicates that the Zhou king appointed an official Hu at place named Duju 杜居. Although this place is unknown to us, it appears that the Zhou king appointed his officials in a certain place that was not in a known Zhou centre of the royal domain. For

rewarding them,[295] overseeing regional states,[296] and marrying non-Jī lineages.[297] A standard-designed early Western Zhou ritual vessel –'Yue Zi 越子' *ding* (Fig. 2-3.2), found in the newly excavated Yejiashan cemetery (from Yejiashan M2, marked as M2:2),[298] provides a good example of this kind of contact. Its inscription records two events in 38 characters:

further discussion of the Shi Hu inscription, see Guo 2002: 58, and Li 2008a: 192-197.

[295] Inviting regional people to the Zhou capitals and rewarding them with royal gifts was recognized as a way to show the hospitality of the Zhou court. For further discussion of the royal receptions see Khayutina 2010a. At regular royal receptions, Zhou king would normally make appointments of persons to various offices, charge them with particular tasks, bestow on them power insignia, or merely hand down gifts to his guests. The contents inscribed on the Shu Ze 叔夨 *ding* from the M114 at Beizhao Jin Marquis cemetery record the participation of a man named Shu Ze, a possible regional ruler, who was based in the Fen 汾 River valley of Shanxi, and invited to the state ritual conducted by the Zhou king in the capital Chengzhou, and awarded with some royal gifts. See Li 2001a: 39-42.

[296] The appointment of an overseer was another measure taken by the Western Zhou court to secure the king's political authority. Such overseers were installed in the regional states to watch over the local rulers, especially those states distant from the capital. Taking Zhong Chengfu 中冉父 *gui* for example, this bronze vessel was unearthed near Nanyang in south Henan. Its inscription shows that the overseer of the Shen state was a close descendent of the Zhou royal family (a son of King Yí), whose relatives held high positions in the local state. See ZYWW 1984.4: 13-16.

[297] The aristocratic marriages between Jī and non-Jī lineages are normally seen in the inscriptions on woman-related bronze ritual vessels. They are widely distributed in both the royal domain and the eastern lands. Several hundred inscriptions identify ritual vessels as dedicated to, made for or made by women, including presents given to women as a dowry by their parents or other relatives, wedding presents given to wives by husbands, vessels dedicated by sons to their (usually deceased) mothers, vessels made by women for themselves, for their ancestors, for their parents-in-law, or for other female relatives, like daughters and sisters. See Chen 2006: 212, and Khayutina 2010b: 6. A good example comes from a newly discovered non-Jī surnamed Ba state in south Shanxi, early Western Zhou period. The inscriptions on the Yan Hou Zhi 燕侯旨 *you* record an aristocratic marriage between the Ba and the Yan state. A Jī-surnamed Yan Marquis cast this *you* vessel for his Jī-surnamed aunt, who had probably travelled hundreds of miles from the present-day Beijing to Shanxi province and married a Gui-surnamed, member of the Ba elite. See Beijing 2011: 65-73.

[298] Beijing 2013: 172.

丁子（巳），王大侑（祐），成。戊（越）子蔑歷（歷），賞白牡一。己未，王商（賞）多邦。白（伯），戊（越）子商（賞）卣、貝一朋。用乍（作）大母乙尊彝。

On the day of *ding si*, the king held a ceremony. When finished, Yue Zi was rewarded with a white ox. On the day of *ji wei* (three days later), when some regional rulers were rewarded by the king, Yue Zi was rewarded again with a *you* vessel for wine, and two units of cowries. Herewith he made the *da mu yi* (Yue Zi's mother) treasured sacrificial vessel.[299]

Although no place name was mentioned, most scholars believe that Yue Zi was probably summoned to one of the Zhou capitals, since he was allowed to meet the king twice in three days.[300] To commemorate the honour, Yue Zi made such a ritual vessel (very likely in one of the royal foundries) and brought it back later to his homeland in Hubei, where it was eventually buried in the Yejiashan cemetery.

These narrative inscriptions show that the centrally-made bronzes could be acquired by regional groups through various interactions with the Zhou central court. Such activities are normally seen as important ways that helped the authority to control its regional states, and maintain a unified territory. Meanwhile, in exchange for power, the regional rulers were incorporated into the Zhou ritual-based system. Whether or not they were

[299] The interpretation here primarily follows the brief report of Yejiashan M2, and is also based in part on views of other scholars. For related sources, see WW 2011.11a: 14, and Li *et al*. 2011: 73-76.
[300] WW 2011.11b: 72-77.

Jī-surnamed lineages, the regional rulers, while their leader's position was fully acknowledged, were considered as the subordinates of the Zhou king, as well as the 'agents' of the whole Zhou state.[301]

2-4 Independent production

For the regional states, their ability for the independent production of bronzes has always puzzled archaeologists. Before diving into the local bronze production in the Suizao corridor, it is necessary first to look at the Zhou central foundries.

In the Zhou centres, large influxes of Shang craftsmen seem to have enabled the Zhou central foundries to mass-produce high-quality bronzes, even to take orders from distant areas.[302] The large quantities of tools and clay moulds discovered in the royal domain, as seen at Luoyang Beiyao,[303] Xi'an Zhangjiapo,[304] and Baoji Lijiacun,[305] give us an overall impression of the production capability of the Zhou centres. As discussed in the

[301] The term 'agents' here is borrowed from Li Feng, who indicates in his book of Western Zhou bureaucracy that '… the regional states were not independent "kingdoms"; instead, they were the active agents of the Western Zhou state', see Li 2008a: 269-270.
[302] Matsumaru Michio suggests that most of the bronze inscriptions that related to the king's gifts may have been drafted by royal scribes. The vessels were thus cast in the royal foundries, and then brought back to the regional states, see Matsumaru 1980: 127. Using the Ying state as an example, Jessica Rawson further suggest that the Ying was evidently under control of the Zhou elite, and '… if there was a central foundry it must presumably have been able to receive orders from areas as distant as southern Henan and Shandong', see Rawson 1999: 407.
[303] KG 1983.5
[304] Beijing 1963.
[305] The Lijiacun clay moulds are all unpublished, but some are currently housed in Zhouyuan Museum; based on notes of a conversation with Xu Tianjin at Oxford, 13/02/2014.

previous section, the centrally-made products were possibly exported to the regional states on various occasions, which created a regional consistency in bronze products in the early Western Zhou period.[306] At the same time, small groups of clay moulds from a few regional states, such as Yan at Liulihe,[307] and Jin at Quwo,[308] also suggest that these regional powers may also have had the ability to run local casting foundries in this period.

The current section will discuss the likelihood of independent production of bronzes in the Suizao corridor. Due to the absence of excavated settlements and casting foundries, as in the Yejiashan case,[309] it appears that archaeologists have to approach this question via traces on the bronzes themselves. After distinguishing different qualities of the standardly designed rounded *ding* from the Yejiashan site,[310] some scholars argue that the lower-quality and uninscribed *ding* were probably local imitations copying the inscribed versions from the metropolitan area. So the Zeng state may have had a level of capability in bronze casting.[311] With this idea in mind, the next sections will discuss

[306] For further discussion of this regional consistency, see an example of identical rounded *ding* in a section 'Exchanging clay moulds/models' later in this chapter.
[307] WW 1996.6: 15.
[308] Beijing 2000a.
[309] Archaeological survey shows that there is a contemporary large walled settlement at Miaotaizi 廟台子, one kilometres away from the Yejiashan site, which may have housed casting foundries of Zeng state in this period. But there is still no excavation planned at the current stage, see Huang and Huang 2013: 264.
[310] The comparison is carried out between two rounded *ding* from the same burial Yejiashan M65: 1) one of the five identical 'Zeng Hou Jian' *ding* (M65: 44); and 2) an uninscribed *ding* with similar shape and decoration (M65: 42). For further discussion, see Zhang 2013a: 47-48, especially the drawings and rubbings on page 48.
[311] See Zhang 2013a. In this paper, Zhang Changping also points out that the massive use of spacers on most of the rounded *ding* is a 'non-mainstream' casting tradition in

the possible origins of the flamboyant style bronzes and the vessels with underside bells unearthed in the Suizao corridor.

Flamboyant style – bronzes imitated locally

Flamboyant style bronzes make up another group that may have been produced outside the Zhou centre. These bronzes have prominent three-dimensional motifs, such as projecting horns, realistic or imaginary animal heads, and hooked flanges. A pair of bronze *lei*, found in 1980 from a hoard at Peng xian near Chengdu in Sichuan, is often chosen to be the representative of this style (Fig. 2-4.1). Apart from the motifs on the lid, the two *lei* look almost identical to each other.[312] Most of their decoration is arranged in horizontal registers in low relief, ranging from animal masks and coiled dragons with cattle and dragons in profile.[313] Exaggerated three-dimensional animal heads are set on handles and at the midpoint between them; as a result, the surface is separated into quarters by four rows of vertical flanges in the shape of successive hooks. Every detail seems to have been elaborately crafted: the animal heads are combined with realistic eyes and eyebrows (with parallel pinstriping designs), elephant tusks and trunks, wide ears and horns (Fig. 2-4.1a); and the upper surface of the flanges on lid have raised dots, imitating a bird's head in profile (Fig. 2-4.1b). Apart from Peng xian

the early Western Zhou period, which is another indicator of independent production.

[312] The only difference between the two *lei* is seen on their lids. One of them, currently housed in the Sichuan Provincial Museum in Chengdu, has two animal masks with four projecting horns, while the other one has four coiled dragons instead.

[313] Unlike more common motifs, such as the animal masks and dragons, the cattle with kneeling forelegs seem to be more popular in the Yangtze River region. For a further discussion on the motif of cattle and jade designs, see Rawson 1995: 30.

in Sichuan, similar decorative schemes are also seen at sites in other parts of the arc of territory, such as Shaanxi Baoji, and Liaoning Kazuo. The Suizao corridor is likely to be the first place attracting a lot of flamboyant style bronzes, but it is located outside the arc.[314] So far five *lei* and one *gui* from Yejiashan (Fig. 2-4.2a), and a three-part set of square *lei*, *you*, and *zun* from Yangzishan (Fig. 2-4.2b) can be recognised as bronzes with the flamboyant style.

In terms of surface decoration, both the Yejiashan and Yangzishan flamboyant bronzes have features that may have been borrowed from the Sichuan *lei* in Fig. 2-4.1. As showed in Fig. 2-4.3, the Yejiashan *lei* (M27: 1 and M27: 2) look very similar to the Sichuan version at first glance, being also equipped with similar decorative components, such as flanges with hooks, elephant trunks, and projecting horns. However, these features were finished to a remarkably low standard. If we compare them with that on the Sichuan *lei*: the imaginary animal head has been replaced by an asymmetric face (Fig. 2-4.3a), which is probably caused by poor mould assemblage; the hooked flanges on elephant trunks have been either removed or replaced by narrow strips, and the openwork is not really left 'open' in most of the places (Fig. 2-4.3b), both of which also come from less skilled mould makers.

[314] The appearance of the flamboyant style in the Suizao corridor may have been as a result of the extended river network (Fig. 1-4.3 and Fig. 1-4.4), which provided express passes for the features of the arc to be carried down to the middle reaches of the Yangtze and its tributaries. For the extended river network, see the definition in Chapter I.

Similarly, the Yangzishan *lei* (M4: no.35 in Fig. 2-4.3) can also be seen as an imitation of the Sichuan example, but in a more conceptual way. The whole vessel in general is like a 'patchwork' of several grotesque schemes, such as the irregularly shaped (or human-eyed) animal masks on the belly (Fig. 2-4.3d),[315] the flanges in the shape of birds or other eyed creatures (Fig. 2-4.3c), and the eyebrows with parallel pinstriping designs on its visual focus (Fig. 2-4.3c and d).[316] All of these can be traced back to the decorative elements on the Sichuan *lei*, which have only been transfigured or relocated to the current situation.

Therefore, based on what we have observed on the flamboyant style ritual bronzes in the Suizao corridor, it seems to be possible to distinguish the imitators' works from the originals. The differences in-between show that the local craftsmen in both the state of Zeng and the state of E may have had a tendency to imitate complex bronzes from their contemporaries in the arc of territory. If it was the case, the differences between them may also suggest that these lower-quality bronzes and the ritual vessels with 'patchworks' are likely to have been cast in local foundries within or not far from the corridor.

[315] There are in total six examples with 'human-eyed' animal masks known to us. Half of them come from the Yangzishan site (see Beijing 2009, photo nos. 31, 32, and 35), and the other three (two square-based *gui*, and one *you*) are kept by museums or private collections in the U.S. and China. For further discussions, see Li 1999b, and Zhang 2011b, especially the figure 2, figure 3, and figure 5 in Zhang's paper.

[316] These eyebrows had been copied from less obvious on the Sichuan *lei* (on the animal heads on handles, see Fig. 2-4.1a) to the main animal masks on the belly of the Yangzishan *lei* (Fig. 2-4.3d).

Underside bell – bronzes created locally

A discussion of bells may also assist our understanding of local production.[317] In ancient China, bronze bells were used in several ways in terms of their types, such as jingle bells, clapper bells, and chime-bells.[318] Among them, the small clapper bells cast onto the underside of bronze vessels are especially interesting, as they are normally fully decorated in raised lines with an inverted animal mask on both sides, but are concealed from view by hiding in the limited space behind downward projecting decorations, or inside the vessel's high ring-foot or square base (Fig. 2-2.2c, and Fig. 2-2.4d). Such bells are sensitive to movement, but although audible, were hardly noticed. Meanwhile, the ways in which they were cast could not easily be adopted by other traditions, since rather than being welded onto the underside surface, most of these bells were actually pre-cast and installed into the outer mould of the vessel before casting, which greatly increased the casting difficulty, and deterred people from using this idea widely.[319] In the early Western Zhou period, almost all of these bells with an archaeologically reliable source were associated with square-based *gui*,[320] such as the four out of five *gui* with bells from Baoji in Shaanxi province (Fig. 2-4.4a),[321] a pair

[317] The current chapter only discusses the combination of bell and bronze vessel. The use of bronze bells will be further compared and discussed in next chapter.
[318] See further discussions of bells and their different usage in Chapter III.
[319] See different ways of casting bells onto a vessel in Zhang 2006, and Zhang 2011b.
[320] The vessels with underside bell here in this part only refer to those excavated from confirmed early Western Zhou tombs. There are of course other early Western Zhou examples. For example a square-based *gui* from Hunan Taojiang 桃江 (KG 1983.9), and a *zu* 俎 from Liaoning Huaerlou 花爾樓 (Beijing 1996, no.18). But as hoarded goods, their problematic dating excludes them from the current discussion. See further discussion in Gao 1988.
[321] Four of the *gui* are found in the Yu state cemetery, including BZFM1: 7, BZFM1: 8, BZFM1:10, and BZM13: 20, see Beijing 1988. The other one comes from Linjiacun 林

from Yicheng in Shanxi province (Fig. 2-4.4b),[322] and three from Suizhou in Hubei province (Fig. 2-4.4c).[323] The general shape of this type of *gui* and its decoration of animal masks perpetuate a Shang tradition of round *gui*, while the square base and rectangular structures under the handle show that most of them may belong to the 'new style' dated to the end of the Shang period. Additionally, another notable fact is that this kind of bell was also used below the large wine containers, *lei*, in this period. Only four excavated examples are known to us, and interestingly, all of them were found in the Suizao corridor, and all were associated with the flamboyant style bronzes (Fig. 2-4.4d).

The idea of combining a clapper-bell with bronze vessel seems to have come from Lijiaya culture, one of the late Shang contemporaries, located at the middle reaches of the Yellow River between Shaanxi and Shanxi, on the steppe and the Central Plains border where bell-headed weapons and chariot adornment (jingle-bells mostly) were popular in the Shang and Western Zhou period.[324] The material culture of Lijiaya culture is thought to be closely related to the traditions of both Anyang and the steppe region.[325] The material remains here include Shang metropolitan bronzes on one hand,

家村, see WW 1988.6. Three of them (BZFM1: 7, BZM13: 20, and the Linjiacun *gui*) are in flamboyant style.

[322] This pair of *gui* was recorded in a temporary exhibition named 'Faxian Ba Guo 發現霸國' by the author at the Shanxi Provincial Museum, 22/09/2012.

[323] Two of them, M50: 14, and M111: 67, have been published, see WW 2011.11, and Huang and Hu 2014a. The last *gui* comes from M126, an unpublished tomb. The bell and loop did not survive, but the connecting part between loop and the vessel's underside surface is still visible. This observation is based on notes, recorded by the author in the storage at the Suizhou Museum, Hubei, 17th Sept 2014

[324] See Lü 1987.

[325] Some archaeologists point out that the metropolitan bronzes from the Lijiaya culture may have been imported to the region (or even looted). For a discussion of trading

and portable weapons and tools with typical steppe features (for example animal-headed or bell-headed weapons) on the other. Meanwhile, a number of bronzes with unusual features, such as the inverted animal masks on *you*,[326] the horn-shaped *gong*,[327] and the vessels with bells below the footing, are believed to be local products, variants of Shang central style and steppe features.[328] One of the first underside clapper-bells known to us was cast inside a small ring-footed wine vessel – *gu* from Shanxi Shilou 石楼, roughly dated to the early phases of the Anyang period on the basis of the metropolitan bronzes excavated along with it.[329] Unlike most of the metropolitan *gu* in Anyang, the funnel-shaped body makes this vessel a little 'top-heavy'. Simple decorative spirals concentrate only on its ring foot, inside of which there is a suspended clapper-bell, swaying and ringing when the vessel is moved (Fig. 2-4.5).[330] In the Lijiaya culture, bells with a clapper or a jingle-ball are normally used as individual bells, or associated with bronze vessels,[331] weapons, tools, and chariot adornments. It seems

activities between the highland area and Anyang, see Cao 2014a: 196-200.
[326] See WW 1960.7: 51, no. 12.
[327] See WW 1960.7: 51, no. 9.
[328] All of the mentioned vessels here are very special and have never been seen in any other contemporary archaeological centres. For a related discussion, see Li 2003.
[329] For the brief report, see WW 1960.7. The material culture of Shanxi Shilou may have belonged to the Lijiaya culture, which had been heavily involved in the trade and exchange network between Anyang and the north-western borders of the Shang. For further discussion of different components of the Lijiaya culture, see Cai 2008: 11-32.
[330] Cao Dazhi argues that this *gu* seems to be 'non-Anyang', see Cao 2014: 102-103.
[331] There is also a contemporary pair of *dou* from Shanxi Baode 保德. The brief report in 1972 shows that there are 'jingle balls' inside their ring feet. But in a later authoritative catalogue in 1998, this description was changed to 'suspended bells'. See WW 1972.4: 62, and Beijing 1998: no.49. This chapter chooses to follow the original report for two reasons: 1) a similar bronze *dou*, currently housed in the Shanghai Museum, is reported to have a jingle ball inside an interlayer of its ring foot, see Beijing 1998: no.50; 2) both of the Shilou *gu* and Baode *dou* are currently displayed on raised transparent platforms in the same gallery at the Shanxi Provincial Museum, but only the *gu* is provided with a mirror underneath to show its underside bell to viewers. It is

that bells and their sound were an indispensable part of local people's life, which, as some scholars suggest, may be related to nomadic pastoralism on the borderland between the steppe and the Central Plains.[332]

Although the 'royal attitude' towards bells is still not clear at the current stage,[333] the Zhou is likely to have been familiar with the tradition of using bells, as the Zhou people had been evidently associated with those from the steppe or the arc beyond the central China border since the proto-Zhou period,[334] where bell-related bronzes were frequently used. Therefore, it is not surprising to see a number of bells in association with ritual bronzes appearing in the royal domain, which are all dated to the first half of the early Western Zhou period in terms of their decorative styles, and interestingly, they are all found with the type of *gui*, and this type only (see Fig. 2-4.4a and 2-4.4b). Such an exclusive use implies that the combination of *gui* and underside bells may have been deliberately arranged. In the meantime, although rarely inscribed,[335] all these *gui* vessels are have been found in major burials of non-Jī surnamed families, for example the largest burials in the cemeteries of the Yu and Ba states.[336] Some scholars believe

most likely that the *gu* and the *dou* do not have the same structure on their underside, and the bells in *dou* cannot readily be observed.

[332] Dai 1993.

[333] So far no Zhou royal burials or cemeteries have been located.

[334] The Zhou people are regarded by Jessica Rawson as outsiders to the central China, who eventually became statesmen after the conquest of Shang. Rawson 1989: 87-93.

[335] Only one out of the seven, the BZFM1: 7 from the Yu state, has been inscribed with 'Yu bo zuo bao zun *gui* 弹伯作寶尊簋', see Beijing 1988: 24-29.

[336] Six out of the seven vessels here are found in Yu and Ba cemeteries. The only one left is found in Linjiacun, located close to the Yu state cemetery. So this burial may also have belonged to the Yu state as well. See WW 1988.6: 92-93.

that in Zhou practice it was a privilege to use such 'elevated' vessels with square base or high ring foot, and the square base may have been invented by the Zhou craftsmen particularly for their top-level elites.[337] However, as we discussed above, it is almost certain that neither the idea of the square base nor the use of the underside bell originated locally in the Wei River valley. But based on the geographical proximity between the Wei River region and the Lijiaya culture, it is hard to avoid the possibility that the use of bells in the Zhou centres could have been inherited from the neighbouring Lijiaya culture.

If the emergence of bronze *gui* with bells in the Zhou centres can be understood as an integration of the square base from the Shang 'new style' and the idea of underside bells from the Lijiaya culture, then the massive use of underside bells in the Suizao corridor can be seen as a combination of the concept of the bell from the north, and the flamboyant style bronzes from China's southwest. There are now three examples of square-based *gui* with such bells known in the corridor (Fig. 2-4.4c).[338] Except for the decorated bells which are similar to the ones with raised line of animal masks in the north,[339] the shape and decoration of these *gui* are also reminiscent of that from the royal domain.[340] Among them, the so-called 'Nangong 南公' *gui* from Yejiashan M111

[337] Zhang 1999: 72.
[338] Apart from these three examples, a square-based 'E shu' *gui* with an underside bell (currently housed in the Shanghai museum) is also believed to have come from the Suizao corridor, but due to the lack of archaeological record, it has been excluded in the current study.
[339] See photos in Beijing 2013: 230.
[340] For the similarities of *gui*, compare section a and c in Fig. 2-4.4.

(M111: 67) has been widely discussed. As one of the few inscribed bronzes with such bells,[341] this *gui* has attracted archaeologists' attention for two reasons: 1) the chief excavator of Yejiashan claims that its inscription shows that the M111 tomb occupant was a Jī-surnamed elite, closely related to the Zhou royal family;[342] 2) the basic decorative components on this *gui* are also seen on the mentioned square-based *gui* in Fig. 2-4.4a (especially the BZFM1: 7, BZM13: 20, and the Linjiacun *gui*), including flamboyant style flanges set in the middle of the major animal masks, three-dimensional animal-headed handles with rectangular structures, and most importantly, the bells on the underside. Apparently, the local groups from the Suizao corridor and those from the Wei River valley shared the same preference of casting bells on the underside of elevated *gui* vessels. But the corridor people seem to have gone beyond that. They were also very interested in combining bells with other types of flamboyant bronzes. As we have discussed earlier, the large wine container *lei* from both Yejiashan M27 and Yangzishan M4 are likely to be local imitations of the flamboyant style *lei* from Sichuan.

[341] Only two out of seven vessels with bells are found with inscriptions, which are Yejiashan M111: 67 and Yangzishan M4: no. 35.

[342] This viewpoint is still debatable. The inscription on Nangong *gui* – 'Kang zuo la kao Nangong bao zun yi 犻作剌考南公寶尊彝' refers the 'Nangong' as Marquis Kang's ancestor. In the meantime, another bronze inscription on one of the later chime-bells found in the Spring-and-Autumn Wenfengta cemetery (M1) also records the name of 'Nangong', who was documented as a key figure helping King Wen and King Wu to conquer the Shang, and was then commissioned by the king (not specified) to go to the south to establish a base there and rule the local groups. Despite the gap in between, the Yejiashan excavators claim that these two names show that the early Western Zhou Zeng and the Eastern Zhou Zeng are one and the same state. The Spring-and-Autumn Zeng state is believed to be a Jī-surnamed polity, since a few inscriptions on the Zeng bronzes mention the character 'Jī'. So in that account, this early Western Zhou Zeng state would also be a Jī-surnamed state as well. See Huang and Hu 2014b. For further discussion, see Chapter IV.

Apart from the quality differences, another thing that may tell them apart is that the majority of the corridor *lei* have underside bells, while none of the known Sichuan *lei* have similar attachments. That is to say that the bells on the corridor *lei* may have been deliberately cast, and may have been related to corridor people's particular interest in bronzes with soundable components.

This viewpoint is readily apparent if we extend our discussion to all the contemporary *lei* vessels between Sichuan and the Suizao corridor. Apart from the flamboyant type that we have discussed above, we also have a common type of *lei*, very popular in the early Western Zhou metropolitan areas (Fig. 2-4.6). Despite plain surfaces, most of these large wine containers have a pair of handles on the shoulder and a single one in the middle of the lower belly on its front. The handles on top are often equipped with solid rings (Fig. 2-4.6a), which are believed to help people hold the vessel when it is tilted (as showed in Fig. 2-4.6b). In fact, these rings may have an additional function. When sagging naturally, they are susceptible to movement. So just like the underside bells, these rings can also make a sound of metal on metal when the vessel is moved. Therefore, with or without the rings become a good indicator to reveal the taste of locals. Among the contemporary *lei* known to us, nine of them are found in Sichuan,[343] but

[343] These vessels come from two major discoveries at Peng xian Zhuwajie in 1959 and 1980. Most of them are currently housed in the Sichuan Provincial Museum. See a very brief report of the 1959 discovery in WW 1961.11 (this site is then reported again in WW 1980.12), and a report of 1980 discovery in WW 1981.6. Due to the low quality of archaeological reports in the 1980s or earlier, none of these reports provide acceptable pictures or accurate object descriptions. Therefore sometimes it is necessary to contact museum staff to get detailed information about these vessels.

none is equipped with underside bells,[344] and only one of them has rings on its handles. By contrast, the sites in the corridor provide six *lei* vessels in total. Each and every one of them has two rings on the handle, and four of them have underside bells at the same time. Take the flamboyant style *lei* from M27, again, for example (Fig. 2-4.7). Unlike the metropolitan *lei* with solid rings, the M27 *lei* only have two small and thin rings. Their size and strength make them very hard to hold the weight of the vessel (Fig. 2-4.7a). As light, movable metal components, however, they are very sensitive to movement, and may even have been better than the bells on the underside to produce sound (Fig. 2-4.7b).[345] These features, along with other soundable components on all the *lei* from the Suizao corridor, look as though they were done deliberately for sound effects. Therefore, it seems that not only can the corridor people cast bronzes by imitating others, but they can also create their own versions with a preference for bells and sound.

However, both the preference for using rings and the combination of the bronze *lei* and underside bells are not a real sense of 'creation' to the corridor people. What they did was use current techniques and ideas available to them to 'customise' their own ritual vessels. Such a process is archaeologically visible, but the ways in which these techniques and ideas were acquired, and the social and political reasons behind them

[344] This information was confirmed by the museum staff on 27/05/2015.
[345] The author made a close examination of this pair of *lei* in the storage at the Suizhou Museum on 17/09/2014. It turned out that when moved gently, the rings were more likely than underside bells to sound in most of the cases.

are also worth thinking about. To further discuss the related issues, the next section will put the corridor materials into the context of a trade and exchange network in early Western Zhou period.

2-5 Trade and exchange activities

Trade and exchange, though rarely discussed in the research field of Chinese archaeology, are considered to be important ways to drive flows of material and ideas between groups and individuals. They are seen as parts of a social process to maintain alliances, distribute resources, and establish prestige and status.[346] The exchange of ritual bronzes is an example. As mentioned above, the Shang bronzes found in Zhou burials can sometimes be understood as simple gifts to the Zhou allied forces in exchange for their contributions in the conquest of Shang, while the Zhou bronzes with narrative inscriptions could be seen as efforts by the Zhou authority to keep the government running, and maintain alliances with its regional states.

However, most of the related discussions only mention part of the exchange process by taking the side of the Zhou centres. The other end of the process, the regional side, also needs to receive attention. Why were those regional powers, no matter how far away they were located, willing to accept their gifts, follow their instructions, and ally with the Zhou? Focusing on the Suizao corridor, the current section discusses this question through the trade and exchange network, starting with two important, and possibly

[346] Renfrew 1984: 91.

exchangeable, materials in the early Western Zhou bronze industry: bronze ingots, and clay moulds.

Mining and exchanging raw materials

Both the Zhou and its predecessors had established their capitals in north China, where mass production of bronzes took place.[347] To meet the needs of the bronze industry, lots of mineral and human resources were required with stable raw material suppliers, and large numbers of technical personnel for mining, smelting, and transporting.

The origin of mineral resources has been a popular topic of discussion for years, especially in the field of Archaeological Science. Based on the studies of highly radiogenic lead isotopes, some scholars believe that the metal that was used in Anyang came from south China, the west of the Sichuan basin (Fig. 1-1.1).[348] Due to the enormous distance in between, this viewpoint is highly controversial, but archaeologists do find large ancient mining and smelting sites along the Yangtze River, such as at Daye

[347] Most of the state-controlled bronze casting foundries are located within or not far from the capital, see Shang examples at Miaopubeidi 苗圃北地 (Beijing 1987), and Xiaomintun 孝民屯 (KGXB 2006.3, and KG 2007.1) in Anyang, and Zhou examples at Zhangjiapo, Xi'an (Beijing 1963), at Beiyao, Luoyang (KG 1983.5), and at Lijiacun 李家村, Baoji (an unpublished material based on notes of a conversation with Xu Tianjin at Oxford, 13/02/2014).

[348] See Jin 1999. However, a recent study at Peking University shows that China's southwest is not the only place showing traces of the highly radiogenic lead isotopes. The metal supplier for Shang might have come from Zhongtiaoshan 中條山, a triangular area in Henan bounded by the present-day Changzhi 長治, Hebi 鶴壁, and Handan 邯鄲. Unpublished material based on notes on one of Wu Xiaohong's 吳小紅 seminars at Oxford, 20th Jan 2015.

in Hubei province,[349] and at Tongling 銅陵 in Anhui province.[350] In both of the locations, mining and smelting activities may have been carried out since the Western Zhou period,[351] or even earlier.[352] All the sites are located close to deep water and/or main water channels, and normally accompanied by the remains of small-scale settlements related to smelting,[353] storing,[354] and casting activities,[355] which imply that the local people might have belonged to specialty groups with mining and smelting skills.

[349] For the Daye Tonglüshan site, see Beijing 1999b.
[350] The Tongling area in southern Anhui is situated on the south bank of the Yangtze River. Archaeologists have found a number of mining and smelting sites here, distributed in three major locations: Jinshan 金山, Muyushan 木魚山, and Fenghuangshan 鳳凰山, all in the south-eastern part of the Tongling area, see Qiu and Ke 2014: 76-77.
[351] The dating issues of these sites have been long debated. In a 1992 paper, Hua Jueming suggests that 'the material basis of the long-lasting Shang and Zhou tradition of using bronzes was copper mining and smelting... Millions of tons of slag show that the Tonglüshan area had large mining and smelting sites. The sites in Tongling area were even larger... lasting from the dynasties of Shang and Zhou to Tang and Song', see Hua 1992. This idea has been widely accepted by researchers, but little solid evidence supported his argument of Shang and Zhou activities, until recent years. In a latest paper, Yu Yongbin and others trace silicon and arsenic in the remains from Anhui Tangjiadun 湯家墩 and Shigudun 師姑墩, and argue that no later than the Western Zhou period people in the Tongling area had bronze smelting and casting activities, see Yu et al. 2015: 109-111.
[352] According to the Tonglüshan primary report, the wooden support in some of the tunnels and shafts can be dated to the late Shang period, see Beijing 1999b: 183-184.
[353] For remains of furnaces, slags, and charcoal, see DNWH 1988.6: 80, KG 1993.6: 509, and KG 2013.6: 22.
[354] For storage buildings for metal ore, found at Daye Wulijie 五里界, see Beijing 2006a: 234-238.
[355] For evidence of bronze casting, see stone moulds at the Wanyingshan 萬迎山 site in KG 1993.6: 508; see stone and clay moulds at the newly excavated Shigudun site in KG 2013.6: 20.

In these local sites, metal ores were normally smelted and prepared as small metal ingots for delivery,[356] possibly to the north.[357] As portable and valuable materials, these ingots were likely to be owned by a regional power that controlled the specialty groups or closely cooperated with them. In the Zeng state for instance, the burial assemblage of Yejiashan M28 includes two metal ingots: one round (M28: 160), and the other rectangular (M28: 161).[358] These ingots are functionally distinct from other burial goods, but were buried on the north upper platform together with bronze ritual vessels.[359] This arrangement is sufficient to show their significance to Zeng rulers, suggesting a close relationship between Zeng and the mining and smelting group nearby.[360] According to some generally later transmitted texts, the Zhou government may have been fully in charge of the mining and transporting of mineral resources.[361]

[356] The little evidence we have suggests that different ore producers may have made metal ingots in different shapes. For example, excavations near the Daye Lake revealed a few round ingots, approximately 1.5 kilogram each, which may have come from the Tonglüshan site, see KGXB 1982.1, and Beijing 1999b: 153-154. Down the Yangtze River to its lower reaches, rhombic ingots are found in several sites in Tongling, see those ingots found at the Muyushan site, the Wanyingshan site, and other related sites in the Tongling area in DNWH 1988.6: 80, and KG 1993.6: 20.

[357] Scientific analyses suggest that at least some of the north bronzes contained metal from the Yangtze region. See the 'element link' between bronzes from the Yu state in Shaanxi and the Tonglüshan finds in Beijing 1988: 639-645.

[358] JHKG 2013.4: 49.

[359] See JHKG 2013. 4, and Beijing 2013: 52-53.

[360] Normally caused by weathering of copper ores, malachite is also found in the Yejiashan site with other burial goods, such as in burial M37. The discovery of malachite shows that both the metal ores and their derivatives may have been used as exchangeable goods in this period. See Huang and Huang 2013: 268.

[361] This situation appears on the much later text, *Zhou li* 周禮, as: '廾人掌金玉錫石之地，而為之厲禁以守之 (The Gongren was in charge of the places with mineral deposits such as bronze, jade, tin, and stone through rigid control)'. Zheng Xuan 鄭玄 added comments for it: 'The bronze, jade, tin, and stone here refer to the mountainous areas with related mineral deposits, and Gongren was the one who controlled both the mountains and the local people who protected the areas'. *Zhou li*: 420.

These ingots may have been used as tribute of valuable materials to the Zhou kings, strictly handled by designated personnel, and transported to the state-controlled casting foundries in north.[362] These accounts are, however, most likely idealized descriptions, saved and recorded by later generations. Some scholars have already pointed out that the Western Zhou state control was probably not as strong and far-reaching as the later texts claimed.[363] The Zhou central foundries may have been the largest consumer in the ingot exchange network, but that does not mean they could get more raw materials freely than others. In fact, as the most important essentials for casting, metal ingots were in great demand for every participant in this network. It seems that only the regional powers, who lived in a neighbourhood where they had direct access to mineral resources, could have direct control of the mineral sources. Situated in the north-western part of China, the Zhou centres were apparently not in a favourable position in the competition with those regional powers in the south. But the central foundries did have scale and a technical edge, which enabled them to produce high-quality ritual bronzes and other prestige goods. It is now looking increasingly likely that at the centre

[362] In a section 'The normal ways to circulate bronzes', Yuan Yanling uses different interpretations of the Nine Tributes (Jiugong 九貢 in Chinese) in the *Zhou li* to show that metal was one of the Nine Tributes, and therefore the Zhou may have imposed strict restrictions on each step from metal ores to bronze products. For further discussion of the Nine Tributes, see Yuan 2009: 70-72.

[363] Based on the distribution of Zhou metropolitan artefacts, Jessica Rawson suggests that large tracts of southern and eastern China were beyond Zhou control. See Rawson 1999: 403-405. Edward Shaughnessy uses 'war with the Rong 戎' to illustrate the loss of control of the eastern lands, which is referred to as 'the eastern states' independence', see Shaughnessy 1999: 323-325. Zhang Changping links the decrease of archaeological sites in Hubei after the mid-Western Zhou period to the text-based King Zhao's death, and suggests that the Zhou lost control of the areas to the east and south of the Suizao corridor after Zhao's reign, see Zhang 2013b: 284.

of this network, the centrally made goods may have been sent in exchange for metal supply and other raw materials needed by the central government.

The 'centrally made goods' here are not necessarily confined to the Zhou ritual bronzes and prestige goods. From the discoveries in the Suizao corridor and other archaeological centres in this period, we can also see a number of lower-quality copies, which, as we have discussed above, are believed to have been made by local craftsmen. In previous studies, the decorations on locally made vessels are often thought to be directly copied from the high-quality bronzes themselves. But in next section, we will use examples from the corridor and the arc of territory to address another possibility in the exchange network.

Exchanging clay moulds/models

The technical advantages of mould making in the Zhou central foundries is particularly relevant to our discussion. The whole bronze industry in the Shang and Zhou periods was built on China's well-developed ceramics.[364] As early as the Erlitou 二里頭 period (c.a. 2000 – 1600 BC), different functional areas had been set up to process ceramic for bronze casting, such as the mould baking and preheating sites in Yanshi 偃師, Henan.[365] The piece-mould casting method distinguished itself by separating clay models, cores, and moulds, and using mortise and tenon joints to piece the adjacent moulds together.[366]

[364] See Rawson 2012.
[365] For early bronze manufacture in Erlitou period, see Beijing 2003b: 109-121.
[366] For further discussion of the Shang and Zhou clay moulds, see Tan 1986.

No later than the Anyang period, craftsmen were able to use the multi-mould technique to produce complex decorative schemes, and were likely to copy motifs from one model to several identical moulds.[367] Then, after the conquest, all of the most advanced mould-making and bronze-casting techniques were obtained by the Zhou people.

In previous sections, we have compared some lower-quality flamboyant style bronzes from the corridor and their possible originals from Sichuan in terms of their decorative styles, and we also have discussed the possibility of independent bronze production in the Suizao corridor. But in the early Western Zhou period, when the aesthetic difference of the same type of bronzes seems to have been minor,[368] relying on bronze decorations only is not enough to differentiate their origins, not to mention getting a clue about the social groups their owners belonged to. The two identical *ding* vessels – the 'Fu Yi 父乙' *ding* (M2: 4) and the 'Zeng Hou Jian' *ding* (M2: 5) in Fig. 2-5.1 form a good example to illustrate the difficulty. Both of them are excavated from Yejiashan M2, a burial of the possible consort of a Zeng ruler. Like other contemporary *li*-shaped *ding* (sometimes referred to as *fendang ding* 分襠鼎 in Chinese), each of them has a deep, rounded body with two vertical handles on top, supported on three tall cylindrical legs. Every single leg vertically corresponds to one third of the vessel body, fully filled by an animal mask with two rounded eyes bulging out from the surface, and flanked by

[367] For related discussion, see a section 'producing bronzes' above.
[368] The regional consistence of bronze shape and decoration of the early Western Zhou period makes it very hard to differentiate ritual bronzes of the same type, especially the metropolitan bronzes which shared the same designs.

two dragons in profile. The only difference between them seems to be their inscriptions. The 'Fu Yi 父乙' *ding* was inscribed with a typical Shang style date inscription 'Yi', while the 'Zeng Hou Jian' *ding* had a typical Zhou Marquis title – 'Hou'. Therefore, it is very likely that the original owners of these vessels belonged to two different social groups from different places, but when making such vessels, their casters clearly followed a standard manufacturing procedure. In fact, this situation is very common among early Western Zhou bronzes. It is generally accepted that the designs of metropolitan bronzes originated in Zhou centres, but so far no consensus has been reached about how different groups of craftsman learned to design ritual bronzes that were identical with centrally-made examples. To resolve this issue, some scholars bring up the idea of the movement of craftsmen. One possibility is that after the conquest of Shang, groups with casting skills were reassigned by the Zhou king to the royal domain and to his regional states.[369] This perspective indeed supports the existence of the central and regional foundries, but such a one-time event cannot explain how those regional craftsmen managed to keep up with the current casting traditions as time went on. To compensate for the weakness of this argument, another idea has been put forward. Some scholars argue that there were possibly one or more independent or semi-independent groups of skilled craftsmen, who travelled from one place to another, and took orders from local employers.[370] Given the degree of craftsmen management in the early Western Zhou states, this idea seems to be more suitable for later periods, when

[369] Wang 2004, and Yuan 2009: 72.
[370] Zhang 2009b: 369-371, 2013a: 47.

the Zhou state power had been weakened, and regional powers had risen. So it looks that none of the viewpoints is tenable enough for the whole Zhou period.

In our search for other potential ways of making identical bronzes and keeping pace with the Zhou centres, 'clay moulds' offer another possibility.[371] They are normally seen as one of the essential intermediate goods in Shang and Zhou bronze industry by scholars, but hardly anyone seems to notice their *mobility* in the trade and exchange network.[372] As mentioned in the preceding section of producing bronzes, most of the clay moulds have been excavated at bronze casting foundries, where they had been decorated, inscribed, heated, and shaped into matching pieces for assembling.[373] According to the general casting procedure, they were then joined together and prepared for pouring metal. But if we stop here, it seems most people have overlooked their characteristics at the current stage: the clay moulds are now in small portable pieces, not fragile, fully decorated,[374] sometimes inscribed, and thus with fairly high added value to be exchangeable goods. As we have discussed, some of the virtues here can

[371] The 'clay moulds' here is a general term particular in the current discussion, which also includes 'models', 'cores', and other materials in the piece-mould method that made of clay.
[372] In fact, in previous studies, it seems that they have never been discussed as an exchangeable material, which can be brought from one place to another.
[373] The clay moulds found in a bronze casting site at Lijiacun, Shaanxi Zhouyuan, demonstrate the different stages of the mould-making process. This information is based on notes of a conversation with Xu Tianjin at Oxford, 13/02/2014. Notably, these stages do not necessarily follow in that sequence, and commonly repeat and overlap from time to time.
[374] The moulds might also be partly decorated as semi-finished goods, if the craftsmen who received these moulds were able to finish the work themselves. This could be another possibility caused the lower-quality bronzes, which were made locally in the regional foundries.

also be seen in metal ingots, which together make them an important component in the exchange network in the Shang and Zhou periods. However, scholars have ignored the exchange value of clay moulds for several reasons, and lack of solid evidence is probably one of them. After casting, most of the moulds would have been fragmented. Even if some larger pieces survived and have been found by archaeologists, they are normally treated as local casting waste but not something imported from elsewhere.

Nonetheless, 'no conclusive evidence for this idea' does not mean there is no clue to further approach the possibility of mould exchange. In doing so, we may look again at the flamboyant style bronzes from the Yejiashan site. Apart from the *lei* vessels with hooked flanges in M27, there is also an unflanged version of the flamboyant *lei*, found in M28 and M111 (see three examples in the first line of Fig. 2-4.2a). Unlike the metropolitan *lei* known to us (Fig. 2-4.6), the shape of these smaller jar-like vessels is more spherical. Resting on a slightly splayed ring foot with a thickened rim, the round body rises from inward-sunk base to round shoulders. They are recognised as flamboyant style bronzes because they have three-dimensional animal heads on handles, and some have an exaggerated horned animal coiling its snake-like body around the top of the lid.

There are in total seven similar examples known so far, all found in the areas far away from the Zhou centres: one from Liaoning (Fig. 2-5.2a);[375] three from Sichuan (Fig. 2-

[375] Only one *lei* with other five vessels were found at Beidongcun 北洞村 hoard no.2

5.2b);[376] and three from Hubei (Fig. 2-5.2c).[377] Although far away from each other, all of these vessels were deliberately decorated with the same design patterns. The body has three basic registers on the chest, the belly and the foot. For the sake of simplicity, we only discuss the front side (see rubbings in the lower part of Fig. 2-5.2). The decorative motifs are symmetrically distributed along the vertical axis, with two head-to-head coiled dragons on the chest, and two regular dragons in profile on the foot.[378] Unlike most of the metropolitan bronzes with only one animal mask arranged on the visual centre, their belly has two full-size masks squeezing side by side in the limited space. This crowded feeling also comes from smaller animals in profile occupying spaces among the major motifs, such as the dragons under the major animal masks, the birds or dragons next to the coiled dragons, and the water buffaloes replacing the upward noses of the coiled dragons. Most of the major or minor decorations here are common motifs on the contemporary early Western Zhou bronzes.[379] It looks like the designer of these *lei* had randomly selected certain motifs, and put them on the vessels without considering whether or not they were appropriate to be there.[380]

in 1973, see KG 1974.6.

[376] Five *lei* were found at the Zhuwajie hoard in 1959, see WW 1961.11.

[377] One *lei* from M28, and two from M111 (only M111:120 has been repaired and published) were found in the Yejiashan site in 2011 and 2013, see Beijing 2013.

[378] A slight difference can be seen on the foot of the Kazuo *lei*, which has to two pairs of head-to-head dragons (four in total on the front side, see Fig. 2-5.2a). This arrangement may be related to a different casting background of the Kazuo *lei*, which will be further discussed in the following part of this section.

[379] All the motifs on this type of *lei* can be seen on their contemporaries, except for the motif of the water buffalo in profile, which is only seen in South China.

[380] For a similar feeling or impression of this type of decoration, see Feng Hanji's 馮漢驥 comment in WW 1980.12: 41.

Such a 'patchwork' feeling becomes more apparent when some wrongly presented motifs are observed. Among the seven *lei*, except two (1959 Peng xian *lei* no.2, and Yejiashan M28: 177 in Fig. 2-5.2), each of the remaining vessels has a band of dragons in profile under the animal masks at the visual centre. If you look closely, it is very easy to see that the bands on four of them turn out to be upside-down (Fig. 2-5.3a), and only the one from Liaoning Kazuo has its dragons positioned in the right way (Fig. 2-5.3b). This presents a paradox: if we understand the upside-down dragons were set intentionally for this specific vessel type, it does not explain why only the Kazuo *lei* used regular dragons; while if we understand the upside-down dragons were set accidentally by some unskilled craftsmen, it is not understandable why four of them, excavated at several places hundreds of miles away from each other, took the same wrong way to present the dragons.

Therefore, these upside-down dragons may have been neither deliberate attempts nor casting mistakes. Indeed, such upside-down arrangement is unlikely to have been acceptable in the Zhou central foundries. Even for the provincial casters, such repetitive 'mistakes' are extremely abnormal. Therefore, rather than 'personal choices' and 'technical errors', these upside-down dragons were more likely to have been caused by normal operations of craftsmen who had very poor understanding of the motif, as if they did not care about whether dragon's upside faces up or down. As mentioned previously in this chapter, bronzes with upside-down motifs are also found in the Lijiaya culture in north China, which are considered as local people's 'unauthorised'

reinvention based on both the dominant Shang casting and their own understanding.[381] In this account, it is likely that these upside-down dragons may also have been made in a similar context, by provincial craftsmen who tried to borrow the centrally-made motifs, but failed to make them correctly, or did not care about them. In the meantime, this situation further implies that, though distributed widely, these *lei* vessels with crowded feeling may have been designed in the same casting tradition, possibly by the same group of craftsmen.[382]

In this sense, our next question will be asked about the Kazuo *lei*, which was likely to have been imported to Liaoning in terms of its unique crowded design, but with a band of regular dragons. If we look back at the mobility of clay moulds, it actually provides us an alternative means, implying that the idea of this type of *lei* may not have arrived at Liaoning in the form of a final product,[383] but in the form of mould pieces, which may have given the local casters a chance to correct the upside-down dragons, and make

[381] For a Lijiaya *you* vessel with upside-down animal masks, see an image published in *Zhongguo Qingtongqi Quanji* 中國青銅器全集, vol. 4, Beijing 1998: no.139.

[382] Referring to the creator of them, if we have to choose one local group, either from Sichuan or from Hubei (as the four *lei* with upside-down dragons were excavated from the two provinces), rather than the Yejiashan people who should have learned the central motifs very well, it seems more likely that those upside-down motifs were done by the craftsmen from Sichuan, and then brought to Hubei in the form of final products. Sichuan did have a strong non-metropolitan bronze casting tradition, for example the locally made bronzes found in the Sanxingdui 三星堆 site in the late Shang period. So if there were local foundries in the Zhou period, craftsmen there were likely to have a certain degree of casting technique, but they may not have known everything about the current motifs on metropolitan bronzes.

[383] Of course, if we turn this around, the Liaoning *lei* could also have been the prototype of these specially decorated vessels. But in either case, it was not possible for the overall design patterns to have travelled in the form of the final product.

other adjustments.[384] Although the hard evidence to support this idea may have long gone, it should not prevent us from making suggestions about the 'mechanics' of mould exchange. Presumably, there was a trade and exchange network of intermediate goods among casting foundries in this period, in which design ideas and patterns could travel from one place to another with clay moulds. The central foundries, as the owners of the most advanced casting techniques among contemporaries, had the ability to offer a variety of high-quality moulds, as well as certain combinations, as packages to the network. These moulds could be acquired, copied, and modified by regional craftsmen, which may lead to a few possibilities as follows: First, we do not exclude the possibility that local craftsmen could make bronzes as good as the centrally-made ones by directly using imported moulds. Theoretically, the more high quality bronzes were in demand, the more efforts would be needed for the locals in exchange for mould packages from the network. This demand could be one of the major driving forces to run the exchange network, but comparing with directly making orders to the central foundries, this option might lead the local craftsmen to take greater risks of disappointing the patrons if their work did not meet the standards. Therefore, the local foundries were more likely to use imported moulds as prototypes to make their own copies.[385] As the second option, the advantage of these copied moulds is that more than one bronze vessel could be

[384] As mentioned earlier, the foot of the Liaoning *lei* is also a bit different. It doubled the dragons, equating their quantity with the number of dragons on the belly register under the animal masks. This change may be related to the correction of the upside-down dragons.

[385] See the 'one-to-many' replication process discussed in a section 'producing bronze' previously in the current chapter.

produced as identical as the centrally-made. But due to the loss of the mould quality during replication, or the lack of casting technique in the local foundries, the quality of these bronzes were probably not as good as the products from the central foundries.[386] In the Yejiashan site, the different qualities of the metropolitan bronzes mentioned earlier in this chapter may have been a result of this option.[387]

As can be seen from the first two options, the exchange network may have provided the local craftsmen with a 'database' of high quality moulds, with the current motifs and design patterns of the period, which in turn raises their third option – a second creation. By recombining the imported moulds on the basis of their own understanding, the local foundries could make their own version of bronzes. The 'patchwork' designs on the seven *lei* might have emerged in such a context. The coiled dragons, animal masks, and the regular dragons in profile, all of these motifs may not have come from the same set of moulds in the first place. The reason why they are awkwardly squeezed on the *lei* is probably because these moulds had been selected, copied and modified to fit the locals' own designs. In this manner, the improperly placed dragons may have been used just because the designer thought reversed or not should not make any difference, and the upside-down dragons may be a better fit for the space. Then, once this local

[386] Of course, this replication process can also be achieved by copying design patterns directly from existing bronze vessels. But 'how many mould pieces were needed', and 'how to separate the outer mould sections in the right way', all of these technical questions contributed to a quandary for the craftsmen, which may have made it even harder for them to copy motifs from clay model to mould.

[387] The metropolitan bronzes here refer to the two identical *li*-shaped *ding* from Yejiashan M2, and the lower-quality rounded *ding* from Yejiashan M65.

combination was fixed, it could also travel to other places with a package of moulds through the exchange network.[388]

In summary, let us come back to the Suizao corridor to see so far what kinds of material have been discussed in the exchange network. The first is raw material – the metal ingots. The geographical advantage of the corridor, as well as the excavated ingots at Yejiashan tomb M28, implies that the Zeng state may have played a role as metal supplier in this network, exchanging metal ingots for prestige goods or necessaries. The second is intermediate goods – the clay moulds. Although we do not find anything directly related to mould exchange in the corridor, the identical bronzes in different quality in M2 and M65, as well as the lower-quality flamboyant style bronzes in M27, are presumably a result of using imported moulds, or their local copies. The third is the final product – the bronze ritual vessels. Among those discussed above, the square-based *gui* with 'Nangong' inscriptions may have been made in the Zhou central foundries, and the pair of *lei* with upside-down dragons were probably cast by the regional craftsmen from outside the Zhou realm, and imported into the Suizao corridor together.

[388] When the package reached another provincial foundry, the local craftsmen were also able to make new adjustments based on their own understanding. The corrections on the Liaoning *lei*, as well as the other two *lei* using enlarged animal masks to replace the upside-down dragons (see M28: 177, and 1959 Peng xian *lei* no.2 in Fig. 2-5.2), may be as a result of this process. In the meantime, the pair of flamboyant style *lei* from M27, imitating the Sichuan *lei*, could also be related to it.

In fact, in selecting foreign materials (either the final products or intermediate goods), the choices in front of the local groups in the Suizao corridor were probably much more than those we have discussed so far in the current chapter. But the local groups seem to have paid special attention in the interaction with the Zhou centres and the south-western China. 'Why were they so interested in these areas?' will be our next question.

2-6 Identity construction

It is always a danger to approach social identity through material remains, since not all of the excavated materials available to us are able to represent the related social groups and their behaviours. Sometimes material remains were serendipitous, situational, and can even be purposefully arranged.

This risk becomes more severe in boundary studies. Apart from material remains, researchers also need to pay continuous attention to the negotiation between the individual and collective identities. As indicated in a related study, rather than individual identity, sometimes people from borderland lay more stress on showing their collective identity to take advantage in resource competition with other social groups. By contrast, people living in the central area are not so keen on doing this.[389] Therefore,

[389] In a study of relationship between local people's social identification and material culture, Ian Hodder uses a social group from Lake Baringo, Baringo County, Kenya, as an example to examine the differences of social features between boundary people and central people. He argues that people from the borderland, who are in the face of increasing competition from their neighbours, prefer to strictly follow the regulations of their own group, choosing representative materials to show their own identity, such as ceramics and clothing. While for the central people in the social group, or those living in the areas with less competition, materials of their own identity are not that important.

in a subjective sense, social identity is constructed, and can change with the shifting of geopolitics on the boundary. To understand the relationship between people's behaviour and their social identity from a local's viewpoint, this section adopts research methods from both instrumentalists and primordialists, and focuses more on 'change' and 'anomaly' in the borderland material culture.

Though it only was used for a century or so, the Yejiashan Zeng state cemetery provides us with some information to approach the social identity of the Zeng people. If we review its major burials from north to south in a chronological sequence (Fig. 2-2.3a and b), it is interesting to find that the burial tradition here seems to be a bit anomalous. As we know in most of the state cemeteries in this period, only the elites of the same ruling family were qualified to share the same cemetery (for example the state rulers and their consorts). They were normally buried in a certain positional relationship in order at the core of the cemetery, such as the burials in the Jin Marquis cemetery at Beizhao (Fig. 1-3.1). Therefore, similar burial practices were passed down from one generation to the next, constituting a stable tradition. In the Yejiashan cemetery, however, it seems that their burial practice, ritual vessel assemblage, and even the taste of bronze ritual vessels changed several times in a few short decades. As a local group living in the Suizao corridor, such a frequent change in their burial and ritual practices is highly unusual, which implies that the social identity of the Zeng people may have changed at several stages in this period.

For further discussion, see Hodder 1978b: 57-62.

Stage one – Shang identity

The first stage is marked by the short interest of the Zeng people in the Shang style of ritual and burial practice. As mentioned earlier, all of the major burials in the Yejiashan cemetery were arranged in an east-west orientation, unlike most of the Jī-surnamed burials in the early Western Zhou period.[390] This tradition began with Yejiashan tomb M1, a high standard Shang style tomb equipped with a waist pit and a sacrificed dog, and a large number of ritual bronzes inscribed with the name 'Shi' and his date inscription 'Fu Gui'. [391] These signs can be seen as 'givens' in the view of primordialists,[392] the real objective existence adopted from the formative environment of the tomb occupant. Or, they can also be subjectively assumed by the occupant, who possibly did not have a Shang identity, but desperately wished to become one. In any of the above cases, one thing is certain, the M1 occupant saw himself as a member of the Shang elite when this cemetery was initially settled. Whether this local group had its root in the corridor, or migrated from other places, such self-awareness differentiated it from the dominant Zhou tradition.

[390] The burial orientation in the Jin Marquis cemetery is an example. For further discussion, see a section 'Jī-surnamed Zhou burials' in Chapter I.
[391] Although there are exceptions, these signs normally represent a Shang tradition of burial and ritual practice. See the 'Non-Jī-surnamed Zhou Burials' in Chapter I.
[392] For the primordialists' approach in boundary studies, see further discussion in the section 'Social group and boundary study' in Chapter I.

Apart from Yejiashan tomb M1, a waist pit is also found in M3.[393] Located in the northernmost part of the cemetery (Fig 2-2.3c), these tombs can be seen as a burial set, probably belonging to the close members of the earliest ruling family. Although using a Shang style coffin chamber, these members were not exactly the same as the people who lived in the Shang period in terms of their burial assemblage. The M1 occupant, for instance, had far more food vessels than wine containers, indicating that they were fully aware of the Zhou dynasty preference for food vessels. It seems that at this stage, the Zhou people's emphasis on food vessels had already become valued in the corridor. Only their primordial attachment to the Shang identity still controlled the subjective identifications of the earliest ruling family.

Stage two – Shang identity with a Zhou title

The second stage emerges with the granting of the title – Zeng Marquis. As can be seen in Fig 2-2.3, the largest burials next to the small Shang group are a male tomb M65 and a female tomb M2. But neither the Shang style waist pit, nor the use of the date inscription in M1, continued in these burials. Instead, a Marquis title of Zeng state, 'Zeng Hou Jian', appeared on a number of core vessels in their burial assemblages. This title does show that the M65 occupant, Jian, was probably the current state ruler, the leader of the local group in this stage. But the sudden emergence of his title makes us have to wonder how it was adopted.

[393] For details of M1 and M3, see the section 'The Yejiashan Zeng cemetery' above.

Some scholars suggest that the Yejiashan cemetery belonged to a group of Shang people, who accepted the Marquis title from the Zhou,[394] or made up a title to be Zhou people for some reason.[395] While others believe that the local people were Jī-surnamed Zhou people, who had granted the title as they were closely related to the Zhou royal family.[396] The subjectivists' approach may provide us with another angle to understand this situation, which may have been related to the trade and exchange of resources. From the viewpoint of instrumentalists, a social group sometimes can be understood as a political or economic phenomenon. The subjective identification of a social group is seen as an instrument, changing with the alternation of political or economic benefits. As mentioned, people from both the corridor and the Zhou centres were all involved in a large exchange network of bronze casting. Zeng with raw materials was at one end, and the Zhou with technical advantage was at the other. In the exchange process, as we have discussed earlier in this chapter, when the Zeng people decided to contact the Zhou centre in the adoption of the current food vessel-centred ritual assemblage and the popular designs on the clay moulds, they had already started to rethink their social identity and the boundary between them and the Zhou. As they chose to follow the Zhou, it did not really matter whether the Marquis title was granted by the Zhou authority, or

[394] See Li *et al*. 2011: 68, and Li *et al*. 2013: 58.
[395] Tani 2013: 1077-1073.
[396] See Huang and Hu 2014b. However, if the Yejiashan people did indeed have a Zhou identity, then the seemingly Shang identity of the M1 tomb occupant, who is regarded as the first ruler of the local social group, can be very hard to explain. Thus, this viewpoint is not supported in the current thesis. For the Nangong *gui* and the related issues, see further discussions in Chapter IV.

was ‘self-styled’. The moment this title appeared on the Zeng bronzes, the original identifications of the local group started changing.

However, in such a short period of time, it is unlikely that the M65 occupant switched his social identity completely from Shang to Zhou, which involved a series of changes in ritual and burial practice, and more importantly, the negotiation between their own Shang behaviour and the dominant Zhou identity. Therefore, what he would most likely to have done was take the Marquis title, as well as the related inscribed vessels (such as his four identical *ding* with Jian inscriptions), not having adjusted his behaviour according to the Zhou practice. Another detail may also support this viewpoint. Unlike other contemporary Zhou regional rulers, the Marquis Jian seems not to have been interested in bringing his own ritual set with him to the afterlife. There are in total 16 ‘Zeng Hou Jian’ vessels known to us in this cemetery, but they were distributed in four different burials, including M2,[397] M3, M65, and M28. Although Jian had a full ritual set in the Zhou standard during his lifetime, it seems that he chose to be buried in a rather conservative old Shang tradition.[398] In fact, if we ignore the inscriptional differentiation, the ritual bronzes and their assemblage in general did not change much in the generations from M1 to M65. It seems that the behaviour and inner sense of the M65 occupant are not consistent. Therefore, at least in his generation, using such a

[397] As a looted tomb, M2 is excluded in the current section.
[398] In his 2014 paper, Zhang Changping points out this conservative trend in the burial practice of the Zeng Hou Jian-related burials, which is very different from the contemporary Zhou practice, see Zhang and Li 2014: 74.

double standard implies that the local group still had the 'primordial attachment' to the Shang identity, which slowed them down in adopting the Zhou practice.

Stage three – Zhou identity

Although being granted the Marquis title, so far their subjective awareness still shows that the Yejiashan people were among the 'outsiders' of the Zhou culture. But this situation soon changed in the third stage. After M65, the following three major burials – M27, M28, and M111 are of the greatest importance to the cemetery in terms of their high-standard tomb structure and burial assemblage. The Nangong *gui*, found in the largest tomb M111, is often used to link the ancestor of the Zeng people to the text-based younger brother of King Wu, with an aim of demonstrating that the Zeng was a Jī-surnamed Zhou state.[399] This explanation is less convincing than many people would like to believe.[400] However, the Nangong *gui* itself does provide us with some important enlightenment other than in its text, such as its combination of the underside bell from the north and the flamboyant style from the south, implying that local people's social identifications with the Zhou identity may have been initiated with these three burials.

Referring to the northern tradition in Yejiashan, the wide use of 'inclined tunnels', starting from the M65 generation, has already suggested a deep link to the burial

[399] For further discussion of King Wu's brother Dan Ji Zai 聃季載, see in Huang and Hu 2014a, while for another link to Nangong Kuo 南宮括, see Huang and Hu 2014b.
[400] For the text-based explanation of Nangong, see further discussions in Chapter IV.

practice of people living in Shanxi (Fig 2-2.3d).[401] Meanwhile, more striking examples come from the underside bells and the rings on the vessel handles. From M28 and M27 onward, the Yejiashan people started to consciously use bell-related bronzes or other types of sound-making bronzes in their ritual practice, which can be directly linked to people in the arc near the Zhou centres, as well as other nomadic pastoralism-related groups at China's north-western borderland. In fact, such burial and ritual practice can be seen as a collective memory from the north, primordially attached to the Zhou people. Just like them, before settling in the corridor, the local group possibly had rich life experiences in the north as well. But in the first generation in the Yejiashan cemetery, for some reasons, such memories were not brought to the surface, until in later generations when they had been instrumentally amplified with the strengthening of subjective identification with the Zhou identity among the corridor people. On the other hand, the interactions between the Zeng people and those living in the south-western China might also reflect local people's social identification of the Zhou identity. From the creation of tomb M28 onwards, the corridor people started to take an interest in the flamboyant style bronzes, trying to imitate them locally, and even combining them with their own tradition of using bells. Although it is conjecture at this point, by exchanging design ideas and patterns of bronze ritual vessels with other groups in the south, and adjusting vessel structures to their own preferences, the local people may have no

[401] The inclined tunnels next to the pit edge, as mentioned earlier, were widely used in the Yejiashan site, including major tombs such as M65, M28, and M111. Similar burial practice is only seen in the contemporary non-Zhou states in Shanxi, such as Peng and Ba. For further discussion, see the section 'The Yejiashan Zeng cemetery' above.

longer seen themselves as the ‘outsiders’ of the Zhou group, but the representative of it. From then, the social identity of Zeng people had completed the transformation of their social identity from Shang to Zhou.

2-7 Conclusion

Although the Yejiashan cemetery served for only a short period of time, from the change of its material remains over several generations, we can see the penetration of Zhou tradition into the Suizao corridor in the early Western Zhou period. The Zhou court knew well the importance of keeping good relations with the corridor people. In order to get stable supplies through the exchange network, also to install a pro-Zhou power in the important pathway to the Yangtze River region, the central government used all means to placate and win the trust of the corridor people. This is evident in looking at the large amount of high quality ritual bronzes with Zhou titles. However, if the Zhou could not make the corridor people to subjectively realise their Zhou identity, all of their efforts would have been fruitless. Fortunately, through local people’s different choices in the exchange network, as well as the adjustments of their burial tradition and the taste of bronze ritual vessels, we can see a gradual change of their subjective identification over generations.

CHAPTER III – Post-Ritual Reform Period

From the mid-9th to mid-7th century B.C.

3-1 Introduction

As discussed in the preceding chapter, through the changes in selecting bronzes and their related ritual and burial practices available in the exchange network, we can see that the Zeng people had completed a transition from non-Zhou to Zhou identity over three generations in the early Western Zhou period. Such transition is visible archaeologically as the Zhou carried out a number of social and political transformations after the conquest of Shang,[402] and the Zeng people came to follow them. Similarly, the current chapter focuses on another cross-cultural conversion – the

[402] The social and political transformations here refer the ways of early Western Zhou state control that were different from the Shang, including the setup of the Zhou regional states, the negotiation between the Jī-surnamed and the non-Jī social groups, and the setup of a new trade and exchange network.

'Ritual Reform' after the mid-late Western Zhou period. In the period of this reform, we continue to see the corridor people as indigenous inhabitants, using their local responses to the overwhelming social and political reform to present their underlying social identity. The chapter highlights the importance of subjective choices of the corridor people, and argues that they were likely to use the Zhou identity as a means to take control over the Suizao corridor after the Ritual Reform.

3-2 Major archaeological sites

Unlike the previous period, the archaeological sites dating from mid-9th to mid-7th century BC are far more widespread in the Suizao corridor than earlier ones (Fig. 3-2.1).[403] Altogether 15 sites are considered in the current chapter: four in the north-western zone;[404] eight in the central zone;[405] and three in the south-eastern zone,[406] which are all listed in Tab. 3-1 with their burial complexes.[407] Two locations among

[403] Among the archaeological data in the current chapter, the materials from the burials of commoner or lower-level elites, and collected or handed-down items, are only seen as additional evidence of the Zeng burial and ritual practice, which will be specified when involved in discussion.

[404] This zone contains 12 burials in four sites, including Xiaoxiguan, Duanying, Caomenwan and Guojiamiao. See WW 1973.5, KG 1975.4, JHKG 1983.3, and Beijing 2005b. In a recent excavation in 2014-2015, the Caomenwan site is confirmed as a part of the Guojiamiao cemetery.

[405] Eleven burials in eight sites are located in this zone, including Taohuapo, Xiongjialaowan, Huangtupo, Yidigang, Zhoujiagang, Hejiatai, Wudian, and Xuguang Zhuanwachang. See WW 1973.5, WW 1980.1, KG 1982.2, WW 1982.12, JHKG 1984.1, KG 1984.6, JHKG 1985.1, WW 1989.3, JHKG 1994.2, and KG 2007.8.

[406] This zone has three sites far away from each other, including Sujialong, Xibeitai, and Yingcheng Zhuanwachang. See WW 1972.2, JHKG 1983.1, JHKG 1996.4, and JHKG 2011.2.

[407] Twenty two of them have been confirmed to be Zeng sites, see Beijing 2007c, and Zhang 2009b. The other four have two sources: 1) some sites have been excluded in the previous Zeng studies as there is no firm evidence to support the claim that these finds belonged to the Zeng tradition, such as the sites at Xiaoxiguan, Yingcheng, and

them are especially relevant to our discussion, namely the Sujialong site in the south-eastern zone, and the Guojiamiao cemetery in the north-western zone (Fig. 3-2.1).

Sujialong site

Instead of being sited at river confluences, the Sujialong site is located at a transition area between the Zhang River and the Dahong Mountains, in the south-eastern zone of the Suizao corridor. Although it seems that the sites in this zone are far away from the main body of the corridor,[408] they are in fact closely connected to others through the local river network. At can be seen in Fig. 3-2.1, both the rivers Zhang and Dafu originate in a small mountainous area in the Dahong Mountains, the birthplace of a number of major river channels leading to both the central and the south-eastern zone, such as the Lang, Jun, and Yun. All of them pass by one or more archaeological sites, like 'outposts' set up in the transition areas, implying that these rivers may have been used as particular pathways between the heart of the corridor and the surrounding areas.

Guangshui 廣水 (see WW 1973.5, WW 1989.3, and JHKG 1996.4); and 2) some sites are actually located within or very close to Zeng cemeteries, but for some reasons they have been excluded from the previous Zeng studies, such as the Bajiaolou 八角楼 M80-5 site in the Yidigang cemetery. Based on private communication with Zhang Changping (05 May 2013), he avoided using this site in this discussion of Zeng as he was not sure whether the finds from the Bajiaolou M80-5 and the Bajiaolou 80-10 (in later period) belong in the same burial or not. In this chapter I would like to pay special attention to the former, not because Zhang ignores it, but on account of certain types of bronzes found here. This site, reported in WW 1980.1, has 2 *ding*, 1 *hu*, 1 *pan*, and 2 'chime-bells'. The so-called 'chime-bells', or more relevantly a set of large clapper bells here show very interesting patterns that may be linked to either Zeng traditions or those from other areas in north.

[408] The Sujialong site and the other two burials in the south-eastern zone are at least 30 miles away from each other, and all of them are separated from the Suizhou area by the Dahong Mountains.

Therefore, the Sujialong site is likely associated with one of the communication routes to the Yangtze River region.

The Sujialong site contains a seemingly high-level burial found in 1966 with 97 bronzes, headed by two matching sets of food vessels, including nine *ding* in decreasing size and seven *gui* in the same size (Fig. 3-2.2a).[409] Two major vessels in the *ding* set were inscribed with the title of 'Zeng Marquis', indicating that this burial may have belonged to a ruler of the Zeng state.[410] It is a bit strange that such a large number of bronzes, and bronzes only, was vaguely reported to be 'found under a small hillock' in the original report, without further information provided by the excavators.[411] Therefore, most archaeologists had to quote this site on the assumption that this assemblage may have been hoarded, until a recent excavation in 2008 found another burial nearby. As shown in Fig. 3-2.3, an east-west orientated tomb, marked as Sujialong M2, is located 25 metres to the east of the 1966 finds (marked as a black triangle). Though M2 is partly damaged, it still reveals a four-part set of *gui* vessels (Fig. 3-2.2b), which, together with the matching sets found in 1966, characterise the typical Zhou burial assemblage of this

[409] These two sets here can be further divided into two groups in terms of their inscriptions and decorations. For the further discussion, see the section 'Matching set of bronze vessels' in this chapter.
[410] WW 1972.2: 47.
[411] This lack of information is common in archaeological reports before the 1990s, which is normally explained as 'limits of field archaeology'. This term refers to both the early fieldwork technologies, especially low-level recording methods, such as photography, mapping, and drawing, and the lack of systematised approach by the excavators. In a number of brief reports in that period, field archaeologists were not consciously aware of recording the basic information of the burials, such as the 1966 Sujialong case.

period,[412] and in the meantime suggest that the whole area was possibly a state cemetery of the Zeng state.

Guojiamiao Zeng cemetery

Like the Sujialong site, the Guojiamiao cemetery is also located not far from the banks of large rivers. On a relatively independent mound, about one kilometre north of the Huayang River, in 2002 archaeologists excavated 25 tombs, two chariot pits, and one horse pit.[413] Together with the Caomenwan site 300 metres to its south,[414] this area attracts great attention from scholars by being surrounded by a number of important burials and settlement remains within a radius of 1,500 metres, all of which are dated from the late Western Zhou to the mid-Warring States period.[415] Many scholars suggest that such densely-distributed sites may have been associated with a Zeng capital,[416] which may have been relocated from the Suizhou area after the Yejiashan period.[417]

[412] See further discussion in the section of Ritual Reform.
[413] Twenty five tombs were excavated in 2002, but the whole cemetery also contains another four heavily damaged tombs (bronzes found first and tomb structure confirmed later), and a previously reported tomb (JHKG 1984.4). See Beijing 2005b: 8, and Zhang 2009b: 43-44.
[414] The Caomenwan site is normally considered as a part of the Guojiamiao cemetery, but excavators use different initials – C and G to differentiate the tombs they are working on. For example, CM1 refers to the Caomenwan tomb no.1; and GM1 refers to the Guojiamiao tomb no.1. In the Guojiamiao primary report, only two Caomenwan burials are included, and marked as CM01 and CM02 in the order of their excavation: see CM01 in KG 1975.4, and CM02 in JHKG 1983.3. In 2014, a rescue excavation took place in the same area and revealed 29 burials, one chariot pit, two horse pits, and one chariot and horse pit. See JHKG 2015.3.
[415] The settlement remains here refer to two locations at Zhoutaicun 周台村 and Zhongyizhai 忠義寨, and the major burials refer to those in the Jiuliandun cemetery of the Chu state (Beijing 2007a). For their relative positions, see Beijing 2005b: 4-7.
[416] JHKG 2015.3: 4.
[417] Zhang 2013b: 284.

This idea may need more support from archaeological evidence,[418] but current discovery implies that this particular area may have been used at least as a foothold of military importance on the route between the central zone and the north-western gateway of the Suizao corridor.[419]

The Guojiamiao cemetery had been heavily looted over a long period.[420] Most of the burials were arranged in an east-west orientation, headed by the most important tomb GM21 on the north-eastern high ground, and a slightly smaller one, GM17, to its southwest (Fig. 3-2.4). The shapes of these two large tombs are similar but distinct from other minor burials, each equipped with a rectangular coffin chamber in a rounded pit with an eastwards slopping ramp, and one or two nested coffins inside.[421] Due to repeated looting, no inscribed ritual vessels were found in GM21, and only a two-part set of *ding* (inscribed with 'Zeng gen Man feilu 曾亙嫚非錄', and found in an individual compartment) and a matching but broken *ding* leg were recovered in GM17 (Fig. 3-2.5a).[422] Fortunately, at the north-western corner of the GM21, the looters have

[418] So far no excavated evidence shows that any Zeng Marquises were buried in this area. The reason why the Guojiamiao cemetery is considered as a state cemetery at the ruler's level is because of the size of the largest tombs in the cemetery. For further discussion, see Zhang 2009b: 46-47.
[419] The later Chu burial nearby implies that this area had been fought over and finally occupied by the Chu state in the Warring States period.
[420] After examining the holes dug by looters, as well as the materials inside, the excavators believe that some of the burials were possibly looted in the Eastern Zhou period. Beijing 2005b: 58.
[421] The GM17 also has a small compartment to the south of its wooden chamber, which is one of the few intact areas in this cemetery that had not been disturbed by looters. It contains a two-part set of *ding*, a pair of *hu*, one *li*, and one bronze cup. See Beijing 2005b: 61-68.
[422] See Beijing 2005b: 63, and Zhang 2009b: 46. The finds in GM17 indicate that 'Man

left us a special set of bells in decreasing size (Fig. 3-2.5b).[423] Similar bells, especially those in a large set, have only been seen in the most privileged burials of a Zhou state cemetery, such as in M2001 of the Guo state cemetery,[424] and in M1 of the Jin Marquis cemetery,[425] which implies that the GM21 occupant may possibly have been a regional ruler as well. Apart from these bells, a surviving bronze weapon – *yue* in GM21 can also be seen as a sign of prestige; it was inscribed with a Zeng title 'Zeng Bo Qi 曾伯陭' (Fig. 3-2.5c).[426] Together with the inscriptions on the GM17 *ding* set, there is reason to believe that the Guojiamiao site was a high level Zeng state cemetery.

If we compare the typical burial assemblages from the previous Yejiashan period with those in the current period, it is not hard to see that they had gone through an upheaval in almost every aspect. One of the most obvious changes is reflected by the bronze ritual vessels. The previous mainstream of realistic motifs in low relief, such as the animal masks and the flamboyant style decorations, were overwhelmingly replaced by

Feilu 嫚非錄' – the possible occupant may have a set of three of more *ding* vessels. In previous studies, some researchers claim that this was a tomb with at least 5 *ding*, since they believe that the sizes of individual *ding* vessels generally form an arithmetic progression with a fixed tolerance. See Beijing 2007c: 93. However, in the known state cemeteries, such as those of the Guo and Jin states, there are more than enough examples to prove that the tolerances between two successive vessels in sets do not equal a fixed value in a number of the cases. Therefore, although it is a possibility, it is hardly a universally applicable method to make an assumption of the five-part set of *ding* in GM17.

[423] This special type of bell, normally referred to as '*ling-zhong*', is decorated with simple raised lines of motifs on both sides. For further definition and more examples, see the following section 'Bells and sound' in this chapter.

[424] Beijing 1999a: 105.

[425] WW 1993.3: 25.

[426] Some archaeologists believe that this weapon type may have been used as a symbol of power and rule, but we still need more evidence to support this idea. For further discussion of this understanding, see Zhang 2009b: 133-134.

repetitive geometric patterns in bands. Meanwhile, ritual vessels of the same type were intentionally cast and used in matching sets,[427] complying with certain requirements of decoration, size, and quantity.

Indeed, the material differences of burial goods are always the easiest way to approach a culture, and are usually the first thing to be noticed in excavation. Rather than physical changes, archaeologists are expected to reveal more on the underlying social and ideological differences before and after this change. On this issue, a number of in-depth studies have already been done by scholars, whose works will be reviewed and applied in the current study in the next section.

3-3 Ritual Reform

The upper limit of this period is marked by a series of social changes which took place in the mid-9th century BC, which is generally known as the 'mid-Western Zhou transition'.[428] As its political dominance declined, the Zhou central power may have

[427] Although having been mentioned a couple of times so far, the underlying concept of the term 'set' still needs to be clarified. The 'set' of bronze ritual vessels here is defined by Jessica Rawson in the 1980s, who examines different types of ritual bronzes in the Shang and Zhou periods, and uses the notion of sets to distinguish different groups of bronze vessels before and after the major ritual change around 850 BC. See Rawson 1989, 1990: 20-52, 1993, 1998: 113-119, 2010b: 57-69. Rather than focusing on bronzes in the same types or with similar decorations, the term 'set' here stresses the simultaneous use of bronzes. They are not necessarily in the same style, but if they are in the same set, they must be used together in certain occasions.

[428] This transition is believed to be happened during the mid-Western Zhou period, which is roughly one hundred years dating from 956 to 858 BC. See Chen 1945: 55, and Shaughnessy 1991: xix. Both Eastern and Western scholars have contributed to the related studies: the written material-based studies in Hsu and Linduff 1988, Shaughnessy 1991, 1997a, 1997b, and 1999, Li 1988, 2006, and 2008; the decoration-

witnessed a crisis from both internal and external forces,[429] which was serious enough to drive the Zhou court to re-unite its regional states by reforming their existing bronze-based burial and ritual system. This alteration, also acknowledged as the 'Ritual Revolution' or 'Ritual Reform',[430] is a multi-dimensional change in Zhou practice.

Recognition of Ritual Reform

Through material and textual sources,[431] both Chinese and Western scholars have noted a number of significant changes in Western Zhou society during the 9th century BC. Although their research materials have much in common, the Chinese and Western research approaches are quite different. With the priority of access to first-hand materials and specialty in text-based studies, Chinese scholars have made good use of comparing excavated materials with received historical texts.[432] From the 1970s to

based studies in Chen Gongrou 陳功柔 and Zhang Changshou's 張長壽 work of animal mask motif (Chen and Zhang 1990); the vessel assemblage-based studies in Guo 1959, Yu Weichao 俞偉超 and Gao Ming's 高明 works (Yu and Gao 1978a; 1978b; and 1979).

[429] Starting in the reign of King Zhao, the crisis includes warfare, reform of court officers, and change of internal relations. See Shaughnessy 1991: 266-287, Shaughnessy 1997b: 152-161, Shaughnessy 1999: 323-326, Li 2006: 93-95, Li 2008a: 34-38.

[430] Jessica Rawson and Lothar von Falkenhausen are the two main figures in the relevant studies. See the definition of 'Ritual Revolution' first in Rawson 1988 and 1989, and then followed by a number of further studies in Rawson 1990, 1996, 1999, Falkenhausen 1997, 1999, and 2006.

[431] The material sources normally refer to the artefacts acquired in archaeological excavations. The textual sources, or sometimes known as written materials, refer to the historical records collected from the known transmitted texts, and from excavated materials, such as from the oracle-bone scripts and bronze inscriptions.

[432] For the originator of this study – Wang Guowei, and his argument of the 'Erchong zhengjufa (the dual attestation in historical research)', see Wang 1994: 3. Indeed, in their traditional concepts, most of the Eastern scholars prefer treating ancient China as a unitary civilization from its creation to the present day, with a clear line of succession in the tradition of 'Chinese culture'. This is one of the major differences between Eastern and Western scholars, and always becomes the cause of debate.

1980s, many Eastern scholars such as Zou Heng 鄒恆,[433] Yu Weichao,[434] and Guo Baojun 郭寶鈞,[435] have successively pointed out a number of changes on the design and usage of ritual bronzes after the mid-9th century.[436] In their discussions, however, most of the Chinese scholars did not go further and explore the implications of such changes, but devoted themselves to the ways in which excavated materials match the received texts. Sometimes, if dissimilarities occurred, they were more likely to trust the literature over the materials excavated by their own hands.[437] On the other hand, the Western scholars, despite having less access to first-hand information, have considered excavated materials from a wider perspective of functions and purposes. Most of them are accustomed to divide ancient China into regions in terms of different burial and ritual practice, using parallels and differences seen in burial assemblages to discuss regional interactions, and to further their arguments on the whole of ancient China. The

[433] Zou 1974.
[434] Yu and Gao 1978a, 1978b, and 1979.
[435] Guo 1981.
[436] The consensus of the change from the perspective of Chinese scholars: 'the bronze configurations after the mid-9th century BC have a preference for food containers. Food vessels *ding* and *gui* are used as the core items in the group, accompanied by newly emerged pairs of *hu* and *dou*. The *pan* and *yi* always come together as water vessels in the group'. See Guo 1981: 91-92.
[437] In the use of Western Zhou ritual vessels, some Eastern scholars prefer to follow later texts than the contemporary excavated materials. In his studies of the usage system of *ding*, Yu Weichao has rightly recognized that the Zhou ritual system had been 'broken' in the late Western Zhou and early Eastern Zhou periods. However, basing himself on numerous texts, Yu devoted himself to correlating the vessel numbers of *ding* sets with the documented 'Wu deng jue 五等爵 (the five social ranks)', and used the notion of 'jian yue 僭越' (exceeding one's own authority) to explain most of the situations that the 'lower ranked elites' were found with more *ding* vessels than they were supposed to have in their burials. See Yu and Gao 1978a and 1978b. Mostly misleading, this tendency happens very often among Chinese researchers in their studies before 1990s, see discussion of 'tendency of historiography in Chinese Archaeology' in Chapter I, and Falkenhausen's critique in Falkenhausen 1993b.

Ritual Reform, as part of the 'Western Zhou transition', is a good example to illustrate the Western effort in the field of Chinese Archaeology.

The concept of Ritual Reform was first defined by Jessica Rawson in two successive articles in 1986/8 and 1989.[438] By comparing shape, decoration, function and other related aspects of the Western Zhou ritual bronzes, Rawson outlines a number of major changes in their usage between the early-middle Western Zhou (c.a. 1050 – 850 BC) and the late Western Zhou (c.a. 850 – 771 BC),[439] which are as follows: 1) the standardization of matching ritual vessels in a set;[440] 2) the elimination of the main drinking vessels;[441] 3) the trend towards abstract decoration;[442] 4) the introduction of large bell sets to the Yellow River Basin;[443] and 5) the emergence of new vessel type and new versions of old vessel type.[444] She further points out that such a diverse range

[438] See English version in Rawson 1988 (and an earlier Chinese version in the papers from the Second International Conference on the Beginning of the Use of Metals and Alloys, Zhengzhou, China, 21-26 October 1986), and Rawson 1989.
[439] See description of the five aspects of the vessel change in Rawson 1988: 230, and see the first emergence of the term – 'Ritual Revolution' in Rawson 1989: 87-93.
[440] The standard vessel sets often refer to the sets of matching *ding*, *gui*, and sometimes *li* as well.
[441] Most of the drinking vessels, such as *jue*, *jia*, *gu*, *you*, *zun*, square *yi*, and square *zun* that dominated in the late Shang and early and mid-Western Zhou period in the ritual assemblage, disappeared. The only exception of the previous drinking vessel is *hu*, which were still used in later ritual practice as fluid containers but in pairs and often in a more generous size. See Rawson 1990: 96-97.
[442] The abstract trend in bronze decoration here refers to the changing process from the old realistic motifs (such as the motifs of animal masks and dragons from the Shang and birds in mid-Western Zhou period) to the new abstract motifs, which are normally presented as repeatable geometric patterns. See Rawson 1990: 75-92.
[443] Like *ding* and *gui*, the large bells also appear in sets of matching pieces, the use of which might have been adopted from southern China. See Rawson 1988 and 1999.
[444] New vessels here include *xu*, *fu* and *dou*; new version of old vessels refer to the *li*, *gui*, *hu*. See Rawson 1990: 108-109. In fact, the representations of Ritual Reform are not restricted to the mentioned five aspects. In her recent papers, Rawson adds another

of changes was instituted across the central Zhou territories and enforced around 870 BC, in the reigns of King Yì, Xiao, and Yí from 899/97 to 858 BC.[445] Another scholar, Lothar von Falkenhausen, follows most of Rawson's opinions except for the dating. On the basis of the same materials as Rawson works on (bronzes from the Zhuangbai 莊白 hoard no.1, see Fig. 3-3.1),[446] Falkenhausen discusses in detail the dating issues of all the four generations of the Wei clan, and suggests that the reform of Zhou ritual practice was applied no earlier than the late Western Zhou period.[447]

Despite their differences in dating, both of the scholars maintain Rawson's perspective on the core of the Ritual Reform – the transition on bronze ritual vessels from the middle to late Western Zhou, when older types were eliminated and new performances were introduced in ritual occasions with the introduction of new varieties of bronze

dimension – the change of coffin decoration into the discussion of Ritual Reform, including the application of bronze clapper bells, bronze fish, cowries, beads, and their related ritual and burial performances. See Rawson 2010a, and 2013b.

[445] See Rawson 1999: 434. Rawson also suggests that the end of the mid-Western Zhou is marked by the end of the Ritual Revolution, see Rawson 1990: 93.

[446] The Zhuangbai hoard no. 1, found in 1976 near the present-day Fufeng county in Shaanxi, is considered as one of the most representative examples to illustrate the timeline of the development of bronzes during the mid-Western Zhou transition, and it is believed to be deposited at the end of the Western Zhou period when the Zhou people were defeated by outsiders. It contains 103 cumulated temple vessels of at least four consecutive generations – the Zhe 折, the Feng 豐, the Qiang 牆, and the Xing 癲 of the Wei clan, covering most of the Western Zhou period. For the original brief report, see WW 1978.3: 1-18.

[447] See Falkenhausen 1997: 652-656. Falkenhausen indicates that the reason why Rawson's and his dating are different is because Rawson probably uses Li Xueqin's chronological system of Zhuangbai hoard no.1 (see Li 1979: 29-36), and he himself follows Hayashi Minao's dating system (see Hayashi 1984). The two systems have a disagreement on the date of most generations in hoard no.1, especially of the last Xing generation, which is the key date marking all the post-reform changes. For further discussion, see discussion in Falkenhausen 1997: 666-670.

vessels.[448] On one hand, the identical food vessels in sets highlight that the main usage of ritual bronzes had been switched from offering alcohol to offering different kinds of food to the ancestors, which must have been followed with changes in specific tasks in ritual performances, and must have required different procedures executed by different specialists (such as more movements of serving food). On the other hand, the presence of sets of ritual vessels in the same shape and decoration shifts the audience's attention from individual vessels to the quantities of identical vessels,[449] which is of social significance for the vessel owner to claim their identity and status.

To understand the close ties between the bronze vessels and ritual practice in the Zhou period, we also need to discuss the fundamental dimension of Chinese bronzes – the use and significance of bronze vessels, which involve the beliefs of the Zhou people and their attitude towards their lineage ancestors. The Western Zhou ritual bronzes, in the form of food and drink containers, were intended for ritual occasions, in which bronzes were used to offer formal banquets to the ancestors of the family.[450] They were buried perhaps in order that their owners could continue to offer such banquets in the afterlife.[451] Many of the Chinese inscriptions on the bronzes describe certain honours

[448] Although this reform in Zhou ritual has been questioned by some historians since it has not been mentioned in any of the known received texts or contemporary bronze inscriptions (Li 2006: 102), the material change reflected on bronze ritual vessels seems to show us more than enough evidence that an intentional reformation of the Western Zhou traditional ritual practice was executed by the centralised body, who controlled the land and the people by a bronze-based ritual system but were nervous enough in their position to see it as necessary.
[449] Rawson 1989:87-93.
[450] Rawson 1988: 228-229.
[451] Rawson 1999b: 364-368.

or achievements of the vessel owners, which, as some scholars believe, were used for their ancestors to read, or considering the vessel owners themselves as the future ancestors, for their family descendants to treasure.[452] Once such connections between the living and the deceased were attached to the bronze vessels, the vessels themselves were no longer simple practical containers any more, but something with symbolic importance linked to the identity and beliefs of the Zhou people. For instance, in Zhuangbai hoard no.1 (Fig. 3-3.1), the bronze inscriptions show not only the names of the vessel owners, such as Qiang and Xing, but also the titles of the older generations in the Wei clan, such as the Gaozu 高祖, Liezu 烈祖, and Yizu 乙祖 recorded on Qiang's *pan*.[453] These inscriptions demonstrate that these vessels from different generations of the lineage were purposefully kept together, possibly placed in the family temple.[454] There is no doubt that the ancestral worship of Zhou people gave weight to the symbolic importance on ritual bronzes, which made any changes to the ritual vessels, or to the ritual practices that these vessels were involved, significant in the Western Zhou period.

Origin of Ritual Reform

New vessel types, sets, and their related preferences were launched in the Zhou royal domain, but were soon universally employed and hence recognised in the metropolitan

[452] See Hsu and Linduff 1988: 318-337, and Falkenhausen 1997, and 2006.
[453] This *pan* contains in total 284 characters divided into two paragraphs. For further information see KGXB 1978.2.
[454] See Rawson 1989.

areas.[455] Although the Ritual Reform is considered as a 'sudden' event,[456] it seems that Zhou people had been familiar with the notion of 'set' long before the mid-Western Zhou period. The idea of using sets of identical ritual vessels was probably adopted from the arc of territory, especially the north-western borders of the Zhou realm in Shaanxi province. The frugal sets of *ding* and *gui* from Rujiazhuang cemetery[457] indicate that no later than the late part of the early Western Zhou period (c.a. 950 BC), people living in the arc area started to use large numbers of identical ritual vessels in their burial practices.[458] Likewise, the appearance of chime-bells in the Yellow River region was also first seen in Shaanxi.[459] Three large bells had emerged in an early Western Zhou tomb M7 in the Zhuyuangou cemetery,[460] and then spread out within a short period of time.[461] Interestingly, all of these inspirations, or preconditions, of the Ritual Reform had originated not far from the initial centre of the Zhou state near the

[455] The vessel types here refer only to the full-size bronzes. The replicas and miniatures of old vessels (or in Chinese terms the *ming qi* 明器) are excluded from the discussion. See the dedicated section on '*ming-qi*' in Rawson 2004: 4-11.
[456] Due to lack of comparative materials (such as Zhuangbai hoard no.1), in regional states, we do now know whether the Ritual Reform can also be seen as a sudden event or not. But one thing is clear. There was absolutely no cross-use of any previous vessel types after the change, which can be seen as an important indicator showing who took up the Ritual Reform, and who did not. For an example of those who did not adopt the reform, see a late Western Zhou site in Tunxi 屯溪 in Anhui province (KGXB 1959.4).
[457] Beijing 1988: 270-412.
[458] Rawson 1989: 91-92.
[459] The Zhuyuangou chime-bells have been considered as the earliest Western Zhou chime-bells for a long time until the discovery of chime-bells from Yejiashan M111 in 2013, but they are still the earliest examples in North China, which may have been more relevant to the origin of the Ritual Reform than the Yejiashan bells.
[460] For the primary report see Beijing 1988: 96-97.
[461] Archaeologists found evidence of a possible eastward spread slightly later than the Zhuyuangou chime-bells, which are found in Puducun 普渡村 near present-day Xi'an city. For further discussion see Rawson 1989: 93.

mountain of Qi 岐,[462] implying that the Zhou people may have attempted to replace their current ritual complex with something more related to their past history. However, the reconnection with their ancestors seems to be insufficient to explain why the Zhou authority had implemented such overwhelming changes. There must have been deeper causes or motivations to trigger the reform.

Recent studies of written material indicate that during the mid-Western Zhou period, the Zhou court may have been facing both internal challenges and conflicts with its enemies from outside of its territory.[463] Three main reasons have been summarised as follows:

1) Warfare. The death of King Zhao (who died in the process of fighting in the south) ended the 100-year Zhou military expansion after the conquest of Shang. This loss cost so much that the Zhou people had to reform their military forces.[464] Meanwhile, starting from the mid-Western Zhou period, the term 'defensive war' began to appear in the inscriptional records. According to some Zhou bronze inscriptions, 'foreign enemies' even invaded very close to the Zhou eastern capital – the Chengzhou area in this period.[465]
2) Reform of court officers. The increasing use of 'appointment inscriptions' is

[462] After moving eastwards of the Zhou centres, the initial capital – Zhou-under-Qi can be seen as the 'west end' of the Zhou royal domain, which is very close to the north-western borders of the Zhou territory.
[463] See Li 2008a: 34-38.
[464] See Shaughnessy 1999: 323-325, and Li 2006: 93-95.
[465] The foreign enemies here refer to the Huaiyi 淮夷 from the Huai River region, see Shaughnessy 1997b: 152-161.

characteristic in this period.[466] This development implies a shift of concern of the Zhou authority, enlarging and reorganising the government.[467]

3) Change of internal relations with regional states. Some inscriptions show that the Zhou court was no longer able to control some of its regional states in this period, such as the Shandong based Qi 齊 state during the King Li period.[468] It seems that from this period on the Zhou court gradually lost its previous favourable situation in a new epoch, which was marked by intensified competition, conflict, and struggle among the Zhou aristocratic lineages.[469]

In fact, entering the mid-Western Zhou period, the Zhou royal family and most of its regional ruling lineages had witnessed at least three generations of development. Although the lineage-based system still existed, the social connections between the Zhou centre and its regional states had possibly deteriorated with time. In the meantime, the pressure that accumulated from both outside and inside the Zhou realm may have forced the Zhou court to try to mitigate the tension. At this very moment, it seems logical to surmise that the Zhou court may have united people and reconstructed its prestige by making serious changes to replace the former ritual kinship institution.

[466] The 'appointment inscriptions' are first seen in the reign of King Mu period, from 956 to 918 BC, and were used to record the ritual process by which the Zhou king personally granted appointments of service in various government offices. See Li 2006: 95.
[467] See discussion in Shaughnessy 1999: 326. Also see Li 2008a: 36.
[468] A Qi ruler had appointed himself as 'Duke of Xian', and ruled many years against the Zhou royal will. For further details of the turmoil of the state of Qi in this period, see the sections of 'King Yi' and 'King Li' in Shaughnessy 1991: 266-286.
[469] See Li 2008a: 34-38.

Changes in the Suizao corridor

We do not know details of the actual relationships between the Zeng state and the central court in this period, but the mentioned material differences are indeed observable in the Zeng state. Archaeologists in Hubei are extremely lucky to have access to relatively intact burials both before and after the Ritual Reform. Two burial assemblages are chosen to illustrate this change. They are M28 of the Yejiashan cemetery in the 10th century BC,[470] and the Sujialong M1 in the 8th century, which are by far the most appropriate materials for us to learn how the burial practice changed in the Suizao corridor, and to what degree the local people followed the practice at the centre.

M28 is considered as one of most privileged burials in the Yejiashan cemetery. As mentioned in the preceding chapter, from this generation onwards, the social identity of the Zeng people, at least in the ruling class, had completed a transition from Shang to Zhou. The tomb structure of M28 follows a high-standard Zhou burial tradition, equipped with sloping ramp, upper platform, coffin chamber, and a single coffin inside. Most of the burial goods are found on the platform, such as bronzes, ceramics, jade, stoneware, and lacquer. Twenty five bronze ritual vessels are confirmed, including 7

[470] The burial assemblage in the Yejiashan M111 is an ideal example to be discussed here in terms of its earliest versions of chime-bells, and various sizes of *ding* vessels, but this burial has only been partially published so far. Therefore, the current chapter chooses to use the materials from second largest burial in the Yejiashan cemetery, the M28.

ding, 4 *gui*, 1 *li*, 1 *yan*, 1 *hu*, 1 *he*, 1 *pan*, 2 *jue*, 1 *gu*, 1 *zhi*, 1 *lei*, 2 *zun*, 2 *you* (Fig. 3-3.2a and Fig. 3-3.2c). The decoration of animal masks, dragons in profile, and other complicated motifs on these vessels are all in a popular early Western Zhou style, and this assemblage is also typical of this period.[471] On the other hand, the burial goods from the Sujialong M1 show a totally different configuration. Although we do not have any information on the structure of this 'possible tomb', the bronze vessel sets here can be distinguished from all the Yejiashan burials. As showed in Fig. 3-3.2b and Fig. 3-3.2d, here we have 33 bronze vessels, including 9 *ding*, 7 *gui*, 9 *li*, 1 *yan*, 2 *hu*, 1 *pan*, 1 *he*, 1 *yi*, 2 *dou*.

From the burial assemblage in Yejiashan M28 to that in Sujialong M1, the dramatic changes of the sets of ritual bronzes become crystal clear if we put them together, as seen in Fig. 3-3.2:

1) Apart from the large flask *hu*, most of the wine vessels, such as *jue*, *zhi*, *zun*, *gu*, *you*, and *lei* (Fig. 3-3.2c), cannot be seen in the later Sujialong assemblage. The disappearance of almost an entire vessel group with a shared function must have been well planned, implying that the Sujialong people may have stopped sacrificing alcohol to their ancestors.[472] In the meantime, the only surviving

[471] As Jessica Rawson has summarised: 'typical early and middle Western Zhou bronze ritual vessel sets comprised the following: food vessels (pairs of *ding*, pairs of *gui* with S-shaped profiles, and a single *yan*), wine vessels (pairs of *jue*, one or two *gu*, and a single *zhi*, cylindrical *zun*, and one or two *you*), and water vessels (single *he* and *pan*)'. See Rawson 1988: 229.

[472] This change is essential to the current discussion because sacrificing alcohol was one of the central components of the ritual activity in the previous Shang period. As a Zhou regional group with a possible Shang origin, the corridor people might have found

wine vessel – the *hu* had been transformed, by being given a more generous size and arranged in pairs.[473] Similar to the newly introduced *dou* (Fig. 3-3.2d), pairs of vessels became one of the standards of this period.

2) The varied food vessels *ding* and *gui* in M28 had been replaced by Sujialong standardised sets of matching vessels with similar sizes and styles. By using this new arrangement, the Sujialong people not only emphasised the role of food over alcohol in ritual performance, but also stressed the 'ritual use' of vessel quantity by requesting a greater number of similar vessels in ritual practice. Although vessel quantity had already been valued from Shang times,[474] by comparison with the Yejiashan sets in random sizes and styles,[475] the Sujialong rows of standardised vessels had embodied the effect of quantity in a more direct way. It is not difficult to imagine that once these matching sets appeared during the ritual process, the audience's attention would be easily drawn to their perfect alignment, and then consciously or unconsciously, they would pay attention to the quantity of vessels, which is exactly the effect the Sujialong patrons must have intended to accomplish. Through vessel quantities, they were able to

it much harder to deal with the outcomes of this change.

[473] Abandoning most of the alcohol vessels does not necessarily mean that the Zhou people had stopped consuming alcohol in their ritual practice after this change. It may have been used in a more gentle and formal way, which can be seen in the more formal version of the alcohol container – *hu*. See Falkenhausen 2006a: 49.

[474] In a comparison between the Fuhao 婦好 bronzes and those from Anyang tomb no. 8, Jessica Rawson suggests that the status of a tomb occupant may have been shown by numbers, size, and range of forms and decorations. See Rawson 1998: 116.

[475] The different sizes and styles of bronzes in the late Shang, early and mid-Western Zhou periods were possibly assembled at different times from different sources, such as those from the Fuhao tomb. See Beijing 1989b.

spread their word out to their audience, highlighting their Zhou identity, and demonstrating their wealth, power, and social status.

3) The M28 realistic and complicated animal-based motifs (suitable to be observed individually from close quarters) had been replaced by abstract and simplified motifs on the Sujialong sets, with repeatable, bolder geometric patterns arranged in horizontal bands (suitable to be observed collectively from a distance). It is hard to say whether these changes were of religious importance,[476] but from a stylistic viewpoint, they do intimate that the ritual ceremony might have been switched from a relatively small-scale and private matter to a more distant and public occasion.[477]

4) New types of food vessels – *dou* had been added into the Sujialong assemblage, which may represent a change of sacrificial food types or their quantities of offering to the ancestors. Most of these new types, as well as the new forms of old types, such as *li* and *gui*, are the bronze versions of everyday vessels in ceramic (from ceramic *li* and *gui*), lacquer (from lacquered *dou*), and so on, which may have been widely used in the homeland of Zhou in Shaanxi long before the Western Zhou ritual change.[478]

[476] Some scholars believe that the change of bronze decorative patterns is related to the change in the religious significance of motifs. See Falkenhausen 2006a: 43-52.
[477] Rawson 1989: 89-90.
[478] For further discussion see Rawson 1990: 108-110, and Rawson 1999: 433-440. It is also seen as part of 'an instance of deliberate archaism', see Falkenhausen 2006a: 50, and 98-111.

Obviously, these four aspects fit in well with our current understanding of the Ritual Reform. The corridor people did use new forms of vessel type and performance in their ritual and burial practice, which had been changed much more than that of the early Western Zhou period. However, if we parallel the Sujialong M1 with other similar post-Ritual Reform burials in the metropolitan area, the Shangcunling M2001 of the Guo state at Henan Sanmenxia for example,[479] there are still some minor differences that can be observed. As illustrated in Fig. 3-3.3, although the Sujialong assemblage includes new vessel types (Fig. 3-3.3c), they are not as plentiful as in the Shangcunling M2001 near the Zhou centres (Fig. 3-3.3d).[480] Meanwhile, their overall vessel types and decorations lack diversity,[481] and the sizes of the Sujialong *ding* are significantly smaller than those in M2001.[482] But the most obvious difference in the Sujialong site is the absence of chime-bells.[483] In the Shangcunling assemblage, a set of eight matching bronze bells is especially important in terms of their generous sizes and vast numbers.

[479] The tomb M2001 in Shangcunling, Henan Sanmenxia is one of the most privileged burials in the Guo state cemetery, which is thought to have been occupied by Guo Ji 虢季, a ruler of the Guo state at the very end of the Western Zhou period. See Beijing 1999b: 225.

[480] The Sujialong assemblage includes a new type of *dou* in a pair (Fig. 3-3.3c), while tomb M2001 has more new ritual vessels, including a four-part set of *xu*, a pair of *fu*, and a pair of *dou* (Fig. 3-3.3d).

[481] Although most of the types and configurations of ritual bronzes are similar between the two burials, the M2001 has a larger variety of design ideas in vessel shape and decoration, such as the different shapes of the two pairs of *hu*, and the combination of two or three decorative bands on the *ding* and *gui* (Fig. 3-3.3).

[482] For further discussion of the vessel size, see the section 'Matching sets of ritual vessels' below in this chapter.

[483] Some scholars believe that the lack of certain vessel types or individual vessels at the Sujialong site may have been related to its discovery background, which was basically a chance find by local workers during a water resources engineering project (see Zhang 2009b: 41). But most sets of ritual vessels seem to have been well organised. If there were chime-bells buried in this site, it is unlikely that none of them was found by the locals.

Although the use of chime-bells may have been well known in early to middle Western Zhou rituals, such as the three bells found in Zhuyuangou M7,[484] and the five ones found in Yejiashan M111,[485] by increasing their quantity in the post-reform sets, the effect of musical performance in ritual occasions must have been reinforced by their combination of more resonant sounds and more movements of the musicians.[486] More importantly, chime-bells were special in the sense that they were music instruments but also made of bronze, which could perfectly combine their musical performance with a serious ritual purpose. Zhou people had apparently long noticed this characteristic of bells, and had widely used them in their ritual practice in the post-reform period.[487]

Through the entirely different ways of using ritual bronzes between Yejiashan and Sujialong, the Zeng people seems to have fully understood and followed the trend of the Ritual Reform. But the comparison between the Sujialong and Shangcunling also tells us that this adoption in the corridor was slightly different from that in the metropolitan area. The following sections will focus on two representatives of the post-reform ritual bronzes – the matching set of *ding* vessels and the chime-bells, and will discuss further the social identity of the Zeng people in this period.

[484] The three bells fall into two sets (two + one) in terms of their different decoration. The smallest bell is in similar shape but with simplified decorations. For the original report, as well as their drawings, see Beijing 1988: 96-97.
[485] The five bells form three sets (two + two + one), and the individual bell is flanged by four tigers in profile, which is a unique motif found only in South China. For images of the Yejiashan bells, see Beijing 2013: 138-143.
[486] Beijing 1999a: 71-77.
[487] The chime-bells and other bell types will be further discussed in the section 'Bells and sound' later in this chapter.

3-4 Matching set of ritual vessels

As the core of the bronze assemblage after the Ritual Reform, the matching sets of *ding* in decreasing size and identical *gui* have led to much dispute in academia. The bone of contention is the degree of relevance between the social rank of the tomb occupier and the quantity of his/her vessels in *ding* and *gui* sets. In previous studies, especially the works of Chinese scholars, the connection between the institution of 'Five social ranks (*Wudengjue* 五等爵)'[488] and the vessel quantities of the core sets have often been over-interpreted, and rarely fully supported by the excavated materials.[489] Nevertheless, a common recognition has been reached on the point that the Western Zhou authority had suddenly substituted a unified configuration of matching sets for the previous various designed core vessels after the mid-Western Zhou period. This decision had been executed widely and effectively among the Zhou regional polities, and thus formed a widely accepted group of core vessels in matching sets. As we have discussed in the preceding chapter, including the Zeng, a number of early Western Zhou regional states had the ability of independent bronze production,[490] which, according to some scholars, had been maintained in the post-reform period.[491] Therefore, to form such a consistency, local foundries must have kept close pace with the central tradition. The basic elements

[488] For definition of the 'five social ranks', see Yu and Gao 1978b: 84-97.
[489] For further discussion, see Rawson 2013b.
[490] For independent bronze production, see an individual section in Chapter II.
[491] Through traces of casting tradition on Zeng bronzes, Zhang Changping argues that in the post-reform period some of the casting techniques that the Zeng craftsmen used were different from those in the metropolitan area, implying that the Zeng had the ability of independent bronze production. See Zhang 2009b: 162-182.

of the core vessels in a matching set (such as shape, decoration, inscription, and so on), no matter whether cast in the Zhou centres or in local foundries, must have been well planned and precisely designed, following unified regulations strictly stipulated and restricted by the Zhou authority.

In previous studies, the Zeng bronzes in this period, either themselves or their casting background, have already been well studied in terms of their typology and technology.[492] But most scholars seem to have overlooked a basic dimension of these ritual bronzes – the size of individual vessels, especially of the matching *ding* in various sizes. We have reason to pay attention to the size issue because for one thing, vessel size was probably one of the first considerations of the craftsmen before the casting process began. Once the measurement of clay model was fixed, the size of the final product would not be easily changed. For another, the vessel size would likely reflect direct demands from the patron, which largely depended on his/her true, or 'ideal' social status, and the degree of restraint of the contemporary ritual practice. Thirdly, if there were any signs of deliberate size control in the post-reform period, they should be observed more easily than the typological or technical features. This kind of observation may obtain more convincing results, since it is based on objective data, and not affected

[492] Zhang Changping in his 2009 book discusses five major aspects of the post-reform Zeng bronzes, including their type/shape, decoration, inscription, casting technique, and burial assemblage. He argues that the Zeng bronzes in this period aligned with the general Zhou characteristics, but most of the aspects on Zeng bronzes lacked variety and creativity. See Zhang 2009b: 118-196.

by the researcher's subjective awareness.[493] In this account, therefore, this section will discuss the size of *ding* vessels in matching sets, to see if the size can enrich our current understanding of the Ritual Reform, as well as the local response to this social change in the Suizao corridor.

The Sujialong ding set

The most intuitive and visual indicator of *ding* size is the height from the top of the handle to the bottom of the foot. In Tab. 3-2,[494] the nine-part Sujialong set forms the largest group of *ding* in the Suizao corridor, the maximum size of which reaches 32.7 centimetres in height, and the rest of them decreases in sequence. The rest of the burials in the corridor in the table normally have two-part or three-part *ding* sets. If we adjust their height measurements to appropriate positions of the Sujialong sequence, as illustrated in Tab. 3-2, it is easy to find out that even the largest vessels from each of the rest of the *ding* sets are much smaller than the largest one in Sujialong.[495] Therefore, whether based on the quantity or the height of the *ding* set, it seems that the social position of the Sujialong occupant may have been higher or more important than that of most other burials in the corridor. However, the Sujialong *ding* set also tells us that

[493] The possible danger of this method comes from the imprecise data of archaeological reports (especially pre-1990s). If inconsistent data of the same vessel appear, normally the latest data are admitted and adopted in this study.
[494] The research data in this table comes from tombs with relatively complete burial assemblage, including at least a two-part set of *ding*. Their measurements follow the original archaeological reports. But if the brief reports fail to provide accurate measurement, the data in the current section is subject to the latest publications. For further references, see notes under Tab. 3-2.
[495] The largest *ding* vessels in each set other than Sujialong are only equivalent to the fourth, fifth, or even smaller vessels in the Sujialong sequence, See Tab. 3-2.

the quantity is not always reliable. As some scholars have pointed out, if we further examine the set, only the first and the third largest *ding* in its height sequence had been well cast and inscribed with 'Zeng Hou zhongzi Youfu zi zuo yi 曾侯仲子斿父自作彝', indicating that the vessel owner Youfu saw himself as a Zeng Marquis. The rest, uninscribed, *ding* are poor in quality, and are thought to have been cast later in order to put together a large set.[496] This is a typical case showing the possibility that some local elites, who were not content with their existing status, and may have increased the vessel quantity to meet their expectations of a higher position. In this sense, the quantity of *ding* is unlikely to accurately represent the social status of its owner, but only a reflection of the position he wished to present.

By contrast, the height measurement of *ding*, especially of the inscribed ones, may be more reliable. The vessel no. 1 in the Sujialong sequence is the largest *ding* among all the corridor contemporaries (see all measurements in Tab. 3-2), which corresponds to the title of 'Zeng Marquis' in its inscription. We are not sure whether its owner – Youfu was an actual state ruler or not,[497] his 'nearly complete' burial assemblage tells us,[498]

[496] A similar situation also happened on the sets of *gui* and *li*. For further discussion see Zhang 2009b: 185, especially footnotes no.3-5.
[497] The unclear burial condition of the Sujialong site makes the Guojiamiao cemetery, which has revealed large numbers of Zeng burials and also some bronzes with the title of 'Zeng Marquis', the possible Zeng state cemetery in this period. As a result, the Zaoyang area nearby became the most likely location for the capital of Zeng in this period. See Zhang 2009b: 43-47.
[498] The term 'nearly complete' is used here, because rather than carefully excavated by archaeologists, the burial assemblage of Sujialong M1 is more like a chance find from a 'possible tomb', see WW 1972.2. So we are still not sure whether the current burial assemblage is complete, or whether there were other burial goods.

nevertheless, that Youfu was possibly among the high authorities in the Zeng state. The size and inscription of his *ding* demonstrate that, as higher-status elite, Youfu wished to demonstrate his position with larger *ding* vessels than those of any other contemporaries in the Zeng state.[499] In other words, the higher social status an individual had reached, the larger size *ding* vessels they may have the right to own. This observation becomes more apparent if we take *ding* sets from other places into account. Tab. 3-3 includes a selection of matching *ding* sets,[500] including three hoards from Zhouyuan,[501] M8 and M93 from the Jin Marquis cemetery,[502] M2001 and M2011 from the Guo state cemetery,[503], M64 from the Ying state cemetery,[504] and M27 and M28 from the Rui state cemetery.[505] Together with the Sujialong set from Zeng, all of their height data have been transferred to a scatter plot, and adjusted in descending order on the basis of

[499] Although having only two small *ding* in the set, the Guojiamiao M17 is not a less important burial. There are two inscribed *ding* vessels found in the intact compartment and a broken but matching *ding* leg found in the looted coffin chamber, suggesting a three-part set at least. The surviving leg is longer than that of the other two vessels, which should belong to a vessel about the same size as the largest *ding* in Sujialong. Considering its tomb structure and variety of burial goods, M17 may contain a large quantity of burial goods, including a set of more than three inscribed *ding* vessels. Some archaeologists thus believe that there might be too many burial goods to fit in the main chamber, and people had to put the rest of them into a compartment alongside. See Zhang 2009b: 46.

[500] In the well-studied state cemeteries such as the Jin and Guo state cemeteries, the largest *ding* in a set are normally found in the most privileged burials, and those in the male's tombs are normally larger in size and quantity than those in the female's. In the current section we are interested in *ding* sets that represent the largest vessels of a state cemetery, so the comparable data are selected from only the most privileged male tombs of a cemetery with complete archaeological records.

[501] The Zhouyuan hoard is an exception. It is not possible to confirm the gender of the vessel owners, so the current section selects both large sets with ten vessels and small sets with only three or four vessels. See Chengdu 2005.

[502] WW 1994.1, and WW 1995.7.

[503] Beijing 1959.

[504] HXKG 1988.1.

[505] KGYWW 2007.6, and KG 2009.4.

the height of the largest *ding* in each set. As showed in Fig. 3-4.1, the majority of the vessels from the Zhouyuan hoards are significantly larger than others. The set of the Guo ruler, who is believed to be the descendant of the Zhou royal family,[506] ranks second, and in third place is the Jin Marquis's set. Notably, these places are all located very close to the Zhou centres, and in most of the cases, every single vessel in a set is found with inscriptions. By comparison, the measurements of *ding* from three other states, Ying, Zeng, and Rui, do not vary hugely. In these relatively distant regional powers, their *ding* sets are not only smaller in size, but also rarely inscribed. Therefore, either within or beyond the Suizao corridor, both the situations seem to imply that the larger sized *ding* vessels were made for people with higher social positions or with a closer relationship to the Zhou authority. Or, in reverse, the higher positions in the Zhou social hierarchy enabled the people to own larger *ding* vessels than those in lower positions.

The pursuit of larger *ding* vessels also brings us to another important observation. In Tab. 3-3, apart from the *ding* sets in Zhouyuan,[507] and very few regional states such as the Ying, almost all the burials at the ruler's level chose to use *ding* with attached handles instead of the vertical ones that they were used to.[508] Technically, the structure

[506] The Guo is documented to be a state with high status and close kinship relations with the Zhou royal family. See Li 2007: 87-88.
[507] So far archaeologists have still not found any evidence of *ding* sets with attached handles in any of the Zhou centres in the royal domain. For a few sets with vertical handles found in Zhouyuan, see Chengdu 2005b: 443-450.
[508] The *ding* with vertical handles on top of the rim had been a popular *ding* type in Shang and early Western Zhou period. The *ding* with handles attached on the vessel body under the rim was first seen in the early Western Zhou period, but only widely

of attached handles requires more works on mould pieces, which is much harder to achieve than the normal vertical handles.[509] Therefore, it is very strange to see people who used to have *ding* with vertical handles, suddenly give them away, and begin to generally use another handle type, which looks similar but required more efforts from craftsmen. The size of *ding* may, again, provide a possible interpretation to explain this situation.

A comparison between these two forms of handles is helpful to our discussion. Four *ding* vessels have been picked from Tab. 3-3, which are all in the same height (30 cm ± 0.7 cm), but their handles are different. As shown in Fig. 3-4.2, although the space between their legs and the rim diameter are not that different, the last two with attached handles appear much larger in size than the first two with vertical handles. As we have discussed, the larger *ding* vessels in a set may have been used by people with higher social status. In this account, is there a possibility that when the vessel height is fixed, or restricted, by the Zhou authority, people tend to choose *ding* with attached handles, rather than the seemingly smaller ones with vertical handles? Or in other words, have people's pursuit of larger vessels promoted the wider use of the *ding* with attached handles after the Ritual Reform? If this were the case, it may also lead us to a hypothesis. Presumably, the Western Zhou court may have had some sort of 'size control' for its newly introduced matching sets of *ding* after the Ritual Reform, which might be applied

spread in the Zhou realm after the mid-Western Zhou period. For the early examples of *ding* with attached handles see Changzikou 長子口 *ding* in Zhengzhou 2000a: 60.

[509] Zhang 2009b: 165.

by means of tying the vessel height to the power of an individual or a social group. So it is likely that people may not have been able to use *ding* vessels literally 'higher' than they were supposed to have, but what they could do is looking for an alternative way of using attached handles to get their ritual vessels 'oversized'.

In a word, the size control of the core matching set may have been another aspect of the Ritual Reform package, which can be seen in the material culture within and beyond the Suizao corridor. Since the only possible state cemetery at Guojiamiao has been heavily looted, and the burial background of the Sujialong site is problematic, we do not have complete data from the corridor to compare with the data from those well-studied state cemeteries in the north. But we can still observe some patterns on the basis of a little information on the vessel size. Facing the wide-spread mid-Western Zhou transition, it seems that the corridor people not only had no intention of departing from Zhou power, but also showed an acceptance of the Ritual Reform, and reconciled themselves to a relatively low position as a social group living on the southernmost boundary of the Zhou territory.

3-5 Bells and sound

Although the heart of the Ritual Reform was concentrated on ritual vessels, other aspects that related to the ancestor or burial offerings can also be seen as part of the package of the reform, such as the ritual use of bells and their sounds on different occasions.

Different bell types

The concept of a bell has different terms in English and Chinese. The 'bell' in English is referred to as an idiophone or a percussion instrument, sounding by the vibration of resonant solid material. Its form is usually a hollow, cup-shaped acoustic resonator, which vibrates upon being struck near the rim by an exterior hammer/mallet or interior clapper/jingle-ball to produce a ringing sound.[510] In Chinese terms, however, the notion of 'bell' has been more specifically categorized: the bell with interior clapper/jingle-ball is referred to as a '*ling* 鈴', normally in small sizes (a few centimetres in height) and rarely decorated (Fig. 3-5.1a);[511] and the bell without an interior structure, vibrating only by being struck by exterior instruments, is referred to as a '*zhong* 鐘' (a set of *zhong* is also known as chime-bells), normally in various sizes and decorative styles (Fig. 3-5.1b).[512] Although both of them seem to have been used in certain sets and all

[510] For definition of bells, see an online source *Encyclopaedia Britannica online*, http://www.britannica.com/EBchecked/topic/59546/bell, 08/08/2013.

[511] The *ling*, in shape of an upside-down 'U' with a loop on top, was widely applied as chariot and harness ornaments and as coffin decoration, which was closely related to burial ritual in the Zhou period. See the use in northwest in the Zhou period in Rawson 2010a and 2013b. Types of *ling*: *ling* 鈴, *qiuxing ling* 球形鈴, *luan ling* 鑾鈴. See Zhang 2006.

[512] The Chinese *zhong* in the Shang and Zhou periods are considered as important musical instruments in the history of world music. See studies of musical tradition in Falkenhausen 1989, 1991, 1992, 1993b, 2000 and Falkenhausen and Rossing 1995, Bagley 2000, So 2000, and Ma 2002. Types of *zhong*: *nao* 鐃 (with cylinder-shaped shanks, mounted with the opening upward), *yong zhong* 甬鐘 (with cylinder-shaped shanks, suspended obliquely from a semi-circular knob laterally cast to the shank), *bo zhong* 鎛鐘 (with flat rims and complex suspension devices), *niu zhong* 鈕鐘 (with curved rims and semi-circular knob on top), *duo* 鐸 (with round shanks, used as handbells), and the mallet-struck *zhong*, such as *zheng* 鉦, and *chunyu* 錞于. See Falkenhausen 1993b: 67-72.

translated as 'bells' in English, they are often seen as different percussion instruments with respective purposes.[513] Thus to facilitate the discussion, bells are referred to as *ling* and *zhong* separately in the current section.

The developments of both the *ling* and *zhong* are closely related to areas outside the Central Plains. The earlier versions of *ling* were made of clay or metal, are seen in China's northwest cultures such as the Yangshao 仰韶, Taosi 陶寺 and Siwa 寺窪.[514] A copper *ling* is first known in Shanxi province, on the north borders of the Yellow River basin,[515] and the prototype of a bronze *ling* was found on the south banks of the Yellow River in Henan.[516] Then it spread widely from the Central Plains in the Shang and Zhou periods.[517] Bronze *ling* can also be seen on the underside of certain types of bronze ritual vessel, the use of which may have been transferred from Shanxi and Shaanxi to Hubei in the early Western Zhou period.[518] By comparison, the development of *zhong* had also witnessed movements between China's north and south. An early

[513] Ma 2002: 515.
[514] The early forms of *ling* are normally shaped with an oval section and suspended by a loop on top. See An 1987: 35-38. See KG 1984.12: 1069-1071, Gao 1989, Beijing 1991b: 319, and Li 1996.
[515] See the copper *ling* in Taosi culture in KG 1984.12: 1069-1071.
[516] The Erlitou culture is referred to as an Early Bronze Age urban society that existed in the Yellow River basin in North China from approximately 1900 to 1500 BC. For discussion of Erlitou culture, see Allan 2007, and for detailed discussion of the bronze *ling* in Erlitou, see Bagley 2000: 46-47.
[517] During its spread, the shape and physical function of *ling* have generally remained stable, so it is believed that this kind of bronze *ling* has a clear path of development that originated locally from the Central Plains. Ma 2002: 515, Zhang 2006: 1.
[518] For further discussion of the adoption of the underside *ling* in Hubei province, see a section 'underside bells' in Chapter II.

form of *zhong* appeared at the late Shang capital – Anyang[519] or even earlier.[520] But they soon died out in the north, and only developed thereafter in the south, where they may have been out of reach of the central government.[521] In the early Western Zhou period, the *zhong* once again drew interest from the central power in the form of *yong zhong*, first seen on the periphery of the Zhou realm in Shaanxi and Hubei.[522] Then, as an important component in the renewed package of Zhou ritual practice, it had soon occupied the Central Plains again as the mid-Western Zhou Ritual Reform was implemented.[523]

Another bell type, though it has sometimes been overlooked or misinterpreted,[524] is often seen in the most privileged burials after the Ritual Reform. Like the *zhong* chime, these bells also appear in large sets and decreasing size. They are normally a dozen

[519] See Gao 1986.
[520] The early form of *zhong* is referred to as *nao*, normally cast with similar physical features as *yong zhong*, and probably held mouth upwards. Some scholars believe that the *nao* in the south were probably diffused from Zhengzhou in the Erligang period. See Bagley 2000: 46-47.
[521] These southern regions here refer to Jiangsu, Zhejiang, Anhui, especially in Hunan, all associated with the Yangtze River region and farther south.
[522] See a three-part set of *yong zhong* from Zhuyuangou M7 in Beijing 1988, and two two-part sets from Yejiashan M111 in Beijing 2013. For the possible route through the Jialing River from south to north, see Rawson 1999.
[523] For discussion of bells in the Ritual Reform, see Rawson 1989: 91-92, 1990. Also, for the large-scale use of *zhong* chimes in Shangcunling Guo cemetery at Henan and Beizhao Jin Marquis cemetery at Shanxi, see Beijing 1959, and WW 1994.1: 4-34, WW 1994.8: 4-21, and 22-33, and WW 1995.7: 4-39.
[524] This special bell type is very hard to define, as in most of the related reports, very few of them are provided with photos, drawings, and full measurements. It seems to have never received attention. Some archaeologists refer it as *niu zhong* (WW 1980.1: 35-36), while many more recognise it as large *ling*, and categorise it into chariot and horse fittings. See the so-called '*ling*' set from the M27 of the Rui state cemetery in KGYWW 2007.6: 13.

centimetres in height, which is slightly taller than the *ling*, while significantly smaller than most of the *zhong*. With their medium size and the fact that some of them are found with mallet-shaped clappers while some are not,[525] this bell type is difficult to define and thus normally referred to as a neutral name – '*ling-zhong*'.[526] Their shape has a trapezoidal profile with a spindle-shaped cross-section and a bottom point at the sides. Most of them are decorated with raised lines of simplified animal masks on both sides (Fig. 3-2.5b). In north China, animal masks have been found in association with both *ling* and *zhong* since the late Shang period,[527] but the prototype of *ling-zhong* seems not to have been developed until the early Western Zhou period. In Shaanxi Baoji, three small sets of bronze *ling* have been recorded in the Rujiazhuang M1 of the Yu state cemetery, ranging from 4.8 centimetres to 8.5 centimetres in height (Fig. 3-5.2).[528] Due to their small sizes, these *ling* are probably not designed for human manipulation.[529] But all the seven *ling* here are decorated with similar raised lines of animal masks, so

[525] There are in total four large sets and two smaller ones of this special bell type known to us so far: 1) seven in Zhuangbai Hoard no.1 with no clappers; 2) six in M2001 of the Guo state cemetery with six mallet-shaped clappers; 3) six in M1 of the Jin Marquis cemetery with six clappers; 4) seven in GM21 of the Guojiamiao cemetery with six clappers; 5) one (possibly in a set) in Guojiamiao M5 without clapper; and 6) two in Bajiaolou 80-5 with no clappers. For references on these sets, see the relevant footnotes in next section.

[526] The name '*ling-zhong*' has also been recorded on a set of bells found in a Spring-and-Autumn tomb in Yishui 沂水 Liujiadianzi 劉家店子, Shandong. The inscription reads: '陳大喪史高作鈴鐘，用祈眉壽無疆，子子孫孫永寶用之。 The *ling-zhong* are made by Shigao for a funeral of Chen. May [he] have abundant longevity without limit. May [his] sons' sons and grandsons' grandsons eternally treasure and use it'. For brief report, see WW 1984.9: 5.

[527] Falkenhausen 1993b:132-138.

[528] Beijing 1988: 319-320.

[529] Falkenhausen discusses the issue of *ling* in his 1993 book: 'Those bells do not seem to be designed to be directly and purposefully manipulated by human beings; their small suspension loops are inconvenient for holding them in hand. They were agitated by virtue of being attached to other moving substances'. Falkenhausen 1993b: 133.

they may have been purposely used and placed together. The set of *ling-zhong* in the post-reform period, as an enlarged version of this decorated *ling*, is possibly developed from it, and performed different functions.

Usage of ling-zhong sets

Between the mid-9th and the mid-7th century BC, large *ling-zhong* sets have been found widely in the most privileged burials in Zhou centres and the major regional states. Tab. 3-4 lists a selection of them with drawings:[530] 1) a seven-part set *ling-zhong* was found in Zhuangbai Hoard no.1, none of which had clappers;[531] 2) a six-part set is found in M2001 of Guo cemetery, and all had clappers;[532] and 3) a six-part set with clappers was found in M1 of the Jin Marquis cemetery.[533] As mentioned earlier, the Guojiamiao GM21 occupant had a set of seven *ling-zhong* with six interior clappers.[534] But his set is visually a bit different. Apart from only one standard *ling-zhong* with animal masks, the items in the rest of the set were all cast with raised lines of distorted S-shaped

[530] This table only lists the burials with a set of more than five *ling-zhong* bells, and most of them have been properly reported with full measurements. Although some other important tombs also reveal individual *ling-zhong* or their sets, in most of the cases, their measurement is incomplete or not accessible. For example in a ruler's level burial – Liangdaicun M27 of the Rui state cemetery, there are in total ten bronze '*ling'*, but only one of them is reported with drawing and measurement, which is a 16cm bell with raised lines of animal masks. See KGYWW 2007.6: 13.
[531] Chengdu 2005: 910-925.
[532] Beijing 1999a: 105.
[533] M1 has been heavily looted and the bells were retrieved from tomb looters. The brief report did not give the size information of all the *ling-zhong*, but only two of them. WW 1993.3: 25. Notably, the dating issue related to M1 is controversial, but most scholars date this tomb up to the late Western Zhou period, after the Ritual Reform. See Liu 2007: 146-158.
[534] Beijing 2005b: 13-24.

geometric motif (Fig. 3-2.5b), which may have been borrowed from the decoration on the shoulder (between bead points) of the early Western Zhou Yejiashan chime-bells (see M111: 8 and 13 in Fig. 4-3.3a). Similar S-shaped motifs also were overwhelming adopted on the waist and shoulder of chime-bells in Zhou regional states after the Ritual Reform,[535] but never been seen on *ling-zhong* except the current example in Guojiamiao GM21.

Apart from this exception of the motif,[536] nearly all the contemporary *ling-zhong* share the same shape and decoration, with a semi-circular knob on top, and a full-scale, but simply decorated, body with an oval section and a wide mouth at the bottom. The interior clappers imply that they could produce ringing sounds if they were shaken. But if we compare the size of the *ling* in Fig. 3-5.1a and the *ling-zhong* in Tab. 3-4, some of the *ling-zhong* are at least three times larger than the ordinary clapper bells, and were probably too heavy to be shaken by a simple movement.[537] For these oversized *ling-zhong*, it seems that the most proper way to make them ring would be by striking on the exterior. Although in a later period, the famous *zhong* chime of Marquis Yi of Zeng provides us a good example of how the bells similar to these *ling-zhong* may have been used. Among the 65 chimes of Marquis Yi, there are three sets of smaller *niu zhong* (two six-part sets and one seven-part set), which are similar in shape and size to the

[535] For similar examples on other bells, see Chengdu 2005b: 791.
[536] The uniqueness of this motif will be further discussed in the next section.
[537] The design of *niu* on top of the *ling-zhong* also prevents them from being swung easily as the bells in English church.

ling-zhong, but without any clappers and barely decorated (Fig. 3-5.3a). According to the primary report, they had been set up on top of an L-shaped wooden stand, producing high-pitched ringing sounds by striking with wooden hammers (Fig. 3-5.3b).[538] Similarly, it is possible that these large sets of *ling-zhong* could also have been used as supplements to the chime-bells, helping them to produce richer variations of sound.[539] The smaller *ling* only makes random ringing sounds, but the *zhong* can be accurately played. If the type of *ling-zhong* did develop from the *ling*, its emergence is likely to be a sign that the post-reform ritual preference had higher requirements for bells and their ringing sound.

It is still uncertain whether or not the Guojiamiao GM21 occupant owned any chime-bells accompanying his *ling-zhong* set, but in a recent excavation in the same cemetery, Caomenwan tomb M1 has revealed a wooden chime-bell stand (Fig. 3-5.4),[540] and a three-part set of *ling-zhong*.[541] Therefore, it seems that the corridor people had already learned how to use new combinations of different types of bells. But the uniqueness of decorations on the Guojiamiao *ling-zhong*, as we have mentioned above, also implies

[538] Beijing 1989: 99-106. For further discussion see Falkenhausen 1993b: 210-215.
[539] In most of the post-reform cases, chime-bells and *ling-zhong* sets often appear simultaneously. For Guo and Jin examples, see their archaeological reports in Beijing 1999a: 105, and WW1993.3: 25.
[540] Caomenwan M1 also reveals a large amount of musical instruments, including chime-stones, drums, and psalteries. See JHKG 2015.3: 3-4.
[541] Apart from the three *ling-zhong* (all with clappers), there are also two additional matching clappers, which may have formed a set of five *ling-zhong*. More interestingly, some scholars found that their rims and waists had been polished, and some positive dots had been added on the inner side of the bells, showing that these bells may have been tuned. For further discussion, see Feng 2015.

that their owner might have had a different level of understanding of these bells. The next section will discuss further the local adoption of the matching sets of ritual vessels and different types of bells, to understand the corridor people's choice, and the possible intentions behind it.

3-6 Identity Maintenance

In approaching the social identity of the corridor people in the post-reform period, it seems to be more difficult for us to discuss the top level than that in the preceding Yejiashan period. Three causes are behind it: 1) although typical post-reform burial assemblages have been found in the Zeng cemeteries at Sujialong and Guojiamiao, their survivals fail to provide us with adequate information of what a Zeng ruler may have had in his position; 2) as the earliest Zeng burials known to us in this period (Tab. 3-1), the Guojiamiao GM21 can be dated to the late Western Zhou period,[542] but it was still a couple of decades later than the period when the Ritual Reform was carried out, so none of the known corridor burials at this level is able to show us sharp changes in terms of their burial assemblages as seen in the Zhuangbai Hoard no.1;[543] 3) as for the surname issues, just as in the Yejiashan period, there is still no direct evidence to support the idea that the Zeng rulers belonged to the Jī-surnamed Zhou people.[544] In fact, if we

[542] The whole cemetery of Guojiamiao is dated from 800 to 650 BC, and Guojiamiao GM21, along with CM01 and CM02 in the Caomenwan site, is among the earliest burials in this cemetery. See Beijing 2005b: 335.
[543] For further discussion, see the section 'Recognition of Ritual Reform' above.
[544] The evidence showing that 'the Zeng was a Jī-surnamed state' all comes from the second half of the Spring-and-Autumn period or later, see Wang 2014: 70.

focus on structural difference of the character 'Zeng' before and after the Ritual Reform (see inscribed Zeng characters in Fig. 3-6.1), there is even a doubt whether the post-reform Zeng state and the Yejiashan Zeng state share the same origin.[545] Therefore, such uncertainties make any attempts to approach the identity issues difficult. However, they do not alter the fact that the tomb contents are mirrors and portraitures of daily life of the corridor people, the same indigenous inhabitants who had been evidentially living in the southern boundary of the Zhou realm since no later than the early Western Zhou period. Therefore, we can still examine the identity of their social group in a subjective sense, to see how the locals may have used their social identity for their own purposes.

The burial assemblages from the Sujialong and Guojiamiao cemeteries, while incomplete, show us strong characteristics of the post-reform ritual and burial tradition from the Zhou centres, which can also be seen in other contemporary Zeng burials in the corridor. As discussed earlier, the capital of Zeng may have been relocated from Suizhou to Zaoyang in this period. Such northward movement, as some scholars suggest, implies that, with the decline of the Zhou central power, its strength had gradually withdrawn from the Suizao corridor.[546] However, this movement may be understood in another way. Standing in the perspective of the Zhou authority, the Zeng

[545] When the first season of Yejiashan excavation was carried out in 2011, scholars pointed out that the character 'Zeng', showed in the bronze inscriptions, is structurally different from those of the known Zeng state in later period. They therefore suspect there was more than one Zeng state in ancient Hubei province. See Li *et al*. 2011: 66. But other scholars also suggest that the change of characters only represented different stages of the development of Chinese writing. They all belonged to the same Zeng state in the Suizao corridor. See Zhang 2009b: 359-362.
[546] Li *et al*. 2011: 76, and Zhang 2013b: 284.

power, which can be seen as a Zhou representative in the south, had in fact, after the Ritual Reform, spread from the central zone to all the adjacent zones, occupying most of the Suizao corridor and even beyond. If we merely look at the occupied region, rather than decreasing, the Zhou strength in the corridor was actually increasing in the post-reform period.

Nevertheless, if we change our viewpoint to reconsider the Zeng people only, it seems that the adoption of the Ritual Reform may have been a means to an end. It is worth noting that the E state in this period, who used to be a strong ally[547] (or opponent,[548] living side by side with the Zeng state in the early Western Zhou period), did not survive. According to the bronze inscriptions recorded on the Yu 禹 *ding* (Fig. 3-6.2),[549] the Marquis Yufang of E started a rebellion against the Zhou before this period, which ultimately caused the elimination of the E state in the corridor.[550] The position of the Zeng people in this military action was not noted, but the Zeng state did benefit from the withdrawal of the E. Most scholars agree that the Yu *ding* is dated to King Li's reign

[547] They have been recorded in the same military operation to help some officials from the Zhou centres. See bronzes inscriptions of the Jing square *ding*, and related discussion in Xu 1998, and Li *et al*. 2011: 67-69.
[548] In terms of producing their own ritual vessels in early Western Zhou period, both Zeng and E state have presented an excellent capacity. If their capitals were located as close to each other as their state cemeteries in the corridor, the resource competition would be a serious problem between them, since they had equal opportunities to reach and even control the mineral-rich area in the Yangtze River region.
[549] Yu *ding* (also known as Mu Gong 穆公 *ding*), found in the Zhouyuan region in early 1940s, uses 206 characters to record a war between the Zhou king and the E Marquis Yufang 馭方. See Beijing 1984: 232-233.
[550] Although being eliminated, the E state seems not to step off the stage of history. In the Nanyang Basin, a Spring-and-Autumn E Marquis cemetery was excavated in 2013, indicating that the E state later relocated slightly to the north.

(857/53-842 BC),[551] which was just about the time that the Ritual Reform was carried out. It is worth considering that by following this cross-cultural conversion, the Zeng people may have deliberately maintained the Zhou identity by showing their loyalty to the Zhou. Meanwhile, they took this opportunity as a means to squeeze their major competitor out of the Suizao corridor, expand their power and monopolise all the three zones and possibly the mineral resources nearby.

However, as we have discussed in the preceding chapter, as a borderland group, the initial bond between the Zeng people and the Zhou identity was not based on Zhou kinship. So, although the Zeng burial and ritual assemblages followed Zhou practice, the ways in which they were treated may not have been perfectly aligned. In the current period, if the Zeng people did purposely maintain their Zhou identity, their understanding of the Ritual Reform is likely to have varied by comparison with the post-reform Zhou groups in north China. In some previous studies, a scheme of three levels, namely the physical level, the social level, and the ideological level, have been proved to be very helpful in understanding China's ritual bronzes and their role in the ancient society,[552] which will be further discussed in the following paragraphs.

Physical level

Headed by the Sujialong site and the Guojiamiao cemetery, the burial assemblages in

[551] For this viewpoint, see Xu 1959: 56-57, and Zhang 1995: 87. Some other scholars also date this vessel to earlier periods, such as to King Yí's reign, see Xu 1994: 91.
[552] For further discussion, see Rawson 2005.

all the three zones seem to have followed the full acquisition of the post-reform assemblage from the Zhou centres. In the most privileged local tombs, sets of *ding* and *gui* form the core of ritual vessel assemblage, accompanied by other vessel types like *yan*, *li*, *hu*, *pan*, *yi*, and sometimes with the newly introduced *dou*. Just like other northern contemporaries, there was strictly no cross use of the early drinking vessels, and the majority carried simplified geometric decorations. Moreover, the emergence of *ling-zhong* sets, chime-bells (despite only remains of *zhong* stand) and other stringed instruments implies an increasing use of musical instruments. All these signs strongly suggest that the material level of the Ritual Reform was adopted in the Suizao corridor in this period.

Social level

The social meanings attached to the material adoption after the Ritual Reform can also be observed in the Suizao corridor. At the physical level, wine vessels were abandoned and food vessels were emphasised. But in fact this change was not as simple as replacing alcohol for food. New ritual and burial performance, steps and movements would have been also introduced as a package with new ritual vessels and other instruments. More importantly, by using matching sets in an expanded ritual occasion, the post-reform assemblage focused more on highlighting its owner's social status, in which the elites with higher positions in the Zhou social hierarchy were likely to have more vessels in larger sizes, and to preside over greater banquets with larger performances than did those with less and smaller vessels. After the Sujialong site was

first discovered in 1966, its large burial assemblage, especially the sets of nine *ding* and seven *gui*, convinced a number of scholars that its occupant was as important as those regional rulers in the contemporary Jin and Guo states. But, as we discussed earlier, the absence of chime-bells and the less creative vessel types are apparently not the taste of a powerful regional ruler. The poor-sized *ding* in matching sets also indicate that their owners might not have been of equal status. This observation, in general, befits their relatively lower status as a social group living only on the boundary of the Zhou realm.

Ideological level

The notion of representation may be one of the most appropriate tools to understand the ideological level of our discussion. As introduced in Chapter I, a representational system sometimes can be seen as a coding-and-decoding system, which sets up the correlation between languages and concepts, and is used to signify the meaning of an object.[553] Here we take for instance the notion of 'bell' once again. When a bell-like object is observed, an English speaker will conceptualise it into the meaning of a general idiophone or percussion instrument, and make it into a word 'bell', using his/her English coding system in mind. And when communicating the meaning of 'bell' in the form of language 'bell' with someone who is coded with Chinese language, the decoding process is different. The Chinese speakers will automatically correlate the term 'bell' to two separate words – '*ling*' and '*zhong*' in Chinese, and to reflect at least two different objects.

[553] For further discussion, see Hall 1997: 36-43.

As some scholars point out, this approach applies not only to language; the representational system can be extended and applied to all social practice. Meaning and meaningful practice is constructed within a 'discourse',[554] with emphasis on the consequence of the processes, or in other word, representation regulates the behaviour of others.[555] For example, the topic of 'post-reform ritual sets' gives us a certain kind of knowledge about the object. After the Ritual Reform, the new rules which prescribed certain ways of conceptualising the 'ritual set' and excluded other ways, governed what was 'sayable' or 'thinkable' about the topic at this particular historical moment. The practices within the new institutions for dealing with the social life of people regulated and organized the conduct of the tomb occupants in their lifetime.

If the behaviour of the corridor people and those from the Zhou centres were under the same 'discursive formation' after the Ritual Reform, they would have had the same characteristics in the way of thinking or the same state of knowledge of their belief system to regulate their conduct, as seen from the same topic – the post-reform ritual sets. However, any differences in the topic, no matter how minor they are, may detach them from this model. As we have discussed above, the Guojiamiao GM21 *ling-zhong*

[554] The notion of 'discourse' is defined as 'a group of statements which provide a language for talking about - a way of representing the knowledge about - a particular topic at a particular historical moment. Discourse is about the production of knowledge through language. But... since all social practices entail meaning, and meanings shape and influence what we do - our conduct - all practices have a discursive aspect'. See Hall 1992: 291.
[555] See the work of Michel Foucault in Hall 1997: 44-46.

set (Fig. 3-2.5b, and Tab. 3-4) carried an S-shaped decorative pattern, whereas all its contemporaries were decorated with animal masks. If we follow the model, the post-reform Zhou central tradition coded its *ling-zhong* with animal-mask motif to form its own meaningful ritual practice. But due to different ways of thinking, different state of knowledge of belief system, or different initial identities,[556] this Zhou practice had not been decoded by the GM21 occupant. Regardless of what the symbolic importance of the unique S-shaped geometric motif *ling-zhong* set was and how much they had been appreciated locally, when abandoning the original animal-mask motif, the meaning and the meaningful ritual practice under the Zhou belief system were likely to have varied at the ideological level in the Suizao corridor.

3-7 Conclusion

The Ritual Reform offers us a general account with which to understand the numerous changes of the 'mid-Western transition'. It also provides us with ways of measuring the degree of closeness of the relationship between the Zhou central court and its regional polities, for example the patterns of decoration, quantity, and size of the bronzes in matching sets. In this course, the Zeng state in this period, as we see here, was bound with the Zhou tradition by an outwardly united but actually slightly alienated relationship. As can be seen from the local ritual and burial assemblage, it is likely that the corridor people had not received value and attention from the central government as much as their predecessors in the Yejiashan period. This situation may be connected

[556] See the section of identity construction in the Yejiashan period in Chapter II.

to the social turbulence during the mid-Western Zhou period, when the authority had been threatened by both external and internal challenges. The Zhou court may have been too busy, and also too far away, to take good care of the situation on its southernmost borderland.

The Zeng state, after sharing this important pathway, as well as the mineral resources nearby, with its neighbouring regional powers for the whole of the early and possibly the mid-Western Zhou period, had finally encountered an opportunity to change the situation after the Ritual Reform. By physically and socially adopting the post-reform assemblage, the Zeng people had demonstrated their loyalty to the central government. But unlike the earlier period, when the Yejiashan people had a primordial attachment to north China and the Zhou, now the main reason that the corridor people chose to maintain the Zhou identity is possibly because this very identity could be used as an instrument or a means to help them control the entire area of the Suizao corridor. Today, this choice can be seen not only as a guarantee to Zeng for survival on the Zhou borderland, but also as a foundation of Zeng for its later success in the Marquis Yi's period.

CHAPTER IV – Marquis Yi's Period

From the mid-6th to mid-4th century B.C.

4-1 Introduction

The Zeng state in this period has been world famous since 1978 with the discovery of the tomb of Marquis Yi, a Zeng lord in the Warring States period, who was buried with tons of funeral objects, including large sets of bronze ritual vessels, 'musical bells',[557] weapons, and other precious goods, such as gold objects, lacquer wares, jade, ceramics, and glasswork.[558] Although archaeologists were no strangers to Zeng bronzes when this tomb was excavated, the discovery of such a massive quantity of high-standard burial

[557] The term 'musical bell' here refers to the bells as percussion instruments (such as different types of *zhong*, and perhaps their *nao* predecessors). The term is normally used to separate them from idiophone (clapper bells for example). Most of the musical bells can produce two tones by being struck on different parts near the rim. There were different ways of using musical bells in Shang and early Western Zhou period, but after the mid-Western Zhou Ritual Reform, they were overwhelmingly arranged in large sets (normally in decreasing sizes).

[558] For the primary report of this tomb, see Beijing 1989a.

goods forced them to revaluate the state of Zeng, and its geopolitical relationship with its major neighbours in the south, such as the text-based Sui state,[559] and the dominant Chu power.[560] The Chu state, to be discussed below in this chapter, is especially relevant to our discussion, as Chu was probably the main power, replacing Zeng to occupy the southern fringe of central China, and to interact with the north in this period. The 'Chu style'[561] burial assemblages were widely distributed in the vast lands from the Yangtze River region to the Huai River, including the central zone of the Suizao corridor where the Zeng state had been active since early Western Zhou period.[562]

The newly excavated Zeng burials, dated from mid-Spring-and-Autumn to early Warring States period, such as the Wenfengta cemetery within Suizhou city, suggest new ways of understanding the Zeng state in Marquis Yi's era. Through special taste of Zeng bronzes and their casting techniques, the current chapter aims to compare the Zeng state, both with the contemporary Chu power, as well as with the earlier Zeng state itself (for example the Zeng state mentioned in Chapter II and Chapter III), in order to discuss the identity change of the Zeng people, and to further understand the

[559] Since the discovery of Marquis Yi's tomb, the question – 'Do the Zeng state known from palaeographic sources and the Sui state known from the transmitted texts refer to the same regional power in Zhou period?' – has been asked over and over again, but, until now, it seems that there is still no satisfactory answer to this question. For the opposite views about this question, see Li et al. 2011: 64-77.
[560] Archaeologists felt the need to revaluate Zeng and its relationship with its neighbours as soon as Marquis Yi's tomb was excavated. For further details, see the brief report of Leigudun M1 in WW 1979.7: 13-14.
[561] For definition of the 'Chu style', see the section on Chu below.
[562] For discussions of the similarities of bronzes between Zeng and Chu in this period, see previous works in Shu and Liu 1982: 72-77, Yang 1991: 16-22, Zhang 1992: 60-66, and especially Zhang 2009b: 197-294.

success of the Zeng state over such a long period of time. Here I argue that although the general Zeng practice had duly followed Chu when the Chu power rose, the Zeng people still held a competitive position against the Chu in terms of their craftsmanship in bronze casting. They also maintained some of their own use of ritual bronzes to show that, with a northern origin, they were fundamentally different from the Chu people. By following contemporary Chu traditions, the Zeng people may have used these as a means to survive in the era with changing power strategies.

4-2 Major archaeological sites

After the late Spring-and-Autumn period, some important lands in the corridor that had belonged to the Zeng state previously had gone (Fig. 4-2.1),[563] and currently most of the Zeng sites concentrated in the central zone near the Suizhou area (Tab. 4-1). Two of them, the Leigudun cemetery and the Wenfengta cemetery, are the focus of this chapter.

Leigudun cemetery

The Leigudun cemetery situated on the hilly terrain to the west of Suizhou city, separated from the densely populated area by the River Jue. The general area includes several independent cemeteries, with a large number of Eastern Zhou burials (Fig. 4-2.2),[564] headed by Leigudun M1, which is also known as the tomb of Marquis Yi of

[563] After the Guojiamiao cemetery, the general Zaoyang area is believed to be later occupied by the Chu state. A large Warring State Chu cemetery at the Jiuliandun site, only one mile east of the Guojiamiao cemetery, demonstrates Chu's occupation of this area. For further information on the Jiuliandun cemetery, see JHKG 2003.2: 29-30.

[564] There are in total eight Eastern Zhou cemeteries nearby, including Tuanpo,

Zeng. This burial, dated to the late fifth century BC,[565] has been regarded as the most essential discovery so far in Zeng history, and has been extensively studied since the late 1970s.

The tomb Leigudun M1 is massive in size with a very special layout. According to the principal report,[566] it has a plan of an irregular polygon in a north-south orientation,[567] measuring 21 metres from west to east and 16.5 metres from north to south, with a total area of 220 square metres.[568] The coffin chamber is built of 171 huge square timbers

Wujiawan 吳家灣, Leigudun, Miaoaopo 廟凹坡, Lüjiabang 呂家塝, Wangjiawan 王家灣, Caijiabao 蔡家包, and Wangjiabao 王家包. For an overview of these cemeteries, see Beijing 2008: 1-2.

[565] The Marquis Yi's tomb is believed to have been created in 433 B.C., or shortly after this year. The dating here is based on the bronze inscriptions on one of its chime-bells, which was sent to Zeng by King Hui 惠 of Chu as a funeral gift. For further discussion, see WW 1979.7: 13.

[566] The full archaeological report of this tomb was published in two volumes about ten years after the excavation finished. See Hubei 1989.

[567] The north-south orientation of this tomb is questionable. In Chinese archaeology, the orientation of a tomb is normally defined by the orientation of the coffin, and so it does in Marquis Yi's tomb. But Yi's coffin may have not been in the position in which it was buried. According to the principal report, Yi's huge bronze-lacquer coffin is equipped with a lacquered coffin with a heavy bronze frame and two inner lacquered wooden coffins, which made the whole coffin system over three tons. During the 1978 excavation, archaeologists noted that the bronze frame of the coffin tipped on to one of its long edges of the baseboard, which was deeply inserted into the floor of the eastern chamber (Beijing 1989a: 9, figure 5). The inserted edge was too firm to be plucked from the timber floor, so the funeral executor had to leave the coffin tilted, and prop up the other side of the long edges with some supporting structures (Beijing 1989a: plate VIII.1). Therefore, this tilted coffin implies that when it was hoisted into the tomb chamber, the framed coffins may have crashed into the coffin chamber, and thus it is possible that its current orientation is not as it should be. Another reason to doubt the orientation of Leigudun M1 is that the Leigudun M2, 102 metres to the east of M1, has adopted an east-west orientation with the occupant's head towards the east. See Beijing 2008: 8-10.

[568] Without any sloping ramp, the vertical tomb pit is 7.5 metres deep, filled with charcoal, kaolin (a kind of white clay, also known as *baigaoni* 白膏泥 in Chinese), large flagstones and three different kinds of earth. The refill has been carefully arranged and rammed. From bottom to top, the pit is successively filled with a layer of charcoal,

and partitioned into four individual compartments, each of which is believed to correspond to the Marquis's bedchamber, ceremonial court, arsenal and harem in his lifetime (Fig. 4-2.3).[569] The eastern chamber has ten coffins,[570] a number of musical instruments, lacquer wares, jade articles, glass beads, and weapons. The central one is filled with a large set of chime-bells, a set of chime-stones, large number of bronze ritual vessels, golden objects and music instruments. The chamber in north contains large number of weapons, chariots, trappings, leather armours and bamboo slips. The western one is full of thirteen coffins of human victims.

As with other Zeng burials in this period, the burial assemblage in Leigudun M1 presents a strong 'Chu style'.[571] The flat-bottomed tripod *ding* with concave sides and outward-curving handles, also known as '*sheng* 鼎升' *ding* according to its inscription, is one of the most representative examples of the Chu style bronzes,[572] which is believed

a layer of kaolin, several alternating layers of brown and grey earth, a layer of large flagstones, and several alternating layers of brown, grey earth (and/or mottled earth). The rammed marks, 4-6 centimetres in diameter, can only be found on the layer of brown earth. See Tan 2003: 23-26.

[569] All the individual chambers are separated but connected with each other by 'doors' as rectangular openings at the bottom of the timber walls in between (each of the openings is no more than 50 centimetres high). Falkenhausen suggests that this interconnected structure may be the 'earliest clear instance of an ambition to recreate underground the living surroundings of the deceased'. See Falkenhausen 2006a: 306-312. And Wu Hung believes that 'Whereas these four sections reflect the internal divisions of a residence, they do not imitate their worldly counterparts… but only symbolize them'. See Wu 2010: 38-40.

[570] Coffins here include one luxury lacquered coffin with a huge bronze frame and two inner lacquered wooden coffins for the occupier of the tomb, eight smaller ones for human victims, and a tiny one for a sacrificial dog.

[571] For further discussion, see next section 'The state of Chu'.

[572] This type of *ding* with the name of '*sheng*' is first found Anhui Shouxian, and the name of *sheng ding* is given by Yu Weichao and Gao Ming, see Yu and Gao 1985: 67.

to have developed from the *ding* in the Zhou tradition during the late Western Zhou period.[573] A matching set of flat-bottomed *ding* is normally seen in the most privileged Chu burials, such as Xiasi M2,[574] Jiuliandun M1,[575] and, in the meantime, such sets can also be found among those regional powers who are believed to be in alliance with or closely affiliated with the Chu, such as the Cai 蔡 state, whose capital was sandwiched by Chu and Wu state in this period.[576] A set of seven flat-bottomed *ding*, excavated from a Marquis's tomb near the Cai capital in Shouxian in Anhui province,[577] is normally seen as one of the demonstrations to show the Cai Marquis's subordination to Chu.[578] Similarly, the set of nine flat-bottomed *ding* in Leigudun M1 is also considered as a Chu-related product (Fig. 4-2.4),[579] which implies that the Zeng state in this period may have faced the same geopolitical situation as the Cai state did.[580] But nonetheless,

[573] The source of *sheng ding* may be linked to the Bangji 邦季 *ding*, found in Zhoujiagang and dated to the post-reform period. After comparing the shape and decoration of flat-bottomed *ding* from the Zeng and the Chu states, Zhang Changping argues that the idea of the regular Chu style *sheng ding* may have come from the flat-bottomed Zhou style *ding*, which was an extension of the *ding* with flat belly and vertical handles in the late Western Zhou period. See Zhang 2009b: 208-214.
[574] A seven-part set of *sheng ding*, see Beijing 1991a: 112-125.
[575] A five-part set of *sheng ding*, see Beijing 2007a: 28-29.
[576] According to transmitted texts, the geopolitical situation of the Cai state was so tough in this period that it had to submit to other powerful states' control. See the second year of Duke Wen in *Zuo zhuan* (左傳·文公二年). The original text reads: '居大國之間，而從於強令。(Wu) situated between large states, (who) succumbed to power (from them).'
[577] Beijing 1956: 6-7.
[578] Beijing 2004b: 388-389.
[579] The Leigudun M2 also has a set of nine flat-bottomed *ding*, which is very similar to Marquis Yi's, but dated slightly later than it. See Beijing 2008: 19-32.
[580] For viewpoints on the affiliation with Chu, see Beijing 2004b: 395. Most scholars believe that no later than the late Spring-and-Autumn period, the Zeng state had affiliated with its powerful neighbour Chu. See Falkenhausen 1999: 513. After comparing bronzes from Zeng, Chu, and Zheng (representative of the northern tradition) in the mid-Spring-and-Autumn period, Zhang Changping argues that the use of bronzes in Zeng state is much closer to the Chu tradition in the south, rather than the northern

not all the burial goods in the Zeng state are consistent with those of the Chu tradition, for instance, the selection of chime-bells. As shown in Fig. 4-2.5, Marquis Yi's large set includes 45 *yong zhong* in five groups,[581] 19 minor *niu zhong* in three groups, and one *bo zhong*,[582] which have been assembled on a large L-shaped wooden stand.[583] In Leigudun M2, all the 36 bells are also in the form of *yong zhong*.[584] Such a Zeng preference significantly differs from the Chu tradition between the late Spring-and-Autumn and the mid-Warring States period, in which most of the Chu elites chose to use a combination of *bo zhong* and *niu zhong*, rather than *yong zhong*.[585]

Wenfengta cemetery

The Wenfengta is part of the Yidigang cemetery, located in the eastern part of Suizhou city.[586] The discovery of this cemetery has passed through three stages: 1) in 2009, a rescue excavation revealed two Eastern Zhou tombs, and one Ming tomb (14th to 17th

Zheng tradition. So no later than this period, the Zeng bronzes had belonged to the Chu tradition. See Zhang 2009b: 200. The dependency relationship is indeed a good way to explain this situation, but there are also other possibilities. As it will be discussed later in this chapter, Zeng and Chu may also have been in a mutually-beneficial relationship. During their interactions, each of the states took what it needed from the other.

[581] About 70% of the chime-bells in M1 are in the form of *yong zhong* (45 items), all of which are standard in shape. Three versions of the '*mei* 枚 (bead point)' on their shoulders are observed: 1) 22 have long bead points; 2) 11 have short rounded bead points; and 3) 12 have no bead points. See Beijing 1989a: 88-99.

[582] The *bo zhong* here is believed to be a sympathy gift from Chu according to its inscriptions, the type of which is possibly excluded in the original set of chime-bells of Marquis Yi.

[583] For the wooden stand, see Beijing 1989a: 76-87.

[584] For the 36 *yong zhong* in Leigudun M2, see Beijing 2008: 70-107.

[585] For further discussion, see the section 'How Zeng differed from Chu' below.

[586] In KG 2014.7, a brief report of the whole cemetery has been published, but the report is too brief to provide detail information of each tomb. So far only the materials from M1 and M2 have been published in the form of archaeological reports (JHKG 2014.4), and the rest of the major burials are still waiting to be reported.

centuries);[587] 2) another rescue excavation in 2012 found four burials and confirmed that this area was a cemetery dating from the late Spring-and-Autumn period to the Ming dynasty;[588] 3) from 2012 to 2013, 54 shaft pit tombs, 12 brick tombs, two chariot and horse pits, and one horse pit were excavated. Two of the shaft pit tombs were equipped with sloping ramps (M8 and M18), and three were found with waist pits (M2, M18, and an unreported tomb). According to their bronze inscriptions, two large burials, M1 and M18, are believed to belong to two Zeng lords in approximately the 5th century BC – Marquis Yu 與 (dated to the late Spring-and-Autumn period), and Marquis Bing 丙 of Zeng (dated to the early Warring States period). The burials of later generations are placed to the south of the earlier one, so the general layout of the Wenfengta cemetery is similar to that of the Yejiashan cemetery.[589] In the meantime, most of the burials here are in east-west orientation with the head towards the east, which are also consistent with the traditions of the previous Zeng state cemeteries from the early Western Zhou period.

Although most of the tombs in the Wenfengta cemetery were looted, the surviving burial goods still show us a number of important patterns, headed by those from three major tombs: M18, M33, and M1 (Fig. 4-2.6). At the south end of the cemetery, Marquis Bing's burial, M18, is interesting for its waist pit and sloping ramp with steps,[590] but

[587] M1, M2 are Eastern Zhou tombs, and M3 is a Ming tomb. See JHKG 2014.4a.
[588] The four burials are numbered from M4 to M7. See JHKG 2013.1: 3.
[589] For the general layout of the Yejiashan cemetery, see Chapter II.
[590] KG 2014.7: 19-20. The waist pit here is a 0.5-metre deep pit with a ceramic jar inside. Both the pit and the jar inside are rarely used at the ruler' level. Similarly, the south-

archaeologists focus more on its tomb structure. Similar to the Leigudun M1, the underground space here is also divided into several compartments. The coffins of Marquis Bing have been placed in a square chamber in the centre of the pit, surrounded by his burial goods in four square compartments on each side.[591] All the five compartments form a cross-shaped structure, which is the only case known in Hubei in the Eastern Zhou period (Fig. 4-2.7).[592] In the northern part of the cemetery, a middle-sized intact burial, M33, revealed 24 bronzes.[593] One of them is a bronze *pan* with openwork handles (Fig. 4-2.8), which is considered as one of the earliest examples of lost-wax casting, dated to the late Spring-and-Autumn period.[594] Marquis Yu's burial, M1, is also considered as an important burial in spite of being severely disturbed by both modern construction work and early looting.[595] Apart from the remains of a few

facing stepped ramp (with 15 stairs, measured at 6.6 metres) is very uncommon in Zhou period, and also different from Chu style burials, as most of the Chu tombs in this period are equipped with stepped pit walls and regular sloping ramps, such as the Jiuliandun M1 and M2 (Beijing 2007a: 18-19), and the newly excavated Wangshanqiao 望山橋 M1 in 2015. For further discussion of the Chu burial tradition, see next section 'The state of Chu'.

[591] The compartment in the east is the only intact one of the five. It contains over 70 bronzes, including *ding*, *gui*, *li*, *jia*, and *hu*. See KG 2014.7: 19.

[592] There are also three additional small compartments to its east, north, and west, each of which is a two-metre by two-metre square (see FK 1-3 in Fig. 4-2.7): KF 1 contains a ceramic vessel; KF 2 has two bronze square *fou*; and KF 3 is an empty pit. See KG 2014.7: 19-20.

[593] M33 is one of the few intact burials in this cemetery, and revealed 3 *ding*, 3 *sheng ding*, 4 *gui*, 4 *li*, 3 *fou*, 3 *hu*, 1 *yu*, 1 *he*, 1 *pan*, and 1 *yi*. See KG 2014.7: 21-22.

[594] For brief report of this *pan*, see KG 2014.7: 29, and 33; and for contemporary examples of lost-wax casting, see the bronze table *jin* (M2: 65) from Xiasi M2 in Beijing 1991a: 126. This casting method will be further discussed in the section 'Zeng resemblances to Chu' later in this chapter.

[595] An iron tool is found in the sounding area of M1, mixed with remains of burial goods, wooden coffin chamber, refill and other burial materials that have been destroyed by the construction work. This type of tool, according to the excavators, often appears in robber holes in 'early periods'. So although without knowing the exact time, most archaeologists believe that this burial may have been looted long ago. See JHKG

ritual vessels,[596] an incomplete set of ten *yong zhong* is particularly valued by archaeologists (Fig. 4-2.9). It is divided into three groups in terms of their appearance and inscriptions (Fig. 4-2.10): 1) Group A consists of the two largest *zhong* (M1: 1, and 2), and one of them has been severely damaged (M1: 2);[597] 2) Group B has a middle-sized one, partly broken (M1: 3);[598] and 3) Group C contains the remaining smaller *zhong* (M1: 4–10), including four intact ones, a partly broken one, and two fragments that cannot be restored.[599]

In Group A, the inscriptions of the largest two *yong zhong* carry the same contents, inscribed at the shoulder (*zheng* 鉦, see Fig. 4-2.11a) and the waist (*gu* 鼓, see Fig. 4-2.11b, and Fig. 4-2.11c) on both front and back of their bodies.[600] Following the arrows marked in Fig. 4-2.11, the inscription is read from right to left, starting at the shoulder on the front (front a), and ending at the right waist on the front (front c):

> (front a) 惟王正月，吉日甲午。曾侯與曰：伯適上帝，佐佑文武。(front b) 達殷之命，撫奠天下。王遣命南公，營宅裔土。君庀淮夷，臨有江夏。周室之既卑，(back c) 吾用燮蹙楚。吳恃有眾庶，行亂，西征南伐，乃加于

2014.4a: 3-4.

[596] The ritual vessels here include 2 *ding*, 2 *li*, 1 *fou*, 1 *jian*. See JHKG 2014.4a.

[597] The two bells in this group were inscribed with the same inscription, so although they have different degrees of damage, the contents here are amazingly complete, and will be discussed in the next paragraph.

[598] The inscription on M1: 3 is also important for one of its sentences: '余稷之玄孫', which may be understood as 'I am the descendant of nation'. The wording here indicates that the vessel owner may have been one of the successors of the Zhou royal family. For further discussion, see Luo 2014: 53, and for the complete content on this vessel, see JHKG 2014.4a: 16-26.

[599] JHKG 2014.4a: 14-33.

[600] For terms that related to the Eastern Zhou *yong zhong*, see So 1995: Appendix II.

楚。荊邦既殄，而天命將誤。有嚴曾侯，業業厥聲。(back a) 親博武功，楚命是爭。複奠楚王，曾侯之靈。穆穆曾侯，(back b) 臧武畏忌，恭寅齋盟。代武之表，懷燮四方。余申固楚城，改複曾疆。擇台吉金，自作宗彝，穌鐘 (front c) 鳴皇。用孝亯于台皇祖，以祈眉壽，大命之長。期純德降余，萬世是尚。

It was the king's first month, the auspicious day, *jiawu* (day 31). Marquis Yu of Zeng said: Shi, as [my] ancestor, assisted the King Wen and King Wu. [They] conquered the Yin [Shang], and united the world. The king sent Nangong [Shi], and asked him to lay out a city at the remote region,[601] and to govern the outsiders along the Huai River [to its north] and the area at the confluence of [the rivers] Jiang and Xia [to its south]. When the Zhou declined, the Zeng stood on the side of the Chu. Emboldened by its power, Wu attacked [Yue] in its south, and made their way west to invade Chu. It was a foretaste of impending doom for Chu, and the Mandate of Heaven was about to lose [Chu]. The glorious Zeng Marquis decided to fight for Chu, and to restore the majesty of the Chu king. The Marquis of Zeng respected the covenants [between Zeng and Chu], who was seen as a model for others. [The Zeng Marquis] helped the Chu king to strengthen his city, and also regained the [previous] Zeng land. [I, Yu] select fine bronze to make a

[601] The transcribed phrase 'yitu 裔土' here, referred to as 'remote region', follows the Chen Wei's viewpoint. For further discussion, see Chen 2015. According to Li Xueqin and Li Ling, this phrase should be 'neitu 汭土', referring to the confluence of rivers, possibly the present-day Suizhou area. The character 'nei' (its variant nei 內) is also seen in the inscription of Yu 禹 *ding*, which records a war in the Suizao corridor between the Zhou king and the E Marquis Yufang. See Li 2014b: 69, and Li 2015a: 118.

treasured *zhong*, in order to honour my ancestors, and to pray for health and longevity. I hope that I, and my descendant, can be given pure virtue.[602]

Although scholars hold different opinions with respect to the interpretation of characters in this inscription, most of them are in agreement on the following points in general: 1) Yu, as the owner of these chime-bells, was possibly the occupant of the tomb, Wenfengta M1;[603] 2) Yu's ancestor – Nangong Shi had helped the Zhou kings conquer the Shang, so he was sent to govern the south;[604] 3) the name Nangong implies that the early Western Zhou Zeng ruler in Yejiashan M111 was possibly Jī-surnamed as well;[605]

[602] This text is first seen in the brief report of Wenfengta M1 and M2, see JHKG 2014.4a: 15-16. Since then, it have been heavily discussed by many archaeologists and historians, such as Fan Guodong 凡國棟 (Fan 2014), Li Xueqin (Li 2014b, and Li 2015b), Li Tianhong 李天虹 (Li 2014a), Li Ling 李零 (Li 2015a), Chen Wei 陳偉 (Chen 2015), and Gao Chongwen 高崇文 (Gao 2015). The current version is basically translated from the latest edition by Li Ling in 2015, with a combination of opinions of the mentioned scholars above.

[603] Apart from Yu's names on bells, another inscription of Marquis Yu is found on a bronze *li* (M1: 19), together they indicate that Yu was the possible occupant of the Wenfengta M1. See JHKG 2014.4a: 9-10. Previous studies show that there are three Zeng Marquis' names, Yue, Yu, and Yi inscribed on the bronzes in the early Warring States tomb Leigudun M1. It is believed that Yu and Yue are forefathers of Marquis Yi. For further discussion, see Zhang 2009c.

[604] Most of the scholars agree that the name 'Nangong' and 'Boshi 伯適' refer to the same person, who is also seen in the inscriptions of Yu *ding*, see Fan 2014: 62.

[605] Based on the inscription on some excavated Zeng bronzes with the character 'Jī 姬', most people believe that, after the late Spring-and-Autumn period, the Zeng state was seen as a Jī-surnamed state. See Zhang 2009b: 383. The names of Nangong appear in Yejiashan and Wenfengta refer to the ancestor of the current Zeng ruler. Therefore, it implies that the Zeng in the early Western Zhou and the Zeng in the late Spring-and-Autumn belonged to a clear line of succession. So the early Western Zhou Zeng state may have been Jī-surnamed as well. In the meantime, some archaeologists further suggest that the person whom the name 'Nangong' refers to is one of the text-based early Western Zhou key ministers – 'Nangong Kuo 南宮括'. See Huang and Hu 2014.4b: 43. However, linking the Nangong inscription to the Zhou minister Nangong Kuo is only Huang's assumption. Although some archaeologists agree with him (see Li et al 2013), none of the current archaeological evidence supports this idea.

4) as the Zhou declined, Zeng had turned to the newly empowered Chu tradition;[606] and 5) Zeng helped the Chu state during the war between Wu and Chu.[607]

As we can see from this record, in the eyes of Marquis Yu, his ancestors had played important roles in assisting both the Zhou court and the later Chu state. In recent studies, these inscriptions are helpful in reconstructing the Zeng history, and in the discussion of the identity of the Zeng people. The related contents will be further discussed in the following sections after the 'Chu style' being defined.

[606] This inscription is the first evidence to confirm the transition from Zhou to Chu in a Zeng ruler's position. In 1980s, this transition has been observed by a number of scholars (see discussions in Zhou 1980, Shu and Liu 1982), while the most comprehensive work has been done by Zhang Changping, see Chapter Three and Chapter Four in Zhang 2009b.

[607] This point is often referred to as a key to close the long debate of the 'Mystery of Zeng'. The first person who claimed that he had solved Li Xueqin's the 'Mystery of Zeng' is the head excavator of the Yejiashan and Wenfengta cemetery – Huang Fengchun, who used two successive papers in 2014 to discuss issues of 'Nangong', and linked the Nangong, as the ancestor of Zeng rulers, to two different person – Dan Ji Zai 聃季載, and Nangong Kuo (the conclusion of the first paper was contradicted by the second one). See Huang and Hu 2014a and Huang and Hu 2014b. At the end of his second paper, Huang listed five states with two names, and argued that since the Wenfengta inscription records the war of Wu, Chu and Zeng, while the transmitted text records a contemporary war of Wu, Chu and Sui, then the Sui and the Zeng refer to the same state, and the 'Mystery of Zeng' is no longer a mystery. See Huang and Hu 2014b: 44, and Huang 2014: 59. This viewpoint has been soon followed by other scholars, such as Luo Yunhuan 羅運環, Xu Shaohua 徐少華, and Li Boqian, see Luo 2014: 52, 56, and 57. But the current thesis still sees it as an opinion affected by the tendency of historiography, in which they attempt to underpin the 'correctness' of historical texts by over-interpreting excavated materials. Because both the states of Zeng and of Sui were recorded as allies, assisting Chu against the Wu, one cannot simply say that they were the same state and rule out other possibilities. For example the Zeng and Sui may each have helped the Chu during the war. Especially after the character 'Sui', as a state name actually inscribed on ritual bronzes, found in the Suizao corridor (Fig. 1-5.3), the issue between Zeng and Sui becomes more complicated. Therefore, for now we still have no good reason to close the debate. On the contrary, as very few scholars insist, the 'Mystery of Zeng' is still far from being settled. See Zhang Changping's argument in Luo 2014: 60.

4-3 The state of Chu

The Chu state, as a Zhou regional power, is believed to have been initially established in the Western Zhou period,[608] and then forced to move southward to the Han River valley in the present-day Lianghu Plains in Hubei and Hunan, where it gradually developed different customs in the Spring-and-Autumn period;[609] it then turned into an expansionist power,[610] and eventually became a strong and influential state in Warring States period. It is regarded as one of the major hegemons of this period, ruling a massive territory from the Yangtze River region to the Huai River.[611] The distinct 'Chu style' tradition, as we see it today through excavated materials, is a complex synthesis, combined with the native customs that were developed by the Chu, the legacies from the earlier Shang and Western Zhou practices, and the numerous regional tastes that were absorbed by the Chu during its expansion. Therefore, the image of Chu is often

[608] It is believed that Chu was originally located within or nor far from the Zhou royal domain in the Western Zhou period. But only few excavated materials – inscribed bronze bells and vessels in particular – can be confirmed to belong to the Chu at the end of the Western Zhou period, which may suggest its existence, but barely provides clues about the location of the state capital. Therefore, there is no agreement about the location of Danyang 丹陽, the first Chu capital in transmitted texts. For related discussions of Chu and Danyang, see Gao and Cheng 1980: 23-26, Shi and Xu 1982: 67-76, Luo 1992: 77-79, Blakeley 1999: 10-13, and Li 2011: 53-58.

[609] The core of the Chu state is basically equivalent to the present-day Lianghu Plains, to the south of the Han River in western Hubei, northern Hunan, and probably a small part in south-western Henan as well.

[610] Like other Eastern Zhou hegemons expanding their territory, Chu also forced their smaller, weaker neighbours in South China into submission.

[611] In South China, the Chu style tradition may have gone so deep into people's minds that it was not crushed with the Chu defeat to the Qin Empire, but maintained its influence on the later Han dynasty. Cook and Major 1999: vii-viii.

seen by many as 'a poetic symbol of an alternative, slightly barbarous culture – one that existed outside the mainstream of proper Confucian society and civilisation'.[612]

Rivers and the geography of Chu

As discussed in Chapter I, rivers may have played significant roles in the development of China's Shang and Zhou societies, either as demarcations that created boundaries between different social groups, or as maps that helped people in travel and navigation in the interregional contacts.[613] If we go through the geography of the Chu territory in its great prosperity, it would be easy to see that the river network in south China was probably an essential factor that guided the Chu and provided 'tailwind' in its expansion.

The debate of locating the Chu capitals in texts has created much controversy.[614] Excavated materials as a means to determine the scope of the Chu heartland and to trace its expansion seem more reliable. So far thousands of Chu tombs have been excavated in the provinces along the Yangtze River region and its north, which can be generally divided into two major zones: 1) the *central zone*, including the regions of Han River and Xiang River in Hubei and Hunan, and the Dan River valley in southern Henan; 2) the *remote zone*, including the Huai River region in Anhui and Jiangsu, the eastern part

[612] Cook and Blakeley 1999: 1.
[613] O'Shea 2011: 162.
[614] The locations of the formal capital Danyang and the later capital Ying 郢 are both under debate, the opinions of which differ wildly between historical and archaeological approaches, which are basically divided into two groups, the Northern School and the Southern School, see Blakeley 1999: 10-13.

of Hubei, the western part of Hunan, and areas in the lower reaches of the Yangtze River.[615] Through its distribution we could see that, although the whole territory of Chu covered vast lands in south China, each zone and its sub-areas (whether they are remote or not) can be directly or indirectly linked to the Chu heartland in the Lianghu Plains by major river channels and their branches. In fact, as discussed previously, the first two chapters of this thesis highlight an extended river network between China's north and south (Fig. 1-4.3 and Fig. 1-4.4), which may have been used to advantage by the Zeng state from the early Western Zhou period. Chu, as an emerging powerful state geographically related to the Zeng, would have been well familiar with this network as well.[616] But unlike Zeng, who mainly used the network to reach the northern and south-western parts of China, Chu seems to have been more interested in exploring the east and south.

Chu in the Spring-and-Autumn period

The known Chu burial and ritual practices in the Spring-and-Autumn period, as the first stage of its development, seem to have been no different from those of the Central Plains

[615] According to the Western Zhou volume of the definitive book series of Chinese archaeology published in 2004, the quantity of confirmed Chu tombs are over 6000, and over 5000 are situated in Hubei and Hunan. The related provinces include Hubei, Hunan, Henan, Anhui, Jiangsu, Jiangxi, and Shanghai. See Beijing 2004b: 348.

[616] As seen in Fig. 1-4.3, the Suizao corridor was on the edge of the Chu heartland in the Lianghu Plains. So the states of Zeng and Chu are separated only by the main channel of the Han River. Comparing with the location of Zeng, the central zone of Chu seems to be more convenient to use rivers to its advantage, as the Yangtze River runs through the Lianghu Plains.

patterns.[617] But they had gradually deviated from the northern practice,[618] and expanded from the Han River valley in Hubei to the areas in northern Hunan and southern Henan in the central zone.[619]

Most of the Chu elite tombs in this period shared similar characteristics. Except they are arranged in east-west orientation, with the occupant's head towards the east (as same as the Zeng state);[620] they normally adopted typical Zhou-style tomb structure with vertical shaft pits, double wooden coffins, coffin chambers, upper platforms, but rarely with waist pits and ramps. The funeral objects consisted of bronzes, ceramics, jade, lacquer wares, and most of which are copies of contemporary northern sets. As their core, the ritual set of Chu bronzes not only included standard vessel types, *ding*, *li*, *gui* (or *fu*), *hu*, *pan*, *yi*, but also uses some special types to show a different taste from the northern tradition. In addition to the exclusive use of *sheng ding* mentioned earlier

[617] One of the earliest representative sites of Chu is at Dangyang 當陽 Mopanshan 磨盤山 in Hubei, dated from early to late Spring-and-Autumn period. It includes a number of cemeteries, such as Zhaojiahu 趙家湖, Jinjiashan 金家山, and Zhengjiawazi 鄭家洼子. The earliest burials there reflect typical patterns from the Central Plains, including tomb structure and the design of bronze and ceramic vessels. See Beijing 1992a.

[618] Many scholars have discussed the early development of the Chu practice in Spring-and-Autumn period, such as the formula of bronze inscriptions, and the ritual use of chime-bells, see Falkenhausen 1991: 85-89.

[619] Apart from the Mopanshan site, the burial tradition in the Zhijiang 枝江 Bailizhou 百里洲 site in Hubei, the Nanyang 南陽 Xiguan 西關 site in Henan, and the Yueyang 岳陽 Fengxingzuishan 鳳形嘴山 site in Hunan are also considered as early Chu practice seen in field archaeology. See WW 1972.3, ZYWW 1992.2, and WW 1993.1.

[620] Typical Jī-surnamed Zhou burials are normally in north-east orientation (see in Chapter I). For the examples of tombs in north-west orientation, see Zeng examples in WW 2011.11a, Beijing 2005b, JHKG 2013.1, and KG 2014.7, and Chu examples in Beijing 1991a, and Beijing 2007a.

in this chapter, the new types *zhan* 盞 (a lidded bowl with three squat feet), *dui* 敦 (a lidded bowl in shape of two hemispheres with animal-shaped legs above and below, often used as a replacement of *fu*), *fou* 缶 (a lidded urn with a flat bottom),[621] and the fixed combination of musical bells *bo zhong* and *niu zhong*,[622] were all introduced into the Chu burial assemblage in this period as a reflection of the formation of the 'Chu style'. The same process can also be observed through the development of surface decoration and casting technique on the Chu bronzes. Rather than blindly following the Zhou patterns of the post-reform geometric motifs, Chu craftsmen concentrated more on using new techniques and creating their own style with an increasing tendency toward sophistication and intricacy. Such a tendency may be best illustrated by the bronze ritual vessels from the Xiasi burials,[623] with their intertwined ornaments and inlaid copper animals on some surfaces, three-dimensional creatures on its sides, and the bird or other animal-shaped knobs, handles, and feet (Fig. 4-3.1). A bronze *jin* (a rectangular bronze altar table) contains extremely ornate openwork of interlaced

[621] The types of *zhan*, *dui*, *fou*, and their later derivatives such as *zun-fou* 尊缶, and *jian-fou* 鑑缶, were widely used in Chu burials after the mid-Spring-and-Autumn period. For their popularity, see the Xiasi site in Beijing 1991a.

[622] The Chu taste in musical bells had experienced a process from using *yong zhong* to using *bo zhong* and *niu zhong* together in the Spring-and-Autumn period. This development will be further discussed in the section 'How Zeng differed from Chu' later in this chapter.

[623] The Xiasi site in Xichuan, southern Henan has 25 tombs and five chariot and horse pits, dating from middle to late Spring-and-Autumn period in the 6th century BC. The richest tomb M2 contains over 500 bronzes, including 52 ritual vessels of different types, a set of 26 elaborated musical bells and other instruments, and the mentioned bronze *jin*. The burial is thus considered as one of the most important Chu tombs in Spring-and-Autumn period. It is believed that M2 belonged to Lingyin 令尹, a member of the Chu elite, whose social ranking may have been just below that of the Chu ruler. For the primary report of the Xiasi site, see Beijing 1991a.

patterns (Fig. 4-4.3a),[624] which is likely to have been achieved by lost-wax casting and soldering techniques.[625] Either these surface decorations or casting techniques are very rare either on the earlier Zhou bronzes or on the contemporary northern vessels. Many scholars thus believe that the departure of Chu style is marked by the Xiasi burials, which had opened the second stage of its development, a 'splendid chapter of the Chu history'.[626]

The Chu in Warring States period

The widely distributed Chu tombs, the ritual sets of Chu elites, and other burial goods outline a strong, influential, and expanding Chu state in the Warring State period (475 – 221 BC). Starting from its heartland in the Lianghu Plains, the far reaching impact of Chu is observable in a number of remote regions to its east and south, to the provinces in the regions of the Yangtze River and Huai River, such as Hunan, Anhui and Jiangsu.

The Chu state became more advanced than that in the Spring-and-Autumn period in terms of its tomb structure and funeral objects, making the Chu style practice stand out among its contemporaries. As the size of elite tombs became larger, the shape of the tomb pits changed from rectangular shaft pits to square funnel-shaped pits, often

[624] Such complex ornament is normally described as '*a dense and wormy openwork of serpentine creatures*', see So 1999: 35.
[625] This *jin* and the lost-wax casting will be further discussed with newly excavated Zeng bronzes in the section 'Zeng resemblances to Chu' later in this chapter.
[626] This title comes from a study of Chu, published in the appendix of the primary report of the Xiasi cemetery. For further discussion, see the section 'Chu wenhua de xingcheng 楚文化的形成 (The formation of Chu culture)' in Beijing 1991a: 338.

equipped with terraced sides, sloping ramps, large mounds, and separate chariot and horse pits.[627] The space inside the coffin chamber is normally broken down into several segments ('*fenxiang* 分箱' in Chinese, which are sometimes recognised as outer coffins), surrounding the lacquered coffins of the tomb occupant. Like the Zeng examples in Leigudun M1 and Wenfengta M33, the segments here are also set for placing funeral and ritual objects. The previous use of ritual vessels (such as the standard combination of *ding*, *fu*, *hu*, *pan*, *yi*, the special vessel types *dui*, and *fou*), decorative patterns (such as the interlaced patterns, three-dimensional creatures, and bird motifs), and musical instruments have been generally inherited by the Chu people of the time. But, with the increasing use of prestige goods made of other materials (such as lacquer, wood, bamboo, leather, iron, high-fired ceramics, and woven textile),[628] and with the development and application of new techniques (such as metal and mineral inlay, carving, coating, layering, and texturing),[629] more types, designs, colours, and new performances were added to the package of Chu ritual practice, and the previous bronze-centred ritual practices were significantly enriched.[630] Although regional

[627] For contemporary large Chu tombs with mounds, ramps, and chariot and horse pits, see Tianxingguan 天星觀 M1 in KGXB 1982.1a, Mashan 马山 M2 in JHKG 1987.3, Baoshan 包山 M2 in Beijing 1991b, Jiuliandun M1 and M2 in Beijing 2007a, and Xiongjiazhong 熊家塚 M1 in WW 2009.4.

[628] For the massive use of wooden objects and lacquer wares, see Tianxingguan M1 in KGXB 1982.1a, Yutaishan 雨臺山 site in JHKG 1990.3, Baoshan M2 in Beijing 1991b, Wangshan 望山 M1 in Beijing 1996a. In fact, these materials such as wood, bamboo, leather, metal and pottery, and textile, are all associated with Chu lacquer wares in this period, as they may have been used as the cores of lacquer wares. For further discussion, see an exclusive study of Jiuliandun lacquer wares in Jin et al. 2012: 108-110.

[629] For general discussions of new techniques in making lacquer ware and textile in the Warring States period, see Li 1987: 72-75, and Peng 1996: 11-39.

[630] Such an enriching process can also be understood as concurrent with the decline of the supremacy of bronze ritual vessels. In fact, no later than the mid-Warring States

variation continues to persist among the Chu people in this period, such a tendency of enriching ritual and burial practice are overwhelmingly common in both the central and remote areas in Chu-occupied territory.

Importance of Chu

The Chu state was without doubt an important regional power among the societies in the Warring States period, as it had acquired control over huge tracts of land in the south, as well as the local network of waterway communication, and of trading and exchanging activities for prestige goods, valuable materials, techniques, and people.[631] The metal mines, transportation routes, and the related specialty groups along the Yangtze River as mentioned in Chapter II,[632] if any of them survived and were still functional in this period, were likely to have been controlled by Chu. The Chu state thus had the ability to bring a wide range of materials together, and to make them stand out as what Chinese archaeologists recognise as the 'Chu style'.

period, bronze was no longer the main material of choice and prestige. The previous sophisticated patterns on bronzes have been gradually replaced by plainer surface decoration. Their importance started to fade, and in the meantime made the newly introduced lacquer wares (often in red and yellow against a black background) and woven textiles in bright colours stand out. For examples of poorly decorated Chu bronzes in this period, see Hubei Wangshan M1 in Beijing 1996a, Hunan Niuxingshan 牛形山 M1 and M2 in WWZLCK 1980, Henan Changtaiguan 長台關 Chu tombs in KG 1958.11, HXKG 1997.3, and WW 2004.3.

[631] For the earlier situations of the waterway communication and the trade and exchange network in China's Shang and Western Zhou period, see Chapter II.

[632] For related archaeological sites mentioned in Chapter II, see the Tonglüshan site in Beijing 1999b, and a summary of the Anhui Tongling site in Qiu and Ke 2014: 76-77.

The Chu-related issues are also very important to our discussion of the Zeng state. Such a distinctive ornamental Chu style has been recognised as a signature of the state from the discovery of the elaborated Chu bronzes in the Xiasi site. Nevertheless, entering the Warring States period, the representative of the highest achievements of this style often appeared in the burials of its neighbour the Zeng state. When discussing the Chu traits and masterpieces in this period, most scholars would like to cite the bronzes of Marquis Yi of Zeng without a shadow of a doubt, simply because Yi is believed to be 'a minor vassal of Chu'.[633] However, Marquis Yi's great wealth, his power, and the character 'Zeng' as a long-lasting state named in his bronze inscriptions, all of these issues suggest that the relationship between Chu and Zeng may not be as simple as it seems. In fact, as we have discussed, the formation of the Chu style is a complex course. It is very hard to say whether Zeng was affected by the Chu tradition, or whether it was a contributor to it, or, indeed, whether both happened. But it is certain that the two states played important roles in each other's history, and frequent contacts took place between them. For example, it was recorded that an unknown Zeng ruler (prior to Marquis Yi) had fought for Chu when it was invaded by Wu,[634] and after Marquis Yi died, King Hui

[633] So 1999: 35.
[634] This event is mentioned on the only *bo zhong* in Marquis Yi's chime-bells, and also appears in the narrative inscriptions found on the newly excavated Wenfengta bells.

惠 of Chu had sent his officials to attend Yi's funeral,[635] and made him a fine *bo zhong* as a sympathy gift.[636]

So, treating the Zeng state as a Chu vassal may not possibly be able to make sense of these issues. In fact, archaeological evidence has already shown that, from the late Spring-and-Autumn period, the artistic and technical achievements of Zeng had already been highly competitive, comparable with those of Chu, and even ahead of them. Therefore, based on newly excavated materials from the Suizao corridor, the following sections will compare some representative issues between the Zeng and Chu, to see if their similarities and differences can help us understand more about the social identity of the Zeng people.

4-4 Zeng resemblances to Chu

It is thought that the Zeng people had started to adopt Chu practices from the middle of the Spring-and-Autumn period, when their state is believed to have been politically affiliated with the Chu power.[637] In the current chapter, the preceding sections have

[635] The bamboo slips found in Marquis Yi's tomb record that a number of people with Chu official titles or ranks appeared at Marquis Yi's funeral. They may have been actual Chu officials, or Zeng officials who shared the same ranking system as Chu. But both of the cases indicate that the states of Zeng and Chu had a good relationship. See WW 1979.7: 14.

[636] The Marquis Yi's current chime has one *bo zhong*, 45 *yong zhong* and 19 *niu zhong*. As the only *bo zhong* was a gift from Chu, some scholars believe that his original set was a combination of *yong zhong* and *niu zhong*, which had 46 *yong zhong*, and one of them (probably the largest one) was replaced by the Chu gift in Yi's funeral.

[637] The argument of this adoption, its time point, and most of related issues are mostly based on the typological studies of Zeng bronzes, see Yang 1991, Zhang 1992, and 2009.

already illustrated the closeness of taste of the burial and ritual objects between the two states. On that basis, this section is set to focus on two advanced bronze casting methods, which can be observed on both the Zeng and Chu bronzes, to see if they can tell us how the techniques had been applied in the two states, and how they are able to reflect the relationship between them.

Pattern-block casting

After careful examination of the clay moulds found at the Houma foundry in Shanxi,[638] archaeologists have discovered an advanced casting technique in the Eastern Zhou period, namely the 'pattern-block' technique.[639] It allows craftsmen to produce multiple identical motifs to form a decorative band or other shapes for surface decoration on bronzes.[640] The core of this procedure has been reconstructed as follows: 1) a decorated pattern unit was prepared in positive relief (as it would appear on final product) onto a flat or curved clay block, which would be the master pattern block after fired; 2) by pressing soft clay onto such a master block, negative impressions of the pattern could

[638] In 1959, thousands of piece-mould fragments were excavated at a large bronze casting workshop not far from the Spring-and-Autumn Jin capital at Quwo, which is normally referred to as the Houma casting foundry, roughly dated from the mid-Spring-and-Autumn to the early Warring States period (between 600 and 380 BC according to the report). For the primary report, see Beijing 1993.

[639] The first discussion related to this casting technique set out by Barbara Keyser in late 1970s, see Keyser 1979. Following her observation of a 'master pattern block' with positive relief and 'slab of clay' with negative relief, Robert Bagley applied this theory into a larger group of findings, and further discussed this technique in 1990s, see Bagley 1995: 46-54, and Bagley 1996: 50-58.

[640] As discussed in previous chapters, this 'one-to-many' production can probably be traced back to the end of the Anyang period. For further discussion, see the Xiaomintun clay moulds and a paragraph of 'motif replication process' in the section 'producing bronzes' in Chapter II.

be copied on the soft clay one after another; and 3) the copies would be successively attached onto the designated areas of the outer mould, the edges of which could be cut to fit into the limited space if the rest of the area was not large enough to accommodate a whole pattern. Normally an entire outer mould piece was composed of several decorative bands, as seen in one instance, a typical Houma product from the British Museum (Fig. 4-4.1a). According to its mould lines, the body of this vessel is probably formed by two main outer mould pieces, joined vertically at the two handles. Fig. 4-4.1b shows a drawing of the front piece, with six bands of interlaced patterns, separated by five roped borders. To prepare such surface decoration with the pattern-block technique, craftsmen did not need to put their mould-making effort on the whole mould piece, but only on one master block per band, and then they just needed to simply copy and paste patterns with soft clays. Such 'one-to-many' procedure had greatly improved the efficiency of mould preparation, and allowed for greater division of labour, as skilled pattern designers,[641] block carvers,[642] impression manipulators,[643] and other craftsmen could focus on their own specialties and work together as a team.

[641] Only the bands at the visual centre (the animal mask composed of snakes) and the upper and the lower ends need to be carefully calculated by the pattern designers, as patterns in these bands would be more easily noticed if a certain part contains a tailored pattern. As seen in Fig. 4-4.1b, seven intact patterns are found on the top band, twelve on the bottom band, and four complete animal masks with interlaced snakes are equally distributed on the most obvious band on the belly of the *hu*.
[642] The carvers need to produce several master blocks, at least one block in each band, as highlighted in bold in Fig. 4-4.1b.
[643] As shown in Fig. 4-4.1, the bands hiding under the tiger-shaped handles may allow the impression manipulators to attach incomplete patterns. Both the two bands in the middle do not have enough space for a whole pattern at the joint points when the edge of last pattern reach the starting point, so the patterns here are modified. Notably, there is a considerable horizontal distance between these two incomplete patterns (about ¼ perimeter in-between). It seems that the manipulators intended to separate them from

At the Houma foundry, it reveals a few mould fragments of cylinder shanks with three horizontal bands of identical interlaced patterns (Fig. 4-4.2a),[644] which match the *yong zhong* found in Luhe M7 in Shanxi province (Fig. 4-4.2b).[645] Like the decorative bands on the British Museum *hu*, such horizontal layout is typical of 'Made in Houma'. In the meantime, similar repetitive and tailored patterns can be observed in south. Both the Zeng rulers, Yi and Yu, chose *yong zhong* to form their bell sets.[646] But unlike those northern examples with cylinder shanks, they preferred to cast their shanks in the shape of approximate octagonal prisms (see Fig. 4-2.9, and Fig. 4-4.2c). Each of the vertical panels requires six to eight recessed pattern units,[647] and each unit has been entirely filled with raised 'comma patterns'.[648] Notably, different from the irregularly shaped

each other in order to reduce the risk of being noticed by the viewer. Similar situations can also be seen on other Houma products. For an observation of another *hu* vessel, see Bagley 1995: 51-54.

[644] For the discovery of Houma bell moulds, see Beijing 1993: 131-151. To assemble such a shank mould, craftsmen needed to prepare at least five separate mould pieces or pattern units for different components of the shank, including one with a three-dimensional animal head for the suspension ring (*wo* 斡), one with negative impressions of intersecting dragons (*panhui wen* 蟠虺紋) for the bulging protrusion (*xuan* 旋), and three similar impressions for the bands (For the names of the parts, see Fig. 4-2.11). In this account, the mould assemblage of a whole *yong zhong* may have required over 140 individual mould pieces. See Li 1999a: 105.

[645] For the brief report of Luhe M7, see WW 1986.6: 2-13.

[646] For further discussion of this special taste of Zeng rulers, see section 'How Zeng differed from Chu' in the next section of this chapter.

[647] The 1989 primary report on Leigudun M1 does not mention the quantity of pattern units on each vertical of the *yong zhong*. In a more recent report in 2008, however, archaeologists have examined a very similar but slightly later example from Leigudun M2, and confirmed that the whole object was executed by pattern-blocks, and each vertical is composed of eight identical pattern units. See Beijing 2008: 74.

[648] Rather than the intersecting dragons in North China, craftsmen in the south were more interested in abstract motifs, which are frequently composed of unarticulated comma patterns. See Falkenhausen 1993a: 182.

pattern units in Houma (highlighted in bold in Fig. 4-4.1b), the Zeng units here are normally executed in the shape of a square, which may have reduced the workload of craftsmen, but in the meantime made the seams between units much more obvious. In fact, both this rigid pattern unit design and the idea of octagonal prism may have derived quite directly from the Chu tradition as seen on the Wang Sun Gao 王孫誥 *yong zhong* found in Xiasi M2.[649] As shown in Fig. 4-4.2d, although it is not a typical octagonal prism in terms of the size differences between the top and the bottom, this Chu shank is vertically divided into eight equal panels, formed by square units with raised comma patterns.[650]

Apparently, when the Houma foundry had reached its height between the late Spring-and-Autumn and early Warring States period, the key ideas of pattern-block casting were also adopted by people in south China in parallel. Both the Zeng and the Chu craftsmen had adopted the northern technique to create their own style, but Zeng was probably not the pioneer of this idea, but a follower of Chu in terms of what we have observed on the *yong zhong*.

Lost-wax casting

Lost-wax is another casting method shared between Zeng and Chu. It is known as one of the investment casting methods for three-dimensional objects in small sizes or

[649] Beijing 1991a: 140-178.
[650] The traces of pattern-blocks are based on personal examination by the author.

irregular designs,[651] which is potentially helpful for the distinctive ornamental Chu style bronzes. But unlike the well-studied pattern-block, the existence of this technique is still under debate.

The core of lost-wax casting seems to have suddenly appeared in south-central China without any earlier wax-use tradition. In previous studies, evidence that supports its existence only comes from direct observations of a few excavated bronzes, all of which are Chu style bronzes.[652] The most representative ones are the afore mentioned Chu bronze *jin* in Xiasi M2 (late Spring-and-Autumn period, see Fig. 4-4.3a),[653] and the Zeng bronze *zun-pan* in Marquis Yi's tomb (early Warring States, see Fig. 4-4.3b).[654] Their shared trait is extremely ornate openwork, composed of wispy decorative units, which are connected to a bronze frame by numerous straight or curved strips like plant stalks (see drawings of a top view and a three-dimensional view of such openwork on the Xiasi *jin* in Fig. 4-4.3c). The openwork is interlaced three-dimensionally in a very tight space, which, according to casting specialists, is very likely to be made by the lost-

[651] This technique originated in the West no later than the fourth millennium BC. One of the earliest artefacts done by lost-wax casting is a Mesopotamian stone seal in the shape of an ox resting on a cylinder seal, dated to the Uruk period, c.a. 3500 BC, see Hunt 1980. For other early examples of lost-wax casting, see bulls in gold and silver in a tomb at Maikop in the northern Caucasus, Artamonov 1974: 156. Comparing with clay or stone mould casting, wax is relatively easier to shape, reshape, and adhere after heating, and thus it will be more suitable for manipulating detailed patterns on a very small scale. The wax patterns will then be pieced together to form a model in the shape of the final product, which will be first coated with mud and clay. When the clay mould is fired, the wax will be melted and poured out, so the cavity left is ready for molten bronze. For further discussion, see Hua and Guo 1979: 46-48.
[652] Hua 2013: 357.
[653] Beijing 1956: 126.
[654] Beijing 1989: 228.

wax method, since in mould casting, such an overlapping structure on a model would be almost impossible to transfer to outer moulds.[655] However, the current evidence, such as the 'mould marks' left on the decorative unit, does not exclude the possibility that they were cast by the traditional piece-mould method with additional welding.[656] This uncertainty has invigorated a long-term debate about whether these decorative patterns were made by mould casting or achieved through wax.

From late 1970s to 1990s, both of the two examples in Fig. 4-4.3 had been heavily discussed in terms of their casting techniques. After examining the related ornaments, some archaeologists and casting specialists (referred to as the 'proposition side' hereafter) gave positive conclusion that only investment casting (most likely the lost-wax method) was able to achieve such openwork as a whole, as in the portions of interlaced structure on the *jin* and the *zun-pan*, including the frame, the strips, and the decorative units.[657] This viewpoint had been accepted by most people, while in 2006 and 2007, a few scholars (referred to as the 'opposition side' hereafter) argued that wax had been never used for casting in the pre-Qin period for a couple of reasons, the

[655] See Hua and Guo 1979: 46-48. For further discussion of this casting method, see a section 'Lost-wax casting' in the following section.
[656] For related casting traces, see discussion in following paragraphs.
[657] The *zun-pan* has been firstly discussed by Hua Jueming 華覺明 and Guo Dewei 郭德維, see Hua and Guo 1979: 46-48. With opinions from other casting specialists, their conclusion has formed an individual article as an authentication, published in the primary report of Leigudun M1, see Beijing 1989a: 646. The *jin* has been discussed by Zhao Shigang 趙世綱 and Li Jinghua 李京華. Zhao's article has been included in the primary report, see Beijing 1991a: 379-388. In a slightly later paper, Li lists ten pieces of evidence showing that the decorations on the *jin* must have been made by lost-wax casting. For details of this list, see Li 1994: 42-43.

following two of which were especially emphasised: 1) rather than through wax, the current ornaments on the *zun-pan* and *jin* could have been accomplished by an advanced piece-mould method, with separated casting and welding; 2) there was no prerequisite of both technical and social needs for developing the lost-wax method in Bronze Age China.[658] Although the opposition side tried to back their argument with images of a number of 'mould marks' and 'welding traces', objections had been raised almost immediately after their papers were published.[659] In fact, if we focus on their arguments of both sides, it is not hard to see that on the proposition side, their observations focused more on broken parts, which had been examined during recovery process, or even beforehand, while the opposition side mostly based itself on direct observation on the complete objects after they had been recovered. As we know both of the mentioned vessels had undergone serious repair. So this point reduces the credibility on the opposition side. In addition, the wording 'never', appeared in both papers as their key arguments,[660] is too absolute for a paper in the arts and humanities, which is very easy to put themselves in an awkward position in the debate.

[658] The key scholars holding this perspective include Zhou Weirong 周衛榮, Dong Yawei 董亞巍, and Wang Jinchao 王金潮. For their discussions, see Zhou *et al*. 2006, Zhou *et al*. 2007, and Wang 2008. They had also published a few articles in newspapers such as *Kexue Shibao* 科學時報 and *Zhongguo Wenwubao* 中國文物報 in 2006.
[659] The objections mainly focus on two aspects: 1) the so-called 'mould marks' could also be achieved through wax (Hua 2013: 351); and 2) the welding process is possible but not practical (Zhao 2006: 90, and Li 2008c: 41). For other related papers on the proposition side, see Tan 2007, Zhang 2007, Huang 2008, Hua 2010, and Hua 2013.
[660] See Zhou *et al*. 2006: 75, Zhou *et al*. 2007: 46, and Wang 2008: 36.

However, the short-coming of the opposition side does not mean that the perspective of the proposition side is justified. If we review this debate from their point of view, rather than providing adequate evidence to support the lost-wax casting, the proposition side seems to focus more on mechanical descriptions of detailed structures, and further on explanation of how these structures could not be achieved through mould casting. Such a process of elimination is indeed very helpful when there was a clear-cut choice only involving one casting method or another. But if more than two options were included, which was probably the case in this period,[661] by screening out the piece-mould method, it is by no means certain that the openwork must have been done by lost-wax casting. Therefore, if the proposition side wants to identify the use of wax, more immediate evidence is needed. In a recent discovery at Wenfengta M33, a bronze *pan* with openwork on its handles is claimed by the excavators to be 'the evidence can bring this debate to a close'.[662] Fig. 4-4.4a shows the Wenfengta *pan* with two enlarged images, illustrating the inner structures of openwork and the traces left on the surface of interlaced strips.[663] The surface here looks very like congealed flows of viscous liquid, which may have been the results of wax strips being heated when they were attached to

[661] For another possible method to form such openwork with lead, see Li 1984: 73.
[662] See Huang 2014: 60. This opinion, presented by the Wenfengta chief excavator Huang Fengchun, has been briefly mentioned on several occasions, such as the numerous news reports of the *2013 Top Ten Archaeological Discoveries*, and some educational papers, such as the paper in *Dazhong Kaogu* 大眾考古 (Huang 2014). But so far no academic papers with serious discussions and proper images have been published by Huang or any other scholars. Therefore, no one knows exactly what the evidence is in Huang's argument.
[663] It was very lucky that when I first saw this vessel in the storage of the Suizhou museum in 2014, it had not been repaired, and both of the handles had fragmented into several pieces. So I got a great chance to examine the broken pieces in great details, and to take clear photos of the related marks.

other structures or bent to form a required angle. Similar traces are also observed on the rim openwork of Marquis Yi's *zun-pan* (Fig. 4-4.4b),[664] which have already been recognised as 'possible evidence of using lost-wax casting' in a 2007 paper, but the author concludes so cautiously that he only puts this argument in the postscript to his major text.[665] In fact, to some scholars who have successfully reproduced the openwork on *zun-pan*, the use of wax is indeed characterised by this kind of surface.[666] Notably, the traces here only show that the bronze strips may have been cast through wax. As for the casting method of the decorative units and how they had been attached to the strips, the current evidence is not yet enough to support what the proposition side have claimed.[667] Therefore, although it is very likely that wax has been at least partially used to cast such openwork, the proposition side and the opposition side still cannot fully persuade each other.

[664] The detailed images of the Wenfengta *pan* and the Marquis Yi's *zun-pan* are all unpublished images based on fieldtrip photos acquired in Hubei in 2012 and 2014.
[665] In a 2007 paper, Zhang Changping reviews this debate in a third party point of view. At the end of this paper, he examines some fragments of openwork from the Marquis Yi's *zun-pan*, which have been kept in the storage of Hubei provincial museum since 1978, and points out that the wrinkled surface may be direct evidence of lost-wax casting. See Zhang 2007: 90.
[666] For further discussion and related images of wax, see Huang 2008: 116-117.
[667] As mentioned earlier, the proposition side has suggested that all the strips, frames, and decorative units may have been cast with wax together as a whole, since no welding traces or pre-cast units have been observed at the joints with naked eye. To back up this visual inspection, some scholars have done a scientific examination of the openwork attachment from Henan Yexian. By using X-ray CT scan (computed tomography scan), they stick to the same point since no interfaces have been detected. See Li *et al*. 2007b: 99-100. However, as suggested by some scholars, the techniques such as CT scan and X-ray are not very helpful in telling the differences between lost-wax and mould casting. See Zhang 2007: 85, especially footnote no. 17.

Of course, a debate with no conclusion does not mean its process is unproductive. The question of prerequisites for developing a casting method in ancient China, raised by the opposition side, is in fact very instructive to our discussion. If we understand the bronzes with such openwork as products of lost-wax casting, its time and special distribution is apparently characterised. The relevant bronzes are only found in the Chu-related regions in the south, dating to the 6th and 5th centuries BC, from mid Spring-and-Autumn period to early Warring States period. At the same time, the finest Houma products had been widely distributed in Shaanxi, Shanxi, Hebei, and other northern provinces. But such a huge, influential foundry is likely to have paid no attention to the lost-wax casting, of which no evidence survives, and none of the lost-wax-related products are found in these areas. It seems that the pattern-block casting had completely met the aesthetic and social needs of the elites in north, so they did not give room to develop other casting techniques and decorative styles. On the contrary, in the Chu-occupied territory to the south of the Yellow River region, although pattern-block casting was also used in bronze casting, the 'all-embracing' Chu style, especially its pursuit of intertwined ornaments and openwork, gave lost-wax casting enough flexibility and space to grow. This is probably why nearly all the related bronzes are found in the Chu sphere of influence.[668]

[668] Apart from the *jin* in Henan Xiasi, and the *zun-pan* in Hubei Suizhou, other examples here include a vessel lid housed in the Metropolitan Museum, an vessel attachment in Henan Yexian 葉縣, an ornament and an attached handle found in Xiasi M2, and a vessel *zhan* found in Changsha 長沙 in Hunan province. For studies related to these examples, see Li 1991: 1-22, Hua 2005: 56, Zhao 2006: 86-87, and Li *et al*. 2007b: 96-103.

However, the Chu interest in this special technique seems to be quite limited. If we concentrate on the lost-wax-related objects further, it is very interesting to see that most of them are dated to a very short time period, merely about a few decades in the middle-late Spring-and-Autumn period. The only example with a later dating is the Marquis Yi's *zun-pan*, a product of the 5th century BC in the early Warring States period.[669] From the Wenfengta M33 *pan* to the Leigudun M1 *zun-pan*, this complicated casting method seems to have remained for at least a century or so in the Zeng state. Comparing with the short interest of Chu, it looks as though the Zeng people had paid more attention to lost-wax casting, and continued to apply this technique to produce high-quality bronzes when Chu had already lost interest in it. Therefore, although Zeng and Chu shared this unique technique initially, its continuous application in Zeng seems to illustrate a small difference in the process of their development.

4-5 How Zeng differed from Chu

Compared with the similar taste of ritual and burial practice, and casting techniques applied in Zeng and Chu, a slight technical differentiation of the lost-wax casting in between is not yet enough to tell the two states apart. In both Zeng and Chu, with the

[669] As indicated by some scholars, the inscriptions on Marquis Yi's *zun-pan* were changed. See Zhang 2009b: 250. The original vessel owner is likely to be Marquis Yu, the occupant of the newly excavated Wenfengta M1. About the dating issues, although the narrative inscriptions on Yu's *yong zhong* have given us some hints, due to different understandings of the term '*ji ri* 吉日', disagreements arise. Some scholars date this tomb to the end of the Spring-and-Autumn period, while some others believe that it was buried in the early Warring States period. For a further discussion, see JHKG 2014.4b: 48.

development of the organic stringed instruments and the bronze percussion instruments or idiophones in the post-reform period,[670] people's need for musical instruments was greater than ever in this period. This need is directly reflected in their use of bronze musical bells, as these bells were not only seen as musical instruments being played in banquets or ceremonies, but also seen as ritual bronzes connecting the living and the deceased in burial or ritual occasions.[671] Therefore, the current section focuses on the choices of using musical bells, to see if they can help us understand more about the differences between the two states.

The discovery of the Zeng tomb Wenfengta M1 reveals remains of a large set of musical bells, all of which are in the form of *yong zhong*. Based on the variation in their size, some scholars speculate that Yu's *yong zhong* may have numbered over 24.[672] As some scholars suggest, in the late Spring-and-Autumn period, such massive use of *yong zhong*, and *yong zhong* only, is neither a contemporary Chu taste nor a tradition from

[670] Such a development is well illustrated in the burial assemblages seen from Caomenwan M1 in the early Spring-and-Autumn period to Leigudun M1 in the mid-Warring States period. Apart from these types of musical instruments, there were also chime-stones, drums, and different kinds of stand and other related accessories. The Caomenwan M1 and its L-shaped wooden stand are discussed in Chapter III. For the stringed instruments from Caomenwan M1, the psalteries for example, see JHKG 2015.3: 3-4, and for the stringed instrument and wind instruments from Leigudun M1, see Beijing 1989a: 155-165, and 166-174.

[671] The latter is also one of the reasons why so many chime-bells in this period had been inscribed with narrative inscriptions. For related examples in this period, see 'Xing' bells in the Zhouyuan area in Beijing 2005b: 790-881, 'Jin Hou Su 晉侯蘇' bells of Jin state in WW 1994.1: 18-20, 'Zeng Hou Yi' bells of Zeng state in Beijing 1989a: 88-99, and 'Wang Sun Gao 王孫誥' bells of Chu state in Beijing 1991a: 140-178.

[672] Luo 2014: 53, and Zhang 2014b: 87.

any of the contemporary states in north China,[673] but is closer to the post-reform Zhou tradition at least three centuries earlier. After the mid-late Western Zhou Ritual Reform, musical performance had been overwhelmingly added into the Zhou ritual and burial practice with the introduction of large *yong zhong* sets, which normally contained eight identical *yong zhong* in decreasing sizes, such as the 16 bells in two sets from Baoji Qijia cun 齊家村, Shaanxi,[674] and the set of eight from Sanmenxia M2001, Henan.[675] The sets of Chu bells in this period were also formed by *yong zhong*, but they were normally made up of smaller groups, with slightly different decorations, for example: the set of eight bells from M64 of the Jin Marquis cemetery in Shanxi;[676] and a single one in Baoji Shaochen cun 召陳村, Shaanxi.[677] In 2012, 11 hoarded *yong zhong* were found in Zhijiang 枝江 Wanfunao 萬福垴, Hubei. Though their owner's Chu identity is debatable,[678] this person does look like a collector who had gathered many *yong*

[673] Zhang 2009b: 221.
[674] These two sets of *yong zhong*, dated to the late Western Zhou period, were among 39 hoarded bronzes found in Baoji Qijia cun, Shaanxi province in 1960. See Chengdu 2005b: 97-150.
[675] Beijing 1999a: 71-78.
[676] For the original report, see WW 1994.8a: 6-10. The eight bells, most of which were named after 'Chu Gong Ni 楚公逆', can be further divided into three groups in terms of their decoration. Group A has the largest two bells; Group B has four middle-sized ones; and Group C has the smallest two. See Shanghai 2002: 152-155. Some scholars believe that at least two unnamed bells in this set did not belong to Ni in terms of their different bird decorations on the centre (as markers designating the striking point of the second tone), so they were possibly added into the six-part set chime-bells for some reason, see Yuan 2007: 55.
[677] For the original report, see KG 1999.4: 20-21. The name 'Chu Gong Jia 楚公家' on this bell is also seen on five other bells with at least three different types of decoration. For further comparison, see Zhang 2012a: 163-165.
[678] They may have belonged to a Chu elite in terms of the inscriptions on one of them. For the brief report, see ZGWWB 2012: 8. The only inscribed bell records a name 'Chu Ji Bao 楚季寶', which makes these bells look like a Chu set of *yong zhong*. But most of them are so varied in terms of their sizes and decoration, and as they are hoarded bronzes, that archaeologists remain doubtful of whether or not they are used as a set.

zhong that belonged to previous periods. Indeed, it seems to be quite clear that the *yong zhong* sets, no matter whether they were complete sets or just 'patchworks', characterised the post-reform Zhou taste of using bells.

But such an exclusive use of *yong zhong* was soon updated after the early Spring-and-Autumn period. The *yong zhong* sets had been expanded in quantity, and largely enriched with the emergence of new forms of *niu zhong* and *bo zhong*.[679] There seems to have been a tendency with new types replacing the *yong zhong* as common bell forms in most of the privileged burials. Some of them only used a single type, such as a *bo zhong* set in Taiyuan Jinshengcun, Shanxi,[680] a *niu zhong* set in Houma Shangma 上馬 M13, Shanxi,[681] and a later *niu zhong* set in Xinyang 信陽 Changguantai 長關台 M1, Henan.[682] While more commonly, the types of *niu zhong* and *bo zhong* are used together, such as examples in Xizheng 新鄭, Zheng Han Gucheng 鄭韓故城, Henan,[683] Xichuan

See Fu 2013: 77.

[679] For definitions of these types of bells, see the section 'bells and sound' in Chapter III. Notably, one of the largest differences between the old type (*yong zhong*) and the new types (*bo zhong* and *niu zhong*) is the ways in which they are hung. The *bo zhong* and *niu zhong* are normally hung vertically from a semi-circular knob on top, while the *yong zhong* can only be suspended obliquely from a loop laterally cast to the shanks.

[680] This Jin burial is dated Spring-and-Autumn period. For its set of 19 *bo zhong*, see Beijing 2004a: 32-40.

[681] This Jin burial is dated to mid-late Spring-and-Autumn period. For its set of nine *niu zhong*, see Zhengzhou 2000b: 77.

[682] This Chu burial is dated to the early Warring States period. For its set of 13 *niu zhong*, see Beijing 1986a: 21-25. In another burial M2, archaeologists found another 13-part set of *niu zhong* on a wooden stand. Interestingly, the bells here were made of wood and lacquer, possibly imitating the bronze version chime-bells found in M1. See Beijing 1986a: 86-90.

[683] For the brief report, see WW 2005.10. There are in total 142 ritual bronzes and 206 bronze bells distributed in 18 sacrificial pits, dated from early to mid-late Spring-and-Autumn period. Most of the bell sets are combinations of *bo zhong* and *niu zhong*. For further discussion, see Wang 2006c.

Heshangling 和尚嶺 M2, Henan,[684] Liuhe 六合 chengqiao 程橋 M2, Jiangsu,[685] Xichuan Xiasi M10, Henan,[686] Gushi 固始 Hougudui 侯古堆, Henan,[687] and a later example in Tianxingguan M2, Henan.[688] It seems that a fixed combination of eight *bo zhong* and nine *niu zhong* often appeared in the Chu-related tombs from the late Spring-and-Autumn to the early Warring States period, and was then maintained into the second half of the Warring States period. But in the meantime, the *yong zhong* set had not been completely replaced by the new types. In some Warring States Jin-related 晉 burials, *yong zhong* had been used together with other two bell types to form a more complex combination, such as the multi-sets in Lucheng 潞城 Luhe 潞河 M7,[689] and Changzhi 長治 Fenshuiling 分水嶺 M25, Shanxi.[690] An earlier multi-set from the tomb of the Marquis of Cai in Shouxian, Anhui,[691] contains eight *bo zhong*, nine *niu zhong*, and 12 *yong zhong*. Their inscriptions show that all the *yong zhong* were dowries given

[684] This Chu burial is dated to the late Western Zhou period. For a nine-part set of *niu zhong* and an eight-part set of *bo zhong*, see HXKG 1992.3c: 124-125.
[685] This Wu burial is dated to the late Western Zhou period. For a seven-part set of *niu zhong* and a five-part set of *bo zhong*, see KG 1974.2: 118.
[686] This Chu burial is dated to the transition period between the Western and Eastern Zhou periods. For a nine-part set of *niu zhong* and an eight-part set of *bo zhong*, see Beijing 1991a: 257-287.
[687] This Chu burial is dated to the transition period between Western and Eastern Zhou periods. For a nine-part set of *niu zhong* and an eight-part set of *bo zhong*, see WW 1981.1: 4.
[688] This Chu burial is dated to the mid-Warring States period. For two eleven-part sets of *niu zhong* and a ten-part set of *bo zhong*, see Beijing 2003a: 63-90.
[689] This Jin burial is dated to the early Warring States period. For two eight-part sets of *yong zhong*, an eight-part set of *niu zhong*, and a four-part set of *bo zhong*, see Beijing 1986.6: 9.
[690] This Jin burial is dated to the mid-Warring States period. For a five-part set of *yong zhong*, a nine-part set of *niu zhong*, and a four-part set of *bo zhong*, see KG 1964.3: 128.
[691] This Cai burial is dated to the late Spring-and-Autumn period. For a 12-part set of *yong zhong*, a nine-part set of *niu zhong*, and an eight-part set of *bo zhong*, see Beijing 1956: 10-11.

from Wu state,[692] so this Marquis Cai may have only had *bo zhong* and *niu zhong* of his own. As the Cai state is believed to be one of the Chu subordinates in this period, this arrangement of eight *bo zhong* and nine *niu zhong* is consistent with the fixed combinations of Chu taste.

Nevertheless, the Zeng state, though as a Chu-related regional power as well, did not follow the same pattern of using *bo zhong* and *niu zhong*, but focused more on *yong zhong*.[693] Between the late Spring-and-Autumn and the mid-Warring States period, three locations in the Suizao corridor, Wenfengta M1, Leigudun M1 and M2, have revealed Zeng chime-bells, with *yong zhong* constituting the main element. As discussed earlier in this section, the general taste of using *yong zhong* in this period may have originated from the post-reform Zhou tradition. This viewpoint is probably right for most regional powers, but for the Zeng state in particular, this preference of *yong zhong* may be traced back further to its own tradition in the early Western Zhou period. In Chapter II, we have mentioned that one of the first Western Zhou examples of using chime-bells was in the Suizao corridor. The M111 of the Yejiashan cemetery has five large bells, including four *yong zhong* in its earliest form,[694] which can be further

[692] Lai 2010: 8.

[693] A late Spring-and-Autumn Chu burial, Xichuan Xiasi M2, has also revealed a large set of 26 *yong zhong*, with inscriptions showing that their owner was Wang Sun Gao, see Beijing 1991a: 140-178. But most archaeologists believe that the M2 occupant was not 'Wang Sun Gao', but 'Wei Zi Peng 鄾子倗', see Li 1981: 36-37, and Falkenhausen 2003: 755-786. Therefore, the *yong zhong* set may have been somehow acquired by Wei Zi Peng, and does not represent typical Chu taste of bells. For further discussion of their owners, see Chen 1983: 32-33, and Lai 2010: 7.

[694] The earliest *yong zhong* is believed to have developed from bronze *nao*, originated in the south. For the transition from *nao* to *yong zhong*, see Kane 1974/5: 90-92, Chen

divided into two groups in terms of their body decorations,[695] and a single *bo zhong* with typical southern features of four flanges of birds and tigers (Fig. 4-5.1a).[696] The bells were arranged side by side with other burial goods on the western upper platform of M111 (Fig. 4-5.1b), making them look like a set.[697] Before the Ritual Reform, similar or identical musical bells, as well as other ritual vessels, had been rarely used as a set.[698] But the Yejiashan examples show that the *yong zhong* themselves, and the ways in which they were installed (especially the combination of different bell types and

1987: 17-23, Gao 1992: 268-270, Falkenhausen 1993b: 153-157, and Rawson 1999b: 427-430.

[695] Although all these bells look very similar, their shoulder decorations (the areas surround the ornamented parts of the *zheng*) can separate them into two types: 1) Type A (M111: 8 and 13) contains dotted circlets; and 2) Type B (M111: 7 and 11), which is supposed to have emerged slightly later than that in Group A, has small protruding studs. The two types and the related dating issues have already been well discussed in previous studies. For details, see Falkenhausen 1993b: 156.

[696] Both of the two types appeared respectively in different archaeological centres from the late Shang to early Western Zhou period, while they have never been seen together until the Yejiashan discovery. For similar early form of *yong zhong*, see a three-part set from Baoji Zhuyuangou M7 (Beijing 1988: 96-97), and a slightly later three-part set from Baoji Rujiazhuang M1 (Beijing 1988: 281-282). For similar *bo zhong*, see a four-tiger example from Hunan Shaodong 邵東 (KGYWW 1991.3: 111-112), and five collected similar examples in Zhang 2014a: 167-168. The bird-headed flanges on bells may have been slightly earlier than the tiger-shaped, see examples in Xin'gan 新贛 Dayangzhou 大洋洲, Jiangxi (Beijing 1997: 73-80), Hubei Shishou 石首 (WW 2000.11: 57-59), and Hubei Maojiachong 毛家衝 (WW 1998.10: 76-77). All the similar designs appear in Hubei and further south.

[697] Normally bells in set are supposed to be in some sort of order. But as showed in Fig. 4-5.1a and b, the two groups of *yong zhong* have been arranged neither by size nor by groups. In the meantime, the loops on their shanks also show that the M111: 7 and M111: 13 face up, and M111: 8 and M111: 11 face down. So the current arrangement may not reflect the original situation. These bells may have been arranged more neatly when they were used in the early Western Zhou period. See Beijing 2013: 140.

[698] In the early Western Zhou period or slightly before, the newly invented *yong zhong*, as their predecessors – *nao*, had usually been buried individually as single bells in hoards or caches without any accompanying artefacts. In South China, most of them seem to be excluded from funerary practice. For hoarded single *yong zhong*, see Changsha 2007: 127, 130, and 185.

suspending methods), were both quite innovative in the early Western Zhou period.[699] Such *yong zhong*-focused practice of Zeng people was indeed ahead of most of their contemporaries, which had probably formed their unique taste of chime-bells, and had been passed down to the generations in the period of the Wenfengta and Leigudun cemeteries.

The invariable bell use in the Zeng state and the variable bell use in the Chu state reinstate two totally different attitudes, which provide us with another good point of how local material cultures developed over time. Based on the similarities and differences between Zeng and Chu, in the following section, we will still treat the Zeng people as an independent group of local inhabitants, and discuss the change of their social identity and their relationship with the Chu after the mid-Spring-and-Autumn period.

4-6 Identity transition

Before the discovery of the Wenfengta cemetery, archaeologists had already formed a consistent understanding of the Zeng state on the basis of the Leigudun cemetery and other related burials after the mid-late Spring-and-Autumn period. Although the Zeng practice had chosen to follow the Zhou tradition at least twice before this period, as a Jī-surnamed regional state, its current material culture had somehow turned to the Chu

[699] The Yejiashan use of identical ritual vessels is also quite innovative. For a typical example, see Marquis Jian's set of identical *ding*, which were distributed into four burials in different generations, in the last section of Chapter I.

tradition, which is normally interpreted as a result of the pressure from rising Chu power.[700] But this transition has yet to be satisfactorily explained in terms of how Zeng and Chu interacted with each other, and how Zeng achieved this success as seen in Marquis Yi's luxury tomb. Through the previous two chapters, we have already shown that the social identity of the corridor peoples was subjectively constructed and maintained under different geopolitical situations. The current section will continue this line of thought, to see how the social identity of Zeng people had changed, and how this change affected the relationship between Zeng and Chu.

As it is generally accepted that the Zeng people in this period were Jī-surnamed descendants of the Zhou,[701] some scholars believe that this Zhou identity should have been a key factor determining the destiny of the Zeng people. As one of the remaining 'legitimate heirs' of the royal family, such identity may have prevented Zeng from being annexed by Chu.[702] This idea is indeed a possibility, in the first half of the Zhou dynasty. But after the mid-Spring-and-Autumn period, when the advantages of wealth and social position of the Jī-surnamed groups had long gone with the decline of the central power, there is likely to be little benefit for the Zeng in declaring this surname and keeping the related practices. The only thing that may have benefited the Zeng people, if at all, is that such identity may have been used as collective memory of their own group to

[700] The Zeng state is referred to as 'a typical client state' controlled by the Chu state. See Zhang 2009b: 292-294.
[701] Zhang 2009b: 346-347.
[702] Luo *et al*. 2014: 60.

differentiate them from the Chu groups. The *yong zhong* set from Wenfengta M1 is a good example to illustrate this angle. As mentioned previously in this chapter, the inscribed bell in Group B records that its owner, Marquis Yu of Zeng, saw himself as a distant offspring of the Zhou royal family. His larger bells in Group A also use their inscriptions to claim the close relationship between Yu's ancestor and the first kings of Zhou. Such descriptions were all arranged at the very beginning of long narrative inscriptions. It looks as though Marquis Yu wanted to highlight this glorious history of Zeng in front of his own people, and in the meantime to show his superiority over those non-Zhou groups (the Chu people for example) by reminding everyone that his family members had been and still were legitimate heirs of the Zhou. In this sense, these memories are used not only as historical documents, but also as a tool to maintain this sense of superiority. On the other hand, the type of *yong zhong*, as the carrier of these inscriptions, also represents a collective memory of a Western Zhou taste of bells. The preference of *yong zhong* in Zeng can be linked either to its own use in the early Western Zhou period, or to the reformed Zhou use of *yong zhong* after the Ritual Revolution. Either way, such a memory draws a clear line between Zeng and Chu, which informs us that, subjectively, Zeng may have viewed themselves as part of a different social group from Chu.

The Marquis Yu's *yong zhong* also provide us with an 'official confirmation' that his forefathers had at some point decided to make an identity transition from Zhou to Chu. Before the Wenfengta discovery, archaeologists could only make educated guesses to

fill in the gap of different styles on Zeng bronzes before and after the mid-Spring-and-Autumn period (first the Zhou style and then the Chu style). The inscriptions on the Group A of Wenfengta bells are the first to document this transition explicitly in a written record. More convincingly, it was presented in the words of a Zeng ruler. Scholars are now more confident that the Zeng state had been affiliated with Chu, no later than the mid-Spring-and-Autumn period.

Taken together, it can be seen that the Zeng people in this period had physically followed the Chu on one hand, while had been trying to subjectively differentiate themselves from the Chu on the other. Such conflicting trends may imply deep-seated reasons. In fact, as we label the Zeng state as one of the client states of Chu, a pair of logical questions is presented: among the characteristics on Zeng bronzes that have been thought to be under the Chu tradition, how many of them were actually adopted from Chu, and vice versa? By comparison with Chu, which is barely observable archaeologically in the Western Zhou period, the Zeng state provides us with rich information on the roots and development processes of Eastern Zhou Chu traditions. As some scholars suggest, the developmental sequence of a number of typical Chu characteristics can be seen in Zeng burials in the previous periods, such as the prototype of *sheng ding*, the intersecting dragons, and some fixed terms and phrases in bronze inscriptions.[703] However, none of these allowed Zeng to keep pace with Chu. To

[703] Zhang 2009b: 293.

maintain sound cooperative relations, and to survive the Chu expansion, it was a must for the Zeng people to have other negotiating leverage with Chu.

The restoration of Chu majesty, documented in the inscription of the Marquis Yu's *yong zhong*, may have counted, and the Zeng craftsmen and their applications of different bronze casting method could have been helpful in the negotiation between Zeng and Chu. As mentioned earlier, people from both the two states had been interested in adding very fine decorative patterns on their bronzes, which required professional and well-connected craftsman teams to fulfil this task. One effective means was pattern-block casting, best represented by the Houma products in north China. The Houma craftsmen had been very good at uniformity and continuity of motifs between adjacent pattern units, with the edge of each unit flexible but accurately done, and it is normally not easy to tell the junction lines in between. The traces of pattern-block on Zeng and Chu bronzes, in contrast, look a bit rigid. Although they used more abstract and dense patterns on each unit, its edge is always a straight line which is instantly recognisable. On this point, the skills of both the Zeng and the Chu craftsmen were probably not as good as those from Houma in terms of the pattern-block technique.

But in the meantime, they also had some skills that the Houma craftsmen may have never experienced, which allowed them to create openwork of complex patterns through lost-wax technique. As we know, nearly all the bronzes that are related to the lost-wax casting concentrate in the mid-late Spring-and-Autumn period in the Chu state

and its client states such as Zeng and Xu 許. It is still not clear where this technique came from, and who was the first to apply it into practice, but the craftsmen from the Zeng people seem to be the only social group who had retained this technique down to the Warring States period. It is possible that the Zeng state may have kept a group of professionals as its bronze casting capability, who was able to exchange ideas with the northern contemporaries on one hand, while cooperating closely with its powerful neighbour, the Chu, on the other. Such capability can probably explain why, after the mid-Spring-and-Autumn period, the Zeng state was able to produce such large quantities of high-level bronzes, through combined casting techniques, and eventually formed the extraordinary burial assemblage in the tomb of Marquis Yi of Zeng. Therefore, we cannot rule out the possibility that the Zeng state may have acted as a major bronze casting centre in this period, which could provide a service to others, especially to the Chu state in return for their support.

4-7 Conclusion

After the Spring-and-Autumn period, the Zeng craftsmen had mastered many top-level casting techniques, which may have surpassed most of the contemporaries in terms of their skills and experience. Although in this period the subjective identification of the Zeng people was still led by the Jī-surnamed Zhou people, their material culture had tended to be closely associated with the Chu tradition. Therefore, the Jī-surnamed Zhou identity can hardly reflect the social identity of the Zeng people at the time, which explains why Marquis Yu only cognitively described the situation without any ashamed

or uneasy wording when he mentioned his ancestor's 'defection'. Such flexibility in their social identity, as well as their strength in bronze casting techniques, may have been the main reasons why the Zeng was not annexed by Chu until the mid-late Warring States period.

CHAPTER V – Conclusion

Rich material remains of the long-lasting Zeng state have provided us a window into the material culture of the Suizao corridor during the Zhou period. Comparative studies on Zeng bronzes and their contemporaries show that the corridor inhabitants were involved in a network of enormous and constantly changing complexity, in which people, objects, practices, and ideas were mixed together through interregional contacts. The choices of local people in adopting foreign ideas and materials from either the dominant cultures or other places heavily depended on the subjective awareness of their social identity, which, as we have discussed in the main chapters, can be constructed, maintained, and transited in different social and political environments.

In the Yejiashan period, the dominant early Western Zhou culture placed much importance on the acquisition of mineral resources and other raw materials along the Yangtze River region, which presented a great opportunity for the corridor people to follow the Zhou closely. The locals, in turn, seized the occasion to transform from a social group with a possible non-Zhou origin to a member of the networked family of Zhou. After the mid-Western Zhou transition, the Zhou carried out a social and political reform, overwhelmingly applied in its territory. Living in the far south, the corridor people chose to stand closely with the Zhou culture, and took the opportunity to get control of the lands in the Suizao corridor. Entering the Spring-and-Autumn period, the dominant external circumstance of the corridor underwent a shift from Zhou to Chu. The local material culture, once again, promptly made adjustments, and tended to associate with the rising Chu power. When facing changes, the choice of the corridor people seems like a leaf of a tree, following whichever way the strongest wind is blowing.

The people in the Suizao corridor, as a social group who lived in a nexus of material culture on the southernmost borderland of the Zhou territory, they took this geographical advantage to develop their own material culture, and keep pace with the outside changes. Now if we go back to the questions asked at the very beginning of this thesis, we will see that, although the external circumstance varies in each of the three periods, some key words never go away in our discussion of the corridor people, such as river networks, metal sources, and the derived bronze casting techniques. But the

most important factor to their survival was the flexibility in their social identity, which had made the long-lasting Zeng state happen, and kept its people going all through the Zhou dynasty.

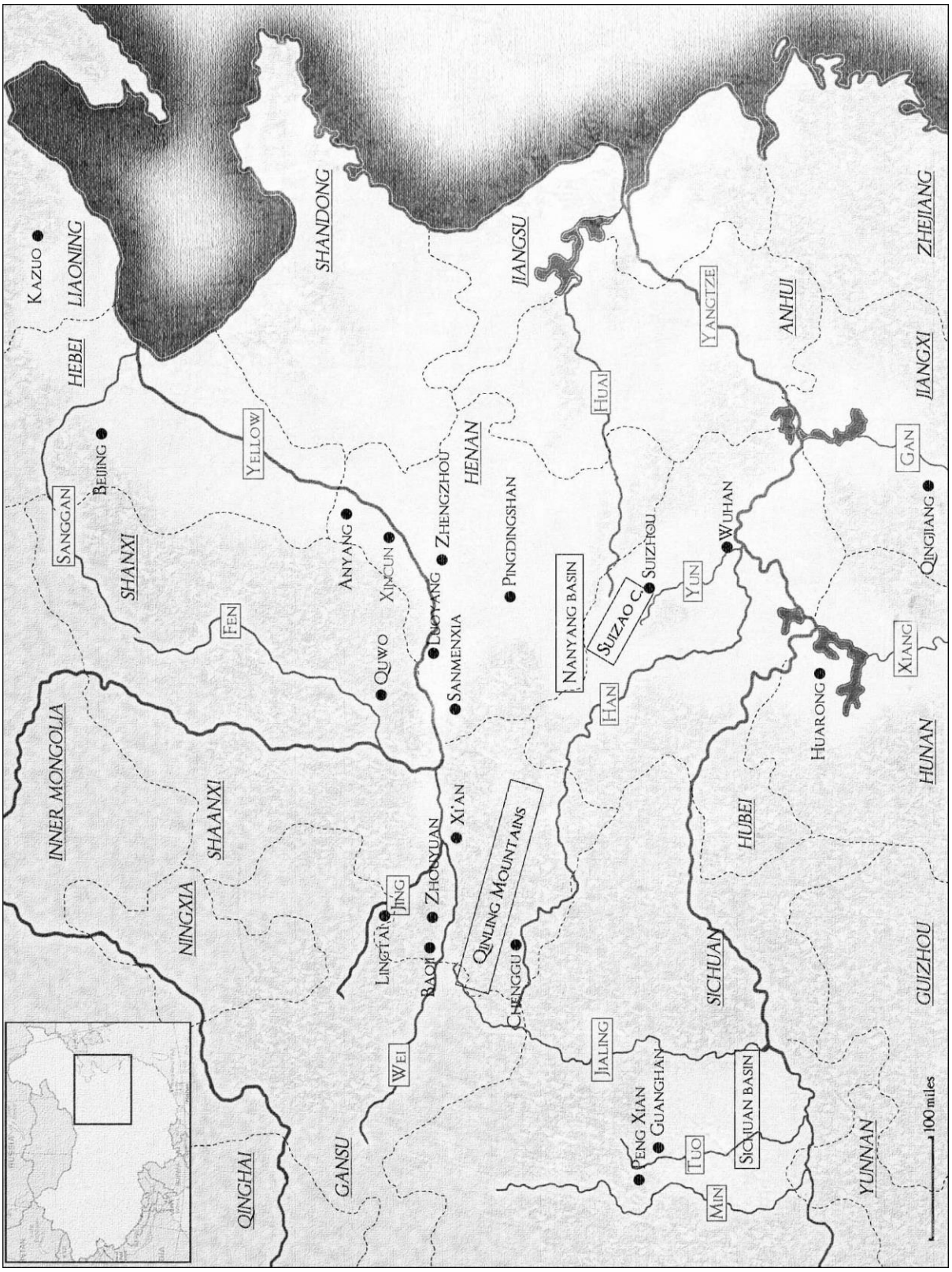
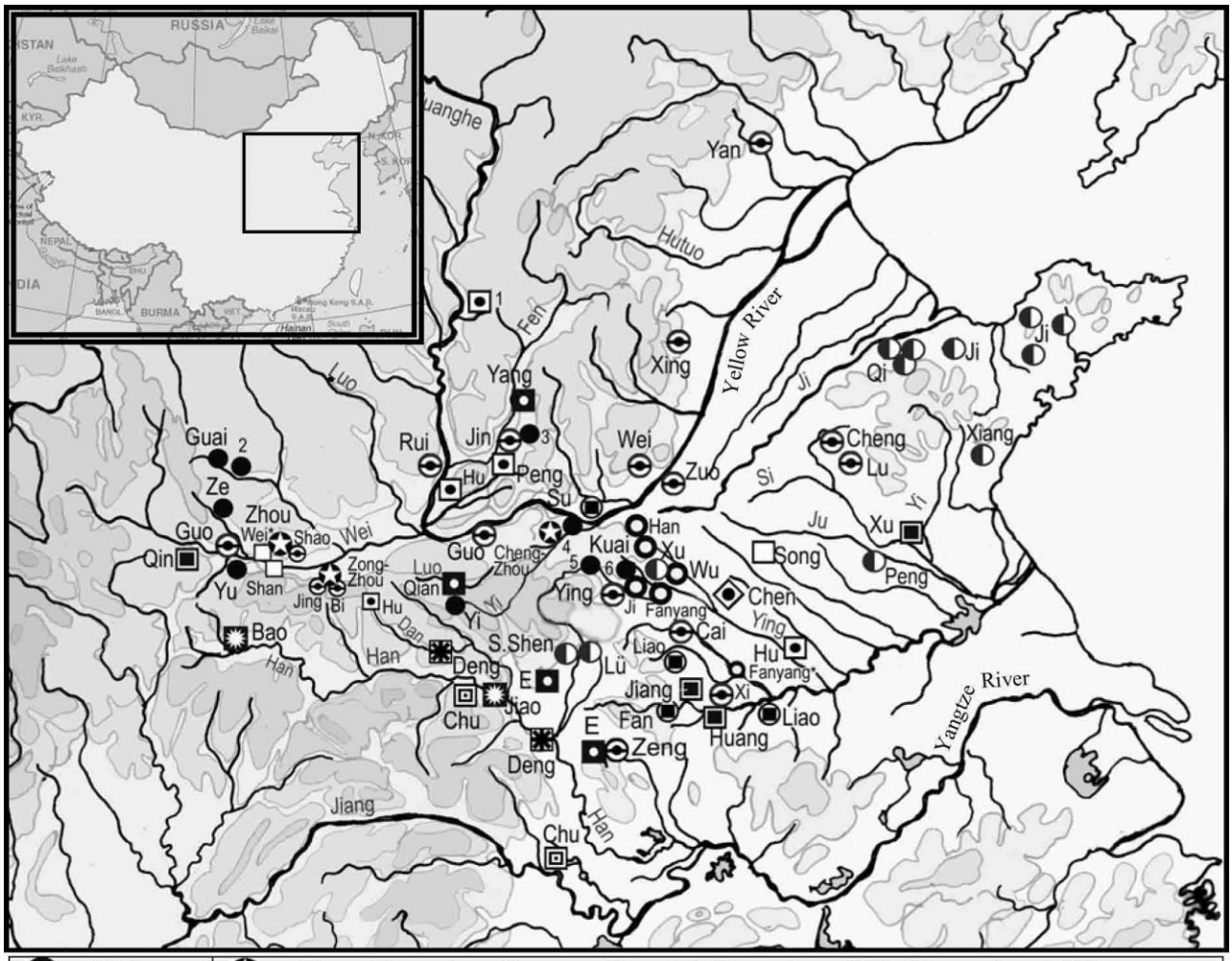


Fig.1-1.1:Map of China's main rivers, the Qinling Mountains, Nanyang basin, Sichuan basin, Suizao corridor, and the locations of important sites dated to the Shang and Zhou period, *drawn on the basis of Google Maps 2014, and Beijing 2004, fig.2-1*



姬 **Jī:**	Zhou 周 royal residences: Zhou 周, Zongzhou 宗周, Chengzhou 成周;	
虢 Guo, 召 Shao, 畢 Bi, 井 Jing, 芮 Rui, 晉 Jin, 魯 Lu, 郕 Cheng, 燕 Yan, 邢 Xing, 胙 Zuo, 衛 Wei,		
應 Ying, 蔡 Cai, 曾 Zeng, 息 Xi;	子 **Zi:** 宋 Song, 衛 Wei*, 單 Shan;	嬀 **Gui:** 陳 Chen
姜 **Jiang:** 齊 Qi, 紀 Ji, 許 Xu, 申 Shen, 呂 Lü, 向 Xiang, 彭 Peng;		嫚 **Man:** 鄧 Deng
(妃) 己 **Jǐ:** 番 Fan, 蓼 Liao;	姞 **Jí:** 陽 Yang; 噩 E; 遣 Qian;	姒 **Si:** 褒 Bao, 絞 Jiao
媿 Kui: 胡 Hu, 倗 Peng, 1 – unknown, Gaohong 高洪 site, supposedly related to Peng		
妘 Yun: Kuai 鄶, Wu 鄔; supposedly, also 函 Han, 棘 Ji, 繁陽 Fanyang		
嬴 Ying: 徐 Xu, 黃 Huang, 江 Jiang, 秦 Qin;	羋 Mi: 楚 Chu	
Non-Zhou/ unknown surname: 妛 Ze (adopted 姬 Jī surname); 魚 Yu, 乖 Guai, 2 – unknown, Baicaopo 白草坡 site; 3 – unknown, Dahekou 大河口 site; 4 – 費 Fei; 5 – 戎蠻 Rong-Man; 6 – 康 Kang		

Fig. 1-2.1: A distribution map of the locations of the Jī lineages and the non-Jī lineages in the Zhou period, *copied after Khayutina 2010b, map I*

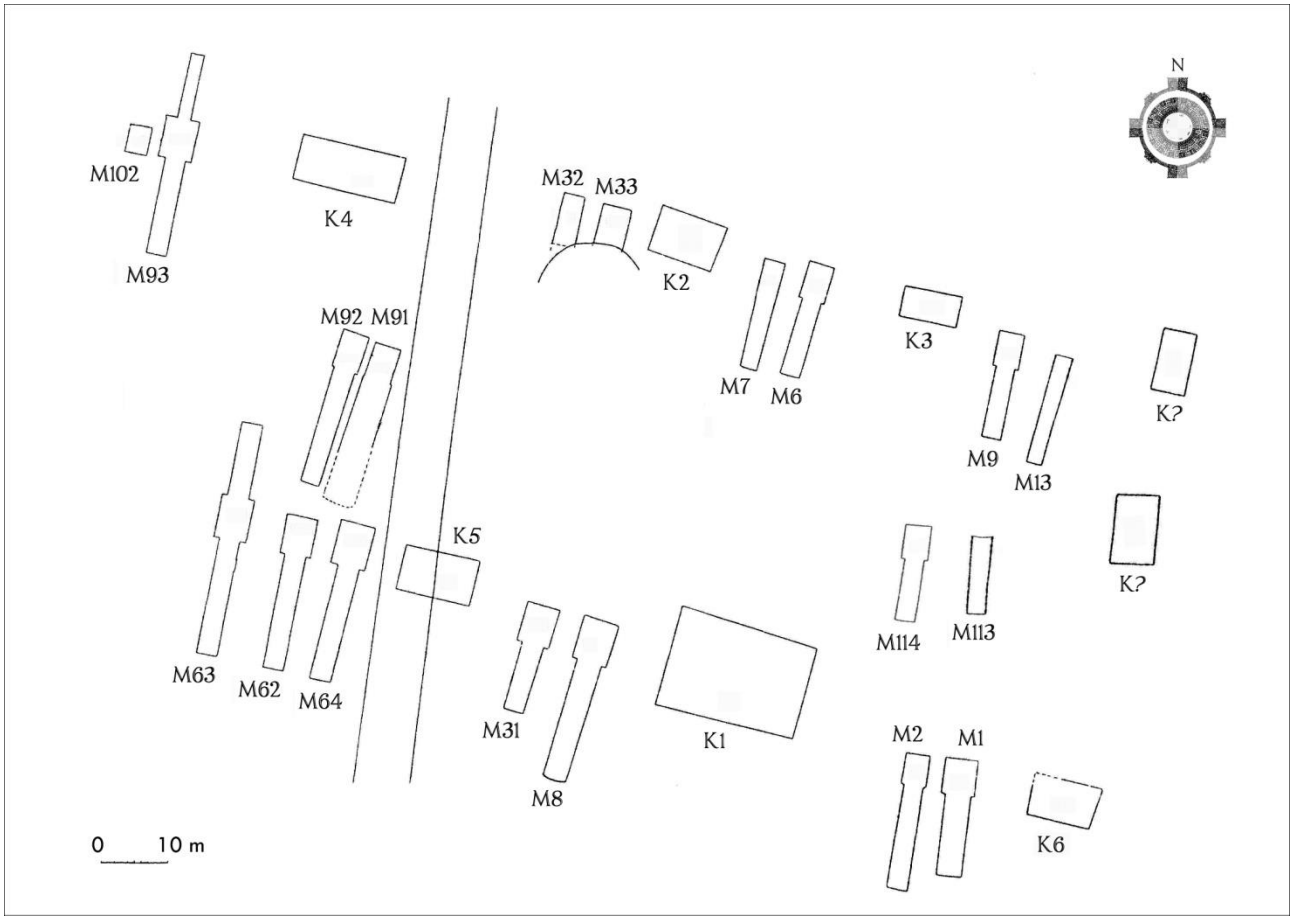


Fig. 1-3.1: Layout of the main tombs and chariot/horse pits of the Jin marquis cemetery, *reedited after WW 2001.8, fig. I*

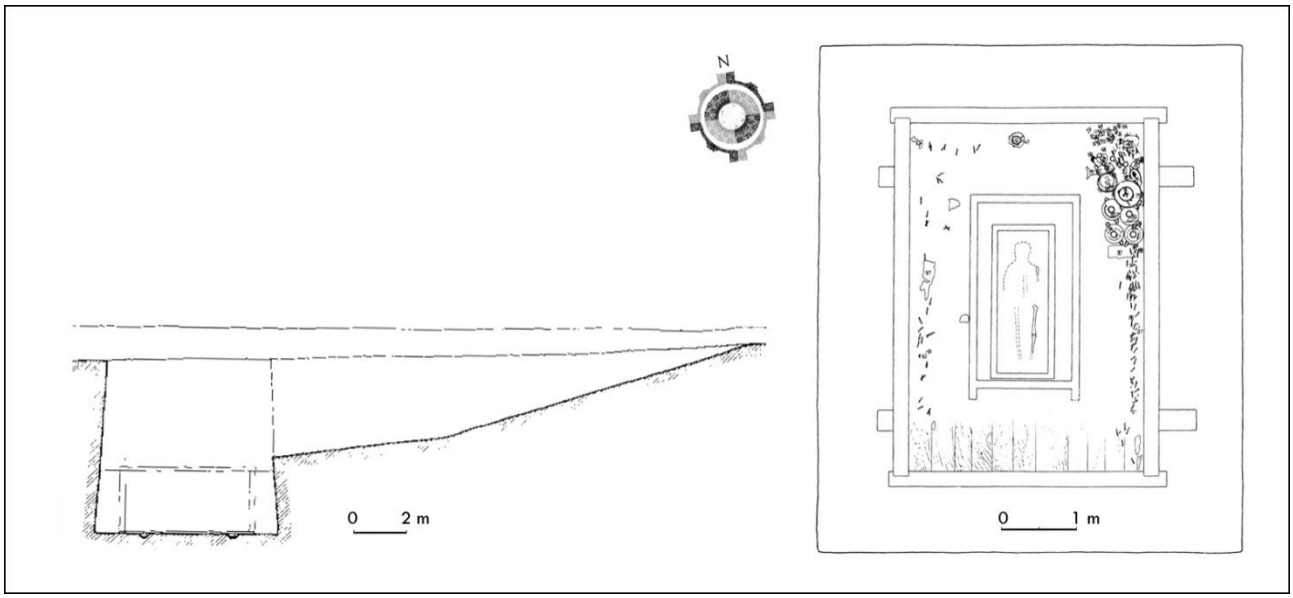


Fig. 1-3.2: Profile and chamber layout of M62 in the Jin marquis cemetery, *reedited after WW 1994.8a, fig. 9 and 10*

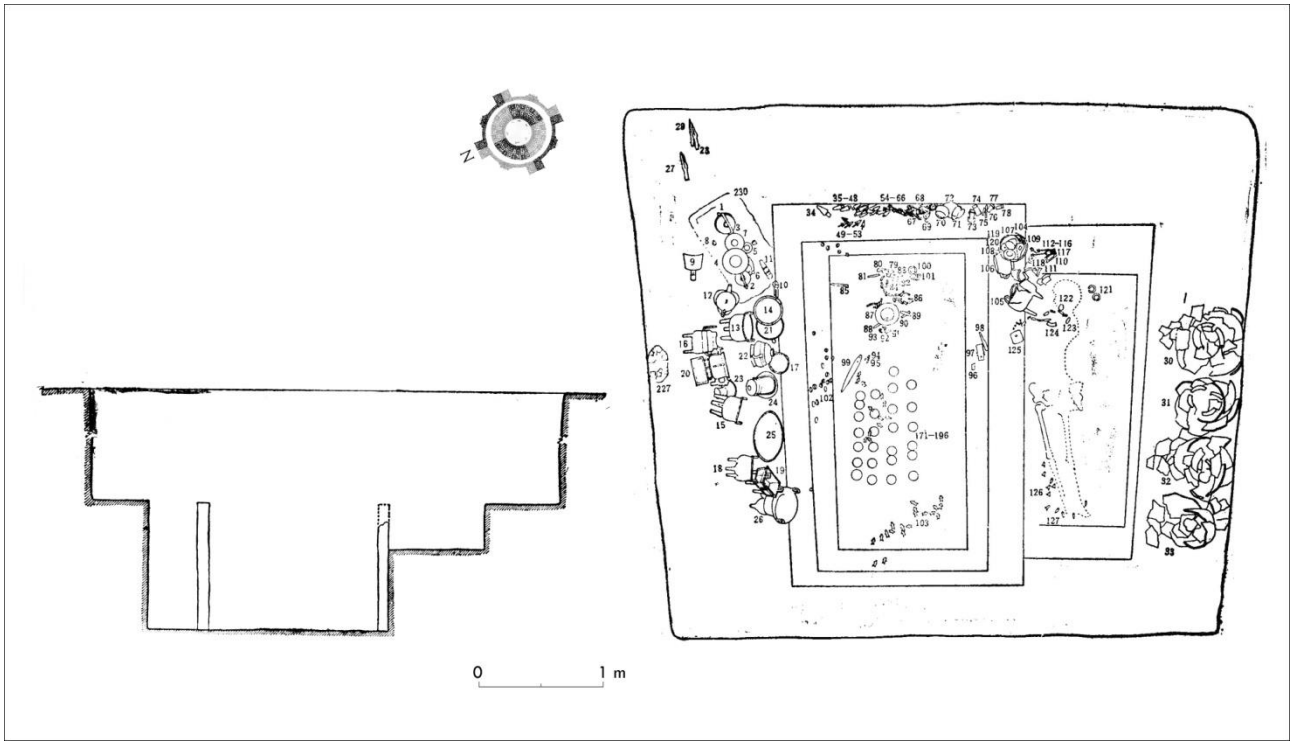


Fig. 1-3.3: Profile and chamber layout of Zhuyuangou M13, *reedited after Beijing 1988, fig. 33 and 34*



M2139, Dahekou cemetery, Yicheng, Shanxi

Fig. 1-3.4: Bird's eye view of a waist pit and a sacrificial dog inside Dahekou M2139, *reedited after Xie 2012, p. 15*

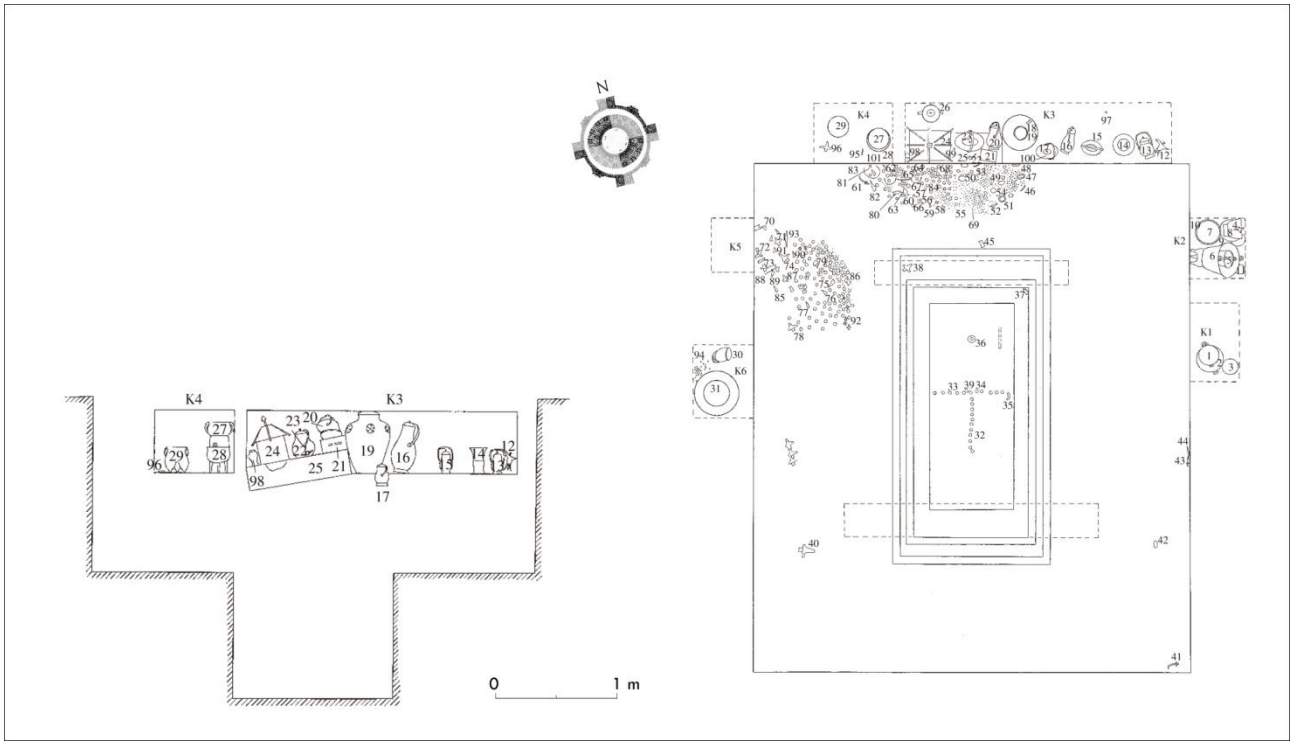


Fig. 1-3.5: Profile and chamber layout of Shigushan M3, *reedited after WW 2013.2, fig. 3 and 11*

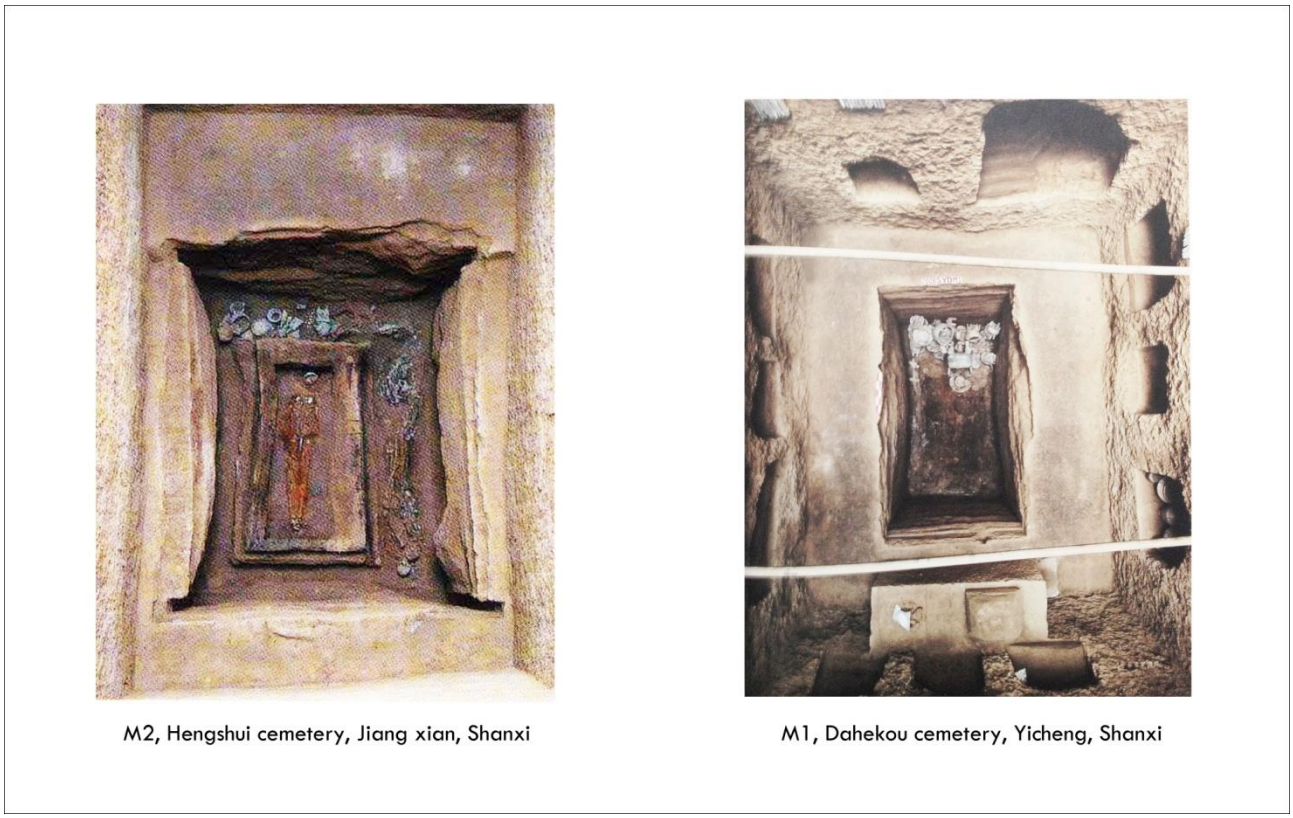


Fig. 1-3.6: Bird's eye view of layout of Hengshui M2 and Dahekou M1, *reedited after KG 2006.7, pl. 5.3, and Xie 2012, p. 27*

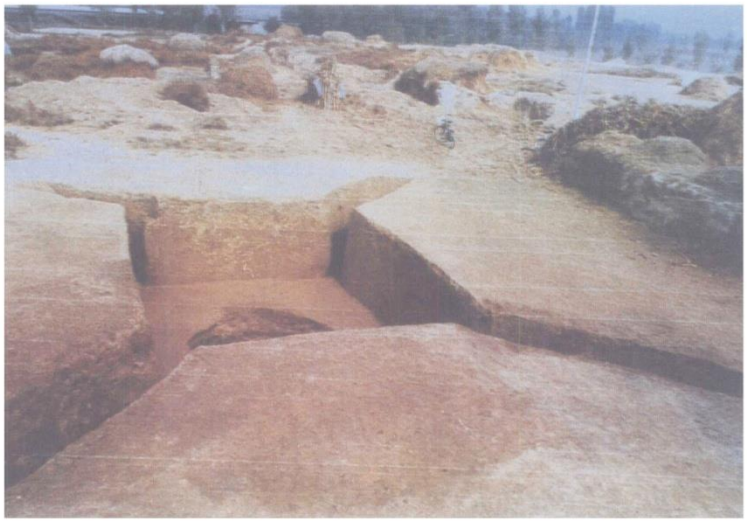


M1, Dahekou cemetery, Yicheng, Shanxi



Inclined tunnels

Fig. 1-3.7: M1 of Dahekou site and its four inclined tunnels, *reedited after Xie 2012, pp.17-18*



M1193, Liulihe cemetery, Fangshan, Beijing

Fig. 1-3.8: M1193 of Liulihe site, and its four 'sloping ramps', *reedited after KG 1990.1, pl. 1.1*

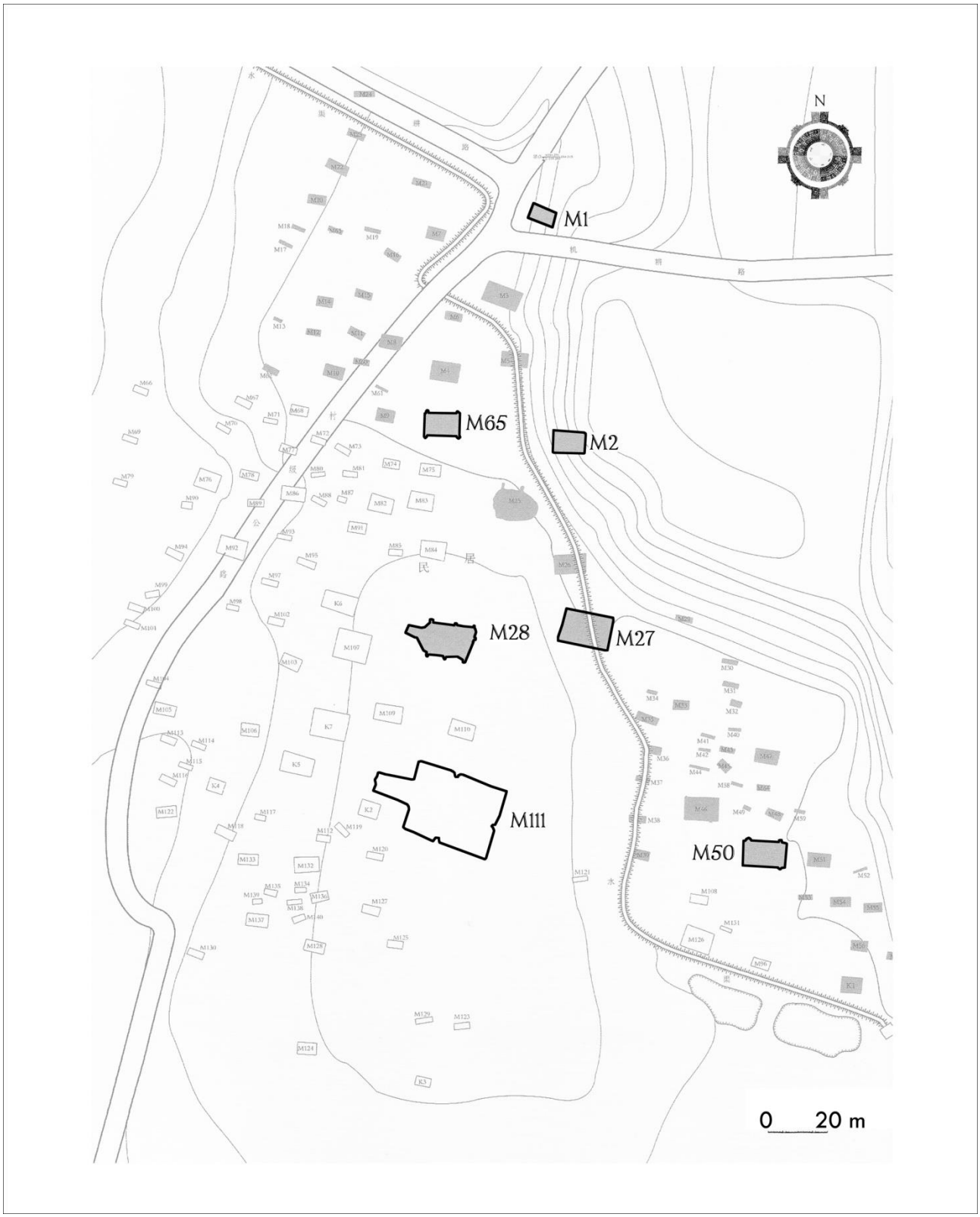


Fig. 1-3.9: Layout and major burials of the Yejiashan cemetery, *redrawn after Beijing 2013, p. 12*

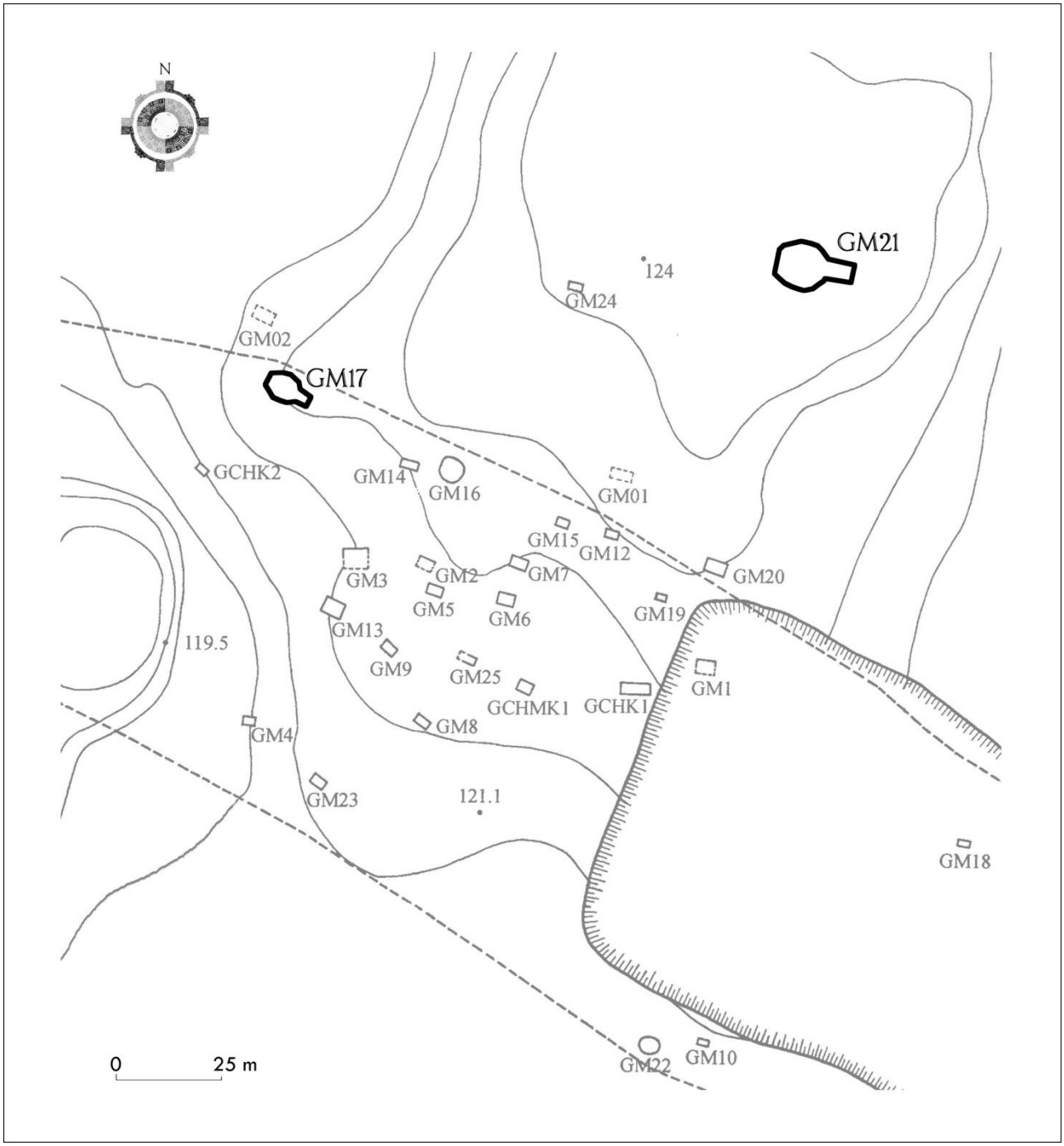


Fig. 1-3.10: Layout and major burials of Guojiamiao cemetery, *redrawn after Beijing 2005, fig. 3*

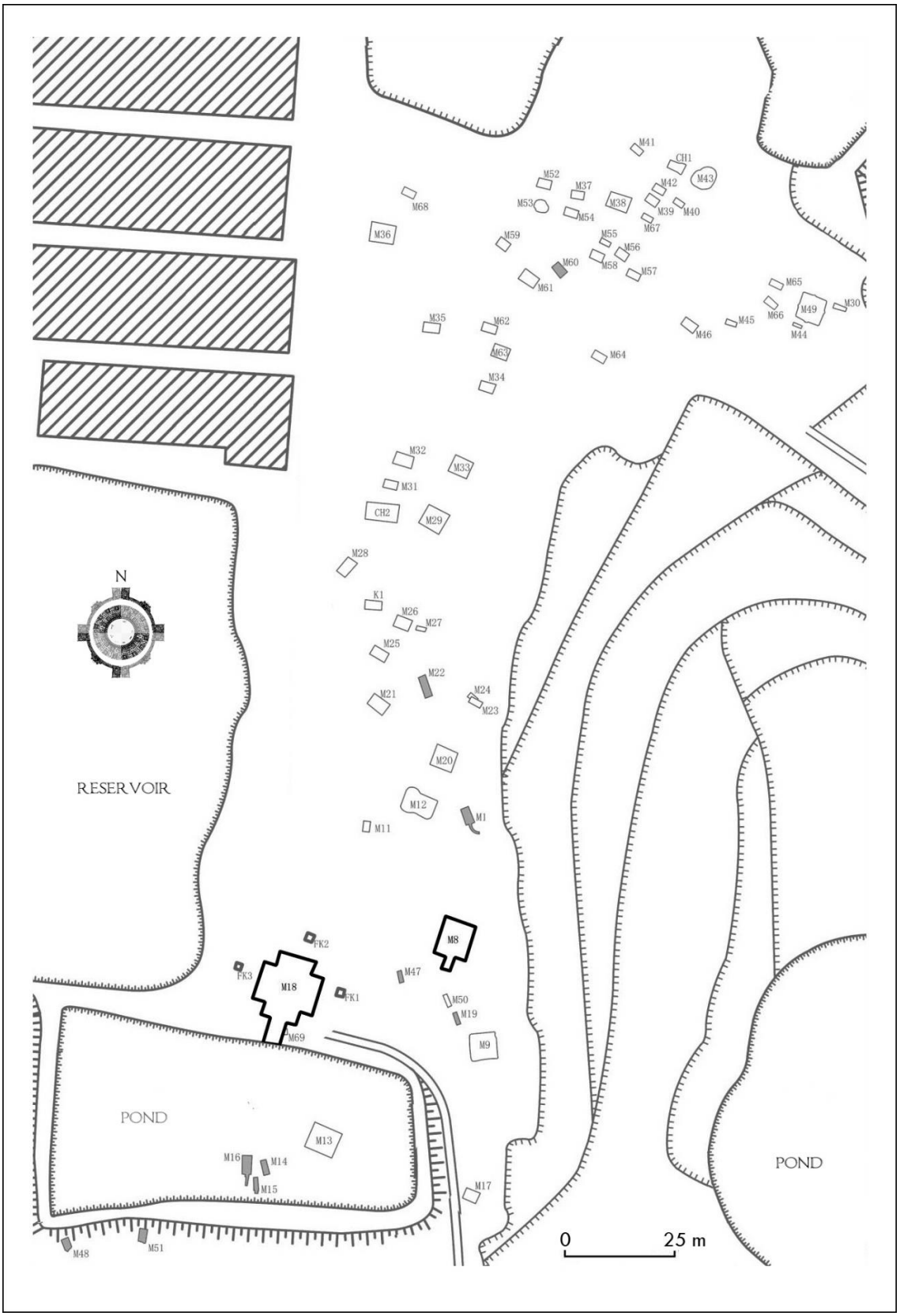


Fig. 1-3.11: Layout of Wenfengta cemetery, *redrawn after JHKG 2013.1, fig. 1, p. 4*

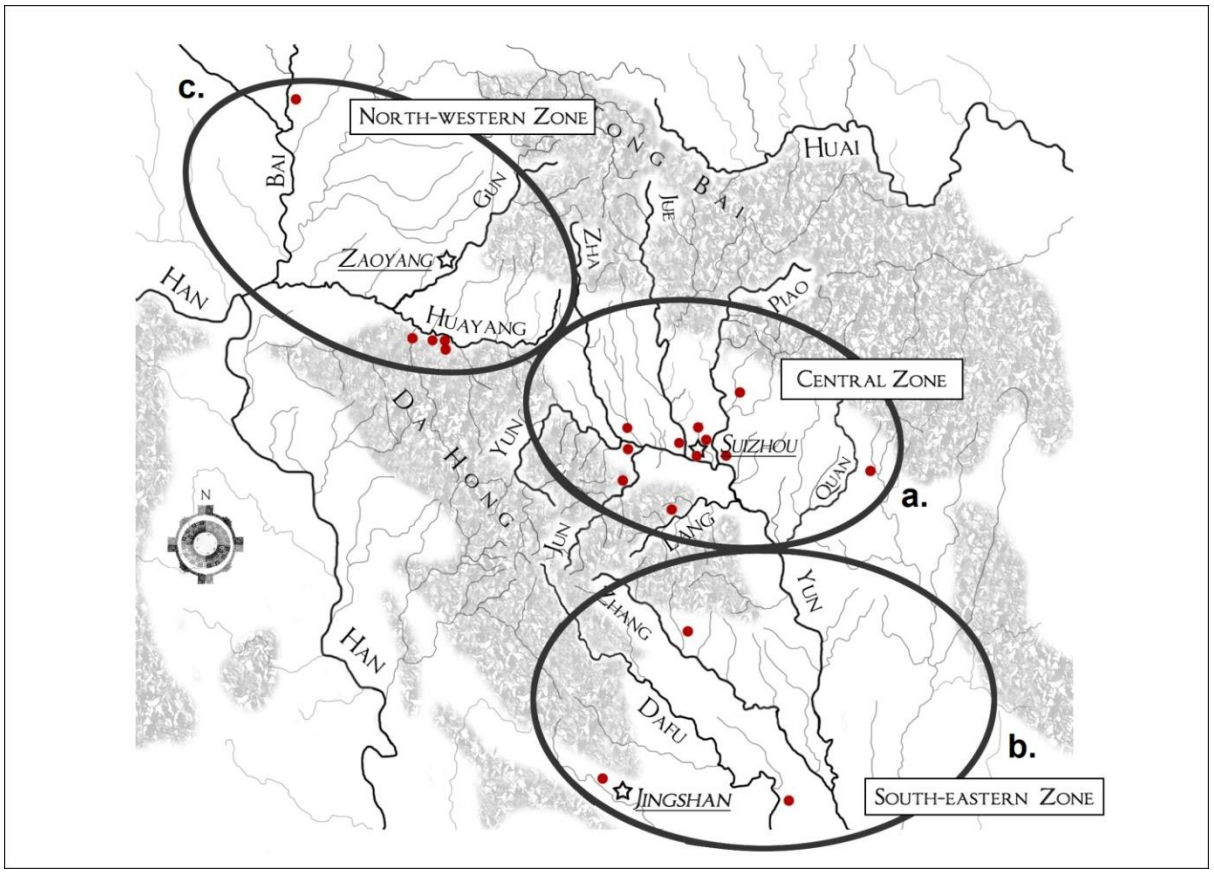


Fig. 1-4.1: Local river network in the Suizao corridor, and three zones of the main Zeng burials in Zhou period, *drawn based on Google Maps 2012, and Zhang 2009, fig. 1.1-1*

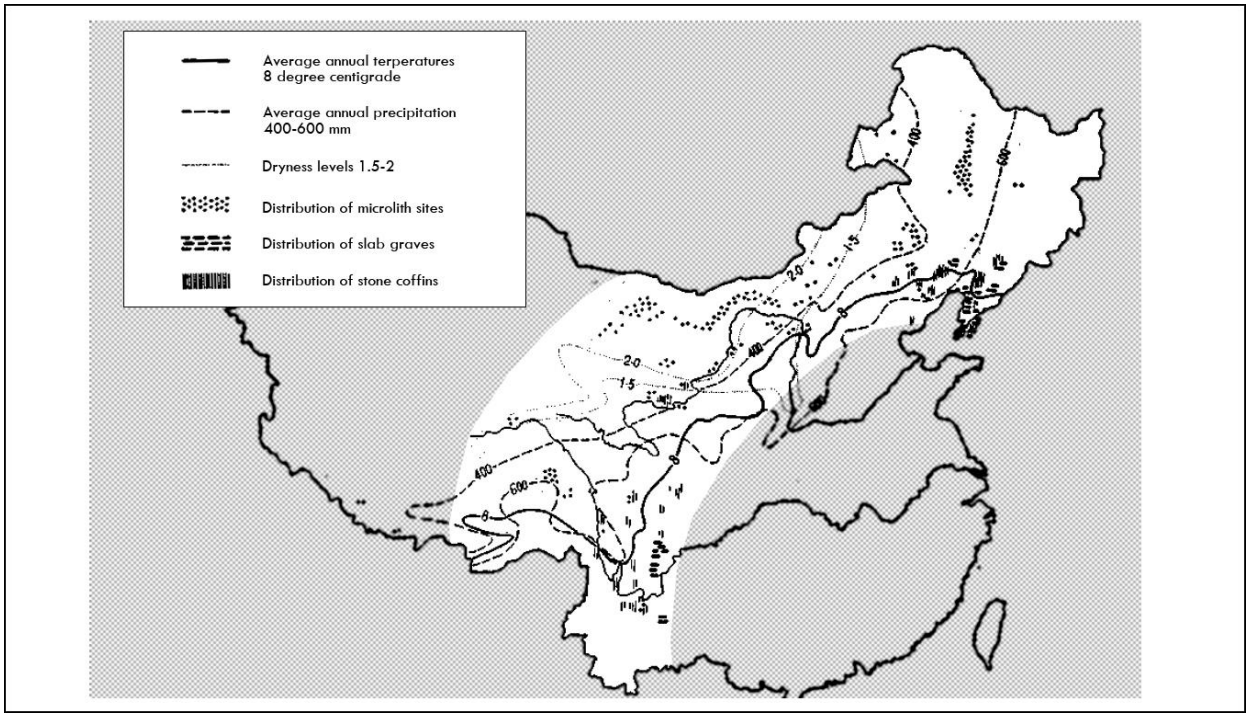


Fig. 1-4.2: General map of the arc of territory, *reedited after Tong 1986, p. 19*

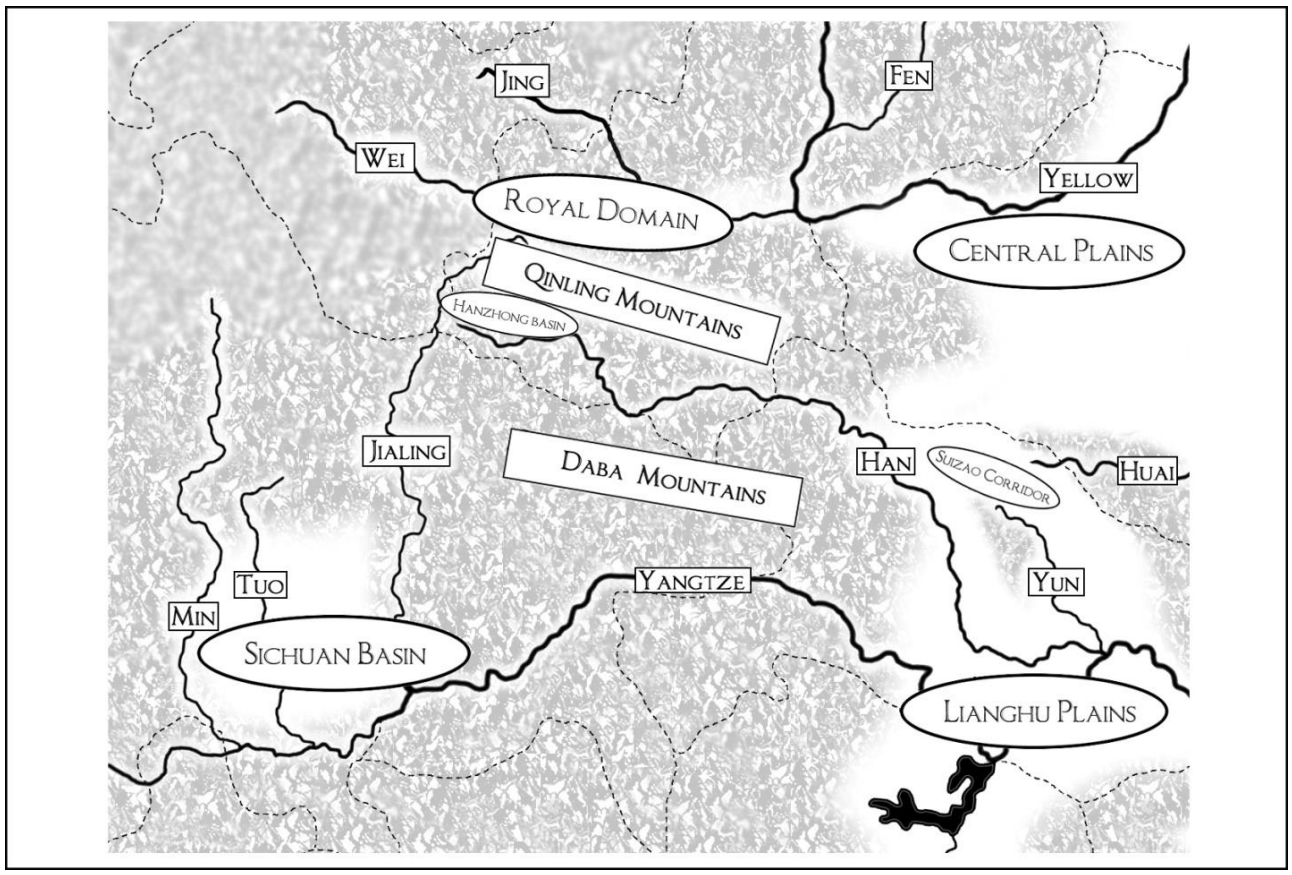


Fig. 1-4.3: Map of extended river network, *drawn on the basis of Google Maps 2014*

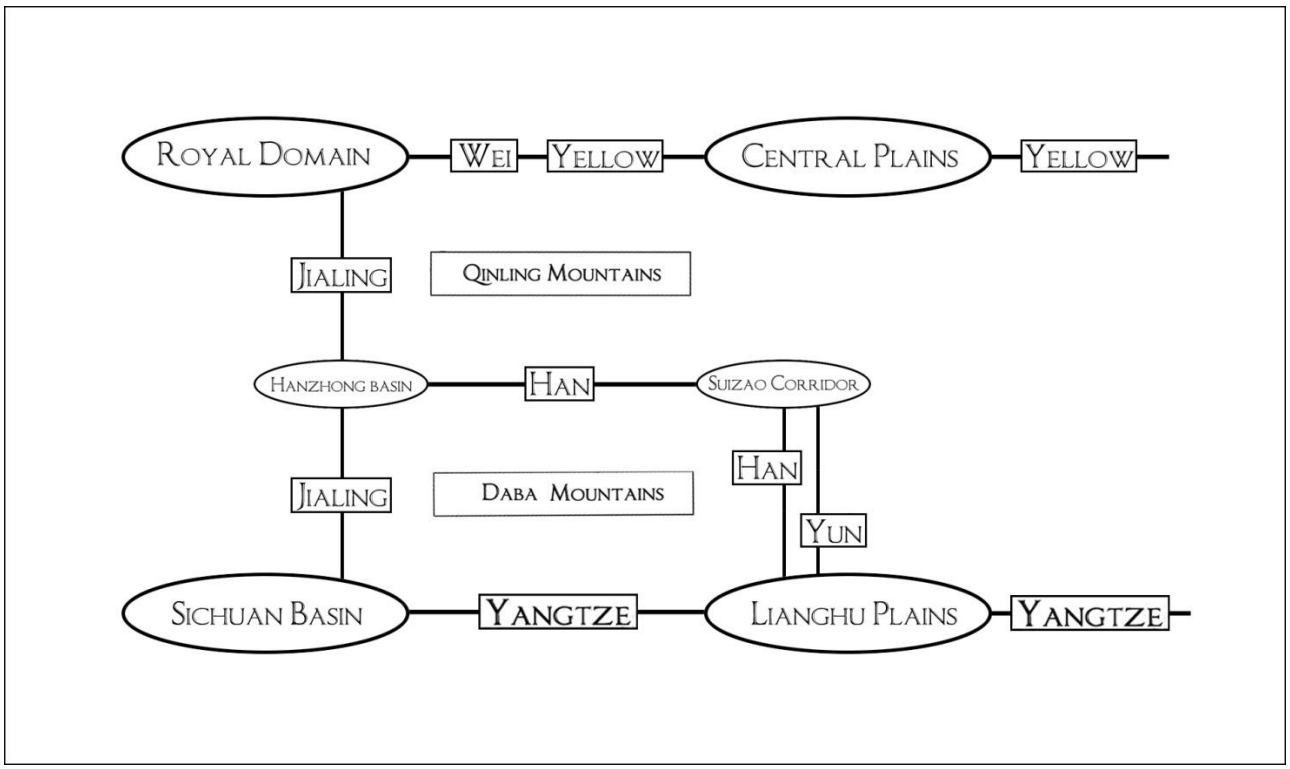


Fig. 1-4.4: A sketch of general river network, *drawn on the basis of fig. 1-4.3 above*

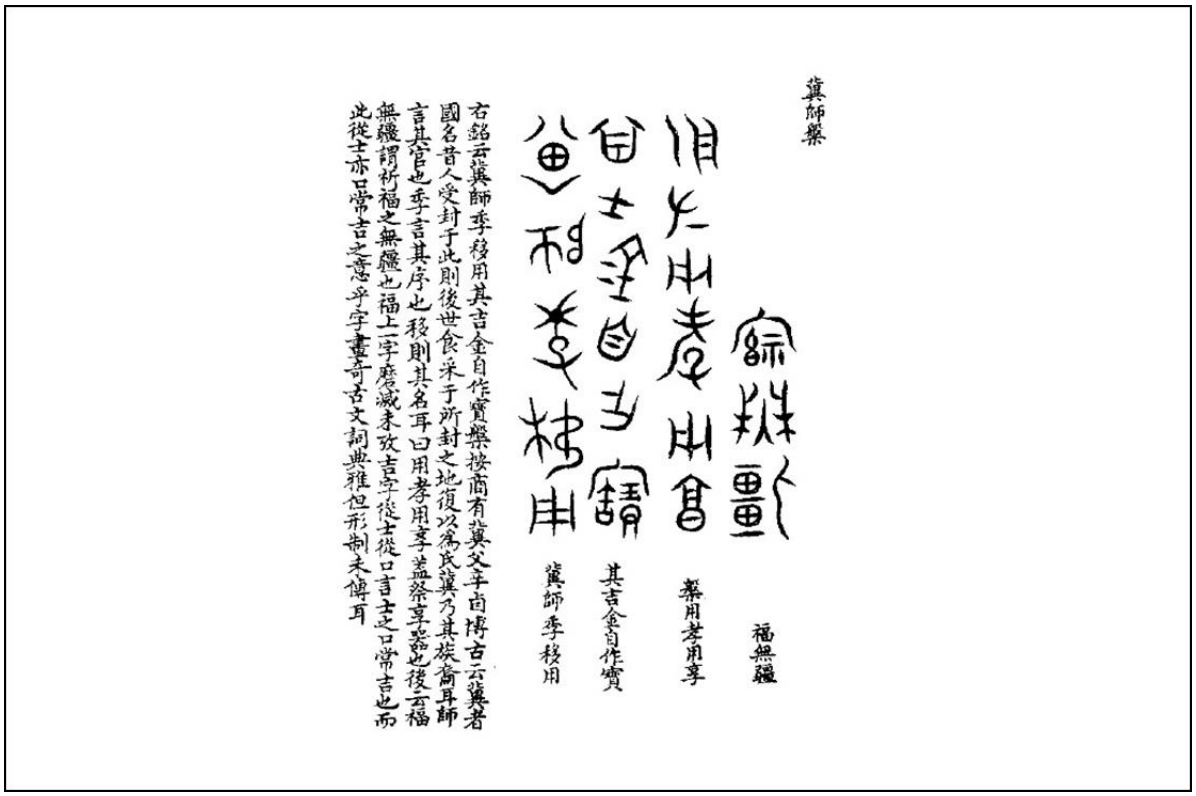


Fig. 1-5.1: Early documented Zeng bronzes: Zeng-shi-ji-X *pan, reedited after Beijing 1986, vol.16, pp.332-333*



Fig. 1-5.2: Early documented Zeng bronzes: a) Zeng-bo-shu *fu*; b) Zeng-zhong *pan*, *reedited after Ruan Yuan 1937, pp.69-70, 107*



Fig. 1-5.3: Excavated and collected Sui bronzes: a) Sui dasima Jiayou zhi xing *ge* (Wenfengta M21: 1); b) Sui zhong mi jia *ding, reedited after KG 2014.7, fig. 45, and JHKG 2011.4, fig. 1 and 2 (scale information in both cases is not provided)*

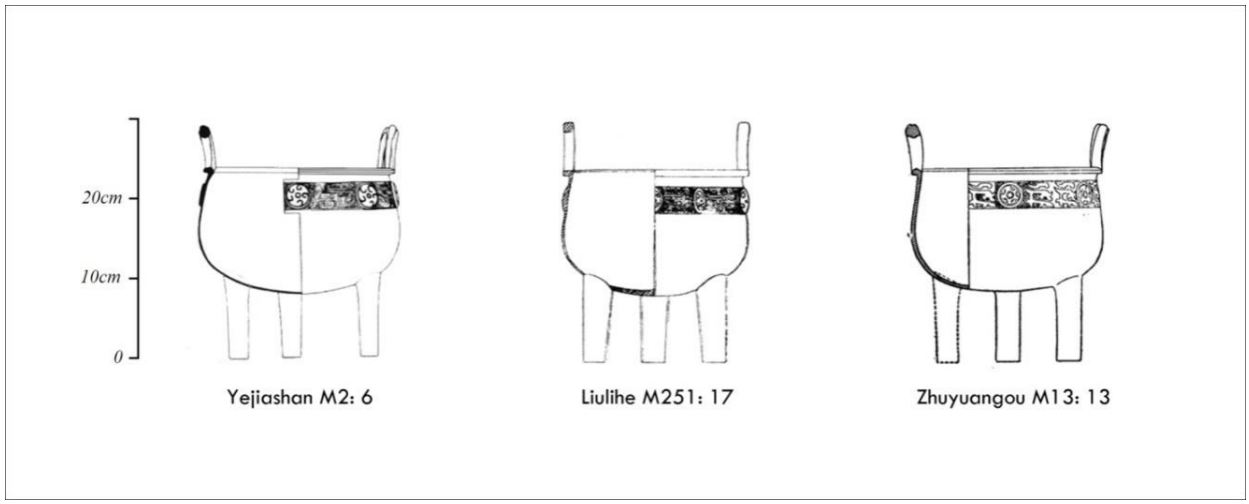


Fig. 1-7.1: A comparison of rounded *ding*, *reedited after JHKG 2011.3, fig 62.1; Beijing 1995, fig. 76.a; Beijing 1988, fig. 36.1*

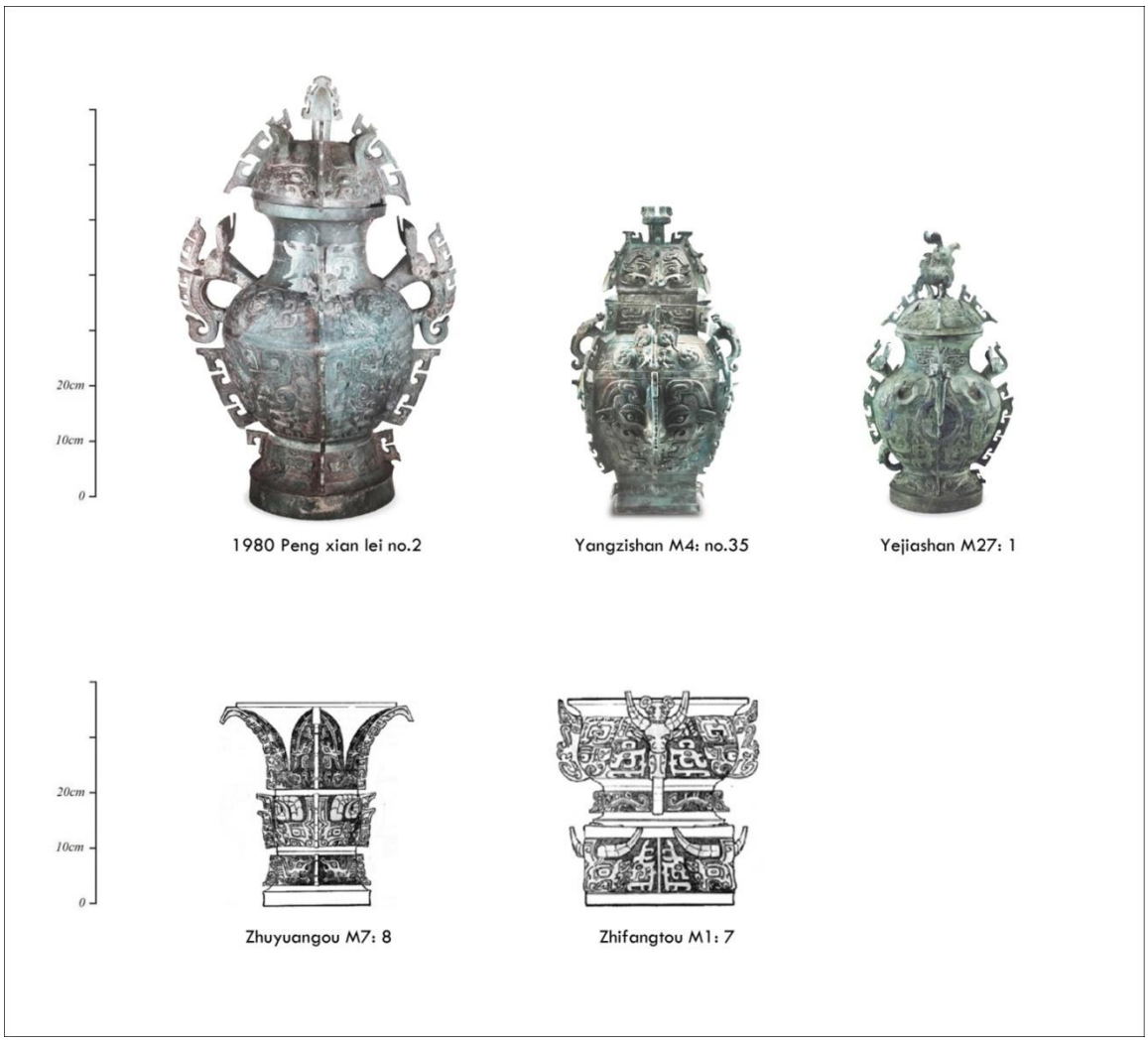


Fig. 1-7.2: A comparison of flamboyant style bronzes, *reedited after Beijing 1988, fig. 19 and 79; WW 1961.11; Beijing 2009, no. 35;WW 2011.11JHKG 2011.3, fig. 62.1; Beijing 1995, fig. 76.a; Beijing 1988, fig. 36.1; Beijing 2013, p. 217*

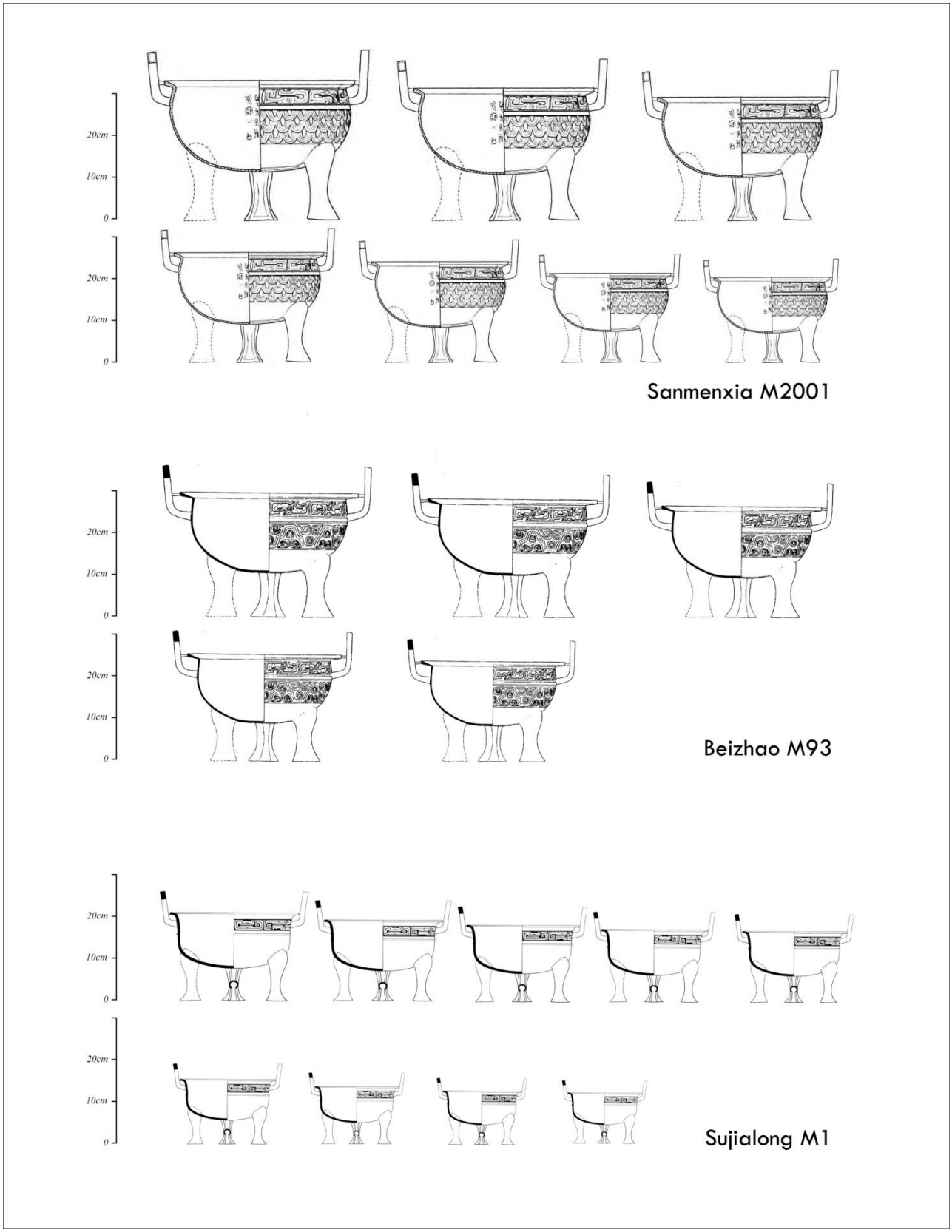


Fig. 1-7.3: A comparison of matching sets of *ding* vessel, *reedited after Beijing 1999a, fig. 22.1; WW 1995.7, fig. 37.3, p.28; Hubei 2007b, pp. 12-13*

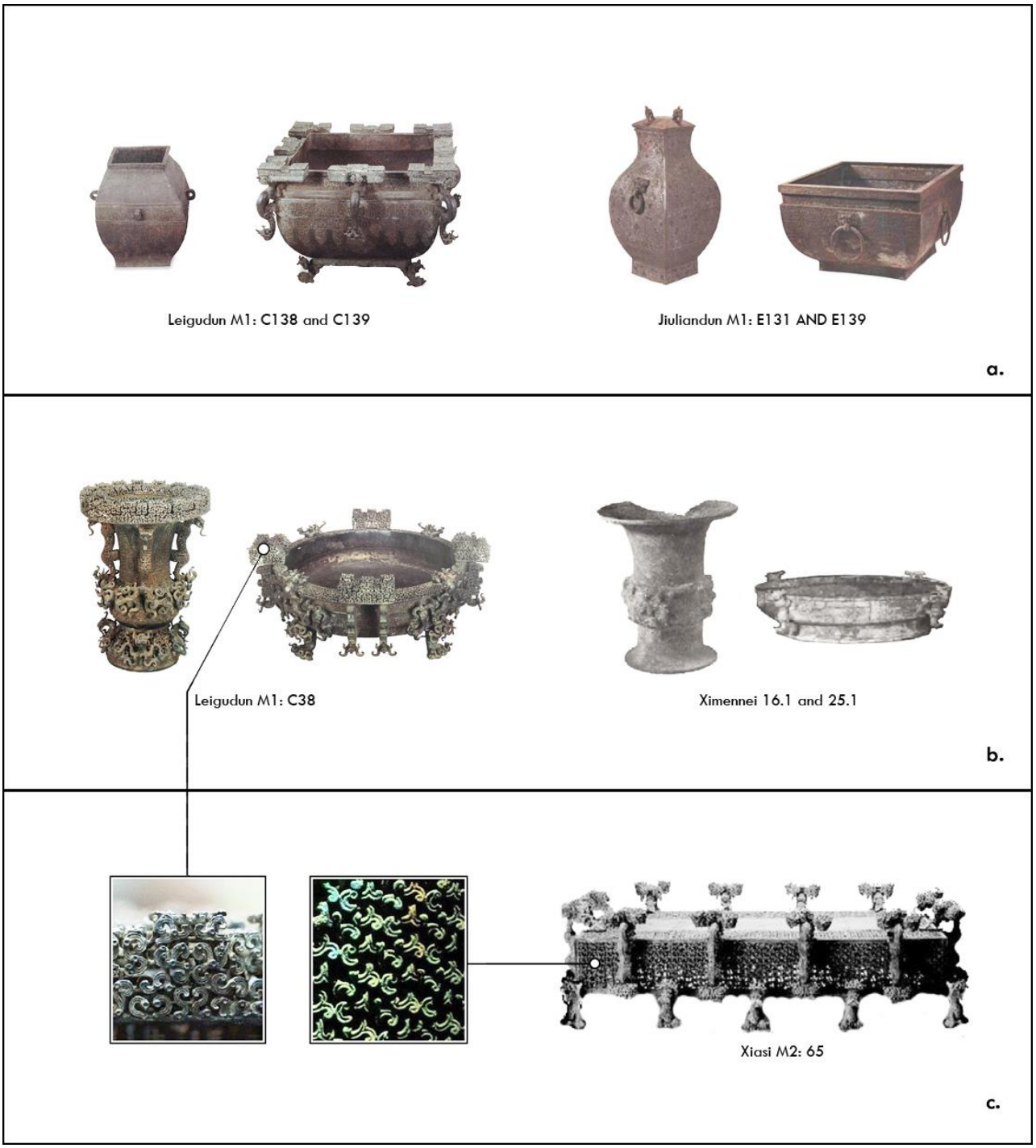


Fig. 1-7.4: Suizao bronzes with southern traditions, *reedited after Tan 2003, p.117 and 118; Beijing 2007a, p.38 and 43; Beijing 1956, fig. 13; and Beijing 1991, fig. 49*

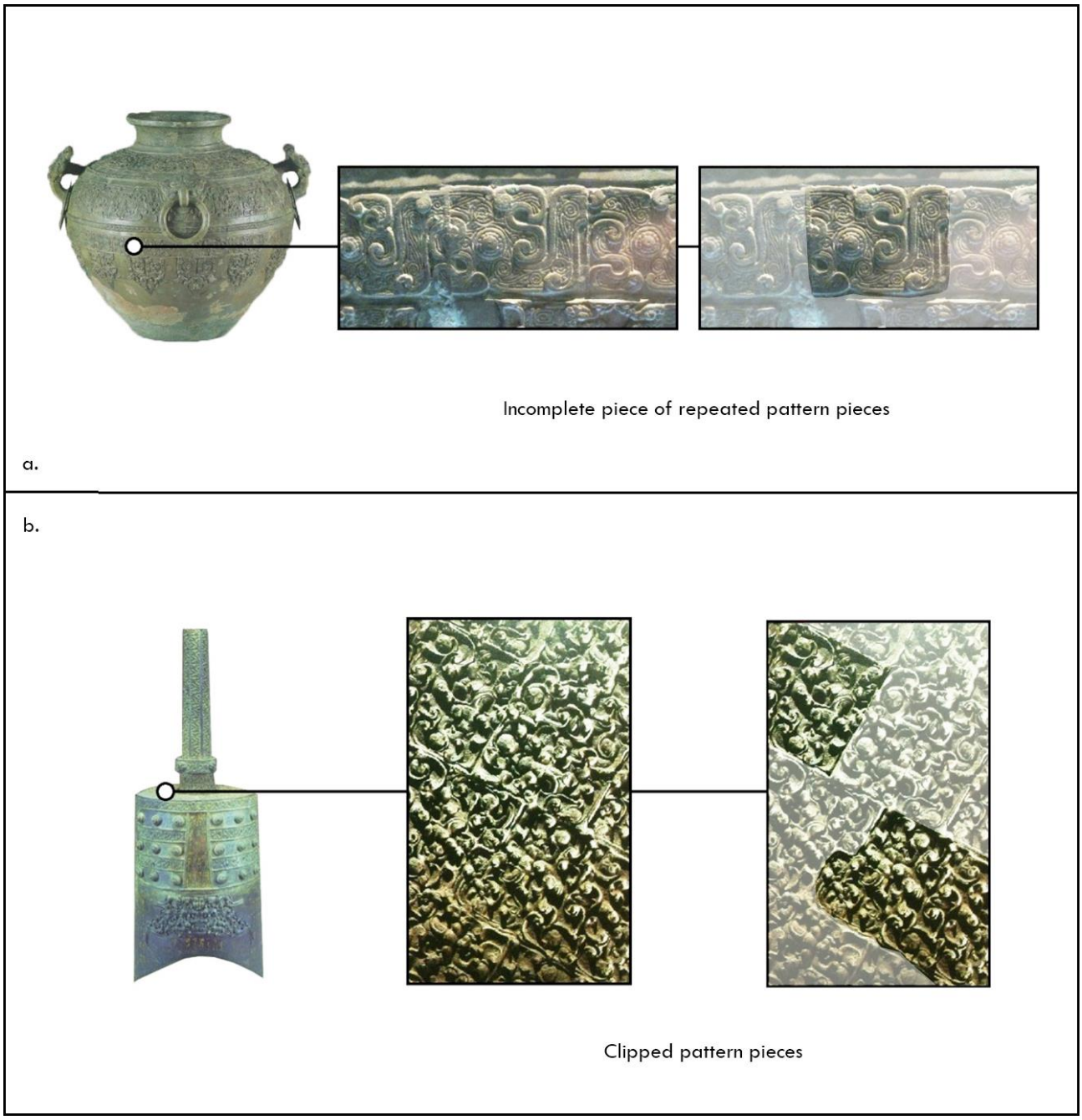


Fig. 1-7.5: Suizao bronzes with northern traditions, *reedited after Beijing 1989, M1: C65; Beijing 2004a, p.25; and private photos took at the Shanxi Provincial Museum, 21/09/2012*

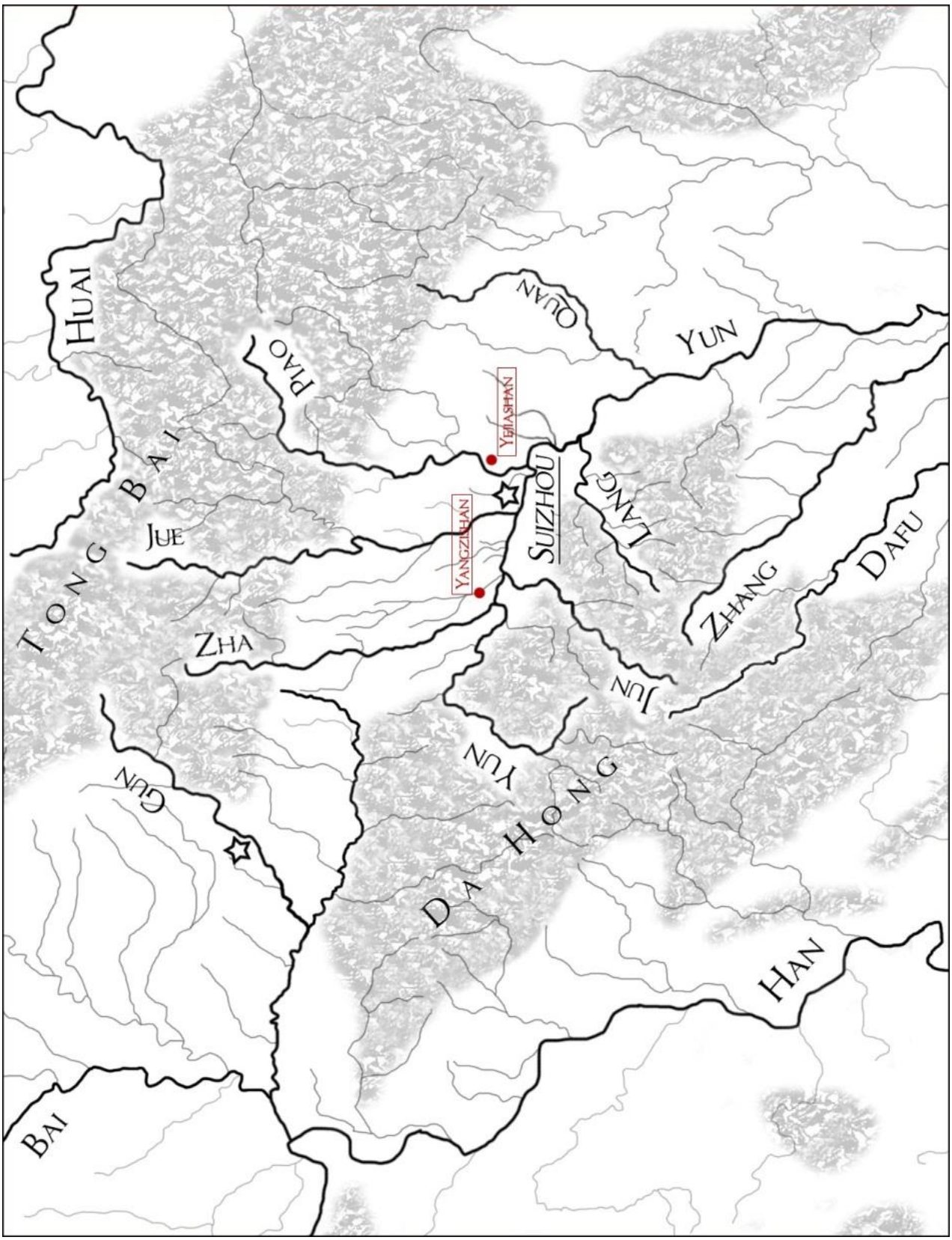


Fig. 2-2.1: Location of major sites in the Suizao corridor around 11th century BC, *redrawn on the basis of the Chinese Cultural Relics Atlas – Hubei province, WW 2011.11, and Google maps 2013*

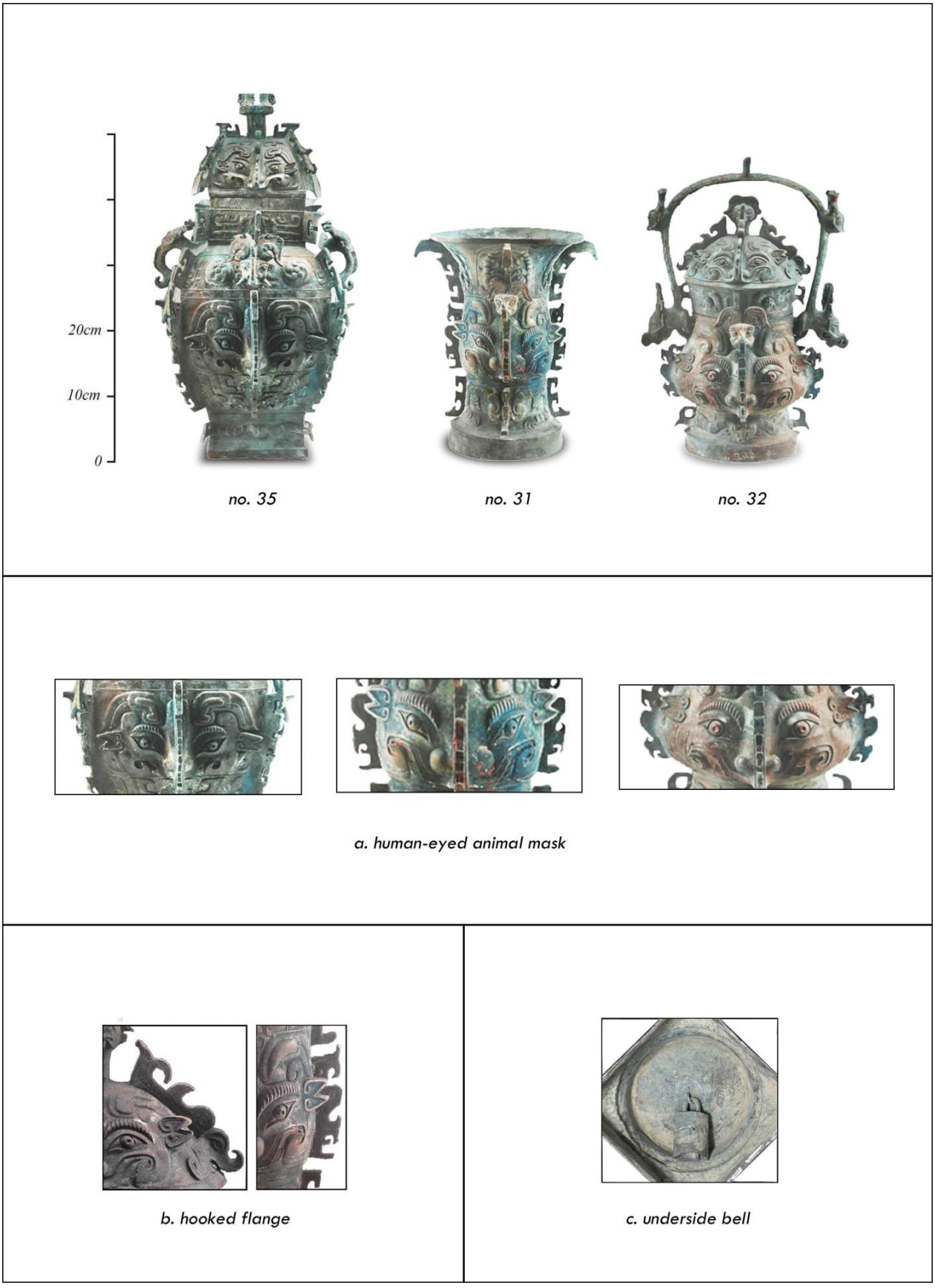


Fig. 2-2.2: Key features on E flamboyant style bronzes – (a) human-eyed animal masks; (b) hooked flanges and variations; and (c) underside bells. , *redrawn after Beijing 2009, photo nos. 31, 32, 35, and photos from Shanghai Museum website – www.shanghaimuseum.net, 07/10/2013*

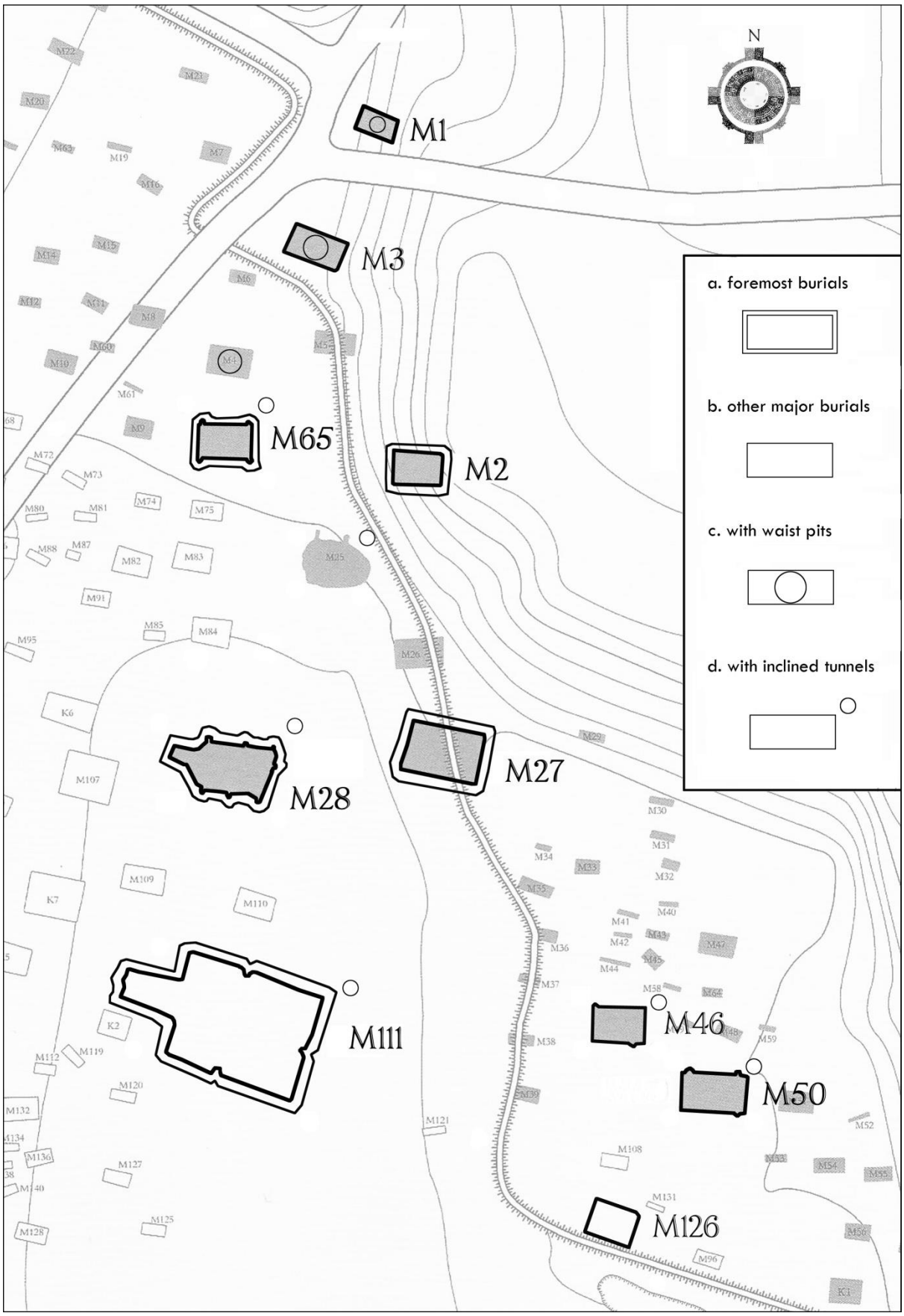


Fig. 2-2.3: Distribution map of major burials of Zeng lords and their consorts in Yejiashan site, and key features of their burial practice, *redrawn after Beijing 2013, p. 12*

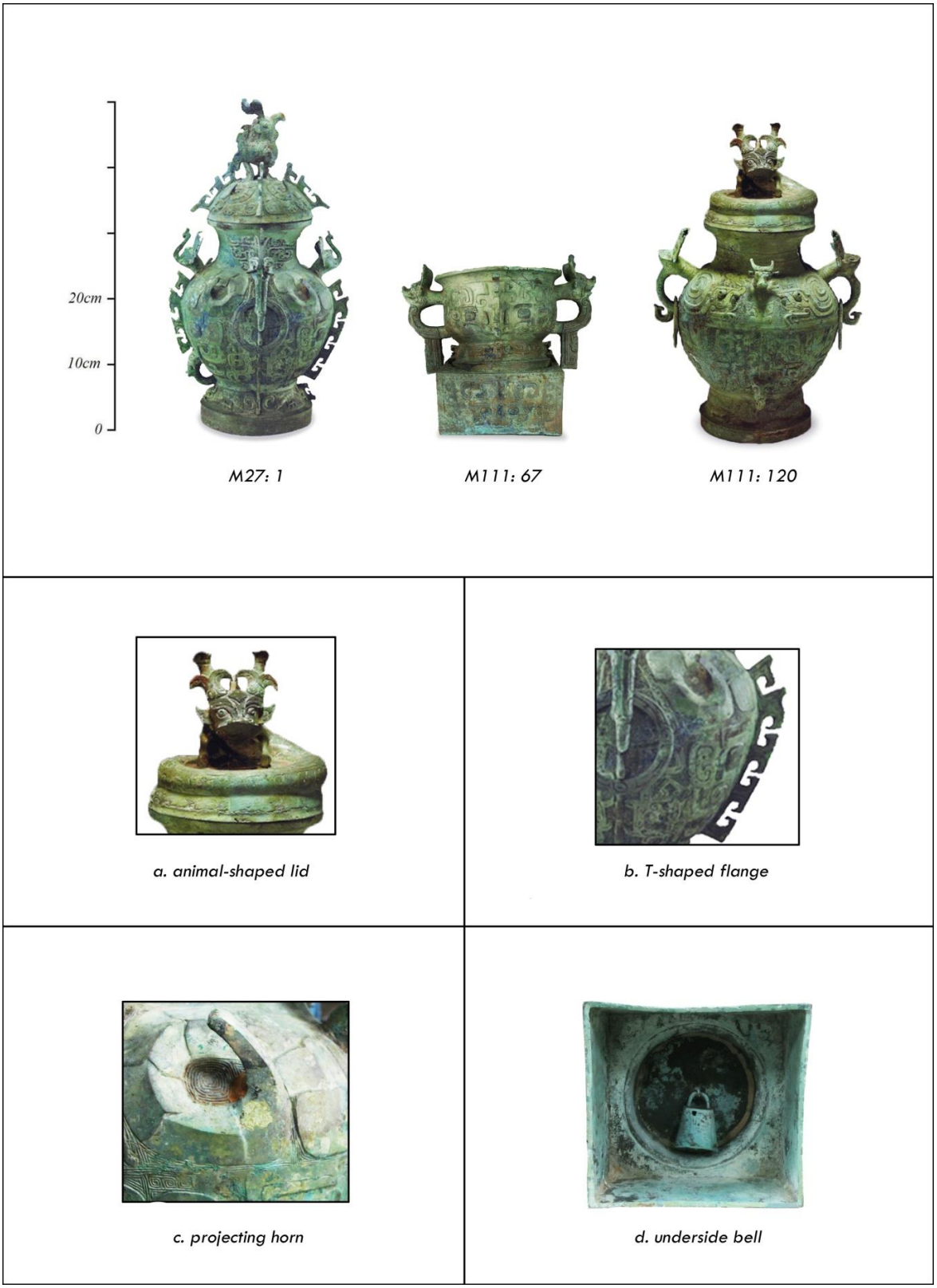


Fig. 2-2.4: Key features on Zeng flamboyant bronzes – (a) Imaginary animal-shaped lids on *lei*; (b) T-shaped flanges on *lei*; (c) projecting horns on *he* and *lei*; d) underside bells on *lei* and *gui*; and e) special-shaped weapons, *redrawn after Beijing 2013, pp. 132-135, 216-219, JHKG 2014.2, pl. 1, and private photos based on author's field trip 17/09/2014*

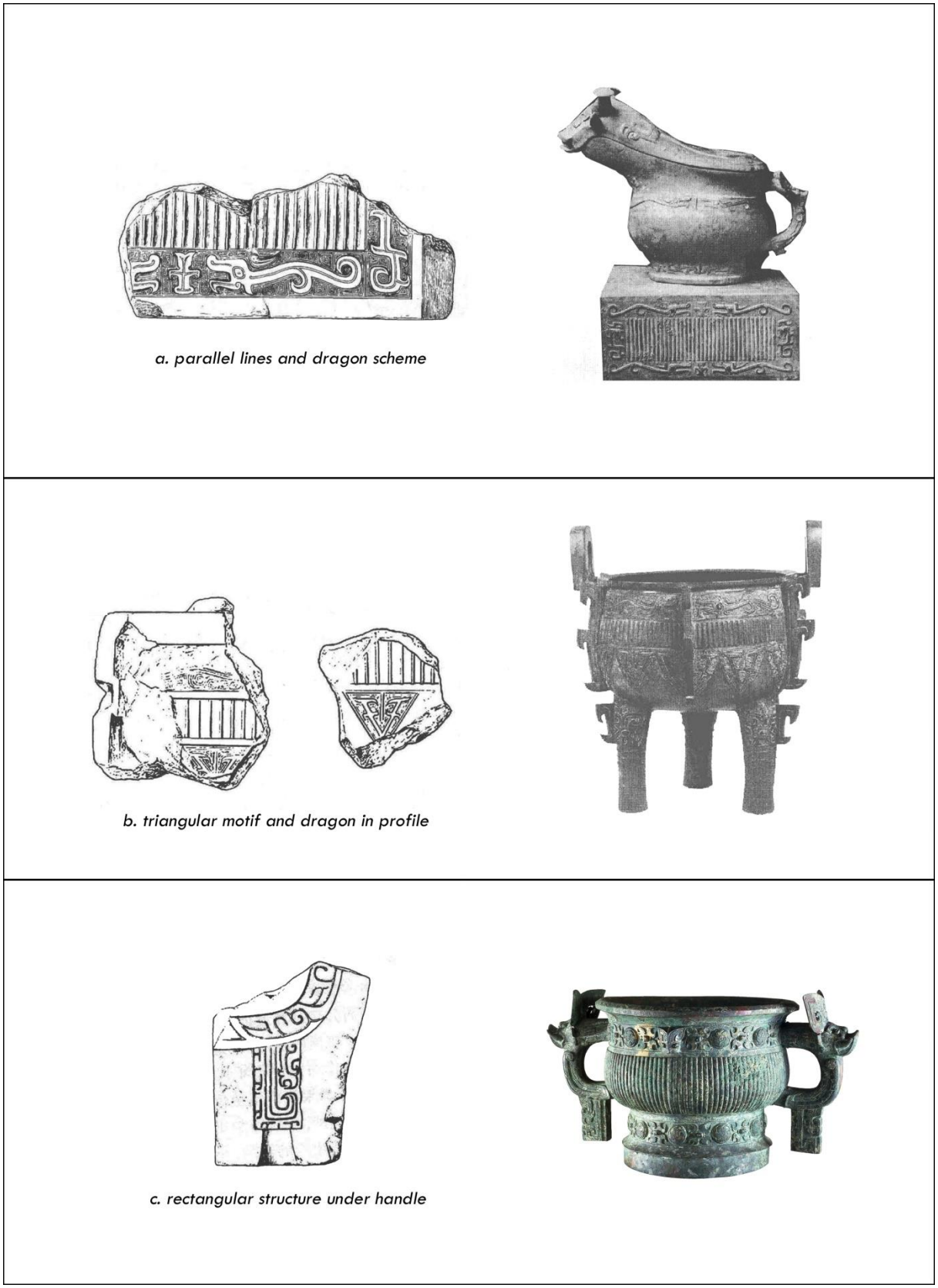


Fig. 2-3.1: The 'new style' of Shang casting on Xiaomintun clay moulds, and the correlated examples on bronzes: a) parallel lines and dragon scheme; b) triangular motif and dragon in profile; c) rectangular structure under handle, *reedited after KG 2007.3, fig. 3-6, 10, and a digital image of gui (1977.4-4.1, AN33904001) from the British Museum, 26/04/2015*



Fig. 2-3.2: 'Yue Zi' *ding*, and its inscription. *Reedited after WW 2011.11, fig. 21*

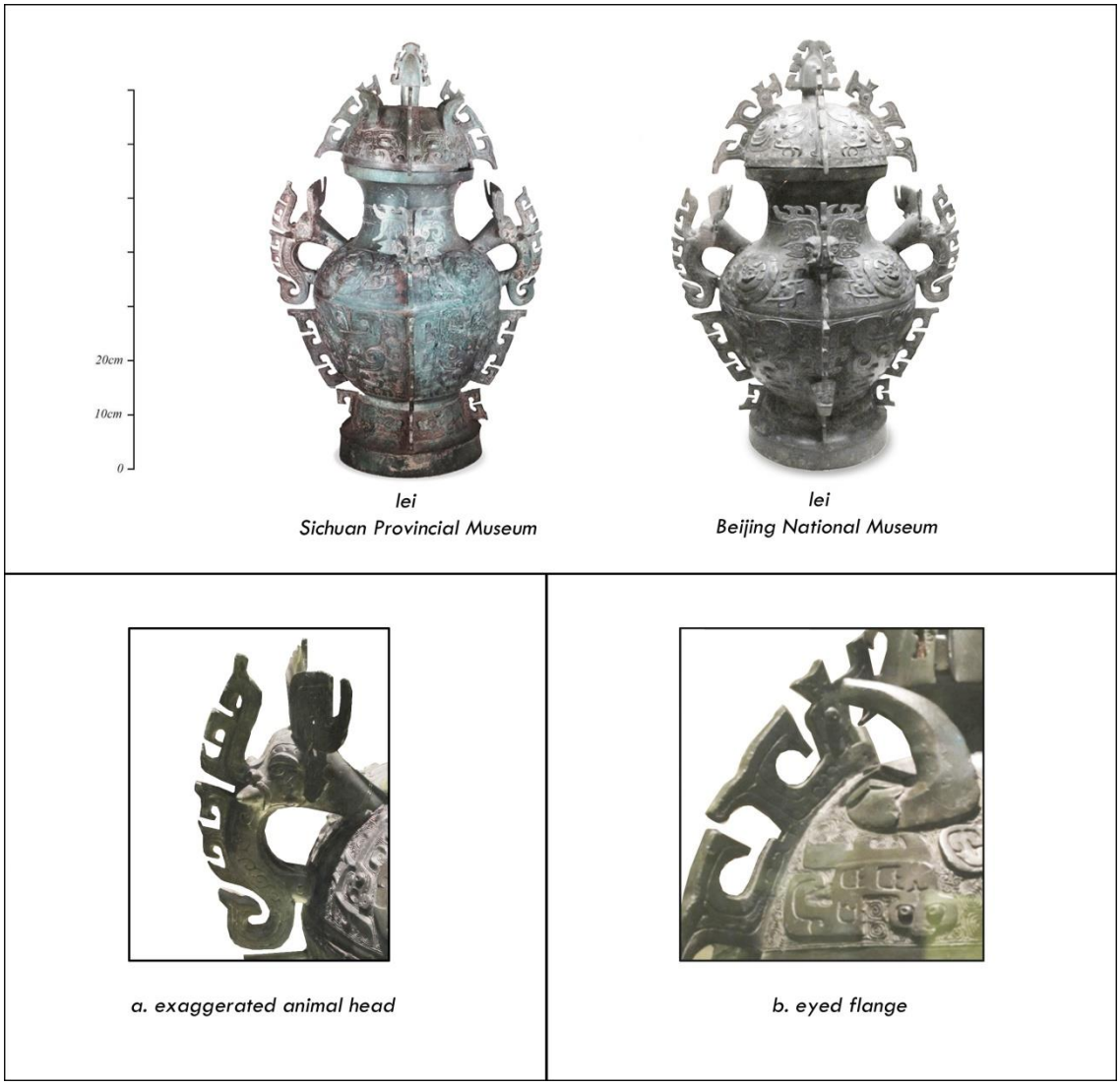


Fig. 2-4.1: Zhuwajie flamboyant style *lei*: a) animal head; and b) eyed flange, *redrawn after Beijing 2005a, pl. I, and private photos based on author's field trip 18/09/2012*

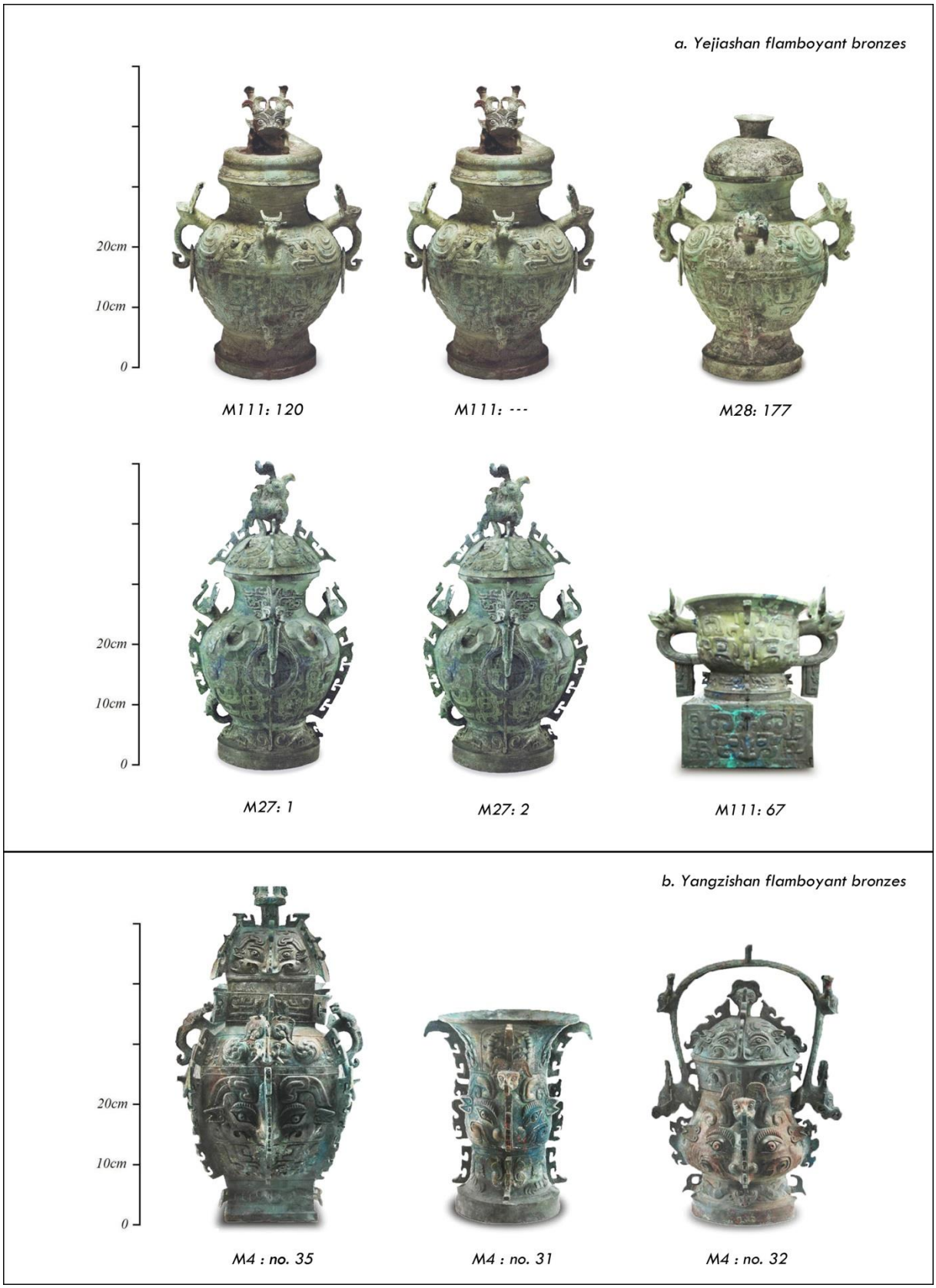


Fig. 2-4.2: Flamboyant style bronzes: a) five *lei* and one *gui* from Yejiashan; and b) a set of square *lei*, *you*, and *zun* from Yangzishan, *reedited after Beijing 2013, pp. 92-99, 132-135, 216-219, Beijing 2009, photo nos. 31, 32, 35, and after private photos based on author's field trip 22/09/2012, 17/09/2014*

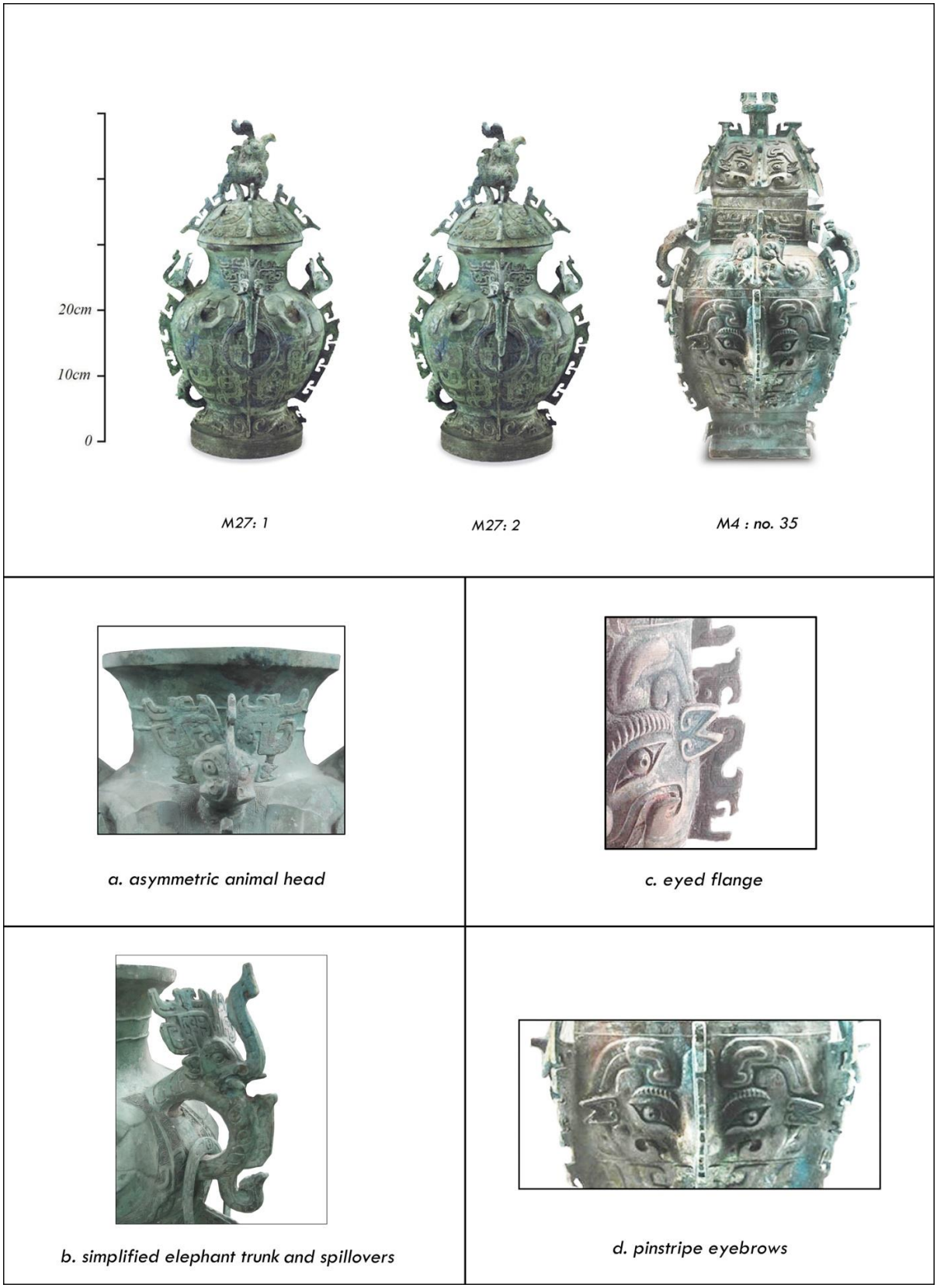


Fig. 2-4.3: Casting defects on Yejiashan M27 bronze *lei*: a) asymmetric animal head; b) simplified elephant trunks and spillovers. Imitated features on Yangzishan set: c) eyed flange; d) pinstripe eyebrows, *redrawn after Beijing 2013, pp. 132-135, 216-219, and private photos based on author's field trip 17/09/2014*

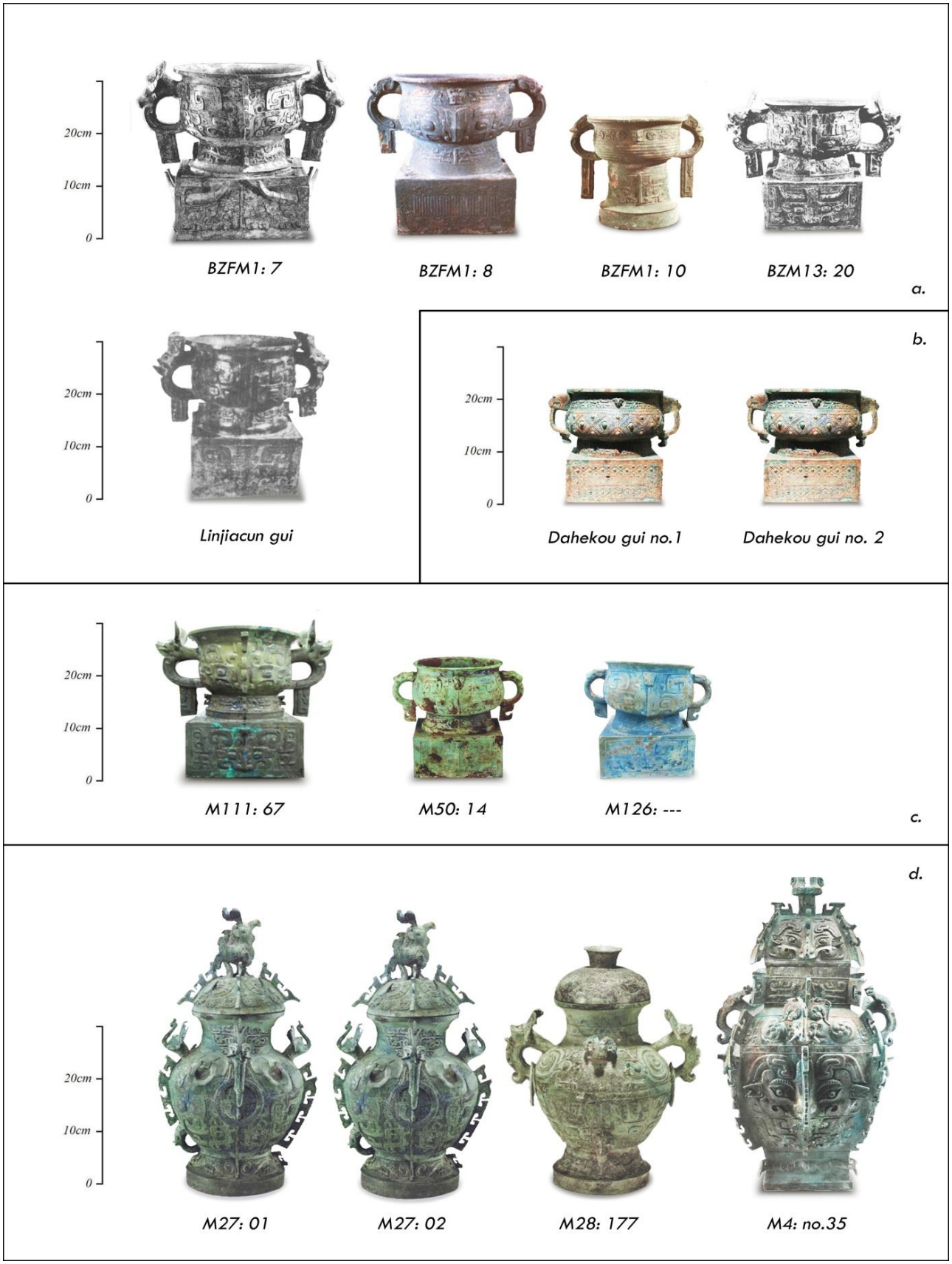


Fig. 2-4.4: bronze vessels with underside bells: a) five *gui* from Shaanxi Baoji; b) two *gui* from Shanxi Yicheng; c) three *gui* from Hubei Suizhou; d) four *lei* from Hubei Suizhou, *redrawn after Beijing 1988, (c) pl. v, iv, and pl. v, xix, WW 1988.6, fig. 1, Beijing 2009, photo no. 35, Beijing 2013, pp. 216-219, and after private photos based on author's field trip 22/09/2012, 17/09/2014*



Fig. 2-4.5: Bronze *gu* with a underside bell. *Reedited after Beijing 1998, no.65, and WW 1960.7, p.51, fig. 1*

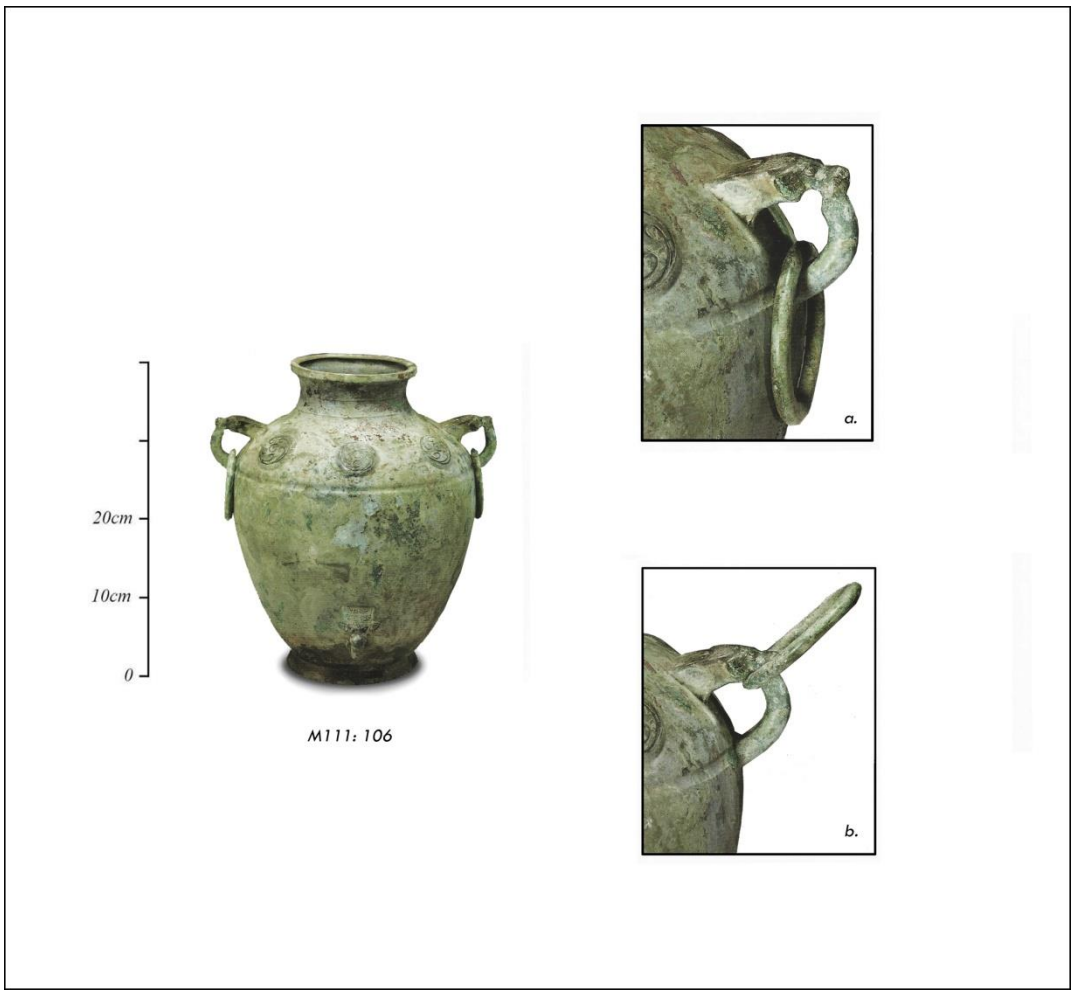


Fig. 2-4.6: Rings and sign of use on Yejiashan M111 metropolitan bronze *lei* vessel, *reedited after Beijing 2013, pp. 136-137*

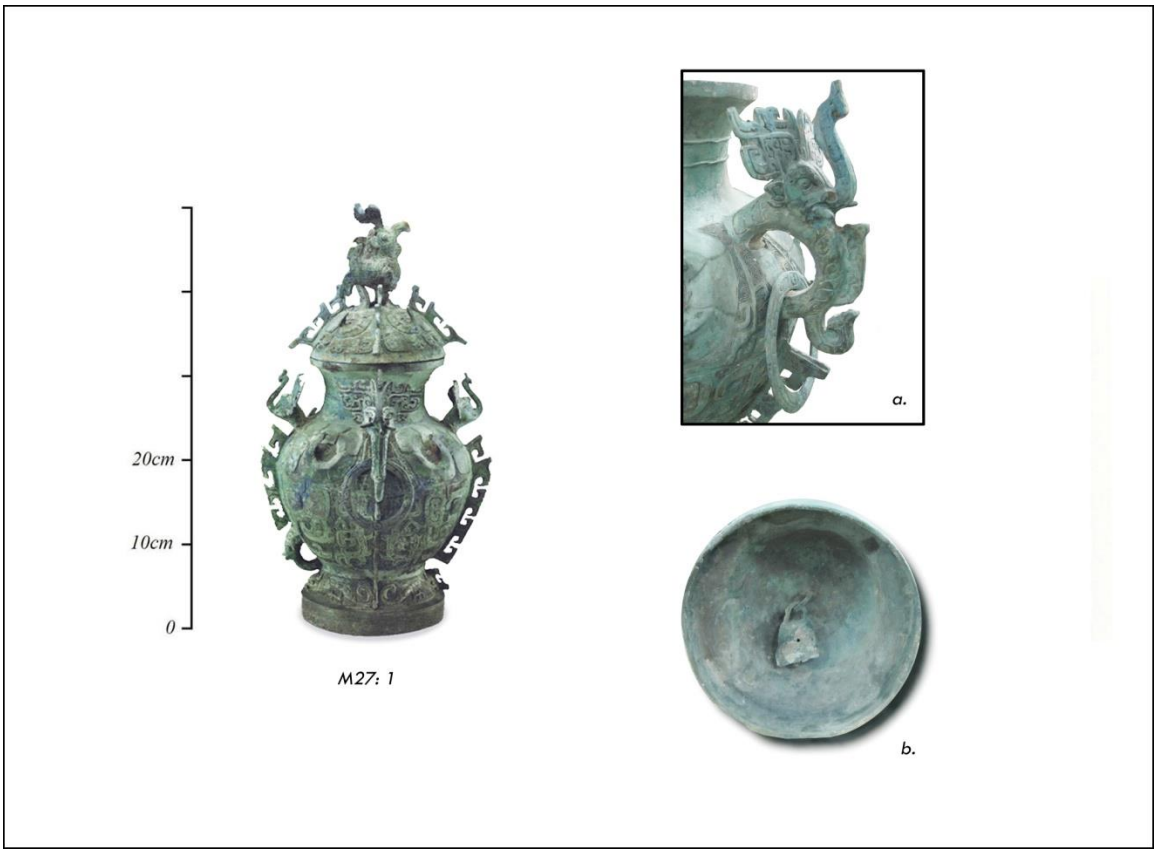


Fig. 2-4.7: Rings and underside bells on Yejiashan M27 bronze *lei*, *redrawn after Beijing 2013, pp. 216-219, and private photos based on author's field trip 17/09/2014*

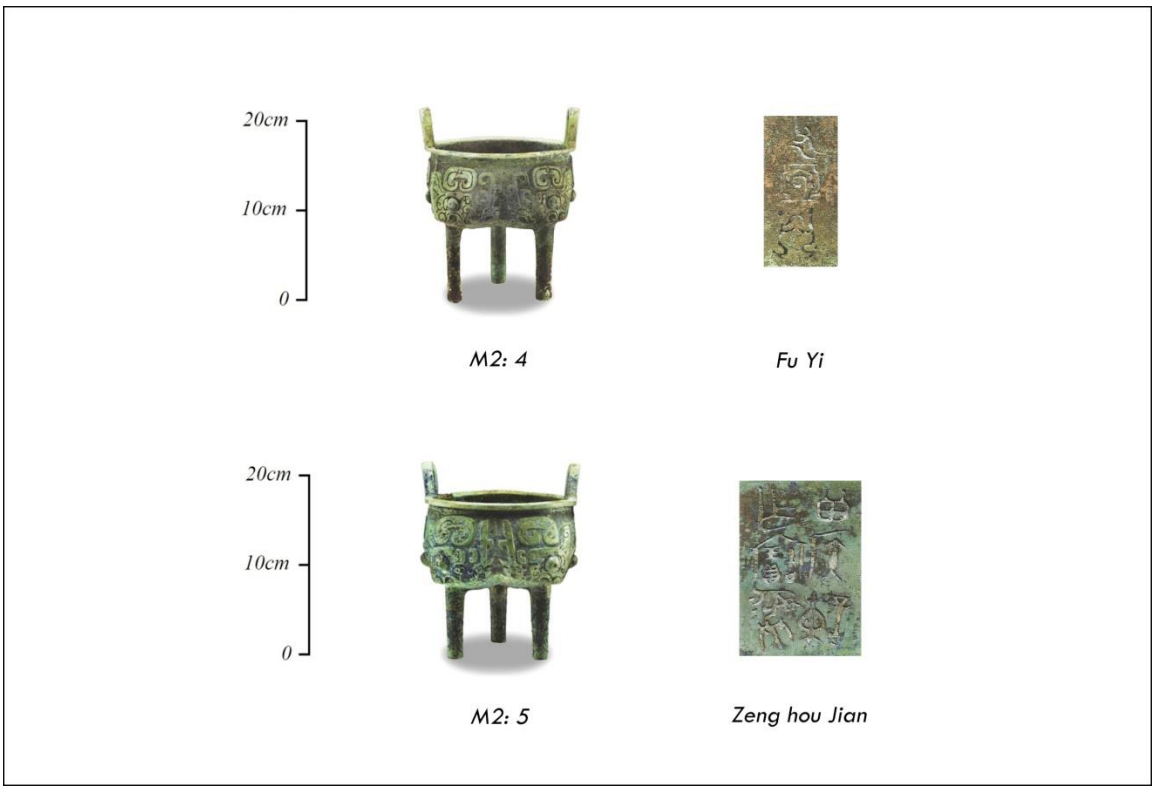


Fig. 2-5.1: Identical designed Shang and Zhou vessels: Fu Yi ding (M2:4), and Zeng hou Jian ding (M2:5), *reedited after Beijing 2013, pp.170, 175*

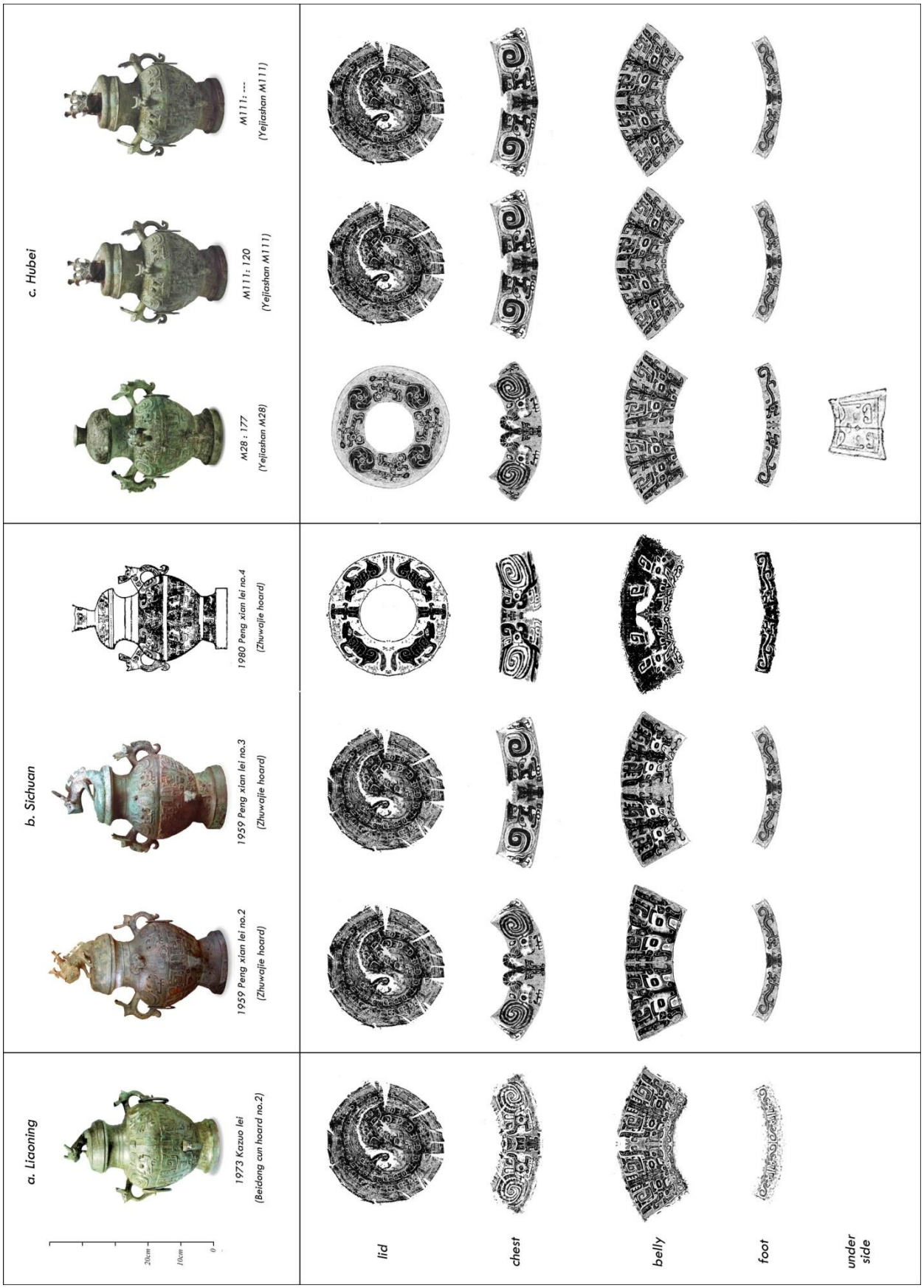


Fig. 2-5.2: Seven *lei* with similar decorative motifs, *reedited after WW 1961.11, fig. 1, 2, 5, KG 1974.6, fig. 4, and pl. I, Beijing 2005a, pl. 1V, and Beijing 2013, pp. 132-135; (missing rubbings) redrawn based on direct observations; sources after KG 1981.6, fig.3, and JHKG 2013.4, no.17*



1980 Peng xian lei no.4

(Zhuwajie hoard)



1959 Peng xian lei no.3

(Zhuwajie hoard)



M111: 120

(Yejiashan M111)



M111: ---

(Yejiashan M111)

a.

b.



1973 Kazuo lei

(Beidong cun hoard no.2)

Fig. 2-5.3: Rubbings of the animal mask and the dragons in profile, *reedited after WW 1961.11, fig. 1, 2, 5, and KG 1974.6, fig. 4; and redrawn after rubbings of M28:177, JHKG 2013.4, no.17*

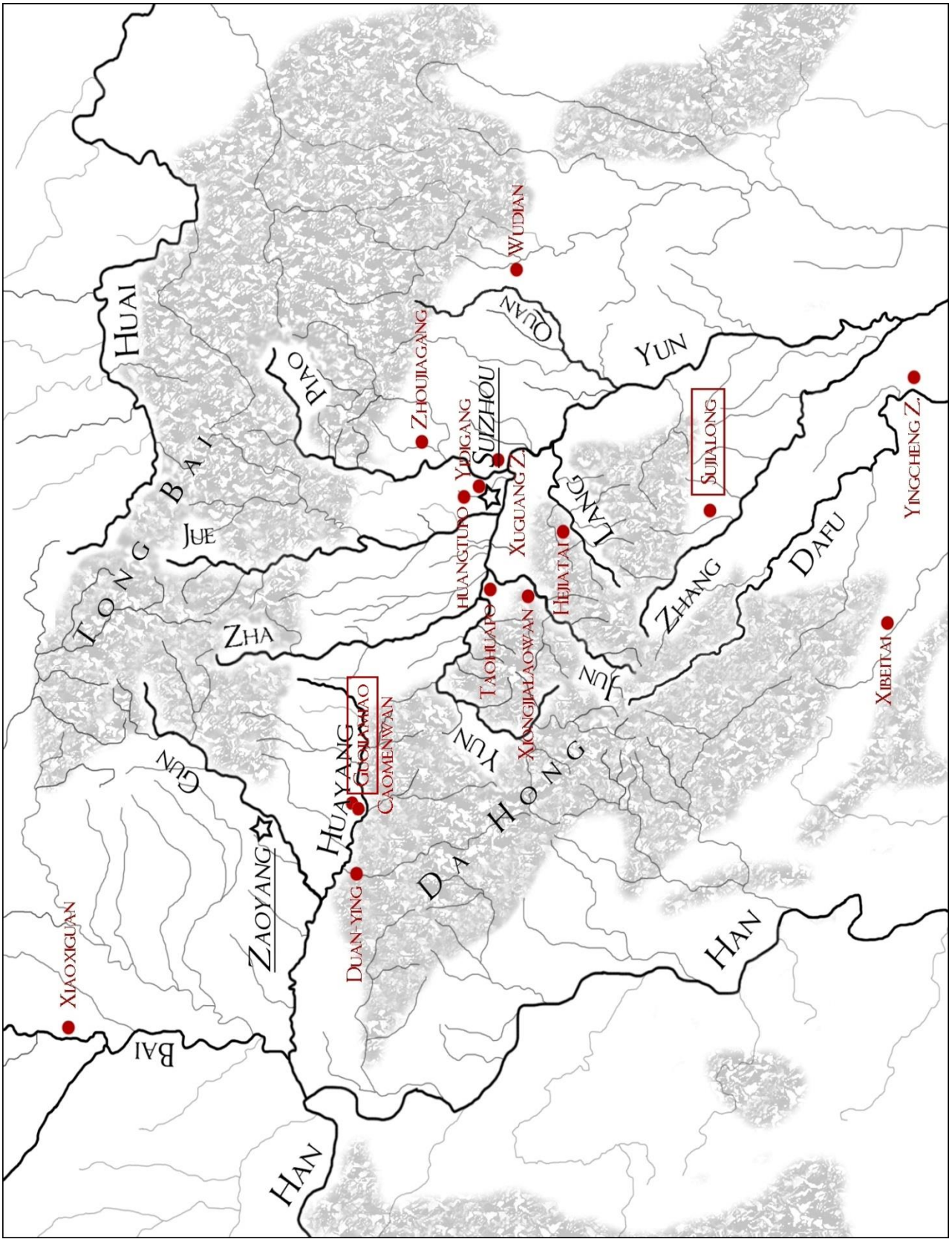


Fig. 3-2.1: Distribution map of the reported Zeng sites in the Suizao corridor, dated between mid-9th and mid-7th century BC, *redrawn on the basis of the Chinese Cultural Relics Atlas – Hubei province, and Google maps 2013*

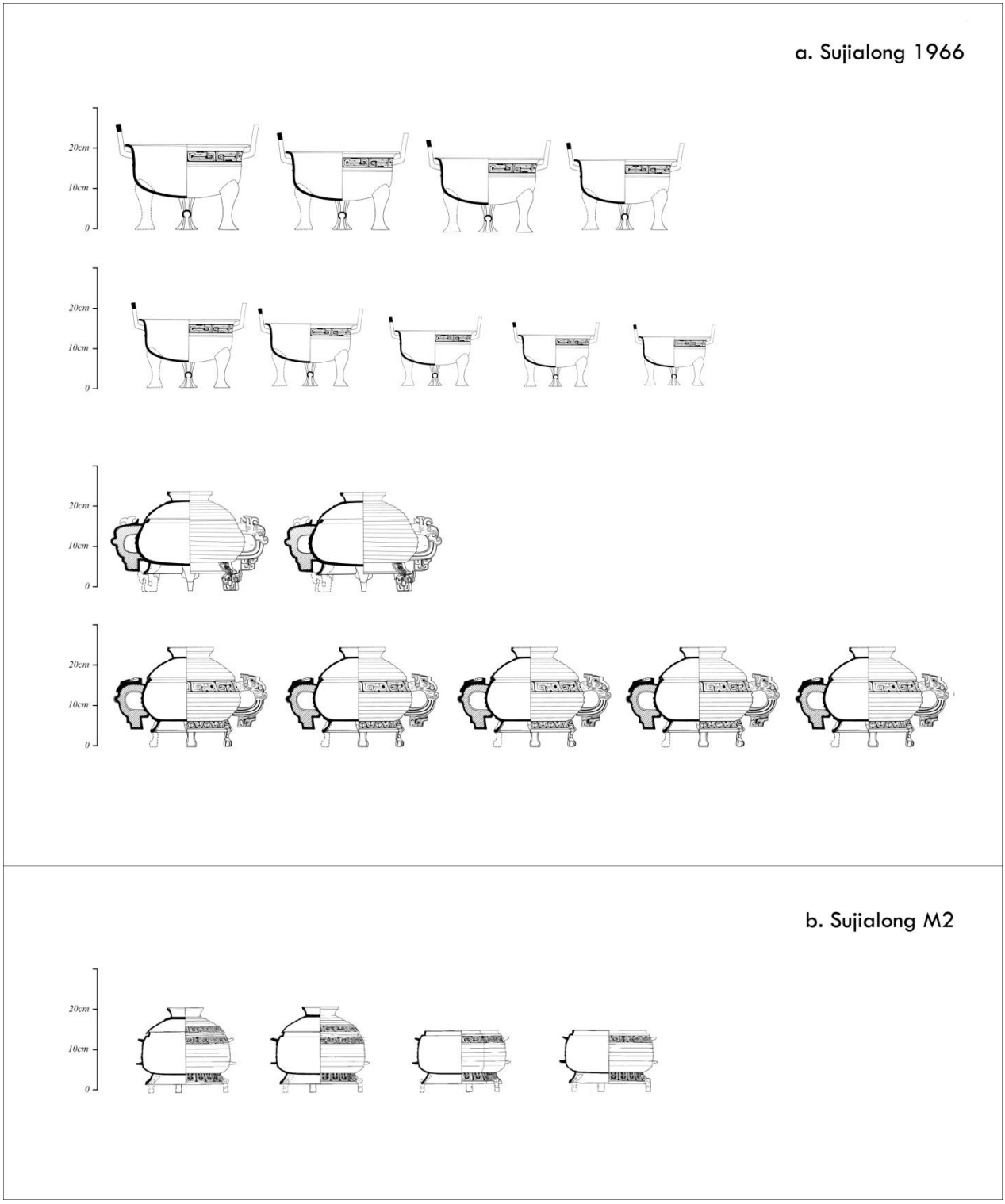


Fig. 3-2.2: Bronze matching sets of *ding* and *gui* vessels found at the Sujialong site: 1) 1966 Sujialong; and b) Sujialong M2, *redrawn after Beijing 2007, pp.11-47*

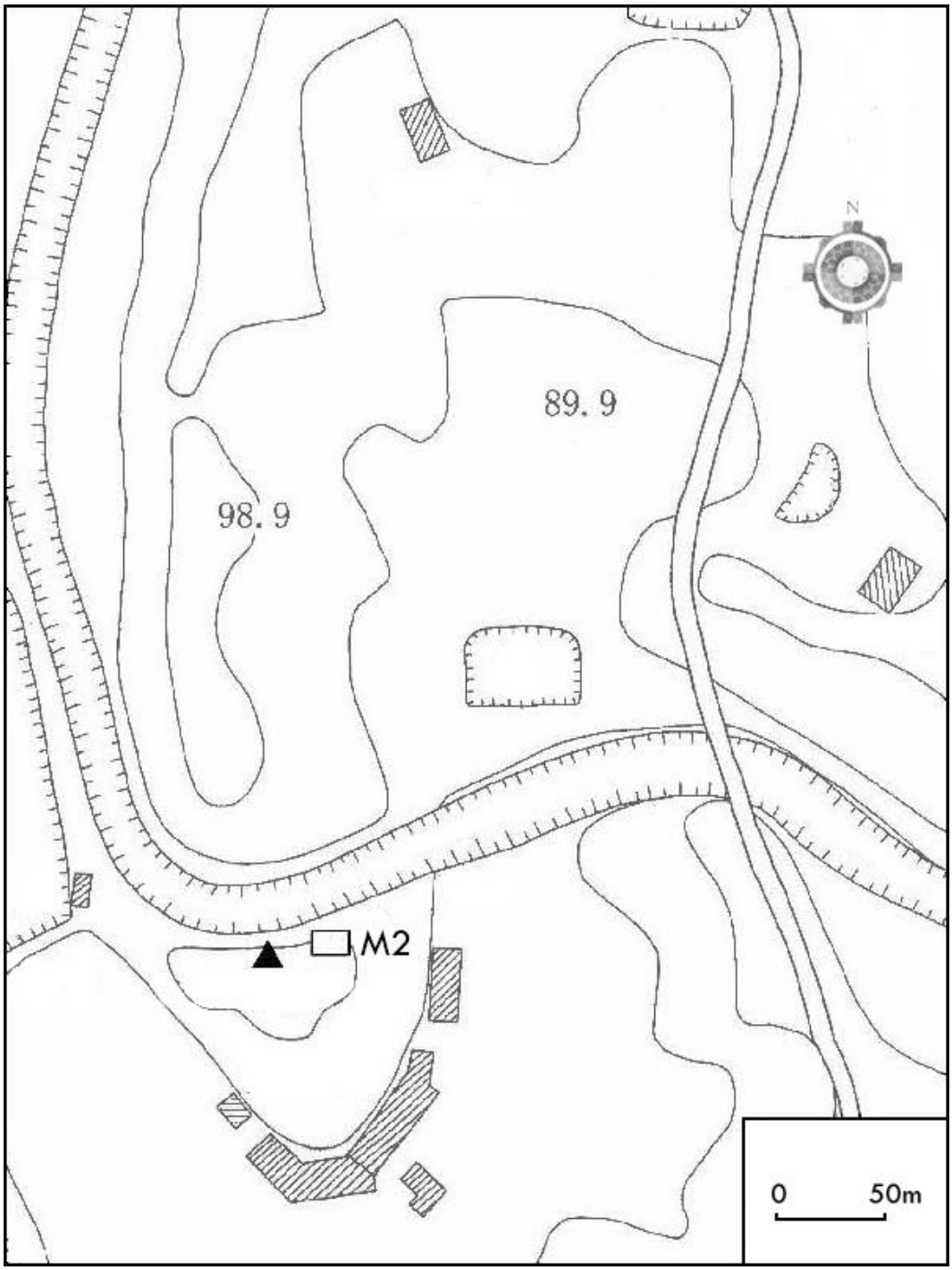


Fig. 3-2.3: Layout of the Sujialong site: 1) 1966 Sujialong (marked by a dark triangle); and 2008 Sujialong M2, *redrawn after JHKG 2011.2, fig. 1*

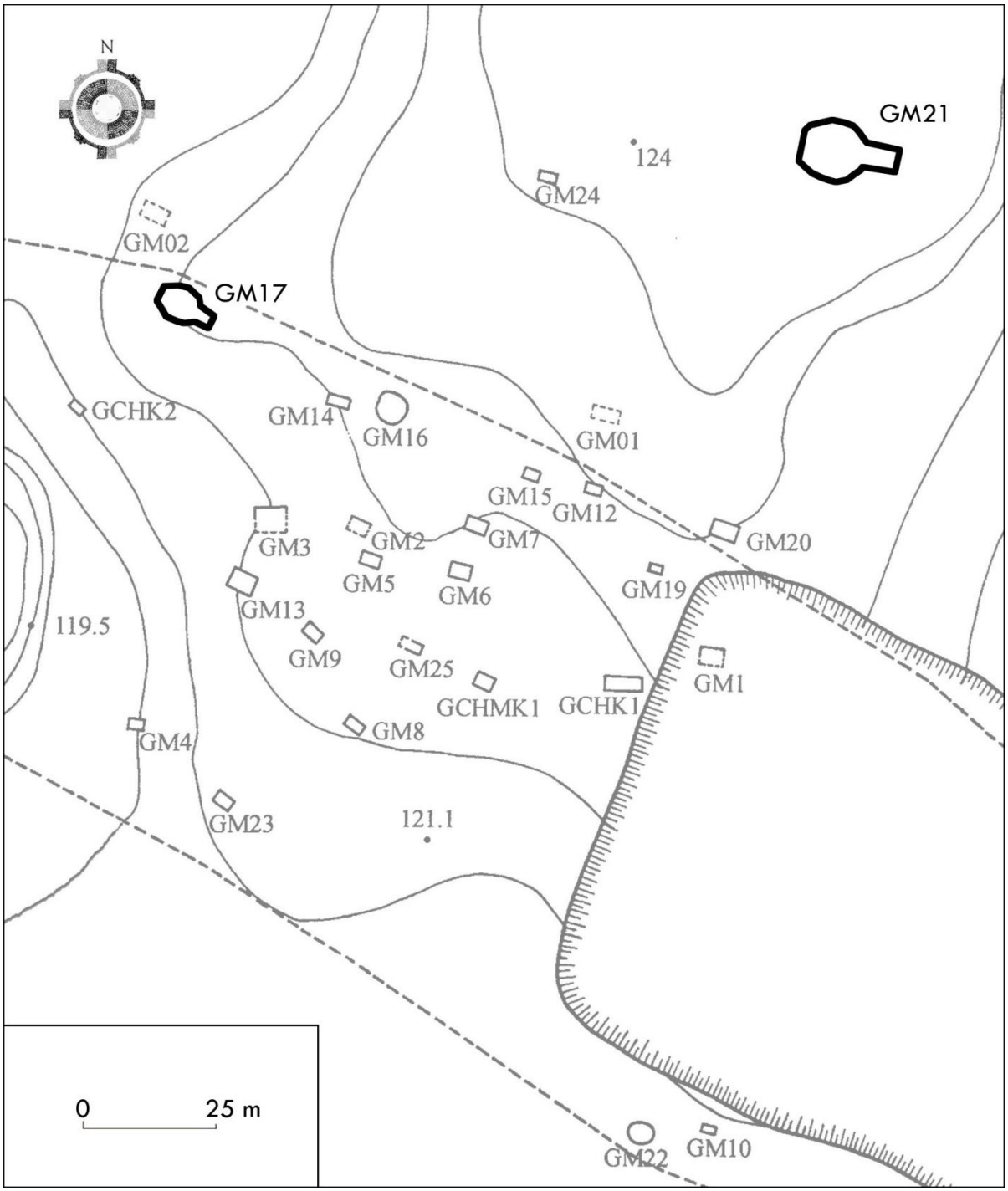


Fig. 3-2.4: General layout of the Guojiamiao cemetery, *redrawn after Beijing 2005, fig. 3*

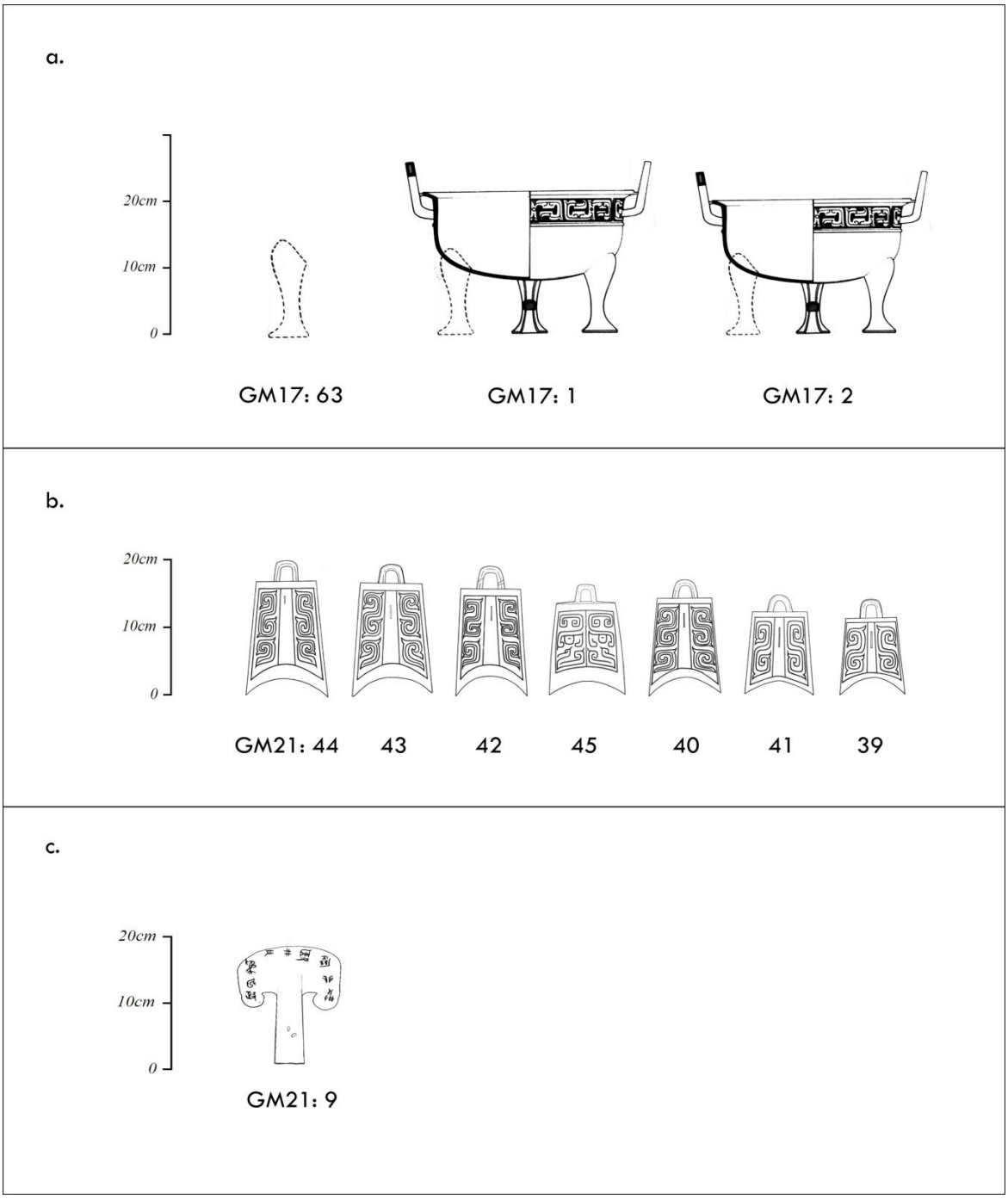


Fig. 3-2.5: Burial assemblages in Guojiamiao cemetery: a) 2 *ding* and 1 *ding* leg from GM17; b) a set of bells from GM21; and c) a bronze *yue* from GM21, *redrawn on the basis of Beijing 2005, figures no. 6, 8, 10, 12, 14, 16, 18, 21, 51, 53, 55, 56*

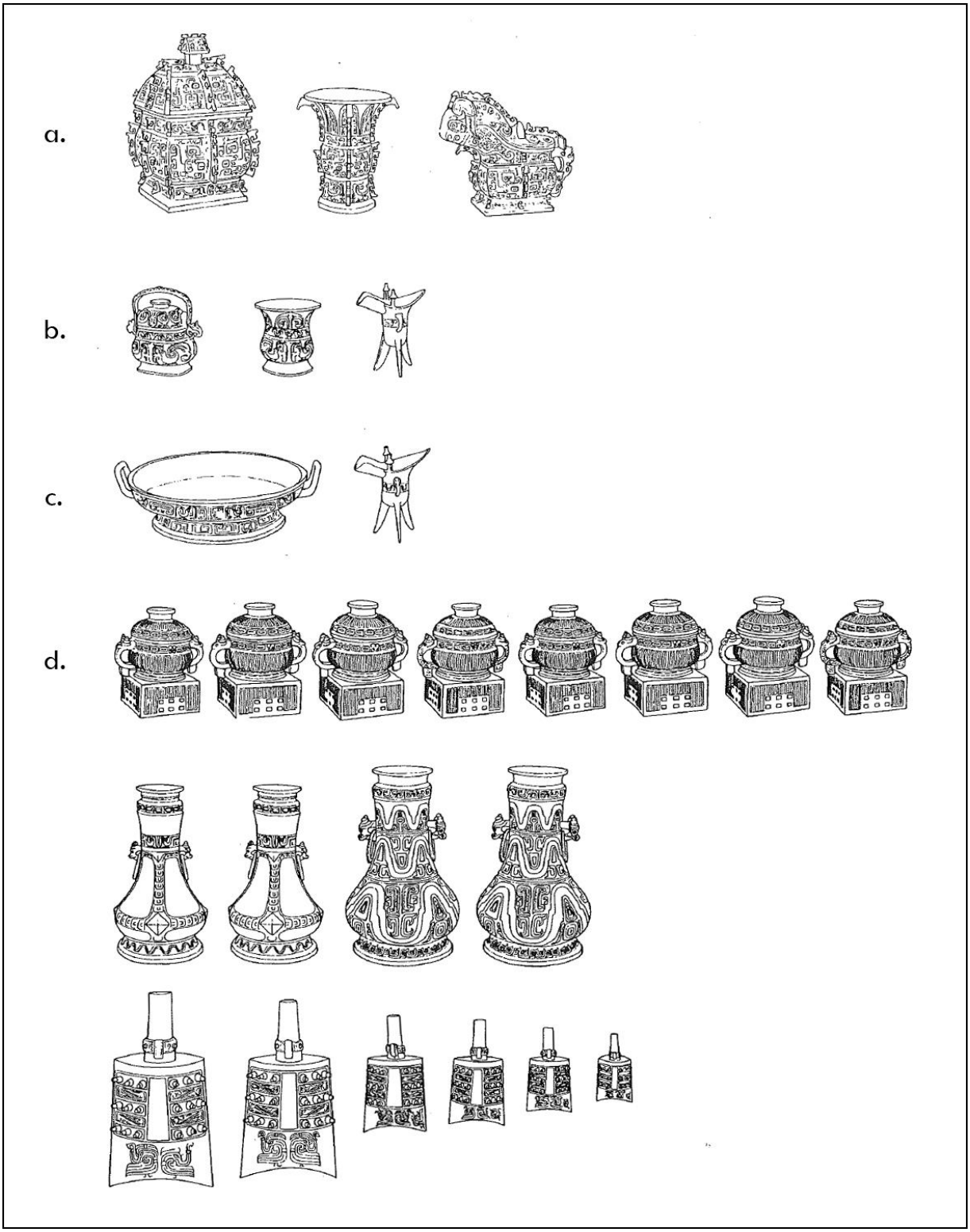


Fig. 3-3.1: Drawings of a selection of ritual bronzes of the four generations of the Wei clan, buried in Zhuangbai Hoard no.1: a) the Zhe vessels; b) the Feng vessels; c) the Qiang vessels; d) the Xing vessels, *reedited after Rawson 1989, figure 5 and 6*

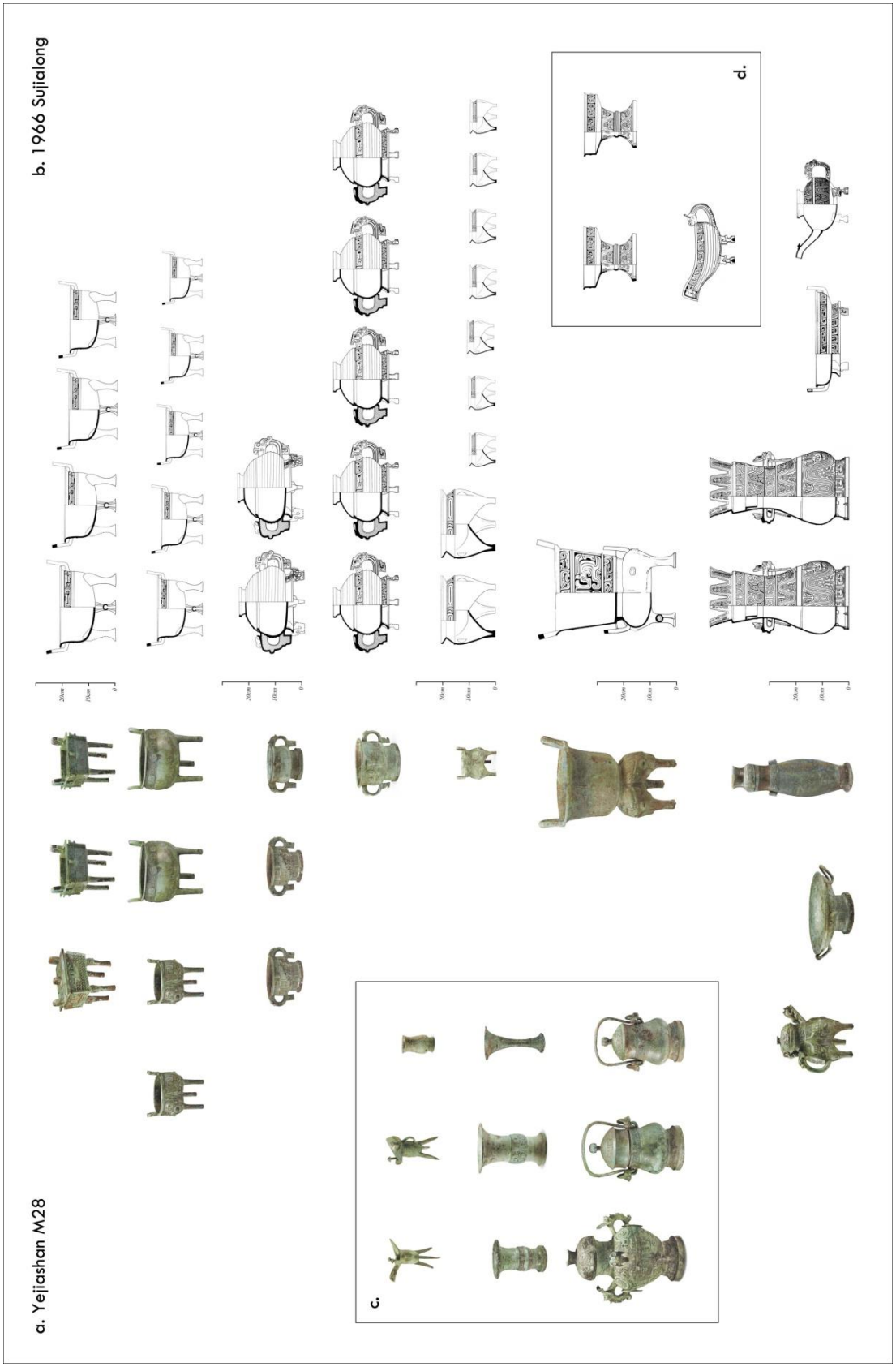


Fig. 3-3.2: A comparison of the burial assemblages from Yejiashan M28 and 1966 Sujialong, *reedited after Beijing 2007b, pp.11-47, and Beijing 2013, pp. 52-102*

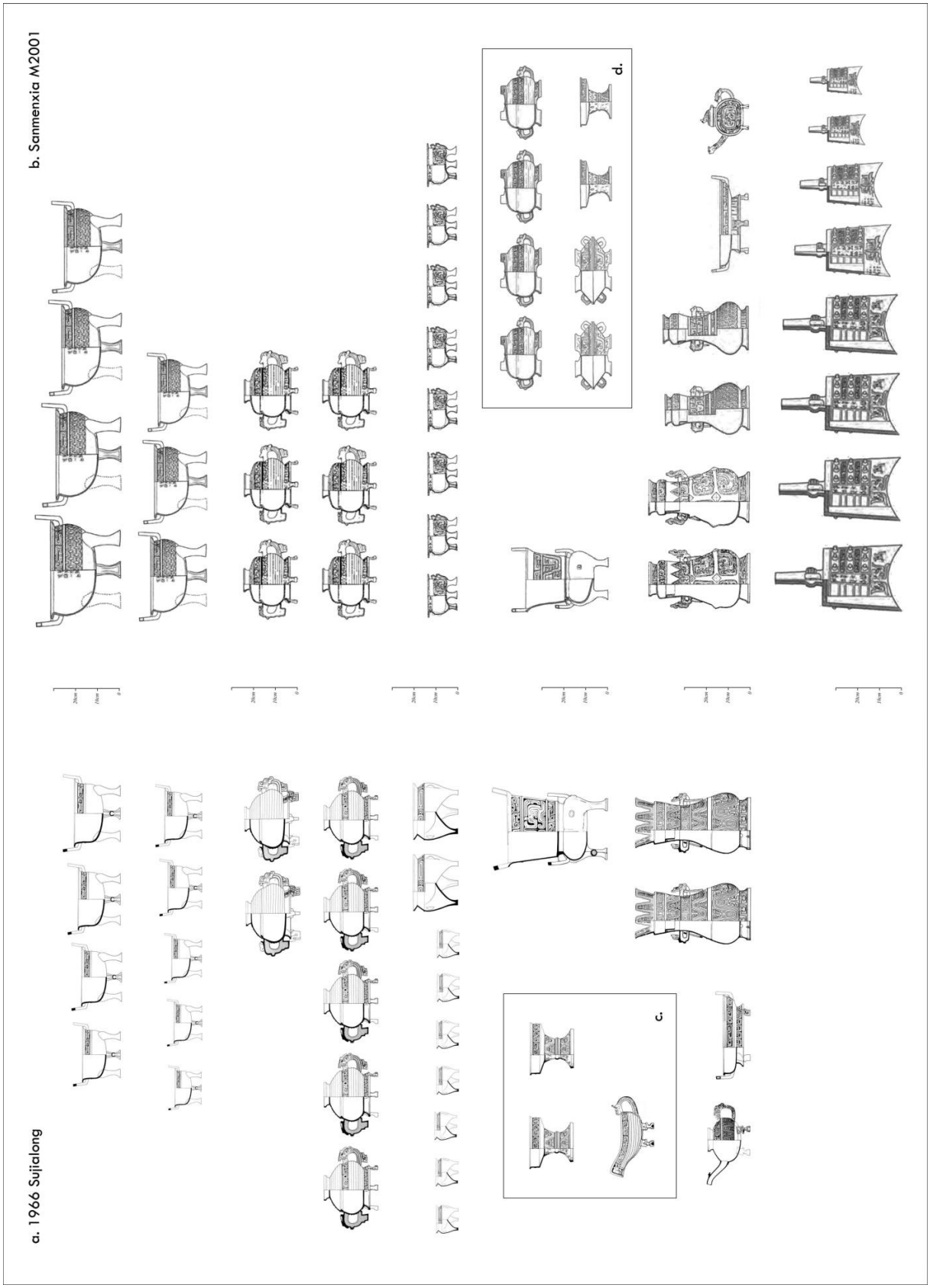


Fig. 3-3.3: A comparison of the burial assemblages from 1966 Sujialong and Sanmenxia M2001, *reedited after Beijing 1999a, pp. 30-79, and Beijing 2007b, pp.11-47*

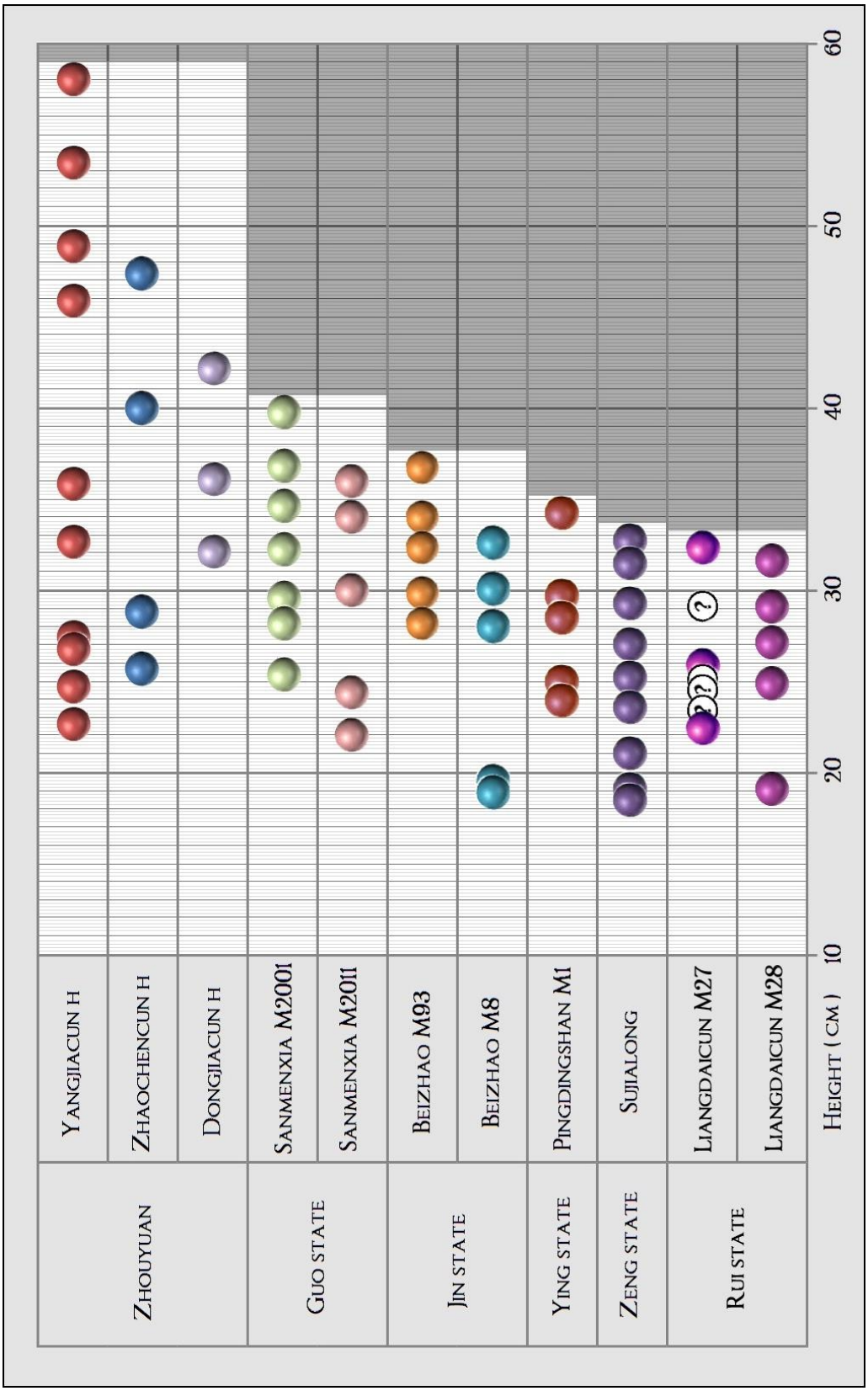


Fig. 3-4.1: A scatter plot of the height data of *ding* sets from Zhouyuan hoards, and the major male burials in the state cemetery of Guo, Jin, Ying, Zeng, and Rui, *drawn on the basis of the data from Table 3-2 and 3-3*

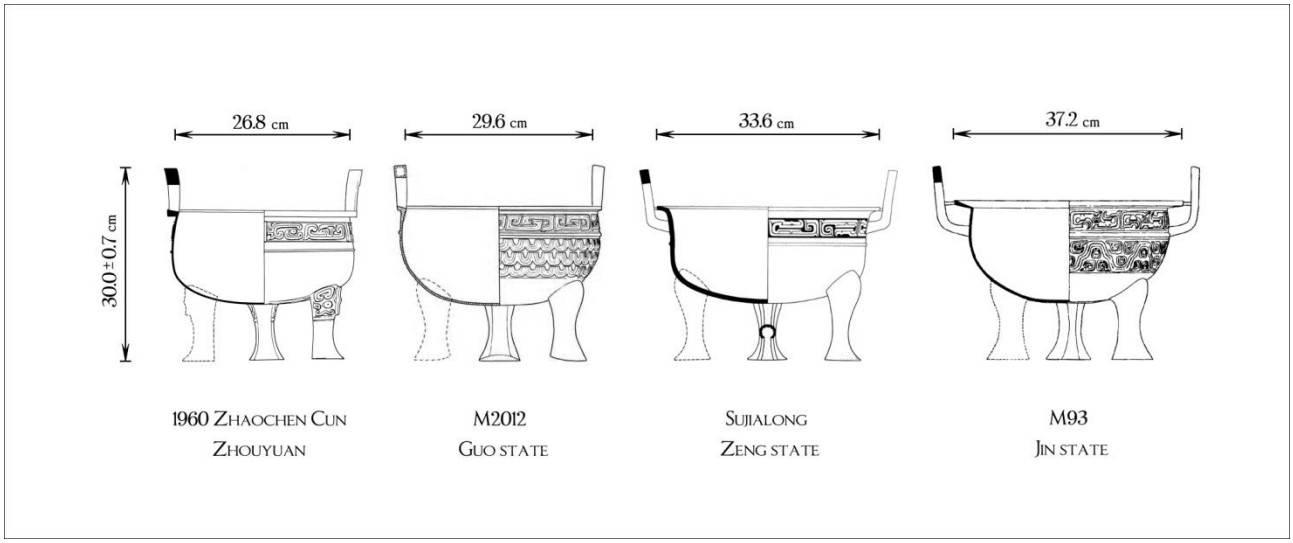


Fig. 3-4.2: Four *ding* vessels with the height of 30 cm ± 0.7 cm. *Redrawn based on Chengdu 2005, p.159, Beijing 1999, p.37, Beijing 2007, p.16, and WW 1995.7, p.28*

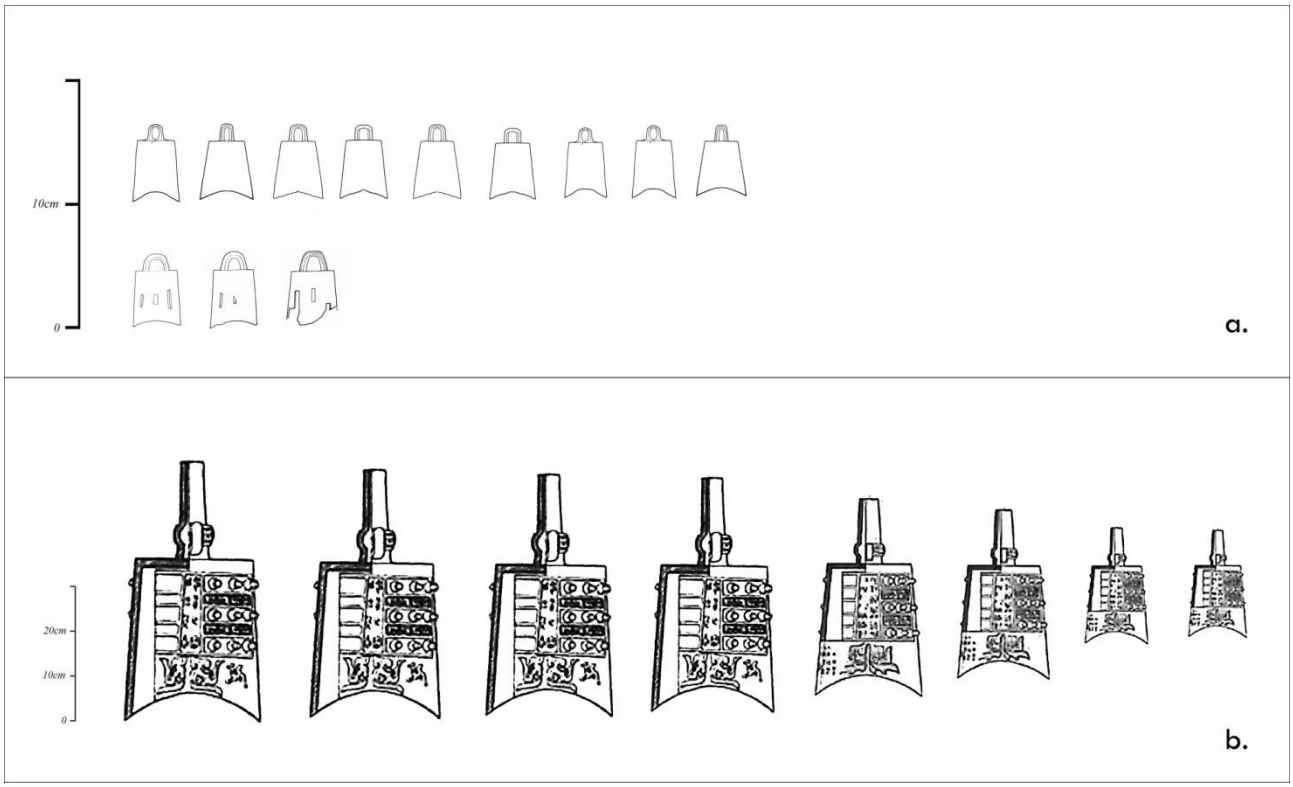


Fig. 3-5.1: A comparison of *ling* and *zhong*: a) two sets of *ling* from Guojiamiao M21; b) a set of *zhong* from Shangcunling M2001, *redrawn based on Beijing 1999a, pp. 30-79, and Beijing 2005, Figure 43 & 44*

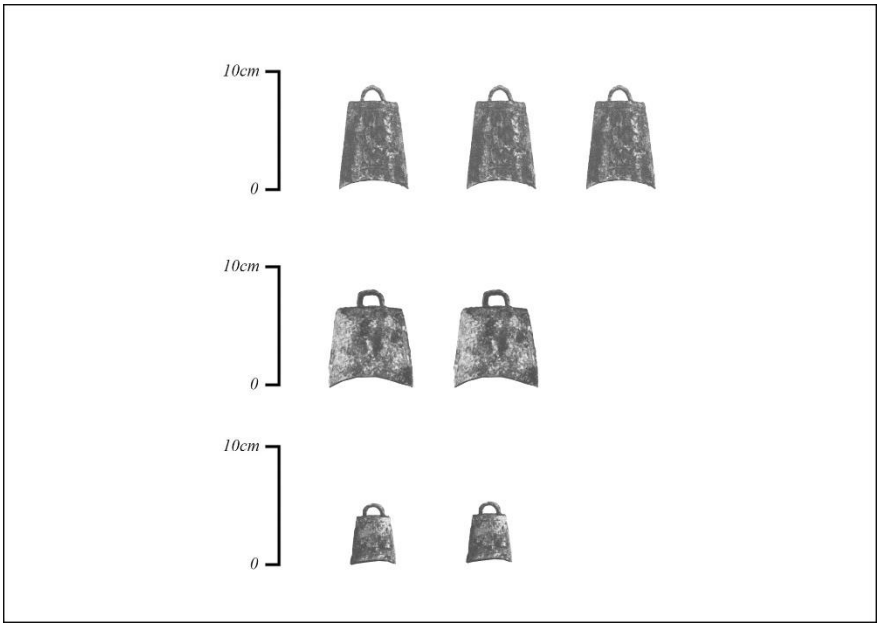


Fig. 3-5.2: Seven bronze *ling* with raised lines of animal masks from Rujiazhuang M1, *redrawn after Beijing 1988, pl. CLXXI*

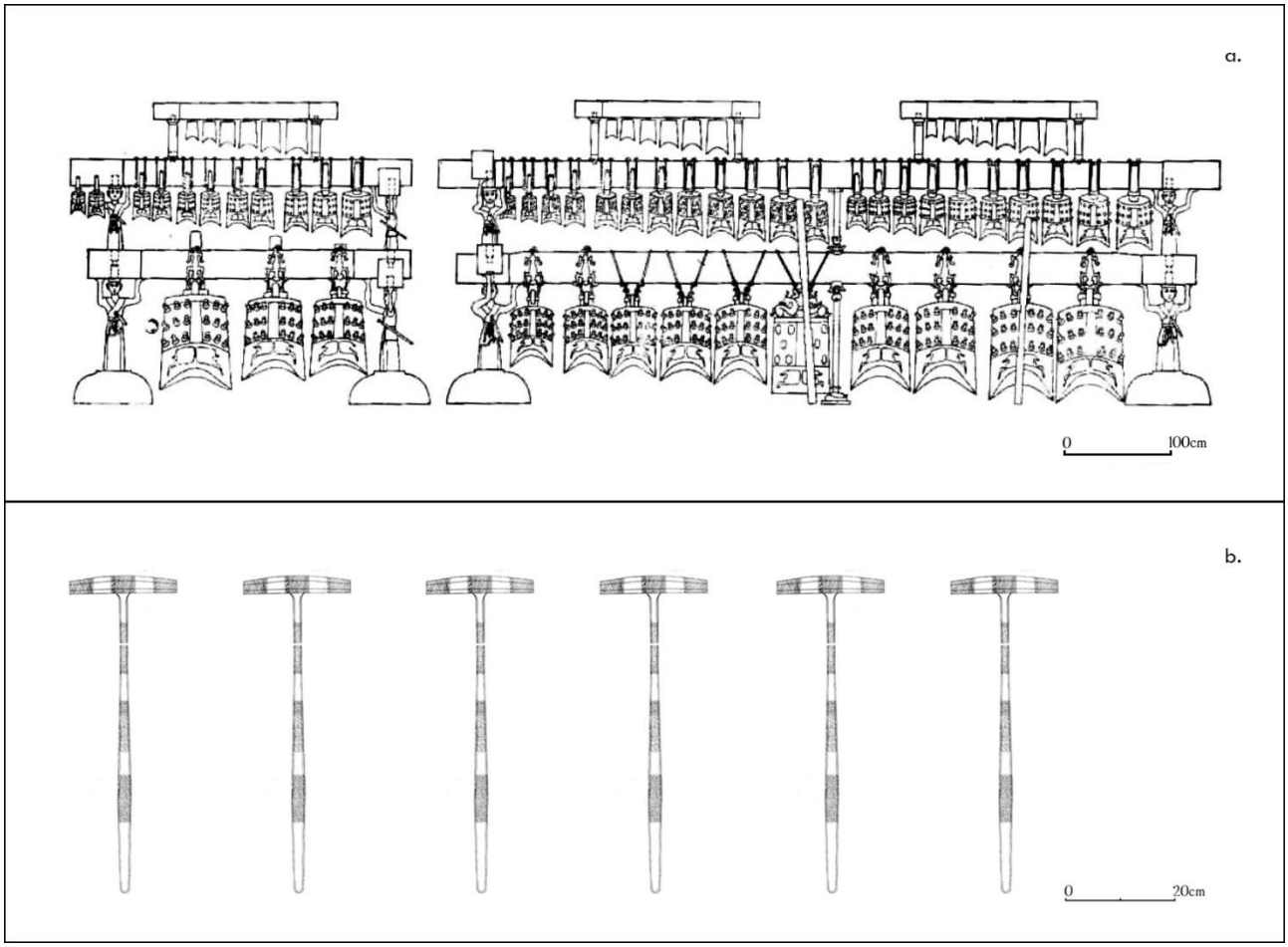


Fig. 3-5.3: The whole 65 *zhong* chime, two sticks (a), and six hammers (b) excavated from the tomb of Marquis Yi of Zeng, *reedited after Beijing 1978, figure 37 and 58*

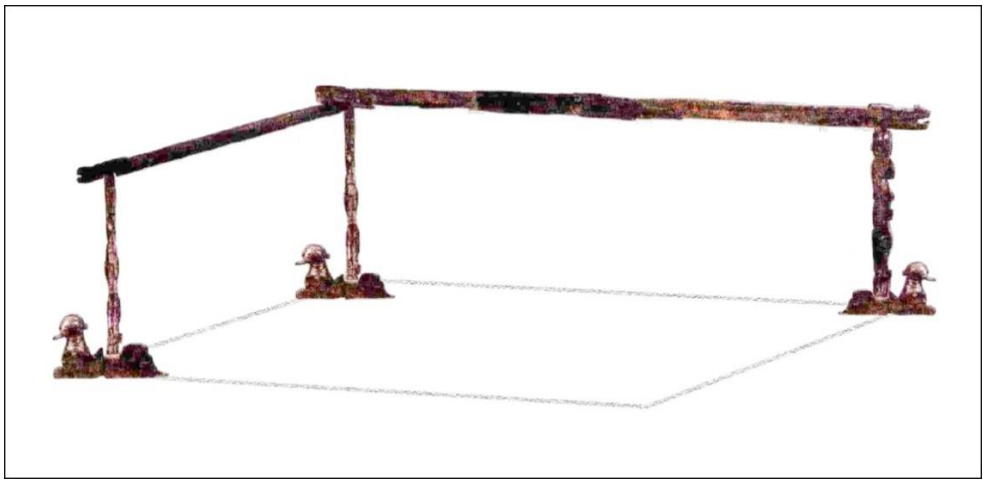


Fig. 3-5.4: Reconstruction of a wooden chime-bell stand from Caomenwan M1 in the Guojiamiao cemetery, *redrawn after JHKG 2015.3, pl. 5*

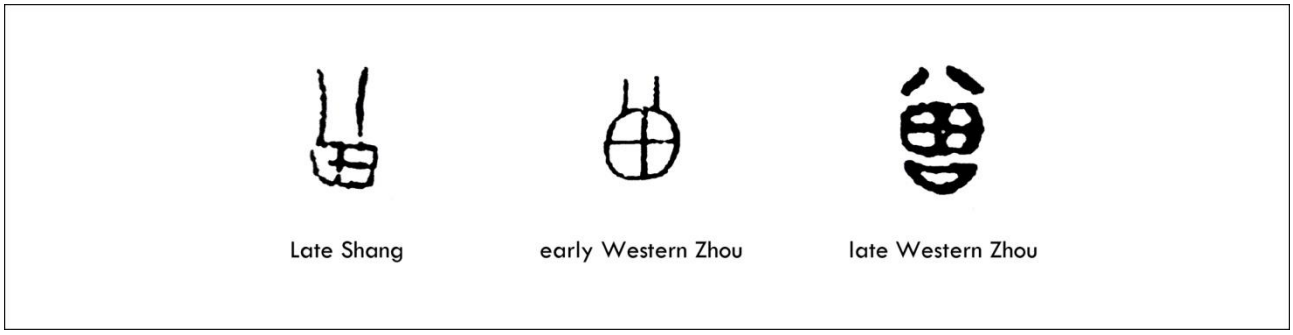


Fig. 3-6.1: Three versions of character Zeng in different periods, *reedited after Zhang 2009, p.362*

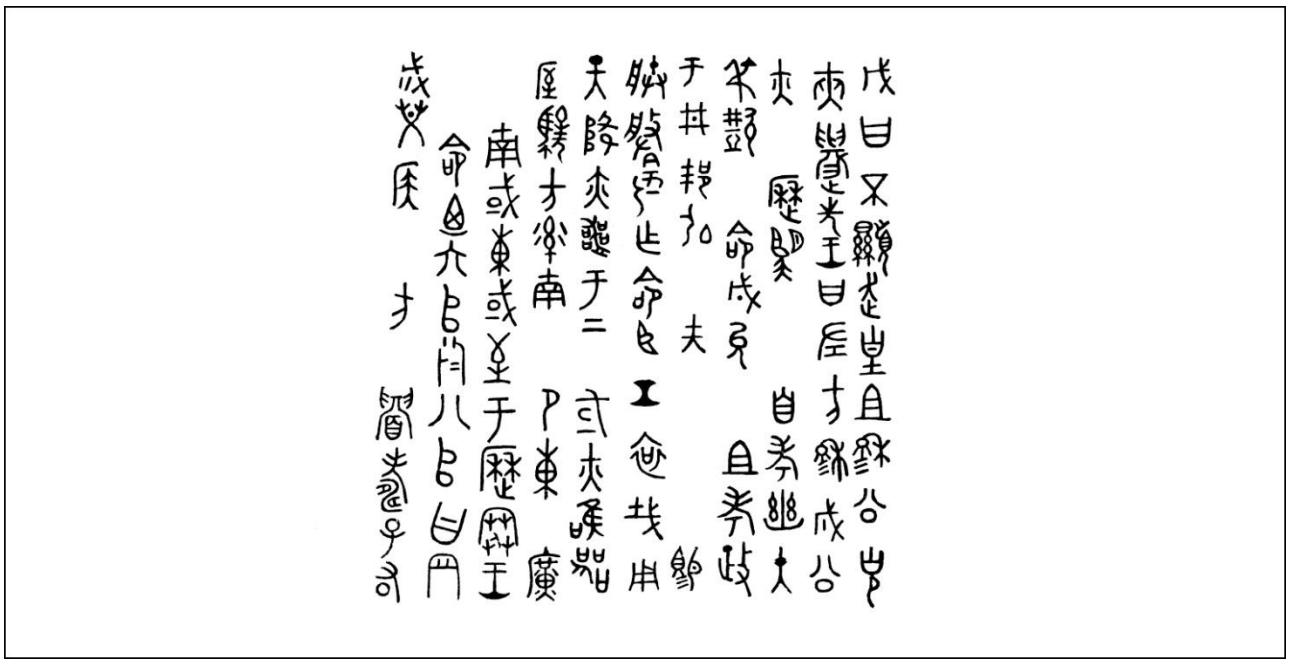


Fig. 3-6.2: Inscriptions on the late Western Zhou Yu *ding*, *reedited after Beijing 1984, pp. 233*

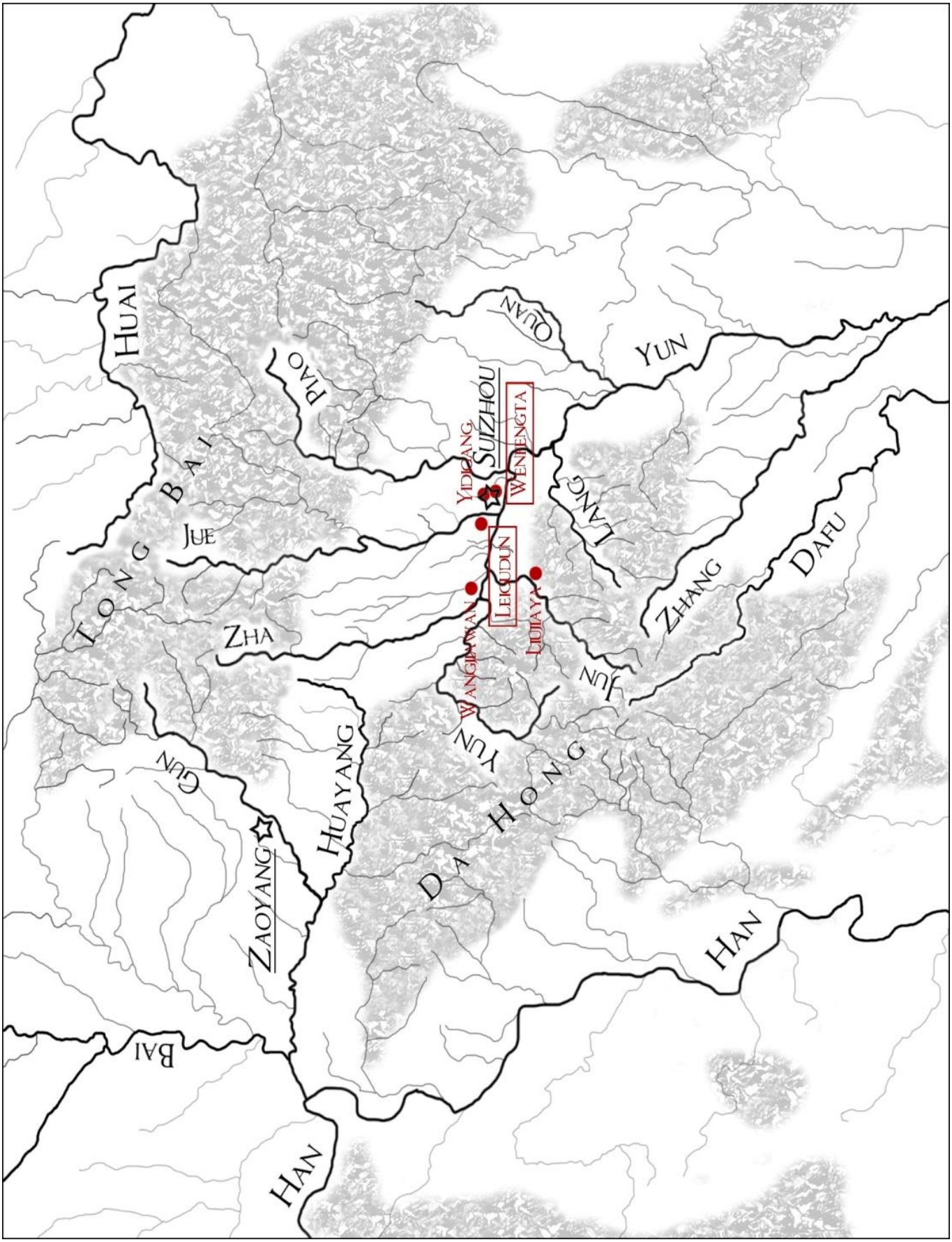


Fig. 4-2.1: Location of major sites in the Suizao corridor around 11th century BC, *redrawn on the basis of the Chinese Cultural Relics Atlas – Hubei province, JHKG 2013.1, and Google maps 2013*

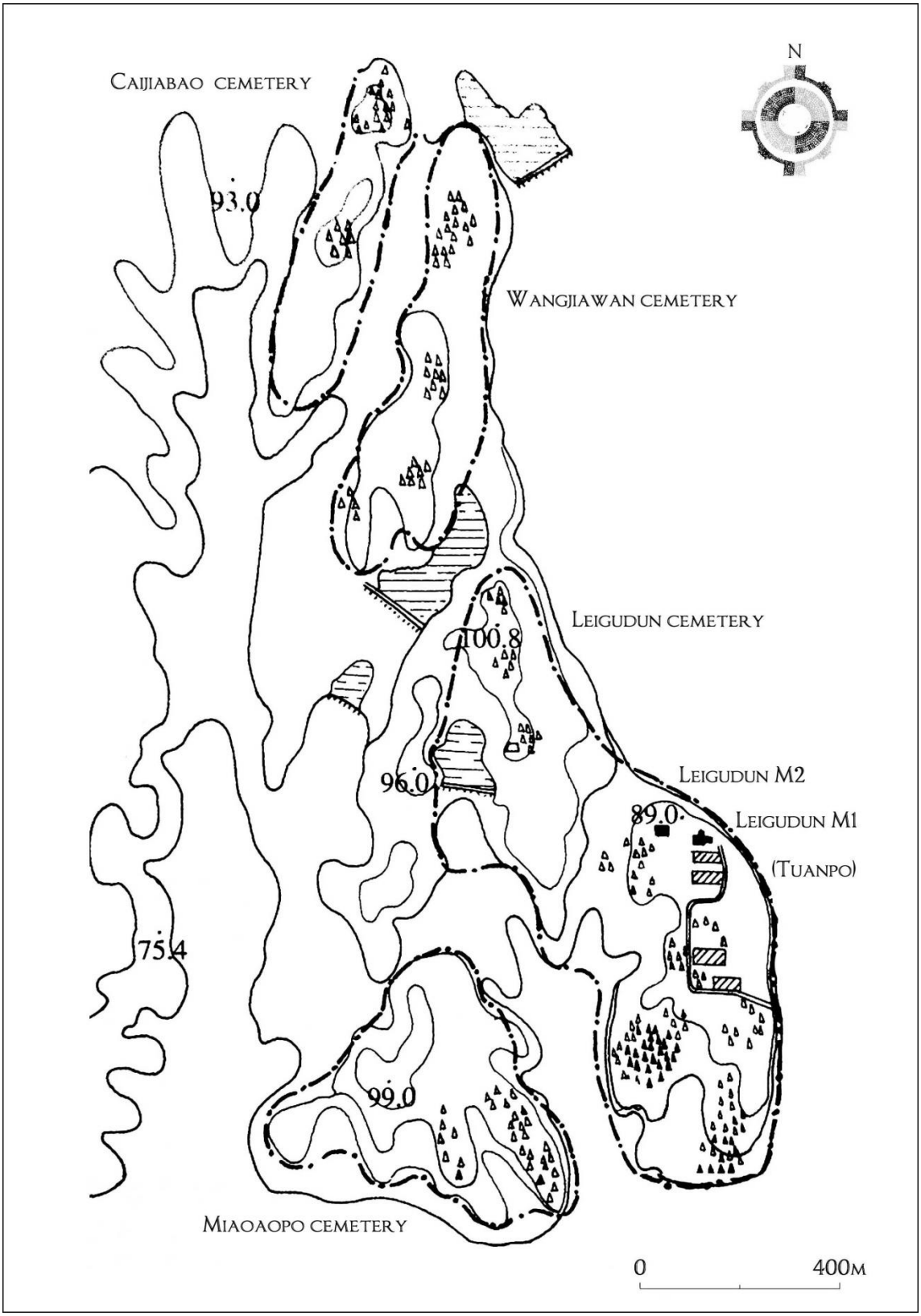


Fig. 4-2.2: A general map of the Leigudun cemetery and the surrounding areas, *redrawn after Beijing 2008, p.3*

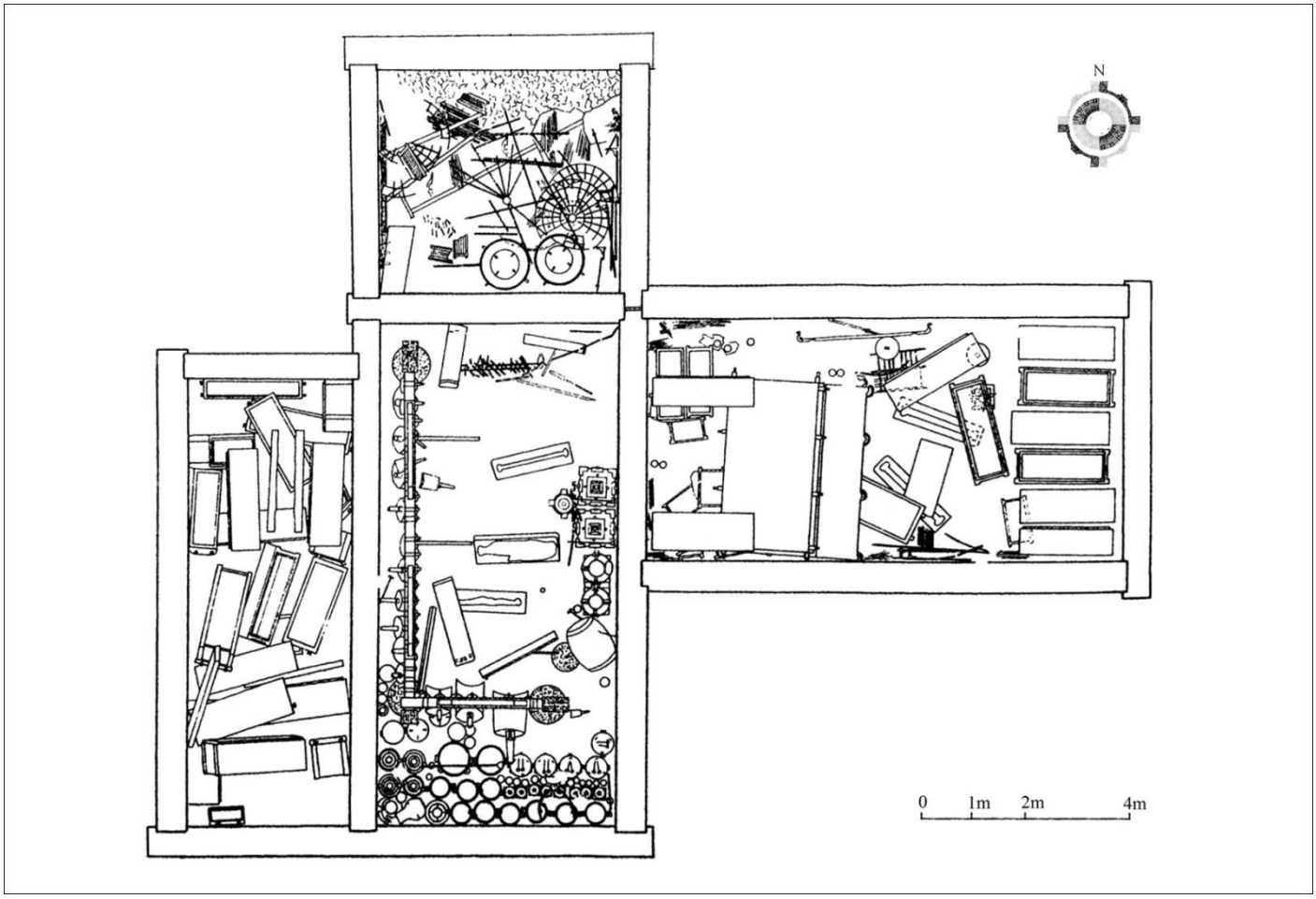


Fig. 4-2.3: Layout of the Leigudun M1, *redrawn after Beijing 1989, figures 5, 32, 35 and 36*

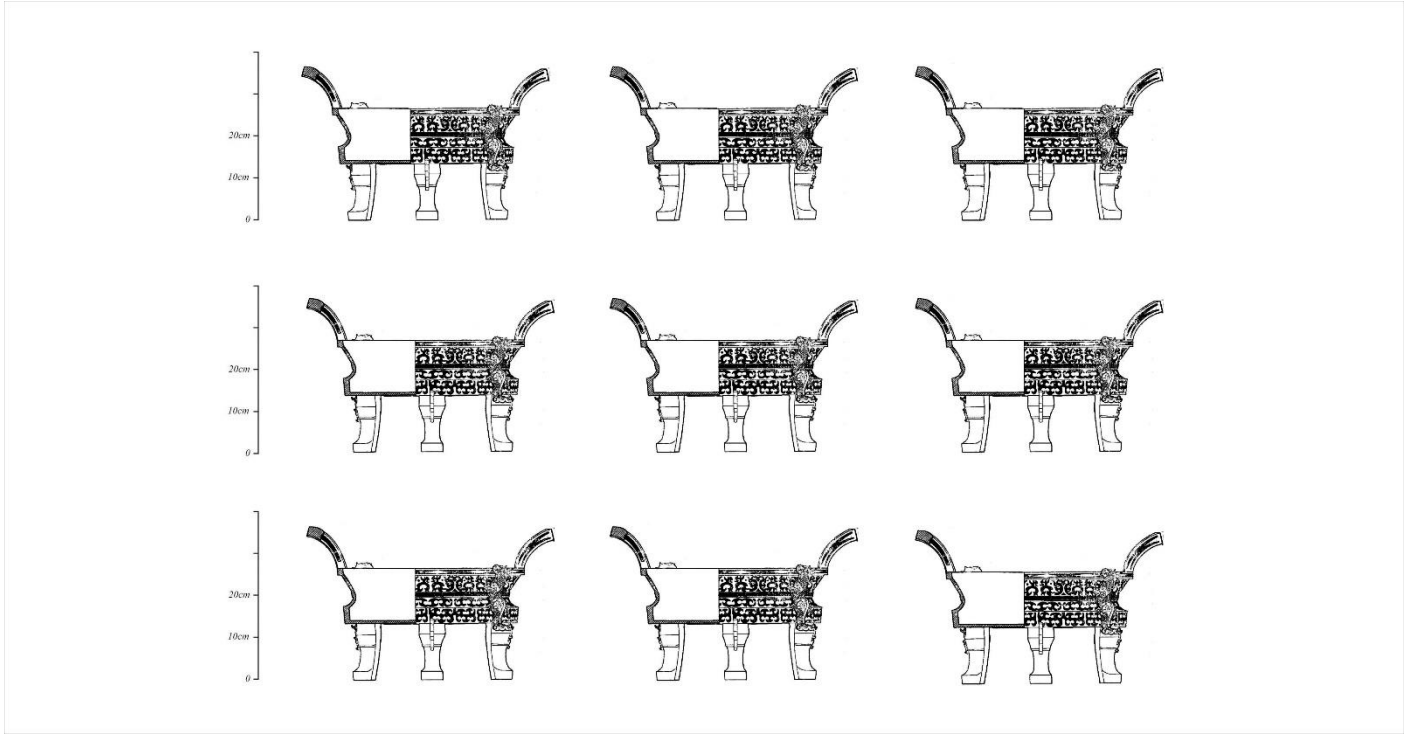


Fig. 4-2.4: A nine-part set of Chu style *ding* from the Leigudun M1, *reedited after Beijing 1989, figure 96*

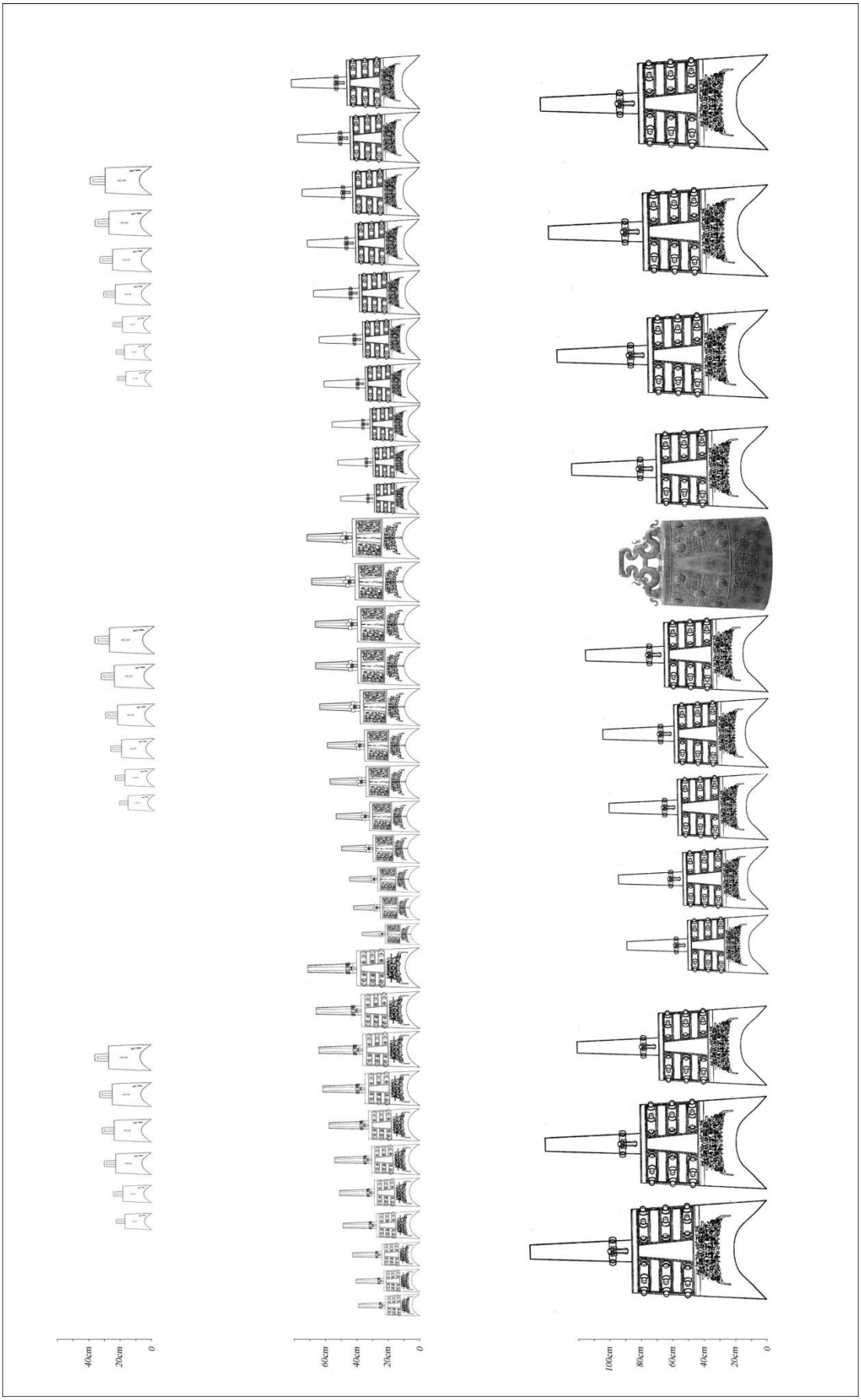


Fig. 4-2.5: A set of 65 chime-bells from the Leigudun M1, *redrawn after Beijing 1989, figures 47, 48, 49, 56, and plate 3*

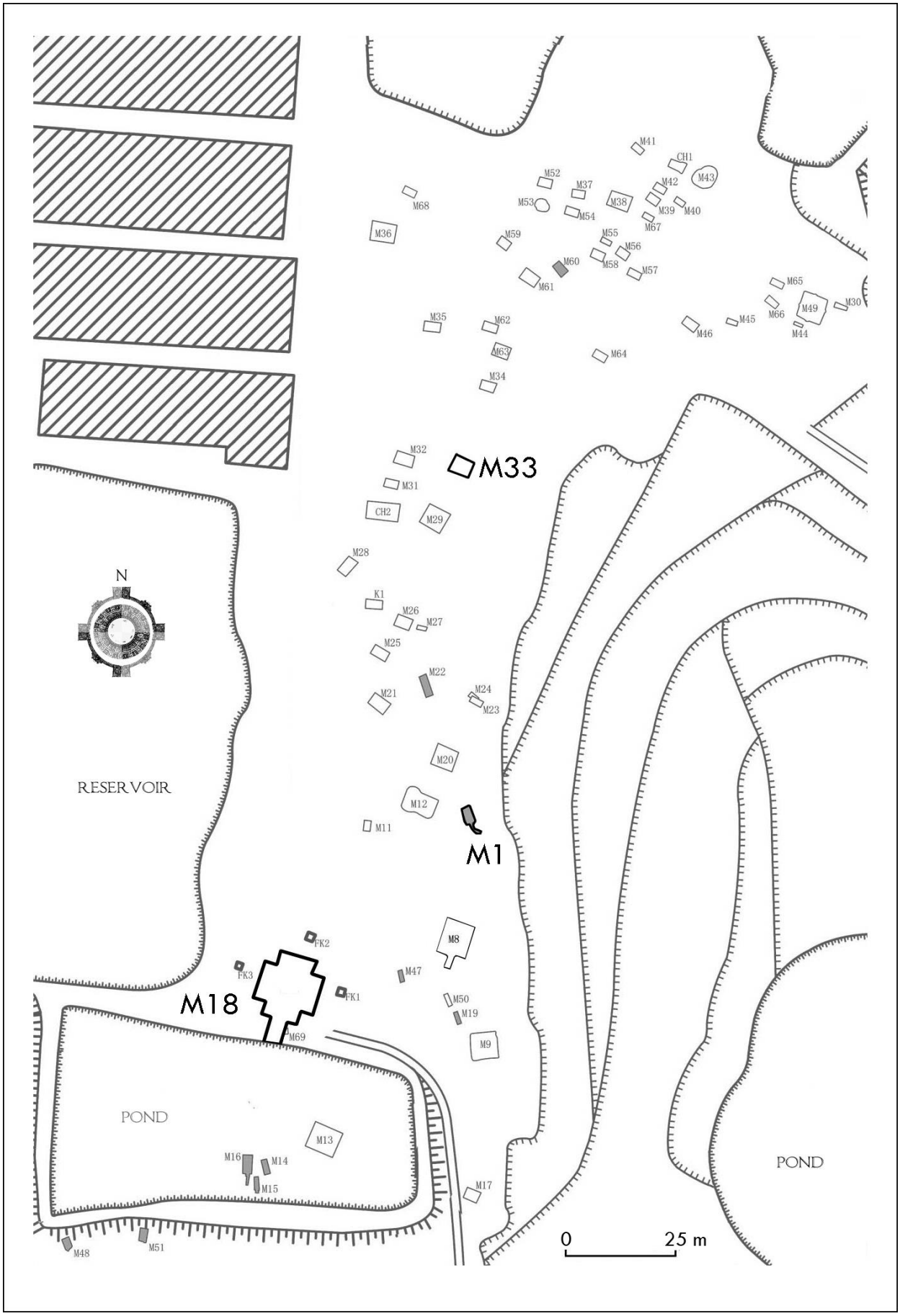
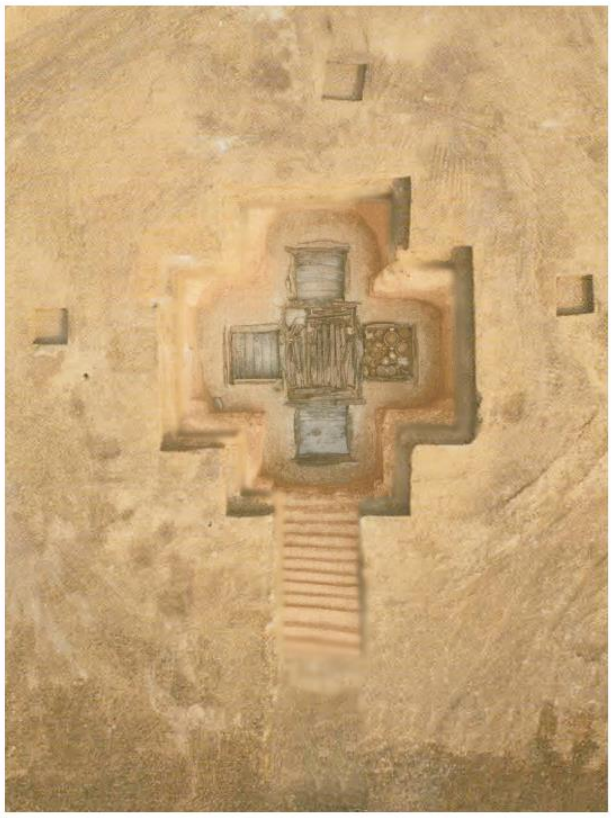


Fig. 4-2.6: A general map of the Wenfengta cemetery, *redrawn after JHKG 2013.1, fig. 1, p. 4*



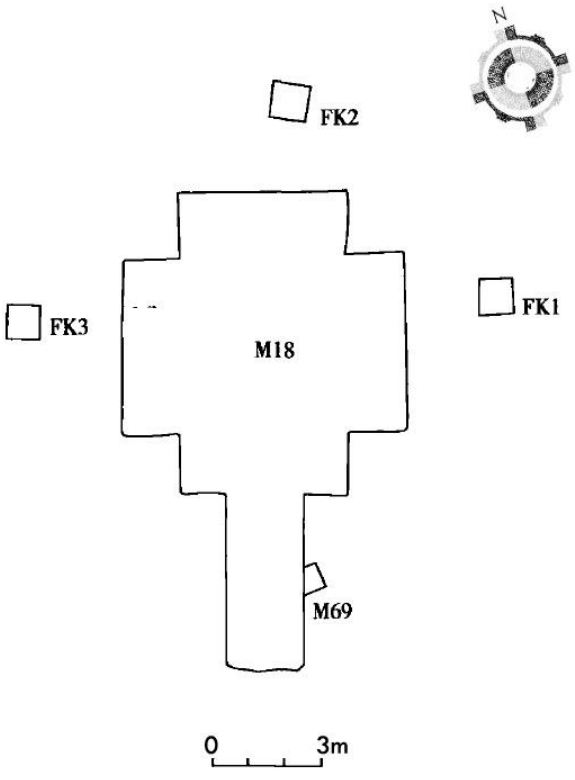


Fig. 4-2.7: Tomb structure of Wenfengta M18, *redrawn based on KG 2014.7, figures 2, 3, and 4.*



Fig. 4-2.8: A bronze *pan* from Wenfengta M33, *reedited after KG 2014.7, figure 32 (no scale information is provided)*

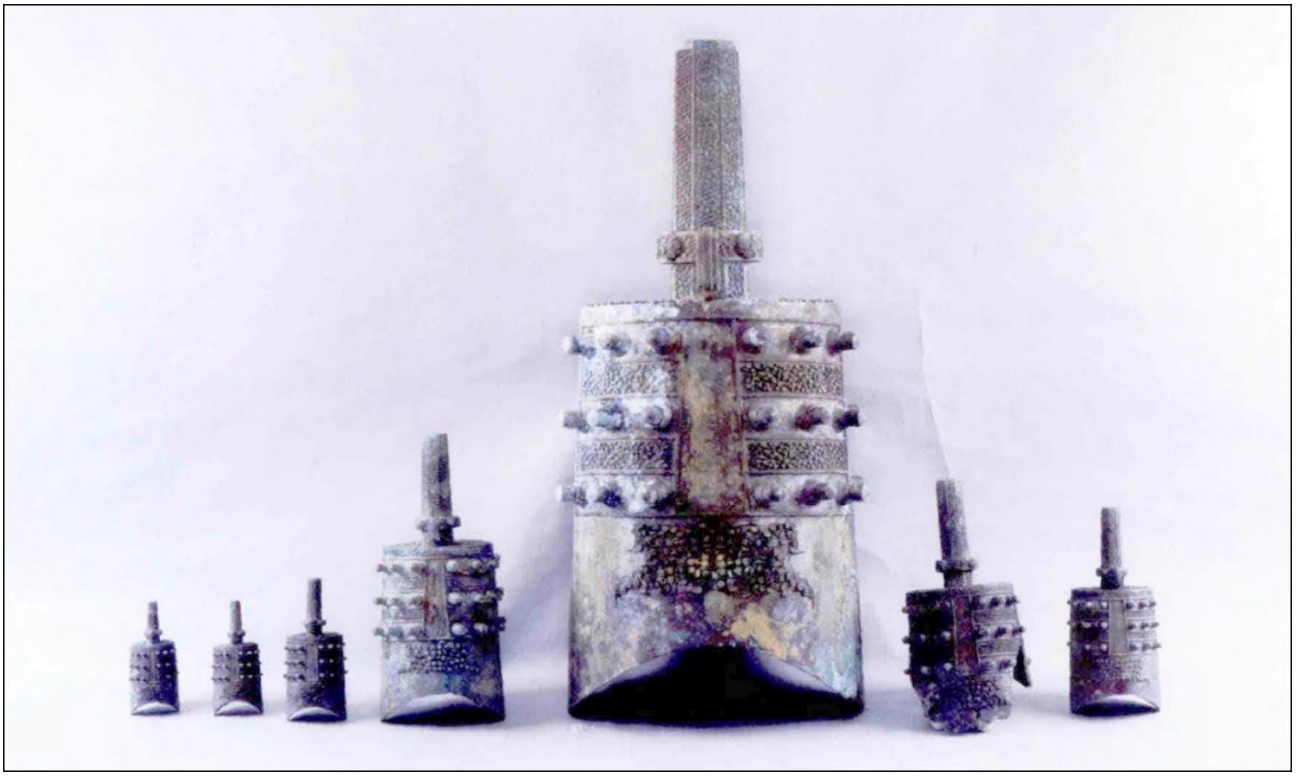


Fig. 4-2.9: An incomplete set of seven chime-bells from Wenfengta M1 (excluding M1: 2, M1: 9, and M1: 10 due to fragmentations that are beyond repair), *after JHKG 2014.4, figure inside back cover (no scale information is provided)*

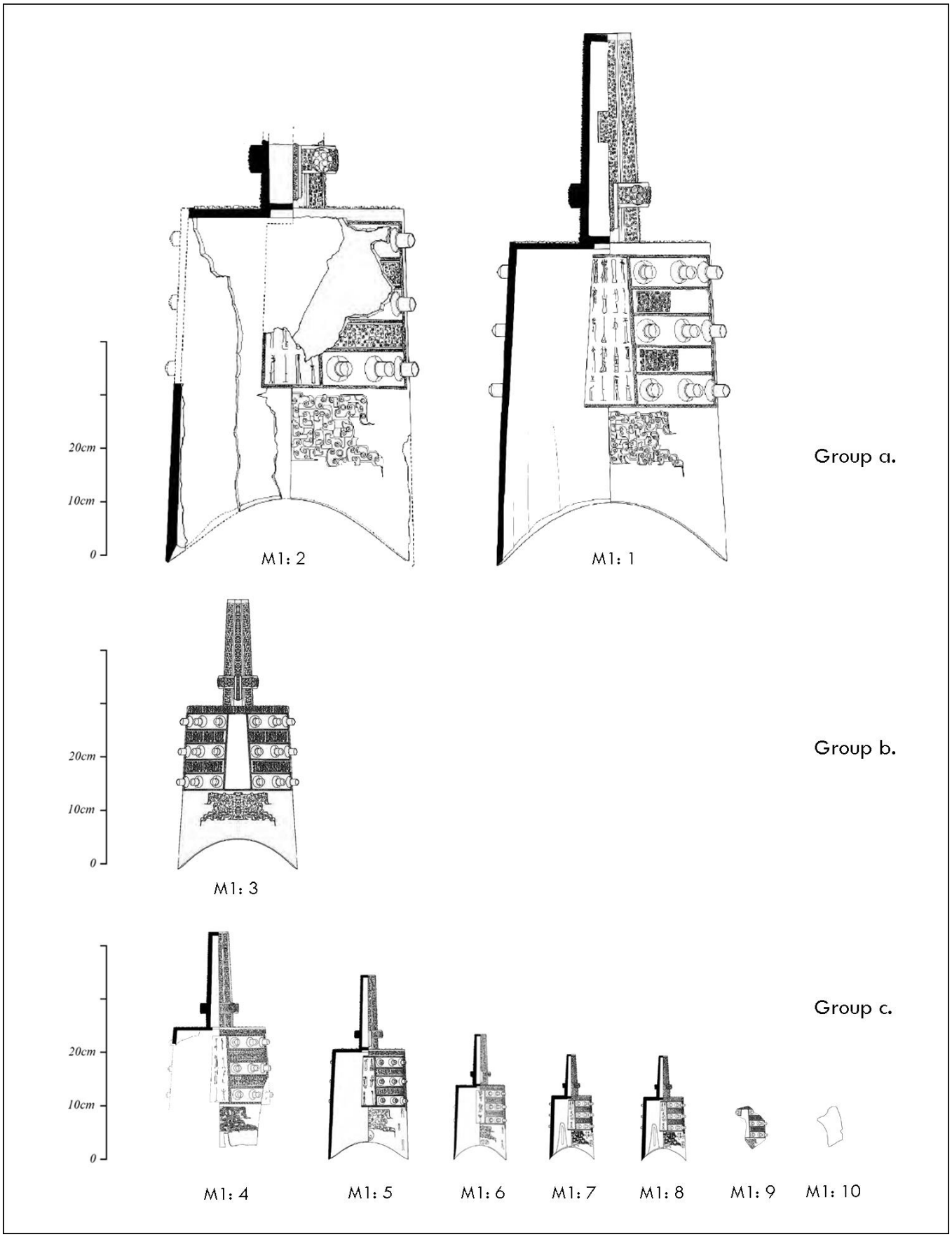


Fig. 4-2.10: Drawings of ten chime-bells from Wenfengta M1, *redrawn after JHKG 2014.4a, figures 7, 8, 9, 10, 11, 12, and plates 34, 61, and 63*

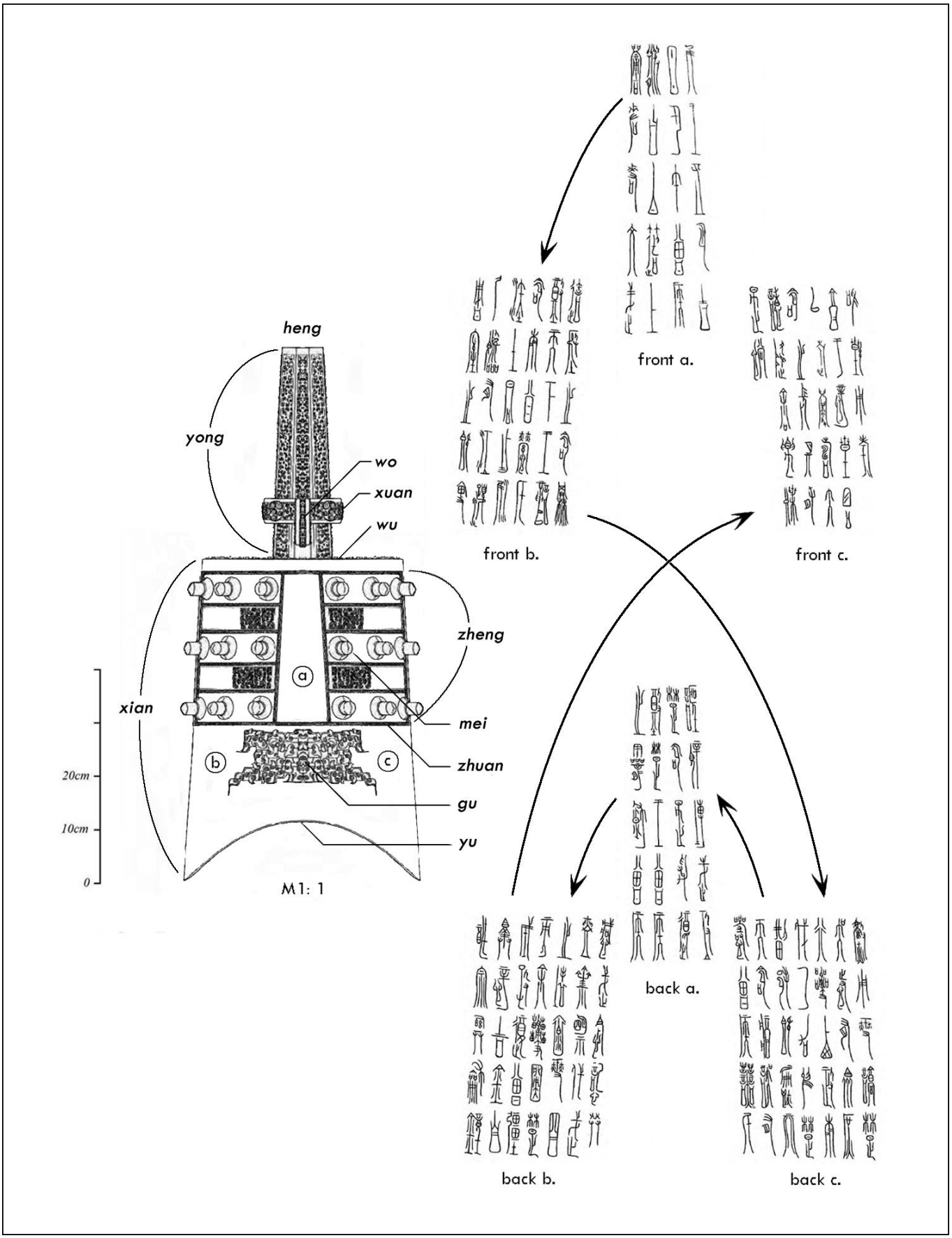


Fig. 4-2.11: The *yong zhong* M1: 1 and its 169 characters of inscriptions from Wenfengta M1, *redrawn after JHKG 2014.4a, figure 7, and transcriptions 1, 2, 3, 4, 5, and 6*

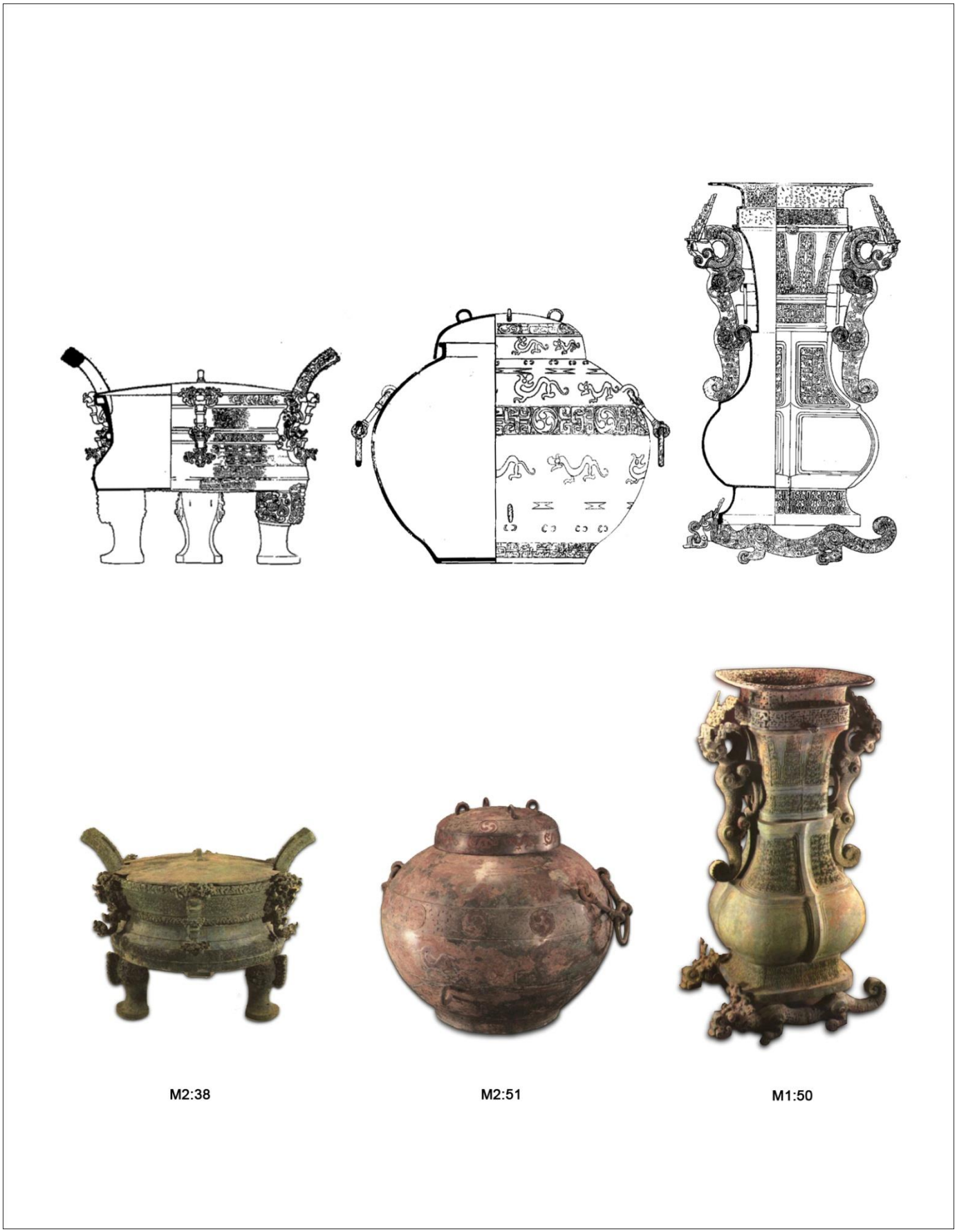


Fig. 4-3.1: Key features of the Chu style on Xiasi bronzes, *redrawn after Beijing 1991a, figure 93, 106, and 63, and plates VI, VIII, and IV*

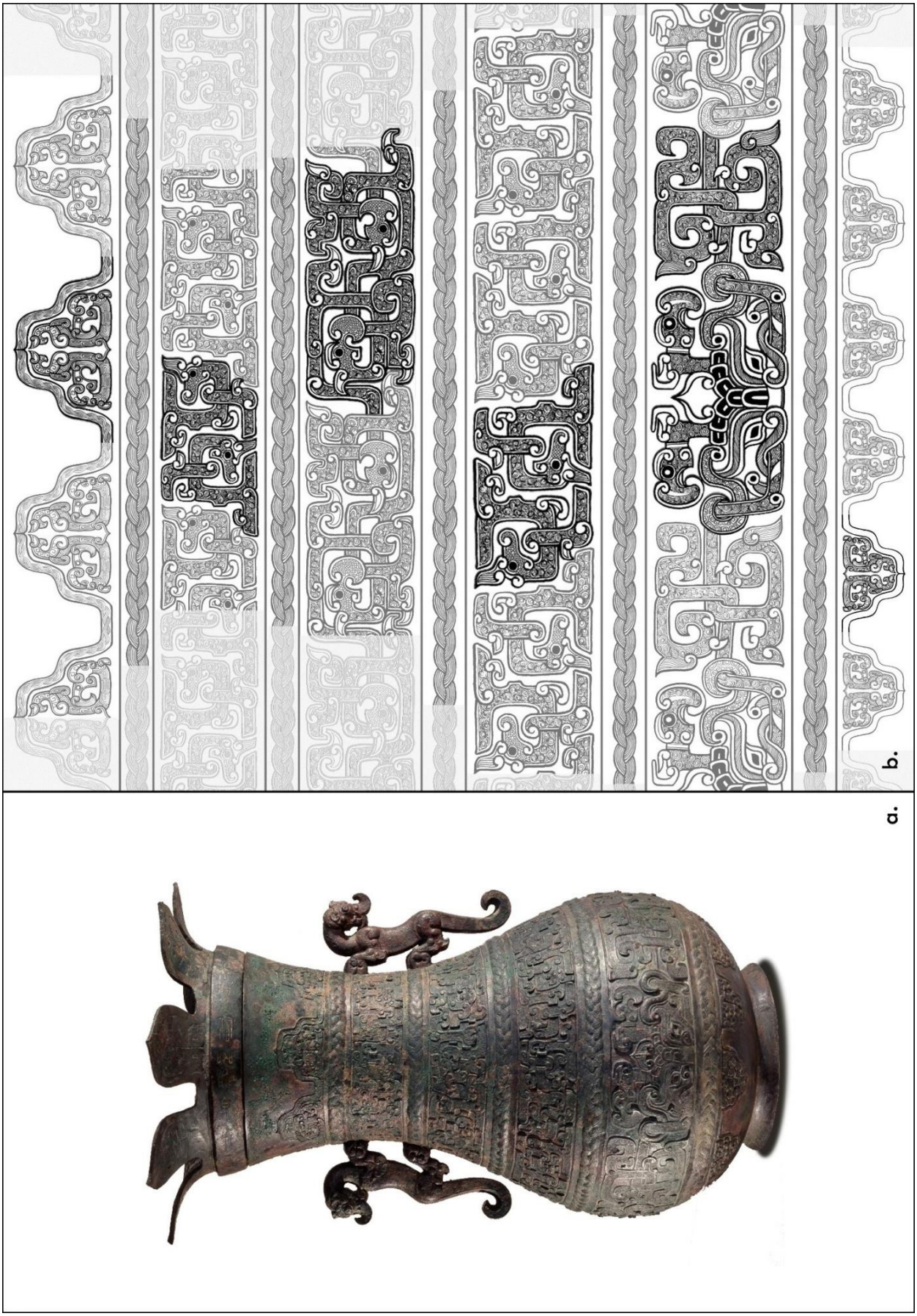


Fig. 4-4.1: Bronze *hu* with repetitive motifs, *drawn after a digital image of a bronze hu (one of a pair, 1972,0229.1.a and 1972,0229.1.b) from the British Museum, 31/01/2012*

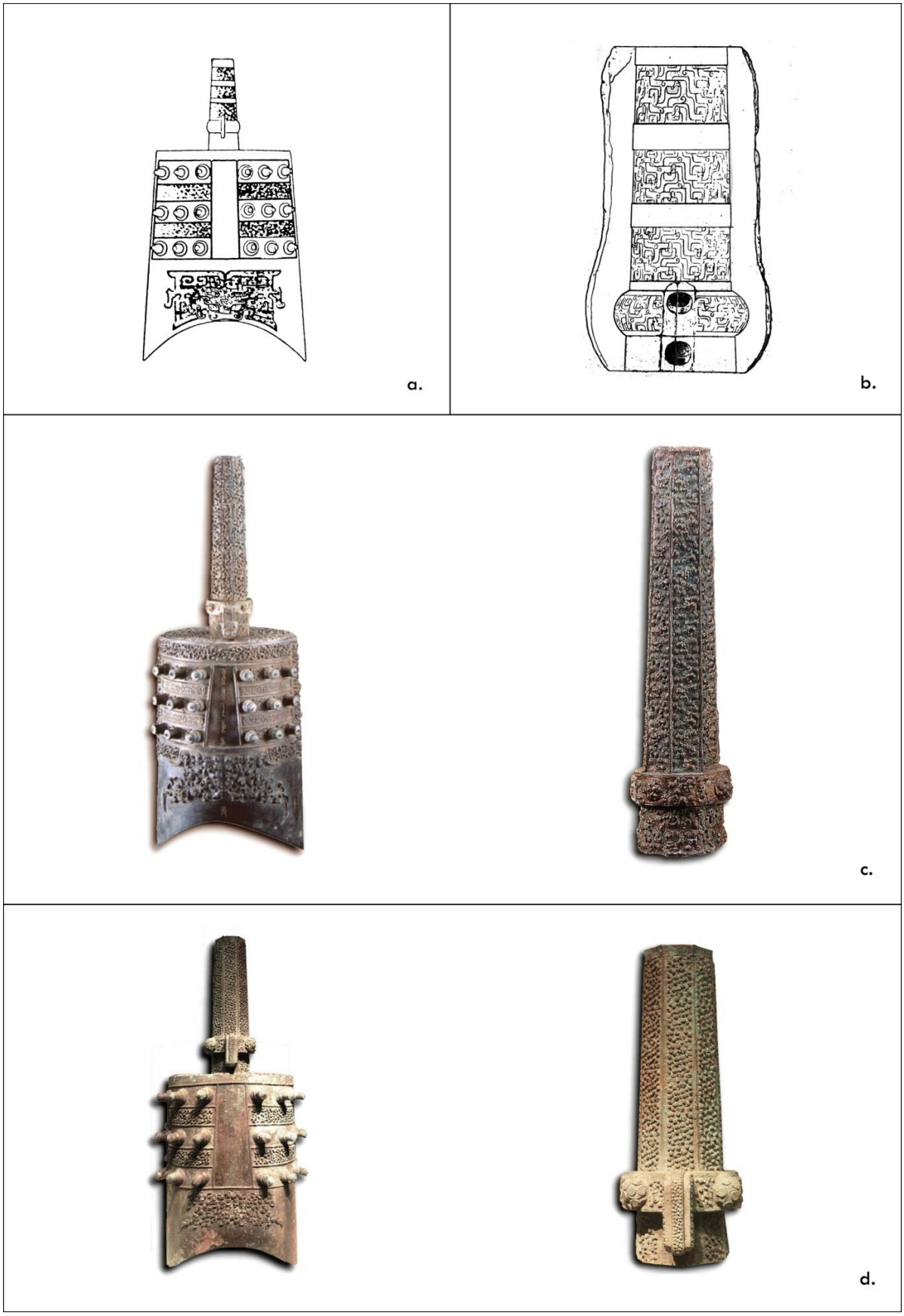


Fig. 4-4.2: *Yong zhong* and their shanks (and moulds) from Luhe M7, Houma bronze casting foundry, Leigudun M1, and Wenfengta M1, *reedited after WW 1986.6, fig. 21, Beijing 1993, fig. 66, Beijing 2007b, pp. 60-67, and private photos based on author's field trip, 17/09/2014*

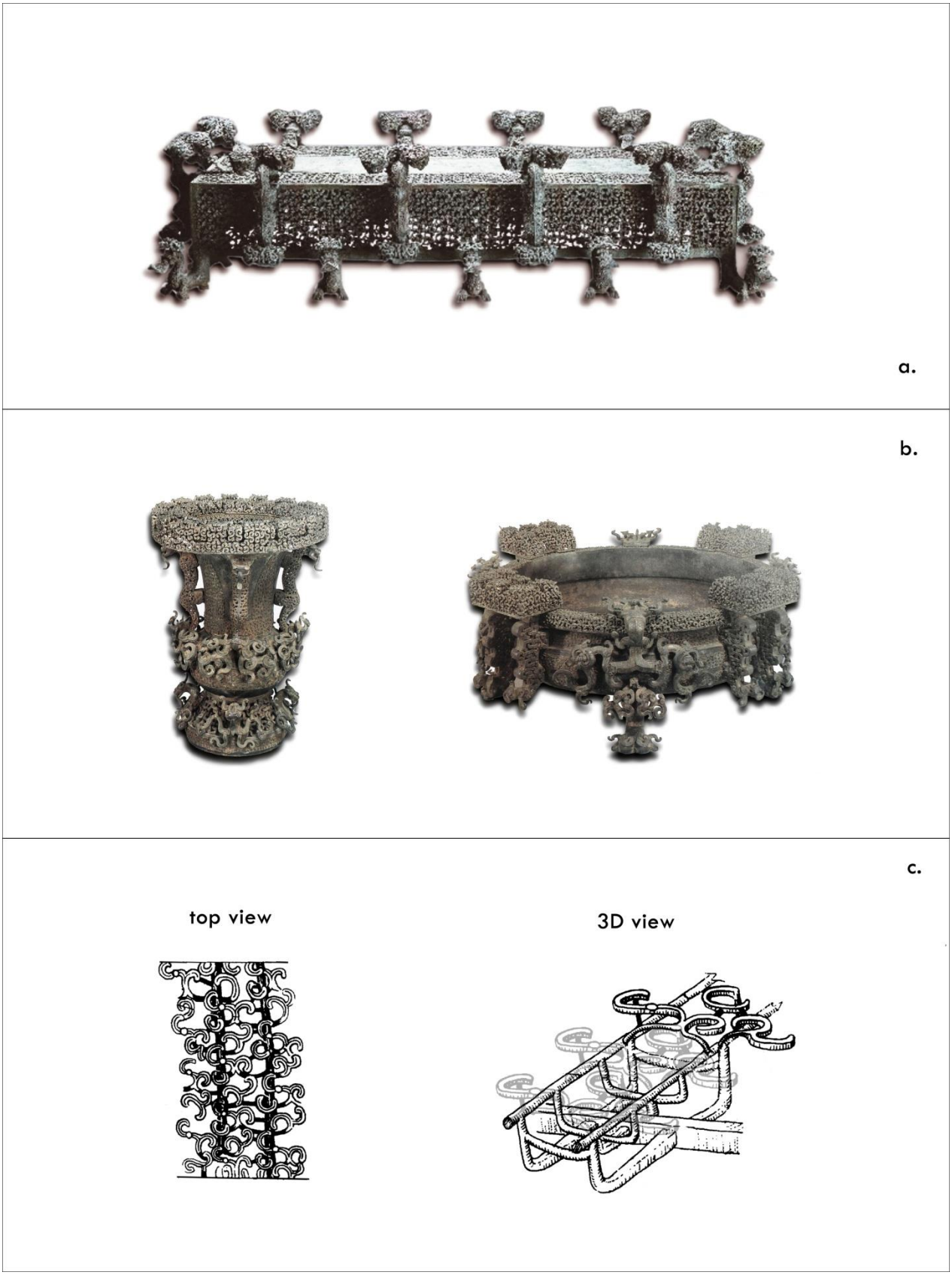


Fig. 4-4.3: Lost-wax-related Eastern Zhou bronzes: a) *zun-pan* from Leigudun M1; b) *jin* from Xichuan M2; and c) openwork on the *jin*, *redrawn after photos in Tokyo 1992, no. 33, the 'weekly selection' of the Henan Museum online collections* http://www.chnmus.net/dcjp/node_125.htm, *12/02/2012, and drawings after Li 1994, figures 11 and 12*



Fig. 4-4.4: A comparison of openwork between two pan vessels from Wenfengta M33, and Leigudun M1, *redrawn after Tokyo 1992, no. 33, KG 2014.7, figure 32, and private photos took at the Suizhou Museum and the Hubei Provincial Museum, 02/07/2012, and 17/09/2014*



a.



b.

Fig. 4-5.1: The *bo zhong* with four tigers and the chime of *yong zhong* from Yejiashan M111, *reedited after Beijing 2013, nos. 068, and 137 (no scale information is provided on the original photos)*

TABLE 2-1: Burial complexes in the burials dated early Western Zhou period

Site name		Bronze ritual vessels	Other bronzes	Ceramic	Jade	Lacquer	Other materials
Yangzishan	**M1**	1 *ding*, 1 *gui*, 1 *jue*, 1 *zhi*, 1 *zun*, 2 *you*	-	-	-	-	-
	M4	1 *ding*, 2 square *ding*, 3 *gui*, 1 *yan*, 3 *jue*, 1 *jia*, 2 *zhi*, 1 *zun*, 3 *you*, 1 *he*, 1 *pan*, 2 lei_1	-	-	-	-	-
Yejiashan	**M1**	5 *ding*,4 square *ding*, 2 *gui*, 1 *yan*, 1 *li*, 3 *jue*, 1 *zhi*, 1 *zun*, 1 *you*, 1 *jia*, 2*gu*, 1 *lei*	-	-	-	-	-
	M65	6 *ding*, 1 square *ding*, 4 *gui*, 1 *yan*, 1 *li*, 2 *jue*, 1 *zhi*, 1 *zun*, 1 *you*, 1 *hu*, 1 *he*, 1 *pan*	W C&H				
	M2	5 *ding*, 2 *gui*, 1 *yan*, 1 *li*,	-	-	-	-	stoneware
	M28	4 *ding*,3 square *ding*, 4 *gui*, 1 *yan*, 1 *li*, 2 *jue*, 1 *zhi*,2 *zun*,2*you*, 1 *hu*, 1 *he*, 1 *pan* 1 *gu*, 1 lei_1	W C&H	*li*, *dou*		*gu*, *dou*	
	M27	3 *ding*, 2 square *ding*, 4 *gui*, 1 *yan*, 2 *li*,1 *gu*, 2 *jue*, 4 *zhi*, 1 *zun*,1 *you*, 1 *hu*, 1 *he*, 1 *pan* 2 *kouqi hu*, 2 lei_2, 1 *gong*			jade		stoneware
	M111	13 *ding*, 5 square *ding*, 10 gui_1, 1 *yan*, 1 *li*, 4 *jue*, 2 *zhi*, 2 *zun*, 3 *you*, 1 *hu*, 2 *he*, 1 *pan* 1 *jia*, 3 *lei*	2+2+1 *zhong*				
	M50	2 square *ding*, 2 gui_1, 1 *yan*, 1 *zun*, 1 *jue*, 2 *zhi*, 2 *you*					

Notes:

[name^{number}**]**=quantity of inscribed bronzes

[name$_{number}$**]**=quantity of underside bell

[C&H]= chariot and harness ornaments

[W]=weapons

[T]=tools

TABLE 3-1: Burial complex from the tombs in the Suizao corridor dated to the late Western Zhou – mid-Spring-and-Autumn period

Tomb/site name	Bronze ritual vessels	Other bronzes	Ceramic	Jade	Lacquer	Other materials	Periods
72-Caomenwan	2 *ding*, 2 *gui*						II-1
70-Xiongjialaowan[5]	4 *gui*[4], 1 *Ling*[1], 1 square *you*						
72-Xiongjialaowan[4]$_1$	3 *ding*[2], 2 *gui*[2], 1 square *yan*, 1 *Ling*, 1 *pan*$_1$, 1 *yi*						
Taohuapo M1[1]	2 *ding*, 4 *li*, 4 *gui*, 1 *hu*, 1 *pan*[1], 1 *yi*	144 C&H		2	3 boxes, 2 *bei*		
Taohuapo M2	4 *ding*, 2 *li*, 1 *gui*						
Yidigang M83[1]	1 *li*[1], 1 *pan*, 1 *yi*			2			
Yingshan Wudian	2 *ding*, 2 *li*, 2 *gui*, 1 square *yan*, 2 rounded *hu*, 1 *pan*, 1 *yi*		1 *guan* in re-fillings	1			
Xibeitai$_2$	2(*ding*), 1 square *you*$_1$, 1 *pan*$_1$						
Guojiamiao M21[1]	1 (*gui*), 1 (*hu*)	7 *ling-zhong*, 160 W[1], 1887 C&H, 14 *ling*		18		1 gold foil, 251 bone tubes, leather, wooden items	
Sujialong[10]	9 *ding*[2], 9*li*[2], 7*gui*[2], 1*yan*, 2*dou*[2], 2 square *hu*[2], 1*he*, 1*pan*, 1*yi*, 3 *bei*	20 C&H					II-2
Duanying[1]	3 *ding*[1], 4 *gui*, 2*hu*	5 W[1], 275 C&H					
83-Caomenwan	1 *ding*, 2 *gui*, 1*hu*						
Hejiatai	2*ding*, 4*li*, 2*gui*, 1 square *yan*, 2*hu*, 1*pan*, 1*yi*	4 C&H, 1 T		1			
Xuguang Zhuanwachang	2 *gui*	1 T, 13 W					
Huangtupo M1	1 *ding*	2 W	1 *li*, 1 *hu*				
Bajiaolou 80-5	2 *ding*, 1 *hu*, 1 *pan*	2 *ling-zhong*, 2 W, 7 C&H					
Yingcheng Zhuanwachang	2 *ding*, 1 *li*, 1 *hu*, 2 *dou*	2+ (W)					

Guojiamiao M6	1 *ding*	12 W	1 *guan*				
Guojiamiao M25	1 *hu*	6 W, 8 C&H	1	1			
Guojiamiao M17[2]	2*ding*[2], 1 (*ding*)1*li*, 2*hu*, 1*bei*	4 Y-shaped items, 1 square base, 1 post, 7 *ling*	2 *li*, 5 *guan*, 4 *dou*	14		1 silver foil, 22 tubes, 1 cowrie, 102 beads	
Zhoujiagang[7]	2 *ding*[2], 2*li*[2], 2*gui*[2], 2 rounded *hu*, 1*pan*[1], 1*yi*	2 W, 4 C&H					II-3
Xinye Xiaoxiguan	1(*ding*), 1 *ding*, 1 *yan*, 2 *fu*, 1 *dun*, 1 *pan*, 1 *yi*	16 W, 22+ C&H		18		2 ivory *jue*, 1 bone dagger	
Guojiamiao M1[4]	1*ding*, 2*fu*[2], 2 square *hu*[2], 1 (*pan*), 1 (*yi*)	3 C&H		1			
Guojiamiao M5		1 *ling-zhong* 5W, 138 C&H		3			
Guojiamiao M6	1 *ding*	12 W	1 *guan*				
Guojiamiao M25	1 *hu*	6 W, 8 C&H	1	1			

NOTE:

[name^{number}**]** = quantity of inscribed bronzes

[name$_{number}$**]** = quantity of *ling*-bronze vessel(s)

[*name*] = missing images

[*(*name*)*] = damaged vessels

[C&H] = chariot and harness ornaments;

[W] = weapons

[T] = tools

[Period] = sub-periods of the Post-reform period based on the chronology of the Zeng bronzes in Zhang 2009b

TABLE 3-2: Rim diameter and height data of the sets of *ding* in Tab. 3-1

Site name / Quantity of *ding*	Measurement (in centimetre)	*ding*								
		no.1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
72-Xiongjialaowan	Diameter	-	-	-	*31.0*	26.5	24.7	-	-	-
1+**2**	Height	-	-	-	*32.7*	**24.5**	**23.2**	-	-	-
Taohuapo M1	Diameter	-	-	-	-	-	24.8	24.0	-	-
2	Height	-	-	-	-	-	**23.2**	**22.8**	-	-
Taohuapo M2	Diameter	-	-		27.8	24.9	22.5	*22.0*	-	-
1+**3**	Height	-	-		**27.5**	**24.6**	**22.4**	*27.7*	-	-
Yingshan Wudian	Diameter	-	-	-	-	-	22.3	22.7	-	-
2	Height	-	-	-	-	-	**23.5**	**22.8**	-	-
Sujialong	Diameter	38.2	35.4	33.6	31.0	30.2	28.5	26.5	23.5	23.1
9	Height	**32.7**	**31.5**	**29.3**	**27.0**	**25.3**	**23.6**	**21.0**	**19.0**	**18.7**
Duanying	Diameter	-	-	-	-	28.0	25.5	-	-	*25.3*
1+**2**	Height	-	-	-	-	**24.5**	**23.0**	-	-	*17.5*
Hejiatai	Diameter	-	-	-	26.9	26.9	-	-	-	-
2	Height	-	-	-	**26.8**	**26.8**	-	-	-	-
Guojiamiao M17	Diameter	-	*(35+)*	-	31.8	28.4	-	-	-	-
1+**2**	Height	-	*(30+)*	-	**26.0**	**24.8**	-	-	-	-
Zhoujiagang	Diameter	-	-	-	-	27.0	27.0	-	-	-
2	Height	-	-	-	-	**25.3**	**25.3**	-	-	-

NOTE:

[**number**] = inscribed vessels;

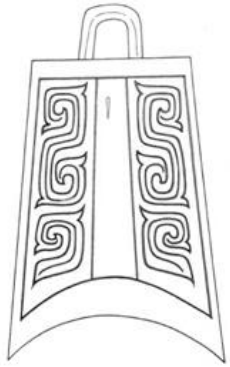
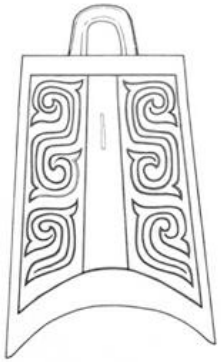
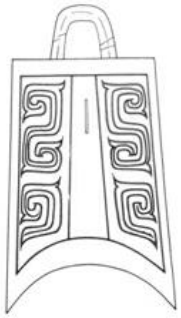
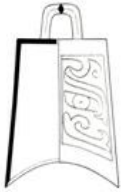
[**number**] = vessels in same size;

[*number*] = NOT belong to the same set;

[*(*number*)*] = damaged vessels

All the *ding* data from the tombs other than the Sujialong have been adjusted to appropriate positions on the basis of their **vessel height** in the Sujialong sequence

TABLE 3-4: Drawing and height data of the sets of *ling-zhong* from contemporary tombs in Zhouyuan, Jin, Guo and the Suizao corridor

Suizao Corridor	**Reference**	44	43	42	45	40	41	39
	Guojiamiao M21							
	Height (cm)	19.8	19.5	18.8	15.6	15.6	12.7	11.2
Zhouyuan	**Reference**	76	77	78	79	80	81	103
	1976 Fufeng Zhuangbai Hoard no. 1							
	Height (cm)	13.8	11.0	9.6	9.7	9.7	10.5	10.4

Guo state	**Reference**	383	385	384	508	255	147	-
	M2001							-
	Height (cm)	16.3	16.4	11.8	11.1	11.6	11.4	-
Jin state	**Reference**	*Dao* 13	?	?	?	?	*Dao* 14	-
	M1		?	?	?	?		-
	Height (cm)	12.0	?	?	?	?	6.5	-

TABLE 4-1: Burial complexes in the burials dated from the late Spring-and-Autumn period to mid-Warring States period

Tomb/site name	Bronze ritual vessels	Other bronzes	Ceramic	Jade	Lacquer	Other materials	Periods
1980 Liujiaya	2 *ding*, 1 (*ding*), 4 (*gui*), 4 *li*, 2 *hu*	5 *ling*, 2 T, 1 W, 9 C&H					I
Yidigang Jishiliang	1 *ding*, 2 *fu*, 1 *yan*	5 *ling-zhong* 2 W, C&W					
Yidigang 1980 Bajiaolou	1 *ding*, 1 *zhan*						
1975 Liujiaya	5 *ding*, 4 *gui*, 1 *yan*, 4 *fu*, 5 *hu*, 3 *pan*	2 C&H				Three times	
1976 Yidigang	1 *ding*, 1 *zhan*						
Wenfengta M1	1 sheng *ding*, 1 *ding*, 2 *li*, 1 *fou*, 1 *jian*	10 *zhong*					II
Wenfengta M2	*ding*, *li*, *yu*, *fou*, *guan*						
Yidigang M6	2 *ding*, 2 *fu*, 1 *yan*, 2 *hu*, 1 *dou*, 1 *yi*, 1 *fou*	1 weight, 9 W, 25 C&H		6		39 bone objects	
Dongfengyouku M1	1 *ding*, 1 *fu*, 1 *yan*, 1 *hu*, 1 *pan*, 1 *yi*	5 W	1 *ding* 1 *dou*, 1 *hu*	-			
Dongfengyouku M2	1 *ding*, 1 *fu*, 1 *hu*, 1 *pan*, 1 *yi*	-	1 *ding* 1 *dou*, 1 *hu*	*jue*, fish		2 turquois beads, bone ring, beads	
Dongfengyouku M3	1 *ding*, 1 square *dou*, 1 *hu*, 1 *pan*, 1 *yi*	1 lid	2 *ding*, 1 jar	3 rings, *jue*, plate *huang*	4 crystal beads		
Leigudun M1	9 sheng *ding*, 2 *ding*, 8 *gui*, 10 *li*, 1 *yan*, 2 *fu*, 2 *hu*, 4 *guan-fou*, 1 *zun*, 1 *pan*, 1 *yi*	65 *zhong*, drum base, W, C&H		50 MI		chime-stone	III
Leigudun M2	9 sheng *ding*, 8 *ding*, 8 *gui*, 10 *li*, 1 *yan*, 4 *fu*, 4 *hu*, 4 *zun-fou*, 2 *guan-fou*, 3 dou, 1 *pan*, 1 *yi*	36 *zhong* 1 drum base, W, C&H		2 *huang*, 2 rings		chime-stone 2 stone discs 24 beads	
Wenfengta M33	*ding*, *gui*, *fu*, *li*, *jian*, *hu*						
Wenfengta M18	*ding*, *gui*, *fu*, *li*, *jian*, *hu*	lamp					

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Abbreviations of Chinese Journals

BFLC
Beifang luncong 北方論叢

BJDXXB
Beijingdaxue xuebao 北京大學學報

Collectors
Shoucangjia 收藏家

DNWH
Dongnanwenhua 東南文化

DZKG
Dazhong kaogu 大眾考古

GGWWYK
Gugong wenwu yuekan 故宮文物月刊

HXKG
Huaxia kaogu 華夏考古

HZKJDXXB(S)
Huazhongkejidaxue xuebao 華中科技大學學報（社會科學版）

JHKG
Jianghan kaogu 江漢考古

JHLT
Jianghan luntan 江漢論壇

KG
Kaogu tongxun 考古通訊 (1951-1958) / *Kaogu* 考古 (1959-)

KGXB
Kaogu xuebao 考古學報

KGYWW
Kaogu yu wenwu 考古與文物

LSYJ
Lishi yanjiu 歷史研究

NFWW
Nanfang wenwu 南方文物

QTWHYJ
Qingtong wenhua yanjiu 青銅文化研究

SCWW
Sichuan wenwu 四川文物

SXJK
Shixue Jikan 史學集刊

WB
Wenbo 文博

WHDXXB (S)
Wuhandaxue xuebao 武漢大學學報（社會科學版）

WW
Wenwu cankao ziliao 文物參考資料 (1951-1958) / *Wenwu* 文物 (1959-)

WWBHYKGKX
Wenwu baohu yu kaogu Kexue 文物保護與考古科學

WWZLCK
Wenwu ziliao congkan 文物資料叢刊

ZHWSLC
Zhonghuawenshi luncong 中華文史論叢

ZGLSBWGGK
Zhongguo lishibowuguan guakan 中國歷史博物館館刊

ZGGJBWGGK
Zhongguo guojia bowuguan guakan 中國國家博物館館刊

ZGWWB
Zhongguo wenwu bao 中國文物報

ZGSYJ
Zhongguoshi yanjiu 中國史研究

ZRKXSYJ
Ziran kexueshi yanjiu 自然科學史研究

ZYWW
Zhongyuan wenwu 中原文物

ZZDXXB(S)
Zhengzhoudaxue xuebao 鄭州大學學報（社會科學版）