An assemblage and material agency approach to the function of jades in a mortuary context: the case of Fu Hao's tomb in late Shang China

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Xuying Du

Student Number: 1043033

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Abstract

This research investigates the function of jades from “Fu Hao’s tomb”, a late Shang burial (c. 1200 BC) in central China. Contrary to previous typological approaches, this research argues that the function of jades should be examined in specific context, and the burial itself should be considered as a context of jade use in the past. It applies recently developed assemblage thinking and material agency in archaeological theories to study the role of jades in this context. By asking research questions — “who”, where, when, how, and why in terms of the participation of these jades in the burial process, this research regards the role of jades as participants in the creation of the past, instead of merely human affiliations. Through this new theoretical lens, this context of jade use is understood as an assemblage of both human and nonhuman actors, who/which gathered for the transformational rites of passage of the deceased. Through an examination of the material properties of jade, this research analyses possible ways in which jades could have taken part within the assemblage in relation to both human and nonhuman others. Based on their position inside the tomb, this research argues that while involved in multiple stages of the burial ceremony, jades were used in close association with the tomb occupant in this burial. They could have facilitated the transformation of the social status and social relations of the person, constituted composite objects as either their accessory or defining parts, and added to the whole assemblage by improving its status. This research aims to contribute to the contemporary discussion on the role of material things in the world in general.

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Chapter 1 Introduction

This research examines the function of jades from a late Shang burial — "Fu Hao's tomb" (c. 1200 BC)[1] —in central China through the theoretical framework of assemblage thinking and material agency. This chapter briefly introduces the motivation, objective, methodology, and source of data of this research. The structure of the remaining thesis is provided in the end.

1.1 Motivation

Jade has been used and valued in China throughout ages (e. g. Rawson 1995; Yang 2005). The earliest jade use known to date in China is in burials at Xiao Nanshan Site in Northeast China about 8000 years ago (Heilongjiang and Raohe 2019). Yang (2005:18) even traces jade use back to the crystal stone object of the Peking Man of Zhoukoudian. Broadly, jade refers to any beautiful stone that may produce a gentle sheen on the surface in Chinese culture. Mineralogically, "true jades" refer to only nephrite and jadeitite, which differentiate themselves from others with their toughness and difficulty in working (Barnes 2018:8–9). Although people in the past certainly were not confined by the mineralogical definition of jade, they seem to excel in the identification of high-quality jade material even better than a modern geologist and could match the capacity of modern scientific method as early as the

[1] The site is identified as the burial of Fu Hao by the excavators (IA CASS 1980:3), one of three official consorts of King Wu Ding of late Shang period. However, the identification is primarily based on the inscriptions on some bronze vessels, while there are eight other types of inscriptions too (ibid:95–100). Therefore, quotation marks are added in this research to indicate some degree of uncertainty. Also, it is noteworthy that the body of the tomb occupant was not found. The excavators' view is that the body has decayed (IA CASS 1980:8), which is not uncommon in late Shang burials. However, it should be noted that remains identified as eight human beings were reported to be found from the slurry inside the chamber (ibid:9), presumably under similar preservation conditions to the tomb occupant. This adds to the mystery why the body of the tomb occupant was missing and the possibility that it was never there.

Neolithic period (Wen 2008). From the Neolithic to the Bronze Age, jade was widely used in many archaeological cultures across China (e. g. Rawson 1995:28–53; Yang 2005:643–721). By the time of late Shang period at Yinxu (c. 1300 – 1046 BC), the jade repertoire reached a new apex with distinctively novel designs and jades from "Fu Hao's tomb" are the most conspicuous collection that was found intact archaeologically. Also, it encompasses a collection of jades from earlier archaeological cultures that span around 5000 years of time and a vast geographical area, which makes them valuable subject for jade studies (Zhu 2016: 1–60).

Jades from "Fu Hao's tomb" have been studied comprehensively in terms of their material, working techniques, form and function, artistic features, and cultural origins before (Du et al. 2018). However, as will be discussed in Chapter 2, their function was mainly approached along with past researchers' endeavour of typological classification and nomenclature of these jades, without fully addressing their context of use. Therefore, this research attempts to restore the role of jades within their context of use in the past. Particularly, this research argues that the burial itself should be regarded as an archaeologically accessible context of jade use in the past and jade use should be examined within this mortuary context.

Jade came into my mind as a subject of study in a number of occasions during my previous studies in anthropology. First, the endeavour of contemporary scholarship to dismantle the human/nature dichotomy makes me recall the link between the materiality of jade and the virtues of human in Chinese culture. Second, contemporary discussions on materiality in making and production practices immediately remind me of the smart carving technique implemented in traditional jade design, which takes inspiration from and makes use of the original shape, colour, condition, and even blemish, of the material to create artful sculpture. These thoughts led me to study jade within a scholarly discourse on the agency of material

things, although this research took a focus on the role of the material in the use of jades instead of their making or production in the end.

The contemporary world is embracing dramatic changes with rapid development in technologies such as biomimicry, artificial intelligence, cyborgs, and prosthetics, among many others which challenge the human/nonhuman dichotomy. This calls for a reconsideration of the position of human in relation to nonhuman things and the role of material things as participants in the creation of history instead of merely the object of human agency. Whether their agency was at play in the past and at present is catching increasing attention of contemporary scholarship. Among these uncertainties, the virtues of jade discussed by ancient Chinese scholars ultimately motivate my personal interest to study jade as a subject.

1.2 Objective

This research aims to study the role of jades in a mortuary context at a late Shang burial — "Fu Hao's tomb".

By considering jades as participants of the burial process, this research will examine the role of jades regarding following five research questions.

1. "Who" were they?
2. Where were they inside the tomb?
3. When did they join the burial?
4. How did they participate in the burial process?
5. Why did they participate in the assemblage?

1.3 Methodology and Data

An overview of all the jades will be provided first to account for their typology, cultural origins, material, working techniques, and artistic features. Then a detailed account of their position inside the tomb is compiled from the excavation report. Their time to join the burial is inferred from their position inside the tomb through laws of stratigraphy. Then, the burial process is reconstructed through assemblage theory and anthropological account of the rites of passage. Finally, the role of jades is examined within this process in terms of what material properties of jade could have allowed them to do within the assemblage in relation to others.

The data for analysis, including the position of the jades, and their typology, is sourced from the archaeological report (IA CASS 1980). The exhibition catalogue (IA CASS and Guangdong 2016) and the comprehensive study conducted by the Institute of Archaeology, Chinese Academy of Social Sciences (IA CASS) (Du et al. 2018) are also referred to for photos of the jades and studies on their cultural origins, materials, working techniques, and artistic features. The excavation reports (Anyang 1981, 2004; IA CASS 2007) for adjacent tombs (Huayuanzhuang Locus East M54, Xiaotun M17 and M18) are also referred to.

1.4 Structure of the remaining thesis

The remainder of this thesis is arranged in accordance with the research questions raised above. Chapter 2 will outline the methodology of this research, reviewing previous typological approaches to the function of jades from "Fu Hao's tomb", stressing contextual analysis, developing a theoretical framework of assemblage thinking and nonhuman agency for this study, and providing a reflexive discussion on the role of the researcher within this research. Chapter 3 will provide a holistic account of the jades found from "Fu Hao's tomb", detailing their typology, cultural origins, material, design, and production. Chapter 4 will

illustrate the structure of the tomb first, and then provide a detailed account of the position of jades within it, based on which the time when they joined the burial will be inferred. Chapter 5 will provide an interpretation of the site as an assemblage first, a transformative process involving rites of passage for the deceased. The material properties of jade will then be examined. Finally, how these properties of jade could have rendered the role of jade within the assemblage in relation to others will be discussed. Chapter 6 concludes the thesis with a summary of findings, contributions, limitations, and suggestions for future research.

Chapter 2 Methodology

This chapter outlines the methodology to approach the function of jades at "Fu Hao's tomb". By reviewing previous approaches to this issue, it argues that assuming the function of jades from their form only is insufficient, and the function of jades should be examined in specific context of use. In the case of "Fu Hao's tomb", jade use can be approached in the context of the burial itself. It will then develop the theoretical framework of this thesis drawing on recent developments in the notion of nonhuman agency and assemblage thinking. These theoretical developments can refresh our understanding of jade use and its context by allowing us to consider the role of jades as participants in the process of the assemblage in relation to other human and nonhuman actors. They also enable us to ask questions regarding jade use from the angle of jades instead of human. Research methods will be put forward in the next section followed by a description of the data. The issue of reflexivity will be discussed in the following section before the conclusion of this chapter.

2.1 Literature Review

This section reviews previous studies of function of jades from "Fu Hao's tomb". It will present the results of three major studies by the excavators (IA CASS 1980), Xia (1983), and Zhu (2016). As these works approach the function of jades together with their nomenclature and taxonomy, a typological framework to classify the jades is often the scheme provided to understand the objects, which assumes function of jades from their forms.

The excavators (IA CASS 1980:114–95) provide the first comprehensive and systematic scheme for the nomenclature and taxonomy of jades from "Fu Hao's tomb" (Wang 2018:271). There are 756 jade objects in total.[2] The excavators classify them into six broad categories: A. ritual objects (175, 23.15%), B. ceremonial objects (54, 7.14%), C. tools (75, 9.92%), D. utensils (9, 1.19%), E. ornamental objects (426, 56.35%), and F. miscellaneous objects (17, 2.25%) (IA CASS 1980:115). Each category encompasses a variety of jade types (Table 2.1). The naming of these jade types stems out of an attempt to understand what these objects are by assuming their functions from their forms, with reference to earlier texts. However, it is best understood as a descriptive framework of the morphological features of the jades instead of a reflection of their function, as it lacks an account of their context of use.

Table 2.1 Summary of the excavators' classification of jade types from Fu Hao's tomb. (total: 756). Source: IA CASS 1980: 114–95. *See also* Wang 2018: Table 2.

	Category	**Jade Types**
A	**Ritual Objects (175, 23.15%)**	*Cong* and *cong*-shaped tube objects (14, 1.85%), *Gui* tablets (8, 1.06%), *Bi* discs (16, 2.12%), Notched disc (1, 0.13%), *Huan* rings (24, 3.17%), *Yuan* rings (18, 2.38%), *Huang* arc-shaped objects (73, 9.66%), *Jue* slit rings (18, 2.38%), *Gui* vessels (2, 0.26%), *Pan* plate (1, 0.13%)
B	**Ceremonial Objects (54, 7.14%)**	*Ge* daggers (39, 5.16%), *Mao* spears (3, 0.40%), *Qi* axes (9, 1.19%), *Yue* axes (2, 0.26%), Large knife (1, 0.13%)
C	**Tools (75, 9.92%)**	*Fu* axes (2, 0.26%), *Zao* chisel (2, 0.26%), *Ben* adze (5, 0.66%), Saw-shaped knife (1, 0.13%), Knives (31,

[2] The total number of jades is reported as 755 in the excavation report (IA CASS 1980:114). However, 756 entries are listed within the "jades" section (ibid:114–95). Possibly a piece of axe material (M5:1252) is overlooked, as 75 entries are listed as "tools" instead of 74, which is the reported number (ibid:141).

		4.10%), Bent awl-shaped object (1, 0.13%), Spinning wheels (22, 2.91%), Handle (1, 0.13%), Spades (4, 0.53%), Spade-shaped object (1, 0.13%), Reaping knives (5, 0.66%)
D	**Utensils (9, 1.19%)**	Mortar (1, 0.13%), Pestle (1, 0.13%), Palette (1, 0.13%), Comb (2, 0.26%), Earpicks (2, 0.26%), *Bi* spoons/daggers (2, 0.26%)
E	**Ornaments (426, 56.35%)**	Body ornaments, inlays and artworks (188, 24.87%); Hairpins (28, 3.70%); Bracelet-shaped objects (18, 2.38%); Handle-shaped ornaments (33, 4.37%); Pendants (38, 5.03%); Tubes and beads (33, 4.37%); Hoop-shaped objects (28, 3.70%); Perforated long-narrow pieces (8, 1.06%); Miscellaneous ornaments (52, 6.88%)
F	**Miscellaneous objects (17, 2.25%)**	Base-shaped objects (5, 0.66%), Thumb ring (1, 0.13%), Carpentry-square-shaped object (1, 0.13%), Handle-like objects (2, 0.26%), Chain (1, 0.13%), Goat-head-shaped object (1, 0.13%), Cylindrical handle-like object (1, 0.13%), Long-handle-like piece (1, 0.13%), Dagger-like objects (3, 0.40%), Long pointed object (1, 0.13%)

The association of certain jade form with certain function seems to stem out of textual records such as *Zhouli* (Rites of Zhou), which widely influences interpretations of jade objects by different generations of scholars. However, with increasing number of archaeological finds discovered in China in recent decades, this documentation proves

inadequate to describe jade use as reflected in archaeological record (Chen 2009). According to Chen (2009:84), textual records cannot be used to validate jade use in Western Zhou period directly, as researchers of jade who base their interpretations on texts often lack a scrutiny of the reliability of the texts they refer to and the texts, which provide jade names and their functions, do not clearly document their forms. Therefore, textual records cannot be taken for granted in the interpretation of jade use in the past. However, this is not to deny the value of texts entirely. Textual records are a good source to formulate hypotheses about jade use, though they should be tested against data obtained from archaeological records to investigate past jade use in contexts.

Xia (1983:455) has addressed the issue of the unreliability of textual documentation and advocates what he calls "an archaeological perspective to study the taxonomy, nomenclature, and function of Shang jades". He agrees that the composition of *Zhouli* (Rites of Zhou) was much later than Shang dynasty and its systematised documentation of jade name and function may be an ideal of later Confucian scholars rather than an entire reflection of early jade use (Xia 1983:455–6). Therefore, he proposes an "archaeological method that is primarily based on archaeologically excavated pieces, with reference to [handed-down pieces and] texts secondarily, instead of the obsolete approach of using unreliable texts or museum and private collections as the starting point … Adopt its archaic name if it can be certain or give it a concise and clear new name if not. The function that cannot be certain can be left undecided for the time being" (Xia 1983:455–6). Based on these principles, Xia (1983) reclassifies Shang jades (with those from "Fu Hao's tomb" as major examples) into three categories: A. "ritual jades", B. weapons and tools, and C. ornaments. It is noteworthy that he puts "ritual jades" in quotation marks because he reserves this term for six designated jade forms — *bi*, *cong*, *gui*, *zhang*, *huang*, and *hu* — instead of any object used for ritual purposes (Xia

1983:455). These six jades are mentioned altogether in *Zhouli* (Rites of Zhou) as objects used to worship the heaven, the earth, and the four cardinal directions. However, their physical forms are not documented. Though later scholars tried to provide diagrams of them according to the texts and annotations and some Shang jades indeed resemble the shapes, it is not clear how the jades were named in Shang dynasty, and according to archaeological evidence, they were not used as described in the texts, nor were they found as a group altogether (ibid). Thus, Xia (1983) rejects the interpretation of these jades in the ritual text, and it seems the term "ritual jades" here refers to these six jade forms only, with the quotation marks implying his uncertainty about their function as ritual objects in Shang context. Xia (ibid) further divides category B. weapons and tools into five sub-categories according to the shape and position of the blade and the assumed function. He puts weapons and tools together as he observes their similitude in morphology and one object can be used as both weapon and tool (Xia 1983:460). He reckons some weapons are not utilitarian and maybe ceremonial (ibid). For Xia (ibid:463), category C. ornaments comprises both utilitarian ones and artworks. Xia's (1983) approach, therefore, denies a direct link between excavated jades with interpretations in ritual texts. For some jade forms, Xia (ibid) provides analyses of their functions by investigating their morphological features, such as blades, perforations, tenons and mortises. He suggests these features of the jades are indicative of their functions as weapons or tools, ornaments for suspension, and artworks for insertion or display (ibid). Xia's (ibid) analyses provide a good example of how jade forms can inform their use, though his approach to the function of jades, as reflected in his classification of "ritual jades", weapons and tools, and ornaments, is primarily morphologically based and it is worth further exploration how they functioned within specific contexts in the past.

Though Xia (1983) has made a significant step by proposing to study these jades archaeologically, his focus is still on the forms and trying to find their ancient names. The context of jade use is still more imagined than evidence-based, although he did mention the archaeological context of a few unearthed jades at Yinxu. This still applies to Zhu (2016), who puts jades from "Fu Hao's tomb" into four categories: A. utensils and tools, B. weapons, C. ornaments, and D. burial jades. As with earlier researchers, the classification of utensils, tools, weapons, and ornaments are assumed from jade forms and lack of an account of the context. Burials jades here refer to those produced for the purpose of the funeral, mainly those fish, which, according to Zhu (ibid), could have been used for adorning the coffin covering, though without an explanation. Also belonging to this category are some *cong* tubes and *bi* discs that may have been made before Fu Hao's own time (ibid). Although not made an exclusive category, Zhu (2016:4) does note that a few jades may have been involved in burial rituals, such as the *gui* vessels found on top of the outer coffin, the plate within the 6th layer of the fill, the *ge* daggers, spades, and object-mouth-shaped ornaments in the upper layers. These inferences may be based on the location of discovery of the jades, which is given in the excavation report, and thus, have taken into consideration of the archaeological context when discussing the function of these jades. This should be further developed, which is the aim of this thesis.

In sum, previous studies approach the function of jades from "Fu Hao's tomb" typologically, which assumes their functions based on their forms without adequately addressing the context of jade use. This approach is rooted in a strong scholarly tradition built on classical texts. Though classical texts remain valuable resources for reference purposes, this approach neglects the specificity of jade use within context and proves inadequate to account for all jade use in the past. Therefore, moving towards an understanding of jade use within specific

context is an inevitable choice for an "archaeological method" to study jade function. So far, the context of jade use is largely imagined rather than evidence-based, and more consideration should be taken towards the archaeological context.

2.2 Theoretical Framework

This section develops the theoretical framework of this thesis. First, it will address the significance of context when studying jade use. Second, it will develop a new understanding of the context of jade use at "Fu Hao's tomb" by bringing in recently developed assemblage thinking and the notion of nonhuman agency in contemporary archaeology. This helps to reframe the research questions with jades, instead of human, as the foci of investigation, and allows for a reconsideration of jades as participants of the burial process, which is a context of their use.

2.2.1 Context

As mentioned in the previous section, earlier approaches to the function of jades from "Fu Hao's tomb" focus on morphological features of jades, without fully looking into their context of use. Context is an important element to consider when examining the function of objects. On the one hand, the same type of objects can perform different functions in different contexts. Jade axes, for example, were found in different contexts from two Neolithic sites in China: Liangzhu and Shimao. Jade axes were found from tombs at Liangzhu (Zhejiang 2005), while at Shimao, they were found buried beneath the ground beside the stone wall (Shaanxi et al. 2017:50). Though both sites utilised jade axes, it seems they were put into different uses in different contexts. On the other hand, the same object can be put into different uses and carry different meanings in different contexts. An axe can be used as a tool

to chop wood in daily productive activities, as a weapon to attack enemies in battlefields or during emergencies, or as a display object telling tales about past in the museum. Therefore, solely relying on morphological features to determine the function of jades is insufficient without putting the forms back into their context of use.

Also, previous consideration of jade use in contexts such as ritual, ceremonial, military, or more mundane aspects of life is more imagined than evidence-based. Though use-wear analyses may be able to provide some information about jade use in specific scenarios, such as suspension or breakage, whether and how these jades were used prior to the burial are largely inaccessible. However, one context of jade use can be certain, which is the burial itself. According to the excavation report (IA CASS 1980:174–81), all 28 so-called *ji* hairpins were found on the north end inside the inner coffin, all 18 bracelet-shaped objects in the middle, and all 33 handle-shaped objects were also found within the inner coffin. This concentration of the same types of objects indicates that some degree of organisation and planning was involved in the deposition of these jades and they were placed here with care instead of random disposal. Thus, this burial itself can and should be considered as a context of jade use in the past, if not the only one. Therefore, this thesis proposes to examine the function of jades within the context of this burial.

2.2.2 Material and nonhuman agency

A series of recent developments in archaeological theories can help to refresh our understanding of jade and its context of use. The first is the recognition of material and nonhuman agency (Knappett and Malafouris 2008). This concept has drawn attention of contemporary scholarship in a wave of efforts to confront the dualism and anthropocentrism in modern thinking and reposition human beings within the world by reconsidering the effect and role of nonhuman actors. A dualistic mindset views human as the subject, as opposed to

and somewhat detached from, the rest of the world, which is the object for human beings to exert agency on. Contemporary archaeologists find this dichotomy obscuring our understanding of the past, as past societies may not have employed such a dualistic mindset and applying such framework to them may impede our interpretation of their life (Harris and Cipolla 2017:31).

Since the 1980s, archaeologists like Ian Hodder and Timothy Pauketat have started to apply practice and agency theories into archaeological inquiries, which "focus on the recursive connections between agents … and social structure" (Harris and Cipolla 2017:44–6). Here, the process of cultural reproduction is understood in a relational manner though agency is still a uniquely human trait. Gell (1998) starts to pay attention to the agency of objects. For Gell (1998), primary agents (human) distribute their agency to patients through secondary agents (objects) (Harris and Cipolla 2017:75). What is notable is that Gell (1998) "understands agency as a phenomenon that comes from relationships", so that an agent and its counterpart, a patient, have to exist together (Harris and Cipolla 2017:75). Taking one step further than Gell (1998), Gosden (2005) argues for object-centred agency. According to Gosden (ibid), artefacts not only act beyond human control but can also influence how human acts, especially "en masse" by establishing a design template and a system of techniques for the craftsman to follow, and consequently, "bring[ing] about their own reproduction" using "human muscles and skills" (ibid:194). Also concerning the agency of nonhuman, Ingold (2013) proposes to think of making as a morphogenetic process instead of a hylomorphic project. In a hylomorphic project, makers impose internal ideas to shape the external material world — an obviously anthropocentric agency and dualistic divide. In a morphogenetic model, as suggested by Ingold (2013), making is a transformational process for the maker and the material to go through together. In his words, instead of imposing humans' ideas onto the material, the maker *corresponds with* it, "bringing them together or splitting them apart,

synthesising and distilling, in anticipation of what might emerge" (ibid:21). By now, archaeologists have established notions of nonhuman agency, and this allows us to look at human and the rest of the world in a relational manner instead of a subject-object divide.

In the philosopher Bruno Latour's view, human and nonhuman actors are caught up in a symmetrical relationship, or a network, and "the whole world … is made up of these networks" which include both human and nonhuman actors (Harris and Cipolla 2017:129). Thus, "the role of humans and nonhumans together is what is crucial from this perspective" and "agency is a quality of [the] relationship" (ibid:134). Applying Latour's ideas, symmetrical archaeologists have "move[d] towards a genuinely non-anthropocentric approach to the past" and "material things become active participants in the world", instead of merely symbols, tools, or identity markers (ibid). Therefore, symmetrical archaeologists seek to establish an archaeology beyond people, and instead, a discipline of things (Harris and Cipolla 2017:135). The past is no longer all stories of human beings and material things are no longer merely used to extract information about human past; rather, they become the focus of interest for their own stories, in terms of their participation and creation of the past. Another approach termed as New Materialism is pursuing a similar goal to reveal the role of material things in the past, drawing on influences from thinkers such as Gilles Deleuze and Karen Barad (ibid:138). For New Materialists, materials are not inert passive substances waiting for humans to transform; rather, they are "animate, changing, vibrant, and becoming", and actively participated in the creation of past (ibid:146). In archaeology, their roles are mostly examined in design and making regarding their morphogenetic capacity (eg. Conneller 2012; and Ingold 2013), and in human experience of the world in terms of their sensorial properties (eg. Hamilakis 2013), especially in conjunction with assemblage thinking (which will be explored in the next section). By paying attention to the properties of the materials, including "how they work, what they are like and how they change in different

circumstances", researchers can examine the dynamics of the assemblage, or "the process of becoming" (Harris and Cipolla 2017:142–3).

Though current theoretical developments strive to provide a "flat ontology" which places human and nonhuman on an equal footing (Harris and Cipolla 2017:147), it seems the agency attributed to material things is not entirely the same as that of human yet. Current discussion on material/object agency seems to centre on their influence or effects on human or the network or assemblage, which is different from the emphasis on intentionality, consciousness, and proactiveness when we talk about human agency. Whether these are characteristics of nonhuman agency, though, is beyond the reach of this thesis. The discussion on material or nonhuman agency in this thesis is restricted in terms of their ability to make a difference (Dai 2020).

Also, it is noteworthy that the recognition of nonhuman agency should not be regarded as a rejection of human agency. As human beings, we are still active and animate, rather than inert and passive. Perhaps a more equal view of our own agency can be established while we learn to respect and appreciate the agency of others, and it may be productive to recognise that agencies of both human and nonhuman are at play in the creation of the past.

What implications does a notion of nonhuman agency have on the study of the function of jades from "Fu Hao's tomb" then? Firstly, it allows for the treatment of the jade material and objects as the foci of investigation, considering their roles as participants in the past instead of merely affiliations of human — as symbols of their identity or status, for example. It seems a distinction should be made between two statements: A. jade objects are markers of identity and status of the tomb occupant for us today (as the labour and social organisation required in their production indicates the possession of valuables); and B. jade objects were used in the burial by past people deliberately as markers of identity and status of the tomb occupant. In other words, the fact that jade objects can inform us the identity and status of the

tomb occupant today is not guaranteeing that they functioned as markers of identity and status in the past, or how past people perceived them. Perhaps a starting point to approach the function of jade(s) is to investigate their participation in the past, and for jades from "Fu Hao's tomb", their participation in the burial process. The question to be asked — *what did they do?*

Secondly, attention can be paid to their own properties and capacities which render possibilities for their participation in the past and the establishment of relationships with other materials or human in the assemblage. The question of concern here is *what could they do?* A major property of jade that is currently well-acknowledged is its toughness which differentiates jade from other stone materials in terms of working techniques. Unlike other stone materials, for which a common way to turn them into artefacts is through knapping, jade can only be worked through intensive abrasion, often with the help of abrasive sands. Indeed, micro-wear analyses support the application of abrasion to jade in the past, thus suggesting past people were aware of this property of jade too. However, does this have anything to do with the function of jade(s), or their use, rather than production? It seems current discussion on nonhuman agency addresses more cases on the production side while less on the use side of the material. What are the properties and capacities of jade that are relevant to their use and function in the past?

Thirdly, it seems how people treat things, whether working them or putting them into use, is affected by, if not totally dependent on, their understanding of the material. Their use, in particular, seems to be associated with the perceived agency of the material by human. As Conneller (2012:4–6) points out, human understandings of the same material vary considerably across time and space. For example, understandings of gold are not entirely the same from an alchemic perspective, through Amerindians', to that of modern science and the

properties that are considered as relevant differ too (ibid). Also, jade was considered as magnetic by pre-Columbian Mesoamericans and capable of "absorb[ing] water and impart[ing] greenness and fertility" (Saunders 2001:221; in Conneller 2012:3), which is very different from modern science again. Therefore, it might be worthwhile to consider if past people attributed agency to jade, and if yes, what were their perceived agency of the material and how did this affect the way they used jade? In other words, *what did past people think they would do?*

In sum, the notion of material and nonhuman agency enables us to consider the role of jade(s) as participants in the past and ask research questions focusing on them instead of human. Thus, this thesis proposes to investigate the function of jades at "Fu Hao's tomb" in terms of their participation in a past burial. Attention will be paid to their material properties and how these may render possible ways for jade(s) to make a difference within the assemblage.

2.2.3 Assemblage

Assemblage is a central concept in archaeology. It is the object of study for archaeologists, from initial encounter in the field to various investigations after the excavation. Conventionally, an archaeological assemblage refers to "a collection of artefacts or ecofacts recovered from a specific archaeological context" (e. g. Lubbock 1865; Lamplugh 1906; Childe 1956; in Joyce and Pollard 2010:292–3). Lucas (2012:193–8) further differentiates between depositional and typological assemblages in archaeology. The former refers to the spatially associated multiple things found at the archaeological site, while the latter all the bronze *gui* vessels from a tomb, for example. Recently, new dimensions have been added to its meaning in theoretical archaeology. Drawing on assemblage thinking developed in philosophy and political theories, an assemblage is considered as "the coming together of multiple different kinds of things into what we can consider a single whole" (Harris and

Cipolla 2017:139). This new concept of assemblage is embracing the notion of process (Gosden and Malafouris 2015, Malafouris et al. 2021) and multiplicity, allowing us to investigate the past relationally, dynamically, and holistically.

Traditionally, archaeology approaches assemblages with an interest in their formation processes, meaning, and the issue of identity. Formation processes became an early interest of archaeologists to investigate assemblages, as the concept — assemblage — has a geological origin, where the idea of "type fossils" stand for "the group of fossils distinctive of specific geological sediments" (e. g. Lyell 1935; in Joyce and Pollard 2010:295). This geological root leads to earlier archaeological approaches to assemblages regarding their formation through deposition (e. g. Binford 1964, 1981; Schiffer 1975, 1976, 1983, 1987; Clark 1973; in Joyce and Pollard 2010:298–9). While models of site formation strive to understand assemblages through depositional histories, other approaches concentrate on the issue of meaning, which are interested in the human intentionality involved, especially if there was any ritual or symbolic significance underlying structured deposition (e. g. Richards and Thomas 1984; Thomas and Whittle 1986; Thomas 1988; in Joyce and Pollard 2010:299). Also, assemblages have been approached from the perspective of identity. Specific types of artefacts were associated with specific cultural identities or "archaeological culture" as their signature objects (e. g. Griffin 1945; Wedel 1945; Childe 1950; Willey and Phillips 1958; in Joyce and Pollard 2010:296). Despite this arbitrary divide of focus, these three aspects of assemblages — formation, meaning, and identity — may well have been intertwined. The process of deposition is imbued with human feelings and thoughts and may serve to construct meaning and identity during the process.

With the influence of non-anthropocentric theories and attention to materiality, contemporary scholarship has suggested an expansion of the concept of assemblage. Firstly, materials that

were conventionally neglected are now considered as significant component within an assemblage, such as sediments and building materials (e. g. Pauketat and Alt 2003, 2005; Boivin 2004; McFadyen 2007; in Joyce and Pollard 2010:304). Secondly, attention has shifted from the intentionality of human beings for ritual or symbolic purposes to broader factors that have a structuring effect on deposits which might encompass everyday pragmatic activities and the materiality of things (e. g. Pollard 2001; Joyce 2008; in Joyce and Pollard 2010:293, 304). Thus, deposition is now understood as "the product of practices by differently knowledgeable actors whose work assembling sediments and worked and unworked things created the contextually associated assemblages we interpret" (Joyce 2008; in Joyce and Pollard 2010:302), and attention is paid to the processes of assemblage that involve multiple actors beyond human.

Thirdly, a more radical approach to assemblage is suggested by Harris (2018) as "more than representational" under the influence of Deleuze and Guattari (2004). For Harris (2018:87), the paradigm shifts from culture history through processual archaeology to post-processual archaeology are not deviating from the focus of representation, which is an enlightenment heritage. All three "accept implicitly the reality of bifurcations between nature and culture, world and person, and body and mind" (Harris and Cipolla 2017; in Harris 2018:87). These dichotomies impede us from understanding past correctly, for not all things fit into this artificial divide, such as human body, and they may not exist in the worlds that we study. A variety of approaches under the umbrella term "ontological turn" strive to challenge these dichotomies. These include phenomenology, personhood, symmetrical archaeology, the proposal of multiple ontologies, and New Materialism (Harris 2018:88). For Harris (2018:88–9), this New Materialism that embraces the vibrancy of materials and "allows for things, animals, plants and places both to be fundamentally emergent out of relations and to be understood in their own right". Together with inspiration from Deleuze and Guattari

(2004), Harris (2018:89) proposes a transformed assemblage theory for archaeology that "turns our gaze from the appearance of final, fixed, forms to the multiplicity of elements that come together and sustain all the different things in the world". Such an approach to assemblage embraces the notion of process and emphasises becoming (Harris 2018:90).

It is also anti-anthropocentrism, where human beings are no longer "ontologically privileged" as "the sole players in the pasts", although they still "remain important and central to our narratives" (Harris 2018:91). Although this is an assertion to go beyond the representational heritage and embrace the animacy of matter, nevertheless, it does not intend to neglect the role of human beings completely, and issues of identity, personhood, and meaning remain significant in this approach to the complexity of the past (ibid).

Here, assemblages can be multi-scalar, varying from a single object like a pot to larger-scale processes like the coming-into-being of a community (Harris 2018:93–6). This does not only refer to the size, but also the category. For example, what constitutes the assemblage may "include materials, … ideas, beliefs, emotions, memories, symbols and more" (Harris and Cipolla 2017:139).

In conjunction with the notion of nonhuman agency developed in the previous section, what this expanded concept of assemblage offers is a framework to understand the role of material things within the assemblage. Their role can now be examined in their participation in the process of the assemblage in relation to other human and nonhuman actors. A series of contemporary studies have made such endeavours, in addition to those exploring the role of materials and their morphogenetic capacities in design mentioned in the previous section. Harris (2018:92–6) explores how multiple actors, both human and nonhuman, work together within an assemblage in Neolithic Britain, and how communities that consist of both human and nonhuman "were assembled through the process of constructing and using monuments"

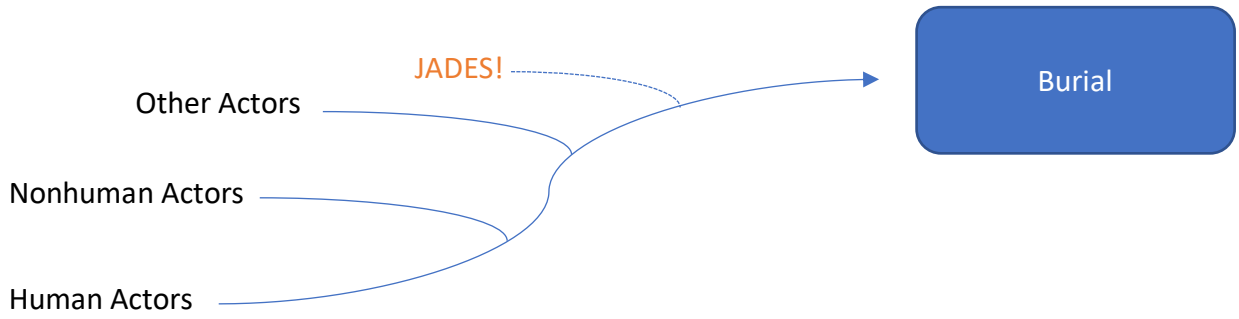
(ibid). Studies also explore how "sensorial properties of things form a critical part of the assemblages through which people live" and experience (e. g. Hamilakis 2013; in Harris and Cipolla 2017:142). Burial practices are also examined from the perspective of the assemblage (e. g. Crellin 2017, Fowler 2017; in Harris and Cipolla 2017:141-2). As Harris (2018:97) puts it, this "new materialism … points to how differing forms of material relationships allow different kinds of history to emerge", and "at its heart is the connection between history and materiality."

2.2.4 Implications

What these contemporary theoretical developments offer is an ontology to view things relationally, dynamically, and holistically, as opposed to dualistically or anthropocentrically. Human is no longer regarded as the sole player of history, and therefore, archaeological record can no longer be regarded as the result of mere human activities. More factors beyond human should be considered to have resulted in the archaeological evidence which archaeologists investigate and interpret. Perhaps, the creation of the past can be reimagined in terms of the interplay of agencies.

For the study of the function of jades from "Fu Hao's tomb", this provides a refreshed framework to understand the role of jade(s) and its/their context of use. On the one hand, jade material and objects are no longer seen as inert passive things for human to exert agency on. Their role as active participants in the creation of the past is to be explored. On the other hand, the expanded notion of assemblage allows us to view the burial as a process that involves both human and nonhuman actors. Thus, to understand the function of the jades within context of use at "Fu Hao's tomb" is to understand their role as participants within the creative process of the burial, in relation to other human and nonhuman actors of the assemblage (Figure 2.1).

Figure 2.1 Jades among other human/nonhuman participants within the creative process of the burial.



This new theoretical framework is also enabling us to put forward research questions in a new way, focusing on the jades instead of human. As with human (cf. Renfrew and Bahn 2020), questions can be asked in terms of the "who", where, when, how, and why regarding the participation of jade(s) within the assemblage at "Fu Hao's tomb".

1. *"Who" are they?* — "Who" are the jades? What are they like? Where are they from? What are they made of and how?
2. *Where were they?* — Where did they participate in the burial?
3. *When did they join the assemblage?* — prior to the burial, at an early stage, or during a later phase?
4. *How did they participate in this assemblage?* — Did they take presence singly or together with other human or nonhuman actors? Are they related to any other human or nonhuman actors? What did they do and what were done to them? Did someone put them there? Have they taken any agency from others? Did they exert any agency towards others?

5. *Why did they participate in this assemblage?* — Is there any property or capacity of jade that were considered as relevant? What could they do? What did past people think they could do? Did they stand for anything?

2.2.5 Summary

In sum, this thesis argues that the burial itself was a context of use for jades from "Fu Hao's tomb" and proposes to investigate jade use within this context. New theoretical developments in the notion of material and nonhuman agency and assemblage allow us to consider the role of jades as participants in the creative process of the burial among other human and nonhuman actors. Research questions are rearticulated under the guidance of this new theoretical framework, with a focus on the jades instead of human.

2.3 Research Methods

This section develops research methods to answer the research questions raised above. Specific methods will be applied to answer specific questions.

2.3.1 "Who" are they?

This question concerns what jades participated in the burial of "Fu Hao" and will be discussed in Chapter 3. A holistic account of the typology, cultural origins, material (colour, provenance, chemical composition), design (form and surface decoration), and production (working techniques) of the jades will be provided. This *jadeography* intends to provide an overview of what kinds of jades were used and deposited at "Fu Hao's tomb" — what they are like, where they are from, and how they were made. Characteristics of jades will be summarised while implications these have on their use will also be drawn.

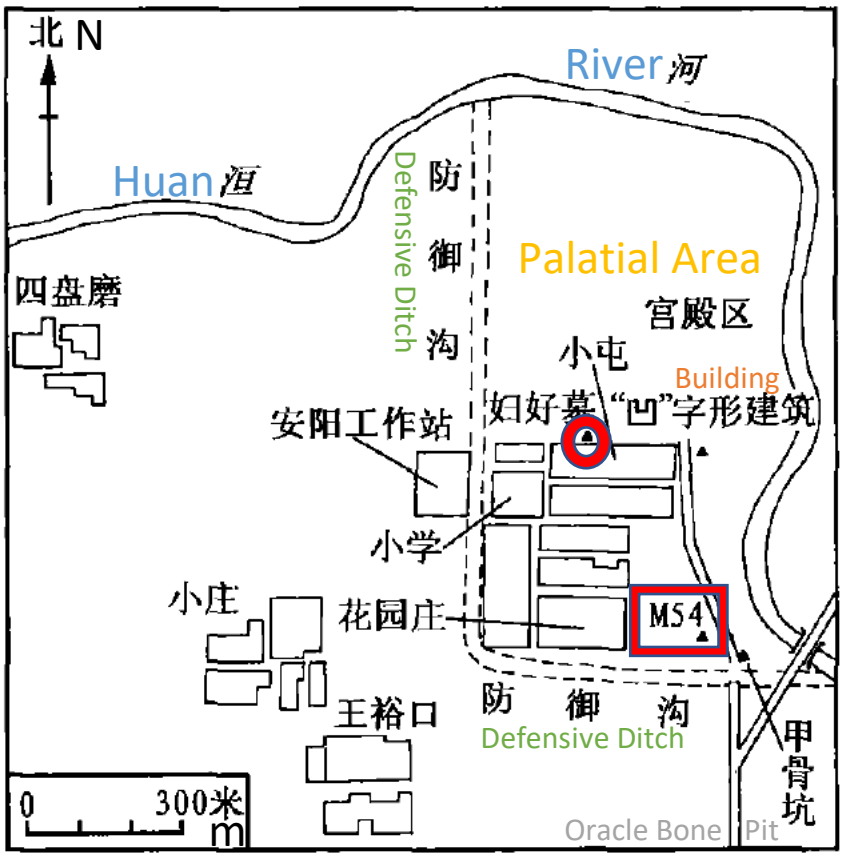
2.3.2 Where and when?

Chapter 4 will examine where and when jades participated in the burial process at "Fu Hao's tomb". It is assumed in this thesis that the placement of jades inside the tomb remains unchanged although their position could be distorted by factors such as the collapse of the coffins. Therefore, location of discovery of the jades is used as approximation of their original placement. Thus, Chapter 4 categorises the jades from "Fu Hao's tomb" according to their location of discovery to understand their pattern of distribution/deposition. The structure of the tomb will be illustrated and details of the jades from each location in terms of their typology, condition, and other associated finds will be provided. Through laws of stratification, especially that of superposition, relative order of deposition can be approached and when the jades joined the burial can be inferred.

It should be noted that the key information on the placement of jades at "Fu Hao's tomb" is very limited. Due to underground water, the exact placement of most jades became unknown, except a few in the fill. Therefore, details about jade types and their positions within the inner coffin can only be explored by referring to other similar burials for possibility. According to Hu (2010:134), a few late Shang burials exhibit a similar feature as "Fu Hao's tomb", which is the structure over the pit-burial above ground, including M311, M312 of Dasikong Village, and M54 of Huayuanzhuang Locus East (Ya Chang's tomb). Among them, M54 of Huayuanzhuang Locus East (Ya Chang's tomb) is best preserved and documented, and therefore, can be used as a case for reference and comparison for "Fu Hao's tomb" (Xiaotun M5). Two other adjacent late Shang burials — Xiaotun M17 and M18 — are also referred to. Ya Chang's tomb (Huayuanzhuang Locus East M54) is recognised as the burial of a late Shang nobility Ya Chang, who is identified as a male about 35 years old (IA CASS 2007:75). The tomb occupant is buried in prone position and heading north, as shown by the partly preserved skeleton (ibid). Like "Fu Hao's tomb", it was also found at the temple-palatial area

of Yinxu and is about 500m away from "Fu Hao's tomb" (IA CASS 2007:68) (Figure 2.2). Another commonality that brings "Fu Hao's tomb" and Ya Chang's tomb together is that the house foundations found above the burials protected them from disturbance. Therefore, both sites were found to be intact and structured in a similar way. At a scale slightly smaller than "Fu Hao's tomb" (about 73.7% in opening size),[3] Ya Chang's tomb yields only 222 jades, about 29.4% of "Fu Hao's tomb".

Figure 2.2 Location of Fu Hao's tomb (M5) and Ya Chang's tomb (M54).
After Anyang 2004. Figure 1, p. 7.



[3] In terms of opening size, "Fu Hao's tomb" is about 22.4m^2 and Ya Chang's 16.5m^2.

2.3.3 How and why?

Chapter 5 investigates the how and why jades participated in the burial process. It will provide an interpretation of the burial as an assemblage first and then situate the jade(s) in relation to other human and nonhuman participants of the assemblage. Attention will be paid to the material properties of jade. It will then discuss how these material properties of jade may have rendered possible relationships jade(s) had with others and the way in which jade(s) could have made a difference to the assemblage.

2.4 Data

This section introduces the data used for analyses in this thesis and their source.

A database is built to account for all the information about the jades from "Fu Hao's tomb" according to the excavation report (IA CASS 1980). As can be seen in Figure 2.3 below, each row makes an entry, documenting all the relevant information of one jade object. Each entry starts with the object number, followed by the categorical and typological classification done by the excavators. The following two columns are descriptions of the material colour and texture of the jade, where provided. Accounts of the form, motif, and working techniques or technical traces are also provided in the excavation report. Measurements of the jades are given in centimetres, and they vary in accordance with the object type. Conditions such as breakage, damage, fragmentation, and weathering are logged where provided, as with traces of use-wear. Information on archaeological context includes mainly the placement of jades, but also the associated objects, the orientation, and possible combination of objects inferred by the excavators for some. The source of the data is given for each entry at the end of every row. The exhibition catalogue (IA CASS and Guangdong Museum 2016) is also referred to for the photos of the jades and specific information.

Figure 2.3 Structure of the database.

	Object Number	Category	Sub-category	Object Typology	Material (Colour)	Material (Texture)	Form	Motif/ Surface Decoration	Working Technique/ Technical Traces	Size (cm) L	…	Size (cm) T	Condition	Use-wear	Archaeological Context	Reference
1																
2																
…																

Information on other tombs for reference and comparison is sourced from relevant excavation reports (Anyang 1981, Anyang 2004, and IA CASS 2007).

2.5 Reflexivity

As a human being, I have my own limits and thus am biased in certain ways. Therefore, it is necessary to reflect on how my subjectivity affects the research at all stages. Being reflexive does not mean eliminating bias for absolute objectivity but being aware of my subjectivity and making it explicit. As modern Chinese, I am by no means a member of the distant past, and therefore "indigenous archaeology" may not be the most accurate description of this research, for the past is open to researchers from all kinds of backgrounds, and I am one who is particularly influenced by modern Chinese education and contemporary Western scholarship. Despite efforts for explicit reflexivity, this thesis ultimately will be a report of my view of the past based on the materials I analyse. This section will provide a reflexive account of my prior knowledge about the subject, decisions made regarding the choice of the topic, and sources of inputs that have inspired the development of this research.

This research has taken inspiration and input from various sources and has been constantly evolving and explorative. Its coming-into-being has been subject to a series of encounters

during my journey of graduate studies. These include the guidance of my supervisors, availability of materials and my own capability as the researcher. Initially, I took interest in jade for its being both tough and gentle as a material. I took this as a model for personality in my journey of self-exploration. While I was confused after embracing diverse world cultures, jade came into my mind as a kind of ideal and guiding principle in dealing with the relationship between self and others. It is the ideal of holding onto both a solid self while at the same time being able to sustain a harmonious relationship with others. Associating jade with moral ideals is not my invention. The Confucians have long taken jade as a model for gentlemen's virtues. This embodiment of humanity in materiality resonates with contemporary discussion on the human/non-human dichotomy. These prior understandings have had profound influence in my choice of research topic and later interpretation of the material.

The scope of this research is restricted within one site and is indeed limited by my personal capability as the researcher to grasp archaeological material within the given time limit. A question concerning me at an earlier stage of the research is how this magnitude of jades from diverse origins all gathered into this one tomb. I later reckon this trajectory of research would require national efforts and is far beyond the reach of my own, so I decided to move on to a more manageable research topic by focusing on jade use within one tomb, hoping that in-depth understanding of one site can contribute to the knowledge of a broader picture, which accumulates from incremental knowledge of single sites.

The understanding of the burial as a practice of assembling human and nonhuman elements brought me to assemblage theory and the interest in jade itself certainly contributed to my orientation towards material and nonhuman agency theories and a focus on the jade material in this research.

2.6 Conclusion

The typological approach seen in previous studies on jades from "Fu Hao's tomb" assumes their function from their form, which neglects the context of use. This thesis proposes to examine jade use in the context of this burial. Recent development in archaeological theories provides a refreshed framework to study the function of jades within context of use. Assemblage thinking allows us to consider the context of jade use as a relational and dynamic process involving diverse human and nonhuman participants while the notion of material and nonhuman agency enables us to consider the role of jades as participants within this process and in relation to others. Therefore, to understand their function is to understand the "who", where, when, how, and why of their participation in this assemblage.

Chapter 3 “Who” are they?

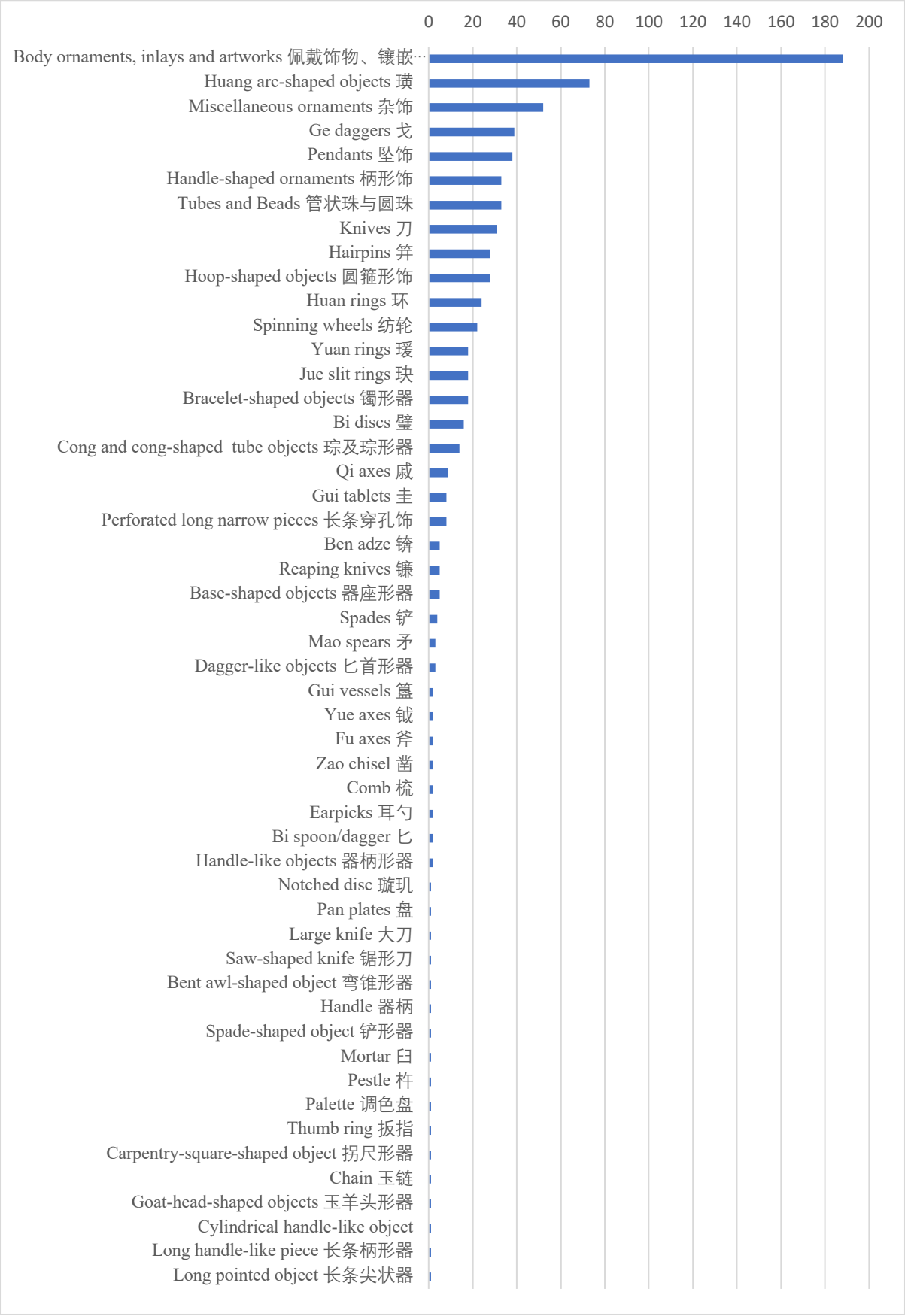
This chapter investigates what jades were used and deposited at “Fu Hao’s tomb” by providing a holistic account of their typology, cultural origins, material, design, and production — a *jadeography*. This systematic description of the jades serves to depict an overview of the jades used at “Fu Hao’s tomb” — what they are like, where they are from, and how they were made. Implications these characteristics have on jade use will also be drawn.

3.1 Typology

“Fu Hao’s tomb” yields 756 jade objects in total.[4] The excavators provide a systematic typological scheme to classify them (IA CASS 1980:114–95). Although their interpretation of the function of jades cannot be taken in full, their work provides a comprehensive description of the morphological features of the jades. Figure 3.1 below shows a summary of all the jade types found from “Fu Hao’s tomb” in the order of object counts.

[4] The total number of jades is reported as 755 in the excavation report (IA CASS 1980:114). However, 756 entries are listed within the “jades” section (ibid:114–95). Possibly a piece of axe material (M5:1252) is overlooked, as 75 entries are listed as “tools” instead of 74, which is the number given in the excavation report (ibid:141).

Figure 3.1 Summary of jade types from Fu Hao's tomb (total: 756). Source: IA CASS 1980:114–95.



As shown in Figure 3.1, the largest group of jades are those considered as "body ornaments, inlays and artworks" by the excavators. There are 188 of them in total, consisting of animals, human figures, and imaginary creatures (Figure 3.2, Figure 3.3). Notably, 155 out of them have a zoomorphic theme, ranging a great diversity of 25 kinds of animals (Table 3.1).[5] These animals cover inhabitants of the sky, land, and water. Among them, the top two are fish (75), accounting for nearly half of all zoomorphic jades, and birds (41), consisting of about 8 different kinds. Among the birds, parrots come the most, with an outstanding number of 21. Other kinds of birds include owls, eagles, cranes, geese, a dove, a swallow, a cormorant, and some unidentifiable ones. Apart from animal jades, the other 33 jades comprise some anthropomorphic figurines and imaginary creatures, such as dragons, phoenixes, and strange birds or monsters. These objects are relatively small, generally within 10cm in height or length and only a few over 10cm. They are either small sculptures in the round or incised flat pieces, which are largely a few millimetres thick. These objects are considered by the excavators as body ornaments and inlays since many of them have some perforations or tenons, enabling suspension, insertion, or attachment in general, while those without are identified as artworks given their exquisite craftsmanship.

[5] Note that some jades from other jade types also have a zoomorphic theme. Xia (1983:464) points out there are 266 animal-themed jades from Fu Hao's tomb, accounting for 35.5% of all 755 jades.

Figure 3.2 Ornaments for wearing or insertion and artworks (total: 188).
Source: IA CASS 1980:151–74.

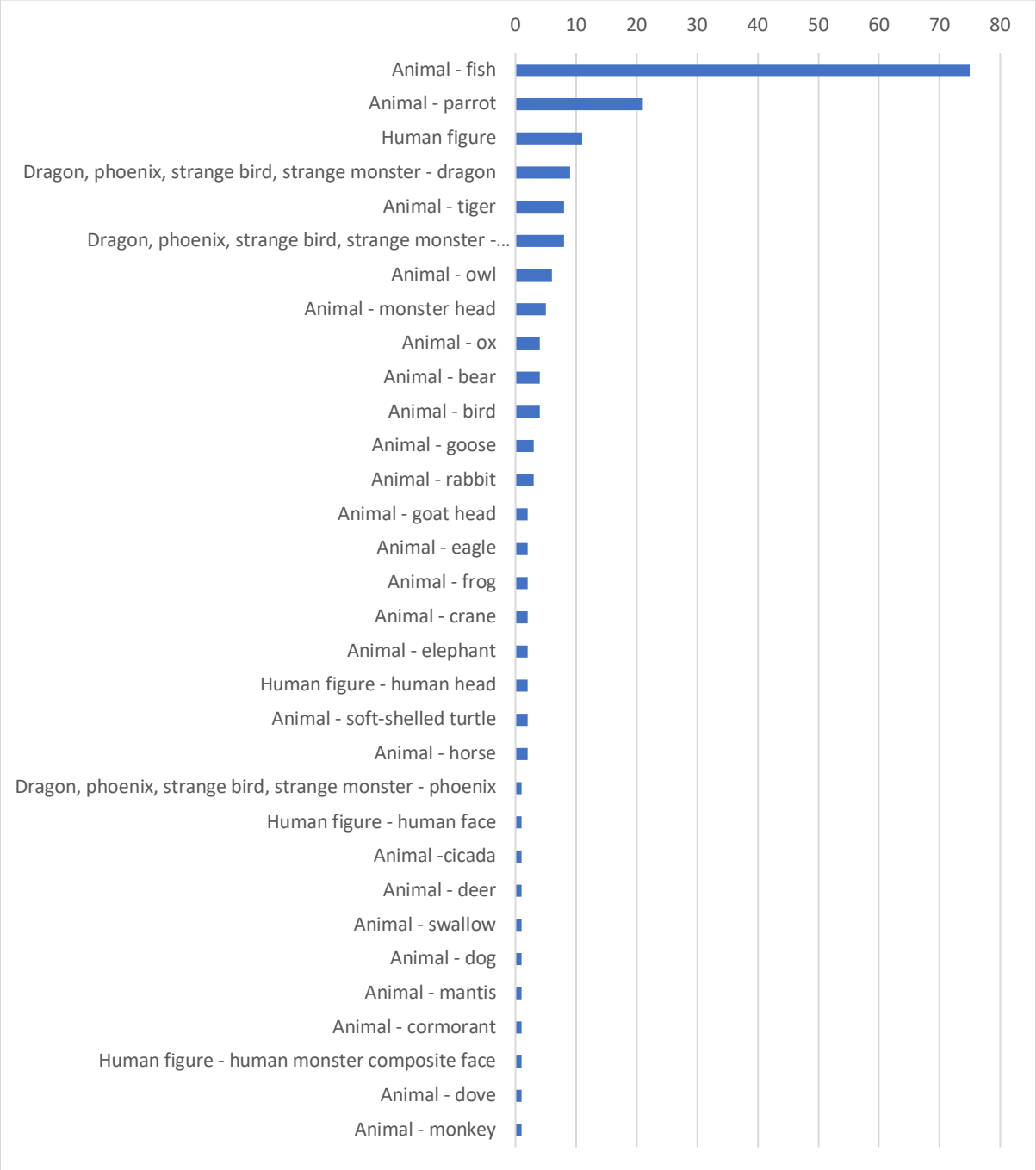


Figure 3.3 Drawings of jade human figure, animals, and imaginary creature.

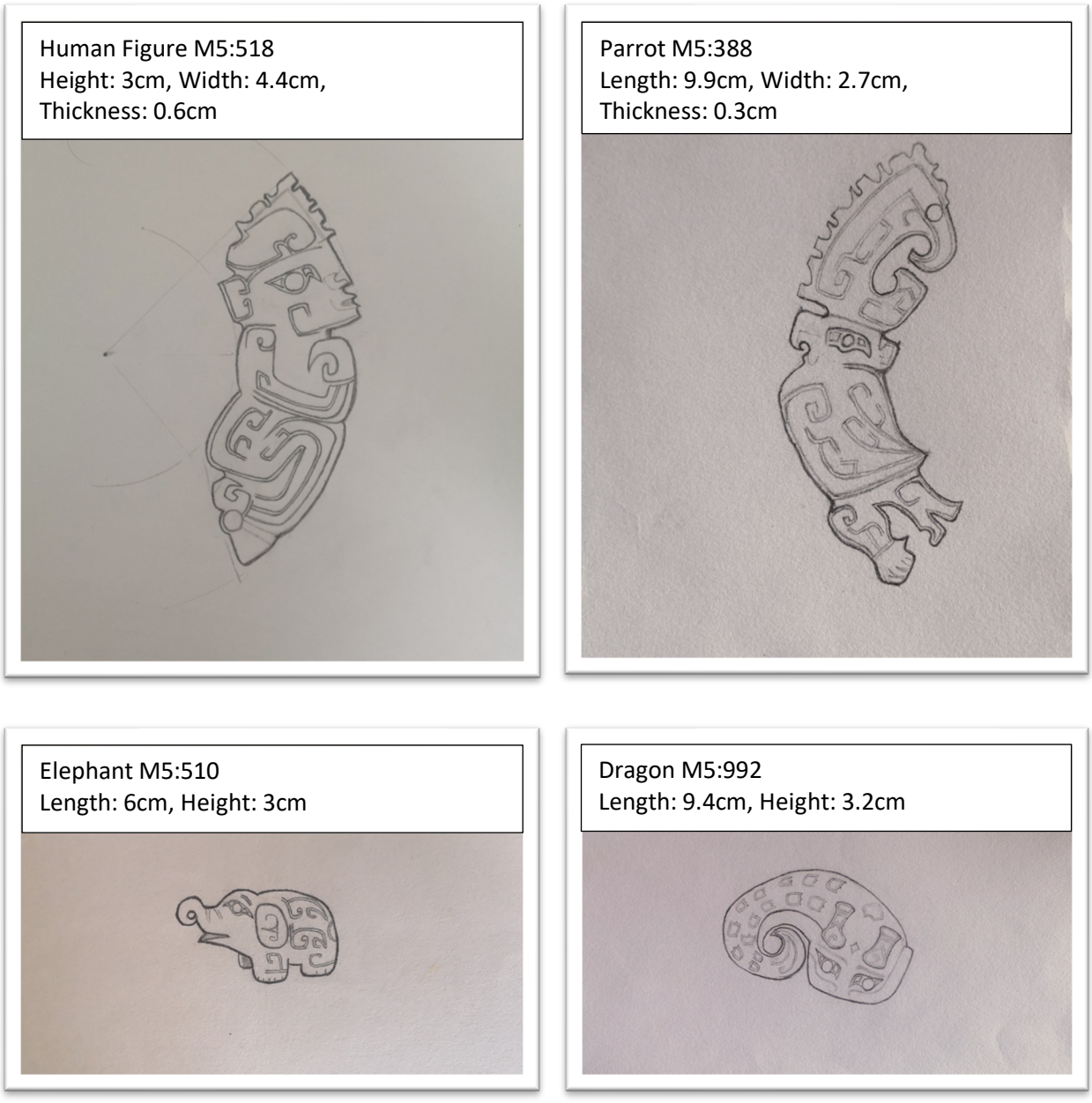


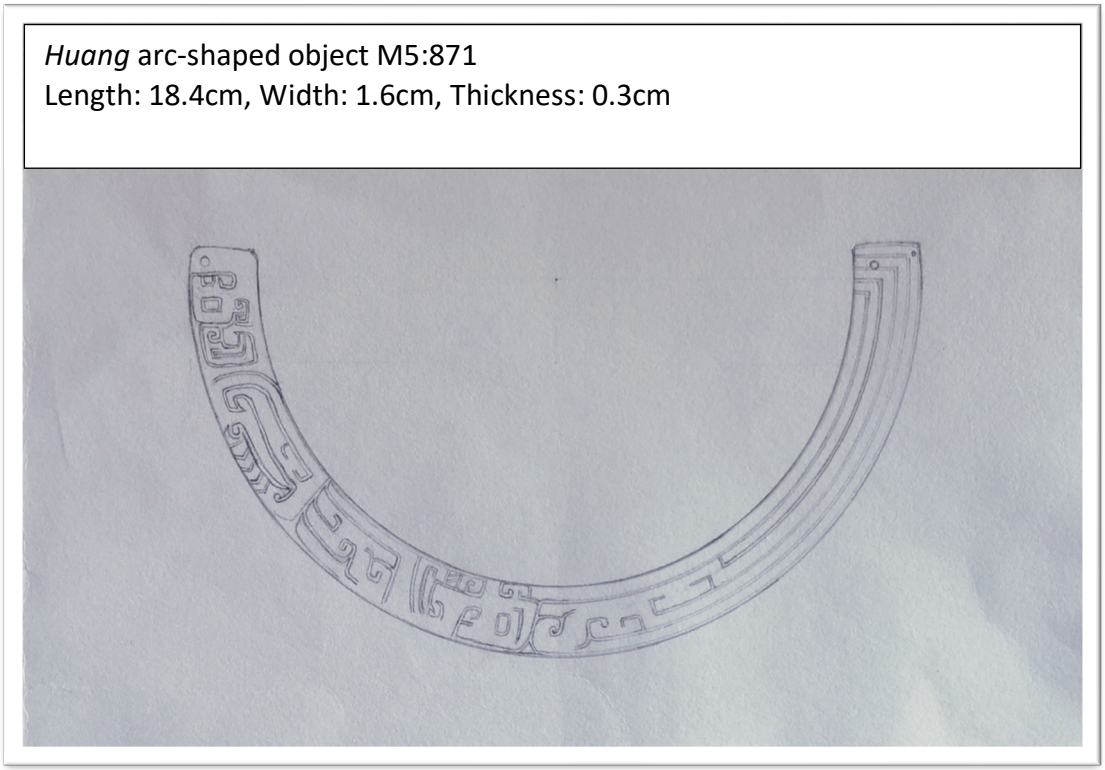
Table 3.1 Summary of animals in jade "ornaments for wearing or insertion and artworks". (total: 155). Source: IA CASS 1980:159–74.

	Class	Animal
Invertebrate	Insecta	Cicada (1, 0.65%), mantis (1, 0.65%)
Vertebrate		Fish (75, 48.39%)
	Amphibian	Frogs (2, 1.29%)
	Reptilia	Turtles (2, 1.29%)
	Aves	Parrots (21, 13.55%), owls (6, 3.87%), birds (unspecified species) (4, 2.58%), geese (3, 1.94%), eagles (2, 1.29%), cranes (2, 1.29%), swallow (1, 0.65%), cormorant (1, 0.65%), dove (1, 0.65%)
	Mammalia	Tigers (8, 5.16%), oxen (4, 2.58%), bears (4, 2.58%), rabbits (3, 1.94%), goat heads (2, 1.29%), elephants (2, 1.29%), horses (2, 1.29%), deer (1, 0.65%), dog (1, 0.65%), monkey (1, 0.65%), monster heads (5, 3.23%)

Also shown in Figure 3.1, the second largest group comprise the "*huang* arc-shaped objects", including 73 pieces, some plain on the surface while some with incised motifs on them. Most of them are about 1/3 or 1/4 of a circle and only a few semi-circular in shape (Figure 3.4). Some of them seem to make a set as they can match and make a complete ring, usually 2 or 3 together, as identified by the excavators (IA CASS 1980:123–4). A few of them seem to be produced by slicing one thick *huang* arc-shaped object into a few thinner pieces (ibid). Some are identified by the excavators as dragons while some others as fish (ibid:124–7). These

objects are mostly perforated on two ends which can be used for suspension or strung with each other. These objects are relatively small too, mostly within 10cm in length (a few exceptions ranging between 10–20cm long), about 1–3cm in width (a few outliners 6.3cm max and 0.8cm min), and a few millimetres thick.

Figure 3.4 Drawing of a jade *huang* arc-shaped object.



The third largest category "miscellaneous ornaments" consist of a range of objects with irregular shapes. Some of them are unique while others are more than one and it is not sure if such repetition makes them a set altogether. These objects are relatively small, mostly within or around 10cm in length. The excavators speculate these objects to be ornamental based on their forms (IA CASS 1980:190). Indeed, they mostly carry perforations or tenons that make them likely to be affiliated to something else, though it is not clear what was associated with

them and how. As reported by the excavators (ibid), a few tubular objects can make sound like a whistle when blown, though it is not clear if this was their intended effects.

"*Ge* daggers" (Figure 3.5) is another major jade type, 39 in total, among which 19 are complete with slight breakage, 18 are broken but can be generally reconstructed into a complete piece again, and 2 are much broken (IA CASS 1980:130). Though the damage could have happened before or after the burial as well, since most jade types remain intact, it can be inferred that breakage of objects was conducted upon certain jades and may have been intentional, possibly as part of the funeral rites. These *ge* daggers mostly carry a straight hilt (ibid). As seen in Figure 3.6, these 39 *ge* daggers vary greatly in length, ranging from 10cm to 51cm, though mostly within 10cm in width. The largest one (M5:1313) is broken into several pieces with some parts missing (IA CASS 1980:137). The remaining piece is 51cm in length while the original object should have been even longer (ibid). The excavators consider these *ge* daggers as ceremonial rather than utilitarian. Although most of them indeed demonstrate very fine craftsmanship and remain intact, some are chipped along the blades. It is not clear whether these should be use-wear, deliberate breakage, or damage caused through deposition. Some of these jade *ge* daggers carry traces of hafting at the front of the hilt, which is about 3.5cm wide (ibid:131). Given the size of these *ge* daggers, they cannot all be dressed on the body of the deceased. However, they can be regarded as part of the equipment prepared for the deceased.

Figure 3.5 Outline of a jade *ge* dagger with bronze hilt.

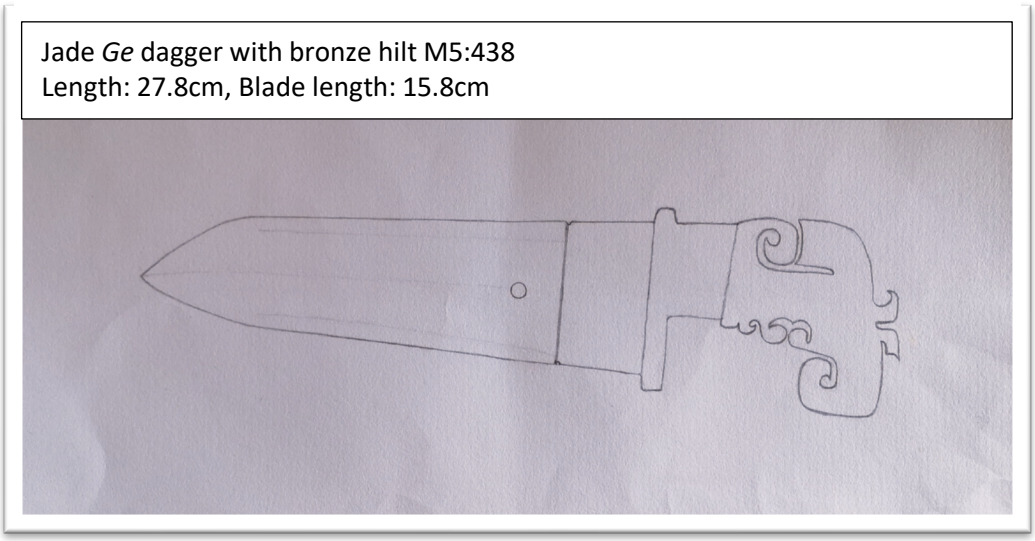
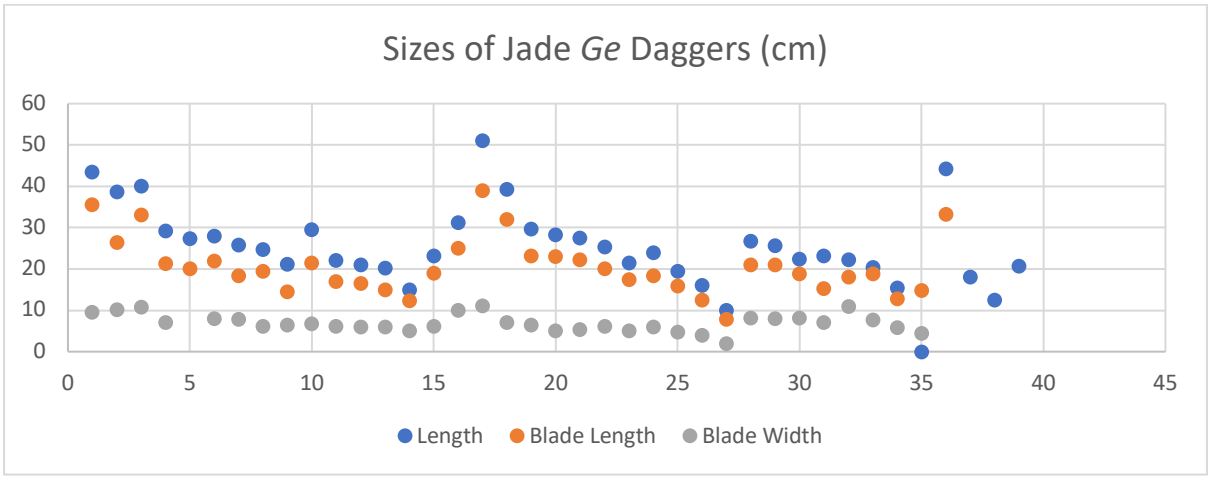


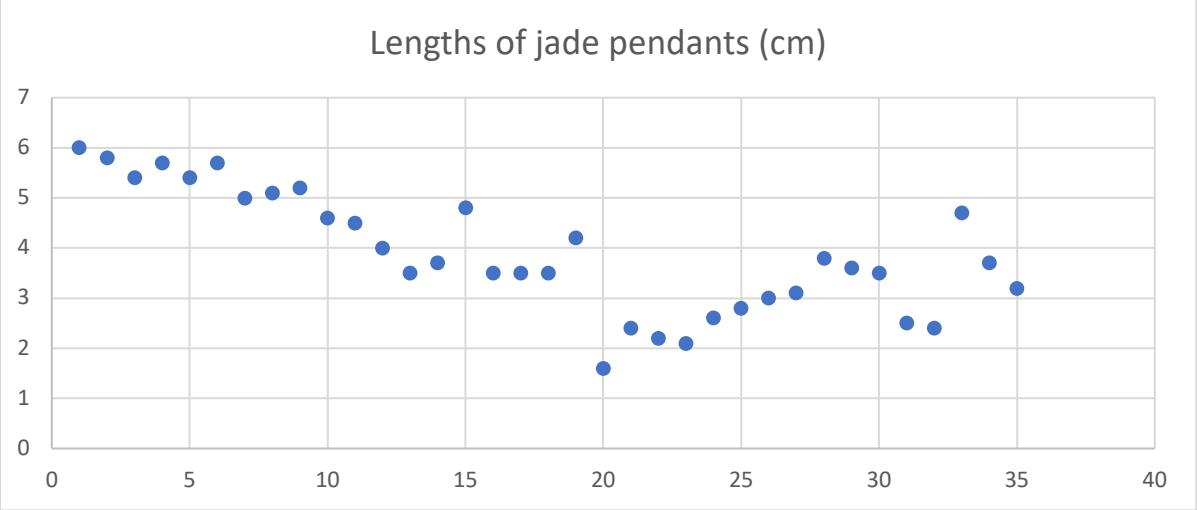
Figure 3.6 Sizes of jade *ge* daggers. Source: IA CASS 1980:130–9.



Notes:
1. At point 35, the value for the length of M5:486 is given in text together with the length of the hilt, making it appear to be zero in the plot. Its real value is 15.6cm.
2. Blank cells are shown as gaps.

There are 38 jade objects classified as pendants by the excavators. Most of them are trumpet-shaped tubes perforated through the centre, some identified with trace of suspension inside by the excavators (IA CASS 1980:181–2). Some of them carry protruding ridges around the narrow waist in the middle, a few with cicada or Y-shaped petal motifs on the surface, while others are plain on the surface. They are largely around 2cm in diameter while ranging between 1.6cm and 6cm in length (Figure 3.7). By referring to other small tombs at Yinxu, the excavators suggest the thin and tall ones might have been pendants hanging on the garment or belt, while the short and thick ones could have been fittings on some objects. According to Zhu (2016:16–23), the majority of these pendants are from archaeological cultures earlier than Fu Hao's own time, and their origins are diverse, including Qijia Culture, Late Shijiahe Culture, Erlitou Culture, and Erligang period of Shang dynasty. It seems trumpet-shaped objects are a pervasive jade type in a large geographical area from c. 2400 BC to c. 1200 BC. A few objects take other shapes close to columns, and some solid ones without perforation may not have been used as pendants.

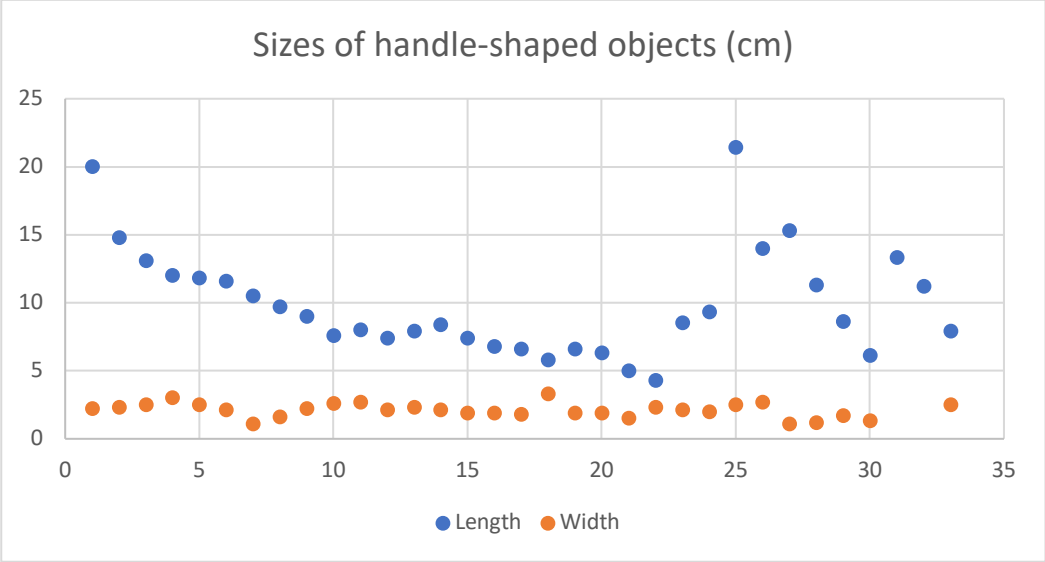
Figure 3.7 Lengths of jade pendants. Source: IA CASS 1980:181–3.



Note:
1. The lengths for three pendants M5:592, M5:346, M5:1036 are not given in the excavation report.

There are 33 handle-shaped objects from “Fu Hao’s tomb” in total, all found inside the inner coffin and mostly with a tenon. The majority of them are square columns or flat rectangular pieces in shape, with exceptions of M5:1297 and M5:1298 being stick- or awl-like. Some are plain on the surface while others are incised with mushroom-shaped cloud motifs or Y-shaped petal motifs. They are ranging between 4.3cm and 21.4cm in length and all within 5cm in width (Figure 3.8). By referring to the placement of such objects in other small tombs at Yinxu, it is speculated by the excavators that they might have been some ornaments for wearing or object handles for insertion (IA CASS 1980:178, IA CASS and Guangdong 2016:283). However, it should be noted that most of these handle-shaped objects carry a tenon, making them more likely to be used as handles inserted into something else instead of being worn on the body.

Figure 3.8 Sizes of jade handle-shaped objects. Source: IA CASS 1980:178–81.



Note:

1. At points 31 and 32, the widths of M5:1297 and M5:1298 are not given in the excavation report.

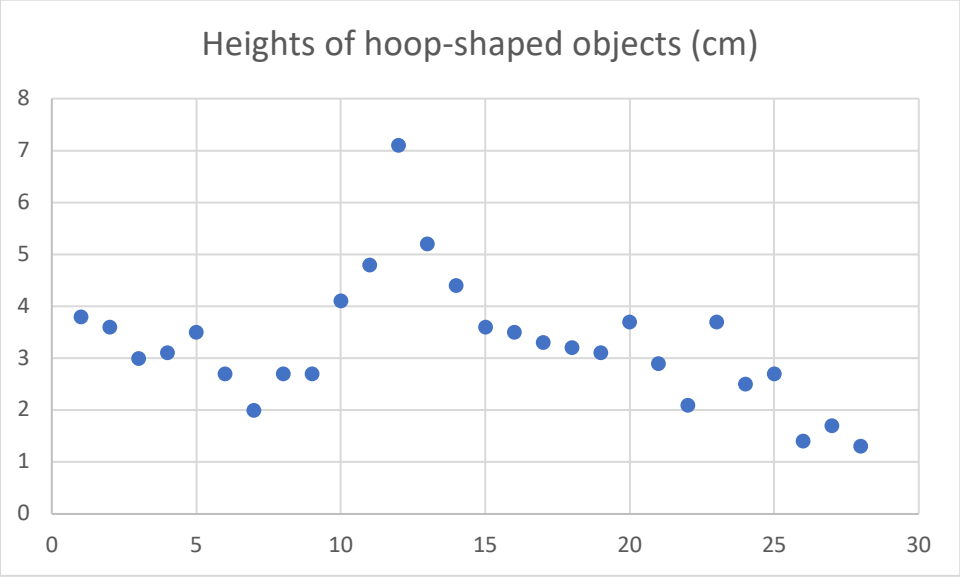
The excavators find 30 jade tubes and 3 beads in total. They classify the tubes into three groups — large, medium, and small (IA CASS 1980:184). They range between 2–5cm in length (ibid:184–5). Some carry traces of suspension inside the perforation. One is incised with motifs on the surface. The beads are 0.5–1.4cm in height. It is not clear whether they used to belong to one group in the past.

There are 28 *ji* hairpins in total, all found on the north end inside the inner coffin (IA CASS 1980:174). As observed by the excavators (ibid), they are commonly awl-shaped, and similar to *ji* hairpins made of bone during Yinxu Culture Phase I and II, but different from Phase III and IV ones, which are thick in the middle and thin on the top (ibid). These 28 *ji* hairpins have three different types of tops. Type I is decorated with *kui* dragon or parrot motifs on the top and has a flat body. There are two objects within this type, though one (M5:1274) is broken with the top missing. Seven Type II ones mostly carry a tenon or mortise that allows for the installation of a top, except one (M5:1271) broken on the top. There are 19 Type III ones, mostly taking the shape of a long thin cone with flat top, mostly plain on the surface, a few (M5:1277, M5:528; M5:1271 of Type II also seems to resemble them) with circles of incisions on the stick. A few (M5:1272, M51323, and M5:531) have a thinner and more squared stick. M5:537 has a small protrusion on the top and may have had some case-like object attached to it. There are three other broken ones not given much detail in the excavation report. These *ji* hairpins are 8.2–19.7cm in length, mostly within 1cm in diameter.

There are 28 hoop-shaped objects found from “Fu Hao’s tomb”. They are all column-shaped with a large hollow at the centre, though varying significantly in size. They range between 2.7cm and 7.7cm in diameter and 1.3–7.1cm in height (Figure 3.9). Their walls are 0.1–0.6cm thick. Most of them have one or two small perforations along the rim, a few in the

middle of the object (M5:1010, M5:1062). Some are plain on the surface, while others are decorated with bands of protruding ridges or parallel incisions, and mushroom-shaped cloud motifs, Y-shaped petal motifs, or cicada motifs. Some are reported with trace of suspension on the inner wall of the object (M5:1006, M5:1060, M5:1121). It is noteworthy quite a few of these hoop-shaped objects are slightly broken. The excavators infer that these hoop-shaped objects may have different functions, some likely to be fittings attached to a wood handle while some may be pendants (IA CASS 1980:185).

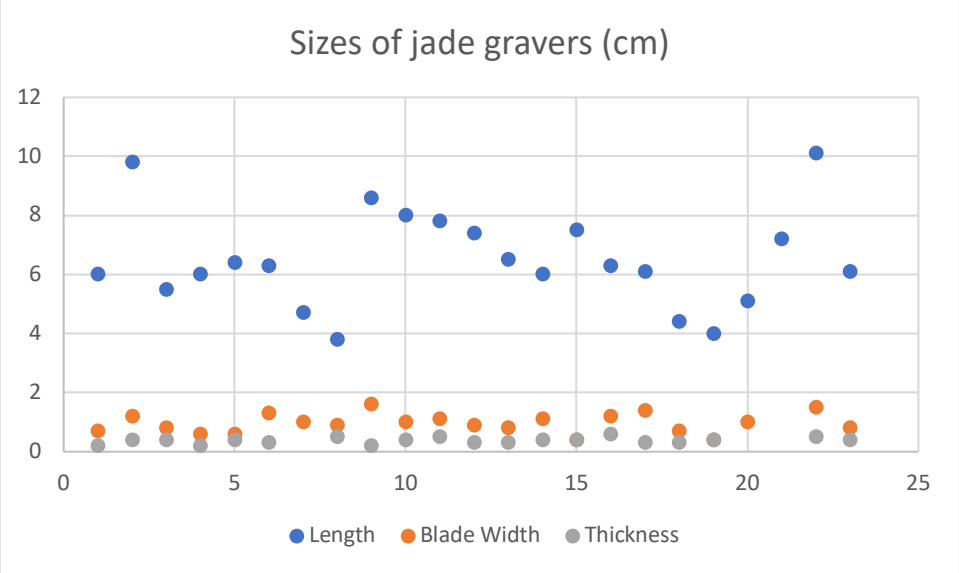
Figure 3.9 Heights of jade hoop-shaped objects. Source: IA CASS 1980:185–8.



"Knives" make another relatively significant group, consisting of 31 objects, the majority of which are gravers. The gravers are relatively small, ranging between 3.8cm and 10.1cm in length and 0.2–0.6cm in thickness, the blade width 0.4–1.6cm (Figure 3.10). Most of them have the top carved into animal shapes, including *kui* dragon, birds, fish, and geckos. Two of them have their handles taking the shape of an awl (M5:962, M5:1270). The birds are all

depicted in profile. The fish ones are mostly in profile too, a few bending into an arc (M5:420, M5:1307). The geckos are sculpted three-dimensionally. The animal gravers are mostly perforated and the excavators infer they can be used for wearing, combining both artistic and utilitarian aspects (IA CASS 1980:143). Other than gravers, there are a few small knives of other kinds. Some take the shape of a bronze knife with raised point and their hilts are probably made of another material and mostly missing (Figure 3.11). M5:559 and M5:918 are considered as scraping knives, in the shape of a crescent and trapezoid, respectively.

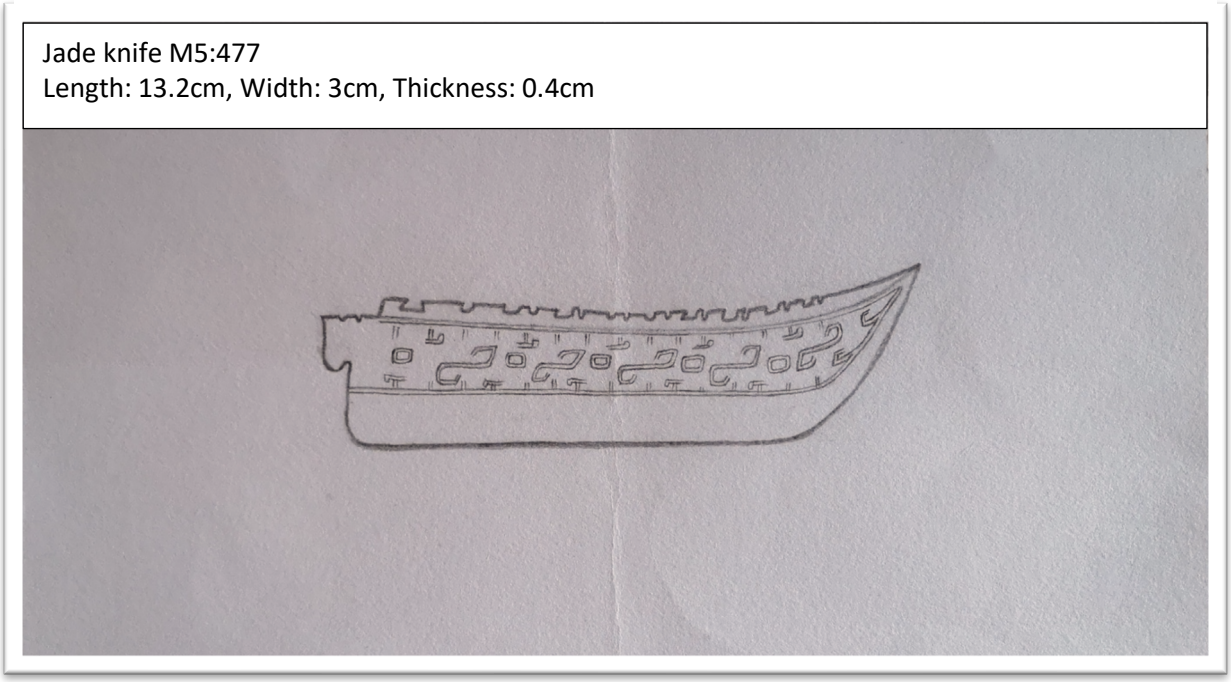
Figure 3.10 Sizes of jade gravers. Source: IA CASS 1980:143–6.



Notes:

1. At points 7 and 20, the thickness of M5:957 and M5:960 are not given in the excavation report.
2. At points 15 and 19, the blade width and thickness of M5:421 and M5:1307 are the same.
3. At point 21, the blade width and the thickness of M5:691 and M5:1298 are not given in the excavation report.

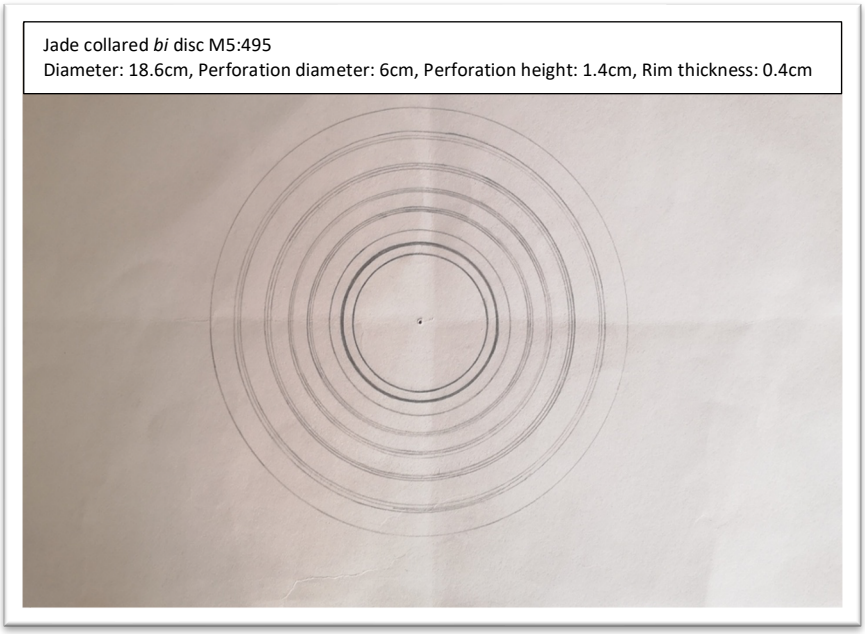
Figure 3.11 Drawing of a jade knife.



Several objects take a circular shape, such as "*huan* rings", "spinning wheels", "*yuan* rings", "*jue* slit rings", "bracelet-shaped objects" and "*bi* discs". They add up to include 116 objects, with around 20 falling into each type. *Huan* rings, *yuan* rings, and *bi* discs are all circular objects, varying in the width of the ring though. The *huan* rings range between 2.2cm and 12.8cm in diameter, 1.1–6.6cm in perforation diameter, and 0.1–0.8cm in thickness. The *yuan* rings range between 5cm and 9.8cm in diameter, 2.8–6.5cm in perforation diameter, and 0.2–0.6cm in thickness. The *bi* discs range between 4.5cm and 18.9cm in diameter, 1–7.5cm in perforation diameter, and 0.2–0.7cm in thickness. Despite this artificial divide, they all present some common features. In terms of surface decoration, some are plain while others carry grouped concentric circles. Some of these objects are protruding along the perforation, making a collar along the inner rim (Figure 3.12). Not all of these objects are perfectly circular in shape, some have an irregular outer circumference, and M5:943 is more squared

than round. M5:91 swells on one side while the other is flat. A few are perforated with small holes, such as M5:913 (also with trace of cutting on the surface) and M5:451, the aim of which unclear. It is noteworthy that there are a few objects among all three types found broken or slightly damaged. It is not clear whether this resulted from intentional ritual activities or other events such as the collapse of the coffins. One is even found with cinnabar around the broken area (M5:456). One irregular piece (M5:1326) has its disk carved into openwork. It is not clear if this is an unfinished product.

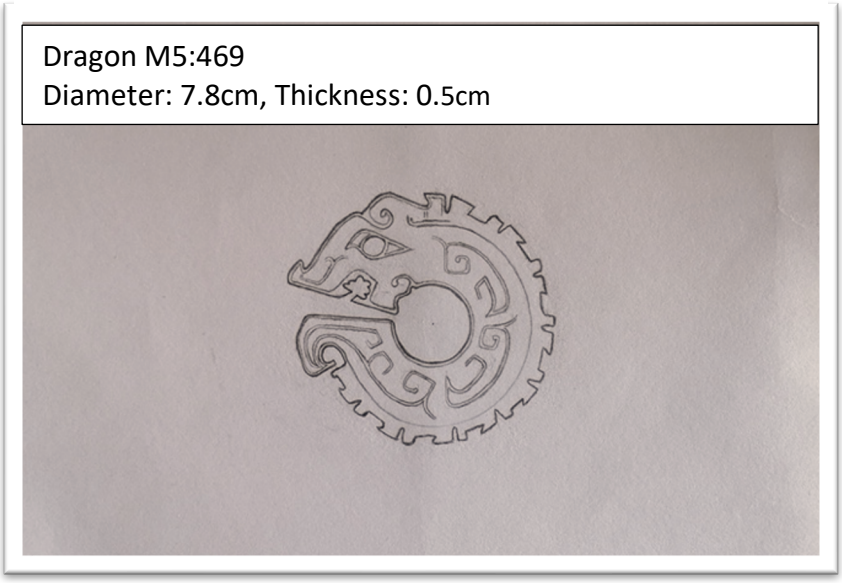
Figure 3.12 Drawing of a jade collared *bi* disc.



Spinning wheels are generally smaller than the previous three types of circular objects, though very similar in shape. They range between 2.9cm and 6.1cm in diameter, 0.2–1.5cm in perforation diameter, and 0.4–1.2cm in thickness. Two are found with incised motifs (M5:1031, M5:455). Two are not perforated and considered as semi-products by the excavators (IA CASS 1980:147). Two are found with the perforation off the centre (M5:914,

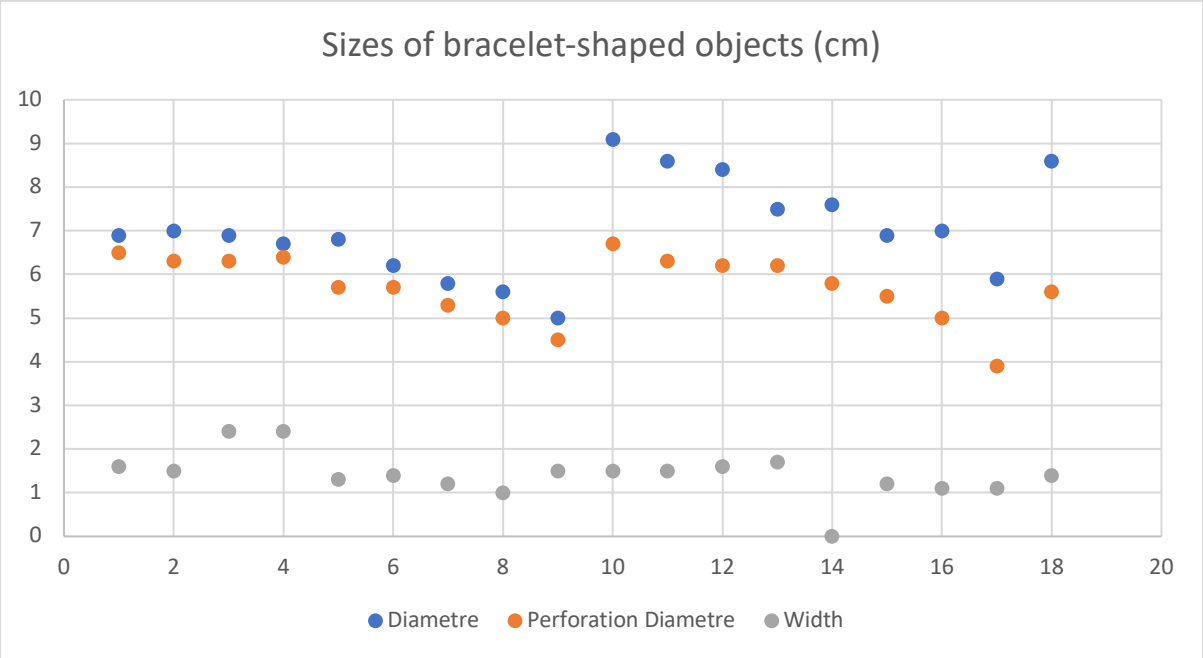
M5:1267). M5:1267 also carries trace of cutting on the surface. It is not clear why the excavators consider these objects as spinning wheels though no explanation is provided. There are 18 objects recognised as *jue* slit rings. They are all circles with a thin break in shape. Some are plain on the surface while others take the form of coiled dragons (Figure 3.13). The dragons are either sculptures in the round or flat pieces, many with small perforations that can be used for suspension or wearing. One is considered as semi-product by the excavators as the openwork is not complete (M5:1030) (IA CASS 1980:129). M5:589 is protruding along its inner rim, like those collared *bi* discs above. These slit rings range between 3.9cm and 11.3cm in diameter, 0.9–6.8cm in perforation diameter, and 0.2–1.8cm in thickness.

Figure 3.13 Drawing of a coiled dragon slit ring.



There are 18 bracelet-shaped objects, all found in the middle of the inner coffin (IA CASS 1980:176). Some of them are plain on the surface, a few with a circle of protruding ridge on the surface, while others decorated with a combination of parallel incisions, protrusions, and mushroom-shaped cloud motifs. They range between 5cm and 9.1cm in diameter, 3.9–6.7cm in perforation diameter, and 0.4–2.4cm in width (Figure 3.14).

Figure 3.14 Sizes of jade bracelet-shaped objects. Source: IA CASS 1980:176–8.



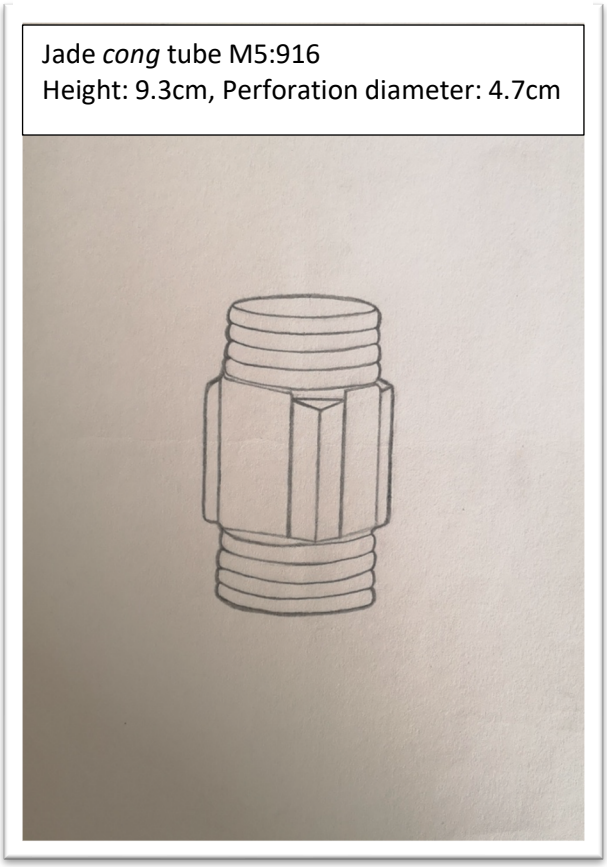
Note:

1. At point 14, the thickness of M5:493 is given as a range as 0.4–0.9cm in the excavation report.

There are 14 objects considered as "*cong* or *cong*-shaped tubes". They roughly all share a tubular form, with a large round perforation at the centre and a rectangular body with protruding four corners around it. Despite a largely common form, they vary significantly in size, some taller (M5:916, 9.3cm tall, Figure 3.15), some wider (M5:997, perforation

diameter 6.7cm), and some tiny (M5:1581, 1.8cm tall). While some are plain on the surface, others are decorated with exquisite motifs, such as cicada motifs or parallel incisions. A few are less like *cong* tubes and more like hoop-shaped objects in shape (M5:1003, M5:595, and M5:999).

Figure 3.15 Drawing of a *cong* tube.



Apart from those mentioned above, there is only one or a few (under 10) objects within most jade types (34 out of 51) (Figure 3.1). These include *qi* axes, *gui* tablets, perforated long narrow pieces, *ben* adzes, reaping knives, base-shaped objects, spades, *mao* spears, dagger-like objects, *gui* vessels, *yue* axes, *fu* axes, *zao* chisels, combs, earpicks, *bi* spoons, handle-

like objects, a notched disc, a *pan* plate, a large knife, a saw-shaped knife, a bent awl-shaped object, a handle, a spade-shaped object, a mortar, a pestle, a palette, a thumb ring, a carpentry-square-shaped object, a chain, a goat-head-shaped object, a cylindrical handle-like object, a long handle-like object, and a long pointed object. Indeed, these jades exhibit great diversity in form and may have had diverse significances which the generic term "jade" may not be able to grasp fully.

Table 3.2 below provides a comparison between jades from "Fu Hao's tomb" and Ya Chang's, which better illustrates the diversity and multitude of the jades used at "Fu Hao's tomb". As can be seen, "Fu Hao's tomb" not only yields more jades than Ya Chang's in terms of total number (756 vs 222) but also jade types (108 vs 28). Many jade types only exist in "Fu Hao's tomb" though Ya Chang's tomb has a few unique jade types too.[6] For jade types that both sites commonly have, there are many more from "Fu Hao's tomb", 73 vs 2 for *huang* arc-shaped objects for example. The only exceptions are jade tubes (30 vs 157) and *mao* spears (3 vs 4), for which Ya Chang's tomb has more. Anthropomorphic jades are only found in "Fu Hao's tomb" and not seen in Ya Chang's while there are many more types of animals from "Fu Hao's tomb" too. It is not yet clear what this difference indicates though — whether it is a difference in identity or status of the tomb occupants or other aspects of jade use. What this does reflect is the richness and diversity in jade use at "Fu Hao's tomb".

[6] Jade types only found from "Fu Hao's tomb" are *yuan* rings, *gui* vessels, plate, large knife, axe and axe material, chisels, adzes, saw-shaped knife, bent awl-shaped object, handle, spades and spade-shaped object, sickles, mortar, pestle, palette, combs, earpicks, *bi* spoons, perforated long narrow pieces, beads, human figures, human heads, human face, human-monster face, monster with bird body, monster with beak and horns, strange birds with horns, a strange bird, dragon and strange bird, a monster, phoenix, tigers, elephants, monkey, deer, horses, oxen, a dog, rabbits, goat heads, cranes, eagles, owls, parrots, a dove, a swallow, birds, a cormorant, fish, frogs, turtles, a cicada, a mantis, tube-shaped objects, object-mouth-shaped objects, tubular ornaments, stick-shaped ornaments, an ornament in the shape of human figure in profile, horn-shaped ornaments, a long narrow ornament, long narrow material, a long oval ornament, a ring-shaped ornament, a monster-face-shaped ornament, a cylindrical ornament, an irregular ornament, a silkworm-shaped ornament, eyebrow-shaped ornaments, beak-shaped ornaments, rectangular jades, a broken ornament, long openwork slices, base-shaped objects, a thumb ring, a carpentry-square-shaped object, handle-like objects, a chain, a goat-head-shaped object, a cylindrical handle-like object, a long handle-like piece, a dagger-like objects, a long pointed object, and arrowheads.

Table 3.2 A comparison of jade types between Fu Hao's tomb and Ya Chang's tomb. Sources: IA CASS 1980:114–95, and IA CASS 2007:177, Table 2.

Typology	Fu Hao (M5)	Ya Chang (M54)
Fish	75 (9.92%)	
Huang arc-shaped objects	73 (9.66%)	2 (0.90%)
Ge daggers	39 (5.16%)	11 (4.95%)
Pendants	38 (5.03%)	1 (0.45%)
Handle-shaped objects	33 (4.37%)	2 (0.90%)
Knives	31 (4.10%)	1 (0.45%)
Tubes	30 (3.97%)	157 (70.72%)
Hoop-shaped objects	28 (3.70%)	1 (0.45%)
Ji hairpins	28 (3.70%)	1 (0.45%)
Huan rings	24 (3.17%)	2 (0.90%)
Gravers	(23 included in "Knives") (3.04%)	1 (0.45%)
Spinning wheels	22 (2.91%)	2 (0.90%)
Parrots	21 (2.78%)	
Yuan rings	18 (2.38%)	
Slit rings	18 (2.38%)	4 (dragon-shaped) (1.80%)
Bracelet-shaped objects	18 (2.38%)	1 (0.45%)
Long openwork slices	17 (2.25%)	
Bi discs	16 (2.12%)	1 (0.45%)
Cong tubes (incl. *cong*-shaped objects)	14 (1.85%)	1 (0.45%)

Qi axes	9 (1.19%)	6 (2.7%)
Human figures	9 (1.19%)	
Dragons	9 (1.19%)	
Gui tablets	8 (1.06%)	2 (0.90%)
Perforated long narrow pieces	8 (1.06%)	
Tigers	8 (1.06%)	
Eyebrow-shaped ornaments	7 (0.93%)	
Owls	6 (0.79%)	
Adzes	5 (0.66%)	
Sickles	5 (0.66%)	
Monster heads	5 (0.66%)	3 (1.35%)
Base-shaped objects	5 (0.66%)	
Spades	4 (0.53%)	
Bears	4 (0.53%)	1 (0.45%)
Oxen	4 (0.53%)	
Birds	4 (0.53%)	
Mao spears	3 (0.40%)	4 (1.80%)
Beads	3 (0.40%)	
Strange birds with horns	3 (0.40%)	
Rabbits	3 (0.40%)	
Geese	3 (0.40%)	1 (0.45%)
Tube-shaped objects	3 (0.40%)	
Object-mouth-shaped objects	3 (0.40%)	
Tubular ornaments	3 (0.40%)	

Stick-shaped ornaments	3 (0.40%)	
Dagger-like objects	3 (0.40%)	
Gui vessels	2 (0.26%)	
Yue axes	2 (0.26%)	1 (0.45%)
Axe and axe material	2 (0.26%)	
Chisels	2 (0.26%)	
Combs	2 (0.26%)	
Earpicks	2 (0.26%)	
Bi spoons	2 (0.26%)	
Stone human figures	2 (0.26%)	
Human heads	2 (0.26%)	
Elephants	2 (0.26%)	
Horses	2 (0.26%)	
Goat heads	2 (0.26%)	
Cranes	2 (0.26%)	
Eagles	2 (0.26%)	
Frogs	2 (0.26%)	
Turtles	2 (0.26%)	
Horn-shaped ornaments	2 (0.26%)	
Beak-shaped ornaments	2 (0.26%)	
Rectangular jades	2 (0.26%)	
Handle-like objects	2 (0.26%)	
Notched disc	1 (0.13%)	1 (0.45%)
Plate	1 (0.13%)	

Large knife	1 (0.13%)	
Saw-shaped knife	1 (0.13%)	
Bent awl-shaped object	1 (0.13%)	
Handle	1 (0.13%)	
Spade-shaped object	1 (0.13%)	
Mortar	1 (0.13%)	
Pestle	1 (0.13%)	
Palette	1 (0.13%)	
Human face	1 (0.13%)	
Human-monster face	1 (0.13%)	
Monster with bird body	1 (0.13%)	
Monster with beak and horns	1 (0.13%)	
Strange bird	1 (0.13%)	
Dragon and strange bird	1 (0.13%)	
Monster	1 (0.13%)	
Phoenix	1 (0.13%)	
Monkey	1 (0.13%)	
Deer	1 (0.13%)	
Dog	1 (0.13%)	
Dove	1 (0.13%)	
Swallow	1 (0.13%)	
Cormorant	1 (0.13%)	
Cicada	1 (0.13%)	
Mantis	1 (0.13%)	

Ornament in the shape of human figure in profile	1 (0.13%)	
Long narrow ornament	1 (0.13%)	
Long narrow material	1 (0.13%)	
Long oval ornament	1 (0.13%)	
Ring-shaped ornament	1 (0.13%)	
Monster-face-shaped ornament	1 (0.13%)	
Cylindrical ornament	1 (0.13%)	
Irregular ornament	1 (0.13%)	
Silkworm-shaped ornament	1 (0.13%)	
Broken ornament	1 (0.13%)	
Thumb ring	1 (0.13%)	
Carpentry-square-shaped object	1 (0.13%)	
Chain	1 (0.13%)	
Goat-head-shaped object	1 (0.13%)	
Cylindrical handle-like object	1 (0.13%)	
Long handle-like piece	1 (0.13%)	
Long pointed object	1 (0.13%)	
Xi gadgets		5 (2.25%)
Monster faces		5 (2.25%)
Rectangular ornament		1 (0.45%)
Crystal ring		1 (0.45%)
Arrowheads		3 (1.35%)
Total	**756**	**222**

Thus, jades from “Fu Hao’s tomb” impress us with both their large number and great diversity. What implication this has on jade use is that these jades may not have a single unified meaning or function but a multitude of significances that require examination on an individual level. Treating them all under an umbrella term “jade objects” may not be able to fully grasp their meaning. Nevertheless, this wide application also encourages us to consider the function of jade by treating it as a material instead of any particular form.

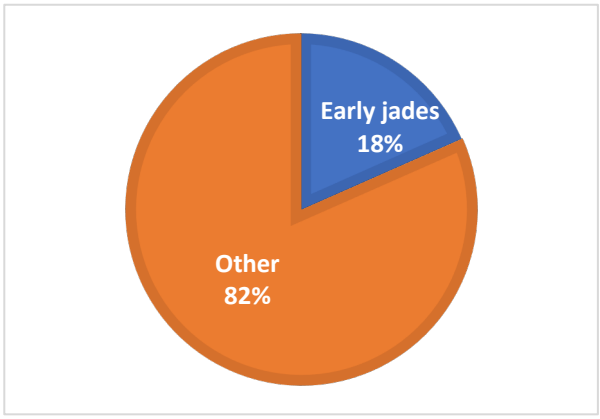
3.2 Cultural origins

Not all jades from “Fu Hao’s tomb” were made during Fu Hao’s own time and many are recognised as relics from earlier archaeological cultures (Minao 1979, 1986 and 1997; Lv 1996; Rawson 1997; Yuan 2000; Huang 2002; Ding and Li 2012; Ding 2014; Gao 2014; Zhu 2016; and Wang 2018). Stylistically, Zhu (2016) identifies Fu Hao’s jades as earlier jades, recut jades, and jades made during Wu Ding’s reign. For Zhu (ibid), 139 objects are recognised as jades from archaeological cultures before Wu Ding’s reign (Zhu 2016:4–23). That is about 18.39% of all 756 jades, nearly 1/5 (Figure 3.16a). The earliest one is a slit ring identified to belong to Xinglongwa culture (c. 6200 BC – c. 5200 BC), nearly 5000 years before Fu Hao’s own time (c. 1200 BC). He further identifies 98 objects (12.96%) as recut from earlier works (ibid:23–34, 43) (Figure 3.16b). Among them, 72 are recognized for a definite time of reshaping. About 56 (78%) were reshaped during Wu Ding’s reign while 14 (19%) were reshaped before that, and 2 (3%) either during early Wu Ding’s reign or in early Yinxu Phase I (Figure 3.17a). Assuming all the rest 26 recut jades with unknown reshaping time were recut before Wu Ding’s reign, then, 58% of all recut jades were reshaped during Wu Ding’s reign (Figure 3.17b). In a broad sense, those reshaped during Wu Ding’s reign can also be seen as new jades made during Fu Hao’s own time and the earlier jades should also include those reshaped before Wu Ding’s reign. Thus, all jades from “Fu Hao’s tomb”

can be divided into two broad categories based on their dating by Zhu (2016). That is, 1) new jades made in Fu Hao's own time, including those reshaped during Wu Ding's reign; and 2) old jades made before Fu Hao's own time, including those reshaped before Wu Ding's reign. Some of those classified as new jades could have been too intensively reshaped, and therefore, cannot be recognized for their origin, so the proportion of these jades with an earlier origin could be even larger. It seems there was significant level of recycling and reusing of old jades during this period.

Figure 3.16 Proportion of early and recut jades. (total: 756). Source: Zhu (2016).

a) Early jades



b) Recut jades

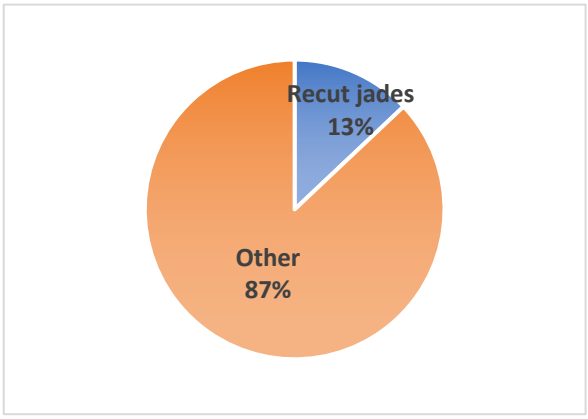
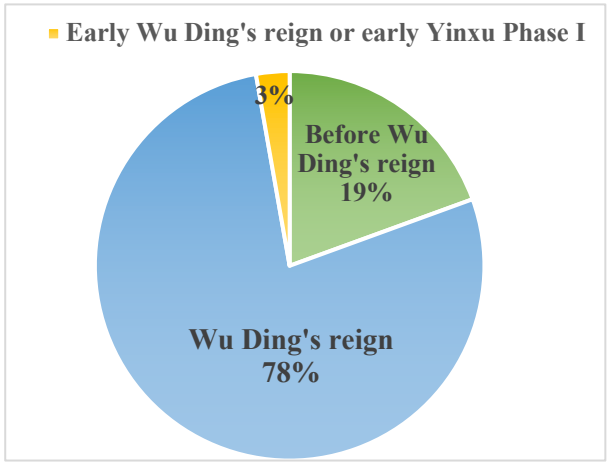
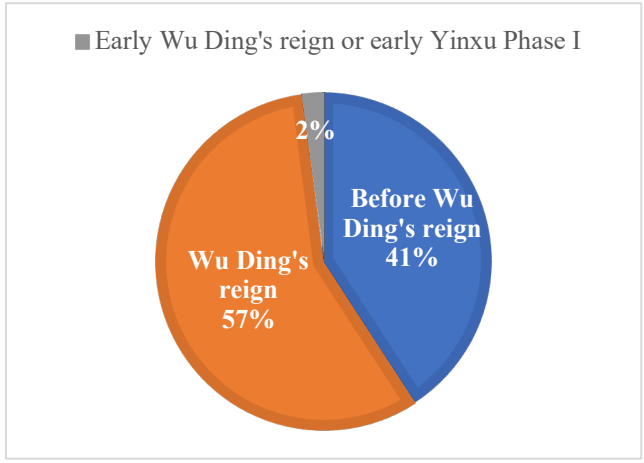


Figure 3.17 Reshaping time. Source: Zhu (2016).

a) 72 out of 98 recut jades identified with time of reshaping (total: 72)



b) Assume all the other 26 recut ones with unknown time of reshaping were all reshaped before Wu Ding's reign (total: 98)



"Fu Hao's tomb" thus seems to host a small community of jades of diverse origins. As mentioned above, old jades from various archaeological cultures before Fu Hao's own time span nearly 5000 years of time. Also, they cover a vast geographical area that includes the northeast, east, south, northwest, north, and the central plain of China (Table 3.3 and Figure 3.18).[7] This indicates wide links of the late Shang with previous cultures and other regions, though the nature of such links is yet to be investigated. Also, whether these links and connections were significant in their use at the burial is to be explored.

Table 3.3 Summary of early archaeological cultures of jades from Fu Hao's tomb. (total: 756). Source: Zhu (2016:4–34).

Region	Archaeological Culture	c. Period (BC)
Northeast	Xinglongwa	6200 – 5200
	Hongshan	4700 – 3300
	Lower Xiajiadian	2000 – 1400
East	Longshan	2600 – 2000
South	Late Shijiahe	2400 – 1900
Northwest	Qijia	2400 – 1500
North	Taosi	2600 – 2000
Central Plain	Erlitou	1850 – 1550
	Erligang	1600 – 1400
	Early Yinxu Phase I	1250

[7] Dates in Table 3.3 are sourced from IA CASS (2003 and 2010), Suo and Li (2011), Han (2019), Liu and Yi (2014), and Zhu (2016 and 2016a), most of which are compiled from C14 data.

Figure 3.18 Geographical Distribution of Origin Cultures of Earlier Jades from Fu Hao's Tomb. Source: Zhu (2016).



Among those 139 objects recognised as earlier jades by Zhu (2016), Qijia culture is the major source, accounting for 59% of all of them (Figure 3.19). Late Shang people's predecessors Erlitou and Erligang in central China seem to be another major source of earlier jades in "Fu Hao's tomb". Late Shijiahe objects also seem to be of interest to them. It is not yet clear why jades from certain cultures are of particular interest to the late Shang people and if this is related to their reshaping practice. In terms of the jade types, again, a wide range of jades were amassed from earlier archaeological cultures (Figure 3.20). It can be seen a large

number of them do take a circular or arc-like shape, such as those varieties of *bi* discs and spinning wheels, and *huang* pendants. These curved objects account for about 53.2% of all early jades and it is indeed tempting to think if they are related to those exquisite arc-shaped jade designs of Wu Ding's reign. What come next are trumpet-shaped pendants. What is interesting is that this seems to be a prevailing jade type all the way through Qijia Culture in the northwest, Late Shijiahe Culture in the south, to Erlitou and Erligang periods in the Central Plain. In Qijia, these pendants tend to be plain undecorated ones, while later ones take on different decorations of their own time, which provides the channel for dating these jades. *Ge* daggers and pendants also seem to be popular.

Figure 3.19 Origin Cultures of Earlier Jades from Fu Hao's Tomb. Source: Zhu (2016).

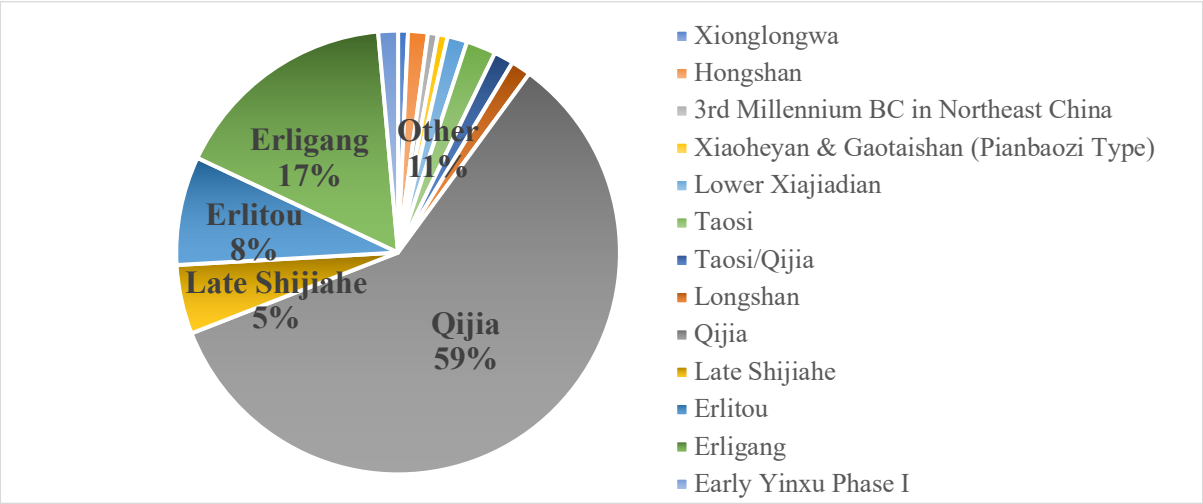
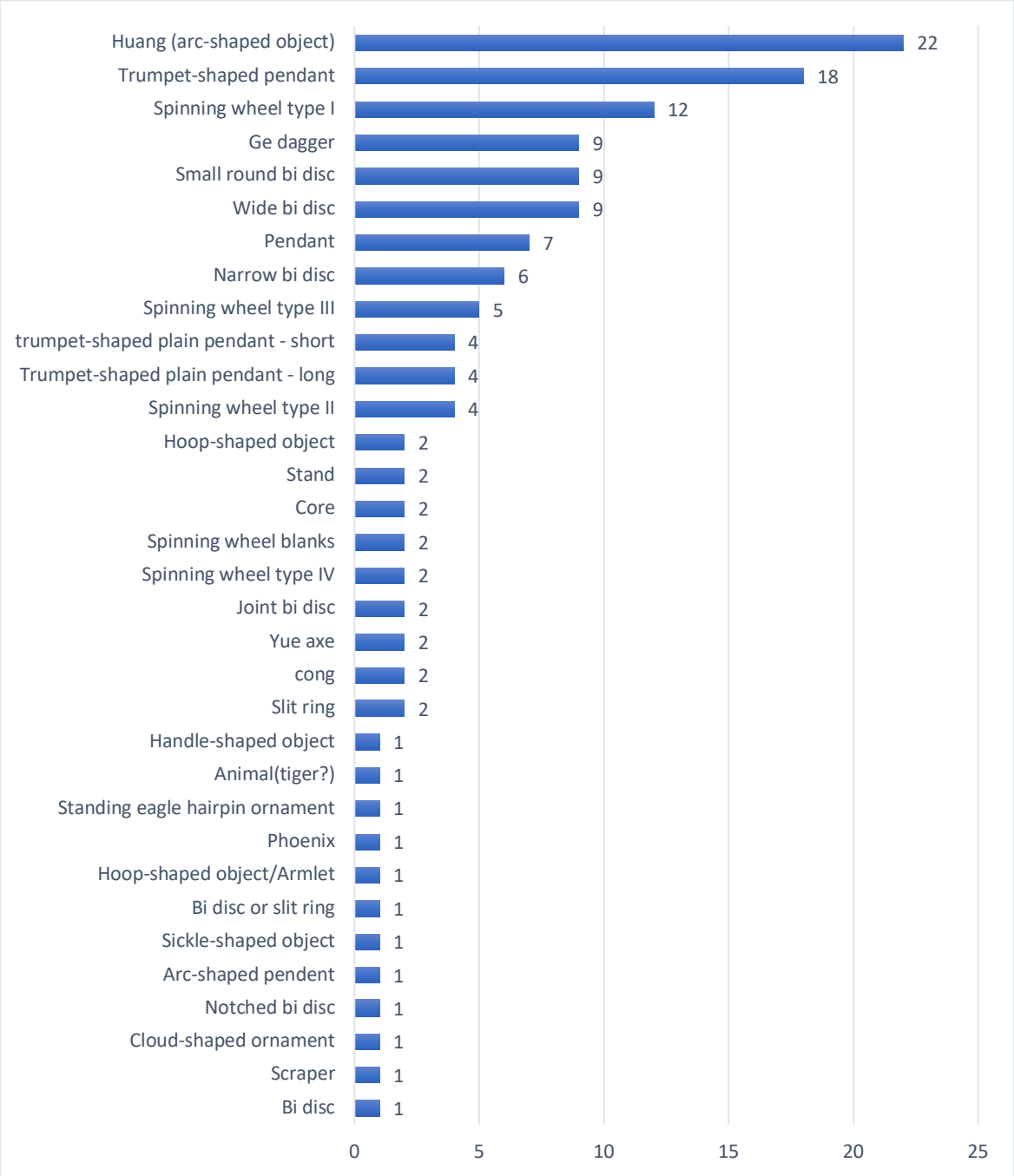


Figure 3.20 Typological Variety of Earlier Jades from Fu Hao's Tomb. Source: Zhu (2016).



The recognition of earlier and recut jades has significant implications on jade use in "Fu Hao's tomb". First, this diversity in the types of jades from earlier cultures and the practice of reshaping and recutting indicate a general interest in jade as a material of the late Shang people, rather than focusing on particular jade forms. Also, this implies that not all jades were produced for the purpose of this burial, although indeed they could have been gathered here for it. Many had had a long life history prior to the deposition here. It is not clear yet whether these life histories of the jades were of any significance to their use at this burial.

3.3 Material

Studies on the material of these jades have been ongoing since their discovery, from early stage naked-eye observation by specialists to more recent scientific examination. Aspects covered mainly include the colour, provenance, and chemical composition of the material. The excavation report mentions about 300 jades that were examined by specialists from Beijing Jade Factory, Anyang Jade Carving Factory and Institute of Geology, Chinese Academy of Sciences and concludes that green is the dominant colour, though ranging from dark green to yellowish green or light pale green (IA CASS 1980:114). It also reports the presence of dark colours such as ochre, brown, and black, and lighter ones such as white, grey, and yellow (ibid). Wang et al. (2018) examines the colour of 91 jades quantitatively using a portable spectrophotometer that collects $L^*a^*b^*$ data, with the help of the magnifier, optical microscope, and transmitted light. They report that these 91 jades can be classified into three groups according to the original colour of their material: white tone (8), yellow tone (2), and green tone (70), with the white tone further divided into white and yellowish white, and green tone light green, green, yellowish green, and dark green (ibid). The researchers further point out that some other stones that are used ornamentally but not being tremolite-actinolite themselves also present green tone (ibid). Thus, the scientific results

largely coincide with the experiential ones above and the use of jades are indeed colourful from “Fu Hao’s tomb” with green as a significant colour.

It is noteworthy that the result of Wang et al. (2018) is about the original colour of the material while jade objects are subject to various secondary changes which can affect their colour. Secondary changes in jade colour can be caused by both human and nonhuman factors (ibid). According to Wang et al. (ibid), a series of nonhuman factors with impregnation effect can cause the jade to turn yellow, black, white, or blue, such as weathering and contact with soil, cinnabar, textiles, or bronzes. Human activities, such as burning, can also cause the jade to turn black, (yellowish) ochre, or greyish white (ibid). The researchers find the majority of the examined 91 jades occurred secondary changes at varying degrees and there exist changes caused by burning (Wang et al. 2018, Wang et al. 2018). Wang et al. (2018) provide scientific results of a jade parrot (M5:993), arguing that the jade underwent phase transition from tremolite to diopside, which should and could have been caused by open fire burning. The researchers consider this as evidence of the jade having been used for burning rituals as offerings, confirming textual records from oracle bone scripts and later Chinese classics, though as they state clearly, it cannot be concluded whether the burning took place as part of the burial process (ibid). Another question concerning the result of their research is whether the presence of diopside is caused by human heating activities or the geological formation processes. As Zhang (1982) points out, the colour of the jade can be related to the impurities that blended into the rock when it was geologically formed. Also, diopside can occur as an accessory mineral of tremolite-actinolite (nephrite jade) in some deposits (Barnes 2018). Therefore, it is worthwhile to discern if the presence of diopside in jade parrot (M5:993) is geological occurrence before concluding the object underwent burning activities by human.

Studies also reveal information about the provenance of the jade material from “Fu Hao’s tomb”. Based on specialists’ observation, the excavation report concludes the existence of jade material from Xinjiang, and possibly Xiuyan jade from northeast China, and Dushan jade from Central China, which are all considered as nephrite (IA CASS 1980:114–5). Shen (1991) reaffirms the use of material from Xinjiang by comparing the chemical analysis results with the reference collection. Wang et al. (2007) confirms the existence of Xiuyan jade from northeast China. Sophisticated scientific examination of the material of 168 jade objects was conducted by Wang (2018) with Raman spectrometer and infrared spectrometer. He reports that the provenance of jades from “Fu Hao’s tomb” is diverse, including Xinjiang in the northwest, Xiuyan in the northeast, Gansu in the northwest, and other unknown origins (ibid). This examination also rejects the identification of four objects as Xiuyan jades and Dushan jades in the excavation report, as they turn out to be marble rather than jade (ibid). Therefore, based on these scientific examinations, it can be concluded that jade material from distant areas was used at “Fu Hao’s tomb”. However, it should be further explored if it is material newly procured in late Shang or coming with those forementioned jade objects that came from earlier archaeological cultures. It is also worth exploration if jades made of material from different provenances were used differently, in terms of placement within the tomb for example.

More scientific studies provide information about the chemical composition of the jade material. Zhang (1982) studies a few fragmented and broken jades from “Fu Hao’s tomb” through thin-section observation and powder X-ray diffraction examination. Zhang (ibid) concludes the material is mostly tremolite nephrite with a hardness of about 6 on the Mohs scale. IA CASS, Beijing, Capital, and Henan (2016) includes two material studies of jades from “Fu Hao’s tomb”, one examining 8 objects (Yu et al. 2016) and the other 44 objects (Wang et al. 2016), their results not accessed in this research though. Wang (2018) examines

168 objects from "Fu Hao's tomb" using Raman spectrometer and Fourier-transform infrared spectrometer, combined with hydrostatic density test and hardness examination for accuracy. This provides an understanding of the colour, hardness, density, translucency, interior texture, and minerology of the examined objects. Among the 168 objects being tested, Wang (ibid) finds that the majority (151, nearly 90%) are tremolite (ibid:175). Using portable non-destructive methods including spectrophotometer, Raman spectrometer, and X-ray fluorescence spectrometer, Wang et al. (2018) finds 80 tremolite-actinolite jades out of 91 examined objects. Indeed, it seems tremolite-actinolite, the so-called "true jade"[8] in modern mineralogical terms, plays a significant role in jade use at "Fu Hao's tomb".

However, according to the scientific studies mentioned above, the use of jade at "Fu Hao's tomb" is not restricted to tremolite-actinolite. A range of other materials are also found, such as marble, agate, muscovite, quartzite, malachite, serpentinite, fluorite, pyrophyllite, amazonite, and turquoise (Wang 2018, Yu et al. 2016, Wang et al. 2016). As Wang (2018) puts it, jades from "Fu Hao's tomb" encompass diverse kinds of materials and reflect the broad concept of jade as the fine stone.

In sum, the material of jades from "Fu Hao's tomb" is also diverse, in terms of colour, provenance, and chemical composition. At the same time, the colour of jades may have been affected by various human and nonhuman factors, possibly involving burning rituals that contributed to secondary colour changes, although it cannot be certain if the burning rituals took place during the burial or before it. Scientific studies also reveal the use of high-quality jade material, the so-called "true jade" or tremolite-actinolite nephrite, at "Fu Hao's tomb", even from distant areas like Xinjiang in the northwest or other locations in the northeast. It is

[8] Broadly, jade refers to any beautiful stone that may produce a gentle sheen on the surface in Chinese culture. Mineralogically, "true jades" refer to only nephrite and jadeitite. *See* Barnes (2018:8–9).

not yet clear if such material came with old objects or was newly acquired. The materiality of this fine material is also worth consideration, which has a felted internal structure that makes it very labour-intensive to work (Barnes 2018). Given that many jades of this material from "Fu Hao's tomb" were worked into exquisite pieces of art, it can be inferred that they were not produced in rush for the burial but with meticulousness prior to the funeral. Thus, they might have had a life history before deposition here and were not used for burial only, though this requires further evidence such as use-wear analysis.

3.4 Design

Liu (2018) concludes major artistic features of jades from "Fu Hao's tomb". This study points out that among the great variety of all jades from the tomb, there is a conspicuous number of circular ones, accounting for nearly half of all the jades (Liu 2018:198). Through a comparison with other Shang tombs, this study further postulates that this is a general phenomenon for jades in Shang burials (ibid). Another prominent feature of these jades is the large number of zoomorphic and anthropomorphic works, many taking a crouching posture (ibid:198–9). This seems to be a unique feature of jades from "Fu Hao's tomb" that differentiates it from other Shang tombs (ibid:197–8). The human figures are discussed in more detail by Wang (2018), who suggests these human figures and those coiled dragons took influence from Hongshan ones. Liu's (2018) study further concludes the major types of motifs involved in these jades and briefly discusses the incision technique that produced them (ibid:199–200). It also mentions that the existence of earlier jades adds to the complexity of the decorative techniques (ibid). Another observation made in this study is the development of sculptures in the round as seen in jades from "Fu Hao's tomb", in addition to the more traditional flat ones (ibid). It should be noted that most of these exquisite jades with motifs are small and it requires close inspection to see the incisions on them. Thus, their artistic and

aesthetic values can be best appreciated on a personal basis rather than shared in a public event and viewed from some distance. Therefore, they may not have been intended as display objects during the funeral to be seen as part of a spectacular, especially most were accompanying the deceased within the inner coffin. Instead, their representational feature may be more relevant.

3.5 Production

At an early stage, the excavator Chen Zhida identifies various techniques applied to produce the jades, including incision, protruding lines, openwork, perforation (using both hollow and solid drills), relief, sculpture in the round, smart carving based on colour of the material, use of rotary wheels and polishing (Chen 1986, IA CASS 2007:323–53). Sax et al. (2004) proposes to study working techniques of ancient Chinese jades scientifically through observation of the silicon resin models of micro-wears under scanning electron microscope (SEM). Researchers of the IA CASS (2014) further develop this method to include comparison with results from experimental archaeology to understand the working process, use of tools and the type of abrasive sands in jade production in Erlitou culture. Combining this method with naked-eye observation and macrophotography, Ye et al. (2018) shows the use of two types of cutting techniques among the jades from "Fu Hao's tomb": slicing and string-sawing (ibid:151). Both involve the use of abrasive sands, which is a long tradition, but harder, thinner, and more even sands were used during this time after careful selection (ibid). Slicing is a traditional method to work jade too, but this study reveals that it was mainly applied for cutting open the material at this time which shaped the flat jade objects (ibid). String-sawing is different from earlier string-cutting with ropes. Instead, it employs some thin material that is both hard and tough to carry abrasive sands and work jade

(ibid). This study does not provide a solid answer to what material this string-saw was made of, only guessing it could be either bronze or meteoric iron (ibid).

Ye et al. (2017) study the conspicuous incision technique that produced the beautiful surface motifs on jades from "Fu Hao's tomb". Based on the examination of samples from 7 jade objects (5 flat ones and 2 sculptures in the round) for their micro-wears under SEM and comparing them with the results from experimental archaeology, this study concludes that the intricate incisions should have been added after rough-outs were made, and rotary wheels carrying abrasive sands were widely used to produce the incisions on jades during the late Shang, though traditional hand-held tools were still used for refining the details (ibid).

Ye (2018) examines a variety of techniques applied to produce jade sculptures in the round from "Fu Hao's tomb" through photography, modelling, and SEM observation of micro-wears. Those production techniques being examined include cutting open the material, reducing the surface, abrasion, incision, perforation, openwork, and coring (ibid:153). Based on an examination of a variety of objects, including animals, vessels, utensils and human figures, this study concludes that the technical innovations in the use of rotary wheels, abrasive sands and string-cutting tools and the creative application of perforation techniques provided the foundation for the novel development in jade sculptures in the round from "Fu Hao's tomb" (ibid:160). It is notable that some of the objects examined in this study for technical details are made of marble instead of tremolite jade but exhibiting the same technical characteristics (ibid:153).

These working techniques suggest profound knowledge of the jade material mastered by late Shang jade workers. The application of abrasive method to work jade indicates they were aware of the toughness of the material, which is a distinctive feature of jade. However, the undifferentiated working methods applied to tremolite jade and marble suggest the late Shang

people may not have made the same categorical classification as modern scientists do. It is not yet clear whether these understandings of the material by late Shang people affect its use.

3.6 Conclusion

Jades from “Fu Hao’s tomb” exhibit great diversity in terms of typology, cultural origins, and material. The variety of jade forms used at “Fu Hao’s tomb” suggest they may not have a unified function while it is worth considering the role of jade as a material. There is a significant proportion of jades from earlier archaeological cultures across vast geographical area. The practice of recycling and reshaping jades is also conspicuous. These imply profound interest in the jade material, rather than particular jade forms of the late Shang people. Also, it can be inferred that not all jades were produced for the burial as many had had a long life history before deposition at the site. The significant use of nephrite jade — a very tough material — also suggests these jades cannot be produced in rush and may have had a life history before the burial, although there is still some possibility they were produced long before the burial but still intended for it. The material was sourced from distant areas, which could add to its value. The design of the most exquisite zoomorphic and anthropomorphic jades indicates they may not have been intended as display objects, as the detailed motifs require close inspection, implying a more personal and representational significance. The production techniques applied by the jade workers demonstrate profound understanding of the material by past people, and in particular, the toughness of jade. However, they may not have differentiated jade from other hard stones in a modern scientific sense.

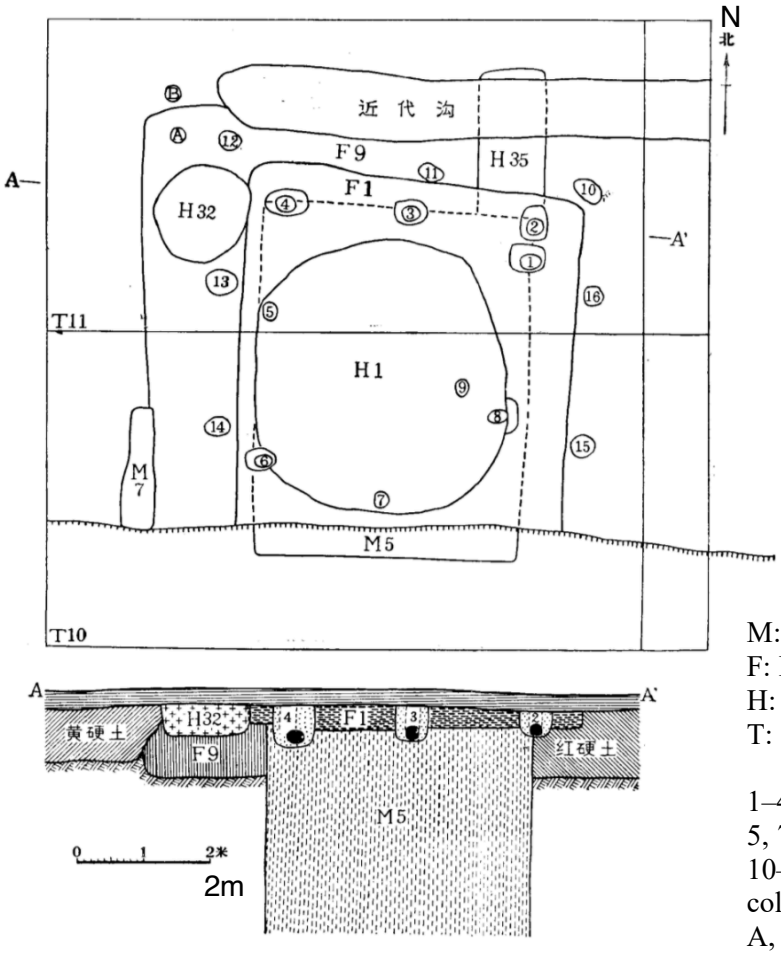
Chapter 4 Where and When

This chapter investigates where and when the jades participated in the assemblage at "Fu Hao's tomb". It will illustrate the structure of the tomb first and summarise the distribution of finds. It will then categorise the jades according to their position inside the tomb, assuming their location of discovery can be used to approximate their original placement. It will then seek to reconstruct when jades participated in the assemblage through laws of stratification (Harris 1979), which converts space into time and reveals relative order of deposition. Through these analyses, this chapter strives to understand where and when the jades were used in the burial and further the understanding of how and why the jades participated in the assemblage.

4.1 The structure of the tomb

As shown in Figure 4.1, "Fu Hao's tomb" (M5) is a rectangular vertical earthen pit, 10° north by east (IA CASS 1980:7). Its opening is 5.6m × 4m in size, and 0.5m underground, beneath a house foundation F1 (ibid). From bottom up, it consists of a waist pit, a chamber, two niches, and a shaft (Figure 4.2). Beneath the bottom of the chamber, a waist pit was found slightly to the south, about 1m in depth (ibid). Both the waist pit and the chamber were found below water table level. As can be seen in Figure 4.2, encircling the chamber is rammed earth that forms four ledges along the walls, each 0.3m wide, which make the bottom of the pit slightly smaller than its opening (ibid). On the same level as the ledges are two niches inside the walls, which locate at the bottom of the shaft.

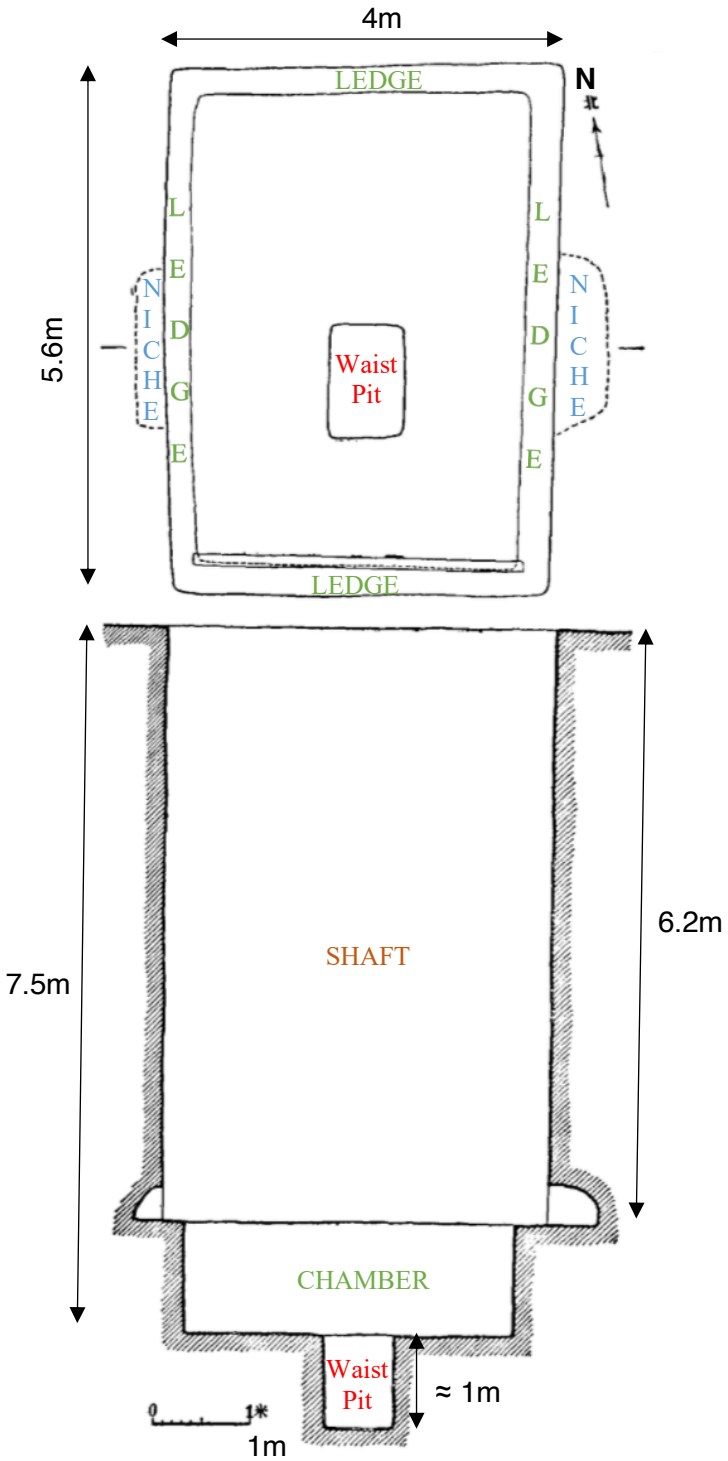
Figure 4.1 Finds from grids T10, T11 and the cross-section along AA'. *After* IA CASS 1980: fig. 2, p. 5.



M: Tomb
F: House
H: Pit
T: Grid

1–4, 6, 8: postholes of F1;
5, 7, 9: stone plinths of F1;
10–16: rammed earth column foundation of F1;
A, B: postholes of F9

Figure 4.2 Plan and section of M5 (reconstructed bottom). *After* IA CASS 1980: fig. 3, p. 8.



As classified by the excavators (IA CASS 1980:9–12), burial objects were found from 1) the fill inside the shaft, 2) the uppermost level of the top of the outer coffin, 3) the top of the outer coffin, 4) between the inner and the outer coffins, and 5) inside the inner coffin (Figure 4.3). In addition to the uppermost level of the top of the outer coffin, human and canine remains were also found within the waist pit and the niches (ibid:8–9). With finds stretching over 7m vertically, this site should have formed through consecutive deposition.

Figure 4.3 Locations from which burial objects were found. *After* IA CASS 1980: fig. 3, p. 8.

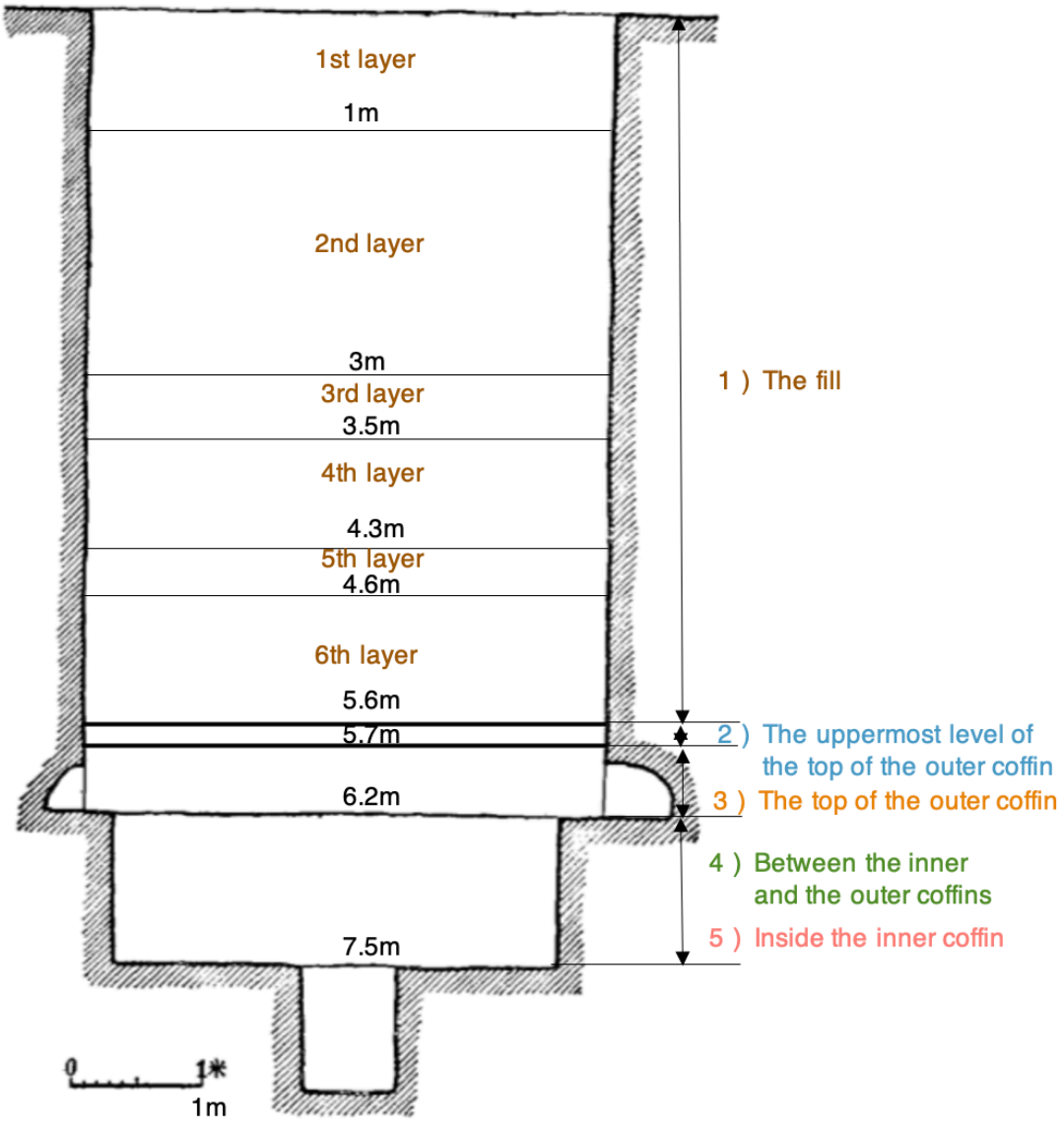
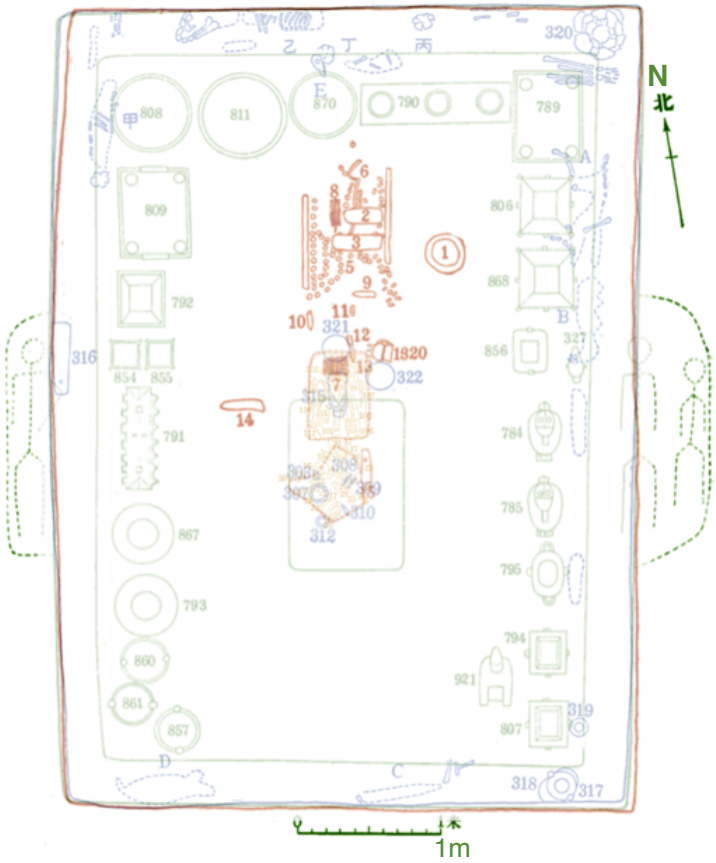


Figure 4.4 below shows the horizontal distribution of finds in a compressed view of the tomb. It seems the remaining finds were either around the tomb along its four sides, or at its centre and supposedly above the inner coffin. However, this is the view constructed with what remains inside the tomb and cannot fully reflect the original placement of everything. Albeit this bias of survival, it is noteworthy that deposition happened repeatedly at the same location at different layers, implying the significance and meaningfulness of the location. It is not yet clear if the "centre" and the "sides" have different significances as locations for deposition. Also, it seems all the remaining finds within the fill (all six layers, both brown and orange) concentrated in the middle of the tomb, and supposedly above the inner coffin, except a mortar (M5:1), which was found in the northeast of the tomb, and a *ge* dagger (M5:14), which is slightly to the west. While the finds from upper layers (the 1st – the 5th) of the fill are more inclined to the north, finds from the lowest layer (the 6th) are more inclined to the south and almost right above the finds from the top of the outer coffin and its uppermost level. Finds from the top of the outer coffin and its uppermost level (blue) form two clusters in accordance with the "centre" and "sides" division. At the bottom of the tomb, it seems this division between "centre" and "sides" corresponds with the position of the inner coffin and the space between inner and outer coffins, or the chamber. Accordingly, large bronze vessels were found inside the chamber, supposedly around the inner coffin, except in the south. Finds found at the centre at this level were supposedly inside the inner coffin, including jades and cowries. At the lowest level is the waist pit at the centre, supposedly beneath the inner coffin. Thus, it seems finds inside the tomb exhibit a general centre/sides division horizontally which may link to the position of the inner coffin and its surrounding areas.

Figure 4.4 A compressed view of tomb M5 from the top. *After* IA CASS 1980: fig. 4–7, pp. 10, 12–4.



Brown
The 1st – 5th layers of the fill.

Orange
The 6th layer of the fill.

Blue
The uppermost level of the top of the outer coffin and the top of the outer coffin.

Green
Large bronzes at the bottom of the tomb.

In sum, "Fu Hao's tomb" is an earthen pit burial found with vertically distributed layers of finds resulting from consecutive deposition, which exhibit a horizontal centre/sides division that may be related to the position of the inner coffin.

4.2 The position of the jades

This section categorises jades according to their position inside the tomb.[9] It will explore these jades by location from top to bottom inside the tomb, supposing that this is following the order of the excavation. Other finds from the same location will also be illustrated. It should be noted that these are the locations of discovery of the jades, which may not necessarily be the same as their original placement, as various formation processes and changes due to taphonomy could have distorted the position of jades. The collapse of the coffins, for example, could have made the jades from the top of the outer coffin fall on the bottom of the tomb. Also, it is not clear how the flooding inside the chamber affected the placement of objects there, where most jades were reported to be found. Given that this tomb was found intact, and therefore without fierce human distortion, it is assumed in this thesis that the jades largely remained where they were originally placed and their location of discovery can be used as an approximation of their original placement.

4.2.1 Overview

Table 4.1 below provides a summary of jades found from each location and associated finds. As can be seen, jades were reported to be found from all five locations yielding burial objects, including the fill inside the shaft, the uppermost level of the top of the outer coffin, the top of the outer coffin, the chamber, and inside the inner coffin. However, jades were not seen in the 1st or the 3rd layer of the fill, where a ceramic *jue* vessel and two stone objects were found broken at the "centre", nor within the niches or the waist pit where human and canine remains were found. Thus, the use of jade objects spanned about 4.5m vertically,[10] covering multiple layers of deposition at the site.

[9] This section will only mention positions where jades were reported to be found for conciseness, while fuller description of the placement of all burial objects is provided in the excavation report (IA CASS 1980:9–14).
[10] From the bottom of the 2nd layer of the fill (3m deep) to the bottom of the chamber (7.5m deep).

Table 4.1 Summary of jades reported to be found from each location.
Source: IA CASS 1980: 8–14, 114–95.

Location		Jades	Other finds
The fill	2nd layer	Mortar (M5:1)	
	4th layer	Object-mouth-shaped objects (M5:11, M5:12, M5:13)	Bronze *ge* daggers (M5:9, M5:10); bronze bow-shaped object (M5:6); over 60 cowries; a group of 109 bronze buttons; two groups of bone arrowheads (M5:7, M5:8); a bundle of 10 bronze arrowheads.
	5th layer	*Ge* dagger (M5:14) *Gui* tablet (M5:15)	
	6th layer	Plate (M5:16) *Ge* dagger (M5:23) Round tubular ornament (M5:59) One small *bi* disc Notched *bi* disc (M5:1029?) *Qi* axe (M5:38)	A wood box containing a large number of bone hairpins and three broken ivory vessels (M5:99, M5:100, M5:101); stone *dou* vessel (M5:25); stone birds (M5:17, M5:18, M5:19); bone gravers (M5:21, M5:22); Arabian cowry (M5:27); ceramic *xun* flutes (M5:29, M5:30); bronze T-

			shaped object (M5:33); bronze mirror (M5:41); bronze arrowheads (M5:34, M5:35); several bone hairpins; bronze bow-shaped object (M5:60, M5:70); bronze mirrors (M5:45, M5:75); a small stone ox; a malachite monster head; a stone cicada; a small stone *guan* vessel; a small stone *lei* vessel; two stone bottle-shaped objects; one bone *bi* spoon; one shell frog; one shell *ge* dagger; red spiral shell (M5:98); nine carnelian beads; two bone pieces with red paint.
The uppermost level of the top of the outer coffin		Hoop-shaped object (M5:307)	Stone ox (M5:315); ceramic *xun* flute (M5:303); bronze arrowheads (M5:308, M5:309, M5:310); large turquoise piece (M5:312).

The top of the outer coffin	*Gui* vessels (M5:321, M5:322)	Bone spoons (M5:323, M5:324); bronze *bi* spoon (M5:329).
Between the inner and the outer coffins	Pestle (M5:596)	Large bronze vessels.
Inside the inner coffin	*Bi* discs; *Huan* rings; *Yuan* rings; Some other ritual objects; Jade ornaments for wearing; All 18 bracelet-shaped objects; Human figures (M5:373, M5:375); Fish; *Ge* daggers; All 28 *ji* hairpins; All 33 handle-shaped objects.	Gravers; over 6,700 cowries.

It should be noted that not all jades were reported with their exact placement inside the tomb as the flooding made the placement of objects under water table level (i. e. the chamber and the inner coffin) unclear. In terms of those jades indeed with documentation, the inner coffin houses most of them and most jade types too, as seen in Table 4.1 above. Next, the 6th layer

of the fill has a few jades, though varying in types too. All the other positions were found with only 1–3 individual jades and the jade types vary from one position to another, indicating the particularity of jade use at specific location. Thus, the use of jades seems to concentrate inside the inner coffin, while spreading out in multiple layers of the site, with the 6th layer of the fill yielding a few more than the others.

4.2.2 A detailed account of the jades, their position, and other associated finds

Details of the jades from each position are as follows. As Renfrew and Bahn (2020:50) defines, the context of an archaeological find "[consists] of its matrix (its surrounding material), its provenience (the horizontal and vertical position within the matrix), and its associations with other finds". Therefore, for each location, details about the typology, condition, and what was found together with the jade will be provided. For jades under water table level, their position and possible use are speculated by referring to other adjacent late Shang burials.

1) The fill

Jade objects were found from the 2nd, 4th, 5th, and 6th layers of the fill in the shaft. Within the 2nd layer, at the depth of 4.3m below the tomb's upper opening, a mortar was found in the northeast[11] of the tomb (IA CASS 1980:9 and 149). It was found upside down with rather bright vermillion colour inside the hollow, showing fine vitreous lustre, indicating it had been used for long (ibid). Cinnabar was found both around the hollow and along its rim (IA CASS 1980:149). Its outer surface is not finely abraded and rather rough (ibid). Thus, it may not

[11] Mortar M5:1 is reported to be found in the northeast of the tomb in the Placement of Burial Objects section in the excavation report (IA CASS 1980:9), but northwest in the Jades section (ibid:149). Since the illustration (ibid:10) of the distribution of burial objects from 1–5 layers of the fill indicates mortar M5:1 is in the northeast, this thesis follows so.

have been used for display. One side of its bottom is slightly incomplete (ibid). It is 23.2cm tall, its wall 8cm thick, its opening 29.5cm in diameter, and its hollow 16cm in diameter and 13cm in depth (ibid). Nothing else is recorded to be found from this location. The excavators consider this mortar (M5:1) and a pestle (M5:596) as a pair for grinding cinnabar (IA CASS 1980:149). However, the pestle was found at a much lower level between the inner and the outer coffins. It is curious why they were placed separately and so far from each other, with the mortar from about the middle of the fill while the pestle nearly at the bottom of the tomb. Clearly, they were involved in the burial process separately. Perhaps, after grinding all the cinnabar to be used at the burial, the pestle was disposed of first while the mortar containing the cinnabar was further involved in the burial process until the whole ceremony nearly finished and it was finally placed within the 2nd layer of the fill.

Within the 4th layer of the fill, at the depth of 4.3m below the tomb's upper opening, three object-mouth-shaped objects (M5:11, M5:12, and M5:13) were found at the "centre" of the tomb together with a group of rather neatly arranged objects slightly to the north (IA CASS 1980:9 and 190). These three objects are nearly identical in form and size. Each is a circular tube about 3.5cm long, perforated through the centre, smaller on one end, and with four circles of protruding ridges on the surface (ibid:190). The perforations at the centre make them capable of being attached to something else, possibly as fittings. These three are roughly aligned along the mid-line of the tomb from north to south. Since they share a common form and were also found together, it is likely they were used together and similarly as a set of three.[12] Two bronze *ge* daggers of similar size[13] were found around the northernmost object-mouth-shaped object (M5:11), one to its west and one to its northeast.

[12] Indeed, some other jade objects in this tomb appear to make pairs of two or sets of more according to their morphological resemblance. However, only these three object-mouth-shaped objects (M5:11, M5:12, and M5:13) are given their placement in the tomb, suggesting a grouping also in use.
[13] Type I bronze *ge* dagger M5:10 is 18cm long, blade length 12.6cm, 0.175kg in weight (IA CASS 1980:105, 107). Type IV bronze *ge* dagger M5:9 is 16.8cm long, blade length 11.8cm, 0.175kg in weight (ibid:108).

Further to the north are a cluster of objects made of bronze, shell and bone, bound by two straight grooves stretching along north-south direction, inferred as traces of hafts of *ge* daggers by the excavators (IA CASS 1980:9). These include a well-decorated bronze bow-shaped object (M5:6), over sixty cowries,[14] a group of 109 small bronze buttons (M5:5) tentatively identified as a horse bridle by the excavators (IA CASS 1980:9 and 110), two groups of orderly arranged bone arrowheads (M5:7 and M5:8),[15] as well as a bundle of another 10 bronze arrowheads.[16] These various objects seem like valuable contents of a kit bag though their significance and how they are associated together are not clear.

Within the 5th layer of the fill, at the depth of 4.6m below the tomb's upper opening, a jade *ge* dagger (M5:14) was found to the west of the tomb centre, with its point towards west and the hilt towards east (IA CASS 1980:11). This *ge* dagger has a sharp point, rather straight cutting edges and ridges along them, and one circular perforation at the back of the blade, its back edge of the hilt sloping, making the hilt triangular in shape (ibid:137). It is 23.2cm long and about 0.5cm thick (ibid). As the photo of this *ge* dagger indicates, it was broken into pieces and carrying a line of cinnabar between the blade and the hilt (IA CASS and Guangdong 2016:180). It cannot be certain when and how it became broken and if the breakage was related to the burial.[17] Also at this layer, a jade *gui* tablet (M5:15) was found to the south of the tomb centre (IA CASS 1980:11). It is a greyish white tablet with curved cutting edge on one end, and a circular perforation on the other (IA CASS 1980:118). It is 22.2cm long and

[14] *Monetaria moneta (Linné)*. Also found in large number inside the inner coffin, in the west and near the waist pit. Big ones are about 2.4cm long, small ones 1.5cm. *See* IA CASS 1980:220.
[15] Despite the identification of the excavators, the so-called bone arrowheads are mostly sticks about 10cm long, with one end in the shape of an awl, which are visually different from those bronze arrowheads. S*ee* IA CASS 1980:208 and Plate CLXXXII.
[16] There are two groups of bronze arrowheads in bundles found from this tomb, numbered as M5:4 and M5:77. It is not clear which bundle is here. Each bundle consists of 10 bronze arrowheads, all with long stems. Both bundles are arranged in layers, with some arrowheads carrying trace of fibres. *See* IA CASS 1980:109–10.
[17] Quite a few jade objects were found broken into pieces, like *ge* daggers M5:1313, M5:1312, M5:14, M5:483, M5:978; M5:923; *qi* axe M5:1327; spade M5:1315; *bi* discs M5:1014, M5:1016; and *huan* ring M5:1015. Some have been reconstructed into a complete object by the excavators, including this *ge* dagger M5:14.

0.6cm thick (ibid). It is finely made with both sides polished (ibid). According to the illustration by the excavators (IA CASS 1980:10, fig. 4), it is placed with its cutting edge towards south. It is interesting these two bladed items were found from the same layer, one seeming to point to the direction of 9 o'clock, while the other six o'clock, both close to the middle lines of the tomb.[18] If they were used as markers of the directions or the mid-points, it is puzzling why the *ge* dagger was broken, which would impact its capacity to show directions, though they are likely to be associated with the directions in some way. No other object was reported to be found here.

The 6th layer of the fill, 5.6m below the upper opening of the tomb and at the "centre" of the tomb, yields much more objects than the upper ones, including six involving jade: a plate (M5:16), a *ge* dagger with jade blade and bronze hilt (M5:23), a round tubular ornament (M5:59), a small *bi* disc,[19] a notched *bi* disc (M5:1029)[20] and a *qi* axe (M5:38) (IA CASS 1980:11–2). Objects from the 6th layer of the fill largely form two clusters at the centre of the tomb, one in the north and the other south. The southern pile consists of over 80 objects, coming in two layers (IA CASS 1980:11). Both the so-called plate M5:16 and the *ge* dagger M5:23 were found from the upper layer of this pile, while the round tubular ornament M5:59, the small *bi* disc, and the notched *bi* disc M5:1029 were found from the lower layer (ibid).

The plate (M5:16) from the upper layer within this southern pile is the only jade object of this form from this tomb. It is 4.3cm tall and about 14.6cm long, with a rectangular basin-like container standing on a circle of rather tall stand which is perforated with cross-shaped openwork (IA CASS 1980:130). It was found upside down (ibid:11). When turned upside down, this object looks like a fitting that can be attached to something else, its "stand" able to

[18] It should be noted that the *ge* daggers (M5:9 and M5:10) in the 4th layer mentioned above also seem to point to these two directions, according to the illustration in the excavation report (IA CASS 1980:10, fig. 4).
[19] Object number unspecified.
[20] Object number unspecified, but there is only one notched *bi* disc in this tomb, which is M5:1029.

act as the tenon for insertion and the cross-shaped perforations for fastening. The *ge* dagger M5:23, considered as a set by the excavators, had the bronze hilt and the jade blade placed separately when found (IA CASS 1980:11). Also, according to IA CASS and Guangdong (2016:181), the jade blade cannot be inserted into the bronze hilt, despite their same width. Further, the jade blade itself is already a complete *ge* dagger in form, having its own hilt and blade separated by a circular perforation, able to be hafted on its own (ibid). Therefore, it is questionable whether the bronze hilt and the jade blade made one object as a set. Although the bronze hilt indeed has a groove that can be used for insertion, given the length of the jade blade (45cm long),[21] it is worth consideration whether this bronze hilt can properly hold the large jade blade. The jade blade is polished all over, having its cutting edges damaged and seems to carry some cracks too (IA CASS 1980:108, IA CASS and Guangdong 2016:181). The bronze hilt is 11.6cm long, decorated with *taotie* motifs, having a separate circular perforation, and its turquoise inlays mostly missing (IA CASS 1980:108). According to the illustration in the excavation report (IA CASS 1980:12, fig. 5), a jade *qi* axe (M5:38) was also found within this pile of objects. It is nearly rectangular in shape, with its top broken and only half of the perforation remaining, six projecting teeth along both edges, and a slightly curved cutting edge (IA CASS 1980:140). Its photo (IA CASS and Guangdong 2016:184) shows some green remains on one side, possibly bronze patina. It is 9.3cm in length, 5cm in width, and 0.7cm thick (IA CASS 1980:140).

[21] IA CASS 1980:108.

The upper layer also consists of one stone *dou* vessel (M5:25),[22] four stone birds (M5:17, M5:18, M5:19),[23] two bone gravers (M5:21, M5:22),[24] one Arabian cowry (M5:27),[25] two ceramic *xun* flutes (M5:29, M5:30), one bronze T-shaped object (M5:33), one bronze mirror (M5:41), two bronze arrowheads (M5:34, M5:35), and several bone hairpins[26] scattered around (IA CASS 1980:11).

At the lower layer of this southern pile found the jade objects: a round tubular ornament (M5:59), a small *bi* disc, and a notched *bi* disc (M5:1029). M5:59 is a column-shaped tube, 4cm long, perforated through the centre, slightly swelling on one end, decorated with triangular motifs on the surface, one end with circles of protruding ridges (IA CASS 1980:190). There are two other tubes (M5:1582, M5:1583) similar in form and motifs, though slightly bigger (4.8cm long) with a straight section protruding beyond the decorated

[22] The stone *dou* vessel M5:25 is well decorated with three groups of *taotie* motifs on the belly and cloud-shaped and square-eye-shaped motifs on the stand in raised lines, 9.1cm tall in total and its upper opening 15.1cm in diameter, in completeness when found, lying on its side on the southern end of this pile of objects within the 6th layer of the fill (IA CASS 1980:11 and 196).

[23] There are four stone birds here according to IA CASS (1980:11). However, only three stone birds are shown with object number (17–19) in IA CASS 1980:12, fig. 5. They (not sure if M5:20 included) were found to the north of the stone *dou* vessel (M5:25) (IA CASS 1980:11 and 12, fig. 5).
M5:17, M5:18, M5:19, and M5:20 are of the same type, all made of marble, in similar size, all about 4.7cm long, though M5:20 is not specified about its placement (IA CASS 1980:202). M5:17 is slightly smaller, 0.3cm shorter than the other three in height, and only M5:17 was found complete, while the other three all have one foot missing (ibid).

[24] Two gravers M5:21 and M5:22 were also found to the north of the stone *dou* vessel M5:25 (IA CASS 1980:11 and 12, fig. 5). They are both within 10cm long, with small perforation indicating capability of being worn (IA CASS 1980:205–6). One end carved into the shape of an animal, the other abraded on both sides, making them a graver (IA CASS 1980:205–6). As the excavators understand, M5:21 takes the shape of a phoenix, while M5:22 takes the shape of a pangolin (IA CASS 1980:205–6). M5:21 does take a similar composition to stone birds (M5:17–20), but it is not that clear in the photo (IA CASS 1980:XXXVIII', 3). M5:22 does look like a pangolin except its curled nose, which does not fit the image of a pangolin that well. There are some jade gravers in similar form too, with one end carved into various kinds of animals, including *kui* dragon, birds, fish, and geckos (IA CASS 1980:143–6). There are gravers reported to be found inside the inner coffin, together with some jade fish and lots of cowries in the west of the inner coffin, near the waist pit (IA CASS 1980:12), though not clear which.

[25] *Mauritia arabica (Linné)*. Processed. With dotted-line-like brown patterns on the surface of the shell. One perforation on the back. 6.1cm long. *See* IA CASS 1980:220.

[26] Only M5:26 and M5:37 are shown in IA CASS 1980:12, fig. 5. According to IA CASS (1980:208), mainly Type III bone hairpins (with round tops) were scattered here to the south of the wood box, while other types seem to be within the wood box. Both M5:25 and M5:37, however, are Type VII bone hairpins, with rooftop-shaped tops (IA CASS 1980:212). M5:26 is 15.5cm long, with green malachite top inserted into the stick (ibid). M5:37 is 16.1cm long, with four sides of its top inlaid with turquoise pieces, though only well-preserved on one side (ibid).

end (IA CASS 1980:190). They slightly deviate from M5:59 in the details of the triangular motifs too. These three similar tubes are classified as one type by the excavators and considered to be ornamental fittings, pendants, or whistles (IA CASS 1980:190). Since M5:59 is specified as the only one jade tube at this location, and the other two are not given a location of discovery in the excavation report (IA CASS 1980:11), it is probable that the bigger two were found elsewhere and used separately from M5:59 here, despite their similar forms. A small *bi* disc was also found among this pile of objects, but its object number is not specified and cannot be inferred. Therefore, it cannot be determined which object it is or how exactly it looks. Also found here within the lower layer of this pile of objects is a notched *bi* disc M5:1029. It is nearly a circular disc, 0.3cm thick, its longer diameter 6.1cm, with three projecting teeth spiralling in the same direction around a large perforation at the centre, both sides polished (IA CASS 1980:119). This is the only jade object in this form found from this tomb. According to IA CASS and Guangdong (2016:270), it carries a line of cutting on one side. The excavators also found a similar notched *bi* disc from a child's tomb at Xiaotun, Yinxu, which was placed on the right side of the chest, possibly as ornament (IA CASS 1980:119). At Ya Chang's tomb (Huayuanzhuang Locus East M54), a notched *bi* disc (M54:340) seems to be associated with the right side of the body too, found among three jade monster faces (M54:341, M54:342, M54:343) and a bronze *ge* dagger (M54:344) along the upper right arm of the tomb occupant. This suggests that the notched *bi* disc (M5:1029) here, together with other finds from the 6th layer of the fill inside "Fu Hao's tomb" may be items associated with human body too. However, since human remains were not found from here, it may carry a different use here from the child's tomb, as well as Ya Chang's tomb.

Also found from the lower layer of this pile are one bronze bow-shaped object (M5:60) in the middle; two bronze mirrors (M5:45, M5:75) in juxtaposition, one in the west and the other east; several small sculptures to the south of the bronze mirrors, including: a small stone ox, a

malachite monster head, a stone cicada, a small stone *guan* vessel, a small stone *lei* vessel, and two stone bottle-shaped objects;[27] another bronze bow-shaped object (M5:70) in the south end, to its northwest are the jade tube (M5:59), small jade *bi* disc, as well as one bone *bi* spoon, one shell frog, one shell *ge* dagger, and one red spiral shell (M5:98);[28] also found from this layer are nine carnelian beads, two bone pieces with red paint, as well as the jade notched *bi* disc (M5:1029) (IA CASS 1980:11).

Apart from the southern pile mentioned above, the northern pile of the 6th layer of the fill is considered as a wood box by the excavators, 0.6m ×0.41m ×0.25m in size, with rather straight edges, including a large number of bone hairpins and three broken ivory vessels (M5:99, M5:100, M5:101), some bone hairpins carrying red lacquer (IA CASS 1980:11, 208, 215–8). Indeed, the 6th layer of the fill seem to house a diverse collection of rather personal items, taking the shape of weapons, musical instruments, body ornaments, figurines, and utensils.

To sum up, remaining finds were found from every layer of the fill, with the 6th layer (the lowest) yielding the most. All the finds from the fill concentrate at the "centre" area of the tomb, probably above the inner coffin. A myriad of object types were found here, including vessels, mortar, *qing* chimes, spade-shaped objects, buttons, bow-shaped objects, arrowheads, *ge* daggers, object-mouth-shaped objects, *ji* hairpins, figurines, gravers, *xun* flutes, T-shaped object, mirrors, *gui* tablet, bottle-shaped objects, round tubular ornament, *bi* discs, notched *bi* disc, *bi* spoon, beads, cowries and shells. They came in various materials including bronze, ceramic, stone, jade, ivory, bone, and shell. Among them, the object types made in jade are unique, including a plate, a mortar, three object-mouth-shaped objects, a *gui* tablet, a round

[27] Object number not specified, but there are only two stone bottle-shaped objects from this tomb — M5:39 and M5:40. *See* IA CASS 1980:198.
[28] *Rapana thomasiana crosse*. Greyish white, well preserved. 10cm long. *See* IA CASS 1980:220. *Spelt as *thomasiara* in the original text.

tubular ornament, a small *bi* disc, and a notched *bi* disc, apart from *ge* daggers which were also found in bronze. These jade objects were found from most layers of the fill, except the 1st and the 3rd, with the most inside the 6th layer.

2) The uppermost level of the top of the outer coffin

At the depth of 5.7m below the upper opening of the tomb is the uppermost level of the top of the outer coffin. Here, a jade hoop-shaped object M5:307 was found together with a stone ox (M5:315), a ceramic *xun* flute (M5:303), three bronze arrowheads (M5:308, M5:309, M5:310), and a rather large turquoise piece (M5:312) at the centre of the tomb. This jade hoop-shaped object is a slightly squared cylindrical object, 4.1cm tall, 7.7cm in diameter, and its wall about 0.4cm thick, polished all over (IA CASS 1980:187). Unlike other hoop-shaped objects which are mostly circular in shape and decorated on the surface, this squared one (M5:307) is more like the *cong*-shaped object M5:1003 in shape, which is also a cylinder with four rounded corners, though decorated on the surface and perforated on one side. The vertical parallel lines found on M5:307 also make it relate to an original *cong* tube.

Notably, this jade hoop-shaped object (M5:307), ceramic *xun* flute (M5:303), bronze arrowheads (M5:308, M5:309, M5:310), and the turquoise piece (M5:312) were found right below the southern pile of the 6th layer of the fill above, while the stone ox (M5:315) the northern pile. Given that the difference between the bottom of the 6th layer of the fill and this layer (the uppermost level of the top of the coffin) is only 0.1m, there is some possibility that these objects from neighbouring layers were associated together, especially the same types of

objects — ceramic *xun* flutes and bronze arrowheads — being repeatedly found from both layers.[29]

Also found from the uppermost level of the top of the outer coffin, but along the "sides", were remains identified as four humans and five dogs, a stone *qing* chime (M5:316),[30] a ceramic *guan* vessel (M5:319), two bronze *zun* vessels (M5:318 and M5:320), and one bronze *jia* vessel (M5:317). Notably, the placement of these humans, animals, and vessels seems to be right above the ledges, with humans occupying the north and animals mainly the north, east and south (Figure 4.4). If these humans and animals were guards protecting the tomb from attacks from four directions, it is curious why the west side is solely placed with a stone spade-shaped object, which the excavators consider as a *qing* chime (M5:316). Given that the human remains here were found incomplete — one with broken skull, one with the lower limb missing, one with the chest and upper limb missing, and the other having only the skull — it is more likely they were treated as human sacrifices than death attendants. Thus, the finds on this level, whether humans or animals, stone or the missing contents within the vessels, are more likely to be offerings, made either to the tomb occupant or deities, such as or related to, four directions.

3) The top of the outer coffin

At the depth of 6.2m below the upper opening of the tomb is the top of the outer coffin. Here, at the "centre" of the tomb, below the wood box of the northern pile of the 6th layer of the fill

[29] It should be further noted that there is overlap between finds from the 4th layer of the fill and the 6th layer too, such as bronze bow-shaped objects, arrowheads, and *ge* daggers. It is not clear if this repetition in items indicates similarity in the nature of deposition at different layers too.

[30] This so-called stone *qing* chime (M5:316) is nearly trapezoidal in shape and much closer to the stone spade (M5:3) and jade *gui* tablet (M5:15) in form, though the jade one has a curved cutting edge. Another identified stone *qing* chime (M5:2) depicts a bird in profile and does not seem to have a cutting edge, unlike this one (M5:316) here.

and the stone ox with inscribed characters of the uppermost level of the top of the outer coffin, found two jade *gui* vessels, one white (M5:321) in the northwest and the other green (M5:322) in the southeast (IA CASS 1980:11 and 13, fig. 6).[31] The white one (M5:321) is slightly smaller, 10.8cm in height and its opening 16.8cm in diameter, while the green one (M5:322) 12.5cm in height and its opening 20.5cm in diameter (IA CASS 1980:130). Both objects are finely decorated with motifs on the surface. The white one (M5:321) has a band of triangular motifs along the upper rim, three groups of *taotie* motifs on the belly, a band of rhombuses and small triangular motifs near the bottom, and cloud-shaped and square-eye-shaped motifs along the circular stand (IA CASS 1980:130). The green one (M5:322) has two circles of protruding ridges beneath the upper rim, its belly with polylines and square-S-shaped motifs, its circular stand with cloud-shaped motifs and square-eye-shaped motifs (IA CASS 1980:130).

Sharing largely a common form, these two *gui* vessels present a strong visual contrast in colour as well as subtle difference in decorative details. Although the use of colour here indeed coincides with the association of white with west and green with east in later texts, it is not likely they indicate the four cardinal directions, as only two objects were found here instead of four. It is not clear whether the difference in decorations is associated with differentiated usage. It should be noted that the *gui* vessel, or vessels in general, was not a common form made in jade before it could be seen here during late Shang. Making jade object in this form is not only indicating a vast improvement in jade-working technology, especially the hollowing technique, but also seems to connect with the movement of form between different media, termed as "skeuomorph" by Campbell (2020). *Gui* vessels are more

[31] According to IA CASS (1980:130), both *gui* vessels were found on the top of the outer coffin, in west-east juxtaposition. According to IA CASS (1980:11), the white one (M5:321) is in the west. According to IA CASS (1980:13, fig. 6), M5:321 (at the position of 12 o'clock) is about to the northwest of M5:322 (at the position of 3 o'clock).

commonly found as bronze objects, which “Fu Hao’s tomb” itself yields five. Both zoomorphic and geometric designs can be found on these five bronze *gui* vessels, as can be seen on the two jade ones. Though the detailed decorations and their combinations cannot be strictly matched between the jade ones and the bronze ones, visual resemblance in form and decorative components can be found between the white jade *gui* vessel (M5:321) and a bronze one (M5:833), and between the green jade vessel (M5:322) and another bronze one (M5:848). However, the white jade one is slightly bigger than its bronze counterpart, while the green jade one is smaller than the bronze one. If these jade vessels were indeed referencing the bronze ones, did they also carry the same use as the bronze ones, which were providing offerings? At the same time, does the use of jade instead of a more commonly-seen material — bronze or ceramic — indicate more prized value associated with who was being offered to and what was being offered here, or at least, differentiated value attached? None of these can be known without fully investigating the original contents inside the vessels, including the bronze ones.

Within the white *gui* vessel M5:321 found two bone spoons (M5:323, M5:324) and a bronze *bi* spoon (M5:329) (IA CASS 1980:11 and 130). Bone spoon M5:323 is 14.8cm long, and its handle 1.6cm wide, both ends of the handle decorated with monster head motifs (IA CASS 1980:206). The other bone spoon M5:324 is 13.2cm long, its handle decorated with heart-shaped motif and vertical incisions (IA CASS 1980:206). The bronze *bi* spoon is 10cm in length, with its head 2.9cm long and in the shape of a cowry, its handle long and narrow (IA CASS 1980:104). This combination of objects seems to indicate the vessel had some contents inside originally, though without residual analyses, it is inconclusive to suggest what it would have been. It is not clear if the bone ones and the bronze one were put into different uses and it is curious why there were three spoons inside the white *gui* vessel while none in the green one. Does it suggest a difference in the contents inside the two vessels, the white one with

something that should be scooped with a spoon, while what was inside the green vessel did not need one? Again, without residual analyses, such a difference cannot be confirmed.

These two jade *gui* vessels and the spoons inside were the only objects found on top of the outer coffin. There are at least three possibilities how they could have joined the burial given their position inside the tomb. They could have been involved in activities taking place during the deposition at the chamber below and then placed here when all activities inside the chamber had completed. Or, they could have been associated with the interment of the humans inside the niches, which were found at the same level, though off along the "sides". Finally, they could have been associated with the stone ox above in the uppermost level of the top of the outer coffin, since they were both found at the "centre" of the tomb and inclined to the northern pile of objects up inside the 6th layer of the fill. Still, it is not clear if deposition was related along the vertical direction between these upper layers above the chamber. Either way, they were placed here at the "centre" of the tomb right after the burial of the chamber, thus probably related to the tomb occupant below, and possibly as offerings to the deceased after the person's social status had been transformed.

4) Between the inner and the outer coffins

At the depth of 7.5m below the upper opening of the tomb, both the inner and the outer coffins were under the water table level (IA CASS 1980:7 and 9). Therefore, apart from some large- and medium-sized bronze vessels, the placement of the majority of the jades and other objects could only be roughly known (ibid). Between the inner and the outer coffins, large bronze vessels were mostly found along the eastern, western, and northern "sides" of the outer coffin (IA CASS 1980:11). Large quantities of objects should have been found here, as with Ya Chang's tomb (Huayuanzhuang Locus East M54), though lack of documentation due

to the flooding. According to the excavation report, remains of eight humans were also found here, from the slurry in the south and west of the chamber (IA CASS 1980:9).

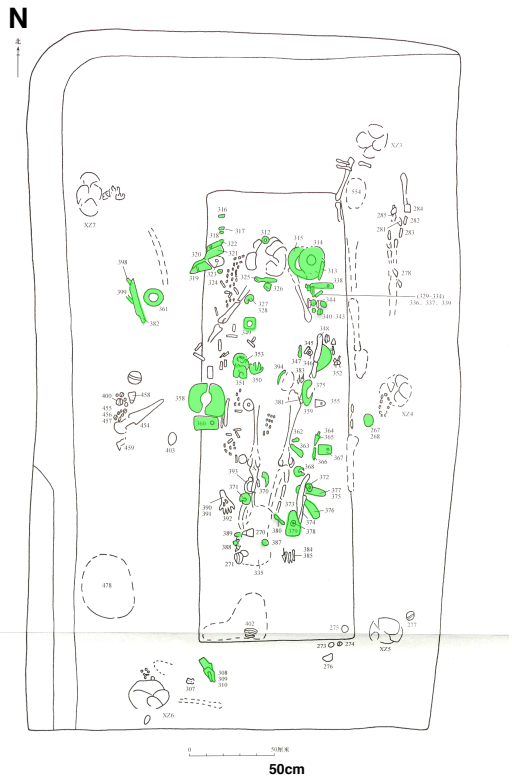
A jade pestle M5:596 was reported to be found inside the outer coffin (IA CASS 1980:149). This pestle is 28cm in length and 7cm in diameter, its head end rather thick, rounded, and smooth, while its handle is thinner and slightly flattened, its middle part slightly contracted, with very smooth and wide spiral traces, which match the depth of the hollow of the mortar M5:1 mentioned above (IA CASS 1980:149). It is puzzling why the pestle was placed separately from the mortar if they were indeed a pair. As forementioned, one possibility is that the pestle was buried first inside the chamber while the mortar with the cinnabar inside continued to take part in the burial until it was finally buried in the 2nd layer of the fill when all activities involving cinnabar were complete. Another possibility is that they may have been a pair prior to the burial, leaving the traces on the pestle, but were regarded as separate individual objects and therefore buried individually. Another possibility is that they were not a pair at all and the spiral traces on the pestle just happen to match the rim of the mortar.[32] Due to lack of documentation, it is not clear what was found together with the pestle (M5:596) here, apart from the large bronze vessels and eight humans. It can only be imagined that it was among a rich collection of various finds.

[32] Indeed, there are also two stone pestles (M5:1592, M5:1593) found from this tomb, though their placement unknown. They are both damaged and broken, seemingly used, taking a similar form to the jade pestle M5:596, with one end slightly thinner than the other, their lower ends both 5.3cm in diameter (IA CASS 1980:200). M5:1592 remains 41cm in length, carrying patina on it, indicating contact with bronze objects with it (ibid). M5:1593 remains 26cm in length, its surface mostly weathered with spalling (ibid). It is not yet clear how these objects were used and whether they were the same type of objects as the jade one, albeit commonly identified as pestles by the excavators. Indeed, these two stone ones were not made of the same material as the jade one.

5) Inside the inner coffin

Also at the depth of 7.5m below the upper opening of the tomb is where the inner coffin was supposed to be. Mainly jades and cowries were found inside the inner coffin and the jades were stained with red lacquer or cinnabar when unearthed (IA CASS 1980:12). The documentation in the excavation report is brief, possibly due to the flooding, but jades that are recorded to be found inside the inner coffin include: *bi* discs, *huan* rings, *yuan* rings, and maybe some other ritual objects; jade ornaments for wearing; human figures (M5:373, M5:375); fish; g*e* daggers; all 28 *ji* hairpins; all 18 bracelet-shaped objects; and all 33 handle-shaped objects. Due to the lack of documentation, the cases of three adjacent late Shang burials — Ya Chang's tomb (Huayuanzhuang Locus East M54) (Figure 4.5, 4.6, 4.7, and 4.8), Xiaotun M17, and Xiaotun M18 — are referred to for possible placement of jades inside the inner coffin of "Fu Hao's tomb".

Figure 4.5 Plan of the distribution of jades from layer 2 of Ya Chang's tomb (Huayuanzhuang Locus East M54). *After* IA CASS 2007: fig. 78.



268. Jade *mao* spear 玉矛.
308. Small jade *ge* dagger 小玉戈.
309. Big jade *ge* dagger 大玉戈.
312. Jade tube 玉管.
313. Jade *ge* dagger with bronze hilt 铜柄玉援戈.
314, 315. Jade *qi* axes 玉戚.
316-318. Small jade tubes 小玉管.
319. Jade *ge* dagger 玉戈.
320. Jade *qi* axe 玉戚.
321. Jade *ge* dagger 玉戈.
322. Jade *gui* tablet 玉圭.
324. Semi-spherical jade object 半球形玉器.
325. Jade *xi gadget* 玉觿.
326. Jade monster head 玉兽头.
327. Dragon-shaped ornament 龙形饰.
328. Jade spinning wheel 玉纺轮.
329. Small jade tube 小玉管.
330-334. Long jade tubes 长玉管.
336, 337. Long jade tubes 长玉管.
339. Jade tube 玉管.
340. Jade notched disc 玉璇玑.
341-343. Jade monster faces 玉兽面.
347. Jade *xi* gadget 玉觿.
349. Jade *cong* tube 玉琮.
350. Jade bear 玉熊.
351. Jade parrot 玉鹦鹉.
352. Jade *bi* disc 玉璧.
353. Jade goose 玉鹅.
358-360. Jade *qi* axes 玉戚.
361. Jade *huan* ring 玉环.
362. Perforated jade ornament 穿孔玉饰.
363. Jade *xi* gadget 玉觿.
364-366. Jade arrowheads 玉镞.
367. Jade *qi* axe 玉戚.
368. Dragon-shaped slit ring 龙形玦.
370. *Kui* dragon 夔龙.
371. Dragon-shaped slit ring 龙形玦.
372. Jade spinning wheel 玉纺轮.
375. Jade knife 玉刀.
376. Jade sickle 玉镰.
377. Jade monster face 玉兽面.
379. Jade spade 玉铲.
380. Jade *xi* gadget 玉觿.
382. Jade knife 玉刀.
387, 388. Jade monster faces 玉兽面.
389. Jade tube 玉管.
394. Jade arc-shaped object 玉璜.
398. Jade handle-shaped object 玉柄形器.
399. Jade *ji* hairpin 玉笄.

Bi discs, huan rings, yuan rings, and some other ritual objects

According to the excavation report (IA CASS 1980:12), *bi* discs, *huan* rings, *yuan* rings, and some other "ritual objects" were found around the interior of the inner coffin. There are 175 jades classified as "ritual objects" by the excavators (ibid:115–30). Apart from two *gui* vessels (M5:321, M5:322), one plate (M5:16), and one notched *bi* disc (M5:1029), which are known to be found elsewhere, other jade types categorised as "ritual objects" by the

excavators include *cong* tubes and *cong*-shaped objects, *gui* tablets, *yuan*-shaped object, *huang* arc-shaped objects, and *jue* slit rings. It is not clear which of these objects were put inside the inner coffin.

In Ya Chang's tomb (Figure 4.5), a *bi* disc (M54:352) was found in the middle of the east side within the inner coffin, possibly associated with the right side of the body of the tomb occupant. A jade *huan* ring (M54:361) was found outside the inner coffin and in the northwest of the chamber, possibly associated with the human remains (XZ7) together with a jade knife (M54:382), a jade handle-shaped object (M54:398), and a jade *ji* hairpin (M54:399), although the excavators consider it to have fallen out as the inner coffin collapsed (IA CASS 2007:92). *Yuan* ring is not reported to be found from Ya Chang's tomb. Therefore, at Ya Chang's tomb, the jade *bi* disc and *huan* ring seem to be associated with human bodies, though one tomb occupant and the other death attendant. Since jade *bi* discs, *huan* rings, and *yuan* rings were reported to be found around the interior of the inner coffin at "Fu Hao's tomb", it can be inferred that they were placed around the body of the tomb occupant. Although they could be part of the coffin too, Ya Chang's tomb suggests they should be associated with the human body instead of the coffin. Therefore, jade *bi* discs, *huan* rings, and *yuan* rings found at "Fu Hao's tomb" are likely to be associated with the corpse of the tomb occupant, though not directly as body ornaments for wearing.

Some of those other "ritual objects" were also found from Ya Chang's tomb (Figure 4.5), including a *cong* tube (M54:349), two *gui* tablets (M54:322, M54:338), two *huang* arc-shaped objects (M54:394, M54:595), and four *jue* slit rings (M54:327, M54:368, M54:371, M54:450). The *cong* tube (M54:349) was found "at the back of the tomb occupant" (IA CASS 2007:92). It seems to be associated with the left side of the body (ibid: fig. 78). A *gui* tablet (M54:322) was found at the northwest corner of the inner coffin, together with jade *ge* daggers (M54:319, M54:321), jade *qi* axe (M54:320), and two bronze arrowheads

(M54:323). Another jade *gui* tablet (M54:338) was found at the northeast corner of the inner coffin, very close to some jade tubes (M54:329-334, 336, 337, 339), and next to jade *qi* axes (M54:314, M54:315) and jade *ge* dagger with bronze hilt (M54:313). It seems both *gui* tablets were associated with jade objects that take the shape of weapons, such as *ge* daggers and *qi* axes, and placed beside the body of the tomb occupant. At "Fu Hao's tomb", a jade *gui* tablet (M5:15) also seems to be associated with a jade *ge* dagger (M5:14) as both were found from the same layer of the fill, though not placed together. Two so-called *huang*-shaped ornaments from Ya Chang's tomb M54:394 and M54:595 are not the same as *huang* arc-shaped objects from "Fu Hao's tomb" in form, in that these two from Ya Chang's tomb are arc-shaped in profile instead of front view, unlike those from "Fu Hao's tomb". Therefore, their placement[33] cannot be used to infer the use of *huang* arc-shaped objects at "Fu Hao's tomb". Four dragon-shaped *jue* slit rings (M54:327, M54:368, M54:371, M54:450) were reported to be found as "forming one straight line" (IA CASS 2007:92), with M54:327, M54:450, and M54:371 evenly distributed along the left side of the body of the tomb occupant, while M54:368 next to the right knee of the deceased. They do not seem to be ear ornaments which slit rings are commonly considered to be. It is not clear where the *jue* slit rings from "Fu Hao's tomb" were found. Thus, at Ya Chang's tomb, the *cong* tube (M54:349) and four dragon-shaped *jue* slit rings (M54:327, M54:368, M54:371, M54:450) are very likely to be directly associated with the body of the tomb occupant, although not necessarily all being body ornaments, while *gui* tablets (M54:322, M54:338) are more likely to be objects placed by the side of the human body. However, it cannot be certain which, if any, of these jade types were found inside the inner coffin of "Fu Hao's tomb".

[33] While it is unclear where M54:595 was found, M54:394 was found at the centre of the inner coffin, about the position of the waist of the tomb occupant, inclined to the right side of the body. *See* IA CASS 2007: fig. 78.

In short, *bi* discs, *huan* rings, and *yuan* rings were found inside the inner coffin at "Fu Hao's tomb", possibly around the body of the tomb occupant, though probably not as body ornaments. *Cong* tubes, *gui* tablets, *huang* arc-shaped objects, and *jue* slit rings are likely to be found inside the inner coffin too. While *cong* tubes and *jue* slit rings were likely to be directly related to the body of the tomb occupant, *gui* tablets were probably placed beside the body together with other weapons. It is not clear whether and how the *huang* arc-shaped objects were placed inside the inner coffin.

Jade ornaments for wearing

Those classified as "ornaments for wearing" from "Fu Hao's tomb" by the excavators were reported to be "mostly found in the middle of the inner coffin" (IA CASS 1980:12). As mentioned in Chapter 3, there are 188 jade objects classified as "ornaments for wearing or insertion and artworks" by the excavators, 155 of which take the shape of various kinds of animals, others in the form of human figures, and imaginary creatures (ibid:151–74). They are mostly exquisite sculpture in the round or incised flat pieces, though it is not clear which were put inside the inner coffin. The excavators consider the perforation on some of the objects as indication for wearing, though they do not specify which (ibid:151). Pendants are also considered as adorning the garment, as well as some objects, by the excavators (ibid:150), thus maybe also found inside the inner coffin too, though not specified by the excavators. Tubes and beads are also considered as "ornaments for wearing" by the excavators (ibid), and maybe also found inside the inner coffin, though neither specified by the excavators. Therefore, it is mainly (A) anthropomorphic, (B) zoomorphic (including imaginary creatures) figurines or flat pieces with perforations, which allow for suspension,

that were found in the middle of the inner coffin, and maybe (C) some pendants, tubes and beads too.

A. Anthropomorphic jades

There are 13 objects from "Fu Hao's tomb" classified as jade human figures by the excavators. These 13 objects[34] depict human figures either as sculpture in the round or flat pieces, some showing the whole body, others only the head or the face, while one as composite figure combining a monster with a human (ibid). Most carry a perforation or tenon for the object to be attached to something else. The placement of most of them is unknown, apart from M5:373 and M5:375.

Jade human figures M5:373 and M5:375 were reported to be found in the middle of the east side of the inner coffin (IA CASS 1980:12). M5:373 is 12.5cm tall and 1cm thick, depicting a human figure in standing position on both sides (ibid:153–4). The excavators consider one side as female and the other male, based on difference in details on two sides (ibid). However, such difference is visually minor except the placement of hands, and the variation may not necessarily intend to reflect a male/female divide and could be a result of creative ingenuity. As the excavators point out, this object has short tenons below feet, which could be used for insertion (ibid). M5:375 depicts a human figure in kneeling position as sculpture in the round, 5.6cm tall (IA CASS 1980:151). This figure has a monkey-like face, two hands placed on the knees, wearing garments with surface decoration and possibly shoes too (ibid). It is perforated through the back of the head and below the body between two legs too, which can be used for suspension or insertion (ibid).

[34] Including two stone ones M5:376 and M5:377, both in kneeling position with the hands placed on the knees, as with M5:371, M5:372, and M5:375. Another one M5:959 shows only a vague silhouette of an unidentifiable thing, and unlike others, may not depict a human figure. *See* IA CASS and Guangdong 2006:64–5, 44, 67, 220.

Jade human figures were not seen in Ya Chang's tomb, and therefore, it cannot be used as a reference for "Fu Hao's tomb". However, at "Fu Hao's tomb", those sculpture in the round are generally vertically perforated, which allows for insertion with a stick. Although M5:371 and M5:372 were found with perforations through the top of the head which allow for suspension, given the size and volume of the material, it would be too heavy for these objects to be used as pendants to decorate the body. Therefore, they are more likely to be part of a composite object, fixed with a wood or bamboo — or other organic material that had decayed — stick through it. The red lacquer found within the perforation at the back of the jade human head M5:534 provides evidence supporting this hypothesis. Those flat pieces all carry a tenon below the feet, suggesting they should have been inserted into something else, and the perforation on them is found near the tenon at the bottom of the object, rather than at its top, indicating the perforation is more likely to be used for fastening the attached object rather than suspension. Therefore, although these jade human figures present truly fine artistry, they may not have been used as body ornaments. Often attached to something else, they may be part of a composite object and act as its defining character.

B. Zoomorphic jades

There are 155 animal jades classified within the category "ornaments for wearing or insertion, and artworks" by the excavators (IA CASS 1980:159–74). These include 25 kinds of animals inhabiting the sky, land, and water. Further, there are 18 jade objects depicting imaginary creatures, such as dragons, phoenixes, strange birds, and strange monsters.

Nearly half of those 155 animal jades are fish (75, 48.4%). The excavators classify them into two types according to their sizes: 13 large ones ranging between 3.8cm and 10.9cm in length while 62 small ones 2.5–3.7cm (IA CASS 1980:170). Jade fish were reported to be found in the west of the inner coffin and close to the waist pit from "Fu Hao's tomb", together with

gravers[35] and over 6,700 cowries (IA CASS 1980:12). It is not clear which and how many of those 75 fish were found here though. Jade fish was not found from Ya Chang's tomb. In two other late Shang burials near "Fu Hao's tomb" — Xiaotun M17 and M18 — jade fish (M17:9, M18:49) were found at the position of the waist of one tomb attendant and within the mouth of the tomb occupant, respectively (Anyang 1981:494, 509). M17:9 is perforated through the eye of the fish, and thus, can be used for wearing on the waist through suspension. M18:49 also has an oblique perforation connecting the neck and the mouth of the fish, and therefore, can be treaded too (ibid:507). However, as it was found within the mouth of the tomb occupant, and together with four cowries (ibid), it may not be body ornament here; rather, it is more likely to take the role of *kouhan* 口含 (mouth fill)[36] as part of the mortuary practice. Thus, the use of fish at "Fu Hao's tomb" here inside the inner coffin seems to be a synthesis of both M17 and M18. First, the concurrence of fish and cowries seems to coincide with M18, where jade fish was found together with cowries. However, at M18, they were found inside the mouth of the tomb occupant and possibly as mouth fill, while here at "Fu Hao's tomb", they were found near the waist pit rather than inside the mouth, and the quantity of cowries is far larger than that in M18 and way beyond the volume a human mouth can hold. Therefore, the jade fish and the cowries here in the west of the inner coffin of "Fu Hao's tomb" cannot have acted as *kouhan* (mouth fill), although they could still retain its significance, implying food, wealth, and/or good fortune. It is not clear if jade fish and cowries are special combinations in burials at Yinxu either and jade fish were not always found together with cowries, as in Xiaotun M17. At both "Fu Hao's tomb" and M17, jade fish were found around the waist of the deceased. It cannot be certain whether the fish at "Fu

[35] The material of the gravers found here is not specified in the excavation report (IA CASS 1980:12). There are both bone gravers and jade ones from "Fu Hao's tomb", although similarly designed with zoomorphic handles.
[36] *Kouhan* 口含 is an item placed inside the mouth of the deceased. There are various interpretations of this mortuary practice. It may signify food, wealth, and good fortune for the tomb occupant, and commonly takes the form of grains, cowries, jades, or coins. *See* Wan 1998:25–30.

Hao's tomb" was body ornament though. Some of those large fish are not perforated and some even have a tenon for insertion. These features suggest that not all jade fish could be used as body ornaments through suspension. Those small fish are perforated through the eye, and mostly incised with mouth, gills, and fins (IA CASS 1980:170, 172, fig. 90), thus capable of being threaded. Zhu (2016:4) considers these fish as the pendants on the coffin cover *huangwei* 荒帷. Indeed, it is possible that the jade fish found here — in the west of the inner coffin and near the waist pit — were decorative elements associated with the coffin or its cover. However, there is no direct evidence of any coffin cover left, and it is curious why jade fish were found in the west of the inner coffin instead of around it, if they were indeed pendants along the rim of a coffin cover. Also, as forementioned, the jade fish in Xiaotun M17 and M18 were found as individual objects and cannot be pendants of the coffin cover. Since it is not specified how many and which of the 75 jade fish were found here near the waist pit, it is not certain how they could have been used in the burial.

It is not clear whether other types of animal jades were found inside the inner coffin at "Fu Hao's tomb" as their placement is not specified in the excavation report. Since they were classified as "jade ornaments for wearing or insertion, and artworks" (IA CASS 1980:159), and "jade ornaments for wearing" were reported to be found in the middle of the inner coffin (ibid:12), it is inferred that some of these animal jades which are perforated and allowing for suspension may be found in the middle of the inner coffin too.[37] These animal jades are either sculpture in the round or incised flat pieces.[38] These animal jades may not all perform a single function as ornaments for wearing.[39] Some are carved into sculpture in the round and

[37] Those with tenons should have been inserted to something else as parts of a composite object, as with human figures with tenons. A few animal jades have neither perforation for suspension nor tenon for insertion, and thus, were considered as "artworks" by the excavators (IA CASS 1980:150).
[38] Some animals were carved into both sculpture in the round and incised flat pieces, such as tigers, bears, oxen, eagles, owls, and parrots.
[39] See also jade monkey M5:407.

not perforated, such as jade tiger M5:405, M5:406, and M5:409. Given the volume, some animal jades as sculpture in the round are not suitable for wearing, despite the perforation, such as elephants M5:510 and M5:511, which are about 6cm long and 3cm tall each (IA CASS 1980:160). Some sculpture in the round is vertically perforated through the body from top to bottom, such as bears M5:303, M5:509, and M5:597.[40] Though capable of being threaded, they are more likely to be fixed with a stick for insertion than for wearing. Jade deer M5:983 is an incised flat piece and perforated, but the perforation is at the bottom of the deer and suspension would place its body vertically with the head down, so as rabbits M5:412, M5:471, and M5:1026.[41] Though head-down suspension of zoomorphic pendants is not unprecedented, it is still not a common way to wear body ornaments. Jade monster head M5:1290 has multiple perforations at its three corners, maybe sewn on other objects as attachments instead of directly worn on the body. Another jade monster head M5:578 has one perforation at the bottom. However, the perforation is on the tenon and more likely for firm fastening instead of suspension.[42] Some have no perforation but a tenon for insertion, unlikely to be body ornaments for suspension, such as jade owl M5:368.[43] A few incised flat slices have no perforation nor tenon, such as jade parrot M5:993. It is not certain how they were used, though they could either be attached to the surface of something else as inlay or carry independent significance. Indeed, it seems there are various ways these zoomorphic jades can be used and not all being body ornaments, though many do seem to be attached to something else through perforation or tenon.

It is not clear if those jades taking the form of imaginary creatures were found inside the inner coffin at “Fu Hao’s tomb”, although it can be inferred whether they could be used as

[40] See also jade monster head M5:387, eagle M5:464, owls M5:402, M5:513, M5:465.
[41] See also jade crane M5:437.
[42] See also jade parrots M5:389, M5:396, M5:996, and M5:1110; goose M5:386.
[43] See also jade parrots M5:353, M5:367, M5:399, M5:428, M5:467, and M5:1292; geese M5:517 and M5:423.

body ornaments through analyses of the perforation on them. Jade dragons are carved into both sculpture in the round and incised flat pieces. Four are perforated or carry trace of perforations that is not drilled through the object, such as M5:408, M5:466, M5:422, and M5:1118. Among them, M5:408 is perforated through the lower jaw of the dragon, and thus can be used for suspension as body ornaments. M5:466 has a perforation not drilled through at the back. Therefore, it cannot be used for suspension as body ornaments. M5:422 is drilled through the back, and thus, can be used for suspension as body ornaments. Another perforation not drilled through may not be intended for suspension. M5:1118 is considered as an unfinished object by the excavators (IA CASS 1980:158) as only a roughout is produced for the dragon without decorative details on the surface. The perforations at the mouth and the tip of the tail of the dragon may be carved to shape the mouth and tail, rather than for suspension. It is not clear what the other perforation at the tail is intended for, though it can be used for suspension. The other five are not reported with a perforation, and thus, cannot be used for suspension as body ornaments. Thus, not all dragons can be used as body ornaments through suspension.

Jade phoenix M5:350 has a small protrusion with perforation in the middle of the outer circumference of the object, which allows for suspension as body ornaments. The openwork at the back of the bird also allows for suspension. Strange bird M5:990 has a vertical perforation at the back of its head. The groove between its legs and this vertical perforation may be carved for insertion instead of suspension. While the same holds true for strange bird M5:508, an extra perforation on its head allows for suspension in addition to insertion. M5:393 has no perforation and therefore cannot be used for suspension. Another strange bird M5:403 has a perforation drilled through its beak, allowing for suspension, though it may be simply carved to shape the beak. Strange bird M5:404 has an oblique perforation at the top of its head, able for suspension. M5:968 has one larger perforation between the eyes and another

at the mouth, able for suspension. M5:354 consists of a dragon, a bird, and a cloud-like piece. It is not certain whether the perforation on the crest of the bird can be used for suspension. M5:308 has a large circular perforation near one end, able for suspension. Therefore, while some of these imaginary creatures can be threaded for wearing as body ornaments, others cannot.

In "Ya Chang's tomb" (Figure 4.5), zoomorphic jades were indeed found in association with the body of the tomb occupant in the middle of the inner coffin, though they may not all be body adornments of the tomb occupant. Animal jades such as bear (M54:350), goose (M54:353), and parrot (M54:351) were indeed found together on the left side of the body at about the position of the waist of the tomb occupant, in the middle of the inner coffin. All three are incised pieces within 1cm thick (IA CASS 2007:192, 201–2). The bear (M54:350) is perforated, which allows for suspension and being worn, a feature that is not seen on the other two though. The goose (M54:353) has one side carved and the other plain, while the surface decoration on the carved side only cover the upper part of the goose, considered by the excavators as an unfinished piece (ibid:201). The parrot (M54:351) is recognised by the excavators as a remaining hilt of a broken jade *ge* dagger, recut into a triangular shape at the front (ibid:191). It seems these three animal jades were gathered here after separate life histories beforehand. It cannot be certain whether it is their commonality of being animal-shaped that brought them together. However, it can be certain they were not all suspended as body ornaments. As forementioned, four dragon-shaped *jue* slit rings (M54:327, M54:368, M54:371, M54:450) were found in association with the body of the tomb occupant at Ya Chang's tomb.[44] M54:450 (the middle one on the left side) seems to differ from the other three in that it is the only one with surface decoration while others are all plain on the surface.

[44] M54:327 was at about the position of the left shoulder of the tomb occupant, M54:450 nearly the left thigh, and M54:371 about the left calf or ankle. *See* IA CASS 2007: fig. 78.

Among these four coiled dragons, only M54:368 (the one on the right side) was reported with a perforation at the back, which allows for suspension and wearing.[45] Therefore, although these dragon-shaped *jue* slit rings are clearly associated with the body, it is not clear whether they were all used as body ornaments. There are also three small monster heads (M54:326, M54:377, M54:401) and five small monster faces (M54:387, M54:388, M54:341, M54:342, M54:343) found from Ya Chang's tomb (Figure 4.5 and 4.6). Type A monster head M54:326 was found at the position of the neck of the body, together with a so-called jade *xi* gadget (M54:325), which is believed to be used for undoing knots. Both objects are perforated and seem able to be threaded and worn. However, the monster head is vertically perforated through the centre of the object, which makes it less likely to be worn as a pendant for a necklace, as the monster head would show horizontally when threaded. The vertical hollow through the centre seems more suitable for taking insertion, allowing the monster head working as a fitting. Another jade monster head M54:377 seems to be found to the right of the right calf of the tomb occupant, together with a jade knife (M54:375). This one does not seem to be associated with the tomb occupant's body, as was found off the body. Jade monster head M54:401 was found along the eastern edge of the inner coffin and off the body too (Figure 4.6). These two Type B monster heads (M54:377, M54:401) have a curved cross-section and multiple perforations on two horns, two corners of the mouth, and in the middle of the forehead of the monster face, and therefore, are more likely to be sewn on something else as attachments than threaded as pendants. Given their positions in relation to the body of the tomb occupant, it is unlikely they were meant as body ornaments of the deceased. Therefore, these monster heads were unlikely to be meant as body ornaments of the tomb occupant but small attachments of other things. Jade monster faces M54:387 and M54:388

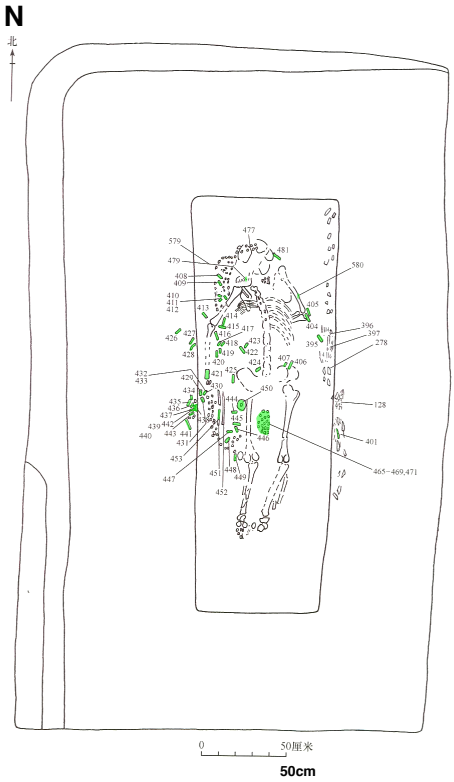
[45] Both M54:327 and M54:368 are seen with a perforation at the back in the illustration of the excavation report, but not on M54:371 or M54:450. *See* IA CASS 2007: fig. 135, p. 181.

seem to be associated with the feet of the tomb occupant, as were found at the position of the feet and one each. They both have a tenon at the bottom and perforation, and thus, can be inserted into something else. They were either adorning the shoes or something placed near the feet, and less likely to be worn around the ankles, as the tenons suggest they should have been used as insertion instead of pendants directly threaded to be worn. Also, the perforations were found on the tenons at the bottom of the monster face, making them less likely to be used for suspension and more for fastening. Thus, these two jade monster faces seem to be attached to something else that was associated with two feet of the tomb occupant, though not directly adorning them. Three other jade monster faces (M54:341, M54:342, M54:343) were found together with the jade notched *bi* disc (M54:340) and the bronze *ge* dagger (M54:344) next to the right upper arm of the tomb occupant. M54:341 and M54:342 are vertically perforated through the centre, making them able to be threaded or inserted with a thin stick. M54:343 has a perforation between the eyes of the monster face, which allows for suspension. It is not clear whether these three jade monster faces carry significance as body ornaments. In sum, although the zoomorphic jades in Ya Chang's tomb seem to be associated with the body of the tomb occupant, they may not necessarily all be body ornaments for wearing.

Therefore, although zoomorphic jades from "Fu Hao's tomb" exhibit exquisite artistic features and decorative potential, they may not necessarily all be body ornaments for wearing. Jade fish were found in the west side of the inner coffin, probably in association with the cowries and taking the significance of food, wealth, or good fortune, though not directly as *kouhan* (mouth fill). Given their concentration in the west of the inner coffin, they are less likely to be decorative elements of the coffin. Some animal jades that are perforated and can be used for suspension may also be found here inside the inner coffin, although not all animal jades were body ornaments. It is not certain if jades in the form of imaginary

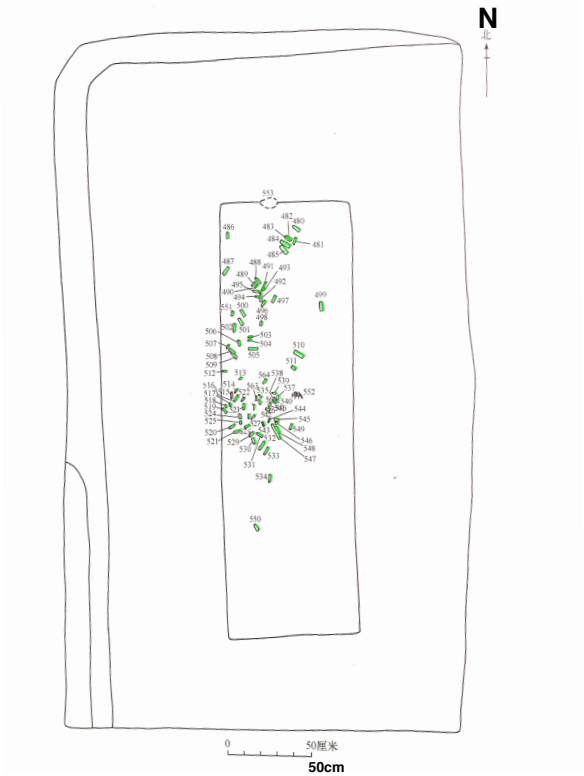
creatures were found here. If they were, they may not all be body ornaments either. As suggested by Ya Chang's tomb, zoomorphic jades may indeed be associated with the body of the tomb occupant, though not necessarily all being body ornaments.

Figure 4.6 Plan of the distribution of jades from layer 3 of Ya Chang's tomb (Huayuanzhuang Locus East M54). *After* IA CASS 2007: fig. 79.



395. Jade tube 玉管.
401. Jade monster face 玉兽面.
404. Long jade tube 长玉管.
405. Jade tube 玉管.
406. Long jade tube 长玉管.
407-409. Jade tubes 玉管.
410-412. Small jade tubes 小玉管.
413-420. Jade tubes 玉管.
421. Large jade tube 大玉管.
422-449. Jade tubes 玉管.
450. Dragon-shaped slit ring 龙形玦.
453, 465-469, 471. Jade tubes 玉管.
479. Jade tube, inside the mouth of the tomb owner 玉管.
481. Jade tube 玉管.
580. Jade tube 玉管.

Figure 4.7 Plan of the distribution of jades from layer 4 of Ya Chang's tomb (Huayuanzhuang Locus East M54). *After* IA CASS 2007: fig. 80.



480, 510. Large jade tubes 大玉管.
481-509, 511-551, 560, 563, 564. Jade tubes 玉管.

C. Pendants, tubes and beads

In Ya Chang's tomb, a semi-spherical jade object (M54:324) is classified as a pendant in the excavation report, which is unlike any jade object classified as "pendants" in "Fu Hao's tomb". However, eight objects classified as "Type B tubes"[46] in Ya Chang's tomb take close resemblance to Type I "pendants"[47] from "Fu Hao's tomb", in that they are all small trumpet-shaped objects perforated through the centre, though the Ya Chang's are reported with a

[46] 2.91–6.63cm long. *See* IA CASS 2007:206–8.
[47] 3.5–6cm long. *See* IA CASS 1980:181–2.

vague octagonal cross-section (IA CASS 2007:206), which is not seen on those from "Fu Hao's tomb". Many of these pendants or tubes from both sites are identified with trace of suspension on two ends of the perforation through the centre (IA CASS 1980:181; IA CASS 2007:206), indicating long-term usage. The placement of these eight Type B tubes within Ya Chang's tomb is rather dispersed (Figure 4.5, Figure 4.6, and Figure 4.7). M54:479 was found from the mouth of the tomb occupant, M54:312 at the top of the head, while M54:484 and M54:485 were found among a group of tubes (M54:480 – M54:485) to the north of the head. M54:389 and M54:550 seem to be both associated with the left foot of the tomb occupant. M54:421 was found to the left of the body of the tomb occupant, while M54:510 below it and possibly at the position of the right abdomen. Therefore, it does not seem these tubes were associated together despite their common form; rather, most of them exhibit rather individual significance. Indeed, they all seem to be closely associated with the body of the tomb occupant, though it is not clear whether they were all meant as body ornaments. The one (M54:479) in the mouth, for example, should not have been used as body ornament, but as *kouhan* (mouth fill). Further, the dispersed placement of these eight Type B tubes indicates they may not all share a common use, despite their common form. "Type I pendants" from "Fu Hao's tomb" were also reported to be found from a small late Shang tomb at Yinxu, unearthed from the waist of the tomb occupant, one on the left side and two on the right, with the flared end up, considered as pendants on the garment (IA CASS 1980:181). The placement of the trumpet-shaped pendants from "Fu Hao's tomb" is unknown. If they were indeed also found inside the inner coffin, they may be associated with the body of the tomb occupant too, as in the other tombs. They could be adorning the garment or other objects as suggested by the excavators (IA CASS 1980:150), or directly decorating the body or placed on it.

There are 33 objects from "Fu Hao's tomb" considered as jade tubes and beads by the excavators, mostly small items within 5cm in length (IA CASS 1980:184–5). In comparison, Ya Chang's tomb yields 157 jade tubes (including the aforementioned eight Type B trumpet-shaped tubes), accounting for the vast majority of all 222 jade objects from this site, while those 33 tubes and beads make only a very small proportion of 756 jades from "Fu Hao's tomb" (4.4%). In terms of form, jade tubes from "Fu Hao's tomb" are close to Type A (I) tubes from Ya Chang's tomb,[48] mostly cylindrical in shape and plain on the surface. At both sites, many of such tubes were reported with trace of suspension (IA CASS 1980:184–5; IA CASS 2007:203–6). In Ya Chang's tomb, these tubes were found to spread both above and below the body of the tomb occupant, given that the person was buried in prone position (IA CASS 2007:202) (Figure 4.6 and Figure 4.7). The excavators consider the trace of suspension found on them indicates long-term wearing before burial (ibid). Although the jades were found rather dispersed and in association with the body of the tomb occupant, there seems to be a concentration of them a) near the head; b) on the left side of the upper body, perhaps along the left arm; c) on or to the left side of the lower part of the body; and d) between two thighs. Indeed, these tubes appear to make a significant part of what the deceased was most closely accompanied with during the burial and thereafter. It is not clear why there seems to be a concentration of them on the left side of the body. Neither is clear whether these tubes

[48] Type A (I) is the dominant form of jade tubes at Ya Chang's tomb (143, 91.1%), max 10.25cm in length. Type A (II) jade tubes M54:395 and M54:583 both have a tenon on one end (IA CASS 2007:206), making them capable of being inserted to something else and less likely to be a tube. M54:395 was found together with a group of 25 bone arrowheads (M54:396) and 17 bronze arrowheads (M54:397) in the middle of the east side of the inner coffin. It may also be associated with jade tubes M54:404 and M54:405 at the right elbow of the tomb occupant. The placement of M54:583 is unknown. Three type A (III) jade tubes are decorated on the surface, two (M54:316, M54:317) of which resemble round tubular ornaments (M5:59, M5:1582, M54:1583) from "Fu Hao's tomb". Type B tubes from Ya Chang's tomb are more related to trumpet-shaped pendants from "Fu Hao's tomb". Type C tube (M54:480) seems to be related to pendant M5:1197 from "Fu Hao's tomb", both decorated with parallel incisions on the surface, found to the north of the group of jade tubes (M54:481–M54:485) near the head of the tomb occupant. *See* IA CASS 2007:202–8.

were directly decorating the body of the tomb occupant, especially those[49] off and to its left. It is not clear where the similar jade tubes from "Fu Hao's tomb" were found. If they were indeed found inside the inner coffin too, it may follow that they were among things that closely accompanied the deceased in death as well, though it cannot be certain whether they directly decorated the body of the tomb occupant. It is also curious whether those 30 jade tubes from "Fu Hao's tomb" were more spread out or concentrated than in Ya Chang's tomb, given that there are much fewer of them at "Fu Hao's tomb", and whether they were carrying the same significances as in Ya Chang's.

Three beads (M5:1502, M5:1503, M5:1537) from "Fu Hao's tomb" vary in form themselves, ranging between 0.9cm and 1.3cm in diameter and 0.5–1.4cm in height (IA CASS 1980:185). Their closest resemblance from Ya Chang's tomb is the semi-spherical object M54:324 mentioned above. With one side curving out while the other flat, and perforated through the centre, M54:324 is considered as a circular pendant by the excavators (IA CASS 2007:202).[50] It seems to be found next to a group of weapons[51] at the northwest corner of the inner coffin though its association not clear (Figure 4.5). Therefore, it is not clear what role this semi-spherical object from Ya Chang's tomb is taking, despite a guess as a pendant by the excavators (ibid). The placement of those three beads from "Fu Hao's tomb" is unknown, and thus, their function unclear apart from their capability to be suspended.

[49] Jade tubes M54:429 – M54:443 were found to the left of the left thigh of the tomb occupant and near the edge of the inner coffin (some even appear outside the outline of the inner coffin) and therefore, may not be directly related to the body of the tomb occupant. *See* IA CASS 2007, fig. 79.
[50] M54:324 is 2.22cm in diameter and 0.81cm thick. *See* IA CASS 2007:202.
[51] Including jade *ge* daggers (M54:319, M54:321), *qi* axe (M54:320), *gui* tablet (M54:322), and two bronze arrowheads (M54:323). *See* IA CASS 2007: fig. 78.

In short, it is not certain whether pendants, tubes, and beads were also found inside the inner coffin of "Fu Hao's tomb". Many of them carry trace of suspension and should have been used for long before the burial. The case of Ya Chang's tomb suggests they could be closely associated with the body, though not all acting as body ornaments. Some could have been involved in mortuary practices, like *kouhan* (mouth fill).

Ge daggers

Jade *ge* daggers were reported to be "mostly found on the north end of the inner coffin" at "Fu Hao's tomb" (IA CASS 1980:12). However, it is not specified how many and which of those 39 jade *ge* daggers were found here.[52] As mentioned in Chapter 3, there are 39 jade *ge* daggers found from "Fu Hao's tomb" in total, many seen with breakage (ibid:130). They vary greatly in length, ranging from 10cm to 51cm, though mostly within 10cm in width (IA CASS 1980:130–9). A few were reported to carry trace of hafting at the front of its hilt (ibid). If inside the inner coffin here were mainly broken ones, it can be inferred that some ritual involving breakage of objects took place, and the breakage may indicate either the end of usage of the object in the living world or the transformation of the object into something belonging to another world.

Since the body of the tomb occupant was not found, it is not clear what the burial style was like. However, if the tomb occupant of "Fu Hao's tomb" was buried in the same way as the nearby tombs M17 and M18 at Xiaotun (Anyang 1981), as well as Ya Chang's tomb (Huayuanzhuang Locus East M54), in which the tomb occupants were found at the centre and heading north, then perhaps the tomb occupant of "Fu Hao's tomb" had some *ge* daggers placed near the head. Indeed, at Ya Chang's tomb (Figure 4.5), jade *ge* daggers (M54:319,

[52] Among these 39 jade *ge* daggers, M5:14 is known to be found from the 5th layer of the fill (IA CASS 1980:11).

M54:321) were found to the left of the head of the tomb occupant, together with a jade *qi* axe (M54:320) and a *gui* tablet (M54:322), while another jade *ge* dagger with bronze hilt (M54:313) was found to its right, together with jade *qi* axes (M54:314, M54:315).[53] Given the perforation on these *ge* daggers, they were probably hafted and placed by the side of the body of the tomb occupant, though not necessarily intended in association with the head. Their placement near the head of the tomb occupant probably reflects the length of the haft, which is likely to reach the head from the toe of the body, instead of a direct link with the head, as those *ge* daggers (M54:308, M54:309, M54:310) found at the southern end of the chamber outside the inner coffin, and probably in association with the death attendant XZ6, were further off the head and probably by the side of the body.

In sum, jade *ge* daggers were reported to be found inside the inner coffin at "Fu Hao's tomb", probably beside the body of the tomb occupant and possibly near the head. It is not clear what the *ge* daggers found here were like. There could be some broken ones, and if so, some ritual involving breakage of objects may have taken place here as part of the mortuary practice.

Ji hairpins, bracelet-shaped objects, and handle-shaped objects

Jade *ji* hairpins, bracelet-shaped objects, and handle-shaped objects were reported to be found inside the inner coffin (IA CASS 1980:174, 176, 178). It is noteworthy that all 28 *ji* hairpins were found at the same location, and so were all 18 bracelet-shaped objects, indicating the placement of these objects involved some degree of organisation as the same type of objects were grouped together.

[53] At Ya Chang's tomb, other jade *ge* daggers were reported to be found to the right of the right calf of the tomb occupant (M54:375, M54:376) and at the southern end of the chamber outside the inner coffin (M54:308, M54:309). The placement of M54:357, M54:211, and M54:464 is unknown. M54:351 is cut short, leaving the parrot-shaped hilt, and found together with the jade bear (M54:350) and goose (M54:353) on the left side of the body. *See* IA CASS 2007: fig. 78.

All 28 jade *ji* hairpins from "Fu Hao's tomb" were reported to be found on the north end of the inner coffin, their exact placement unclear (IA CASS 1980:174). They are generally narrow awl-shaped sticks with a rather sharp point, ranging between 8.2cm and 19.7cm in length (ibid:174–6). Jade *ji* hairpins (M18:27, M18:28) were found to the top of the head of the tomb occupant and along the northern edge of the inner coffin at Xiaotun tomb M18, among the remaining tops of a group of bone *ji* hairpins (M18:63–72) (Anyang 1981: fig. 1). The excavators consider both the jade and the bone hairpins as decorative elements on an elaborate headdress placed outside the inner coffin but to the top of the head of the tomb occupant (ibid:494). Like jade *ji* hairpin M5:931 from "Fu Hao's tomb", these jade and bone hairpins from tomb M18 are carved at the top, presenting exquisite decorative characteristics. However, most other jade *ji* hairpins from "Fu Hao's tomb" do not have a decorative top, though a few do have a tenon or mortise, allowing one to be attached. Indeed, M5:931 seems to be unique among all jade *ji* hairpins from "Fu Hao's tomb", with a flattened stick as well.[54] Ya Chang's tomb also yields a jade *ji* hairpin (M54:399). However, it was not found in association with the head of the tomb occupant but outside the inner coffin (IA CASS 2007: fig. 78) (Figure 4.5). It was found together with a jade knife M54:382, jade handle-shaped object M54:398, and jade *huan* ring[55] M54:361, at about the position of the waist of death attendant XZ7 and may not have been used as a hairpin. A few so-called jade *ji* hairpins (M5:528, M5:1271, M5:1277, M5:) from "Fu Hao's tomb" take close resemblance to this one from Ya Chang's tomb, in that they all carry "bamboo motifs" — circular incisions — around the sticks, though they differ at the top. Ya Chang's one (M54:399) has a sloping top, perhaps as a tenon for insertion (IA CASS 2007:201, fig. 145). M5:528 from "Fu Hao's tomb" has a mortise at the top, allowing for insertion too (IA CASS and Guangdong

[54] The excavators consider M5:1274 to be a pair with M5:931, though its top broken (IA CASS 1980:174).
[55] Collared *bi* disc with concentric incisions on the surface.

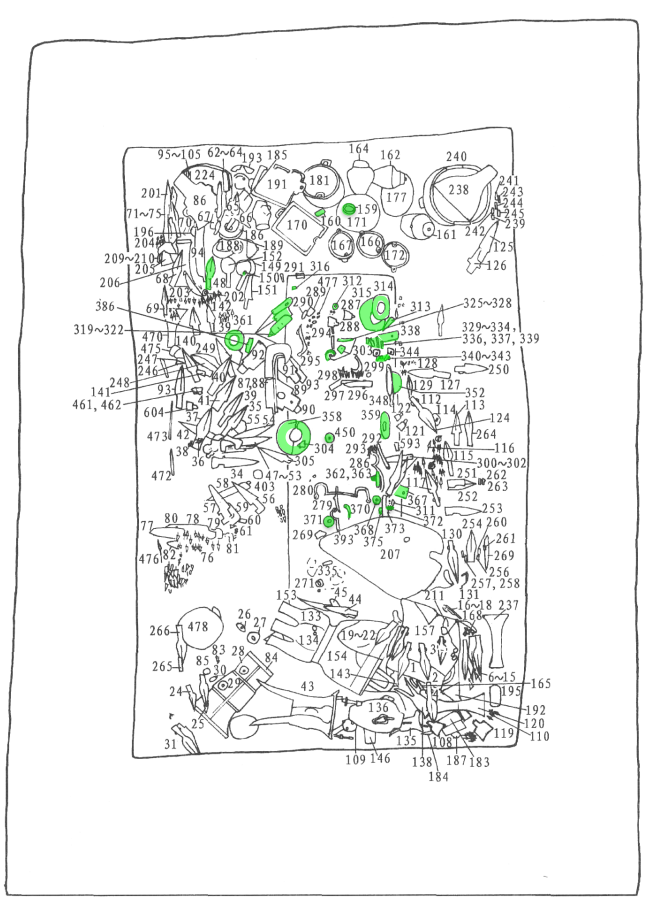
2016:139). Also from "Fu Hao's tomb", M5:1271 has its top broken, while M5:1277 has a flat top (ibid:135, 138). As inferred by the excavators (IA CASS 1980:174), this type of jade *ji* hairpins could have had something attached on the top, though it is not clear why the one from Ya Chang's tomb was found at the position of the human waist instead of the head, or how it was used there. Therefore, though those from Xiaotun tomb M18 suggest these so-called jade *ji* hairpins were indeed in association with human head, it is not the case at Ya Chang's tomb. Given that those from "Fu Hao's tomb" were also found from the northern end of the inner coffin — similar to Xiaotun tomb M18 — they may be part of the headdress of the tomb occupant too, though it cannot be certain as the orientation of the body is unknown at "Fu Hao's tomb".

All 18 bracelet-shaped objects were found in the middle of the inner coffin (IA CASS 1980:176). These ring-shaped objects range from 5cm to 9.1cm in diameter and 3.9cm – 6.7cm in perforation diameter (IA CASS 1980:176–8). The excavators consider those larger than 6cm in perforation diameter able to be used for practical purposes for adults, while the smaller ones may be intended for children (ibid). However, since all these 18 objects were found together inside the inner coffin, such a divide may not fit within this context. Nevertheless, these 18 objects indeed vary in size, and those classified as Type I bracelet-shaped objects by the excavators are smaller and thinner than Type II ones.[56] This typological divide in size largely corresponds with the difference in surface decoration too, though not entirely congruent. The majority of Type I ones carry a circle of protruding ridge in the middle of the outer circumference, a few with two or three circles, except M5:1096 and M5:1097. These two carry similar mushroom-shaped motifs and parallel incisions on the

[56] Type I bracelet-shaped objects: M5:1054, M5:1042, M5:1053, M5:1009, M5:1095, M5:1043, M5:1044, M5:1097, M5:1096; and
Type II: M5:1007, M5:1038, M5:1008, M5:1052, M5:493, M5:340, M5:1041, M5:454; and
Type III: M5:1039.

surface of many Type II ones. Other Type II ones, such as M5:493 and M5:454 are closer to the Type III one, M5:1039, in surface decoration, carrying very simple or no lines on the surface. It is not clear if the difference in their appearance also corresponds with their use though, although their commonality in the location of discovery indicates they should have been commonly used inside the burial. Indeed, they may have been ornaments decorating the arms since they were found in the middle of the inner coffin where the arms and hands of the body should have been. They differ from other circular objects, such as *bi* discs, *huan* rings, and *yuan* rings, which were reported to be found around the interior of the inner coffin (IA CASS 1980:12). Since the so-called bracelet-shaped objects were reported to be found in the middle of the inner coffin (ibid:176), they are more likely to be body ornaments, perhaps decorating the arms, than those found around the interior of the inner coffin. The bracelet-shaped object M54:160 from Ya Chang's tomb, though, was not found inside the inner coffin but at the northern end of the chamber (outside the inner coffin), together with a hoop-shaped object M54:159 (Anyang 2004: fig. 3) (Figure 4.8). Thus, it brings some uncertainty about the use of bracelet-shaped objects as body ornaments decorating the arms.

Figure 4.8 Plan of the distribution of jades from layer 1 of Ya Chang's tomb (Huayuanzhuang Locus East M54). *After* Anyang 2004: fig. 3.



148. Jade *mao* spear with bronze hilt 玉叶铜骸矛.
150, 312, 316, 329-334, 336, 337, 339. Jade tubes玉管.
159, 160. Jade hoop-shaped objects 圆箍形玉器.
221. Jade object 玉器.
313. Jade *ge* dagger with bronze hilt 玉援铜内戈.
314, 315, 320, 358, 359, 367. Jade *qi* axes 玉戚.
319, 321. Jade *ge* daggers 玉戈.
322, 338. Jade *gui* tablets 玉圭.
325, 363 Jade *xi* gadget 玉觿.
326. Jade monster head 玉兽头.
327, 368, 371, 450. Jade dragon-shaped ornaments 龙形玉饰.
328, 372. Jade spinning wheels 玉纺轮.
340. Jade notched *bi* disc 玉璇玑.
341-343. Jade monster faces 玉兽面.
352. Jade *bi* disc 玉璧.
361. Jade *huan* ring 玉环.
362. Perforated jade ornament 穿孔玉饰.
370. Jade *kui* dragon 玉夔龙.
375. Jade knife 玉刀.
386. Jade handle-shaped ornament 玉柄形饰.

In "Fu Hao's tomb", all 33 handle-shaped objects were reported to be found inside the inner coffin, though their exact placement unclear (IA CASS 1980:178). Therefore, it is not clear whether they all concentrate together within the inner coffin or scatter around. They are largely square columns or flat rectangular pieces in shape and range between 4.3cm and 21.4cm in length, all within 5cm in width (IA CASS 1980:178–81). The excavators (ibid) and others (IA CASS and Guangdong 2016:283) consider them to be ornaments for wearing[57] or

[57] By referring to other small tombs at Yinxu (IA CASS 1980:178).

object handles for insertion. Indeed, most of these handle-shaped objects from "Fu Hao's tomb" carry a tenon which allows for insertion.[58] Thus, it is more likely they were attached to something else originally, and possibly as a handle-like part of a composite object, although some of them present decorative characteristics such as exquisite motifs and reliefs. At Ya Chang's tomb, there are two jade handle-shaped objects, one with a tenon too (M54:398), the other reported with a sloping blade at the end (M54:386) (IA CASS 2007:208–9). They seem to be found in association with each other in the northwest of the chamber but outside the inner coffin, though M54:386 is illustrated in an upper layer in the excavation report (Anyang 2004: fig. 3; IA CASS 2007: fig. 78). Also found together were jade *huan* ring M54:361, jade knife M54:382, and jade *ji* hairpin M54:399, and they all seem to be associated with death attendant XZ7. Thus, these handle-shaped objects seem to be associated with the middle part of the human body, though not necessarily as body ornaments. Therefore, at "Fu Hao's tomb, these handle-shaped objects found inside the inner coffin may be associated with the body of the tomb occupant as part of a composite object, though not necessarily directly decorating the body.

In short, there is a concentration of jades inside the inner coffin at "Fu Hao's tomb". This encompasses both a large number of jade objects and a good variety of jade types. Those reported to be found here with certainty include jade *bi* discs, *huan* rings, *yuan* rings, human figures (M5:373, M5:375), fish, g*e* daggers, all 28 *ji* hairpins, all 18 bracelet-shaped objects, and all 33 handle-shaped objects. It is likely some jades classified as "ritual objects" and "ornaments for wearing" by the excavators were also found inside the inner coffin, although they did not specify which. These "ritual objects" may include *cong* tubes and *cong*-shaped objects, *gui* tablets, *yuan*-shaped object, *huang* arc-shaped objects, and *jue* slit rings. Those

[58] Only three are not reported with a tenon, including M5:1083, M5:568, and M5:506. *See* IA CASS 1980:178–81.

"jade ornaments for wearing" found inside the inner coffin could be some anthropomorphic and zoomorphic figurines or flat pieces with perforations, and maybe some pendants, tubes and beads too.

4.2.3 Summary

In sum, at "Fu Hao's tomb", jades were reported to be found from the 2nd, 4th, 5th, and 6th layers of the fill, the top of the outer coffin and its uppermost level, inside the chamber, and inside the inner coffin, covering most levels at "Fu Hao's tomb" and exhibit a vertical distribution across 4.5m. They were not seen in the 1st and 3rd layers of the fill, nor the niches or the waist pit. A concentration of jades can be seen inside the inner coffin, with the most jade types and jade objects reported to be found, although it is not entirely clear how many and which were found here. Through comparisons with other late Shang tombs at Yinxu, these jades inside the inner coffin are likely to be associated with the body of the tomb occupant, though not necessarily all being body ornaments. They could also be some equipment placed beside the body of the deceased, or items involved in the mortuary practice. Some of them carry use-wear, indicating a life history before deposition here, though they could have been appropriated from their prior use for the burial here.

4.3 From where to when

The position of jades within "Fu Hao's tomb" is thus given, as summarised above. Since the site was found intact, the jades are assumed to have remained where they were originally placed. Through laws of archaeological stratification, this information on where they were inside the tomb can be converted into when they joined the assemblage.

Harris (1979) outlined four laws of archaeological stratigraphy: the Law of Superposition, the Law of Original Horizontality, the Law of Original Continuity, and the Law of Stratigraphical Succession. The Law of Superposition states: "in a series of layers and interfacial features, as originally created, the upper units of stratification are younger and the lower are older, for each must have been deposited on, or created by the removal of, a pre-existing mass of archaeological stratification" (Harris 1979:112). This provides a means of conversion from space to time, and it translates physical relations between archaeological features into relative chronologies (ibid:113). However, at most archaeological sites, there could be more than one stratigraphic sequence as separate lines of deposition could happen within features like walls or ditches, thus defying a direct correlation between the stratification and the order of deposition (ibid:114–5). Also, a section cannot fully reflect the stratigraphic sequence of the whole site, and Harris (1975:112) suggests a combination of the section and plans of all strata for stratigraphic studies. A comprehensive reconstruction of the stratigraphic sequence at "Fu Hao's tomb", though, is not attempted here, nor does the recording of the site allows so. The aim of this thesis is to understand the participation of the jades within the process of the assemblage. Therefore, only the deposition related to the construction of the tomb and the burial process is concerned here, for which the laws of stratigraphy can provide general guidance.

Roughly, at "Fu Hao's tomb", the shaft should have been dug first, followed by the waist pit, while the niches could have been done simultaneously or later. Then the human and canine victims were buried inside the waist pit. With the bottom of the tomb smoothened, the construction of the chamber should then follow. Given that the placement of large bronze vessels at the bottom of the tomb was surrounding where the inner coffin supposedly was, the contents inside the chamber (between the inner and outer coffins) should have been placed later than the burial of the inner coffin, accommodating its position. The inner coffin could

have had two possible states at the burial. First, the body of the tomb occupant, as well as those jades and cowries, were already put inside the inner coffin and sealed. Thus, the living spectators of the burial would not be able to see the person, nor the jades or the cowries. Second, a less likely scenario differing from the modern practice, the body of the tomb occupant could have been put inside the inner coffin during the burial, accompanied by those also found inside the inner coffin, including jades. Thus, these items may be given to the deceased by those attending the burial during the ceremony. It cannot be certain if late Shang people had a completely different practice with the inner coffin from our modern one. Either way, the jades inside the inner coffin should have joined the assemblage at an early stage of the funeral and closely accompanied the deceased through the burial. Then the chamber should be buried altogether, with soil filled and rammed between the chamber and the shaft, forming the ledges around the chamber, as well as the surface on top of the outer coffin. The jade *gui* vessels (M5:321, M5:322) found at the top of the outer coffin and other finds, including the human and canine remains, found on the level above suggest various activities should have taken place right after the burial of the chamber. The niches, as well as the human remains found inside, could have been constructed and placed at this stage too, if not earlier.[59] Then the tomb is filled with layered soil within the shaft, with finds spread across different layers, indicating successive depositional activities taking place above the chamber. This may be concluded by the construction of the house F1 found above the tomb. Thus, the deposition at "Fu Hao's tomb" generally follows seven stages: 1) the burial of the human and dog at the waist pit, 2) the construction of the chamber 3) the placement of the inner coffin, or the burial of the tomb occupant 4) the placement of objects inside the chamber, 5) the burial of the chamber, 6) the placement of humans, dogs, and objects on top of the chamber

[59] Although it cannot be certain whether the construction of the niches took place immediately after the digging of the shaft, or after the burial of the chamber, it is likely the humans inside were placed after the burial of the chamber and close to the burial of other finds on top of the chamber, as one was reported to be partly placed on the ledge (IA CASS 1980:9).

and inside the niches, and 7) layers of deposition inside the fill.[60] After the construction of the tomb (step 1 and 2), the burial should have started with step 3) the placement of the inner coffin at the bottom of the tomb chamber.

The position of the jades thus can help infer the time they joined the burial. As summarised above, jades were found from the following locations at "Fu Hao's tomb": 1) inside the inner coffin, 2) between the inner and outer coffins (the chamber), 3) on top of the outer coffin and the level above, 4) the 6th, 5th, 4th, and 2nd layers of the fill, spanning multiple layers inside the tomb. Thus, it can be inferred that the use of jades covered multiple and most stages of the burial ceremony, including a) the burial of the tomb occupant, b) the placement of objects inside the chamber, c) the placement of humans, dogs, and objects on top of the chamber, and d) deposition of objects inside the 6th, 5th, 4th, and 2nd layers of the fill. Also, jades were not involved in the following activities at "Fu Hao's tomb": a) the construction of the waist pit and burial of the human and dog inside, b) the construction of the chamber, c) the burial of the chamber, and d) the burial of humans inside the niches. Further, the concentration of jade objects inside the inner coffin indicates intensive use of jades associated with the burial of the tomb occupant. This has four implications. First, these jades inside the inner coffin had an immediate connection with the deceased and were among the most intimate things that accompanied the person at the burial. Second, the jades inside the inner coffin joined the assemblage at an early stage of the burial process, and probably even before the burial and during the process of preparing the corpse. Third, if the inner coffin was already sealed with its lid covering the deceased, as well as any content inside, the jades inside the inner coffin could not be seen by the living audience at the burial, and therefore, their visual qualities may not be at play during the burial, at least not towards the living. Fourth, this is in contrast with

[60] *See* Hu (2010:162) for a general discussion on the mortuary process at Yinxu.

jades found from other positions, which participated in the burial ceremony in a more direct way and were associated with the tomb occupant less directly.

In sum, with the help of laws of archaeological stratigraphy, when the jades participated in the assemblage can be inferred from where they were inside the tomb. The jades from "Fu Hao's tomb" thus participated in multiple stages of the burial and there is a concentration of jades involved in the burial of the tomb occupant. These jades inside the inner coffin may differ from others, with more intimate relationship with the tomb occupant and probably related to the preparation of the corpse before the burial, while others found from other positions may be more directly related to the burial process.

4.4 Conclusion

Consecutive deposition happened at "Fu Hao's tomb" as indicated by the vertical distribution of finds inside the tomb. The remaining finds exhibit a centre/sides division horizontally, probably related to the position of the inner coffin. Jades were found from multiple levels of the tomb, excluding the 1st and 3rd layers of the fill, the niches, and the waist pit, indicating use of jade objects at multiple stages at the burial. A concentration of jades is seen inside the inner coffin, indicating close association between the jades and the tomb occupant, and an early participation within the assemblage. They may not necessarily all be body ornaments, but equipment placed beside the body of the deceased and items involved in the mortuary practice.

Chapter 5 How and Why?

This chapter examines *how* and *why* jades participated in the assemblage at "Fu Hao's tomb". As discussed in Chapter 2, the notion of nonhuman agency and assemblage thinking establish a framework for us to examine the role of jades as participants of the assemblage in relation to other human and nonhuman actors. Therefore, this chapter will provide an interpretation of "Fu Hao's tomb" as an assemblage first. It will then examine the material properties of jade which render possible ways for it to make a difference. Finally, it will situate jades in relation to others within the assemblage to discuss their possible roles.

5.1 The archaeological assemblage

As reviewed in Chapter 2, assemblages have been approached from the perspectives of their formation, meaning, and socio-cultural identity through the history of archaeology. Lucas (2012:193–8) further differentiates between depositional assemblages and typological assemblages. Recently, emphasis has been laid on its process of becoming, where attention has been paid to the basic meaning of an assemblage as "the coming together of multiple different kinds of things into what we can consider a single whole" (Harris and Cipolla 2017:139).

While these different definitions stress different aspects of an archaeological assemblage, for archaeologists, the assemblage is first and foremost a physical one. It is the material finds for archaeologists to discover and study. Thus, archaeologists can study assemblages as material scientists study substance, in terms of their composition, structure, properties, and

occurrence. This section will try to discuss “Fu Hao’s tomb” as an archaeological assemblage in this way.

5.1.1 Composition

As a physical assemblage, “Fu Hao’s tomb” consists of a multitude of material things, ranging from human and faunal remains, through objects made of various materials, to substance that constitutes the tomb, as well as things that have decomposed and are no longer visible.

There are remains of 16 recognised human individuals, none identified as the tomb occupant (IA CASS 1980:8). There are also remains of 6 dogs and bone powder of unidentified animals (ibid:9). Also found are remains of wood inner and outer coffins with lacquer and textile traces (ibid:7–8). At the bottom of the inner coffin is found trace of cinnabar together with red lacquer (ibid:8). Considered as burial objects by the excavators are 468 bronzes, 756 jades, 63 stone objects, 47 gemstone objects, 564 bone objects, 3 ivory vessels and 2 fragments, 11 ceramic objects, 15 shell objects, 3 shells, and over 6820 cowries (ibid:15). What should also be considered as components of the assemblage include rammed earth, water, mud, as well as those missing things that no longer survive in the archaeological record.

5.1.2 Structure

As discussed in Chapter 4, “Fu Hao’s tomb” comprises a shaft, a chamber, two niches, four ledges, and a waist pit. It is roughly a rectangular earthen pit. The distribution of finds seems to exhibit a centre/sides divide horizontally, probably related to the position of the inner coffin, while layered deposition stretches vertically above and below the inner coffin.

Campbell (2018:220–2, figure 7.1) provides an idealised template for late Shang tombs at Anyang, dividing the space surrounding the deceased into five zones from the inside out. According to this template, the inner coffin (zone I) houses the deceased, and thus, anything belonging to the "immediate personal space", while the space between the inner and the outer coffin (zone II), or the chamber, is like the "interior of the dwelling", where personal items are placed (ibid). Ledges and niches outside the chamber (zone III) are regarded as the "intermediary space between personal and public", where death attendants might work as servants and food offerings could be made (ibid). The waist pit, ramps, and the fill within the shaft (zone IV) are considered as entrances or "approaches to the tomb", where human and canine guards would work and sacrifices may be made (ibid). Outside the tomb (zone V) is like the external area of an elite dwelling, "where subordinates and servants lived" (ibid). While this correspondence between the tomb and the dwelling of a living elite in terms of spatial arrangement may be verified by comparing the tombs with palaces at Anyang, this division of space in late Shang tombs in terms of relative position and distance from the tomb occupant is a plausible approach to the structure of the burial. In terms of spatial relations, there are 1) the waist pit and the dog and human within it below the tomb occupant, 2) jades and cowries within the inner coffin immediately around the tomb occupant, 3) bronze vessels and other finds, including human remains, within the chamber further around the tomb occupant, 4) layered deposition within the shaft above the tomb occupant, as well as 5) human remains within the niches above and on two sides of the tomb occupant.

There are a few possible ways to interpret these relative positions to the tomb occupant. First, they tell relative sequence of deposition during the burial. The finds within the waist pit can be seen to have been deposited before the tomb occupant, those inside the inner coffin together with it, and those in the chamber and shaft after it. Second, relative position and distance from the tomb occupant may indicate the distance in social relations. Things inside

the inner coffin — jades and cowries — may be prepared by close relatives of the deceased while those bronzes further inside the chamber could be associated with further, and maybe, external relations. Finds found on top of the outer coffin, inside the niches, and within the shaft, which should have been deposited after the burial of the chamber, may signify further social relations between the deceased and the living, as the social status of the person may have been transformed after being completely buried.

In short, the tomb can be seen as centred at the tomb occupant. Layered deposition below (waist pit), together with (inner coffin), around (chamber), and above (niches and shaft) the tomb occupant can be seen in terms of their relative position and distance to the deceased.

5.1.3 Properties

"Fu Hao's tomb" as an archaeological assemblage exhibits properties of spatiality, temporality, and multiplicity.

First, the assemblage consists of multiple things within a spatial limit — the tomb itself. This spatial confine provides the basis on which the diverse finds can be interpreted as a contextually associated whole. Also, all components of the assemblage occupy specific spatial position within it. Thus, the relationship between any finds within the tomb can be most immediately interrogated in terms of their spatial relations, that is, their relative position. For "Fu Hao's tomb", how things relate to the tomb occupant is of paramount significance, and based on which, their relationships between each other can be classified. In other words, any find of the tomb should be first recognised as related to the tomb occupant, and then its relationship with other finds can be determined, in terms of commonality and difference in their relative position to the tomb occupant. In theory, taking the position of the tomb occupant as the origin of a coordinate system, the position of all other finds can be expressed with a three-dimensional coordinate, and their relationships between each other

can be quantified. However, since the position of finds is not documented in detail for "Fu Hao's tomb", such quantitative examination is not possible. A qualitative approach to the spatial relationships between finds within "Fu Hao's tomb" can be achieved through examination of their relative position to the tomb occupant, with features such as the inner coffin and outer coffins as inbuilt space dividers.

Second, the assemblage has a temporal dimension. The archaeological assemblage is not only a collection of finds associated together in terms of spatiality, but also temporality. As discussed in Chapter 4, the vertical stretch of "Fu Hao's tomb" and its finds indicate consecutive deposition and activities. These finds did not just happen there but found their place in the flow of time, in the creative process of the burial. In other words, the assemblage is a process of gathering, which different things joined at different times. As already discussed, the burial should have started with the interment of the inner coffin first, followed by the placement of bronze vessels, eight human beings, and other things inside the chamber. Then the chamber, including the inner coffin and everything else, should have been buried altogether. Then two jade *gui* vessels (M5:321, M5:322) should have been placed above the inner coffin while three human beings were interred into the niches. After these were buried with soil, five dogs and four humans, together with a stone *qing* chime, one ceramic and three bronze vessels were placed along the "sides" of the tomb, while a stone ox, a ceramic *xun* flute, a jade hoop-shaped object, a turquoise piece, and three bronze arrowheads were placed at the "centre". Only then layered deposition happened inside the fill, mostly concentrating at the "centre" of the tomb and maybe above the inner coffin. It should be noted that the body of the tomb occupant and other finds within the inner coffin may have been prepared prior to the burial ceremony. Thus, the significance of the jades found inside the inner coffin are likely to be related to activities earlier than the burial, maybe during the preparation of the corpse or placement of the body inside the inner coffin, instead of the tomb. Therefore, jades, as well as

cowries, found inside the inner coffin are distinctive in terms of the time they joined the assemblage.

Third, the coming-into-being of the assemblage involves multiple participants, both human and nonhuman. The burial gathers not only close family and friends of the deceased, but a variety of connections and personnel, including (possibly) servants who provided physical labour for the funeral, craftsmen who manufactured the objects, external relations who had contact with the person but beyond the immediate kindred of the deceased. There are also those humans who were buried inside this tomb but not as the tomb occupant and possibly as attendants and sacrifices. It is a gathering of not only human, but also nonhuman things of diverse origins. As noted by the excavators (ibid:95–100), the nine types of inscriptions on bronzes from "Fu Hao's tomb" indicate their diverse sources. As mentioned in Chapter 3, jades are also identified with diverse origins that span across vast geographical area and over 5000 years of time. Cowries and shells may also have come from afar in the coastal area (ibid:220). Thus, the burial is a gathering of a myriad of people and things who/which came from various backgrounds and contexts of different time-space but assembled here for the deceased.

5.1.4 Occurrence

As indicated by the layered finds within the tomb and its vertical stretch, the assemblage should have accumulated through consecutive deposition, which would be the burial process in the past.

Van Gennep (2013[1960])[61] provides a schema called "rites of passage" to account for various ritual ceremonies of human life across different cultures that commonly consist of

[61] The Chinese translation by Zhang Juwen (2012[1909]) is also referred to in this research.

three stages: separation, transition/marginality,[62] and incorporation. Funeral rites can also be interpreted in terms of these three stages. According to Van Gennep (ibid), a funeral is a transformative period that the deceased and the living go through together, during which they form a special group situated between the living and the dead, for whom social life is suspended. Not only is the dead separated from the world of the living through a series of rites and later incorporated into the world of the deceased, but the living also enter a state of separation and transition, marked by special dressing, for example, and later re-enter the world of the living with updated social status. Thus, with various activities regarded as rites of separation and the stay of the corpse transition, the burial itself is considered as "the real rite of incorporation" for the deceased to join the other world by Van Gennep (ibid:163). During this journey, the deceased is seen as equipped with "all the necessary material objects — such as clothing, food, arms, and tools — as well as those of magico-religious nature — amulets, passwords, signs, etc. — which will assure him of a safe journey or crossing and a favorable reception, as … a living traveler" (ibid:154). Thus, the occurrence of the assemblage can be interpreted as due to this process of transformation for the deceased and the living and any finds within it can be understood in terms of their role within this process.

Therefore, the assemblage can be seen as a centripetal[63] event where both human and nonhuman gather around the deceased. This process has a central point — the relocation of the dead person within the world(s), as perceived by the living people. Through this process, the social status and relationships of the person are transformed and renegotiated, often involving the use of material things, the role of which can be understood in terms of their facilitation of this transformation of social status and relations of the deceased and the living.

[62] The Chinese translation by Zhang (2012[1909]) stresses the marginality of the second stage in contrast to the transition in English translation.
[63] *See* Nail 2021:87.

5.1.5 Summary

"Fu Hao's tomb" as an assemblage consists of multiple things, both human and nonhuman. It can be seen as centred at the tomb occupant and with other components in relation to the deceased person. Its spatially associated components can be categorised in terms of their relative position to the tomb occupant. As a process of gathering, the assemblage has its components joining at different times, which are associated with depositional activities at different stages of the funeral. It is a gathering of human and nonhuman things from diverse origins and backgrounds, who/which assembled here for the transformational journey of the deceased from the living world to that of the dead.

Thus, with this understanding of the assemblage in terms of its spatiality, temporality, and multiplicity, how jades participated in the assemblage seems clear. Jades inside the inner coffin closely accompanied the deceased in attending the burial among other things such as cowries. They were most likely to have been placed inside the inner coffin before the burial itself while close relatives were preparing the corpse, which is a more intimate or domestic affair compared with the burial ceremony, which would be a more social or public affair, involving further external relationships. Thus, the jades attended the burial together with the deceased, or put reversely, the deceased attended the burial closely accompanied by, or equipped with, the jades and cowries inside the inner coffin. Thus, it seems likely that jades, as well as cowries, were part of the preparation done for the deceased by close relatives to join the person's last social/public event. Those jades outside the inner coffin would carry a different meaning and play a different role from those inside the inner coffin, since the burial of the inner coffin and the chamber altogether may signify a transformed status of the person and updated relationship with the living world.

5.2 Material properties of jade

As discussed in Chapter 3, the diversity in the jade forms found from "Fu Hao's tomb" suggests these variety of jade objects may not have had a single unified function and could have had various significances. The umbrella term "jade objects" may not be able to fully grasp their functions as individual objects. However, this encourages us to gaze into the use of jade as a material, instead of jade objects categorically.

Human use of a material depends on their understanding of its properties. For example, metal can be used to produce wires as modern people understand its ability to conduct electricity. Notably, it is human perception of the material's properties that is directly related to how the material is used, which is not always congruent with the material's own capabilities but emerges out of an interaction between the materiality and human perception. For example, rooster blood was used in the funeral procession in the past, in that people believed it would bring good luck to the deceased on the way, which is no longer the case in modern times. On the one hand, this reflects that human perception of a material changes through time. On the other hand, it reveals how closely human use of material is associated with their own belief.

It is not entirely clear how Shang people understood jade and what properties of jade they considered as relevant to its use in the burial. However, a review of its known properties today can help to speculate what they could do within the assemblage. As mentioned in Chapter 3, the production of these jades by late Shang people involves the method of abrasion, which indicates their understanding of the material's toughness. The oracle bone script of the Shang people provides a written record of their understanding of jade. Modern specialists consider the script of *yu* jade to depict a few jade pieces strung together with a thread. Interestingly, the script for *li* (gift/rite) seems to depict a *dou* vessel containing such strung jades. Although it cannot be inferred from this what properties of jade that the Shang

people were valuing, it seems to imply the possibility that jades could have been used as gifts or offerings by Shang people.

Later Confucian classics attribute five, nine, or eleven virtues to jade that resemble those of a gentleman. The five virtues of jade pointed out by the Eastern Han scholar Xu Shen are benevolence, righteousness, wisdom, bravery, and purity. In terms of physical properties, these are describing the lustre, translucency, sound, stiffness, and gentle texture of the jade. Here, the materiality of jade can be linked to the personhood of human.

Further, modern science examines the microstructure and mineral composition of the jade. It reveals that nephrite jade mainly consists of tremolite-actinolite series with a felted fibrous structure, which makes the material tough and must be worked through abrasion, which is a time-consuming and labour-intensive process. Also, as mentioned in Chapter 3, high-quality jade is often sourced from distant areas. These add to the value of jade as a prestigious material. Indeed, any object of a common form, when complemented with a jade part will be immediately transformed into something special and of higher level. Thus, the use of such prestigious material can level up the status of any object made of it, including the burial.

In terms of sensorial properties, Menefy (Hanna and Menefy 1995), who studies New Zealand greenstone, provides a precise description of how jade can be felt by people: "Holding a jade touch-stone is quintessentially tactile. The jade is cool, but takes on the warmth of your hand. It is smooth and waxy, suggesting a softness that is belied by its known strength. Mine fits between the palms of my clasped hands and feels as if it's part of me — totally soothing, almost pure. It is easy to appreciate the spiritual significance of pounamu to the Maori." It seems jade presents this dual nature of being both tough and gentle that attracts people by heart. The toughness invokes a sense of strength as other hard stones do while the gentleness brings a sense of intimacy and warmth and invites close interaction. Further, this

dual nature of being both tough and gentle of jade can elicit feelings of being spiritually supported, stabilised, soothed, and nourished in people.

Jade also presents aesthetic properties, including its colour, gentle texture, and beautiful sheen after a good polish. It can be imagined that whenever and wherever jade is used, it will bring about a sense of delight and grandeur, adding beauty to the person wearing it or any object it is attached to. It seems the use of jades in burial implies the human pursuit of beauty at the point of death and perhaps even beyond.

In addition, it is not known with any toxicity to the human body, nor chemically reactive with other components of the burial. In other words, it presents no conflict with other human or nonhuman things of the assemblage. Therefore, it could be placed close to the body of the deceased in large quantity and attached to things made of other materials to make a composite object, without causing any damage, and even, adding to its value.

Thus, late Shang people probably mastered good knowledge of jade as a material, especially aware of its toughness through production. They may have used it for offerings, considering them as valuable gifts to distinguished beings. Its materiality could be linked to the morality of a person, add materialistic and aesthetic value to a person or thing, bring sensorial delight and spiritual healing, and connect with other human and nonhuman peacefully. These material properties render possibilities for jade to join the assemblage in relation to others.

5.3 The role of jade in relations

The notion of nonhuman agency allows us to consider jades as participants of the assemblage. Agency here is defined as the ability of an entity to make a difference (Dai 2020), regardless of its consciousness, intentionality, or proactiveness. Thus, the function of jades is how they could make a difference with their material properties within the relational assemblage. Their role refers to their position within a relationship. With a focus on jade as a

material rather than specific objects, this section will examine the role of jade within the following relationships: 1) with the tomb occupant, 2) within a composite object, and 3) within the assemblage.

5.3.1 With the tomb occupant

As has been discussed in Chapter 4 and earlier sections of this chapter, jades inside the inner coffin should have been closely associated with the body of the tomb occupant, although they may not all be body ornaments. Some could have been placed beside the tomb occupant as equipment or involved in mortuary practices. Given their position within the tomb, they should have been used at an early stage of the funeral, probably when close relatives of the deceased accepted the death of the person and started to dress and equip the person with items required for the journey to the other world. As indicated in the previous section, the material properties of jade could allow the person to embark on a journey to the other world peacefully, safely, decently, and beautifully.

These items could either be personal belongings of the deceased which were also used in life, or gifts/offerings made to the person in death. Since some of them carry use-wear (such as the pendants with trace of suspension) and some had had a long life history prior to deposition (such as those identified as early or recut jades), it can be inferred that not all jades were produced specifically for this burial and may have been used by the person in life too. If so, at least some of these jades can be regarded as personal belongings deposited with the deceased in death. Notably, while some jades may have been in use also in life, they could have been put into a different use when deposited here, as a tube (M54:479) from Ya Chang's tomb suggests. Ya Chang's tube (M54:479) was found from the mouth of the tomb occupant and may have been used as part of the mortuary practice as *kouhan* (mouth fill), despite use-wear indicating long-term usage (IA CASS 2007:206). This implies a change in use of the

tube from life to death of the person. Thus, some jades could have been appropriated for mortuary purpose from a living context. Indeed, the existence of some jades that appear unfinished[64] supports the possibility that some jades were produced in rush and may have been intended for the burial.

While these items inside the inner coffin, including jades, may be prepared for the perceived afterlife of the deceased, and their usage could be related to the social status of the person in the living world too, they also served to transform the person from a member of the living world into someone belonging to the dead. The use of such items signifies the acceptance of the death of the person by close relatives albeit their reluctance and wish to treat the person *as if* alive. Therefore, mortuary practices such as *kouhan* (mouth fill) seem to treat the person as a living one but the use of jades, cowries, and objects made of other materials to fill the mouth clearly conveys a more symbolic significance, unlike the treatment of a real living person. Thus, the use of such materials and items facilitates the transformation of the status of the person from a member of the living world to that of the deceased while the person's relationships with the living are also renegotiated.

After placed inside the inner coffin with the deceased, these items attended the burial together with the tomb occupant, entitling the person to receive offerings, such as contents within the bronze vessels in the chamber, from further extended social relations in a new social status and set of relations. The status of the person may be further updated after the chamber and the inner coffin were buried altogether, signifying the recognition of the person's social/public death in the living world. Thus, further deposition made on top of the outer coffin, in the niches, and in the shaft may have been made to the deceased in a new set of relations, between the living and the dead, for example, as well as to other deities.

[64] Such as M5:396, M5:872, M5:1030, and M5:1118.

In short, jades inside the inner coffin should have been closely associated with the tomb occupant. Some of them may have been used in life prior to the burial here but may also have been appropriated for mortuary purposes. Probably prepared by close relatives of the deceased at an early stage of the funeral and prior to the burial, they expressed the contradictory feelings of the living towards the dead, treating the person both as dead and as if alive. They facilitated the transformation of the social status and relations of the person from the world of the living to that of the deceased. The living may have endowed the person with items made of this fine material in the hope that they could accompany the dead through the journey into the other world peacefully, safely, decently, and beautifully.

5.3.2 Within a composite object

As mentioned in Chapter 4, some morphological features such as tenons, mortises, and perforations suggest some jades should have been attached to something else originally. This indicates that they may not have been used singly but in combination with other things that probably are organic and have decayed. In other words, these jades may have been parts of a composite object which, like a modern knife, consists of a metal blade and a wood hilt. These parts made of jade could add to the materialistic and aesthetic value of the object and turn a common form into a prestigious one. Some of these jade parts are zoomorphic or anthropomorphic, which could act in a representational way.

A tenon is a small protruding part extending out of the major body of an object to connect with the mortise of the other part of a composite object. It can be seen on many jades from "Fu Hao's tomb". For example, the majority of the handle-shaped objects have tenons of varying shapes on them, indicating they were attached to something else originally.[65] A

[65] Among 33 handle-shaped objects from "Fu Hao's tomb", the majority are found with a tenon, including: M5:554, M5:571, M5:1078, M5:1079, M5:1080, M5:335, M5:574, M5:1077, M5:1081, M5:1076, M5:1085, M5:1084, M5:1086, M5:570, M5:1296, M5:1088, M5:1087, M5:1329, M5:1294, M5:1295, M5:1330, M5:565,

question concerning these tenons is whether they can support the object standing on a base, given that the size of the tenon is rather small in comparison with the whole object. It is more likely they were inserted into another component of the composite object just like how wood handles are attached to the metal blades of modern knives. Some tenons have a small perforation through them, which may have been used for more secure fastening, such as M5:554.

Tenons are also found on some other jade forms, including a few *huang* arc-shaped objects, one *ge* dagger, one *mao* spear, some anthropomorphic and zoomorphic objects, a few *ji* hairpins, and some potentially ornamental objects of varying shapes.[66] The parrots, for example, are generally arc-shaped and presented in profile, with a small protruding tenon attached to the claws, some with a perforation possibly for secure fastening too. Likewise, they could have been attached to something else that went missing. They are generally within 10cm in height and the exquisite craftsmanship make them excellent components with aesthetic value of a larger object. It is not certain whether these jades with tenons make the major part (perhaps as representation of some deity for example) or the accessory part (such as fittings) of the composite object though. If they were the major part of the original composite, then the anthropomorphic or zoomorphic figures made of jade could have been the defining characters of the whole thing. If they were accessories, presumably their presence would add to the materialistic value of the whole thing, given the difficulty of working jade, and/or the aesthetic value resulted from the fine texture and craftsmanship.

M5:1075, M5:555, M5:567, M5:1082, M5:415, M5:1297, M5:1298, and M5:1089. Only three are not reported with a tenon, including M5:1083, M5:568, and M5:506. *See* IA CASS 1980:178–81.

[66] Other than handle-shaped objects mentioned above, jades with a tenon include: *huang* arc-shaped objects M5:345, M5:1117(?); *ge* dagger M5:1013; *mao* spear M5:1071(?); human figures M5:373, M5:518, M5:987(?), M5:470, M5:357; strange bird M5:400; monster head M5:578; owl M5:368; parrots M5:467, M5:353(?), M5:389, M5:396, M5:1292, M5:367, M5:1110, M5:399, M5:996, (M5:428); geese M5:517, M5:386, M5:423; arc-shaped fish M5:418, M5:334; fish M5:970 (?); *ji* hairpins M5:524, M5:533, M5:535, M5:536, M5:1275(?); round stick-shaped ornament M5:1280; human figure in profile ornament M5:502; annular ornament M5:945; irregular ornament M5:562; eyebrow-shaped ornaments M5:1433, M5:1432, M5:1434; hook-beak-shaped ornaments M5:1444, M5:1445; and handle-like objects M5:964, M5:1120.

Similarly, tenons were found on some small jade pieces like two hook-beak-shaped objects M5:1444 and M5:1445 (IA CASS 1980: Plate CLXIII). As with a jade eagle from late Shijiahe Culture, which has a tremolite (nephrite jade) beak inserted into its mica body, these two hook-beak-shaped objects may have been parts of a larger bird figurine too. It seems the use of tremolite to make the beak of the eagle at late Shijiahe stresses its hardness, so a hard material was chosen to produce the hard part of the figurine. Therefore, these two hook-beak-shaped objects from "Fu Hao's tomb" may also be the jade parts of an original bird figurine in a representational way.

In short, these jades with tenons are likely to have been attached to something else to make composite objects. They could be the major constituent of the composite, or accessory part with aesthetic, materialistic, and/or representational significance.

Apart from tenons, perforations are another morphological feature suggesting the jades may have been used in combination with other things. They can be found on some anthropomorphic and zoomorphic sculptures in the round.[67] For example, M5:534 is a sculpted human head with a perforation through the neck to the top, found with red lacquer inside and possibly for insertion (IA CASS 1980:155, IA CASS and Guangdong 2016:73). It can be imagined a wood stick coated with lacquer once was used to support the sculpture but through time has decayed, leaving only some traces of the lacquer within the perforation of the jade. The same applies to a jade bear M5:597, which is also found with red lacquer inside the perforation through its body,[68] possibly going through the same process as the human head sculpture (M5:534). A jade eagle M5:464 is also suggested with a similar use for the perforation (IA CASS 1980:163, IA CASS and Guangdong 2016:343), though without any trace of red lacquer inside. These sculptures in the round may have been display objects and

[67] Such as human figure M5:375, malachite human figure M5:377, human head M5:534, (human) face M5:576, human-monster face M5:577, strange monster M5:990, strange bird M5:508, and owl M5:513.
[68] The red traces are recognised as lacquer by the excavators (IA CASS 1980:160) but as cinnabar in the exhibition catalogue (IA CASS and Guangdong 2016:199).

standing on a lacquer and wood base. Another possibility is that they were fittings of a larger object through insertion. As with those jades with tenons, it cannot be certain whether these sculptures in the round were the major or accessory parts of the original object, or both. Equally, their presence may be representational, or add materialistic or aesthetic value to the whole thing, or both.

Other perforations, such as those found on *ge* daggers, *fu*, *yue* or *qi* axes, and knives, could have allowed for hafting. Again, these jades were constituting a composite object, but as the major or defining part. Trace of hafting was reported to be found on some of these objects, such as *ge* dagger M5:580 (IA CASS 1980:131). Indeed, perforations can be found on many jades and jade types, allowing for potential suspension, grouping, inlay, insertion, sewing, fastening, or hafting. Either way, it allows for the combination of the jade with something else, implying the jades were not used on their own originally and had a missing partner.

A few particular jade types are recognisably parts of larger things too, either through inlay or insertion. For example, eyebrow-shaped object M5:1450 (IA CASS and Guangdong 2016:156) is a curved piece with turquoise inlays and found with cinnabar. Its peculiar shape can also be found in the *taotie* motif on bronze *bu* vessel M5:830 (IA CASS 1980: Plate XXIX), perhaps indeed as its eyebrow. Other jade eyebrow-shaped objects, such as M5:1432, M5:1433, M5:1434 are probably also parts of the *taotie* motif on a larger decayed object, carrying similar incisions with those on the bronze *bu* vessel M5:830. Long bar-shaped pieces with openwork (IA CASS 1980: Plate CLXIII) are very likely to have been parts of dragons (e. g. M5:469), parrots (e. g. M5:388, M5:520), human figures (e. g. M5:470), or other forms (e. g. fish M5:418) with notched ridges along the body or crest.[69] Indeed, the kind of notches on these jade bar-shaped pieces can be clearly seen on the notched ridge

[69] The so-called silkworm-shaped object M5:1437 was perhaps the jade part of the notched ridge of an original object too. Compare with the notched ridge along the crest of an unfinished jade parrot M5:396. *See* IA CASS and Guangdong 2016:155, 215.

along the body of the dragon on a bronze plate M18:14 (Anyang 1981: fig. 9) from the nearby tomb M18 at Xiaotun, probably representing its spine.[70] Therefore, these jade eyebrow-shaped objects and long bar-shaped pieces with openwork were likely to have been small components of original objects carrying *taotie* or dragon motifs.

In sum, morphological features such as tenons, mortises, and perforations, as well as particular jade types, indicate these jades were not used on their own. Rather, they were parts of a composite object, acting either as the main character or an accessory of the original object, combined with a missing part originally. Their presence could add materialistic and/or aesthetic value to the whole thing, levelling up its status. Some anthropomorphic and zoomorphic jades could have acted in a representational way. Although it cannot be fully certain whether these jades were attached to something else when used at "Fu Hao's tomb" or at earlier stages of their life histories, it cannot undermine the possibility of these jades being attached to something else in this context as well.

5.3.3 Within the assemblage

The role of jade within the assemblage can be explored through a thought experiment of removing them. That is, whether their absence from the assemblage will make a difference. Indeed, there are tombs without jades found at Yinxu. This implies that jades are NOT *necessary* conditions of a late Shang tomb. In other words, removing all jades from the site will not affect its nature as a burial. Therefore, it is reasonable to recognise the role of jades within the assemblage as accessory rather than essential. Their existence *adds to* the burial instead of *constitutes* it. However, its role may be critical in turning the whole assemblage —

[70] This kind of bronze dragon plates were also found from "Fu Hao's tomb" (M5:777, M5:853) (IA CASS 1980: fig. 21, fig. 22), though the rubbings are not as clear as the drawing for the M18 one (Anyang 1981: fig. 9).

a composite object with jade parts itself — into a special one with higher status by contributing materialistic, and maybe other, value to it.

An understanding of more late Shang burials is required to examine whether jade has a special role within the assemblage, compared with things made of other materials. According to Campbell (2018:220), jades, together with cowries, contrast other burial objects in terms of their position inside late Shang tombs, which are most often found within the inner coffin, although jades can sometimes have stone substitutes. This indicates the special link between the use of jade objects with the human body. Even when they are indeed found outside the inner coffin, they often seem to be associated with human remains.[71] As has been discussed, this does not mean they are all body ornaments though. What this does imply is that the use of jade has something to do with the person which other materials cannot achieve. Notably, some jade forms are shared with objects made of other materials, such as stone, shell, bone, and bronze, although not with ceramic objects.[72] However, these objects made of other materials are not reported to be found within the inner coffin, and thus should carry different significances from jade ones. A commonality that jades share with cowries is their lustre, which could be a reason why they were both closely associated with human. However, bronze could have been glittering too when new. Therefore, it is not entirely clear what differentiates jade, as well as shells, from other materials as perceived by the late Shang people.

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[71] Such as M54:361, M54:382, M54:398, M54:399 (with human XZ7); and M54:308 and M54:309 (with human XZ6) in Ya Chang's tomb. *See* Figure 4.5 in Chapter 4.

[72] Shell: *ge* dagger M5:56 (IA CASS 1980: Plate CLXXXVI), frog M5:84 (ibid: Plate CLXXXVI), fish M5:1561, M5:1562 (ibid: Plate CLXXXVI). Bone: *ji* hairpins; comb M5:325; gravers M5:21, M5:22, and M5:96. Stone: human figure M5:1575 (ibid: Plate CLXXXIII); tiger M5:49 (ibid: Plate CLXXXIII); frogs M5:50, M5:58, M5:76, M5:81, and M5:86 (ibid: Plate CLXXXIII, Colour Plate XXXVIII'). Bronze: *ge* daggers, *gui* vessels, and others.

In short, the use of jade objects may add certain value, if not materialistic only, to the assemblage. Their existence turns it into a special kind of burial. Compared with other materials, they take a special position in close association with human.

5.4 Conclusion

Considering “Fu Hao’s tomb” as an assemblage that gathers a myriad of human and nonhuman things from diverse origins, who/which assembled here for the burial of the tomb occupant, we can recognise the role of jades as facilitating the transformation of social status and renegotiation of social relations of the deceased. Their material properties not only allow them to help the tomb occupant with the transformational journey into the world of the deceased, but also enable them to contribute to a composite object by bringing materialistic and/or aesthetic value, or representational significance. Similarly, they add to the whole assemblage by turning it into a special one with higher status.

Chapter 6 Conclusion

This chapter concludes the thesis with a summary of its findings, contributions, and limitations. Suggestions for future research are also provided.

6.1 Summary of findings

Through the theoretical framework of assemblage thinking and material agency, this research examined the function of jades from "Fu Hao's tomb" regarding the "who", where, when, how, and why of their participation within the burial process. Major findings are as follows.

First, a great diversity is seen in the jades used at "Fu Hao's tomb", in terms of their forms, cultural origins, material composition, and material provenance. This diversity implies that these jades may have had various functions, as well as life histories, which an umbrella term "jade objects" may not be able to fully grasp. While attention can be paid to the function of individual objects, it also encourages us to examine the role of jade as a material. These jades demonstrate not only outstanding artistic achievement but also technical dexterity, which imply profound understanding of the material by past people, including its toughness.

Second, an examination of the position of jades inside the tomb reveals a concentration of jade use inside the inner coffin, with the most jades and jade types, while they also spread out in multiple layers of the vertically stretched deposition inside the tomb, though only a few from each location. These include the chamber, the top of the outer coffin and its uppermost level, and the 2nd, 4th, 5th, and 6th layers of the fill. They were not found from the 1st, or the 3rd

layer of the fill, where a few broken objects were, nor inside the niches or the waist pit, where human and canine remains were found.

Third, through laws of stratigraphy, the assemblage is seen as accumulated through consecutive deposition, and the position of jades suggests the time when they joined the assemblage. The construction of the tomb roughly went through: 1) the digging of the shaft, the waist pit, and possibly, the niches; 2) the burial of the human and the dog inside the waist pit; 3) the construction of the chamber; 4) the interment of the tomb occupant; 5) the deposition inside the chamber; 6) the burial of the chamber; 7) the placement of humans, dogs, and objects on top of the chamber and inside the niches; and 8) layered deposition inside the fill. Therefore, jades were involved in multiple stages of the burial process, including the burial of the tomb occupant, the deposition inside the chamber as well as on top of it, and inside the fill. However, a significant concentration of jade use is seen along with the burial of the tomb occupant. These jades may have been placed with the tomb occupant inside the inner coffin at an early stage of the funeral, probably prior to the burial ceremony.

Fourth, "Fu Hao's tomb" is interrogated as an assemblage, a process during which both human and nonhuman participants gathered for the burial of the tomb occupant. Therefore, all finds, including jades, within the tomb can be understood in relation to the tomb occupant and as parts of those rites of passage which transformed the social status and renegotiated social relations of the tomb occupant. Thus, jades inside the inner coffin are recognised as close companions to the tomb occupant through this journey to the world of the deceased. They were probably in close association with the body of the deceased, probably not all being body ornaments, but equipment and items involved in the mortuary practices prepared by close relatives of the tomb occupant. Their position presents a contrast to jades, as well as

objects made of other materials, found from other locations of the tomb, which should have been involved in later stages of the burial ceremony after the interment of the tomb occupant and signify further and different sets of relations with the deceased.

Fifth, through an examination of the material properties of jade, this thesis tried to explain why jades were used in this process by examining its possible roles with the tomb occupant, within a composite object, and within the assemblage. Although it cannot be certain how late Shang people understood jade, its material properties suggest jade objects could have facilitated the transformation of the social status and relations of the tomb occupant, allowing the person to take the journey to the other world peacefully, safely, decently, and beautifully, as perceived by the living. As morphological features such as tenons, mortises, and perforations, as well as some jade forms themselves, suggest, some jades should have been parts of a composite object, parts of which were made of other materials but have gone missing in the archaeological record. These jade parts could have constituted the composite object as either an accessory or a defining component, carrying materialistic, aesthetic, and/or representational significances. Also, with the whole assemblage as a composite object itself, the use of objects made of a prestigious material — jade — could have improved its status.

6.2 Contributions

This thesis provides an attempt to approach the function of jades from "Fu Hao's tomb" within the theoretical framework of assemblage thinking and material agency. This theoretical framework enables us to focus on nonhuman jades, in contrast with a traditional narrative of past that centred on human. Thus, research questions are asked from the perspective of jades, concerning their role in the creation of the past, rather than treating them as merely human affiliations.

Also, this thesis stresses the necessity to analyse the function of jades within specific context and beyond only typological speculation. It proposes that the burial itself should be regarded as a context of jade use in the past and the function of jades should be examined within this context in terms of their participation within the burial process. For this purpose, a detailed account of the position of jades within the tomb is provided, which presents a new way to categorise the jades.

Besides, laws of stratigraphy and the anthropological theory of rites of passage help to provide an interpretation of "Fu Hao's tomb" as an assemblage through accessible archaeological evidence, which refreshes our understanding of the context of jade use.

Further, the notion of material agency helps to provide an explanation of jade use within a mortuary context through an examination of how its material properties could have made a difference within the assemblage.

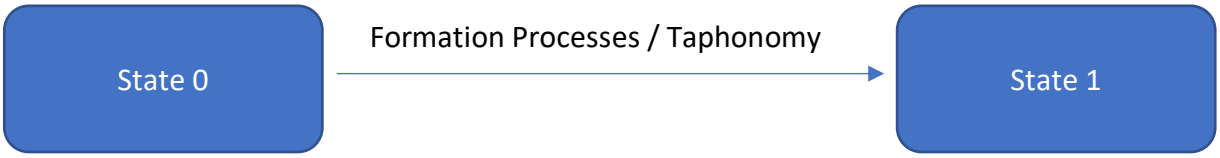
6.3 Limitations

Limitations of this research are as follows.

First, it assumes the jades remained where they were originally placed, on which the entire interpretation of their function and roles within the assemblage is based. However, a number of factors could distort their position, such as the collapse of the coffins and the flooding. Indeed, this happened at Ya Chang's tomb (Huayuanzhuang Locus East M54). Therefore, it is necessary to differentiate two states of the site: State 0 and State 1 (Figure 6.1). State 0 refers to the site when the burial was created and state 1 refers to the point when archaeologists recovered the site (both approximated as dots on the timeline though in reality both take some duration too). Various formation processes or taphonomy can alter the assemblage. Though the disturbing effects can be little for some intact sites and the location of discovery can be used as an approximate for where the objects originally were, it is

necessary to examine if there were any displacement of jades due to formation processes or taphonomy between their burial and discovery for a more precise understanding of their original placement, which is beyond the limit of time of this research and the capability of the researcher.

Figure 6.1 Difference between the original placement of objects and their location of discovery.



Second, the identification of the site as a burial is following the excavators' interpretation, without independent investigation. For newly excavated archaeological sites, the nature of the assemblage is not easily determined and subject to interpretation. Preliminary comparison between "Fu Hao's tomb" (M5) and Ya Chang's tomb (M54) was done in this research and discovers similar scale, structure, and contents of the site. Therefore, it is reasonable to consider the nature of the site as a tomb as well and examine its jade use within a mortuary context. However, the researcher is still largely influenced by the excavators' established identification of the site as a tomb.

Third, by discussing the function of jades, it is assumed there is one and there is human purpose and intention behind their use at the site. However, it is indeed still not clear what late Shang people really thought of jade and if they put jades in burials on purpose — they could have just followed the tradition, for example. Although the discussion on the material

properties of jade can contribute to an understanding of what jades could have done to the assemblage, there still seems to be some distance from what they were meant to do. Indeed, effects do not always equal intentions.

6.4 Suggestions for future research

A few suggestions for future research to further the understanding of the function of jades, or indeed, the use of other material culture, are as follows.

First, jade use, or use of material culture in general, can be studied further in a temporal context, instead of the spatial one as in this research. The function of jades from "Fu Hao's tomb", for example, can be examined within a long and widespread tradition of jade use in China from the Neolithic to the Bronze Age. Attention can be paid to the change in the use of the same type of jades in different contexts. On the one hand, this facilitates the understanding of the role of jades within an assemblage. On the other hand, this helps to examine if/how the past constitutes/feeds into the present, or the agency/materiality of the existing material world in inspiring the creation of the present and future.

Second, instead of material agency, the role of jades can be approached from the perspective of object agency. As the diversity of jades in this research suggests, they may not all have a generic function and should have more individual significances. Thus, more attention can be paid to the analysis of how individual jade object, or specific jade form, could have functioned within a specific context. An integrated analysis of an individual object's "who", where, when, how, and why may help to explain why a specific jade took presence at a particular place and a particular time, and in a particular way within an assemblage.

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