A Preliminary Investigation of Place Foundation No.1 at the Huanbei Shang City

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The foundation of palace No.1 at the Huanbei Shang City 洹北商城 (2001HBSCF1) underwent excavation in 2001 and 2002. Currently the middle and western portions of the foundation have been revealed and the materials from the excavation have undergone basic analysis already published in a partial excavation report. It is based on this information that the author will attempt to discuss a few related issues as laid out below.

I. Layout and Structure of the Architectural Remains

From an analysis of the information from both excavations and coring, the foundation of palace No.1 is a “回” character-shaped siheyuan 四合院-style building with the main palace hall situated in the north side facing south. Situated on the opposite side of the courtyard is the entrance hall with the gate house probably in the middle of the southern hall. To the east and west side of the main palace hall are subsidiary buildings. These buildings enclose an architectural space on four sides, creating a courtyard. Approximately 173 m east-west, 90 m north-south, yielding a total area of 16,000 sq m with an orientation of 13 degrees (Fig. 1).

1. Main palace hall

The pounded earth platform foundation of the main palace hall is rectangular, 14.4 m wide (north-south), and no less than 90 m long (east-west). The top of the foundation platform is damaged and the remaining height (from the original courtyard surface) is 0.6 m. Estimating from the angle of the stairs at the front and back of the palace foundation and the current state of preservation, the original pounded earth platform should be over a meter in height.

The main palace hall is evenly divided into rooms, nine of which have already been exposed, and extrapolating there should be 11 altogether. Each room has a door in the middle of its southern wall, with stairs in front of each door. The rooms had wood-framed walls, and within the wall footings considered to be those of the main palace hall (at least the north eaved wall and the east-west eaved walls) were wood framed, board-mold pounded earth walls. Surrounding the rooms is a gallery about 3 m wide. From the arrangement of eave pillars and wall pillars, the roof was four-faced and sloping.

The row of rooms on the platform of the main palace hall should be termed “shi 室-chambers”. In Yinxu 殷墟 oracle-bone and bronze inscriptions, palace rooms were called “shi-chambers”. Chen Mengjia 陈梦家 stated that “shi-chambers were components of temples” and looking at the various examples of the word “shi” in the oracle-bone inscriptions wrote that, “aside from small shi-chambers, the rest were the ancestral shi-chambers and great shi-chambers of sacrificial activity also used as places of administration.”

On the platform, on both the north and south sides, pounded earth stairs have been discovered. On the north and south sides two and nine sets of stairs have been uncovered respectively. At the top of the steps wooden structures are frequently found. Generally they consist of two parallel straight logs about 20 cm in diameter, with three or four boards laid across them. We hypothesize that they were wooden steps. To each side of the stairs are traces of thin wooden pillars, perhaps a structure to protect the pounded earth steps. On the palace foundations at Anyang 安阳, Yinxu, a similar kind of remains can frequently be seen. Pounded earth steps in the Shang period where perhaps called fu 坡. According to Wuding 武丁 period divination inscriptions, once when Wuding was sacrificing to Zhongding 仲丁 he fell at the “ting fu 庭阜”. Zhu Fenghan 朱凤瀚 has noted that, “the shape of the graph fu 坡 was originally stair-like with steps and meant stair (therefore when later people made the graph...
jie (steps) it was still from (fu).” Saying that “the shape of the graph (fu) was originally stair-like with steps and meant stair” is extremely pertinent.

To the west of the main palace hall foundations, between the eighth and ninth stairs a passage was found that cuts through the main palace hall. This gate wasn’t put in during the construction of the palace as part of the building plan, but most likely cut after the main palace hall was already in use for some time.

2. Side galleries

To the west and east sides of the main palace hall are adjoined galleries. Slightly north of the gallery foundation platforms’ east-west axis ran a wood-framed wall. This likely formed a dividing wall between inner and outer corridors as well as the support for the spine of the gallery’s roof. Along both the north and south sides of the platform run a row of postholes. From the wall and postholes, the roofs of the galleries were single-peaked, two-sloped structures. No dividing walls have been found within the galleries so perhaps they were unobstructed long corridors.

At the east end of the western gallery there is a north-south passage (gate No.3). In the middle of the passageway, in line with the wood-framed wall, a trough created by the rotting away of a wooden door-still was discovered on the ground surface suggesting that there was originally a gate there. The existence of this gate and the passageway through the main palace hall demonstrates that palace No.1 and the buildings behind it are connected and that palace No.1 is just the southernmost component of a larger architectural complex.

3. West wing

The rammed earth platform of the west wing architectural foundation, connects with the southern gallery in the south and with the western side gallery in the north. An obvious difference between west wing and the main palace hall and galleries is that no postholes have been found on the west wing foundations. The excavators did, however, discover traces of the foundation troughs of rammed earth walls on the southern and western borders of the platform with the two walls joining at the corner and the eastern end of the southern wall lining up with the...
wood framed wall of the southern gallery. The preliminary excavation report stated that, “no postholes were found on the surface of the western palace. However, from the large quantity of broken pieces of adobe brick found around this palace, it perhaps originally had a wall of adobe.” This inference is reasonable.

The evidence that suggests that the west wing did not have a roof includes: both at the point where the west wing joins with the western side gallery and where it joins the southern gallery, clear traces of wood framed walls and holes for roof supports have been found on the surface, but the west wing shows no sign of this type of remains. Just what kind of building is this monumental construction of rammed earth that nonetheless has no roof? The hypothesis of this author is that this is related to the so-called “granary platform” (lin tai 麓台) of goods storage.

The chapter “Ke Yin Jie” of the Yizhou Shu 逸周书·克殷解 (sibu beiyao edition 四部备要本) records that: “When King Wu 韦王 attacked Zhou, ‘the Shang armies greatly collapsed. Shang Xin 商辛 fled within, climbed to the top of Lutai 鹿台 and covering himself in jade, cast himself into the fire. … (King Wu) then commanded Nangong Hu 南宫忽 to relieve the poor with the riches of Lutai and the grain of Juqiao 鉵侨. The gloss states, ‘Lutai’, in the old version was written ‘Lin 窘’, now on the authority of the Shi ji 史记 and the Yulan 御览 it is fixed as ‘Lu’.” However, according to the chapter “Yin Benji” of the Shi ji 史记·殷本纪, “on Jiazi 甲子 day, Zhou’s army was defeated. Zhou 王 fled within, climbed Lutai, donned his precious jade suit, entered the fire and died.” The compiled commentaries state: “Xu Guang 徐广” says, ‘one reading of Lu is Lin’”. From this we know that the so-called Lutai was originally Lintai. The forms of the characters for Lu and Lin are close and can be mistaken. Thus, taking it as “Lintai” is reasonable.

The word “lin” exists in Shang period oracle-bone inscriptions. Chen Mengjia stated: this word “is shaped like a mound of grain exposed to the heavens. ... it was the place where grain was accumulated, becoming the “lin” that means granary in later times.” According to oracle-bone records the king frequently sent people to “Xing lin 省廪”, or inspect the granaries. The divinatory inscriptions record three granaries catching fire and from this we know that granaries could be adjacent to one another allowing fire to spread from one to another. Because of this, explaining “lin tai” as the rammed earth foundation of a granary is quite logical. Thus, the fact that the West Wing of palace No.1 at the Shang center of Huanbei is a platform with a surrounding wall but no roof exactly fits the description of a granary. Because it is located to the west, it can be called the “West Granary”.

4. Southern gallery

Symmetrically placed directly across the courtyard from the main palace hall is the southern gallery. Its rammed earth platform is 6 m wide from north to south and its western extremity merges with the foundation of the west wing. Along the south part of the platform is a row of neatly arranged rectangular post-holes for the placement of double pillars, obviously the remains of a wood framed wall. Along the north edge is a row of pillar holes for roof supports. Between the roof supports and the wood framed wall was a 3 m wide corridor. Based on defensive needs, an analysis of the southern wood-framed wall’s linkage with the wood-framed walls of the gate houses, and so on, the south gallery’s roof was very likely single-eaved with one slope. The wood-framed wall would have supported the spine of the roof, while the eave-supporting pillars supported the eaves, making the roof high on the outside and low on the inside.

The southern gallery did not extend into the platform of the courtyard, while the corridor of the southern gallery and those of the gate-houses were joined. The southern gallery extends west about 65 m from the gate house, while the area east of the gate house has yet to be exposed and so its length is unclear.

5. South gate and gatehouses

The main gate of the palace is located in the middle of the southern gallery and consists of two passages and three gatehouses. As for the structure of the gatehouse roofs, this author believes that they had a single ridge in the middle and two sloping faces. The wood-framed wall is positioned slightly to the south of the center of the gatehouse platform. To the south of the wall there is still about 6.6 m of width. This space would not have been left exposed beyond the coverage of the roof, it must also have had a roof to protect from the wind and rain. In addition, since the gate is set in line with the wood framed wall if there was no south face of the roof, there would be no way to protect the gate. Moreover, on the platform of the gatehouses and the entrance on both the inner and outer sides, a large quantity of evenly distributed pieces of baked clay, the remains of the gatehouses’ collapse. This demonstrates that the gatehouses not only had north facing roofs but also south facing ones. Although no remains of associated postholes were found during excavation (front eave supports), at the southern part of the entry passages, and the southern edge of the gatehouses,
traces of square pillars were found, perhaps to strengthen the side walls of the gateway and at the same time support the roof. Worth pointing out is that on both the north and south edges of the gatehouses several shallow troughs were found, if they are the remains of rainwater runoff from the roof, then they demonstrate that the gatehouse roofs’ southern eaves covered the entirety of the platforms’ southern half.

In the two gateways of the gatehouse and aligned with the wood-framed wall to support the gate is a trough for an upright wooden threshold. The walls to either side also have traces of troughs where the gate-frame was set. Both the gate frames and thresholds were constructed of wide, thick and square (in cross-section) planks. Given that no gate post-holes or post-stones have been found, the gate-frame was set on top of the threshold and the gates themselves were set into the gate-frame without any additional gate-pillars. From the “upside-down hook” shaped protective wall on gate-frame’s outer side, together with the fact that the platform outside of the gate is relatively close to the threshold, while the inner platform is relatively far from the threshold, it can be deduced that the gates opened inward (to the north). When the gates were open they would have lain against the passage walls and would not have obstructed passage.

The Yin Xu oracle-bone inscriptions record a gate named for its position: “south gate.” The gate at the center of the southern gallery of palace No.1 is located exactly in the palace complex’s south and should be this so called “south gate”. Oracle-bone inscriptions also record a “hall gatehouse”. This so called “hall gate” refers to the hall’s point of entrance and exit and is also the “southern gate”. “Gatehouse” then refers to the buildings on either side of the gate. The gate gallery constructions of the Shang center at Huanbei’s palace No.1 then, should be gatehouses.

6. Courtyard

The main palace hall, the east and west wings, the southern gallery and the gate houses surround a space, creating a huge courtyard, 68 m from north to south and more than 140 m from east to west. According to Shang and Zhou period custom, this can be called a “ting 庭 - courtyard”.

Both Shang period oracle-bones and bronze inscriptions have the graph for “ting 庭”. According to Yu Xingwu’s 于省吾 research “ting” in the oracle-bone inscriptions refers to the royal court, while Cheng Mengjia claims that “ting” “is the place for sacrifice as well as the place for feasting”. This can be followed. In addition, the ting was an area for administration. According to transmitted records, when the Shang king Pangeng 殷 盘庚 wanted to move his capital and encountered resistance, he assembled the multitude and the nobility in the king’s court to admonish them. This so called “king’s court” was the Shang king’s palace courtyard. Calling “the multitude” to the “ting” to hear the king’s admonition demonstrates that the “ting” was a very large space. According to the inscription on the Western Zhou bronze vessel Xiao Yu Ding 小孟鼎, Yu 孟 went to the Zhou ancestral temple to present captives to the king, “entering the south gate... arrived at the great court... performed the liao-ritual at the Zhou Ancestral temple.” This demonstrates that from Western Zhou times, ancestral temples had courtyards which were also located in the plaza in front of the ancestral hall.

7. Sacrificial pits

At present sacrificial remains have been discovered in 40 places within palace foundation No.1, mostly distributed in the main palace hall, the gate houses and the west-wing.

In front of the main palace hall platform, near the stairs two different types of sacrificial remains were discovered. One type was human sacrificial pits, located very close to the main palace platform and about 1 sq m in surface area. At present, 5 human sacrificial pits have been found with a single individual in each pit and 4 of the 5 pits have a single jade handle-shaped artifact. The other type of sacrificial pit contains “scattered animal bones” which have been identified as sheep/goat bones.

In the middle of the main palace-hall platform sacrificial remains have also been discovered. At present, 2 sacrificial pits have been discovered, rectangular and oriented north-south, both with a single dog. In the oracle-bone inscriptions there is record of sacrifice to the “yong shi 雅示”, and the graph for yong (harmonious) is made up of two frames joining together, a representation of the inner-rooms of a building and thus yong shi is the god responsible for the safety of buildings. The dog pits described above were perhaps the remains of sacrifices to yong shi.

Animal bones were also discovered in front of the stairs of west wing foundation, with pig bones discovered in front of the northern steps, sheep in front of the central steps and a large mammal, the taxon of which is unclear, in front of the southern stairs.

More than 20 sacrificial pits have been discovered in the vicinity of the gate houses and can be divided into two types. The first are human sacrificial pits: rectangular
pits in which human sacrifices were placed. The other type was “empty pits”: square or irregular in shape, which their excavators believed were “perhaps the remains of a special method of sacrifice”. The author hypothesizes that these were perhaps related to the “wine rituals” (jiu ji 酒祭) or “grain offerings” (deng he 登禾) recorded in the oracle-bone inscriptions and that the pits originally had wine poured into or grains buried in them. Oracle-bone inscriptions record that there were gate spirits in the Shang period (men shi 门示) to whom sacrifices had to be made.

Because the sacrificial pits on the main palace hall are overlain by the platform’s or stairs’ top layer of rammed earth, and the sacrificial pits in the vicinity of the gate houses both intrude into the foundation trench and their openings are overlain by the road running through the middle of the courtyard, these sacrificial pits are the remains of rituals performed during the building process. Some of them were perhaps foundation placement ritual remains while other were perhaps “dedication” ritual remains.

II. Date of the Buildings

From the standpoint of currently excavated materials, despite the fact that the main palace hall, west wing foundations and the southern gallery and southern gate foundations were constructed serially, the foundations of palace No.1 at the Huanbei Shang City, when taken as a unit, were the product of a single building episode without later additions. The only exception is the gateway through the main palace hall which is, perhaps, a later addition.

Because no sections have yet been taken of the foundations of the city at Huanbei’s palace No.1, estimation of the dates of its construction and use must mainly rely upon the dates of the stratigraphic layer overlying foundations as well as ceramic shards excavated from the palace courtyard and scattered on the surface. According to the preliminary report, there are 6 stratigraphic layers overlying the palace foundations and the 6th level “is believed to be the cultural layer accumulated during the use of palace No.1”. From this level “more than 100 shards were excavated, mostly dating from phase II of the Middle Shang period. There were also a few shards that seemed as late as early phase III of the Middle Shang”. According to this, the excavators judged that “Middle Shang phase III was the period in which palace No.1 was abandoned. The date that construction began on the foundations is more complicated and the possibility that it was Middle Shang period II cannot be excluded”. If the 6th layer really is the cultural layer accumulated during the use of the palace, it would mean that the palace was used from Middle Shang phase II to the early part of phase III. Although the date of construction is difficult to determine, the currently available stratigraphy demonstrates that the date of construction cannot be earlier than the date represented by the shards found in layer 6. According to what is already known concerning the date of cultural remains within the palace area, the author estimates that palace No.1 at the Huanbei Shang City is very likely a relatively late construction within the palace area, and its date of construction cannot be earlier than Middle Shang phase II. Thus, palace No.1 at the Shang City of Huanbei belongs to the Middle Shang period, earlier than the palace complex at Yinxu and later than the palace architecture at the Yanshi Shang City.

As for the date and character of the Huanbei Shang City, between “Hedanjia 河亶甲 resided at Xiang 相” and “Pangeng 盘庚 moved to Yin”, my inclination is to choose the latter. If I may be permitted to make a bold hypothesis concerning the date of the construction of palace No.1, I guess that it might be in the period after Pangeng and before Wuding.

III. Nature of the Buildings

According to “Discovery and Preliminary Discussion of the Huanbei Shang City 洹北商城的发现与初步勘探”, “the palace area is located along the southern part of the Huanbei Shang City’s north-south axis” (Fig. 2). If the evidence that the excavators presented demonstrated that palace No.1 is really in the southeast part of the palace area, then there are other palace buildings to the west, or perhaps palace No.1 is simply a part of an eastern architectural complex within the palace area (Fig. 3). If so, then we have reason to believe that it isn’t the main structure on the palace area’s central axis. If this is the case, then the Huanbei Shang City’s palaces Nos. 1 and 2 are basically positioned analogously to the Yanshi Shang City’s palace Nos.4 and 5 and palace No. 1 in the ding group of Anyang Yinxu’s palace area (Fig. 4). Moreover, the Shang center at Yanshi’s palaces Nos. 4 and 5 and Anyang Yinxu’s palace No.1 in the palace area’s ding group are not part of the “court hall” architectural group, but rather quite likely are “ancestral temple” structures. In addition, at both the Yanshi Shang City and Anyang Yinxu, the Shang king’s residential palace is located at the northernmost part of the palace complex (the Yanshi Shang City’s palace No.8 and Anyang
Yinxu’s jia group palaces are all residential palace structures. The “hold court in the front and reside at the rear 前朝后寝” system of palace positioning was already established in the Early Shang period and from this we can exclude the possibility that palace No.1 at the Huanbei Shang City was a residential palace.

From an analysis of the Huanbei Shang City palace No.1’s scale and special structural characteristics, we can also exclude the possibility that it was a residential palace or court hall. The scale of this palace is utterly monumental, greatly exceeding the actual needs of a residential palace. In addition, the division of space in palace No.1 is basically even, such that there are no main and secondary rooms, which does not fit the structure and needs of court halls. We know that in Shang period palace architecture, even in residential palaces the distinction was made between large and small rooms. The inscription from a bronze yu-vessel excavated at Yinxu Xibeigang 西北冈 has the phrase “small residen-
tial chamber”, which should be the opposite of “great chamber”. The oracle-bone inscriptions also have “great chamber”, which in Shang times referred to the main space of the palace structure (the most important room in the structure). Some scholars have pointed out that in the Shang period the “great chamber” was the place of sacrifice and administrative affairs. The rooms of palace No.1 at the Shang city of Huanbei on the other hand, are evenly divided in terms of space with no main and secondary rooms, a situation unsuitable to the architectural space requirements of the Shang king’s administrative court hall. Moreover, these chambers of even size each have a flight of rammed earth stairs obviously indicating their mutually independent status, a situation more suitable to an ancestral temple’s arrangement of ancestral tablets.

According to research on the Yinxu oracle-bones, we know that when the ancestors were sacrificed to in the Late Shang period, frequently a “collective rite” was performed toward a group of ancestors. Hu Houxuan胡厚宣 has termed the building constructed for this purpose a temple of collective sacrifice. Temples of collective sacrifice in the oracle-bones were called “great ancestral temples” (da zong 大宗) or “small ancestral temples” (xiao zong 小宗) of which Chen Mengjia writes, “great ancestral temples and small ancestral temples are both ancestral temples. The difference is that the great ancestral temples were dedicated to Dajia 大甲 onwards, while the small ancestral temples were dedicated to Dayi 大乙 onwards”. He believed that great ancestral temples and small ancestral temples were dedicated to different ancestors. Hu Houxuan on the other hand believed that the difference between great and small ancestral temples was simply the scale of the architecture. Setting aside this issue, what is certain is that in the Late Shang period the Shang king performed collective sacrifice to the ancestors at different ancestral temple buildings. Obviously, whether large ancestral temple or small ancestral temple, both are ancestral temple structures where the ancestral tablets of the former kings were kept, which is different from each of the former kings having their own independent ancestral temple. The author hypothesizes that in collecting the ancestral tablets of different lines in a single great or small ancestral temple did not likely mean that all the tablets to be sacrificed to were kept in the same room, but rather it is likely that they were kept in different rooms, one tablet to a room or at least the main line kings one to a room. The oracle-bone inscriptions sometimes refer to a particular king’s chamber or gate, from this we know that in specially designated ancestral temples each king’s ancestral tablet had its own room. Thus, the uniform scale of rooms in the main palace hall of Huanbei Shang City’s palace No.1 perhaps fits a great or small ancestral temple.

IV. Academic Relevance

The excavation of the foundations of palace No.1 at the Huanbei Shang City has a multi-faceted academic relevance. The author has only raised four issues for preliminary discussion.

1) The excavation of the foundation of palace No.1 at the Shang city of Huanbei puts the claim that the Shang city at Huanbei is a Middle Shang period capital site beyond reasonable doubt. The Shang center at Huanbei’s recognition makes it the first Middle Shang period capital site in my country that has been unanimously accepted by the scholarly world and thus undeniably fills a lacuna in Chinese archaeology’s lack of capital sites for the Middle Shang period.

2) The excavation of the foundation of palace No.1 at the Shang city of Huanbei will necessarily greatly advance archaeological work at the Shang city of Huanbei. Ever since the birth of civilization, the place most representative of a society’s level of development is its capital city and the kernel of a capital is the palace area and palaces. Thus, if one wishes to investigate a dynasty archaeologically, one must firmly grasp this key, the capital site. Investigating the capital site the most crucial
thing is to perform large scale excavations of the palaces and other such ceremonial structures.

3) The excavation of the foundation of palace No.1 at the Shang city of Huanbei fills Chinese archaeologies lacuna in Middle Shang palace sites. The exposure of palace No.1 at Huanbei links the Early Shang palace foundations at Yanshi and the Late Shang palace foundations at Yinxu. This creates a sequence of Shang period palace architecture giving us a solid foundation for discussing its special characteristics and development.

4) The excavation of the foundation of palace No.1 at the Shang city of Huanbei contributes excellent comparative material for deeper studies of the palace area foundations at Yinxu. Given the archaeological material concerning the Yanshi and Huanbei palace foundations, we can certainly correctly understand the original state of the palace structure foundations at Yinxu.

References


Note: The original paper, published in Wenwu 文物 2004.5: 50–64, with 7 illustrations, is written by Du Jinpeng 杜金鹏. The summary is prepared by the original author and English-translated by Rod Campbell 江雨德.