The Location where Narmer probably buried

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Abstract: In *Bamboo Annals*, Yu (禹) was depicted as having big nose and mouth(虎鼻大口，两耳参髅), so this resembles Limestone head of the king Narmer . And in my point of view, tomb of King Qa'a resembles a particular burial system – “Huangchangticou”(黄肠题凑). Since human Y-chromosome DNA haplogroups O be found in Egypt, but no in the others in the image in the paper, I speculate that there must be a “indigenous people” in the Liangzhu area to return to Egypt with the fleet. From the paper , I speculate that the eagle in a statue of a man, dating from Yue State (越国) and the eagles in Fanshan Cemetery and Yaoshan Hill, the Archaeological Ruins of Liangzhu City (良渚古城遗址反山墓地和瑶山), resemble the God Horus in Egypt. I can also get a conclusion that Zhejiang (浙江) (including Yuhang(余杭)and Shaoxing(绍兴)) was once Egypt's colony. From the paper, I can get a conclusion that Mojiaoshan Terrace (莫角山台地) resembles the Ziggurat of Ur and Anu Ziggurat, Uruk (modern Warka) in function and shape. In my point of view, Narmer's tomb in Umm el-Qa'ab near Abydos in Upper Egypt is a cenotaph of his. And from the paper, I can conclude that the “grass-wrapped silt” discovered by Liangzhu archaeologists in Archaeological Ruins of Liangzhu City has the same shape, size and use

of building materials as the mud bricks used in the construction of cities, palaces and tombs during Narmer's period of ancient Egypt, so I can conclude that the territory of Liangzhu culture (including Yuhang(余杭) and Shaoxing(绍兴)) was once Egypt's colony. From the paper, I can find the prototype of the square-shape (the shape of "Hui"(回), a Chinese character) altars on Mt. Yaoshan and Mt. Huiguanshan from Dendera zodiac. From the paper, I can conclude that the divine emblem unearthed from Tomb M12, Fanshan cemetery indicates that the owner of the tomb was probably the governor of ancient Egypt. Since Fanshan (反山) is an artificially piled up mastaba shape like mound and it is larger than any other tombs of mastabas of the kings in ancient Egypt, I can get a hypothesis that Yu (Narmer) died while on a hunting tour to the eastern frontier of his empire, and chose Fanshan (反山) as his tomb at first, but for some unknown reasons, he buried in Yu mausoleum (大禹陵), Mount Kuaiji (会稽山), south of present-day Shaoxing (绍兴).

Narmer was an ancient Egyptian king of the Early Dynastic Period(Wilkinson 1999, p. 67), circa 3100-3050 BC. He probably was the successor to the Protodynastic king Ka, or possibly Scorpion. Some consider him the unifier of Egypt and founder of the First Dynasty, and in turn the first king of a unified Egypt.

Verso of Narmer Palette

Limestone head of a king. Thought by Petrie to be Narmer . Bought by Petrie in Cairo, Egypt. 1st Dynasty .

The complete spelling of Narmer's name consists of the hieroglyphs for a catfish (n'r) (Wilkinson 1999, p. 67) and a chisel (mr), hence the reading "Narmer" (using the rebus principle). This word is sometimes translated as "raging catfish"(Redford 1986, pp. 136, n.10). However, there is no consensus on this reading. Other translations include "angry, fighting, fierce, painful, furious, bad, evil, biting, menacing" , or "stinging catfish"(Pätznick 2009, pp. 308, n.8; Leprohon 2013, p. 22; Clayton 1994, p. 16). Some scholars have taken entirely different approaches to reading the name that do not include "catfish" in the name at all, but these approaches have not been generally accepted.

Horus name of Narmer

Rather than incorporating both hieroglyphs, Narmer's name is often shown in an abbreviated form with just the catfish symbol, sometimes stylized, even, in some cases, represented by just a horizontal line (Raffaele 2003, pp. 110, n. 46). This simplified spelling appears to be related to the formality of the context. In every case that a serekh is shown on a work of stone, or an official seal impression, it has both symbols. But, in most cases, where the name is shown on a piece of pottery or a rock inscription, just the catfish, or a simplified version of it appears.

Serekhs bearing the rebus symbols *n'r* (catfish) and *mr* (chisel) inside, being the phonetic representation of Narmer's name.

Name of Narmer in serekh

Naqada Label reconstruction
Garstang 1905, p. 62, fig3

Two necropolis sealings, found in 1985 and 1991 in Abydos, in or near the tombs of Den (Dreyer 1987) and Qa'a (Dreyer et al. 1996, pp. 72–73, fig. 6, pl.4b-c) , show Narmer as the first king on each list, followed by Hor-Aha. The Qa'a sealing lists all eight of the kings of what scholars now call the First Dynasty in the correct order, starting with Narmer. These necropolis sealings are strong evidence that Narmer was the first king of the First Dynasty (Cervelló-Autuori 2008, pp. 887–899).

Necropolis seal impression of Qa'a
Dreyer 1987, p. 36, fig.3

The famous Narmer Palette, discovered by James E. Quibell in the 1897–1898 season at Hierakonpolis (Quibell 1898, pp. 81–84, pl. XII–XIII), shows Narmer wearing the crown of Upper Egypt on one side of the palette, and the crown of Lower Egypt on the other side, giving rise to the theory that Narmer unified the two lands (Gardiner 1961, pp. 403–404). Since its discovery, however, it has been debated whether the Narmer Palette represents an actual historic event or is purely symbolic. Of course, the Narmer Palette could represent an actual historical event while at the same time having a symbolic significance.

In 1993, Günter Dreyer discovered a "year label" of Narmer at Abydos, depicting the same event that is depicted on the Narmer Palette. In the First Dynasty, years were identified by the name of the king and an important event that occurred in that year. A "year label" was typically attached to a container of goods and included the name of the king, a description or representation of the event that identified the year, and a description of the attached goods. This year label shows that the Narmer Palette depicts an actual historical event (Dreyer 2000). Support for this conclusion (in addition to Dreyer) includes Wilkinson (Wilkinson 1999, p. 68) and Davies & Friedman (Davies & Friedman 1998, p. 35). Although this interpretation of the year label is the dominant opinion among Egyptologists, there are exceptions including Baines (Baines 2008, p. 23)

and Wengrow (Wengrow 2006, p. 204).

Archaeological evidence suggests that Egypt was at least partially unified during the reigns of Ka and Iry-Hor (Narmer's immediate predecessors), and perhaps as early as Scorpion I (several generations before Iry-Hor). Tax collection is probably documented for Ka (Dreyer, Hartung & Pumpenmeier 1993, p. 56, fig. 12) and Iry-Hor (Kahl 2007, p. 13). The evidence for a role for Scorpion I in Lower Egypt comes from his tomb Uj in Abydos (Upper Egypt), where labels were found identifying goods from Lower Egypt (Dreyer 2011, p. 135). These are not tax documents, however, so they are probably indications of trade rather than subjugation. There is a substantial difference in the quantity and distribution of inscriptions with the names of those earlier kings in Lower Egypt and Canaan (which was reached through Lower Egypt), compared to the inscriptions of Narmer. Ka's inscriptions have been found in three sites in Lower Egypt and one in Canaan (Jiménez-Serrano 2007, p. 370, table 8). Iry-Hor inscriptions have also been found in two sites in Lower Egypt and one in Canaan (Jiménez-Serrano 2007, p. 370, table 8 and Ciałowicz 2011, pp. 63–64). This must be compared to Narmer, whose serekhs have been found in ten sites in Lower Egypt and nine sites in Canaan. This demonstrates a qualitative difference between Narmer's role in Lower Egypt compared to his two immediate predecessors. There is no evidence in Lower Egypt of any Upper Egyptian king's presence before

Iry-Hor. The archaeological evidence suggest that the unification began before Narmer, but was completed by him through the conquest of a polity in the North-West Delta as depicted on the Narmer Palette (Heagy 2014, pp. 73–74).

Narmer Palette

Drawing (front and back) of Narmer Palette

The Narmer Macehead

Narmer Macehead (drawing). The design shows captives being presented to Pharaoh Narmer enthroned in a naos. Ashmolean Museum, Oxford.

The scene depicts a ceremony in which captives and plunder are presented to King Narmer , who is enthroned beneath a canopy on a stepped platform. He wears the

Red Crown of Lower Egypt, holds a flail, and is wrapped in a long cloak. To the left, Narmer's name is written inside a representation of the palace facade (the serekh) surmounted by a falcon. At the bottom is a record of animal and human plunder; 400,000 cattle, 1,422,000 goats, and 120,000 captives (Millet 1990, pp. 53-59).

The importance that Narmer attached to his "unification" of Egypt is shown by the fact that it is commemorated not only on the Narmer Palette, but on a cylinder seal (Quibell 1900, p. 7, pl. XV.7), the Narmer Year Label (Dreyer 2000), and the Narmer Boxes (Dreyer 2016) ; and the consequences of the event are commemorated on the Narmer Macehead (Quibell 1900, pp. 8–9, pls. XXV, XXVIB). The importance of the unification to ancient Egyptians is shown by the fact that Narmer is shown as the first king on the two necropolis seals, and under the name Menes, the first king in the later King Lists. Although there is archaeological evidence of a few kings before Narmer, none of them is mentioned in any of those sources. It can be accurately said that from the point of view of Ancient Egyptians, history began with Narmer and the unification of Egypt, and that everything before him was relegated to the realm of myth.

Narmer and Hor-Aha's names were both found in what is believed to be Neithhotep's tomb, which led Egyptologists to conclude that she was Narmer's queen and mother of Hor-Aha (Tyldesley 2006, pp. 26–29). Neithhotep's name means "Neith is satisfied". This suggests that she was a princess of Lower Egypt (based on the fact that Neith is the patron goddess of Sais in the Western Delta, exactly the area Narmer conquered

to complete the unification of Egypt), and that this was a marriage to consolidate the two regions of Egypt (Tyldesley 2006, pp. 26–29). The fact that her tomb is in Naqada, in Upper Egypt, has led some to the conclusion that she was a descendent of the predynastic rulers of Naqada who ruled prior to its incorporation into a united Upper Egypt (Wilkinson 1999, p. 70). It has also been suggested that the Narmer Macehead commemorates this wedding (Emery 1961, pp. 44–47). However, the discovery in 2012 of rock inscriptions in Sinai by Pierre Tallet (Tallet 2015) raise questions about whether she was really Narmer's wife.

Feeling tired? Now let us back to China. Yu the Great (大禹), was a legendary ruler in ancient China famed for his introduction of flood control, inaugurating dynastic rule in China by establishing the Xia dynasty, and for his upright moral character (Mungello, David E. (2009) and 戴逸, 龔書鐸. [2002] (2003) 中国通史. 史前 夏 商 西周. Intelligence press. ISBN 962-8792-80-6. p 40).

The dates proposed for Yu's reign predate the oldest-known written records in China, the oracle bones of the late Shang dynasty, by nearly a millennium (Underhill, Anne P., ed. (2013).). No inscriptions on artifacts from the proposed era of Yu, nor the later oracle bones, make any mention of Yu; he does not appear in inscriptions until vessels dating to the Western Zhou period (c. 1045–771 BC). The lack of anything remotely close to contemporary documentary evidence has led to some controversy over the historicity of Yu. Proponents of the historicity of Yu theorise that

stories about his life and reign were transmitted orally in various areas of China until they were recorded in the Zhou dynasty (Allan, Sarah (1991)), while opponents believe the figure existed in legend in a different form—as a god or mythical animal—in the Xia dynasty, and morphed into a human figure by the start of the Zhou dynasty. Many of the stories about Yu were collected in Sima Qian's famous *Records of the Grand Historian*. Yu and other "sage-kings" of Ancient China were lauded for their virtues and morals by Confucius and other Chinese teachers(戴逸, 龔書鐸. [2002] (2003) 中国通史. 史前 夏 商 西周. Intelligence press. ISBN 962-8792-80-6. p 36).

Yu (禹) is one of the few Chinese rulers posthumously honored with the epithet "the Great". While in *Bamboo Annals*, Yu (禹) was depicted as having big nose and mouth(虎鼻大口，两耳参镳). So this resembles Limestone head of the king Narmer , as the image above.

Song Dynasty depiction of Yu

According to several ancient Chinese records, Yu (禹) was the eight-times-great-grandson of the Yellow Emperor (黄帝): Yu's father, Gun (鲧), was the five-times-great-grandson of Emperor Zhuanxu (颛顼); Zhuanxu's father, Changyi (昌意), was the second son of the Yellow Emperor (Book of Han (律曆志) chapter; Book of Lineages (世本); 戴逸, 龔書鐸. [2002] (2003) 中国通史. 史前 夏 商 西周. Intelligence press. ISBN 962-8792-80-6. p 38; Zynews.com). Yu's mother was of the Youxin clan named either Nüzhi (女志) or Nüxi (女嬉). His clan name is Si (姒) while

his personal name is Wenming (文命), according to the *Records of the Grand Historian*.

Han dynasty depiction of Yu

When Yu was a child, his father Gun moved the people east toward the Central Plain. King Yao(尧) enfeoffed Gun as lord of Chong, usually identified as the middle peak of Mount Song. Yu is thus believed to have grown up on the slopes of Mount Song, just south of the Yellow River (Hubeiwater.gov.cn). He later married a woman from Mount Tu (涂山) who is generally referred to as Tushan-shi (涂山氏; 'Lady Tushan'). They had a son named Qi(启), a name literally meaning "revelation"(Wang Hengwei 王恒伟. (2006) *Zhongguo Lishi Jiangtang* 中国历史讲堂 #1 *Yuan Gu Zhi Chunqiu* 远

古至春秋. *Zhonghua Shuju* 中华书局. ISBN 962-8885-24-3. p 18).

Qi the Chinese King

Now, let's go back to the Yu(禹) question. The picture below shows the portrait of Yu(禹).

Portrait of Yu-禹 (Narmer)

And the images below are archaeological timeline of ancient Egypt and Xia Dynasty(夏朝). The timeline starts from the beginning of ancient Egypt to the end of the First Dynasty of ancient Egypt. There are about several kings.

Scorpion I corresponds to the Yellow Emperor(黄帝)

Partial pattern and inscription of Scorpion I's scepter

The oldest "摯" name

The name of King Iry-Hor of Dynasty 0 is “尧”

The name of King Ka/Sekhen of Dynasty 0 is “舜”

西奈半岛Wadi Ameyra岩石雕刻: 妮斯霍特普名字

The oldest 女“娇”name

The prototype of“启”

The King List of the First Dynasty of ancient Egypt

Now let us back to Egypt. Umm El Qa'āb (sometimes romanised Umm El Ga'ab, Arabic: أم القعاب) is a necropolis of the Early Dynastic Period (Tombs of kings of the First and Second Dynasty) kings at Abydos, Egypt (Toby Wilkinson, Early Dynastic Egypt, Routledge, 1999). Its modern name means "Mother of Pots" as the whole area is littered with the broken pot shards of offerings made in earlier times.

The area was a site of veneration and worship in ancient Egypt, and by the time of the Middle Kingdom, at least one of the royal tombs was

excavated and rebuilt for the priests of Osiris (Shaw, Ian. The Oxford History of Ancient Egypt. p. 67. Oxford University Press. 2000. ISBN 0-19-280458-8).

General view of Umm El Qa'ab, showing littering of pots

Image of Abydos

Umm el-Qa'ab

Source: Wilkinson, *Early Dynastic Egypt*, p. 232, fig. 7.1.

Image of Umm al-Qa'ab

Plan of the Cemetery at Umm al-Qa'ab, with human sacrifices in it

The Cemetery at Umm al-Qa'ab of early dynasty and the first Dynasty, with human sacrifices in it

Umm el-Qa'ab was used as a burial ground serving the elite ruling the area of Abydos since early Predynastic times, from at least the Naqada I period, ca. 3800 BC. It was the royal cemetery during the 1st Dynasty and was also used by the two last kings of the 2nd Dynasty, confirming Manetho's statement that the early kings of Egypt originated from This, near Abydos.

The area has been divided into two cemeteries, U and B. Cemetery U is dated to the Predynastic era and includes the famous tomb U-j, which belonged to a powerful ruler whose influence may perhaps have extended as far as Lower-Egypt. This tomb has yielded some inscribed

tablets, which are believed to be the oldest known examples of writing to mankind. One of the tables may have contained an early writing of the name of Bubastis, a city located in the western Delta. If this writing is correct, then the owner of tomb U-j must at least have had trading contacts with Lower-Egypt.

Several inscribed bone tags from tomb U-j at Umm el-Qa'ab, the oldest examples of writing known to mankind.

Source: Joukowsky Institute for Archaeology Website.

Cemetery B is dated to the Early Dynastic Period, and was exclusively used by the royal family. The tombs are significantly larger than those in cemetery U. The increasing size of the tombs hints at the increasing wealth and power of the ruling family and at the better mastery of crafts.

Even though each royal tomb is different from the other, they all share the same basic structure, which consists of a large, square pit dug into the ground, lined with mudbrick walls. This pit was used as the main burial room. It was often surrounded by additional chambers, at a

slightly higher level than the burial room itself. In the tombs of Djer and Djet, these rooms open off the central chamber. From the tomb of Meretneith onwards, they would surround the burial chamber, without interconnecting.

From the reign of Djet onwards, the superstructure of the tombs appears to have consisted of a hidden mound over the main burial chamber and a larger mound covering the entire tomb. There are indications that the large mound may also have hidden the subsidiary tombs which, starting from the reign of Aha, extended from or surrounded most 1st Dynasty royal tombs. If this is indeed the case, then it is clear that the subsidiary burials all occurred at the same time as the royal burial.

Several tombs appear to be associated with mudbrick enclosures, built more to the east, close to the rim of cultivation. The largest and most famous of these enclosures, known today as Shunet el-Zebib, is dated to the reign of Khasekhemwi, the last king of the 2nd Dynasty.

And a mastaba or pr-djt (meaning "house of eternity" or "eternal house" in Ancient Egyptian) is a type of ancient Egyptian tomb in the form of a flat-roofed, rectangular structure with inward sloping sides, constructed out of mud-bricks (from the Nile River). These edifices marked the burial sites of many eminent Egyptians during Egypt's Early Dynastic Period and Old Kingdom. In the Old Kingdom epoch, local kings

began to be buried in pyramids instead of in mastabas, although non-royal use of mastabas continued for over a thousand years. Egyptologists call these tombs *mastaba*, from the Arabic word مصطبة "stone bench" ("Mastaba Tomb of Perneb". *Met Museum*. Retrieved 22 October 2016).

A mastaba

Old Kingdom Mastaba at Meidum

The afterlife was an important part of Ancient Egyptian religion. This is reflected in their architecture and most prominently by the enormous amounts of time, money, and labour involved in the building of tombs (Hamlin, Talbot (1954).). Ancient Egyptians believed the soul could live only if the body was preserved from corruption and depredation as well as fed (Badawy, Alexander (1966).).

Starting in the Predynastic era and continuing into the later dynasties, the ancient Egyptians developed increasingly complex and effective methods for preserving and protecting the bodies of the dead. They buried their dead in pit graves dug out from the sand; the body placed on a mat, usually along with some items believed to help them in the afterlife. The first tomb structure which the Egyptians developed was the *mastaba*, composed of earthen bricks made from soil along the Nile. As the remains were not in contact with the dry desert sand, natural mummification could not take place; therefore the Egyptians devised a system of artificial mummification (*Ancient Egypt and the Near East*. Cambridge: MIT Press. 1966. p. 7). Until at least the Old Period or First Intermediate Period, only high officials and royalty would be buried in these mastabas (BBC. "mastabas". BBC. Retrieved 29 May 2013).

When seen from a distance, a flat-topped mastaba does resemble a bench. Historians speculate that the Egyptians may have borrowed architectural ideas from Mesopotamia, since at the time they were both

building similar structures (Gascone, Bamber. "History of architecture". History of the world).

The above-ground structure of a mastaba is rectangular in shape with inward-sloping sides and a flat roof. The exterior building materials were initially bricks made of the sun-dried mud readily available from the Nile River. Even after more durable materials such as stone came into use, all but the most important monumental structures were built from mudbricks (*R., C. L. (1913)*). Mastabas were often about four times as long as they were wide, and many rose to at least 30 feet in height. They were oriented North-South, which the Egyptians believed was essential for access to the afterlife. The above-ground structure had space for a small offering chapel equipped with a false door. Priests and family members brought food and other offerings for the soul, or *ba*, of the deceased, which had to be maintained in order to continue to exist in the afterlife.

Structure of a mastaba

Inside the mastaba, a deep chamber was dug into the ground and lined with stone and bricks. The burial chambers were cut deep, until they passed the bedrock, and were lined with wood (BBC. "Mastabas". bbc. Retrieved 29 May 2013). A second hidden chamber called a *serdab*(سرداب), from the Persian word for "cellar" (Bard, K. A. (1999). *Encyclopedia of the Archaeology of Ancient Egypt*. New York: Routledge. ISBN 978-0415185899), was used to store anything that may have been considered essential for the comfort of the deceased in the afterlife, such as beer, cereal, grain, clothes, and precious items (Lewis, Ralph. "Burial practices, and Mummies". *Rosicrucian Museum*). The mastaba housed a statue of the deceased that was hidden within the masonry for its protection. High up the walls of the *serdab* were small openings that would allow the *ba* to leave and return to the body (represented by the statue); Ancient Egyptians believed the *ba* had to return to its body or it would die. These openings "were not meant for viewing the statue but rather for allowing the fragrance of burning incense, and possibly the spells spoken in rituals, to reach the statue"(Arnold, Dorothea (1999)).

The mastaba was the standard type of tomb in pre-dynastic and early dynastic Egypt for both the pharaoh and the social elite. The ancient city of Abydos was the location chosen for many of the cenotaphs. The royal cemetery was at Saqqara, overlooking the capital of early times, Memphis (Fletcher, Banister (1996)).

Mastabas evolved over the early dynastic period. During the 1st Dynasty, a mastaba was constructed simulating house plans of several rooms, a central one containing the sarcophagus and others surrounding it to receive the abundant funerary offerings. The whole was built in a shallow pit above which a brick superstructure covering a broad area. The typical 2nd and 3rd Dynasty mastabas was the 'stairway mastaba', the tomb chamber of which sank deeper than before and was connected to the top with an inclined shaft and stairs (Fletcher, Banister (1996)).

Even after pharaohs began to construct pyramids for their tombs in the 3rd Dynasty, members of the nobility continued to be buried in mastaba tombs. This is especially evident on the Giza Plateau, where at least 150 mastaba tombs have been constructed alongside the pyramids (Davis, Ben (1997)).

Map of the Giza Plateau, showing the mastabas constructed within the complex

In the 4th Dynasty (c. 2613 to 2494 BC), mastabas, then, were developed with the addition of offering chapels and vertical shafts. 5th Dynasty mastabas had elaborate chapels consisting of several rooms, columned halls and 'serdab'. The actual tomb chamber was built below the south-end of mastaba, connected by a slanting passage to a stairway emerging in the center of a columned hall or court.

Mastabas are still well attested in the Middle Kingdom. Here they had a revival. They were often solid structures with the decoration only on

the outside (Arnold, D. (2008)).

By the time of the New Kingdom (which began with the 18th Dynasty around 1550 BC), "the mastaba becomes rare, being largely superseded by the independent pyramid chapel above a burial chamber" (Badawy, Alexander (1966)).

And the excavations at Abusir South have already uncovered many tombs that have added valuable information to the general knowledge of the development of the Old Kingdom society, its burial and funeral habits, and last but not least social relations and their impact on the lives of ancient Egyptian officials. One of the latest discoveries is the tomb of Kaisebi (AS 76) and the adjoining structure of Ptahwer (AS 76b), which are located to the south of the anonymous mastaba (AS 54) lying on the most prominent spot of the whole Abusir South area (for more information on this tomb, see Bárta 2010 and Jirásková 2011). Kaisebi and Ptahwer built their tombs between this huge mastaba (AS 54) and a recently discovered 18.5 m long boat, both dated to the end of the Third Dynasty.

Research in this area was initiated in 2014, when the southern wall of AS 54 was being cleaned. By that time, the northern façades of three new mastabas had come to light, divided from AS 54 by a narrow corridor running in the east-west direction. They were labelled AS 76 (the westernmost), AS 77 (the central), and AS 78 (the easternmost). The excavation of the structures was planned for the spring season of 2015

but lasted until the end of that year. AS 77 and AS 78 were family mud brick mastabas, whereas AS 76 was built of limestone.

Tomb AS 76 was constructed in two phases. The first one consisted of a rather small rectangular mastaba with a chapel (fig. 1), an external niche, a serdab, and two shafts. Later on, the original structure was enlarged by an annexe (AS 76b) attached to the eastern wall of AS 76, which included another offering place and two burial shafts (fig. 2).

Fig. 1 Kaisebi's chapel with an offering stand in situ shortly after its discovery in the spring season of 2015 (photo M. Frouz)

Fig. 2 Plan of the area south of tomb AS 54 with the three mastabas and other structures excavated in 2015 (drawing M. Bárta, L. Jirásková, M. Odler, M. Peterková Hloučová, J. Turek, L. Vařeková)

Fig. 2 Plan of the area south of tomb AS 54 with the three mastabas and other structures excavated in 2015 (drawing M. Bárta, L. Jirásková, M. Odler, M. Peterková Hloučová, J. Turek, L. Vařeková)

name	tomb code	provenance	dynasty	king	title	Jones	bibliography
<i>Hry-ny-R*</i>	AC 1	causeway of Sahure's pyramid complex	early 5	Sahure	<i>šmšw h(ḏ)yt</i>	902–903, no. 3313	El Awady 2009: Pl. 5
<i>Tnti</i>	AC 1	causeway of Sahure's pyramid complex	early 5	Sahure	<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	El Awady 2009: Pl. 9
<i>Šndm-ib</i>	AC 1	causeway of Sahure's pyramid complex	early 5	Sahure	<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	El Awady 2009: Pl. 9
<i>Nḥti</i>	AC 1	causeway of Sahure's pyramid complex	early 5	Sahure	<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	El Awady 2009: Pl. 9
<i>Ty-nfr</i>	AC 1	causeway of Sahure's pyramid complex	early 5	Sahure	<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	El Awady 2009: Pl. 9
<i>Kḥ(i)-m-št</i>	AC 1	causeway of Sahure's pyramid complex	early 5	Sahure	<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	El Awady 2009: Pl. 9
<i>Mmi</i>	AC 1	causeway of Sahure's pyramid complex	early 5	Sahure	<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	El Awady 2009: Pl. 9
<i>Kḥ(i)-pr Junior</i>	AS 61	mastaba of Kaaper Junior	mid 5		<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	unpublished
<i>Nfr-Inpw</i>	AS 37	mastaba of Neferinpu	late 5	Nyuserre – Djedkare	<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	Bárta <i>et al.</i> 2014: 9, 71–80
<i>Kḥ(i)-zbi</i>	AS 76	mastaba of Kaisebi	late 5		<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	Dulíková <i>et al.</i> 2016
<i>Šndm-ib</i>	AS 16	mastaba of Qar	late 5 – early 6	Unas – Teti	<i>šmšw h(ḏ)yt</i>	902–903, no. 3313	Bárta <i>et al.</i> 2009: 102
<i>Tnti</i>	AS 16	mastaba of Qar	late 5 – early 6	Unas – Teti	<i>šmšw h(ḏ)yt</i>	902–903, no. 3313	Bárta <i>et al.</i> 2009: 107
<i>Tnti</i>	AS 16	mastaba of Qar	late 5 – early 6	Unas – Teti	<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	Bárta <i>et al.</i> 2009: 53, 101
<i>Šndm-ib</i>	AS 18	tomb of Senedjemib	late 6	Pepy I – Pepy II	<i>šmšw h(ḏ)yt</i>	902–903, no. 3313	Bárta <i>et al.</i> 2009: 149
<i>*nh-m-Tnnt</i>	AS 22	mastaba of Inti	late 6	Pepy I – Pepy II	<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	Bárta – Vachala <i>et al.</i> , forthcoming
<i>Šndm-ib</i>	AS 22	mastaba of Inti	late 6	Pepy I – Pepy II	<i>šmšw h(ḏ)yt</i>	902–903, no. 3313	Bárta – Vachala <i>et al.</i> , forthcoming
<i>Trī</i>	AS 22	mastaba of Inti	late 6	Pepy I – Pepy II	<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	Bárta – Vachala <i>et al.</i> , forthcoming
<i>Pth-wr ?</i>	AS 76b	tomb of Ptahwer	late 6		<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	Dulíková <i>et al.</i> 2016
<i>Htp(w)-Inpw</i>	AS 85	mastaba of Hetepinpu	late 6		<i>šmšw h(ḏ)yt (n) zḥb</i>	813, no. 2974	unpublished

Table 1 Holders of the title *šmšw h(ḏ)yt (n) zḥb*, “the elder of the judicial/audience hall” whose names occurred at the Abusir necropolis during the Old Kingdom (V. Dulíková)

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Fig. 3 Shafts in the core of the original mastaba of AS 76, numbered as Shafts 1 and 4 (drawing V. Dulíková, M. Peterková Hloučová, L. Vařeková)

Fig. 4, A disturbed human burial in the burial chamber of Shaft 2 in tomb AS 76b, presumably belonging to the owner of the annexe (photo M. Frouz, drawing M. Odler, M. Peterková Hlouchová, L. Vařeková)

The image of the above Fig.4

And for his burial, Horus Aha stayed at Umm el-Qa'ab, and had his tomb built right next to the pits that are believed to have been used for Narmer's burial. Aha's tomb is substantially larger than Narmer's, which has led some researchers to believe that not Narmer but Aha is to be identified as the near-legendary founder of the united Egypt, Menes.

Aha's tomb consists of 3 large, slightly rectangular pits in a row, now numbered B19, B15 and B10. The pits B17/18, believed to be Narmer's tomb, are located to the north of pits B19 and B15. The pits are lined

with walls ranging between 1.5 to 2.1 metres in thickness. There is no connection between the pits, although it is possible that they shared a common superstructure.

A view on the three principal pits of Aha's tomb.
Source: Starożytny Egypt - Nekropola Abydos.

Subsidiary Graves of the Tomb of Aha, with human sacrifices in them

To the east of B10, and extending the line of pits that make up Aha's tomb, are two smaller pits (B13 and B14), and a series of 34 subsidiary tombs laid out in 3 parallel rows. The subsidiary tombs are seen as evidence for retainer sacrifice, a gruesome practice of burying some of the king's staff along with him, that appears to have started under Aha and would be maintained until the end of the 1st Dynasty.

Benerib, one of Aha's wives, is believed to have been buried in pit B14. If this is indeed the case, it is likely that her burial happened at the same time as Aha's, which could indicate that she was ritually put to death to be buried alongside her husband. It is also possible that she predeceased her husband and was laid to rest in what was to become part of Aha's tomb.

Djer built his tomb at Umm el-Qa'ab at some distance to the west of that of his predecessor, Aha. Petrie, one of the archaeologists who excavated the tomb, gave it the designation of "Tomb O".

Contrary to Aha's tomb, Djer's consisted of one single pit measuring 13.2 by 11.8 metres internally and a depth of 2.7 metres. The sides of the pit are lined with 2.6 metre thick walls. Several smaller chambers were built against the north, east and west walls, but not against the south wall. It is the first royal tomb of the 1st Dynasty to have an internal structure.

A view on Djer's tomb shows the thick walls as well as the tomb's internal structure.
Source: Hadas Newsletter Archive.

Among several objects found inside the tomb was a mummified arm, assumed to have belonged either to the king himself or, more likely, to one of his queens. One of the oldest known artificially mummified human remains, the arm wore 4 bracelets, one of which consisted of a string of Djer's Horus-names.

Four bracelets were found on a mummified arm inside the tomb of Djer.

Source: Tiradriti, *Egyptian Treasures*, p. 42

318 subsidiary graves, some with stelae identifying the owners, were

found surrounding the king's tomb. The fact that some individuals were named, points to them having had some prestige, if not in life, then in death. It is not certain if all subsidiary burials happened at the same time, and were the result of retainer sacrifice or not.

For some reason, later tradition, started at the latest during the 18th Dynasty, considered this tomb to be the tomb of Osiris, the god of the dead, who had one of his most important cult centres in Abydos.

Horus Djet was buried in a tomb at Umm el-Qa'ab, to the southwest of the tomb of Djer, his predecessor. Petrie, one of the archaeologists who excavated the tomb, gave it the designation of "Tomb Z".

The king's tomb consisted of a single pit, measuring 9.3 by 11.9 metres internally, slightly smaller than the tomb of Djer. The wall thickness varies between 0.8 and 1.05 metres.

As was the case with Djer, there are several smaller chambers built against the north, east and west walls.

There are 174 subsidiary graves surrounding the tomb in a pattern somewhat reminiscent of Djer's subsidiary graves. The overall look of the plan and layout of Djet's tomb gives the impression of being a copy of Djer's.

Several stelae engraved with the king's Horus name were found connected to the tomb.

Figure 1 - A First Dynasty Abydos mastaba: (a) reconstruction; (b) plan. The tumulus inside the substructure of Djet's mastaba (c). Sources: Spencer, *Early Egypt*, p. 82; Emery, *Archaic Egypt*, p. 68; Dreyer, *MDAIK* 47 (1991), p. 99.

A First Dynasty Abydos mastaba

Fig. 3: King Djet's Tomb Z at Abydos and Mastaba 3504 (after EVERY 1961: 70, 72).

King Djet's Tomb Z at Abydos and Mastaba 3504

Mastaba 3504 (Sekhemka-Sedj)

Fig. 4: A comparison of labels and seal impressions naming Sekhemka at Saqqara and Abydos.

Mastaba 3504 and Djjet's Tomb at Abydos

Fig. 5: Other parallels between the inscriptions discovered in mastaba 3504 and Djjet's tomb at Abydos.

Mastaba 3504 and Djjet's Tomb at Abydos

An impressive tomb was dug out into the ground for Merneith right next to her probable husband's tomb at Umm el-Qa'ab. It was labeled Tomb Y by Petrie, one of the main archaeologists who worked on the site and is the most lavish Early Dynastic queen's tomb at Umm el-Qa'ab.

The tomb itself measures 8.9 by 6.3 metres internally. Its walls vary in thickness between 1.3 and 1.6 metres. Eight storage rooms were built against all four walls and were found filled with pottery. The actual burial chamber was dug deeper than the storage rooms.

A stela with the name of Merneith was found in the burial chamber.

A stela with the name of Merneith

The queen's tomb is surrounded by 41 subsidiary graves. This is significantly less than was the case with her husband or her son, indicating that she may have had less servants or that she shared some with her husband and son.

A seal impression listing kings buried at Umm el-Qa'ab from Narmer to Den, ends with the name of Merneith, commemorating her role as regent during her son's childhood.

Reconstruction drawing of the tomb of Merneith showing that the tomb had a superstructure.

Den continued the move south at Umm el-Qa'ab for the location of his tomb, labeled "Tomb T" by Petrie, building it to the southeast of the tombs of Den and Merneith. That his tomb was located next to both the tombs of Djed and Merneith, could perhaps confirm that Djed was his father, with historical sources already having confirmed Merneith as his mother.

As was the case with the tombs of his predecessors and mother, Den's tomb consisted of a pit dug into the ground. It measures 15.2 by 8.5 metres internally, surrounded by mudbrick walls between 2.1 and 3.8 metres thick, making it the second largest royal tomb of the 1st Dynasty.

Unlike the tombs of his predecessors, however, Den's tomb features a 23.77 metres long staircase descending down into the burial chamber from the northeast. The staircase consisted of 2 parts, probably

separated by a wooden door. A second feature that was new to the royal tombs, was that the floor was made of granite.

Tomb of Den

Among the finds in the tomb were 20 year labels, recording rituals and events that occurred during Den's reign.

136 subsidiary graves were found surrounding the tomb, mainly on the north, east and west sides, and substantially less on the south side. In one of the graves a stela for a dwarf named Ser-Inpu, was found.

The tomb of Den at Umm el-Qa'ab was surrounded by 136 subsidiary tombs.

The Tomb of Den as it appears today

Jewellery from the Tomb of Den

Linen wrapped arm from the Tomb of Den at Abydos

Fig. 6: Seal impressions of officials discovered at Saqqara and Abydos, part 1.

Seal impressions of officials discovered at Saqqara and Abydos, part 1.

Horus Anedjib chose to build his tomb, labeled "Tomb X" by Petrie, to the northwest of Merneith's tomb, and to the southwest of the subsidiary graves of the tomb of Horus Djed at Umm el-Qa'ab. In doing so,

he broke the chronological placement of tombs from Aha to Den, that gradually moved to south. Whether he did this out of practical considerations, or because he felt more related to Horus Djet than to Den is not known.

Anedjib's Tomb

The tomb itself consists of two chambers dug into the ground, surrounded by walls varying in thickness between 1.3 and 1.6 metres. The burial chamber, entered through a descending staircase coming from the northeast, measures 6.8 by 4.4 metres, making it one of the smallest royal tombs of the 1st Dynasty.

64 subsidiary graves are laid out around the king's tomb.

Tomb of Anedjib

Semerkheth had his tomb, labeled “Tomb U” by its finder, Petrie, built to the south of Den’s at Umm el-Qa’ab, on the opposite side of the axis of the tombs of Den and Anedjib, and continuing the motion south that was started with the tomb of Djer. This could be seen as an indication that, if Anedjib built his tomb away from Den’s because he didn’t feel closely related to him, Semerkheth wanted to stress a connection with Den.

Tomb of Semerkhet

As was the case with the tombs of Djer, Djet, Merneith and Den, Semerkhet's tomb consisted of a single pit dug into the ground, surrounded by walls that vary in thickness between 1.5 and 1.8 metres. This too marks a change compared to Anedjib's tomb, that consisted of two chambers, and a return to a slightly older tradition. The burial chamber is entered through a descending passage coming from the northeast, rather than via a staircase as was the case with the tombs of Den and Anedjib.

64 subsidiary graves were built directly against the king's tomb. The larger graves were dug in a single row against the southeast side of the main tomb, while the slightly smaller ones were laid out in two rows against the other sides of the main tomb. That the subsidiary graves were built directly against the king's tomb was an innovation.

A stela with the name of Semerkhet

Fig. 7: Seal impressions of officials discovered at Saqqara and Abydos, part 2.

Seal impressions of officials discovered at Saqqara and Abydos, part 2.

Horus Qa'a built his tomb, labeled "Tomb Q" by Petrie, to the south of Den's tomb and the southwest of the tomb of Semerkhet at Umm el-Qa'ab. The location of the tomb may show an affiliation to either Den or Semerkhet, or it may have been the result of purely practical considerations.

Fig. 143.—Plan of tomb of King Qa, with subordinate interments round it, Abydos, First Dynasty

Plan of tomb of King Qa'a, Abydos , First Dynasty

The burial chamber is a rectangular pit measuring 10 by 5 metres. It is entered through a descending stairway coming from the northwest.

The tomb of Horus Qa'a seen from the southeast to the northwest. The king's tomb is

located in the middle while most of the smaller, surrounding chambers were subsidiary graves.

The tomb is surrounded by 26 subsidiary graves, one belonging to the high official Sabef. The way the subsidiary tombs are laid out around and connected to the king's tomb makes it likely that all burial occurred at the same time, suggestive of the practice of retainer sacrifice.

There are indications that the tomb was built in several phases, with fairly long periods without building activity. This would confirm that Qa'a may have had a long reign. There are also indications that the tomb may have been entered by robbers shortly after the king's burial, and that it was re-closed by Qa'a's successor Hotepsekhemwi.

This tomb may be connected to the funerary enclosure of Deir Sitt Damiana. While in my point of view, tomb of King Qa'a resembles a particular burial system – "Huangchangticou"(黄肠题凑). According to historical records, "Ticou"(题凑) structure in tomb burial existed no later than the Warring States period, but there is no physical evidence. The existing Han archaeological materials showed that the basic characteristic of "Ticou"(题凑) structure is tile layers upon tile layers by stacking vertically. There is often no tenon; the second is that "wood are introverted", that is, square wood stacked around the wall was in a vertical direction against the wall wood in the same side in the coffin room. If it was seen from the inside, only the head of square wood were in sight. The name of "Ticou" was, then, derived in this particular way.

“Huangchang”(黄肠) was the pine wood used in making “Ticou”.

An example of “Huangchangticou”(黄肠题凑)

“Huangchangticou”(黄肠题凑) was popular in the Qin and Han dynasties, and was applied less after Han Dynasty. It was mainly used when emperors and their wives, as well as the emperor's minions franchise were died. Due to its high standards and short popular period, it is rare. So far, there were only ten more unearthed “Huangchangticou” tomb burials. In all the same type of tomb burials, those of Liuxu(刘胥) and the queen in Guangling are the best preserved ones. They have the most complex structures.

The previous site of Guangling King's Tomb was located in Shenju Mountain, Tianshan Village, Gaoyou City, which is 45km northwest of Yangzhou City. The tomb, discovered in 1979 during cutting into the

mountain, was the resting place of Liu Xu(刘 胥), the first Guangling King(广陵王), and has the history of over 2,000 years. Guangling King's Tomb is featured by complex structure, careful layout, and grand scale, and is one of the rare "Huang Chang Ti Cou" timber-chambered tombs in Han Dynasty that are well preserved.

Guangling King's Tomb, one of the rare "Huang Chang Ti Cou" timber-chambered tombs in Han Dynasty

The Queen's Tomb is also a "Huang Chang Ti Cou" tomb and was relocated to Yangzhou City together with Guangling King's Tomb. After relocation, the Queen's Tomb is 50m east of Guangling King's Tomb. The two tombs form a joint tomb.

And the table below is the mastabas of the kings in ancient Egypt.

Lieu	Image	Sépulture	Dynastie	Souverain	Dimensions de la base	Annexes (Sépultures subsidiaires et magasins)	Remarques
Oumm el-Qa'ab		Tombe B0/1/2	Dynastie 0 (?)	Iry-Hor	15 × 5 m	Deux magasins	
Oumm el-Qa'ab		Tombe B7/9	Dynastie 0 (?)	Ka	16 × 5 m	Un magasin	
Oumm el-Qa'ab		Tombe B17/18	I^{re} dynastie	Narmer	10 × 3,1 m	Un magasin	
Oumm el-Qa'ab		Tombe B10/15/19, 13/14, B16	I^{re} dynastie	Hor-Aha	104 × 16 m	Trente-huit (trente-quatre tombes (?) et quatre magasins (??))	
Oumm el-Qa'ab		Tombe O	I^{re} dynastie	Djer	70 × 40 m	318 tombes et seize magasins	
Oumm el-Qa'ab		Tombe Z	I^{re} dynastie	Djet	71 × 35 m	204 tombes et dix-neuf magasins	
Oumm el-Qa'ab		Tombe Y	I^{re} dynastie	Merneith	34 × 26 m	Quarante-et-une tombes et huit magasins	
Oumm el-Qa'ab		Tombe T	I^{re} dynastie	Den	54 × 40 m	142 tombes et onze magasins	
Oumm el-Qa'ab		Tombe X	I^{re} dynastie	Adjib	32 × 23 m	Soixante-quatre tombes et un magasin	
Oumm el-Qa'ab		Tombe U	I^{re} dynastie	Sémerkhet	26 × 18 m	Soixante-sept tombes et deux magasins	
Oumm el-Qa'ab		Tombe Q	I^{re} dynastie	Qâ	30 × 20 m	Vingt-et-une tombes et dix-huit magasins	
Saqqarah		-	II^e dynastie	Hotepsekhemoui	?	-	
Saqqarah		-	II^e dynastie	Ninetjer	?	-	
Oumm el-Qa'ab		Tombe P	II^e dynastie	Péribsen	18 × 15 m	Sept magasins	
Oumm el-Qa'ab		Tombe V	II^e dynastie	Khâsekhemoui	70 × 18 m	Cinquante-sept magasins	

Mastabas of the kings in ancient Egypt

About 1.5 km away to the north of Umm al-Qa'ab, by the edge of the farmland, are the remains of an enormous double-walled, mud brick enclosure known as *Shunet ez-Zebib* ('the storehouse of raisins'). It is the only one standing of a group of such enclosures, all broadly similar in

layout if not in scale. The earliest datable enclosure (in fact, a group of three small enclosures) belongs to Aha, the founder of the First Dynasty but there are others that may be even earlier.

Shunet ez-Zebib

Abydos Enclosures. ©GoogleEarth

The inner wall of the *Shunet ez-Zebib* was over 5 metres thick and survives to a height of 11 metres in places. The façade was made up of a

series of recessed panels, which would seem to have been inspired by the characteristic Mesopotamian device of alternating niches and buttresses. It is assumed that this was done to create patterns of light and shade that would break the monotony of a solid façade in a land of intense sunshine (particularly since the wall face was plastered and then whitewashed). However, in this instance the wall was screened by an outer wall, which would have concealed the effect if it had risen to anything like the same height. Perhaps a more likely source of inspiration were the woven mats and bundles of reeds that made up the walls of ordinary Egyptian houses of the period.

Shunet ez-Zebib. Excavations

The entire structure was some 133.5 metres long and 77.7 metres across, covering an area of just over a hectare and was oriented with its corners to the cardinal points of the compass. There was a rather elaborate entrance with an antechamber in the northwest wall, close to the north corner, another (with an indirect approach) by the eastern corner, and a simpler one near the southern corner. All of these were

blocked up soon after the edifice was finished. Because of the massive scale of the structure, nineteenth century scholars believed it was a fort but this is clearly not the case—unless the ancient Egyptians were in the habit of building forts and then immediately blocking all access.

Plan of the Enclosure of Khasekhemwy at Abydos

Satellite map of the above

Pottery Offerings next to Peribsen's Enclosure

Over the course of the last century, evidence of at least 10 other enclosures has come to light, all sharing the same orientation. Ayrton himself discovered one belonging to Peribsen, Khasekhemwy's immediate predecessor and the only other member of the Second Dynasty to have his tomb at Abydos. The rest are First Dynasty or earlier and there is a good chance that others will be found since the only ones where the owner can be identified belong to Aha, Djer, Djet and Queen Merneith. Most of the First Dynasty compounds were originally located on the basis of the subsidiary burials that surround them and have produced little in the way of internal features. Where they have been found, the entrances are located in the same places as at Khasekhemwy's— the eastern and northern corners—and chapels have

been located just where you would expect them in most of them.

Plan of Enclosures at Abydos

The most recent excavations have also resulted in the discovery of three additional enclosures, surrounded by subsidiary graves and sharing the same alignment as the ones already known. Inscriptions on pots and clay sealings found in the graves showed that the enclosures dated to the reign of Aha. They were substantially smaller than their successors—the largest (Aha I) covering a mere 700 square metres versus well over a hectare (10,373 square metres) for Khasekhemwy's. Each had an entrance in the south end of the northeast wall and Aha I had another at the opposite end. Each of them had a chapel—the one in Aha I is near the eastern entrance, where you would expect, but in the

case of the other two it is at the other end of the building. Of course, space was limited and the explanation may be as simple as that.

Excavation of the Aha I Enclosure

The Aha Enclosures

B. Trigger, in: Trigger, Kemp, O'Connor, Lloyd, *Ancient Egypt: A social History*, 1983, fig. 3.2 (with some modifications)

Abydos Royal Enclosures, West of Kom es-Sultan
(Talbezirke, Funerary enclosures, Open Courts)

Saqqara (Arabic: سقارة, Egyptian Arabic pronunciation: [saʔˈʔɑːrɑ]), also spelled Sakkara or Saccara in English /səˈkɑːrə/, is a vast, ancient burial ground in Egypt, serving as the necropolis for the Ancient Egyptian capital, Memphis (Fernandez, I., J. Becker, S. Gillies. "Places: 796289136 (Saqqarah)". Pleiades. Retrieved March 22, 2013). Saqqara features numerous pyramids, including the world-famous Step pyramid of Djoser, sometimes referred to as the Step Tomb due to its rectangular base, as well as a number of mastabas (Arabic word meaning 'bench'). Located some 30 km (19 mi) south of modern-day Cairo, Saqqara covers an area of around 7 by 1.5 km (4.35 by 0.93 mi).

Saqqara in Egypt

At Saqqara, the oldest complete stone building complex known in history was built: Djoser's step pyramid, built during the Third Dynasty. Another 16 Egyptian kings built pyramids at Saqqara, which are now in various states of preservation or dilapidation. High officials added private funeral monuments to this necropolis during the entire pharaonic period. It remained an important complex for non-royal burials and cult ceremonies for more than 3,000 years, well into Ptolemaic and Roman times.

And the images below are the mastabas at Saqqara.

Fig. 1: First Dynasty mastabas in North Saqqara (after HELCK 1984: 387–388).

First Dynasty mastabas in North Saqqara

Figure 3- The First Dynasty Saqqara necropolis. Source: Lehner, *Complete pyramids*, p.

The First Dynasty Saqqara necropolis

Figure 4 - A First Dynasty Saqqara mastaba: reconstruction, plan and section. Sources: Aldred, C., *The Egyptians*, London, 1987, p. 89; Spencer, *Early Egypt*, p. 91.

A First Dynasty Saqqara mastaba

Figure 5 - Plans of the Saqqara mastabas 3507 (Hermeit) and 3038 (Anedjib) compared with the plan of the Djoser complex. Source: Spencer, *Early Egypt*, p. 102.

Plans of the Saqqara mastabas 3507(Hermeit) and 3038(Anedjib) compared with the plan of the Djoser complex

TOMB 3038

Period A

Period B

Period C

Saqqara, Mastaba 3038 (Nebetka)
after Emery, Great Tombs I (1949)
plates 34, 35

A

34

A

35

TOMB No. 3038
SOUTH END OF SUPERSTRUCTURE AND WELL TERRACE OF
Period B

TOMB No. 3038
GENERAL VIEW FROM THE SOUTH-WEST OF THE SUPERSTRUCTURE
OF Period A

B

B

TOMB No. 3038
SOUTH END OF SUPERSTRUCTURE OF PERIOD A AFTER REMOVAL OF THE TERRACES
OF PERIOD B

TOMB No. 3038
GENERAL VIEW FROM THE NORTH-WEST OF THE SUPERSTRUCTURE OF PERIOD A.
NOTE REMAINS OF PALACE FAÇADE OF PERIOD C

FRF

Saqqara, Mastaba 3038 (Nebetka)

Subsidiary burial plan and section
(earliest known leaning barrel-vault)

Magazine

**SAQQARA
Tomb S3500**
(late reign of Qa'a)

Magazine in the northern part
of the superstructure

Click on the 3 red
evidenced spots

Subsidiary burial n. 1

Plan and N-S / E-W sections

Entrance and eastern part
of the burial chamber

Single
niche

Saqqara Tomb S3500

Saqqara

Pyramid of Djoser

Reconstruction drawing of Pyramid of Djoser, Saqqara

Hyperdiffusionism refers to hypotheses suggesting that certain historical technologies or ideas originated with a single people or civilization before their adoption by other cultures. Thus, all great civilizations that share similar cultural practices, such as construction of pyramids, derived them from a single common progenitor. According to its proponents, examples of hyperdiffusion can be found in religious practices, cultural technologies, megalithic monuments, and lost ancient civilizations.

Heliolithic Culture, as Grafton Elliot Smith refers to it, consists of cultural practices such as megaliths. Similar designs and methods of

construction of such pieces have what seem like a linear geographical distribution. These heliolithic cultures can refer to religious customs that share distinctive practices, such as the worship of a Solar Deity. As this trope is seen in numerous belief systems, Smith believes it is diffused from one ancient civilization (Smith 1929, p. 132).

Mummification, as believed by G. Elliot Smith, is a prime example of how religious customs prove the diffusion of cultures (Smith 1929, 21). He believes that only an advanced civilization, such as Egypt, could create such a peculiar belief that then spread by way of ancient mariners (Smith 1929, 133-134).

Map 2.—An attempt to represent roughly the areas more directly affected by the “helio-lithic” culture-complex, with arrows to indicate the hypothetical routes taken in the migrations of the culture-bearers who were responsible for its diffusion.

Grafton Elliot Smith: Map of Hyperdiffusionism from Egypt, 1929

And **Haplogroup Q** or **Q-M242** is a Y-chromosome DNA haplogroup. It has one primary subclade, Haplogroup Q1 (L232/S432), which includes numerous subclades that have been sampled and identified in males

among modern populations. In my point of view, the speculation of migration of Haplogroup Q is the following below:

The speculation of migration of Haplogroup Q

The subclades of Haplogroup Q with their defining mutation(s), according to the 2011 ISOGG tree are provided below.

- **Q** M242
- **Q1** P36.2, L232, L273, L274
 - **Q1a** MEH2
 - **Q1a1** M120, M265/N14
 - **Q1a2** M25, M143
 - **Q1a3** L56, L57, M346, L528
 - **Q1a3a** L53, L54, L55, L213, L331
 - **Q1a3a1** M3
 - **Q1a3a1a** M19
 - **Q1a3a1b** M194
 - **Q1a3a1c** M199, P106, P292
 - **Q1a3a2** L191
 - **Q1a3a3** L330, L334
 - **Q1a3a3a** L329, L332, L333
 - **Q1a3b** M323
 - **Q1a3c** L527, L529
 - **Q1b** L275, L314
 - **Q1b1** M378/Page100, L214, L215/Page82

- **Q1b1a L245**
 - **Q1b1a1 L272.1**

And that is the information of Egyptian Gene:

The Egyptian Gene

Although not detected in the royal mummies whose DNA has been examined so far, this autosomal ancestry marker is also clearly African in origin. Today it enjoys its greatest spread in Egyptians. About 1 in 10 Africans or African Americans have it, but a sharp spike occurs in Copts, today's successor population in the Land of the Nile, where up to 27% possess it. About 7% of European Americans have it. Tellingly perhaps, East Coast Indians and Melungeons have it at elevated levels. It is hardly noticeable in Asia, suggesting that it did not form a significant part of the Great Migration of Humanity out of Africa about 100,000 years ago but spread to Eurasian populations primarily from Egypt and the

And that is the image of the world ancestry of the Egyptian Gene:

World Ancestry of the Egyptian Gene

The Egyptian Gene is Sub-Saharan African in origin like others in its series but enjoys a surprising distribution in select populations, including Maya Indians, Northeast Europeans, Melungeons and Jews.

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In the image above, green circle means strong match, brown means weak match, red means no match, transparent means no match possible.

Notice that China also has a certain mark of this Egyptian Gene.(In the area of ancient Liangzhu Culture (良渚文化) -nowadays in Yuhang(余杭) and Shaoxing(绍兴)).

Listed below are the human Y-chromosome DNA haplogroups found in various ethnic groups and populations from Africa .

Country ^[1]	n	A	B	E- M33	E-M2	E- M35*	E- M78*	E- V12	E- V32	E- V13	E- V22	E- V65	E- M81	E- M34	F	G	I	J1	J2	K	L	O	P,R	Q	R1a	R1b- V88	R1b- M269	R2	T
Libania/Western Sahara	189	-	0.53	5.29	6.88	-	-	-	-	-	-	-	55.56	11.11	-	-	-	13.23	-	-	-	-	-	-	-	6.88	0.53	-	-
Morocco	760	0.26	0.66	2.76	3.29	4.21	0.79	0.26	-	0.26	1.84	3.68	67.37	0.66	0.26	0.66	0.13	6.32	1.32	0.53	-	-	0.26	-	-	0.92	3.55	-	-
Algeria	156	-	-	0.64	5.13	0.64	1.92	0.64	-	0.64	1.28	1.92	44.23	1.28	3.85	-	-	21.79	4.49	0.64	-	-	-	0.64	0.64	2.56	7.04	-	-
Tunisia	601	-	0.17	0.5	0.67	1.66	-	-	-	-	3	3.16	62.73	1.16	2.66	0.17	0.17	16.64	2.83	0.33	-	-	0.33	-	0.5	1.83	0.33	-	1.16
Libya	83	-	-	-	38.55	-	-	-	-	2.41	-	4.82	45.78	-	-	-	-	-	-	-	-	-	2.41	-	-	6.02	-	-	-
Egypt	370	1.35	-	0.54	2.43	3.24	0.81	7.03	1.62	0.81	9.19	2.43	11.89	6.76	1.08	5.68	0.54	20.81	6.75	0.27	0.81	0.27	0.54	0.27	2.16	2.97	2.97	0.54	6.22

Now let us back to China. According to a paper, the Y chromosome haplogroup of DNA from ancient East Asians was examined, in order to genetically link them to modern populations. Fifty-six human remains were sampled from five archaeological sites, primarily along the Yangtze River. The highly ethnic-related Y chromo-some diversity is one of the best materials to describe the relationships (Su et al. 1999; Shi et al. 2005). The Y chromosome haplogroup patterns are quite different among different ethnic groups. In this paper, we present Y SNP data of 48 ancient samples from China, mostly along Yangtze River, to provide a survey on the genetic diversity of the prehistory populations in this region.

The samples collected in this paper were from five sites: Maqiao,

Xindili, Wucheng, Daxi, and Taosi. Most of the samples belonged to four different cultures: Daxi C. was the earliest, followed by the Longshan C. and Liangzhu C. around the same period, and finally, by Wucheng C., the latest in the Shang Dynasty of the Bronze Age. These cultures were most representative for the prehistory of China. Some samples from the same necropolises that belonged to the historical time (later than 841 BC in China) were also collected for comparison. Most of them belonged to the Han Dynasty. The remains of the same culture were sampled from different necropolises, avoiding the bias of relative samples.

Locations of the archaeological sites, cultures and the distributions of Y SNP haplogroups

For some of the samples, not all of the five SNPs could be amplified, thus haplogroups could not be determined if no mutated alleles were found. However, most individuals were successfully amplified, and the

haplogroups were determined for half of them. Therefore, at least 62.5% of the individual remains (30 out of 48) belong to O haplogroup, which is still the major haplogroup of today's East Asians. These ancient results, consequently, did not differ from the modern populations. The resulting DNA types thus made "phylogenetic sense" (the Y chromosome haplogroup structure), helping to verify the authenticity of the ancient DNA. The previously reported results of ancient Y chromosome were all obtained from samples preserved in cold environments (Keyser-Tracqui et al. 2003; Ricaut et al. 2005; Kuch et al. 2007; Bouakaze et al. 2007).

In two sites of Liangzhu Culture, only O1 haplogroup were found, and the frequencies of O1 in two sites were almost the same. That indicated the ancient people of these two sites belonged to the same population. The historical samples from the same sites did not differ from the prehistoric samples in the haplogroup patterns. Even modern populations in this area around Shanghai contain a large proportion of O1 haplogroup (Wen et al. 2004). The consistency of the Y haplogroup pattern in this area, from the Neolithic Age to modern times, reveals that the population might not have been replaced. O1 reaches the highest frequencies in the Taiwan aborigines, and also in Daic speaking populations in the southwest China (Li 2005). Therefore, it is also possible that there are some close relationships among Taiwan aborigines, Daic speakers and the ancient Liangzhu Culture populations.

A high frequency of O3d was only found in Daxi Culture. O3d is very rare in modern populations; Hmong-Mien populations have been found to contain a small proportion of O3d (Feng 2007). Since O3d occurs at low frequency in the Hmong-Mien, the ancient people of Daxi Culture might be the ancestors of the modern populations of Hmong-Mien. The absence of O3d in the historical samples from the Daxi site (it might not have been found because of the small sample size), and the migration of modern Hmong-Mien populations to the southwest might indicate that the prehistoric population in the Three Gorges area has been replaced.

Site	Culture	Sample size	O1	O2a	O3*	O3d	O3e	Undetermined	Missing
Maqiao	Liangzhu	6	4					2	
	Historical	3	2					1	
Xindili	Liangzhu	9	5					3	1
	Historical	4	3						1
Wucheng	Wucheng	4		2	1				1
Daxi	Daxi	20		1	1	5		9	4
	Historical	5			2			3	
Taosi	Longshan	5			3		1		1
Frequencies in modern populations (%)									
Family	Reference	Sample size	O1	O2a	O3*	O3d	O3e		
Daic	Li (2005)	1,465		34.87	26.52	10.05	0.19		9.36
Austronesian	Li (2005)	381		24.07	16.25	22.41	2.01		2.32
Sino-Tibetan	Su et al. (1999)	281		1.57	8.49	17.24	0.53		32.74
Hmong-Mien	Feng (2007)	934		8.49	21.87	17.19	10.45		26.38
Austro-Asiatic	Li (2005)	140		1.79	31.40	18.49	6.25		19.73
Altaic	Su et al. (1999)	303		1.74		4.11			6.60

Case counts of Y SNP haplogroups of the archaeological sites

Among three sites—Wucheng, Daxi and Taosi—O3* and O2a were shared. And O3* is most common in modern East Asians, and O2a can be found in different populations in southwestern China. Besides,

there were still some genetic differences between the populations in the areas of Yangtze River and the Yellow River, as O2a was not found from the Taosi site.

O1 was not found out of Liangzhu Culture, bringing a noticeable genetic difference between coastal and inland populations, which can still be observed in modern populations. O1 distributes along the coast of East Asia, from Manchuria in the north to Malaysia and Indonesia in the south (Su et al. 1999; Li 2005; Zhang et al. 2007). This distribution may indicate that there were at least two different migration routes for the early peopling of East Asia. Hardly any genetic flows could be observed between the coastal route and the inland route in the prehistoric peoples. So in my point of view, this may demonstrate that hyperdiffusionism from Egypt by Grafton Elliot Smith.

Now why is human Y-chromosome DNA haplogroups O be found in Egypt, but no in the others in the image above? I speculate that there must be a “indigenous people” in the Liangzhu area to return to Egypt with the fleet. This phenomenon was very common in the history of Egypt. The ancient Egyptian fleet often brought back some animals and plant species, including ethnic groups, back to Egypt from other places. During the eighteenth dynasty of Egypt, when Thutmose III conquered a place in the West Asia region, he took the nobles and princes of this place back to Egypt and educated them in Egypt.

The statue below was a man from "Baiyue" (百越). Also had a eagle in the front:

An statue of a man, dating from State of Yue, located in the State Museum of Zhejiang province, Hangzhou, Zhejiang, China.

· Bird pattern

Bird patterns are the most common next to the deity and animal mask motifs, generally located subordinate to the latter - on the left and right of the motif or below. A deity and animal mask motif corresponds with two bird patterns. As a part of the theme pattern of deity and animal mask motif, bird patterns don't have the worship significance in their own right. Bird patterns were mainly engraved on jade *cong*, trapezoidal jade plaques, jade *huang*, three-pronged plaques and other jade artifacts. (Fig 2-96, Fig 2-97, Fig 2-98, Fig 2-99)

Fig. 2-96 Bird Pattern on Jade *cong* Unearthed from Tomb M12:93 in Fanshan Cemetery (from left to right: overall picture of jade *cong*, local picture of jade *cong*, line graph of local part)

Fig. 2-97 Bird Pattern on Jade *Yue* Unearthed from Tomb M12:100 in Fanshan Cemetery (from left to right: overall picture of jade *yue*, rubbing of jade *yue*, detailed picture of bird pattern, line graph of bird pattern)

Fig. 2-98 Bird Pattern on Three-pronged Plaques Unearthed from Tomb M14:135 in Fanshan Cemetery (from left to right: overall picture of three-pronged plaques, rubbing of three-pronged plaques, line graph of bird pattern)

The eagle unearthed in Fanshan Cemetery, the Archaeological Ruins of Liangzhu City, Yuhang District, Zhejiang, China

Bird-shaped jade ornament (the eagle) unearthed from tombs of Fanshan Site, the

Archaeological Ruins of Liangzhu City(良渚古城遗址), front side

The reverse of the above

Color Image 62 .Jade bird (Front side) (M2: 50)

The eagle unearthed in Yaoshan Hill(瑶山), the Archaeological Ruins of Liangzhu City(良渚古城遗址), front side

The back side of the eagle above

And Horus is one of the most significant ancient Egyptian deities. He

was worshipped from at least the late prehistoric Egypt until the Ptolemaic Kingdom and Roman Egypt. He was most often depicted as a falcon, most likely a lanner falcon or peregrine falcon, or as a man with a falcon head. Horus is recorded in Egyptian hieroglyphs as *ḥr.w* "Falcon"; the pronunciation has been reconstructed as *ḥa:ruw*. Additional meanings are thought to have been "the distant one" or "one who is above, over".

Horus may be shown as a falcon on the Narmer Palette, dating from about the 31st century BC.

The image below is Horus, Louvre, Shen rings in his grasp:

Amulet representing a ram-headed falcon. Ancient Egypt, 1254 BC (26th year of the

reign of Ramses II, XIXth Egyptian dynasty), found on the mummy of an Apis bull in the Serapeum of Memphis at Saqqara. Gold, lapis, turquoise and cornelian.

The statue below is God Horus as a falcon:

God Horus as a falcon wearing the Double Crown of Egypt. 27th dynasty. State Museum of Egyptian Art, Munich

So from the above, I speculate that the eagle in a statue of a man, dating from Yue State (越国) and the eagles in Fanshan Cemetery and Yaoshan Hill, the Archaeological Ruins of Liangzhu City (良渚古城遗址反山墓地和瑶山), resemble the God Horus in Egypt. I can also get a conclusion that Zhejiang (浙江) (including Yuhang(余杭)and Shaoxing(绍兴)) was once Egypt's colony.

And the Archaeological Ruins of Liangzhu City was the centre of power and belief of an early regional state in the Circum-Taihu Lake Area. It is located on a plain criss-crossed by river networks in the eastern foothills of the Tianmu Mountains in the Yangtze River Basin on the southeast

coast of China.

The property is composed of four areas: Area of Yaoshan Site; Area of High-dam at the Mouth of the Valley; Area of Low-dam on the Plain – Causeway in Front of the Mountains; and Area of City Site.

Aerial view 1 of the Archaeological Ruins of Liangzhu City (from southwest to northeast)

Aerial view 2 of the Archaeological Ruins of Liangzhu City (from southwest to northeast)

The Archaeological Ruins of Liangzhu City

Topographic Map of Archaeological Ruins of Liangzhu City

Sketch Map of Distribution of Liangzhu Archaeological Site

Comparison of dates of major sites of Liangzhu Archaeological Site

The Archaeological Ruins of Liangzhu City (良渚古城遗址) reveals an early regional state with rice-cultivating agriculture as its economic base,

and social differentiation and a unified belief system, which existed in the Late Neolithic period in China. With a series of sites, including the City Site built during ca. 3300-2300 BCE, the Peripheral Water Conservancy System with complex functions and socially-graded cemeteries (including an altar), and the excavated objects represented by series of jade artefacts symbolizing the belief system, as well as its early age, the property represents the remarkable contributions made by the Yangtze River Basin to the origins of Chinese civilization. In addition, the pattern and functional zoning of the capital, together with the characteristics of the settlements of the Liangzhu culture and of the Outer City with the terraces, support strongly the value of the property.

Distribution Map of Archaeological Ruins of Liangzhu City and other Contemporary Remains in the Surrounding

Distribution of sites of Liangzhu culture in Yuhang area

Schematic Diagram of the History of Water System in Liangzhu Area

Location of Archaeological Ruins of Liangzhu City in the Core Zone of Liangzhu Culture

Distribution Map of Main Sites with Indication of Social Hierarchy of the Liangzhu

Culture

Distribution Map of Main Sites of the Liangzhu Culture

And Mojiaoshan Terrace (莫角山台地) is located in the north of the center of City Site, and stands due south and north. It is in a shape of rectangular frustum, with four distinct borders. It is about 630 m long from east to west, and about 450m wide, with an area of 300,000 m². The relative altitude is 9-15 m and the sea level elevation is 10-18m. The terrace is artificially stacked, taking advantage of the natural terrain, which was built by paving green silt at the bottom and stacked upon it pure yellow clay or grass-wrapped silt.

Aerial View of Terrace in the Palace Area (GD) (South to North, 2017)

Distribution Map of Terraces in the Palace Area(GD)

Aerial View of Mojiaoshan Terrace (GD1) (Northwest to Southeast, 2017)

Mojiaoshan

Mojiaoshan Terrace

Distribution of remains at terraces of Mojiaoshan Palace Area and picture of the palace restored through imagination

The Large Mojiaoshan foundation is located northeast to the Gushangding platform. It is the largest palace foundation on the Gushangding platform, surrounded by a circle of 4-15 meters wide and 0.6-1.5 meters deep ditch. The ditch was abandoned in the late phases of the Liangzhu culture, whereafter was converted into stone walls to reinforce the defense. Very likely the Large Mojiaoshan palace ranked the highest level in the city. Upon the Large Mojiaoshan, there were 7 house foundations discovered distributed in two rows aligned in the north-south direction. Each of them was approximately 300 to 900 square meters sized.

The Small Mojiaoshan is located in the northwest of the Gushangding platform, which is the smallest scaled palace among the Mojiaoshan palatial area. The foundation was 90 meters long from the east to the west, 40 meters wide from the north to the south, covering a size of approximately 3500 square meters. The excavation result shows that there were 4 Liangzhu cultural house foundations in total on the top of

the small Mojiaoshan hill which belonged to two different periods. Among them, one house foundation, dating back to the early phase, was 25.5 meters long from the east to the west and 15.5 meters wide from the north to the south, covering an area of 380 square meters. Three house foundations of the late phase were aligned in the east-west direction, the sizes of which were relatively small. The discovery of these remnants demonstrates the settlement layout and the house type within the palatial area.

Aerial View of Large Mojiaoshan Foundation (GD1-1) (Southeast to Northwest, 2017)

Picture of Large Mojiaoshan (right) and Small Mojiaoshan (left) restored through Imagination

The Wuguishan foundation is located in the southwest of the Gushangding platform. It is unfortunately severely destroyed and consequently only its general outline can be recognized. The bottom foundation was 130 meters long from the east to the west, 67 m wide from the north to the south, covering an area of 8500 square meters. None Liangzhu cultural remnants were found on the top of it due to the poor preservation.

There was a large-scale sandy soil square located in the centre of the Gushangding platform, which covered almost 70,000 square meters. The sandy soil square was constructed with alternating layers of sand and mud. The construction was hard which implies that it very likely served an important ritual venue. 9 house foundations were found located in the south and east parts of the square, the sizes of which ranged from 200 to 500 square meters with well arrangement.

And the Ziggurat (or Great Ziggurat) of Ur is a Neo-Sumerian ziggurat in what was the city of Ur near Nasiriyah, in

present-day Dhi Qar Province, Iraq. The structure was built during the Early Bronze Age (21st century BCE) but had crumbled to ruins by the 6th century BCE of the Neo-Babylonian period, when it was restored by King Nabonidus.

Partially reconstructed facade and the access staircase of the Ziggurat of Ur. The actual remains of the Neo-Babylonian structure can be seen at the top.

The Ziggurat of Ur in Iraq

The ziggurat was built by King Ur-Nammu who dedicated the great ziggurat of Ur in honour of Nanna/Sîn, in approximately the 21st century BCE (short chronology) during the Third Dynasty of Ur ("The Ziggurat of Ur". *British Museum*. Retrieved 24 November 2017). The massive step pyramid measured 64 m (210 ft) in length, 45 m (148 ft) in width and over 30 m (98 ft) in height. The height is speculative, as only the foundations of the Sumerian ziggurat have survived.

Reconstruction of Ur-Nammu's ziggurat, based on the 1939 reconstruction by Woolley (vol. V, fig. 1.4)

The ziggurat was a piece in a temple complex that served as an administrative center for the city, and which was a shrine of the moon god Nanna, the patron deity of Ur (Gardner, Helen; Kleiner, Fred S.; Mamiya, Christin J. (2005)).

The construction of the ziggurat was finished in the 21st century BCE

by King Shulgi, who, in order to win the allegiance of cities, proclaimed himself a god.

The remains of the ziggurat consist of a three-layered solid mass of mud brick faced with burnt bricks set in bitumen. The lowest layer corresponds to the original construction of Ur-Nammu, while the two upper layers are part of the Neo-Babylonian restorations (*Woolley, C. Leonard (1972) [1939].*).

Besides, Uruk (modern Warka in Iraq)—where city life began more than five thousand years ago and where the first writing emerged—was clearly one of the most important places in southern Mesopotamia. Within Uruk, the greatest monument was the Anu Ziggurat on which the White Temple was built. Dating to the late 4th millennium B.C.E. (the Late Uruk Period, or Uruk III) and dedicated to the sky god Anu, this temple would have towered well above (approximately 40 feet) the flat plain of Uruk, and been visible from a great distance—even over the defensive walls of the city.

Archaeological site at Uruk (modern Warka) in Iraq

Ziggurats are made of mud-bricks—the building material of choice in the Near East, as stone is rare. Ziggurats were not only a visual focal point of the city, they were a symbolic one, as well—they were at the heart of the theocratic political system (a theocracy is a type of government where a god is recognized as the ruler, and the state officials operate on the god's behalf). So, seeing the ziggurat towering above the city, one made a visual connection to the god or goddess honored there, but also recognized that deity's political authority.

Remains of the Anu Ziggurat, Uruk (modern Warka), c. 3517-3358 B.C.E.

The sides of the ziggurat were very broad and sloping but broken up by recessed stripes or bands from top to bottom, which would have made a stunning pattern in morning or afternoon sunlight. The only way up to the top of the ziggurat was via a steep stairway that led to a ramp that wrapped around the north end of the Ziggurat and brought one to the temple entrance. The flat top of the ziggurat was coated with bitumen (asphalt—a tar or pitch-like material similar to what is used for road paving) and overlaid with brick, for a firm and waterproof foundation for the White temple. The temple gets its name for the fact that it was entirely white washed inside and out, which would have given it a dazzling brightness in strong sunlight.

Digital reconstruction of the White Temple and ziggurat, Uruk (modern Warka), c. 3517-3358 B.C.E. © artefacts-berlin.de; scientific material: German Archaeological Institute

The White temple was rectangular, measuring 17.5 x 22.3 meters and, at its corners, oriented to the cardinal points. It is a typical Uruk “high temple (*Hochtempel*)” type with a tri-partite plan: a long rectangular central hall with rooms on either side (plan). The White Temple had three entrances, none of which faced the ziggurat ramp directly. Visitors would have needed to walk around the temple, appreciating its bright façade and the powerful view, and likely gained access to the interior in a “bent axis” approach (where one would have to turn 90 degrees to face the altar), a typical arrangement for Ancient Near Eastern temples.

Digital reconstruction of the two-story version of the White Temple, Uruk (modern Warka), c. 3517-3358 B.C.E.

Section through the central hall of the "White Temple," digital reconstruction of the interior of the two-story version White Temple, Uruk (modern Warka), c. 3517-3358 B.C.E.

Interior view of the two-story version of the "White Temple," Digital reconstruction of the White Temple, Uruk (modern Warka), c. 3517-3358 B.C.E.

To the north of the White Temple there was a broad flat terrace, at the center of which archaeologists found a huge pit with traces of fire (2.2 x 2.7m) and a loop cut from a massive boulder. Most interestingly, a system of shallow bitumen-coated conduits were discovered. These ran from the southeast and southwest of the terrace edges and entered the temple through the southeast and southwest doors. Archaeologists conjecture that liquids would have flowed from the terrace to collect in a pit in the center hall of the temple.

So from the above, I can get a conclusion that Mojiaoshan Terrace (莫角山台地) resembles the Ziggurat of Ur and Anu Ziggurat, Uruk (modern Warka) in function and shape.

And the image below is the technique of grass-wrapped silt.

Technique of Grass-Wrapped Silt

It means to wrap silt with grass stalks and then bind the stacking materials in bulk with plant stripes. The Liangzhu people mainly utilized resources in the local wetlands in autumn and winter. First they collected silt from the wetlands, then used a special species of grass in the wetlands to wrap the silt block before it finally bound with bamboo stripes. In autumn and winter, the water level of the wetland fell, which was in favor of the operation; besides, there were abundant materials needed here. This technique demonstrates that the Liangzhu people were fully able to recognize the seasonal change of water level and the features of plant materials and utilize such knowledge. Especially, the grass wrapped silt could be prefabricated, easily transported and used for construction, and hence facilitate cooperation and improve construction efficiency.

Single-piece grass-wrapped silt retrieved from southwestern slope of Gushangding
(古尚顶)

Restoration of production process of grass-wrapped silt

In situ preservation and complete extraction of grass-wrapped silt

In situ preservation and complete extraction of grass-wrapped silt

Cross section plan of the northern wall of eastern slope of Mojiaoshan

Ridge-shaped structure shown in the cross section profile of the northern wall of eastern slope of Gushangding

Cross section profile of eastern slope of Gushangding and stacked layers of grass-wrapped silt with yellow clay

Dissecting excavation of ash ditch G9 (from south to north)

Cross section profile of grass-wrapped silt remains in ash ditch G9

Details of grass-wrapped silt remains in ash ditch G9

Dissecting excavation of ash pit G9 in eastern slope of Gushangding

Now let us go back to Egypt. Narmer's tomb in Umm el-Qa'ab near Abydos in Upper Egypt consists of two joined chambers (B17 and B18), lined in mud brick. Although both Émile Amélineau and Petrie excavated tombs B17 and B18, it was only in 1964 that Kaiser identified them as being Narmer's (Kaiser 1964, pp. 96–102, fig.2.). Narmer's tomb is located next to the tombs of Ka, who likely ruled Upper

Egypt just before Narmer, and Hor-Aha, who was his immediate successor. However, many Egyptian archaeologists believe that this is probably not his true tomb. The scale and architecture of this tomb does not match the strong Narmer's rule. In my point of view, this is a cenotaph of Narmer.

And the images below are Narmer's tomb in Umm el-Qa'ab near Abydos in Upper Egypt, have you seen the grass-wrapped silt?

The grass-wrapped silt in Narmer's tomb in Umm el-Qa'ab

Narmer's tomb in Umm el-Qa'ab

A 3D portrayal of Narmer's tomb (actually is a cenotaph of Narmer)
 And the image below is the brick making model in ancient Egypt.

Ancient Egyptian painted wooden model of three men making bricks, 12th Dynasty, Beni Hasan tomb 275, British Museum

And the images below are brick-making in ancient Egypt.

Brick-making in Ancient Egypt

Forced Labourers of the Semitic Race Making and Carrying Bricks. (Tomb of Rekhmara at Thebes)

So from the paper above, I can conclude that the “grass-wrapped silt” discovered by Liangzhu archaeologists in Archaeological Ruins of Liangzhu City has the same shape, size and use of building materials as the mud bricks used in the construction of cities, palaces and tombs during Narmer’s period of ancient Egypt, and whether the manufacturing process was done with molds and dried, need to be discovered by Liangzhu archaeologists. I can also conclude that the territory of Liangzhu culture (including Yuhang(余杭)and Shaoxing(绍兴)) was once Egypt’s colony.

And the texts below are Area of Yaoshan (瑶山) Site and Area of

Huiguanshan (汇观山) Site.

In 1987 Yaoshan Altar and Cemetery were discovered. In 1991 Huiguanshan Altar and Cemetery were also discovered. After discovery of the Liangzhu Ancient City in 2007, we knew that they were located respectively on the natural hills north and west of the City. In those places were king-level aristocrat cemeteries similar to that of Fanshan Site. Tomb M1 and M2 of Huiguanshan Site were of the same date with Yaoshan Cemetery, which belonged to the early Liangzhu culture period. Therefore the tomb occupants might have been the very ones who designed and built the Liangzhu Ancient City. More probably, they might have designed and used the altars. After the original designed functions of the altars went obsolete, these once sacred places for communication between heaven and earth became the permanent residence for their afterlife.

A. Yaoshan Altar and Cemetery

Yaoshan Hill, a natural mound with an altitude of about 35 m, is located about 5 km to the northeast of the Liangzhu Ancient City and under the administrative jurisdiction of Xiaxiwan, Anxi Township (Liangzhu Sub-district at present), Yuhang District. West of Yaoshan Hill is Fenghuangshan Hill and south of it is Mantoushan Hill. Connected with Yaoshan Hill in the east had been a small hill, which was dug away for quarrying. In the north are stretches of the offshoots of Tianmu Mountains. The East Tiaoxi River runs from west to east about one kilometer south of Mantoushan Hill. In 1987, an altar of the Liangzhu culture was discovered for the first time in history on the top of Yaoshan Hill¹. West and north of the altar were stone revetments in the shape of a frustum. On the flat top of the altar was a gray earthen frame formed by two homocentric squares made through ditching and filling. The gray earthen frame together with the original red and yellow soil formed a distinct tri-colored structure. As the remains had a regular shape and distinctive structure and there was no house or any other architectural remains above ground plus that it was placed together with the large tombs of the Liangzhu culture with jade artifacts as the main burial artifacts, it was naturally inferred as the site for sorcerers to hold sacrificial activities and thus the name “altar” has since been accepted by the academia.

Four excavations of Yaoshan Site were conducted in 1996, 1997 and 1998, which proved that planning and adjustment had been done from the foot to the top of Yaoshan Hill. Stone revetments to protect the slope and retain earth were found on the southern, western and northern slopes. Originally, the top of Yaoshan Hill should have been a tilted slope higher in the east and lower in the west. In order to build a terrace on the top, tiers of stone revetments were built to retain earth on the western, southern and northwestern hillsides and earth shoveled from the top in the leveling of it was stacked in the west and the south, thereby forming a 3-4 tier pyramid structure from the foot to the top of the hill with a spacing of about 2 m between tiers.

A total of 13 large tombs of the Liangzhu culture were retrieved during the excavations of Yaoshan Site, which were buried in two rows on the southern side of the altar. (Figure) Among them, Tomb M1 and M3 broke the stone revetment on the western side of the altar

¹ Zhejiang Provincial Institute of Cultural Relics and Archaeology: *Yaoshan*, Cultural Relics Press, 2003.

and Tomb M2, M6 to M9, M11 and M12 respectively broke the gray earthen frame of the altar. The date of the strata of those tombs was later than that of the altar and they obviously damaged the originally designed pattern of the altar. Then, what was the altar exactly used for? What's the relationship between the altar and the tombs? It had long been a puzzle in the minds of researchers. Tomb M7 and M12 in the middle of the southern row and Tomb M11 in the middle of the northern row were of the highest class. The tombs of Yaoshan Site were arranged in a neater way than those of Fanshan Site and the assemblage of their burial artifacts were more apparent as well. Among the 13 tombs of the Liangzhu culture excavated at Yaoshan Site over the years, the burial artifacts unearthed included jade artifacts, pottery artifacts and stone artifacts and 754 pieces (including sets) were numbered, which was a total of 2,660 single pieces. Most of them were jade artifacts and 678 pieces (including sets) were numbered, which was a total of 2,582 single pieces. Jade *cong*, jade *yue*, three-pronged plaques and sets of grouped awl-shaped jade pendants unearthed were all from the tombs in the southern row, while jade *huang*, strings of round plaques and jade spindle whorls, etc. were found only in tombs in the northern row. In addition, column-shaped artifacts with cover were found in every tomb of the southern row and only one was found in Tomb M11 in the northern row. In the tombs of Yaoshan Site and Fanshan Site, bones of tomb occupants were almost gone and only some teeth were found in a couple of tombs. Therefore, it was unable for us to identify the gender and age of the tomb occupants. The burial artifacts in Yaoshan tombs had certain patterns: *yue* as weapons were only found in tombs of the southern row while spindle whorls and weaving tools were only found in tombs of the northern row. We thus inferred that the tomb occupants of the southern row were males and those of the northern row were females and that jade *huang* were a special ornament for females, while three-pronged plaques and sets of grouped awl-shaped jade pendants were for males. The tomb occupants of the southern and northern rows should be different not only in gender but also in their roles. All 13 tombs of Yaoshan Site were of roughly the same period. They date was similar to that of the tombs at Fanshan Site and some were even earlier. Tombs of higher classes were placed in the middle and those of lower classes were placed away from the center. The order and position of a tomb could reflect the rank of the tomb occupant during his/her lifetime. Examples of tombs in the southern and northern row are respectively described as follows:

Tomb M10 was located in the western part of the southern row, with Tomb M3 to its west and Tomb M9 to its east and Tomb M4 and M5 to its north. Its opening was beneath the surface layer of cultivated soil and broke the yellow earthen terrace. It was a rectangular vertical shaft tomb, with a heading direction of 184°. The tomb pit was 3.35 m long, 1.75 m wide and 1.34 m deep. Walls and floor of the pit were comparatively flat. The filled earthed in it was gray mottled earth with no inclusions seen. Skeleton inside the tomb had rotten away and left no traces.

B. Huiguanshan Altar and Cemetery

Located about 2 km to the northwest of the Liangzhu Ancient City, Huiguanshan Hill is a small natural hill with an altitude of about 22 m. West of it is Yaoshan Hill of Pingyao Town, east and south of it are open plains and about 2 km north of it is an offshoot of Tianmu Mountains. The East Tiaoxi River runs across the plain south of the hill. In the spring of 1990, some important artifacts of the Liangzhu culture including jade *bi*, jade bracelets and stone *yue*, etc. were unearthed when residents of Pingyao Town were building houses on the top of Huiguanshan Hill. In 1991, Zhejiang Provincial Institute of Cultural Relics and Archaeology conducted archaeological excavations¹ here and found an altar shaped similar to that of Yaoshan Site. Huiguanshan Altar was also built on the basis of a natural hill. It was shaped as a rectangular frustum with its eastern and western ends structured as a two-tier staircase. On each tier were two small north-south ditches. In the south and west of the altar were outward-extending artificial grounds about 2.2 m lower than the altar top. In the east and in the north were also flat openings with a similar height, the architectural structure of which was not recognizable due to damages in the modern times. It was inferred from the general structure that there had been open platforms of the same height around the main body of the altar. On the western part at the top of the altar was also a gray earthen frame formed by two homocentric squares made through ditching and filling. Four large tombs of the Liangzhu culture were retrieved in the southwestern part of Huiguanshan Altar. The artifacts unearthed were numbered to 173 pieces (including sets), which were more than

1. Zhejiang Provincial Institute of Cultural Relics and Archaeology, Yuhang Cultural Relics Administration. Brief Report on the Excavation of Huiguanshan Altar and Cemetery of the Liangzhu Culture, Yuhang, Zhejiang Province Cultural Relics, 1997: 7. Zhejiang Provincial Institute of Cultural Relics and Archaeology. Brief Report on the Second Excavation of Huiguanshan Site. *Cultural Relics*, 2001: 12.

269 single pieces. Among them, jade artifacts were numbered to 104 pieces (including sets), which were more than 200 single pieces. All stone artifacts were stone *yue* and there was a total of 54 pieces, 48 of which were unearthed from Tomb M4. In addition, there was a total of 15 pieces of pottery artifacts. The date of Tomb M1 and M2 was similar to that of Yaoshan Site and the two tombs were buried in the southwestern corner of the altar without damaging the pattern of the altar. Tomb M3 and M4 were of a later time. Tomb M4 broke the gray earthen frame on the top of the altar, damaging the originally designed pattern.

Through excavations of Huiguanshan Site, we developed some new understanding of the general structure and scale of the altar. The top of the restored Yaoshan Altar had an area of about 400 m² and that of the restored Huiguanshan Altar was nearly 1,500 m². We also developed further understanding about the multi-tier structure of the altar and its overall utilization of the hill. However, there was still no breakthrough in the understanding of its function and the relationship between the altar and the cemetery. Why on earth were two altars so similar in shape and structure built in two places so close to each other in the same period? All large tombs were buried in the southwestern part of the altar, indicating that people then had clear knowledge of the position and layout of the altar at the choice of the burial site. But why were such well designed and labor-consuming altars easily discarded and damaged soon after their completion? What replaced the originally designed function of the altars? All these questions had been confusing us and all inferences and assumptions had not been satisfactory.

From 1999 to 2001, in order to restore and present Huiguanshan Site, we retrieved and further excavated the peripheral areas of Huiguanshan Altar and arranged exploration trenches on the slope at the northeastern corner and the platform south of the altar. Results of the excavation proved that the slope at the northeastern corner of Huiguanshan Hill had been adjusted from top to bottom and stone revetments had been built to retain of earth. The platform south of the altar had originally been a hollow bulging in both east and west, which was later filled up with earth and gravels from the hill top when the altar was being built. Further excavation of Yaoshan Site and Huiguanshan Site provided us with deeper understanding of the construction process of the two altars. Meanwhile, we also carried out protective restoration of the main body of Huiguanshan Altar.

After many years' observation and research, Liu Bin, the discover of Liangzhu Ancient Town and researcher from Zhejiang Historical Relics Research Institute, recently held the view that the strange square-shape (the shape of "Hui"(回), a Chinese character) altars on Mt. Yaoshan (瑶山) and Mt. Huiguanshan (汇观山) were very likely served as a platform for observing the year. All the winter solstice, summer solstice, spring equinox and autumnal equinox can be observed through the sunshine and correctly and regularly found out on the square-shape altars.

There are strange square-shape altars on both Mt. Yaoshan and Mt. Huiguanshan.

In 1987, the Liangzhu Culture Altar was firstly found on the peak of Mt. Yaoshan. With the main part in the dipper-shape structure, the altar basically faces the southern and northern direction, with east-west length about 24m and south-north width about 18m; the flat natural mountain bed rock can be seen on the top of the 400-square-meter altar, which was built and chiseled flat and neat through meticulous manual work. What is obscure is that there is a square-shape marl earth frame,

with south-north length of outer frame about 11m and east-west width of outer frame about 10m, south-north length of inner frame about 7.6m, east-west width of inner frame about 6m and with depth of 0.65m-0.85m, which was constructed through the trenching and earth filling way. It is measured its four angles are 45°, 135°, 225° and 305° north by east, respectively.

In 1991, an altar, which is similar to the shape of the altar found on the Mt. Yaoshan, was discovered on Mt. Huiguanshan in Pingyao, where is about 5km from the newly found Liangzhu Ancient Town. The main part of the restored rectangular dipper-shape alter on Mt. Huiguanshan, with top covering approximately 1500sqm, east-west length of top about 35m and south-north width of top about 27.5m, is towards the south and north direction. A square-shape marl earth frame, with south-north length of outer frame about 13.5m and east-west width of outer frame about 12m, south-north length of inner frame about 9.5m, east-west width of inner frame about 7m, width of surrounding trench of the frame chiseled on the bed rock of 2.2m-2.5m and with depth of 0.1m-0.6m, was also constructed on the western part of the altar's top through the trenching and earth filling way. It is measured its four angles are 45°, 135°, 225° and 305° north by east as well.

The square-shape altar was probably used in observe the solar terms of the year.

In the important days in solar terms including winter solstice, summer solstice, spring equinox and autumnal equinox, Liu Bin would erect a surveyor's pole in the center of the altar to as to observe the variation of sun shadows and the sunset position. Through over two years' practical observation and deliberation, Liu Bin found out that the altar should be designed as a place for observing the astronomical phenomena, recording the solar terms of year and making the time calendar.

In the winter solstice, the sunrise direction is just identical with the direction of the two altars' southeastern angle, which is about 135° north by east, while the sunset direction is just in coincidence with the direction of the two altars' northeastern angle, which is about 225° . In the summer solstice, the sunrise is just in the same direction with the two altars' northeastern angle, which is about 45° north by east, while the sunset direction is coincident with the direction of the two altars' northwestern angle, which is about 305° .

In the spring equinox and autumnal equinox, the sun rises from the east of the altar, which is about 90° north by east and sets from the west of the altar, which is about 270° .

Liu Bin deemed that the correct law is evidently not a coincidence. Apart from the dimension and angle, the position of the marl earth frame on the altar was also elaborately designed and selected, for the reason that event the same azimuths are in the different positions,

making the reference points of observed sunrise and sunset different. According to the practical observation of Mt. Yaoshan and Mt. Huiguanshan, if the marl earth frame was moved, the sunrise and sunset will not be observed at the same angle due to the sheltering of mountain ranges.

Besides being used in observing the movement of sun and the solar terms of a year, the altars were also probably used in observing other celestial bodies, including the moon and astronomic and atmospheric changes.

Plan of Area of Yaoshan Site

Topographic map of Yaoshan Site

Topographic Map of Yaoshan Remains

Surrounding Natural Environment of Yaoshan Site

Panorama of Yaoshan Cemetery (Including Altar) (South to North , 1987)

Excavation of Yaoshan Site in 1987

Excavation of Yaoshan Site in 1997

Panorama of Yaoshan Cemetery (Including the Altar) Shot in 2017 (West to East)

Archaeological Plan and Profile Map of Yaoshan Cemetery (Including Altar)

North-South B-B' Archeological Profile Map of Yaoshan Cemetery (Including Altar) (I)

East-West H-H' and I-I' Archeological Profile Map of Yaoshan Cemetery (Including Altar) (II)

South No. 1 Stone Revement
of Yaoshan Altar

Local of South No. 1 Stone Revement of Yaoshan Altar

North No. 1 Stone Revement
of Yaoshan Altar

West No. 1 Stone Revement of Yaoshan Altar

Stone Revements of Yaoshan Altar

Directions of the four corners of the two homocentric squares at Yaoshan Site

Huiguanshan Altar

General plan of Huiguanshan Site

Now let us go back to Egypt. The sculptured Dendera zodiac (or *Denderah zodiac*) is a widely known Egyptian bas-relief from the ceiling of the *pronaos* (or portico) of a chapel dedicated to Osiris in

the Hathor temple at Dendera, containing images of Taurus (the bull) and the Libra (the scales). This chapel was begun in the late Ptolemaic period; its *pronaos* was added by the emperor Tiberius. This led Jean-François Champollion to date the relief to the Greco-Roman period, but most of his contemporaries believed it to be of the New Kingdom. The relief, which John H. Rogers characterised as "the only complete map that we have of an ancient sky" (John H. Rogers, "Origins of the ancient constellations: I. The Mesopotamian traditions", *Journal of the British Astronomical Association* 108 (1998) 9–28), has been conjectured to represent the basis on which later astronomy systems were based (Zodiac of Dendera, epitome. (Exhibition, Leic. square). J. Haddon, 1825). It is now on display at the Musée du Louvre, Paris.

The Dendera zodiac as displayed at the Louvre

The zodiac is a planisphere or map of the stars on a plane projection, showing the 12 constellations of the zodiacal band forming 36 decans of ten days each, and the planets. These decans are groups of first-magnitude stars. These were used in the ancient Egyptian calendar, which was based on lunar cycles of around 30 days and on the heliacal rising of the star Sothis (Sirius).

Its representation of the zodiac in circular form is unique in ancient Egyptian art. More typical are the rectangular zodiacs which decorate the same temple's pronaos.

The celestial arch is represented by a disc held up by four pillars of the sky in the form of women, between which are inserted falcon-headed spirits. On the first ring 36 spirits represent the 360 days of the Egyptian year.

Denderah zodiac with original colors (reconstructed)

On an inner circle, one finds constellations, showing the signs of the zodiac. Some of these are represented in the same Greco-Roman iconographic forms as their familiar counterparts (e.g. the Ram, Taurus, Scorpio, and Capricorn, albeit most in odd orientations in comparison to the conventions of ancient Greece and later Arabic-Western developments), whilst others are shown in a more Egyptian form: Aquarius is represented as the flood god Hapy, holding two vases which gush water. Rogers noted the similarities of unfamiliar iconology with the three surviving tablets of a Seleucid zodiac and both relating to *kudurru*, "boundary-stone" representations: in short, Rogers sees the Dendera zodiac as "a complete copy of the Mesopotamian zodiac" (Rogers (1998) p. 10).

Zodiaque de Denderah with the 48 constellations of Claudius Ptolemaeus clearly identified among the present 72 constellations on this Zodiac.

So from the paper above, you can find the prototype of the square-shape (the shape of "Hui", a Chinese character) altars on Mt. Yaoshan and Mt. Huiguanshan from Dendera zodiac.

Now let us go back to China. Fanshan (反山) is located northwest of Mojiaoshan Palace and north of Jiangjiashan inside the Liangzhu Ancient City. It is about 120 m long from west to east, 80 m wide from north to south, with an altitude of 12.4 m (subject to the latest survey) and a relative height of about 5-6 m. It is an artificially piled up rectangular mound of 4-6m.

Distribution of functional areas inside Liangzhu Ancient City

Distribution of remains of early Liangzhu culture period inside and outside the City

Distribution of remains of late Liangzhu culture period inside and outside the City

Location Diagram of Fanshan and Mojiaoshan

(Based on the topographic map of Liangzhu Archaeological Site by Zhejiang Provincial Institute of Cultural Relics and Archaeology , April 1997)

Distribution plan of exploration units and trenches and drilling holes in Fanshan Site
(with references from *Fanshan*)

Fanshan

The Tombs of Fanshan

The Structure of Fanshan

A Distant View of the Western End of the Fanshan Cemetery and the Cross-section of the Site

Local Part of the Cross-section of the Western Part of Fanshan Cemerery

The Eastern Part of the Fanshan Site

Excavation of Fanshan Site in the Summer of 1986 (from south to north)

Excavation of Fanshan Site in the Autumn of 1986 (from southeast to northwest)

Layout of Tombs in Fanshan Site (from south to north)

Layout of Tombs in Fanshan Site (from east to west)

Plan of Tombs and Other Relics of the Liangzhu Culture Period in Fanshan

And the text below is about Fanshan Cemetery.

Fanshan Cemetery is a highest-graded cemetery, which is located in the northwest of the Inner City and adjacent to Mojiaoshan Terrace in the east. The independent terrace where the cemetery is located was artificial construction with a slightly oval plane, with the east-west length of about 200 m, the north-south length of about 150 m, an area of about 2 ha, and the relative height of about 5-6 m. The distribution area of tombs is about 300 m². It was built in ca. 3000 BC and continuously in use until the late Liangzhu culture period.

11 tombs have been discovered in Fanshan Cemetery so far, which are distributed roughly in south and north rows. The highest-grade Tomb M12 is located in the middle of the south row and Tomb M20 of equally high grade is located in the middle of the north row while Tombs M15 and M18 of lower grade are in the northwest corner of the cemetery, which reveals certain pattern of layout. (Table 2-14) Tombs in Fanshan Cemetery range 4.4-8 m² in area, most of which face south by west. They all are shaft tombs with funerary utensils. (Fig.2-75, Fig.2-76)

There are more than 1,200 pieces (sets) of unearthed objects include jade artifacts, stone artifacts, pottery, ivory artifacts, jade-inlaid lacquerware and other precious cultural relics, among which jade artifacts account for more than 90%. These objects unearthed are rich in variety with perfect workmanship and mostly carved with fine patterns. Featuring unearthed burial objects in a large quantity, high specification and perfect workmanship, Fanshan Cemetery is the highest-grade cemetery of the Liangzhu culture so far, which has not been seen in other sites of the Liangzhu culture. [see Appendix II *Archaeological Reports of Liangzhu Sites II: Fanshan* for details]

Archaeological Number	Location Instruction	Tomb Orientation	Size (cm)	Depth of Tomb Pit (cm)	Form of Tomb	Quantity of Objects Unearthed (Calculated by Piece)	Quantity of Jade Artifacts Unearthed (Calculated by Piece)
Fanshan M12	Middle of the South Row	188°	310×165	110	Shaft tomb	658	647
Fanshan M14	East in the South Row	188°	350×210	90	Shaft tomb	388	370
Fanshan M15	Southwest Corner	187°	275×175	60	Shaft tomb	61	54
Fanshan M16	West in the South Row	188°	340×170	120	Shaft tomb	494	488
Fanshan M17	East in the South Row	188°	330×200	120	Shaft tomb	321	316
Fanshan M18	Southwest Corner	183°	290×150	40	Shaft tomb	66	61
Fanshan M19	West in the South Row	Unknown	Unknown	Unknown	Unknown	37	36
Fanshan M20	Middle of the North Row	190°	400×200~175	132	Shaft tomb	538	490
Fanshan M21	West in the South Row	Unknown	Remnant 160×75	Remnant 60	Unknown	166	115
Fanshan M22	East in the North Row	190°	325×170	100	Shaft tomb	185	175
Fanshan M23	East in the North Row	200°	390×195	100	Shaft tomb	467	459

Statistics of Tombs in Fanshan Cemetery (NC-MD1)

Data cited from: *Archaeological Reports of Liangzhu Archaeologic Site II: Fanshan* (October 2005)

Aerial View of Tomb M12 in Fanshan Cemetery

Plan of Tomb M12 in Fanshan Cemetery

Rubbing of jade *cong* (Fanshan M12:98)

Jade *cong* (Fanshan M12:98) in the tomb

"Jade *cong* of the most classical shape and patterns" Unearthed from Fanshan Cemetery (M12:98)

Divine emblem on jade *cong* (Fanshan M12:98)

Line graph of the divine emblem on jade *cong* (Fanshan M12:98)

And the image below is the resemblance between the divine emblem of Liangzhu and the Pharaoh of ancient Egypt.

So from the image above, I can conclude that the divine emblem unearthed from Tomb M12, Fanshan cemetery indicates that the owner of the tomb was probably the governor of ancient Egypt. Besides, Fanshan (反山) is about 120 m long from west to east, 80 m wide from north to south, with an altitude of 12.4 m (subject to the latest survey) and a relative height of about 5-6 m. It is larger than any other tombs of mastabas of the kings in ancient Egypt. According to the *Bamboo Annals*, Yu ruled the Xia Dynasty for forty-five years and, according to *Yue Jueshu* (越绝书), he died from an illness (Bamboo Annals Xia chapter and Chinaculture.org. "Chinaculture.org Archived 2010-09-11 at the Wayback Machine." 大禹祭典. Retrieved on 2010-09-26.). It is said that he died at Mount Kuaiji (会稽山), south of present-day Shaoxing (绍兴), while on a hunting tour to the eastern frontier of his empire, and was buried there. The Yu mausoleum (大禹陵) known today was first built in the 6th century AD (Southern and Northern Dynasties period) in his honor. It is located four kilometers southeast of Shaoxing city (China.org.cn. "China.org.cn." *Yu Mausoleum*. Retrieved on 2010-09-26.). Most of the structure was rebuilt many times in later periods. The three main parts of the mausoleum are the Yu tomb (禹陵), temple (禹庙) and memorial (禹祠). (lvyou.eco.gov.cn. "lvyou.eco.gov.cn." 治水英雄大禹的葬地: 大禹陵. Retrieved on 2010-09-26.). In many statues he is seen carrying an ancient hoe (耒耜). A number of emperors in imperial times travelled there to perform ceremonies in his honor, notably Qin Shi Huang.

Yu mausoleum in Shaoxing

Yu temple in Yu mausoleum

Since Fanshan (反山) is an artificially piled up mastaba shape like mound and it is larger than any other tombs of mastabas of the kings in ancient Egypt, I can get a hypothesis that Yu (Narmer) died while on a hunting tour to the eastern frontier of his empire, and chose Fanshan (反山) as his tomb at first , but for some unknown reasons, he buried in Yu mausoleum (大禹陵), Mount Kuaiji (会稽山), south of present-day Shaoxing (绍兴). And After Shaokang (少康) rehabilitation, the Yu's descendant Shaokang's (少康) son-Wuyu (无余) was sealed in Kuaiji (会稽), enshrined Yu (禹), and created Yue State (越国). In Yuling Village (禹陵村) of Shaoxing, the descendants of Yu (禹) have been defended the Mausoleum till now according to legend. The ancient Chinese character 越 (Yue) is completely an ancient Egyptian hieroglyph:

越

Bronze (金文编裏的字) Characters

B01747	B01748	B01749	B01750	B01751

Bronze (金文编裏的字) Characters
Papyrus stem in hieroglyphs	Papyrus stem-(tril.) --- w3dj-(uatch-uadj)	or or 3 of many spellings, 'W3dj' in hieroglyphs	Green-绿色 Vigour-活力 Young-年少
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莎草茎象形文字几种拼写法

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