

THE ORIGIN AND DEVELOPMENT OF SHANG CULTURE

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Prior to 1950 our knowledge of the Shang period was derived mainly from the ruins of the Shang capital at An-yang 安陽 in northern Honan. The Capital, known to the Shang people as the Great City Shang, 大邑商 was founded by King P'an-k'eng 盤庚 in 1384 B.C. (Prof. Tung Tso-pin's 董作賓 chronology).¹ According to the ancient texts and the Oracle Records which were found at the site, a total of twelve kings ruled from this capital and it was invaded in the twelfth century B.C. by the Chou expeditionary forces and fell in 1111 B.C. The Great City Shang stood as a centre of Chinese culture for 273 years in the later part of the dynasty.

The pre-war excavations touched only a few parts of a total of eleven sites in and around An-yang. The material published² had already given us an intimate understanding of the activities of the royal court, their daily routine, their triumphant tours abroad, their receipt of tributes from outside peoples and their defence of the capital. The people enjoyed a mature bronze age civilization and their arts and craft were adequately shown by the large amount of artistic remains in bronze, jade, stone, bone, horn shell, and pottery. Besides, various types of architectural remains gave us some idea of their royal palaces, cemeteries, archives as well as the dwelling quarters of the people. The importance of the Shang culture in the development of Chinese civilization as a whole, indeed, cannot be exaggerated.

The excavation of An-yang presented many a puzzling problem. The most outstanding one was the origin of the culture. The Shang civilization was then at its height. Besides the excellent bronze industry, the people possessed an efficient written language and maintained a stable government and social organization. The high standard of culture must have required a long period of development. The ancient texts and the Oracle Records

¹ Tung Tso-pin, *Yin li p'u 殷曆譜*, 1945. Cf. Ch'ên Mêng-chia 陳夢家, *Yin-hsü pu-tz'ü tsung-shu 殷虛卜辭綜述*, 1956, 29-35.

² Li Chi and others, *AYPK (An-yang fa chüeh pao-kao) 安陽發掘報告*, 1929-33; many articles in *KKHP (K'ao-ku hsiieh-pao) 考古學報*, formerly *T'ien yeh k'ao ku pao kao 田野考古報告* and *Chung-kuo k'ao ku hsiieh pao 中國考古學報*, 1936- and in *CYCK (Chung-yang yên-chiu-yüan li-shih yü-yü-n' n-chiu-so chí-k'ar) 中央研究院歷史語言研究所集刊*, 1931-, etc.

informed us that there were eighteen dynastic kings before P'an-k'eng and fourteen pre-dynastic ancestors before King T'ien-yi 天乙, the founder of the dynasty, better known to the later generations as Emperor Ch'êng-t'ang 成湯. The remains of these pre-dynastic ancestors and early dynastic kings presumably existed somewhere, but so far there was nothing of archaeological material that could be definitely ascribed to these early periods. As P'an-k'eng was the last of the early kings and the first of the late Shang period, it would be possible that in moving the capital to the Great City Shang, his court had brought archives from the old capital. So some of the remains found at An-yang might have been relics from the earlier periods and some of the inscribed records still waiting to be read, may ultimately be revealed as belonging to the earlier periods. But again, no distinction had yet been made and proved.

The origin of some of the outstanding elements of the late Shang culture may now be told. Many of these can be traced directly not only to the earlier Shang but also to the neolithic remains which have been found recently in large numbers. Most of the neolithic sites previously known to us in China were in the northern provinces, but in the last few years hundreds of new ones have been discovered and some of them systematically excavated. The distribution of these sites covers a much wider area, stretching from Inner Mongolia to Hainan Island and from Taiwan to Sinkiang. They have been found in practically every province.³

These new discoveries give us a better idea of the geographical distribution of various types of neolithic culture in this country as well as their respective characters. It seems clear now that in prehistoric China there were at least four types of neolithic culture. In the north, a microlithic type of culture flourished in the Gobi region and is consequently known as the Gobi Culture, but in the south, there were three sister cultures which had their origins in the Huang-ho basin, the cradle of the Chinese civilization. It would be of interest to note here some of the neolithic aspects which may serve as a foundation upon which the magnificent structure of the Shang culture was erected.

The Gobi Culture produced some characteristic objects, notably a series of chipped stone tools fashioned in the microlithic tradition and a typical brown pottery which is coarse and usually decorated with incised simple geometric design. A number of the potsherds are comb-marked. This type of cultural remains have been found mainly north of the Great Wall from Manchuria to Sinkiang. Several sites have recently been investigated right in the middle of the Huang-ho basin in eastern Shensi⁴ and

³ Ch'eng Tê-k'un 鄭德坤, *Prehistoric China*, to be published in 1957.

⁴ An Chih-min 安志敏, Brief report of the archaeological investigations at San-mên-hsia, along the Huang-ho, *KKTH (K'ao-ku t'ung-hsin) 考古通訊*, 1956. 5. 2-4.

microlithic implements, such as arrowheads⁵ and scrapers⁶ have sometimes appeared in association with Shang remains, so it would not at all be far-fetched to suggest that the Gobi Culture did contribute something towards the rise of the Shang people.

The prehistoric culture in the Huang-ho basin presents, however, a different picture. The neolithic remains in this region from Shantung to Chinghai appears to be basically the same and the physical type of the population similar to that of the modern northern Chinese. They are known as the "Proto-Chinese", a name first introduced by Davidson Black in 1925. In the late neolithic times, this region was teeming with busy life, because the Proto-Chinese drew their sustenance mainly from what they could grow. They were essentially agriculturalists who supplemented their food supply by raising domestic animals, chiefly pigs and dogs. They lived in villages, which have been found to be packed full of underground pits used for dwelling and storage. In some cases their settlements were surrounded each with a wall more or less like a fortified city. All these features are common aspects of a Shang dwelling site.

The Proto-Chinese made a wide variety of stone implements which were fashioned by chipping, pecking, sawing, grinding, and perforating. The common tools were axes, adzes, chisels, and shouldered axes for cutting and digging; knives, semi-lunar and rectangular in shape, and some with a handle, for cutting and harvesting; arrow-heads, spear-heads, sling-stones, *ko*-dagger-axes for hunting and war; and perforated discs, rings, and beads for spinning and ornaments. The raw material includes such fine stone as *yü*-jade. The entire lithic industry, including the material, the techniques and the types of artifacts had been handed down to the Shang people. In fact, they improved upon all these and succeeded in replacing them with metal. In his catalogue of the stone edge-tools excavated from Yin-hsü 殷墟 (Hsiao-t'un 小屯), Dr. Li Chi 李濟 shows ten basic types, including axes, knives, and arrowheads, which have their prototypes from the neolithic sites in North China.⁷

Some Proto-Chinese practised scapulimancy—a form of divination made by cracking a piece of animal, preferably the scapula. The cracks which gave the omen were obtained by scorching.⁸ This is a simple outward manifestation of a complex system of religious beliefs, but in the hands of the Shang people it was elaborated and the animal scapula was soon replaced by the tortoise shell, which provided not only a standard size and

⁵ Li Chi, an illustrated catalogue of stone edge-tools excavated from Yin-hsü, *CYCK*, 23(1952), 601, pl. 16.

⁶ Hsia Nai 夏鼐 and others, *Hui-hsien fa-chüeh pao-kao*, 輝縣發掘報告 1956, 7.

⁷ *CYCK*, 23(1952), 523-619.

⁸ Li Chi and others, *Ch'êng-tzû-yai*, 城子崖, 1934, 85-9.

shape, but also a smooth surface with constant thickness. The tortoise, a humble animal, became an auspicious creature in China. Besides a record of the oracle was inscribed on the bone or shell itself, the longest being over 100 characters. We may safely conclude that divination was one of the causes which inspired the invention and perfection of a written language and thus elevated China from prehistory into the historical stage.⁹

It was probably due to the diversity of the geographical environment that the Proto-Chinese came to produce three different types of pottery. The people in the loess highland in the west produced a red pottery which is sometimes painted; those who lived on the eastern flood plain made a black pottery which is usually highly polished; and those who lived farther south in the Huai valley produced a grey pottery which is coarse and usually covered with beaten or stamped cord-marks. They are often referred to as Yang-shao 仰韶, Lung-shan 龍山 and Hsiao-t'un, because typical examples of these three types of neolithic pottery have been first reported from these three sites—Yang-shao in western Honan, Lung-shan in western Shantung, and Hsiao-t'un at An-yang, the Shang capital.

Recent discoveries seem to show that in their respective areas, these cultures may appear in their pure forms, but in the majority of the sites investigated present a mixture of types. The proportions of these three types of pottery in various provinces indicates that the grey pottery of the Hsiao-t'un type was predominant. Wherever it went it absorbed and supplanted the other two, proving itself the fittest to survive.

In the later part of their development, some of the Proto-Chinese villages grew into large towns and cities with flourishing industries of every description. The bronze age remains of the Shang people have always been found associated with the Grey Pottery, so it is stratigraphically clear that the Chinese historic culture of the Shang type stemmed directly from the Grey Pottery Culture. The late Shang capital at An-yang was built on a Grey Pottery site which had been previously occupied by the Yang-shao Red Pottery and the Lung-shan Black Pottery peoples at separate intervals.

The region that covers the provinces of Honan, Hopei, Shansi, and Shensi was known in Chinese history as Chung-yüan 中原 or "the Central Plain". It is the border of the loess highland and the flood plain of the Huang-ho. The course of events in history indicates that it was the heart of Chinese activities and that any rising power which had the advantage of controlling it would eventually become the supreme ruler of the entire empire. The same situation may also be found in the prehistoric days. It is interesting to note that the expansion of the four neolithic cultures, Gobi, Yang-shao, Lung-shan, and Hsiao-t'un, all tended to concentrate towards this area, where their struggle for supremacy was most intense. As a result

of their rivalry and co-existence, the archaeological sites in the area occur in a wide variety of combinations, some in successive stages while others in complicated mixtures.

The mixing of these cultures appear also far and wide and may be noticed in practically every province. To the north of the Great Wall a large number of sites have been found with the mixing of the Gobi and the Huang-ho cultures. The latter occur always in mixed form, some dominated by the Yang-shao, others by the Lung-shan, while a great majority by the Hsiao-t'un elements, and many of these are associated with bronze objects and are definitely historical in date. The same situation has also been found in the Yangtze basin and in south China. Most of the southern sites present only the Huang-ho neolithic elements in various stages of advancement and degrees of combination and they are also mostly historical in date. In view of the fact that many of the Shang traits had their roots deeply embedded in the neolithic past and that the new culture was surrounded and supported by a sea of neolithic survivals, there seems no reason to doubt that the rise of the Shang culture was a logical outcome of the mixing of these neolithic cultures. The process could only have happened in a region like the Central Plain where the cultural mixture took place.

Now it has been found that An-yang was not the only Shang principality on the Chinese Central Plain. Recent excavations have brought to light at least 73 additional sites. Map I shows the distribution of Shang sites, including the eleven investigated by the members of Academia Sinica before the war—the total being 84:51 in Honan, 12 in Shantung, 7 in Hopei, 4 in Shansi, 5 in Shensi, 4 in Anhui, and 1 in Kiangsi. It is clear that the geographical extent of the Shang culture covered not only the entire territory of the Central Plain but also parts of the Huai and the Yangtze basins. A number of these sites yielded similar remains as those which had been unearthed at An-yang, and, therefore, late Shang in date. Others have been found to contain earlier remains while a few presented some stratigraphy showing the development of Shang culture in at least three stages.

This evidence of a stratigraphical sequence for the Shang culture was first noticed at Liu-li-ko 琉璃閣 in Hui-hsien,¹⁰ 輝縣 Honan. A large scale excavation was made by the members of the Chinese Academy of Sciences in 1950-1. A cultural stratum with three underground pits and 53 Shang tombs were investigated. The latter were found distributed in three groups, 28 in the northern, 9 in the central, and 16 in the southern section of the site. The excavators found that only in the southern section had tombs been dug into the cultural stratum. Besides, the structure of these tombs were more elaborate with fewer prone burials, which formed a larger percentage in the northern group. It seems possible that the tombs in

¹⁰ Hsia Nai and others, *op. cit.*, 3-32.

⁹ Ch'en Meng-chia, *Yin-hü pu-tz'a tsung-shu*, 55-134.

the southern section belonged to a stage younger than the cultural stratum as well as the tombs of the other two sections.

The stratigraphy was verified by the repeated excavation of Shang dwelling and burial sites in Chêng-chou 鄭州, also in Honan, since 1952.¹¹ According to ancient historical accounts Chêng-chou may be identified as the City of Ao 郟 (郟) which was established by Chung-ting 仲丁, the 10th king of the Shang dynasty. The excavations show that the modern city of Chêng-chou was built above the Shang ruin and it is only about two-fifths of the ancient city in size. Five sites have been revealed within the modern city, while seventeen others are scattered beyond the walls in every direction. The ancient city was rectangular in shape, 2 km. from north to south, and 1.7 km. from east to west, making an area of slightly less than 4 sq. km. The wall, 20 metres wide at the foundation, was made of stamped earth and the cultural debris was as a whole greyish in colour.

The ancient settlement was full of architectural remains. Subterranean pits, round or oval, square or oblong, or other shapes, occurred in large numbers. These had served either as dwellings or as storages and were provided with several depressions on the wall, presumably for the occupants to climb up and down. The dwelling floor was usually covered with layers of white plaster. Foundations of houses, sometimes found in series one on top of the other, were also common. The large type, which was 16.2 metres long and 7.6 metres wide, comparable to the Shang houses at An-yang, was usually built in the same fashion, on a low terrace previously prepared for the purpose. The wall was erected with layers of stamped earth, and parts of it and the floor were also covered with layers of white plaster. The material was prepared by dissolving lumps of *shih-chiang* 石薑 or "stone ginger", a natural concretion in north China, which contains large quantities of calcium carbonate. The plaster was also used by the ancient people to mend pottery vessels.¹²

The cemeteries which were found scattered in various parts of the settlement, yielded several types of burials, some small and simple, others large and elaborate. Cremation was sometimes practised, as a pottery jar has been found to contain ashes of a cremated body.¹³ Some of the tombs had been dug into the cultured layers, while others were found in the ancient city wall. A number had been rifled before, but most of them were undisturbed, yielding all sorts of mortuary objects of stone, pottery and bronze, and sacrificial dogs and human beings. The latter had always been placed with their face downward in the prone position.

¹¹ Many reports published: *KKHP*, 8(1954), 65-107; 1956, 3, 77-103; 1957, 1, 33-73. *KKTH*, 1955, 3, 16-19. *WWCK* (*Wên-wu ts'ün-k'ao tsü-liao*) 文物參考資料, 1954, 4, 35-9; 5, 32-7; 12, 83-95; 1955, 9, 56-8; 10, 24-42; 1956, 4, 3-7; 5, 33-40; 10, 50-1.

¹² *WWCK*, 1955, 7, 120-1; *KKTH*, 1956, 5, 55-8.

¹³ *WWCK*, 1956, 10, 50.

Among the architectural remains there were also other traces of stamped earth and fire. The streets were paved by pounding and some of the walls of houses were hardened by fire. Besides, remains of bronze foundries, refuse heaps of pottery kilns, and workshop ruins of bone and horn industry were common. These were found not only inside, but also outside the city. A large centre of bronze manufacture was located 1 km. to the south, a bone and horn works 0.6 km. to the north, and a ceramic factory also a kilometre to the west. The ancient Capital of Ao, like An-yang was also an industrial centre.

The accumulation of Shang tombs, architectural remains, and other cultural debris, shows that the city had been occupied for a long time. The series of stratified deposits was by no means uniform throughout the site, but the correlation of the cultural levels at various points is clear enough to support a sequence of three stages. Outside the city, at Pai-chia-chuang¹⁴ 白家庄 and Êrh-li-kang,¹⁵ 二里岡 two levels have been recognized and they represent some early deposits which may be taken as the early and the middle stages. Inside the city at Ming-kung-lu,¹⁶ 銘功路 a same type of deposit has been revealed, but it was divided into three levels, the second one being a transition between the early and the middle stage. The most complete sequence was observed in Jên-min-kung-yüan 人民公園 or People's Park to the north of the city. Here a series of three levels was found.¹⁷ The two lower ones are similar to those found at Êrh-li-kang and Pai-chia-chuang, but on top of them was a younger deposit which yielded artifacts and remains similar to those found at Hsiao-t'un in An-yang. The latter was definitely late Shang in date. So stratigraphically the deposits of Chêng-chou and An-yang may be linked together and the forerunner of the late Shang culture may now be supplied by the remains of the lower levels of Chêng-chou. The sequence of the Shang culture may also be applied fairly well to other sites. A chronological sequence of the more important Shang sites may be tabulated as on page 87.

The chronological sequence of the Shang culture proposed by the excavators of Chêng-chou seems to have support from the evolution of the characteristic elements observed in the various levels. Some of the outstanding examples may be mentioned as follows:

1. The pottery *ü*-tripod 鬲—Fig. 1.

The *ü*-tripod, a cooking vessel with three hollow legs, is a unique pottery shape of neolithic China. It has never been found in any other country. Recent investigation seems to support the assumption that it was first used by the Grey Pottery people, became fully developed in the Shang

¹⁴ *WWCK*, 1955, 10, 24-42; 1956, 4, 3-5.

¹⁵ *WWCK*, 1955, 3, 18-19; 1956, 5, 33; *KKHP*, 8(1954), 65-107.

¹⁶ *WWCK*, 1956, 10, 50-1.

¹⁷ *KKTH*, 1954, 12, 86-93; 1955, 3, 18-19.

CHRONOLOGICAL SEQUENCE OF SHANG SITES

Province	District	SHANG CULTURE		
		EARLY	MIDDLE	LATE 1384-1111 B.C.
Honan	An-yang		Hsiao-t'un and others	
				Chao-chia-ts'un
	T'ang-yin			Li-chia-fên
				Hou-ying-ts'un
	Hui-hsien	Liu-li-ko I?		Liu-li-ko II
				Ch'u-ch'iu
				Mêng-chuang
	Chêng-chou	Jên-min-kung-yüan I	Jên-min-kung-yüan II	Jên-min-kung-yüan III
		Ming-kung-lu I, II, III		
		Êrh-li-kang I	Êrh-li-kang II	
		Pai-chia-chuang I	Pai-chia-chuang II	
	Lo-yang	Sun-ch'i-t'un		
Chien-pin I?			Chien-pin II	
Shantung	Tsi-nan		Ta-hsin-chuang	
Hopei	Ch'ü-yang	Pai-chia-wan		
			Fên-chia-yên	
	Hsing-t'ai	Hsing-t'ai-shih I	Hsing-t'ai-shih II	
Shansi	Wên-hsi	Wên-hsi		
	An-yi	An-yi		
Shensi	Hua-hsien		Nan-sba-ts'un?	
	Pin-hsien		Pin-hsien?	
Anhui	Po-hsien		Wu-chia-ho?	
			Chiang-chuang-ts'un?	
	T'ai-ho		Ni-ch'ru-chi	

and early Chou times, began to disappear after the middle Chou and went completely out of fashion towards the end of the period. At Êrh-li-kang, it formed 72 per cent of the entire ceramic furniture collected in the 1952-4 excavation.¹⁸ In the Shang levels at Chêng-chou, the *li*-tripods show three stages of development. In the early period, the tripod (a) appears with a tall body, high legs and outspread mouth-rim. It has a thin wall and is decorated with impressed fine cord-marks. In the middle period, (b) the body and legs become shorter in size, the mouth is thick and has a downward bent, the wall is medium in thickness and the cord-marks medium in coarseness. In the late period, (c) the body, legs, and neck are all further shortened, while the wall is thick and the cord-marks coarse.¹⁹ In some of the examples unearthed at An-yang, (d) the hollowness of the legs have almost disappeared though retaining the three pointed legs.²⁰

2. The pottery *tsun*-cup 尊—Fig. 2.

The *tsun*-cup is another common pottery. In Êrh-li-kang it formed 19 per cent of the entire ceramic collection, the second largest group.²¹ The shape has also been found to have undergone three stages of development. The early *tsun*-shape (a) is a tall tumbler-like vessel with a large mouth, contracted neck and a tall body tapering into round or flat bottom. The wall is thin and the paste hard. The decorated surface recalls some basket work, the pattern being composed of fine cord-marks, horizontal incised lines, and horizontal rope reliefs. In the middle stage, (b) the vessel has no neck, the mouth larger and bottom smaller, the wall thicker, the paste soft and coarse, and the cord-marks also coarse.²² In the late period, as represented by those unearthed at Hsiao-t'un, (c) the lower part of the body becomes globular in shape and the vessel is supported by an outspread ring-foot.²³ The paste is finely prepared, but the wall is thick. Some of them (d) are decorated with incised horizontal and zigzag lines, recalling also some basket work.²⁴

3. The pottery *tou*-bowl 豆—Fig. 3.

The *tou*-bowl may not be regarded as a typical vessel in the Shang times. The shape, consisting of a shallow or semi-globular bowl with a tall ring-foot, is rather common and has been found not only in the prehistoric period but also in the Chou and later dynasties. It became an outstanding shape in the late Chou and Han times when the bowl was usually supported by a tall or short cylindrical post, common in both bronze and pottery. The

¹⁸ KKHP, 8(1954), 75.¹⁹ WWCK, 1954, 12, 91-2.²⁰ KKHP, 9(1955), 38.²¹ KKHP, 8(1954), 75.²² WWCK, 1954, 12, 91.²³ KKHP, 3(1948), 52.²⁴ KKHP, 9(1955), 42.

excavation of Chêng-chou reveals that there are two rather typical shapes in the earlier Shang period. The early one (a) has a ring-foot supporting the bowl at the bottom and is decorated with raised horizontal ribs and an open-work in the shape of a cross, but the later type (b) has the ring-foot supporting the bowl at under the mouth rim and the ornament consists of a series of incised horizontal grooves.²⁵ In the late Shang period, *tou* appeared to be rather heterogeneous in shape (c). The excavation of Ta-ssü-k'ung-ts'un 大司空村 at An-yang in 1953 alone yielded five distinct types²⁶ and most of them seem to be structurally more advanced than the two types found at Chêng-chou.

4. The pottery *k'an-kuo* crucible 坩堝—Fig. 4.

The *k'an-kuo* crucible is a very specialized vessel used for melting bronze. It was meant to be placed in a fire so the paste is coarse and the wall thick. It was always constructed in a corded mould, as a result of which there are always cord impressions on the outer surface. In the earlier period, the crucible, (a) as found at Chêng-chou, is just a tall tub-shaped vessel, large mouth and flat bottom,²⁷ but in the later period, as at An-yang, the vessel (b) acquires a pointed base, which could function efficiently if inserted into the charcoal fire.²⁸ It is interesting to note that the various forms of the character *chu* 鑄 which means "casting", appear in the bronze inscriptions of the Shang and Chou times, consist invariably of two hands pouring the contents of a crucible of this type into a mould, the contents being depicted either as a mixture of metals or as fire. The character is simply a picture of the act of casting.²⁹

5. The pottery *fan*-mould for bronze casting 範—Fig. 5.

The Shang bronze-smith made two kinds of moulds, a *mo*-model 模 which was used for making the mould and a *fan*-mould in which the article or vessel was cast. The model was simply a clay object slightly baked, carved into the desired shape and decorated with the required design. The mould, on the other hand, was prepared from the model for casting and as a result of which it showed always the effect of the burning liquid metal on the pottery surface which came in contact with it. There is yet no direct evidence that the ancient bronze-worker practised the "lost wax" process, as some writers used to imagine. A simple object like arrow-heads and knives, was usually cast in a two-pieced mould, (a) but for a vessel with a number of accessories, a complicated set of pieces with tenons and mortices had to be assembled with the help of stripes of clay to form the mould. These mould parts are functionally of three types, the outer mould, the

core (b) and the filling. The filling was placed inside the handle, the legs or other accessories and it stayed there in the bronze. The core was used to form the cavity of the vessel or the hollow part of the base. The outer mould was meant to provide the shape of the vessel and each section of it was usually covered on the inside with the required design. The majority of the mould-parts (c) recovered from An-yang and published in the past belong to the outer mould.³⁰ The excavation of Chêng-chou brought to light a number of these types of pottery and it is quite clear that they are mostly not as complicated as those unearthed at An-yang.³¹ Besides there are a number of two-pieced moulds,³² which were meant for the casting of arrow-heads, knives and *ko*-dagger-axes 戈. A core for casting the socketed axes has also been found.

6. The bronze vessels—Fig. 6.

The simplicity and crudeness of the earlier Shang bronze moulds had their effect on the finished product. The bronze *chüeh*-cup 爵 furnishes a fine example. This type of vessel is a characteristic wine cup of the Shang times and it continued to be used only in the early Chou period. Those (a) recovered from the earlier levels of Chêng-chou³³ can easily be distinguished from the majority (c) of the An-yang examples³⁴ in at least three ways: first, the decorative design is always crude and bold, and, with the exception of the eye, mostly only on one plane in low-relief; secondly, the cup has always a flat bottom which is probably easier to cast and the accessories are clumsily proportioned and the general form awkward; and thirdly, the wall of the vessel is thin and the handle-posts and legs are all rather flimsy, owing to the poor quality of the alloy. The same holds true with the examples excavated at Hui-hsien (b).

The same situation may also be observed in some of the other types of bronze vessels from these two centres. A comparison of the series of bronze *ting*-tripod 鼎, *chia*-tripod 鬲, *lei*-jar 罍, *p'an*-basin 簋 and *ku*-cup 觚 from Pai-chia-chuang in Chêng-chou³⁵ and those unearthed at An-yang, as assembled by Ch'ên Méng-chia³⁶ will show the marked differences between them in style as well as in substance. There is no doubt that bronzes from the earlier capital were the product of a more primitive industry, centuries before the zenith of the art which was reached at the late Shang capital. It should be noted, however, that some of the earlier style and shapes did survive into the later period,³⁷ but among the elegant

²⁵ KKHP, 7(1954), 36-42, cf. CYCK, 26(1955), 95-129.

²⁶ KKTH, 1955, 3, 18.

²⁷ KKTH, 1955, 3, pl. 7, 3-4.

²⁸ WWCK, 1955, 10, 35, cf. Hui-hsien fa-chüeh pao-kao, pl. 13.

²⁹ AYPK, 480, pl. 9, 13, 14; KKHP, 7(1954), pl. 18; 9(1955), 48, pl. 18.

³⁰ WWCK, 1955, 10, 25-42.

³¹ KKHP, 7(1954), 17-30, pl. 1-33.

³² KKHP, 3(1948), 1-93.

²⁵ WWCK, 1954, 12, 92.

²⁶ KKHP, 9(1955), 37.

²⁷ KKTH, 1955, 3, pl. 7, 1-2.

²⁸ AYPK, 696, pl. 2.

²⁹ Jung Kêng, 容庚 *Chin-wên pien*, 金文編, 1925, 14, 1-2.

An-yang examples they invariably look clumsy and awkward, reminding one of the queer and ancient machines used in a veteran car race on the Brighton Road. The later specimens, though retaining the ancient shape, are as a rule made of a better or more substantial alloy.

7. The bone *pin*-hair-pin 笄—Fig. 7.

The Shang sites at Chêng-chou yielded a large number of bone *pin* or hair-pins. In the earlier levels (a) they are simply long slender rods broader at the top end. But in the later levels, (b) the finial is deliberately enlarged and elaborately carved into the shape of a bird or an animal.³⁸ This type of hair-pin has also been unearthed in large numbers at An-yang, but most of them have a finely carved finial (c) with typical late Shang design,³⁹ though simple rods and intermediate examples are also known.⁴⁰

8. The oracle bones and tortoise shells—Fig. 8.

The evolution of the Shang culture may further be illustrated by the oracle bones and shells recovered at Chêng-chou.⁴¹ In the early stage (a) the materials are mainly scapulae of pig, ox, and sheep, and the scorched spots, on which the fire or glowing stick of charcoal was applied, are mostly unprepared, only a few having some prepared depressions slightly circular in shape. In the middle stage, ox bones (b) are predominantly used and the scorched spots are mostly prepared by drilling. The instrument is a long point in bronze with a diamond shape cross-section and it is supposed to have been driven with a bow to produce the circular depression.⁴² In the final stage, 90 per cent of the oracle records are made of tortoise shells. (c) The scorched spots are all carefully prepared, not only with a drilled circular depression, but also with a carved oval space; their combination being necessary to facilitate a clearer crack on the other side of the bone or shell at the application of fire. Besides, a number of the oracle shells bear a few small perforations at the edge, which were used for stringing the inscribed shells into a bundle for storage as well as for future references. Some of these bundles have been found to be numbered.⁴³ This is the earliest form of a book in China and the ancient character *ch'ê* 冊 for "book" is actually a picture of a set of tortoise shells tied together in a volume. Several archives of these ancient books have been found at An-yang and the inscribed records published. These are certainly the most important material for the study of Shang history and culture.

9. Shang writing.

It would be out of place in this paper to give even a very brief account

³⁸ *WWCK*, 1954, 12, 90.

³⁹ *KKHP*, 5(1951), pl. 14.

⁴⁰ *KKHP*, 9(1955), pl. 34.

⁴¹ *WWCK*, 1954, 12, 89-90.

⁴² *KKHP*, 8(1954), 91, pl. 16.

⁴³ *AYPK*, 126-9.

of the study of the Oracle Records of An-yang. A few figures will be enough to illustrate its scope and results.⁴⁴ Up to the end of 1952, a total of about 100,000 pieces of inscribed bones and shells have been reported and the number is by no means complete. There are more than 300 scholars in this field, 230 Chinese, 40 Japanese, 6 British, 5 American, 4 German, 2 French, 1 Russian, and 1 Canadian, and a list of their publications amounts to no less than 900 items, including five dictionaries. Other statistics show that the Shang diviner used a total of about 3500 characters and only about one-third of them can now be read. However, it is generally agreed that the Chinese written language had already become mature in the fourteenth century B.C.,⁴⁵ and it must have a long development before the establishment of the Shang capital at An-yang.

The excavation of Êrh-li-kang at Chêng-chou serves to solve part of the problem. Among the 375 oracle bones recovered from the site,⁴⁶ two pieces are inscribed.⁴⁷ One of these which was collected from the surface layer, has an inscription of ten characters, similar to the An-yang writing, especially those produced by the practice of character-carving. The second piece was recovered from a lower stratum which is early Shang in date, and it bears only one simple character.

The simplicity of earlier Shang writing may further be illustrated by the marks on some Êrh-li-kang pottery.⁴⁸ They are written and carved in a style with each stroke pointed at both ends. This is a typical Shang style of writing and it may be regarded as the ancestral form of the An-yang script. These discoveries promise that a more ancient stage of Chinese writing before the fourteenth century B.C. may yet be found at Chêng-chou or other Shang sites.⁴⁹

With all these data—a series of stratigraphy supported by the evolution of large number of the typical artifacts—it seems quite clear now that the development of the Shang culture may be divided into at least three stages and that the magnificent standard achieved at An-yang had a long earlier history which will become better known as new discoveries are constantly being made.

A study of the development of the Shang culture will not be complete without a discussion on the stratigraphy of the Shang deposits at Hsiao-t'un. It has been treated so far together as a remains of the Late Shang Stage. But since the site had been occupied by the Shang people for at least

⁴⁴ Hu Hou-hsüan 胡厚宣, *Wu-shih nien chia-ku hsieh lun-chu-mu*, 五十年甲骨學論著目, 1952.

⁴⁵ Ch'ên Mêng-chia, *op. cit.*

⁴⁶ *KKHP*, 8(1954), 86.

⁴⁷ *WWCK*, 1954, 5, 6.

⁴⁸ *KKHP*, 8(1954), 105.

⁴⁹ Cf. Li Chi and others, *Ch'êng-tzu-yai*, pl. 16.

over three centuries, a stratigraphic sequence of its cultural deposits needs to be established if we are to understand the development of this ancient culture in its proper light.

Ever since the beginning of the investigation at this important site, observations along this line have been carefully noted by the excavating party from the Academia Sinica. They succeeded in establishing the succession of the remains of the Yang-shao, the Lung-shan, and the Hsiao-t'un Cultures in this area,⁵⁰ but they are far from being satisfied with the stratigraphical sequence in the Hsiao-t'un deposits itself. The fact that this area had been the capital of the Shang people for 273 years seems to be responsible for the archaeological accumulation which shows a gradual and continuous deposition, and since it was a dwelling site, the "architectural" remains throughout the period constituted a most complicated affair.

In the earlier stage of the excavation (Seasons 1-6), it has been noted that the deposits consists of two levels. The lower stratum was characterized by the presence of some rectangular and circular pits, while the upper one contained a series of stamped earth, which was probably foundations of houses and other architectural remains. The latter occurred constantly at a level about 3-1.0 to 2.5 metres under the surface of the ground. The differences between the objects of these two levels have also been noted. They included several types of pottery, forms and designs of bronzes, and the evolution of the characters inscribed on the Oracle Records.⁵¹

In the later stage of the excavation (Seasons 8-15), however, the excavators reported that the Shang deposits at Hsiao-t'un may be divided into three levels, each characterized by some "architectural remains", as follows:⁵²

1. Upper level—burials
2. Middle level—stamped earths and draining channels
3. Lower level—underground pits

In spite of the fact that this sequence of three stages has been clearly noted at Trench C85, it can hardly be taken to account for the actual deposition of the whole site. These "architectural remains", which have yet to be defined, did not occur exclusively in their respective levels; burials have been reported in the lower and underground pits noted in the upper level.

In a recent study of the site Mr. Tsou Hêng⁵³ of Peking University brings out a new interpretation of the Shang remains which helps to establish a more reasonable stratigraphy. Tsou is of the opinion that the

⁵⁰ Liang Ssü-yung 梁思永, Hsiao-t'un, Lung-shan and Yang-shao 小屯龍山與仰韶, *Studies presented to Ts'ai Yuan-p'ei*, 1934, 555-67; Li Chi, *Studies of the Hsiao-t'un pottery: Yin and Pre-Yin, Annals of Academia Sinica*, 2(1955), 103-117.

⁵¹ *AYPK*, 575-76.

⁵² *KKHP*, 2(1947), 69-71.

⁵³ *KKHP*, 1956, 3, 77-105.

draining channel offers a key to the settlement. This type of structure has been found associated only with a certain amount of stamped earths and it indicates that they were closely related to each other. It is most likely that in a certain brief period the architectural construction in the Shang capital was preceded by the digging of a drainage system. This practice, however, was not closely followed later on. There were a certain amount of stamped earth which have not been found associated with the draining channel. Hence the stratigraphical sequence of the Shang deposits at Hsiao-t'un may be revised as follows:

1. Upper level—consisting of the later stamped earth which had no draining channel and some underground pits and burials which either occurred above or had intruded upon the earlier stamped earth which was in association with the draining channel;
2. Middle level—containing some stamped earths and their drainage, some underground pits and burials; and
3. Lower level—some underground pits and burials which occurred under or had been damaged by the stamped earths with drainage.

When P'an-k'eng moved his capital to An-yang his court would surely need a large number of houses, temples, and palaces. The large scale construction was probably very well planned and the buildings were provided with a proper drainage system. Therefore, it would seem not unreasonable to assume that the stamped earths and their draining channels were some of the remains of these buildings constructed in around 1384 B.C. or shortly after that. By that time Hsiao-t'un had already been occupied by some Shang people who were responsible for the deposits of the lower level. And these should be regarded as the pre-capital remains.

Mr. Tsou has also made a rather detailed comparison of the cultural remains from these two Shang capitals and tried to correlate the stratigraphy revealed from them. His observation of the evolution of the Shang characteristic artifacts includes a wide variety as follows:

1. *kuei*-, *li*- and *chia*-tripods; 鬲, 鬲, 鬲
2. *hrien*-tripod; 甗
3. *ting*-tripod; 鼎
4. *kuan*-vase; 罐
5. *tsun*-cup; 尊
6. *lou*-cup; 豆
7. *yung*-, *lei*- and *fou*-jars; 甕, 甕, 甕
8. *p'en*-, *kuei*- and *yu*-containers; 盆, 甕, 盂 and
9. tools, weapons and oracle bone and shell.

He comes to the conclusion that the Early Shang Stage at Hsiao-t'un should come in between the Middle and the Late Shang Stage of Ch'eng-chou, the Middle Shang Stage of Hsiao-t'un corresponds to the Late Shang

Stage of Chêng-chou in date, and the Late Shang Stage of Hsiao-t'un is the youngest of them all. In other words, Tsou classifies the known Shang remains into five stages as follows:

- I. Early Chêng-chou
- II. Middle Chêng-chou
- III. Early Hsiao-t'un
- IV. Late Chêng-chou and Middle Hsiao-t'un
- V. Late Hsiao-t'un

The entire series is preceded by the Lung-shan Black Pottery Culture, because in both cases, remains of this culture has been found underneath the Shang cultural deposits. The validity of Tsou's proposed chronological sequence has yet to be verified by further excavation. The Shang cultural deposits at Hsiao-t'un is indeed a complicated affair and the development of this capital may yet be observed from another point of view.

A most successful attempt at periodization of the Shang culture at Hsiao-t'un has been made through the study of the Oracle Records recovered from the site. The accumulation of this type of remains seems to have occurred after P'an-kêng had made his capital here. The credit goes exclusively to Professor Tung Tso-pin of the Academia Sinica who took part in the excavation and has worked on the material consistently for over thirty years. The ancient records brought to light by the spade number to some 30,000 pieces of inscribed bone and shell, and they have been classified by him into five successive periods:

1. 1384-1281 B.C.—under four kings: P'an-kêng, Hsiao-hsin 小辛, Hsiao-yi 小乙 and Wu-ting 武丁;
2. 1280-1241—under two kings: Tsu-kêng 祖庚 and Tsu-chia 祖甲;
3. 1240-1227—under two kings: Lin-hsin 廩辛 and Kêng-ting 庚丁;
4. 1226-1210—under two kings: Wu-yi 武乙 and T'ai-ting 太丁;
5. 1209-1111—under two kings: Ti-yi 帝乙 and Ti-hsin 帝辛.

Professor Tung arrives at this periodization from evidences which he gathered from ten sources, and they serve to check each other. The thesis was first introduced in 1933⁵⁴ and subsequent discoveries and researches tend to support his assumption.⁵⁵ It has, indeed, become the foundation for the study of the Oracle Records.⁵⁶ It would be worth-while to make a brief review here of the sources of his evidence because it would throw considerable light on our survey of the Shang stratigraphy in this site.

The evidences for this epoch-making conclusion came first from the discovery of the "signatures" of the diviners 貞人, who were in charge of

⁵⁴ Tung Tso-pin, *Chia-ku wên tuan-tai yên-chiu li 甲骨文斷代研究例*, *Studies presented to Ts'ai Yuan-p'ei*, 1933.

⁵⁵ Tung Tso-pin, *Yin-li p'u*; *Chia-ku wên tuan-tai yên-chiu ti shih ko piao chun*, *Ta-lu tsa-chih 大陸雜誌*, 4(1952), 252-6; 296-300; 328-33.

⁵⁶ Cf. Ch'ên Mêng-chia, *Yin-hsü pu-tz'ü tsung-shu*, 135-206.

the scapulimancy as well as the inscribing of the records. A list of 122 names has so far been made⁵⁷ and they can be grouped under the kings whom they served. This was determined by the ways the ancestors were addressed 稱謂 in their respective sacrificial records. The same person would have been addressed as father in one generation and grandfather in the next, and so forth. The validity of these addresses may further be substantiated by the genealogical lists 世系 which appeared on the sacrificial records occasionally inscribed on bones or shells. So with evidences from these three basic sources, which throw light on each other, the date of a large number of the recorded bone or shell may be determined.

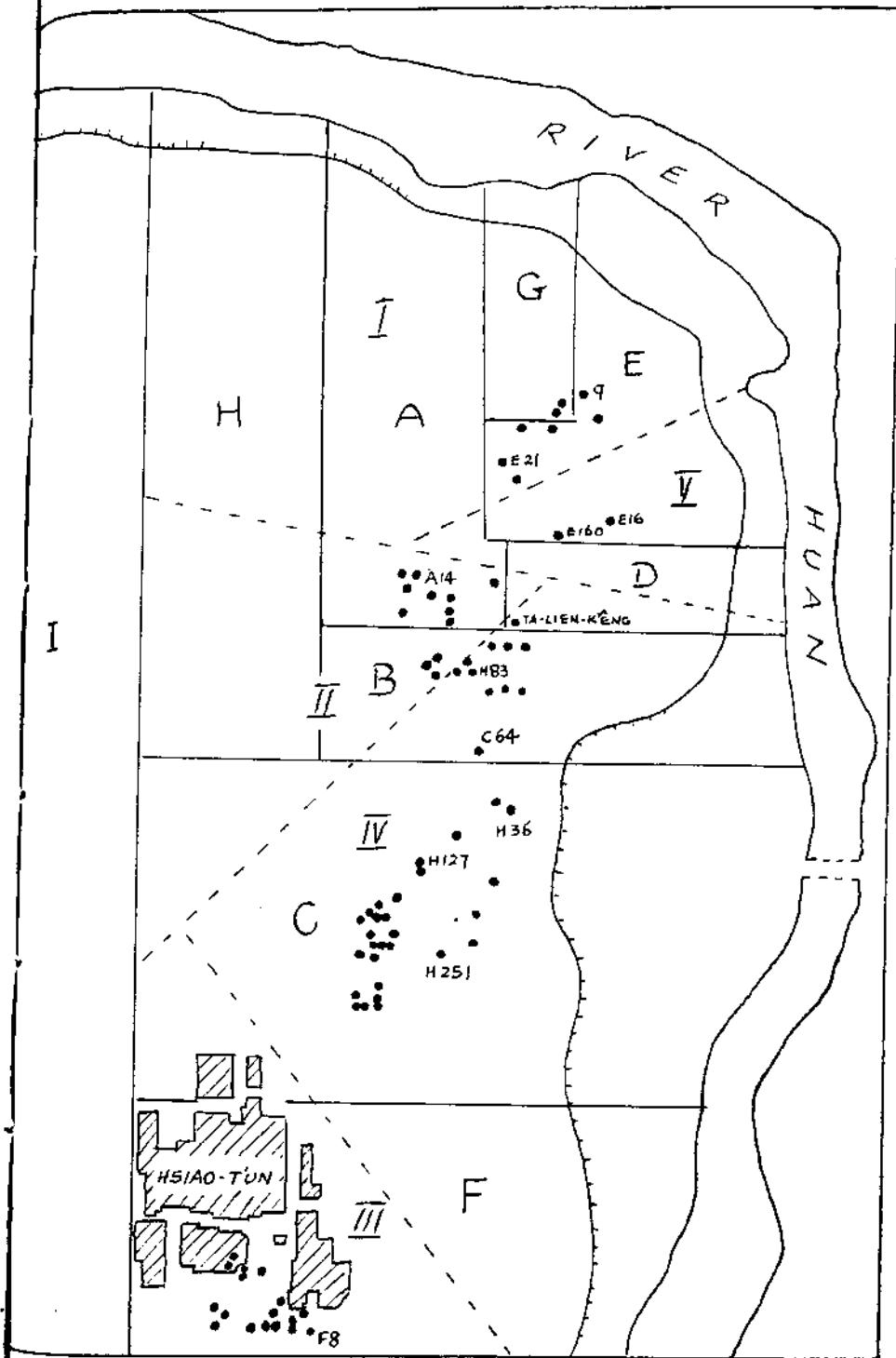
The validity of this five period sequence has again been subjected to other careful tests. From the contents of the Records ascribed to the various stages, additional evidences have been found and they may be grouped under six headings as follows:

1. Names of foreign tribes or countries 方國, who belonged to a particular period;
2. Names of persons 人物, who lived in a particular period;
3. Types of affairs 事類, which showed the special inclination of the king concerned;
4. Grammatical constructions of the writing 文法, typical of each period;
5. Forms and structure of the characters 字形, which were popular in a particular period; and
6. Styles of calligraphy 書體 which were characteristic of a particular period.

These evidences are indirect in nature, and in some cases rather subjective, but when used to support the chronology derived from the evidences from the three basic sources mentioned above, the cumulative effect is most convincing indeed. And finally, a fourth group of basic evidences has come directly from the field 坑位.

In the excavation of Hsiao-t'un the site has been divided into nine localities, named alphabetically from A to I (see Map II). It has been found that Oracle Records of Period I come from the northern section of Localities H, A, G, and E; those of Period II, from the southern section of Loc. H and A and the western section of B; those of Period III, mainly in the western section of Loc. F (in and around the modern village of Hsiao-t'un); those of Period IV, in the middle section of C and B and the southern section of D; and those of Period V, in the northern section of Loc. E and the northern section of D. It is interesting to note that archaeologically, the Oracle Records of Period I has been found in the northern part of the site, those of Period II, in the middle west; those of Period III in the south-west;

⁵⁷ Ch'ên Mêng-chia, *op. cit.*, 205-6.



those of Period IV, in a large territory on the south-east; and those of the last period, in a small section on the north-east. 13,041 pieces of the excavated records have been published⁵⁸ and how satisfying that it is now possible to wander through the archives of the late Shang diviners and historians and to be acquainted with their way of life, thought, and style of writing!

The distribution of the Oracle Records at Hsiao-t'un shows concurrently the ecological development of the Shang capital. The field records support the fact that the deposition of the Shang remains at this site is far from being a simple affair. It has to be studied horizontally as well as vertically.

⁵⁸ Tung Tso-pin, *Yin-hsü wên-tzú* 殷墟文字, 4 vols., 1943-53.