

# Settlement Pattern Study and the Search of the Origin of Chinese Civilization

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## The Study of Settlement Pattern

*1. Settlement pattern study is one of the important areas in archaeology.* I propose to define “settlement pattern” as “the housing arrangement of a human group.” Settlement is not an isolated house. It is the form in which a group of people of variable number living in close proximity. That is to say, it is the making of a settlement or the making of a group of settlements in a region by a human group.

Settlement pattern is analogous to a mirror. It reflects the social organization and structure of the society that constitutes the settlements. Changes in settlement pattern are pertained to the development of human society and the changes in the organization and structure of the society.

The archaeological study of settlement pattern is also called “settlement archaeology.” According to my understanding, the goal of archaeological study of settlement pattern is to monitor the social relationship of the past. It is a study of the past social organization and structure and the relationship between human group and environment. It provides important clues to the development of past societies through the study of the background and factors leading to the changes in settlement pattern.

*2. The earliest settlement pattern study in China* can be traced back to the excavations at Yinxu 殷墟 site in Anyang 安阳 in the 1930s and the excavations at Banpo 半坡 Neolithic settlement site in Xi'an 西安 in the first half of 1950s. To date, settlement sites that have been more-or-less completely excavated include Jiangzhai 姜寨 at Lintong 临潼 and Xinglongwa 兴隆洼 at Aohan 敖汉 Banner, Inner Mongolia. Before the early half of 1990s, settlement pattern study in China was limited to the study of single settlement site. These studies concentrated on the questions of relative chronology and

cultural characteristics of the site. They were inadequate in the pursuits of settlement plan and inter-settlement relationship. This weakness was attributable to the lack of the understanding of the importance of settlement clusters and the deficiency of in-depth settlement survey information.

In recent years, Chinese archaeologists in collaboration with colleagues from other countries, have conducted full-coverage settlement surveys in the Huanhe 洹河 river valley, the Yi-Luo 伊洛 river valley and the Yinghe 颍河 river valley in Henan 河南, southeastern Shandong 山东 and Juxian 莒县 in Shandong, the Banzhijian 半枝箭 river valley in southeastern Inner Mongolia. They have revealed a large number of archaeological sites. The newly discovered sites in some of these areas increase the number of previously known sites in the same areas by several times! This is an indication of the importance of systematic and detailed settlement surveys. They lay the foundation for settlement pattern study.

Settlement pattern study can be divided into synchronic and diachronic studies. Each of these categories can be further partitioned into microscopic and macroscopic studies.

## Synchronic Study of Settlement Pattern

Synchronic study is to study the relationship between the coexisting settlement sites. Synchronic studies vary in scale. Microscopic studies focus on the relationship between the various coexisting residential structures and other features within a settlement site. Macroscopic studies concentrate on the relationship between the coexisting settlements of a settlement cluster or the relationship between the coexisting settlement clusters and the social organization and structure revealed by these patterns.

*1. Microscopic study.* The subject of study is an individual settlement (including walled settlement). It constitutes the following two main components.

First, selection of settlement locality. The building of a settlement is constrained by topography, landform, mode of economy, as well as human and social factors. Based on the considerations of the needs of social elite of the center settlement, the centripetal tendency and the solidarity ideology of a human group, and the consideration on the production of the means of subsistence and the distribution of resources, satellite settlements are in general distributed on the surrounding of the center settlement. Development in exchange and trade would transform a settlement into a trade center. Trade centers are usually built on communication route. Localities near navigable rivers and main terrestrial arteries are favorable localities.

Second, size, plan and functions of the settlement. The first step is to understand the overall conditions of the settlement, such as the dimensions, the presence or absence of defensive moat or wall, and the number of features and their functions. The study of the various features should start with residential structures because they comprise the richest information, especially the information about the living conditions of the past people. It is crucial to know the number of contemporary residential structures, because it is related to the population estimation of the human group. It is inappropriate to count all the structures of a settlement or all the interments of a cemetery as contemporary and propose the social organization and structure based on the estimated population.

Based on the knowledge of the coexisting features we can then proceed to study the similarities and differences of the configuration and size of these architectural features. Variations are often attributable to difference in function. An important issue in settlement plan is the organization of the residential structures, which is instrumental to the study of the internal social organization of the settlement. The residential structures of the Banpo cultural settlement at Jiangzhai, Lintong, Shaanxi were partitioned into five groups. The residential structures of the Xinglongwa settlement were organized into more than ten rows. The residential structures of the Dawenkou 大汶口 cultural settlement at Yuchisi 尉迟寺, Mengcheng 蒙城 in Anhui 安徽, the Dahecu 大何村 settlement at Zhengzhou 郑州 and the Baligang 八里岗 prehistoric settlement at Dengxian 邓县 in Henan were organized in rows of room blocks.

People living in the same groups or in the same rows were likely sharing close kinship relations or even members of the same families. Attention should be paid on the range of artifact classes and the stylistic variation among the same class of artifacts used by different residential groups. If difference exists between them, we should investigate the reasons. If the artifacts were produced by the kin-based groups, their difference might have attributed to the aesthetic variation between groups. If the style of an artifact class is very similar between groups, they might have been the products of the same workshop. These are very important information regarding the study of the past economic institution and social organization.

Another important component of the study of settlement plan is the study of religious ritual locality. Plaza or features of special structures were often the locations where religious ritual was performed. These features often had structures different from that of the domestic facilities. Moreover, they usually were large in size. For instance, structure 901 of the Dadiwan 大地湾 site at Qin'an 秦安, Gansu 甘肃 is an outstanding example. This massive structure occupied several hundred square meters. It was partitioned into the front hall, rear hall, and room blocks in both the left and right wings. Its dimensions and plan were unique. Artifacts recovered from the structure are important indicators of the function of the architectural feature. Features of special functions usually yield little domestic wares but rich in some special artifacts. For instance, Dongshanzui 东山嘴 site at Kazuo 喀左, Liaoning 辽宁 consists of a group of architectural structures and a stone circle. Dragon-shaped jade discs and woman figurines were yielded from these features, suggesting that they were locales closely related to the religious belief of the people.

It needs to stress that in stratified societies (complex societies) important religious structures or elite residences were not built in every village. They were usually built in the regional centers. Therefore, the presence and absence of religious structure or grandiose residential structure is an important indicator in determining the social role of the settlement.

Regional centers of complex societies often maintained spatial partitions for specialized functions within the site. In addition to the sacred locality discussed above, it might also maintained discrete spaces for industry, storage and burial. They are important factors in determining the social organization and conditions of social development of the settlement.

Settlements include ordinary villages, regional centers and capitals of archaic states. The former can be seen as super large specialized regional centers. They were the political, religious, cultural, as well as economic and trade centers of the past. They contain extremely rich information and are the focuses of historical archaeology. Archaeology of the capitals of archaic states in a broad sense is one of the components of settlement archaeology. The plans of archaic state capital sites are the starting points in studying the political, economic and cultural aspects of early dynasties.

2. *Macroscopic study.* The subjects of “macroscopic settlement pattern study” include the relationship between the contemporary settlements and the relationship between the contemporary settlement clusters.

First, the relationship between the settlements of a settlement cluster. This is the study of the differential functions and interaction of the coexisting settlements in a settlement cluster. In ancient times, especially during the Xia-Shang-Zhou era, people aggregated with their own kind. A settlement cluster was often a region occupied by a human group of relatively intimate kinship relation. Because of differential proximity of kinship relation, economic capacity and military power, the group would have partitioned into camps of different status. This pattern would reflect on the settlement pattern. For instance, the center settlement was significantly larger than the other settlements and the other settlements would cluster around the center. The relationship between the center and the satellite settlements was stronger than the relationship between the satellite settlements themselves. It was attributable to the fact that the satellite settlements needed to maintain a close relationship with the center in the political, economic, cultural, and religious fields, and the center needed to maintain control of the satellite settlements. Therefore, the study of the interaction between the settlements of a settlement cluster is one of the most important means to study the structure of past human groups. Important questions include the number of contemporary settlements within a settlement cluster, their difference in size and hierarchical levels of organization, their inter-relationship, the similarities and differences of the types and functions of the features and artifacts of these settlements.

Second, relationship between contemporary settlement clusters. This kind of study in fact is to investigate the relationship between different human groups. The scale of the settlement cluster reflects the popula-

tion size and strength of the different human groups. The similarities and differences of the type, form and function of the various features and artifacts reflect the distance in the cultural traditions of different human groups. Moreover, changes in the distribution of different settlement clusters chronicle the relative strength of different human groups.

## **Diachronic Study of Settlement Pattern**

Diachronic study is the study of the changes of settlement pattern through time. It can reveal the evolution of the organization and structure of past societies. Diachronic settlement pattern study can be partitioned into microscopic and macroscopic studies and four different levels of study.

1. *Microscopic study I.* This level of study investigates the relationship between human group and environment. It concentrates on the study of the similarities and differences of the settlement locations of different periods.

2. *Microscopic study II.* This level of study focuses on the changes of settlement plan through time. Factors attributable to these changes convey the information about the changes of social organization and structure of past societies.

3. *Macroscopic study I.* This level of study constitutes the relationship between the neighboring settlements through time. They concentrate on the diachronic changes of the relationship of the neighboring settlements, the scale and number of settlements, the hierarchical arrangement of center and satellite settlements, the number of hierarchical levels, the division of labor and trade among settlements.

4. *Macroscopic study II.* This level of study constitutes the relationship between settlement clusters of different times. Important topics include the change of the number and distribution of the settlements of a settlement cluster. These changes may reflect the change in the relative strength of different human groups.

## **Settlement Pattern Study and the Search for the Origin of Civilization**

1. *The study of origin of civilization.* I argue that the search for the origin of Chinese civilization is a comprehensive survey of the beginning of early Chinese civilization and its formation processes. It does not only cover the processes, it also covers the motivation and mechanism;

that is to say, it studies the factors leading to the emergence and development of Chinese civilization.

Civilization is a construction by culture and society. The origin of civilization, therefore, comprises the processes of cultural development and social progression. The cultural sphere includes the mode of production, and the exchange and consumption of material resources. It also consists of the spiritual world of belief, idea and perception and their expressions, that is, art and ritual. The social sphere of civilization mainly concerns the development of social organization and structure. It reflects the transformation of the relationship between people and denotes the stratification of the society. Relationship between members of the society changes from an egalitarian relationship to a relationship of master and subject. The inequality between people increases through time and becomes institutionalized. It eventually becomes a relationship of ruling and being ruled. Public servant of the administrative agency is transformed into the commander of the society. Specialized bureaucratic agency and the state organization—a public administrative mechanism with strong coercive and regulatory capacity—enters the political arena.

Changes in social organization and social structure are the most fundamental changes. The appearance of state is a qualitative change that symbolizes the formation of civilized society. Therefore, investigation of the changes in social organization and structure and the rise of state are central to the search of the origin of civilization.

*2. Relationship between settlement pattern study and the search for the origin of civilization.* Changes in social structure are definitely expressed in the settlement pattern. Therefore, settlement pattern study is one of the important research methods in the study of the structure of ancient Chinese societies, and it is indispensable to the study of the origin of civilization. It can provide critical information in the study of the origin of civilization.

The academic circle has different opinions on the dates of the origin of the Chinese civilization. Many argue that the processes of the origin of civilization started in the middle and late phases of Yangshao 仰韶 culture, at about 6000 BP. The Longshan 龙山 era at 5000 to 4000 BP and the Xia, Shang and Western Zhou eras were the critical times of the formation and early development of Chinese civilization. During this period, significant changes were apparent in many areas of the cultural and social fields. These changes reflect in the archaeologi-

cal remains in different degrees. The most obvious change was the increasingly differentiated settlement pattern. Settlements of different scale constituted a pyramidal structure. The most overt feature is the appearance of a super large center sitting on the apex of the pyramid. It indicates a large aggregation of population. This form of population aggregation was the desire of the social elite and ruling class, which supported the development of stratified society.

How can we study the origin of civilization from the settlement pattern? First, we must select the right point to break through. It is the center settlement (including the archaic state capital) in the core area where civilization began. Because they were the then political, economic and cultural centers, they were the “microcosmic versions” of the past societies that contained rich information of the many aspects of the societies. Therefore, the study of center settlements (including the capital sites of Xia-Shang-Zhou) is the focus in the study of the origin of Chinese civilization. Because of that, the “Origin of Chinese Civilization Project (Stage I)” –a key project in scientific and technological research commissioned by the tenth Five-Year Plan that started last year–propelled “the study of social structure from the perspective of settlement pattern” to the status of the leading sub-project. The sub-project has already achieved considerable results.

*3. The study of settlement clusters and origin of civilization.* To study the social structure from the settlement pattern can only bring understanding of the chronology and plan of the center settlement (including state capitals, same below). It is, by all means, inadequate for our pursuit. We need to understand the conditions of the entire settlement cluster. That is to say, we need to study the surrounding area of the center settlement. It is important to know the number of contemporary settlements, the relationship between satellite settlements and the center settlement, the scale of these settlements, and their hierarchical order. No center settlement was an isolated existence. In fact, a center settlement was the nucleus of the social life of the entire region. However, there is an intellectual error in the study of walled settlements. For instance, many studies only focus on the excavation and study of the center, but overlook the survey and understanding of the settlements distributing around the center. Some think that the knowledge on the center is sufficient to accurately reconstruct the past. The major goal of the study of the processes of civilization is to study the structure of the

society and its evolution. The society was partitioned into several classes and social strata. Understanding of the conditions of the paramount ruler says little about the organization of the entire society. We should not only study the elite of the class societies, we should also study the middle class and the lower class of the society and the various elements that built and sustained the vast social pyramid. To study the relationship between the various social classes and strata necessitates the analysis of the relationship between the members of elite and the members of the middle and lower classes. It is important to know how the social hierarchy was maintained. Was it maintained by geographic proximity or by kinship relation, by tradition and custom, coercive force and violence, or redistribution of wealth? Or was the order maintained by a combination of several elements? In the study of archaic capitals, we need to study the plan of the palatial complex, the functional divisions of the area beyond the palatial complex, as well as the area beyond the perimeter wall of the center settlement. We need to study the relationship between the dynasty or its power center and the surrounding area. This would lead to the understanding of the control strategies of the state on the hinterlands. If not, we will never be able to comprehensively reconstruct the history of state origin. I would like to make an appeal to my colleagues: We should give equal weight to microscopic and macroscopic studies of settlement pattern. We need to prevent seeing the tree but not seeing the wood. We should prevent the tendency of focusing only on the capital site and overlooking the study of the settlement pattern in the periphery and a wider region. This is one of the critical aspects that separates success from failure in the study of the beginning and early development of civilization.

An additional important aspect of settlement pattern study is the relationship between settlement clusters. According to written document, “Yu 禹 met the heads of sovereigns in Kuaiji 会稽. Ten thousand states sent their representatives.” Ten thousand is likely an exaggeration. However, it is indicative that during the era of Yao-Shun-Yu, a great number of “states” scattered in the expansive landscape of China. Each of these “states” was a settlement cluster comprised of one center settlement and its satellite settlements. States differ in strength and populations differ in number, these differences are expressed in the variation in size of the settlement clusters. Inter-state competition and the dynamism of power politics led to changes in the scale of

settlement clusters, and thus hierarchy emerged among the settlement clusters. After the emergence of civilization and the appearance of state, super large center, that is, state capital, emerged. The hierarchy of settlements became increasingly prominent and polarized. Therefore, analysis of the scale and hierarchy of settlements is a legitimate way to monitor the changes in social structure, the processes of the evolution of civilization, and the degree of authority consolidation.

It need to stress the difference between settlements and settlement clusters did not appear only after the emergence of civilization. This difference emerged well before the beginning of civilization. However, this difference was attributable to environmental change and natural increase of population. The difference emerged during the formation of civilization was mainly attributable to non-natural or social factors. This is an important difference needs to be addressed in our study.

### **Research Methods of Settlement Pattern Study**

First and foremost, we should concentrate on the plan of center settlements and cities for tactical breakthrough. The experiences of the archaeological works at Taosi 陶寺, Xinzhai 新砦 and Erlitou 二里头 are invaluable.

Second, great effort should be spent on the systematic and detailed survey of settlement distribution. In recent years, Chinese archaeologists, some collaborated with foreign colleagues, conducted several scientific survey projects. These projects share the characteristics of focusing on the study of settlement clusters and through the distribution of settlement clusters, they discuss the relationship between human and the environment and the structure of the society. Rich results have been obtained. They are models for the study of settlement pattern.

Third, three strategies of settlement pattern study—regional survey, test excavation and excavation—should be employed simultaneously. Settlement survey can only reveal the approximate dimensions and relative dates of the sites. We need to excavate the important localities of the possible center settlements. The effect of this strategy has been demonstrated by the archaeological works at Taosi, Xinzhai and Erlitou.

Fourth, collaboration with the colleagues in other disciplines is needed in settlement pattern study. We encourage the participation of scholars who study paleo-environment, paleo-topography, zooarchaeology,

archaeoflora, archaeological culture and archaic societies. The ideal solution is to organize a multi-disciplinary survey team, which provides opportunities for the scholars to exchange ideas in the field. By complementing each other in team work, we can better accomplish the task of settlement pattern study.

Last but not least, we need to consider the regional characteristics of Chinese archaeology in the search of

the appropriate survey and study methods. To date, all settlement surveys are conducted in North China. The geological setting, weather condition and the preservation of archaeological sites of South China are dramatically different from those of North China. We need to search for the survey methods appropriate for the local conditions.

Notes: The original paper, published in *Wenwu* 文物 (Cultural Relics) 2006.5: 58–66, is written by Wang Wei 王巍. This summary is prepared by the author himself and English-translated by Lee Yun-kuen 李润权.