JINAN IN THE FIRST MILLENNIUM B.C.: ARCHAEOLOGY AND STRUCTURAL HISTORY

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ABSTRACT

This thesis is an archaeological study of social changes in the Jinan Region, eastern China, during the first millennium B.C., using settlement pattern and burial analysis. Taking a multiscalar approach of structural history, I examined local manifestations of political and economic centralization in relation to long-term structural changes in technology, landscape, and mentality. Settlement pattern analysis revealed trends of increasing territorial control, expanding use of metal in local sites, increasing specialization in craft production, and rising state intervention in exchange and production. Analysis of ritual assemblages in burials suggested changes in the nature of political authority, in social relations, and in attitudes towards political and economic changes among various sectors of local population. Against the deeply entrenched structure of kinship solidarity, the rise and decline of militarism, social mobility, and an increasing perception that the state-defined economic order continued into the afterlife were expressed in burial rituals as Jinan society was gradually incorporated into imperial China. Through a comparative study of general trends from the two types of analysis, the research provided archaeological evidence for a transition from a lineage-based political structure to a centralized political structure characteristic of imperial China. Structural conditions, including landscape, technology, and mentality preconditioned the local mediations of historical forces emanating from the larger society and were transformed by changes in the socioeconomic arena. I concluded that an appreciation of the historically specific conjunction of forces operating at different temporal scales in the local society is critical in understanding the way that the final entry of Jinan into the imperial China was realized and imperial life and values were consolidated in the local historical landscape. It is through the local mediations of people in their changing socioeconomic circumstances deriving from the sociopolitical development of the medium temporal scale that long-term, structural changes in technology, economy, and mentality, such as the introduction of iron technology, the threshold of monetary economy, and the formation of an imperial ideology, were brought to the local life in their historically specific manifestations.

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ABBREVIATIONS

CXEC Changqing Xianzhi Editorial Committee

JCM Jinan City Museum

SPIA Shandong Provincial Institute of Archaeology

TCACR Tianjin City Administration of Cultural Resources

ZXEC Zhangqiu Xianzhi Editorial Committee

XZEC Xiuhui Zhenzhi Editorial Committee

NOTES ON ROMANIZATION OF CHINESE TERMS

Names of authors and publications from P. R. China are romanized in the *Pinyin* system. The rest are romanized in the Wade-Giles system. Artifact names, site names, and inscriptions are romanized in *Pinyin* with the exception of Cheng-tzu-yai which follow the established romanization from the original report.

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PART I. INTRODUCTION

One of the most profound social transitions in ancient China was the formation of its centralized political structure, which has characterized the social order and political philosophy of later Chinese civilizations (Tu 1990; Lewis 1990; Su 1999). Underlying the decisive event of Qin unification in 221 B.C. was a centuries-long change in crucial aspects of social life. These movements include the emergence of centralized government, the threshold of urban life, the formation of monetary system, and the transition to iron technology, transformations that set the stage for rapid changes to unfold in the late first millennium B.C. (Weber 1964; Hsü 1965).

As a window into deep time, archaeology allows for emphasis on social movements removed from center stage and considers the life and times of the "people without history" using information on changing spatial and temporal relationships of archaeological remains (Snodgrass 1991; Hodder 1999). It can reveal long-term patterns of change occurring at the most mundane level of society at a slow rhythm that was undetectable to contemporary observations. Rich contemporary textual material, on the other hand, provides an independent source of information to enrich, verify, and critique archaeological theory and methodology (Yan 1999: 10).

In this regional study of the Jinan Region in eastern China, I hope to understand when and how important sociopolitical and technological movements, such as the formation of centralized control, the introduction of a monetary system, and the rise of iron technology, affected local life and how these different forces were entangled with each other in the local world.

Research Questions and Theoretical Perspective

During the first millennium B.C., what changes took place in different domains of people's lives in Jinan society? What were the major trends of political, economic, and technological development represented in these local changes? How were these major trends related to each other?

To account for these local changes, this study employs the approach of structural history put forth by the Annales School, which studies the social conditions of existence within which individual events took place (Braudel 1972, 1973; Ladurie 1978, 1979). In this approach, the story that unfolds is based on the interplay between different kinds of histories operating at different time scales. At one end of the scale were events or *événements*, the short-term occurrences of political and military history. They are the history of individuals, events, and politics spanning an observable period of years or decades. In the middle were conjunctures or

conjonctures, a history with slow but perceptible rhythms...the history of "groups and groupings"--social and economic changes developing within the lifetime of the actors or over generations (Braudel 1972: 21). They concern the broader movements of economies, social structures, and political institutions (Snodgrass 1991: 62).

At the other end of the scale were long-term processes, the history of structures or *longue durée*, factors such as the role of climate, seasonality, and topography on farming and communications, and the effects of technology on production systems --"a history whose passage is almost imperceptible, that of man in his relationship to the environment... those underlying currents, often noiseless, whose direction can only be discerned by watching them over long periods of time" (Braudel 1972: 20-21).

The long-term history also concerns the history of cognitive structures or *mentalités*, the way that the people's thought processes, characterized by the religious, ideological and behavioral systems, bound societies together in particular ways (Barker 1995:1). These symbolic relations of cultural order were entrenched in people's minds and most resistant to change (Kirch and Sahlins 1992: 5). Keightley's (1987) study on mentality in craft production in Neolithic China and Chang's (1990, 1992) works on Shamanistic cosmology among circum-Pacific cultures are attempts of revealing long-term mental structures in the archaeological study.

This paradigm shift in historical sciences calls for an integrated study of "anthropology of history," in which archaeology plays an important part (Sahlins 1981, 1985; Kirch and Sahlins 1992). In a multi-scale approach, subjects of archaeological inquiry, such as technological development, social change, and economic growth are perceived as operating at different "wave lengths." They collectively contributed to the structural transformation of a society. The strength and potential of this approach for archaeology has been demonstrated by archaeologists working from different perspectives (Hodder 1987; Bintliff 1991; Knapp 1992).

The challenge for the multi-scale approach is the absence of a common "language" for the different scales of change, a language that "does equally well for the short-term contingent as for the long-term structural" (Hodder 1999: 130). My choice of time frame for this study, particularly the use of four periods deriving from political history as units of analysis, attests that the research is primarily concerned with general trends gradually transforming the way the local population lived their lives over generations. The nature of archaeological remains determines the fact that the socioeconomic trends are most directly observable in archaeological investigation among changes in the three time scales mentioned above (Snodgrass 1991). The trends of medium time scale, however, were not independent of event and structure. Structures and conjunctures

are articulated through events in the form that local people conceptualize the situation in reality with different ways that conform with their own symbolic categories and practical interest, which may contradict each other and cause unintended conflict. This constitutes the "structure of conjuncture," defined as "the practical realization of the cultural categories in a specific historical context as expressed in the interested action of the historic agents" (Sahlins 1985: xii).

Bintliff (1991: 19) argues that structural change should be analyzed not only in terms of demography, environment, and social and political transformation, but also "in the hearts and minds of past societies as symbolized in the changing components of material culture." As part of lived experience, mind and body should not be separated. Thus in discussing the reproduction of structures, it is relevant to explore both conceptual and material structures (Hodder 1999: 133). This research, therefore, attempts to document the pattern of change in socioeconomic domains of social life in settlement data, as well as to capture different cultural responses to these changes by various sectors of local populations by looking at the pattern of grave goods assemblages. In this regard, a full "description" of the complex details of local sequences of events becomes a favorable research strategy in a multi-scale approach (Hodder 1991: 10, 89; 1999: 129).

In an inductive approach, I present the settlement data for each period, followed by my interpretation of the settlement pattern. Then I discuss general trends. Next, I follow the same procedure for burials, presenting the data and interpreting the data and their patterns. Then, I compare the patterns of the settlement and burial data and propose a set of general trends for the region.

Using patterns deriving from both sets of the data, I hope to investigate: What was the nature of political authority represented in different periods? What type of evidence for political control prevailed in different periods? How did the relationship among different sectors of the local population change? How were the major technological and economic innovations, such as the introduction of iron technology and monetary systems, represented in local communities in different periods? How were they related to the increasingly centralized control of the state? What were the different responses to various trends of social and economic change in the burial rituals? What does the difference mean?

For the distribution and function of sites, what combinations of site functions prevail in each period?

Did certain kinds of economic activities become more or less common as the organization of economy changed? What were the trends in the organization of local production and interregional trade over time? For

burial data, what changes in the burial ritual took place in different sectors of the population and what does it say for their relationship? How do changes in the vessel sets presented as grave offerings reflect different social attitudes and different nature of political structure? What changes took place in artifacts linked to occupational specialties and why? In the case of elite burials are there changes in symbols indicative of ritual and political authority? How were various technological and economic innovations manifested in burials of different segments of the society over time?

The Study Region and Its Landscape

The study region, Jinan, "the land south of the Ji River," is part of Shandong Province in eastern China. In the first millennium B.C., the Ji River was at the position of the present Yellow River which, in turn, was at its northern course beyond the regional boundary. As the Yellow River took the contemporary course after two millennia of constant shifting and flooding, the Ji River ceased to exist. Historically, Jinan's administrative boundary shifts from time to time. For this study, I arbitrarily chose the modern Yellow River as its northwestern boundary, the Long Wall of Qi as its southern boundary, and the Mount Changbai as its eastern limit (Figure 1). The region is approximately 100 kilometers long and 40 kilometers wide. From west to east, the region includes Changqing County, metropolitan Jinan, Licheng District, and Zhangqiu County.

The local landscape is characterized by two major types of terrain, the steeply rising slopes of the Tai mountain range in the south and a strip of an alluvial plain in the north. Several transportation routes go through the mountain valleys connecting the northern plain with southern regions. The mountainous terrain is relatively poor for agriculture and rich for limestone and mineral deposit. Iron and copper ore were mined at the foothills for local industry. Looking beyond the southern boundary, Mount Tai as a unified whole has great symbolic significance. Over the last two millennia, it became a prominent site for mountain cult. It was incorporated in the cosmology into imperial China and graced by numerous royal pilgrimages (Chavannes 1910).

The limestone formation of the mountain range intercepts the flow of underground water creating many natural springs in the northern plain, making it fertile agricultural land for wheat, millet, and other crops. Meandering waterways crosscut the plain and empty into the Yellow River and the Bohai Gulf. Located in the center of the plain, metropolitan Jinan is the regional political and industrial center. An east-west oriented trade route served as the backbone of the alluvial plain, along which major regional centers have been located from antiquity to present (Hou 1979). To its east, it reached the modern industrial city of Zibo, which was built by

the site of Linzi, the metropolitan center of the Qi macro-region, in the late first millennium B.C. To its west, it reached the Central Plain, the heartland of Chinese civilization. One of the most famous pieces of evidence of long-distance movement along this route came from a stone offering shrine at Xiaotangshan (XTS) in the western end of the region, which was erected in the first century. Dozens of inscriptions left by travelers and diplomats revealed the importance of this route in antiquity (Chavannes 1913: vol.1; Luo 1961; Yu 1983).

The climatic condition of the study region was characterized by a gradual transition from a warm, subtropical climate in the second millennium B.C. to the cooler, temperate climate of northern China today. The turning point was at the beginning of the first millennium, as seen in the southern migration of local fauna, such as elephants and rhinos (Zou 1997: 16-17). The social implication of this climatic change has not been studied extensively, but the effect on long-term change in agriculture is inevitable.

Local History

The local history of Jinan, like that of many regions in China, manifests both the specific trajectory of cultural development in the context of its distinctive local landscape and the act of general forces that was transforming the contemporary society. The place of Jinan in the historical landscape of ancient China in the late first millennium B.C. is presented in Figure 2. A chronology of the study period is presented in Table 1.

Table 1: Chronology of Ancient China in the First Millennium B.C.

The First Millennium B.C.						
		Eastern Zhou				
Shang	Western Zhou	Spring and Autumn Period	Warring States Period	Qin	Western Han	
11 th	century	770 47	75	221 2	06 B.C.	A.D.8

The first permanent settlements were founded in the seventh millennium B.C. in the plain area (Wang 1995; SPIA 1998). By the third millennium B.C., settlements and burials indicate the social differentiation and the emergence of walled communities with a number of traits that presage development in later more complex society in China (Fu et al. 1934; Pearson 1981, 1996-97; Yan 1997). The political structure associated with these communities has been characterized as chiefdoms (Underhill 1993; Liu 1996). The linear distribution pattern of four walled town sites along the northern slope of Mount Tai during the late third millennium B.C. suggests the threshold of an interregional trade route and the likelihood that the regional society was actively engaged in interregional interaction (Yan 1997: 249).

Local polities, represented by the walled towns such as Cheng-tzu-yai (CTY) continued to flourish in early Bronze Age until their political prominence was eventually overshadowed by the rising centers with elite regalia bearing Shang symbolism, first at Daxinzhuang (DXZ) and later at Xingfuhe (XFH), believed to be Shang colonies (Chang 1986: 371; Bagley 1999: 221). After the collapse of the Shang network in the late second millennium B.C., the region was inhabited by several lineage-based local polities, which may have maintained tributary obligations to the Zhou court or, more likely, to its regional representatives, such as the feudal states of Qi to the east and Lu to the south. The poem "Greater East" in *Shijing*, an anthology of contemporary poetry, presents a poetic recollection of the antagonism between the local population and the Zhou elite along the trade route at the time (Appendix I: Greater East).

As the power of Zhou hegemony declined after the 7th century B.C., the regional states competed for dominance during the Eastern Zhou Period, which is conventionally subdivided into the Spring and Autumn Period and the Warring States Period. Historical narratives commonly emphasize broad social and political developments during this period, such as the rise of territorial polities, the subsequent devolution of political power within polities to competing lineages or branch lineages interlinked by kinship ties and aristocratic order by more rationalized and centralized political structures (Falkenhausen 1999: 451). The regional state of Qi, centered in the city of Linzi, emerged as a dominant economic power in eastern China by encouraging trade, mining, and craft industry. Located along the strategic route connecting Qi and the Central Plain, the small polities in Jinan were eventually annexed by Qi and its rival state Lu as they competed for dominance. Jinan area became the frontier region for intensive military and economic interaction for Qi and its rivals.

In 221 B.C., Qin annexed the state of Qi along with other regional states. Jinan region became part of the Qi Commandery under the direct control of the Qin Empire. To reinforce its control of the new territories, the First Emperor of Qin initiated the construction of imperial highways connecting the capital to the eastern regions. The Qin government imposed the standardization of measurement, currency and writing system and further attempted to foster an imperial cosmology through the imperial pilgrimages to the Mount Tai.

The enormous amount of labor investment demanded for these grand projects and the harsh legalist governance employed by Qin led to widespread resentment from the populace. Soon, the empire was overthrown by peasant rebellions. The Western Han Empire emerged from the aftermath of the Qin collapse in 206 B.C. To reinforce imperial control, the Han court created a dual administrative system by strategically

placing kingdoms governed by members of royal clan amid commanderies governed by appointed administrators. Jinan was part of the Qi kingdom, the most powerful in these semi-autonomous states.

The kings reinforced their political autonomy through their independent operations of mining, minting, iron workshop, and salt production, which posed severe threat to the imperial revenue and sovereignty. The imperial court responded by trying to carve land out of kingdoms, dividing large kingdoms into smaller ones, and taking kingship away from royal clan members. The Jinan region became part of the Jinan Kingdom and Jibei Kingdom, both carved out of the Qi Kingdom and ruled by two junior lineages of the Qi house.

Tension between the imperial court of Han and the kingdoms eventually led to the War of Seven Kingdoms in 154 B.C., when the kingdoms of Jinan and Jibei rebelled against imperial Han with their coastal allies and lost the battle. In the following decades, the imperial court transferred the administrative and military authority from the kings to the officials of the Commanderies of Jinan and Jibei appointed by the central government. The imperial control further reinforced its regional economy by imposing a state monopoly on the production of currency, salt, and iron after 118 B.C. The handicraft agency, *gongguan*, and iron monopoly agency, *tieguan*, under direct control from the central government were established in Jinan and Tai'an in Shandong as well as in major economic centers in Henan and Sichuan (Wang 1982: 85).

These imperial policies, which were based on the newly adopted Confucian ideology, suppressed the private production and commercialism which had flourished since the Warring States period. Local industry became a source for imperial revenue for wars of expansion and ambitious capital projects. In late first century B.C., the empire gradually weakened as result of ruinously expensive war and corruption. During the final decades of the millennium, widespread natural disasters swept through the region and Central Plain, which intensified the existing social tensions and set the stage for change (An 1993b:57-59). Responding to the opportunities derived from the crisis, tyrant Wang Mang, a native of Jinan, seized the throne in A.D. 9 and ended the Western Han. At the end of the millennium, the population density of the region was roughly at 87.5 persons per sq. km, which makes it one of the most populated regions in the Han empire (Lao 1935: 217).

History of Local Archaeology

The strength of Jinan archaeology lies in its rich contextual information and the historical continuity of its cultural development, which allows for comparison of data in a broad spatial and temporal scope to reveal long-term patterns. Academic inquiries based on field exploration began in the 5th century when the historical

geographer Li Daoyuan investigated the ruins of Han towns and monuments and described them in their association with the natural landscape and river channels (Fu et al. 1934; Luo 1993). In the centuries to follow, scholars made vigorous effort in recording local history and cultural relics from the perspectives of historiography, classics, and antiquarianism (Ning 1994).

In the beginning of the 20th century, Chavannes (1910, 1913) investigated Han monuments in Jinan and the religious landscape associated with imperial cult of Mount Tai. In 1928, Wu Chin-ting (1930) investigated the Han remains at P'ing-ling (Dongpinglingcheng, DPLC) and identified the site as the ruins of a Han town. Wu's report of prehistoric remains from the nearby site of CTY led to excavations by Academia Sinica at the site in 1930. The excavation found prehistoric remains of the "Black Pottery Culture" superimposed by historical remains of the mid first millennium, which allowed Li Chi to propose an indigenous foundation for Chinese civilization, using a direct historic approach (Fu et al. 1934; Chen 1997: 218).

Shandong University and the Shandong Provincial Institute of Archaeology are the major academic bodies that have worked in the region in recent decades. Major archaeological efforts include the surface collection of historical artifacts at DPLC and the salvage excavation of cemeteries, settlement sites, and isolated elite burials. Information from these projects forms the basis for my research. In addition, extensive survey of prehistoric remains has been conducted in the eastern part of the plain area. A system of local cultural resource bureaus (wenguanhui) and museums of various levels undertake appropriate conservation and reporting of surface remains and chance finds. Archaeologists working in these institutions, such as Yu Zhonghang and Ning Yintang, have devoted their entire career to archaeology of Jinan. Meanwhile, the cultural resources of the region have suffered severe destruction in recent decades due to ill-guided agricultural and construction efforts despite the opposition and conservation effort of the archaeologists (Ren and Cui 1997; Zheng and Yuan 1997).

In the mountainous area, archaeological remains have been reported primarily as chance finds and brief descriptions of remains associated with the Long Wall of Qi. Our knowledge of the mountainous region increased significantly after the publication of data from the first full-length, systematic survey of the wall in 1997, a heroic effort undertaken by a volunteer team of senior citizens led by late Lu Zongyuan (Lu et al.

¹ This study uses the modern location to name the archaeological sites except for Dongpinglingcheng, which has been conventionally referred to by the name of a town at this location in the Han Dynasty (Zheng and Yuan 1997).

1998). The extensive publication by this group of avocational archaeologists offered detailed information on the distribution, construction methods, preservation, and associated features for this monumental structure.

PART II: DATA

Inventory of Sites. My research uses data from available archaeological reports from the Jinan region, records of personal visit of sites, topographical maps and aerial photos of the region, and personal communication with archaeologists working in the region. As regional, systemic survey has not been carried out in this region, this research focuses on complementing the extensive works already being undertaken by the local scholars. A general inventory of sites in three periods is presented in Table 2. The site names in Chinese are presented in Appendix II. Some sites have several components of different periods.

Table 2: Inventory of Sites from the First Millennium B.C. in the Jinan Region

Type of Sites	Western	Eastern Zhou		Qin and Western Han
	Zhou	Spring and	Warring States	
		Autumn Period	Period	
Excavated sites with	NJB, WTGZ,	CTY, NJB,	DXZ, NJB	NJB, XRT
residential features	WFZ, XRT	WTGZ, XRT		
Isolated cemeteries	DXZ, XRT	BCG, DLZ	GX, GZC, NLS,	BB, BY, DC, DW, DX, DZ,
and burials			QFS, TQ, WTGZ,	FLS, LZ, MEJ, MIJ, ML, MS,
			WYS, ZJW	NLS, SRS, WJ, WS, WTGZ,
				WYS, XEMS, ZZ
Hoards		XEMS	SW, SZ, TY,	XXZ
			WLPF, WYHZ,	
			XHY, ZQSZF, ZY	
Specified surface	MTL		CTY, DPLC, LB,	CJC, DPLC, DXZ, HC, JH,
collection and			MPB, YZG	LCW, QZ, YZG, WZ
chance finds			,	
Sites with	DJX, HJ, MA,	Surface remains associated with the		BXMC, CJ, DJX, MA, SJC,
unspecified	QLY, SJC,	Long Wall of Qi		WGC, XSC
components	XEZ, XJ			

Deficiency of the Data. Like other parts of China, the archaeological record is strongly biased in favor of remains pertaining to the aristocratic segment of the population (Falkenhausen 1999: 453). Information about the life of the rural population, such as commoner's burials or small village sites is seldom reported or studied. Further, there are sampling problems due to different intensity of surface survey in different parts of region. Only the plain area of Zhangqiu County has been extensively surveyed. In general, very little survey data on overall site distribution within the region has been published. These disparate data, nevertheless, could shed light on the general trend of change in the society after potential bias is taken into consideration. My analysis

should be regarded as a trail of a regional approach, which provides a brief sketch of the historical trend in the major discoveries of the region.

Dating. I adopt the dating of archaeological remains presented by the reporters. Only relative dating was available for sites from the first millennium B.C. Both settlement remains and burials are dated primarily by diagnostic potsherds or vessels. For instance, the *li* tripod was primarily used before the mid first millennium B.C. in this region. The presence of *li* legs, which are distinctive in form, helps to date the occupation of a site in surface collection. In some cases, stylistic attributes of bronze vessels and bronze coins were also used to refine the date. According to contemporary textual record, for instance, the *wuzhu* coin was issued after 118 B.C. This helps to date the burial mound M1 at Shuangrushan (SRS) after the date of issue.

Since the Eastern Han Period is beyond the time frame for this study, archaeological remains dating to this period were excluded from analysis. However, the "Han component" in surface collection of settlement sites may include Eastern Han materials. Further, unexcavated Han burial mounds used for spatial distribution may contain Eastern Han burials as well. These data will be used with caution. Surface remains or unfurnished burials that cannot be dated precisely are generally excluded from the analysis. Finally, certain unique but important artifacts were first found by local people who took them to scrap metal collectors, from whom they were retrieved. Presumably they came from the local area although their precise location is unknown.

Organization and Assumption of Data. Artifacts are classified by their function and material. In addition to their use, they have social and symbolic meaning. Symbols of ritual and political authority include chariots, musical instruments and various forms of ritual bronzes and jades. Categories of data associated with socioeconomic life include coins, architectural remains, weapons, agricultural and craft implements, remains of craft production, and items for personal consumption, such as seals, mirrors, and belt hooks.

There are both metal and non-metal artifacts. The metal artifacts are made of bronze, iron, tin, lead, and gold. The non-metal materials include stone, pottery, shell, bone, and precious stone. Bronze, in general, embodied greater ritual and social significance than pottery and wood. For this study, I use the presence of bronze vessels among grave goods as the defining criterion for elite burials.

Significant overlap and crosscutting exist in each category. As stated in the theoretical section, the meaning and relationship of categories were constantly redefined and rearranged in the structural transformation of the local society. The meaning of the categories and even the composition of the categories themselves are

subject of constant change and can only be understood in relation to other categories in their temporal and spatial framework.

PART III. ANALYSIS AND RESULTS

1. SETTLEMENT PATTERN

In this section, I examine the patterns of change in the spatial and functional arrangement of archaeological remains. I make inferences on social structure, economy, and technological change on the basis of these information. First, I will describe the settlement data for each period followed by a brief analysis of the settlement pattern for the period. Then, I will discuss the general trends in different aspects of local life as seen from the spatial data with the approach of settlement archaeology (Chang 1968, 1983).

Settlement data include sites identified by surface collection and excavation. Artifacts from settlement remains include coins, molds, metal implements, diagnostic potsherds, and debris from various types of specialized production. Features include walls, house foundations, kilns, isolated burial mounds, cemeteries, water wells, and storage pits. Large sites often have components from more than one time period.

To set the stage for a comparison of patterns in settlement data and burial data in the next step, the analysis of settlement data will not include artifacts from burials. While the majority of data from settlements are from residential features, some surface collection and chance finds may come from destroyed burials. I have included a category of "sites with unspecified components" to indicates that there are many sites located in the region, with findings that are unclear, showing that overall site density is high and the pattern is more complex than we can establish at present.

Western Zhou Period Settlement Pattern (11th century to 770 B.C.)

Settlement data of the Western Zhou Period are presented in Figure 3.

Excavated Sites with Residential Features. The excavation at Wangfuzhuang (WFZ) yielded two kilns, two wells, two house floors, a burial, a fire hearth and over 200 pit features dating to the mid and late Western Zhou Period (Sun 1999). Pits used for storage have straw or wooden boards placed in the interior as insulation and steps for access. Complete pottery vessels, potsherds, oracle bone fragments, and carbonized millet grains have been found in the pits. Bone, antler, and polished stone artifacts of unspecified types were also reported at the site.

The excavation at Ningjiabu (NJB) produced two house floors, a well, two burials, and 20 pit features in the Western Zhou component (Ren et al. 1993). F8 is the only well-preserved house dating to this period. The semi-subterranean house has three fire hearths, two of which each had a pottery *li* tripod set on their top. Artifacts found in the fill of pit features include oracle bones, pottery food vessels, implements made of polished stone, shell, antler, pottery, and bone, and arrowheads of polished stone and bronze. Types of implements include spindle whorls, sickles, awls, hoes, knives, spades, chisels, and adzes (Ren et al. 1993: 103-105). The excavation at Wangtuiguanzhuang (WTGZ) identified a pit feature (H148) dating to the Western Zhou Period, which contains diagnostic potsherds and a spindle whorl (Liu and Ning 1996: 49).

In the mountainous area, a residential site was excavated at the Xianrentai (XRT) site located in the river valley at the western part of the region (Ren and Cui 1998; Cui and Ren 1998). Eight semi-subterranean house floors, 30 pit features, and a kiln were found at the site. Skeletal remains of young animals and children have been found at the base of wooden posts and under house floor, probably used as ritual deposit. Remains of fireplace and residential debris were found inside the house (Ren and Cui 1998: 3)(Table 3). The interior of the pit was very well smoothed, presumably used for grain storage. Potsherds representing a wide range of food vessels have been reported.

Table 3: Inventory of Artifacts in Three Western Zhou Houses at XRT

Artifact Material	House F1	House F4	House F6
Pottery	li tripod, spindle whorl	guan jar, weng urn	li, zeng steamer, gui container, bo bowl
Polished stone		sickle, casting mold	
Bone	blade	awl, pendent	
Bronze			arrowhead

Source: Ren and Cui 1998:4-6

Isolated Cemeteries and Burials. In addition to those found at XRT and NJB, six burials have been excavated at Daxinzhuang (DXZ) (Xu 1995).

Surface Collection and Chance Finds. A bronze tripod of late Western Zhou Period has been reported at Muotianling (MTL) in Zhangqiu. The inscription bears the name of a polity tentatively identified as *Guo* (Chang and Ning 1989: 71).

Ning (1994: 38) reported about 100 sites containing unspecified Western Zhou components in Zhangqiu County which is the only area that has been surveyed. However, only the locations of the larger settlement sites were known (Ning 1994: 38 and 63).

Settlement Pattern. The spatial distribution pattern of sites in the region suggests that both the plains and the river valleys in the mountainous terrain were inhabited in the Western Zhou Period. The eastern part of the plain appears to be more intensively inhabited than the western part. This may represent a sampling error due to lack of survey in other parts of the region. Since the information from XRT in the western part of the region closely resembles that of the NJB site in the east, there may be no significant difference between sites located in the plain and in the river valleys and the nature and intensity of social interaction in them.

Information from the Zhangqiu survey and from the excavations at XRT, WFZ, and NJB shed light on the local life at the turn of millennium. The presence of storage facilities, permanent house structures, wells, and burials in settlement sites suggests that local inhabitants of Jinan led a settled agricultural life. The presence of a polished stone mold for bronze casting and kilns further indicates that they were engaged in bronze smelting and pottery production. The spatial association of the stone mold with artifacts representing domestic life and food production activities, such as sickles, awls, pendants, and food vessels, on the house floor F4 at XRT indicates that craft and subsistence production were carried out at the community level without strong signs of specialization. The close spatial association between remains of pottery or metal production and residential remains, wells, pit features, and burials at XRT and NJB support this general pattern.

Data from house floors at XRT and pit features at NJB suggest that daily activities were primarily carried out with implements made of polished stone, shell, antler, and bone. At both sites, bronze was reserved for artifacts associated with hunting activities and/or warfare, such as arrowheads. The presence of an inscribed bronze tripod at MTL, which may come from a destroyed elite burial, suggests the presence of political and ritual authority within the region.

Spring and Autumn Period Settlement Pattern (770-475 B.C.)

Settlement data of the Spring and Autumn Period are presented in Figure 4.

Settlement Sites with Residential Features. In the plain area, remains of the Spring and Autumn Period have been reported at WTGZ and CTY. Excavation at WTGZ revealed at least two pit features containing potsherds from food vessels and fragments of shell sickles (Liu and Ning 1996: 43).

The excavation at the walled town site of CTY revealed a large inventory of artifacts from the Eastern Zhou component (Fu et al. 1934). The settlement was enclosed by a rammed earth wall, which measures approximately 400 meters on each side. The excavation identified six pottery kilns (Fu et al. 1934: 34-35).

Artifacts of pottery, polished stone, bone, shell, antler, and bronze have been reported. Pottery artifacts include vessels for various aspects of food preparation and consumption as well as potter's paddles for the manufacture of the vessels (Fu et al. 1934: 57-70). Polished stone artifacts include pendants, grinding stones, rubbing stones, hammers, axes, adzes, chisels, shovels, knives, and arrowheads (Fu et al. 1934: 82-89). Fu et al. (1934: 76-77) reported that the raw material for lithic implements were primarily obtained from outcrops of the Mount Tai. Bone artifacts include oracle bones, chisels, awls, needles, bodkins, hairpins, and arrowheads. Worked antler resembling the forms of awl, axe, chisel were also known. Shell artifacts include shovels, harvesting knives, saws, rings, and arrowheads. Metal artifacts include a bronze knife and two bronze arrowheads. The rammed earth wall associated with the upper layer deposit was built during the Spring and Autumn Period (Zhang 1993: 2). The majority of artifacts were dated to the same period.

In addition to sixteen furnished commoners' burials, the NJB excavation revealed two kilns, a well, and pit features of unspecified number dating to the Spring and Autumn Period (Ren et al. 1993: 48-79). The majority of the pit features were interpreted as storage pits. Artifacts found in the fill include a small number of potsherds from food vessels, worked bone, and fragments of polished stone implements.

In the mountainous terrain, residential remains have been reported in the Eastern Zhou component at the site of XRT (Cui and Ren 1998; Ren and Cui 1998; Ren 1998). In addition to the lineage cemetery of the Si polity, the excavation reported 20 pit features, some of which were used for storage (Ren and Cui 1998: 7). Artifacts of pottery, stone, shell, and bone have been found in the fill. Pottery artifacts include various types of food vessels, a ceramic mold with carved design for casting a metal implement of an unspecified type, and spindle whorls. Polished stone tools include adzes and axes. Bone artifacts include awls, arrowheads, hairpins, and worked bone. Shell tools are primarily sickles. The Eastern Zhou occupation at XRT dates to late Spring and Autumn Period (Ren and Cui 1998: 10).

Isolated Cemeteries and Burials. Isolated elite burials have been reported at Dianliuzhuang (DLZ) and Beicaogou (BCG) (Sun 1998: 21; Zhu 1973: 64).

Hoards. A hoard of bronze ritual items unearthed at Xiao'emeishan (XEMS) was deposited in pits on the northern slope of a hill unassociated with burial or residential features. The hoard produced at least 80 bronze items, including chime bells of various types, *gui*-shaped plaques, and *bi*-shaped disks (Chang and Ning 1989: 66). One bronze chime measures 0.75 meter in full height. The extraordinary large size indicates great

ritual significance of the hoard. The hoard was identified as a ritual deposit on the basis of its content and unusual context (Chang and Ning 1989: 70).

Defense Structure. Remains of a monumental structure, the Long Wall of Qi, were located across the mountainous landscape. The wall meanders from Guangli (GL) at the western end of the region eastward and reaches the western shore of the Yellow Sea beyond the regional boundary. Based on the measurement from the 1997 survey, Lu et al. (1998: 30) reported that the wall spans a distance 618.9 kilometers at its full length. A third of the wall is located in the region, of which 75 % has visible surface remains. The survey team also identified remains of smoke signal towers, passes, and fortifications for stationing troops along the wall (Lu et al. 1998: 16-22). The body of the wall is about 6 meters wide and is primarily constructed of stone. Different methods of construction were employed depending on local resources.

Due to the absence of archaeological excavation, the remains of the Long Wall of Qi is dated on the basis of textual references to the wall in inscriptions on bronze vessels and in historical works from the first millennium B.C. (Wang 1979). For instance, the inscription on the Biao Qiang set of bronze chime bells discovered at Jincun, Luoyang in 1930 mentioned the invasion of the *Changcheng*, "the Long Wall," and its nearby towns by an army from the state of Jin (represented by the states of Han, Wei, and Zhao in Figure 2) in the "22nd year" (Li 1985: 34). Scholars are yet to reach a consenses on the exact equation of the event with two similar historical instances in 555 B.C. and 404 B.C. (Wang 1979:198; Li 1985: 34; Ren 1998: 32). In either case, it is clear that the section of the wall referred by the inscription, which was located in the western part of the study region, had been completed by the time of invasion and it did witness military confrontations in the mid first millennium B.C. Historical accounts suggested that the eastern sections were gradually added on to defend the northern expansion of the southern states from the Yangtze River basin, such as Chu and Yue, which were finally completed as a whole in late fourth century B.C. (Wang 1979: 199).

Settlement Pattern. The distribution pattern of sites suggests that both the plain and mountain area were inhabited. The most imposing landmark was the Long Wall, which characterizes the mountain as a military frontier in the late Spring and Autumn Period. Town life, represented by the combination of a rammed earth town wall, kiln production, and a rich inventory of artifacts associated with domestic life and craft production, flourished at the site of CTY, which was previously a prehistoric town in the third and second millennia B.C. Although the report did not distinguish between completed products and the uncompleted ones,

the rich variety of artifacts indicates that both manufacturing and consumption probably took place here. No contemporary burials have been found in the walled town, which indicates that they may lie outside of town wall away from the community. Sites with residential features and cemeteries in a spatially bounded area such as XRT and NJB may represent smaller communities in the region.

The distinction of settlements with walled enclosure from ones without as well as between military structures and community sites suggests difference in site functions. Artifacts of polished stone, bone, antler, and shell dominate the tool assemblage at CTY, XRT, and NJB. These materials were probably manufactured locally with native resources. For instance, the lithic tools at CTY were primarily fashioned from raw material from Mount Tai. Bronze was used for weapons, such as knives and arrowheads at CTY, and ritual items, such as musical instruments at XEMS. The great diversity of these non-metal tools, in contrast to the general absence of metal tools and their molds, indicates that metal was not widely used in subsistence production despite occasional finds of metal tools from scrap metal piles and surface finds that may date to the first half of the millennium (Wang 1957: Yu 1979).

Local political authority is represented by the presence of elite burials at XRT and BCG. The nature of political authority revealed by these elite burials will be discussed in detail in the section on the burial analysis. Political authority might have also been involved in the construction of town walls at CTY and the sponsoring of a ritual deposit at XEMS (Chang and Ning 1989: 70).

The construction of the Long Wall by the end of this period represents evidence of territorial control of the region by a powerful political authority lying beyond the regional boundary. Like the Roman walls, the purpose of the wall was probably both military and financial (Collingwood and Myres 1936). With the old Yellow River and the Ji River serving as the northern barrier and the wall and mountain range as the southern one, the heartland the Qi state was protected from its hostile neighbors, such as Yan, Lu, Jin, Chu, and Yue (Wang 1979: 194). The financial aspect is inferred from the inscribed Qi standard measurement containers bearing the term *guan*, "pass," found at Lingshanwei (LSW) in the eastern end of the wall in 1857, presumably used for collecting tax in the Warring States Period (Wang 1979: 194; Li 1985: 133). The labor force mobilized for such massive construction and the impact it had on the local society are questions to be further explored.

In general, settlement data from the Spring and Autumn Period reveal that productive activities in daily life in local communities were primarily carried out with a virtually Neolithic tool assemblage with limited use

of metal. A basic division between town life and rural life created by the town walls is observed. However, the nature of this distinction and the mechanism of social control is not fully understood. Signs of territorial control, represented by the construction of the large defense wall indicate the imposition of centralized control by the end of this period (Trigger 1968: 69). Even today, when this vast work remains only in shattered fragments, it stands as a monument of Qi purposiveness, which presaged the construction of the Great Wall(s) on the northern frontier by the Qin-Han empires of the late first millennium B.C. (Figure 2).

Warring States Period Settlement Pattern (475-221 B.C.)

Settlement data of the Warring States Period are presented in Figure 5.

Excavated Sites with Residential Features. In addition to 28 furnished commoners' burials, the NJB excavation revealed a kiln, two wells, and pit features of unspecified number in the Warring States component (Ren et al. 1993: 48-79). The majority of the pit features were interpreted as storage pits. A small number of potsherds from food vessels, worked bone, fragments of unspecified polished stone implements, and a human skeleton have been found in the fill. A fragment of a large bronze knife coin with one remaining inscription, *Qi*, has been located in the cultural deposit.

An unspecified number of rammed-earth wall foundations, storage pits, wells, and pit burials from the Warring States Period have been excavated at DXZ (Xu 1995). Roof tiles, plain tile ends, and various types of food vessels have been reported from these features.

Isolated Cemeteries and Burials. Cemeteries have been excavated at Nülangshan (NLS) (Li 1993a and 1993b), Wuyingshan (WYS) (Liu 1954; Jin 1980), WTGZ (Liu and Ning 1996: 43), Gaozhuangcun (GZC) (CXEC 1992: 420). Isolated elite burials have been reported at Zuojiawa (ZJW) (Liu and Wang 1995), Qianfuoshan (QFS) (Li and Yin 1991), Tianqiao (TQ) (Yu 1997), and Gangxin (GX) (Luo 1980).

Hoards. Coin hoards have been found at Sunzhuang (SZ), Xiheyai (XHY), Wulipaifang (WLPF), Shenwu (SW), Tangye (TY), Wangyahouzhuang (WYHZ), Zaoyuan (ZY) (Zhu 1972), and Zhangqiushizhengfu (ZQSZF) (Ning 1994: 137). An inventory of these hoards is presented in the Appendix III.

Arch-backed small knife coins in the ZY hoard can be dated to the mid Warring States, on the basis of their stylistic similarity to coins found in the dated QFS elite burial and both coins and molds excavated in Juxian County (Li and Yin 1991; Li 1991; Su 1991, 1994). The single-character inscription conventionally known as *ming* is yet to be deciphered meaningfully. The large Qi knife coins and Qi round coins were probably

used in late Warring States. This is inferred from the WLPF hoard, which contains 59 large Qi knife coins, 599 Qi round coins, and a Yan round coin dating to the end of the Warring States (Liu 1975: 239; Zhu 1984: 100, 165). The hoard reveals that when the Yan round coin, *yihuo*, "one cash," was traded in the region at the end of Warring States, the large Qi knife coins and the Qi round coins were the major types of currency in circulation. This indicates that the majority of hoards were buried in late Warring States.

Surface Collection and Chance Finds. Surface collection at Mapengbei (MBP) reported potsherds from food vessels and pottery spindle whorls of the Warring States Period. At least six potsherds from the *dou* stemmed plates were stamped with seals bearing place names and the terms *li*, "block," and *lizheng*, "block supervisor" (Liu and Sun 1995: 308).

The 1975 reconnaissance at the site of DPLC reported artifacts of the Warring States Period (Zheng and Yuan 1997). Pottery artifacts include potsherds from a variety of food vessels, potter's paddles, and spindle whorls. At least two stem sherds from *dou* stemmed plates were stamped with seals bearing place names and the term *li*, "block." The reconnaissance also reported three fragments of ceramic molds for casting arch-backed small knife coins inscribed with a single character *ming* (Zheng and Yuan 1997: 159; Yu and Song 1998: 382). Bronze artifacts include a fragment of a large bronze knife coin bearing the inscription of *muo zhi fahuo* (the first character missing), "the legal currency of [Ji]muo," and a fragment of a small knife coin with a last character *huo*, "currency," remains in its inscription (Zheng and Yuan 1997: 159)². In 1930, a fragment of a large knife coin bearing the first two characters of its inscription, *Jubang*, "the Ju polity," was found at the site as chance find (Zhu 1984:105; Li 1985: 391).

A fragment of a small knife coin was reported in the Eastern Zhou components at CTY (Fu et al. 1934: 89). Since the fragment closely resembles the shape of coins represented on the DPLC molds, they were probably contemporaneous. A Qi standard volume measure stamped with the character *shi*, "market," has been found at DXZ in 1939, which dates to the Warring States Period (Li 1959 cited in Yu 1997; Qiu 1980). A fragment from a bronze spearhead bearing the inscription *Yanwang Zhi*, "King Zhi of Yan," has been unearthed at Liubu (LB) with unspecified provenance (Yu 1996a: 124). A bronze *ge*-halberd commissioned by the same king for his royal guard was also found in scrap metal piles from the Jinan area (Yu 1996a: 124-125). Using historical documents and the spatial distribution of weapons made by this very person, scholars have

² Fahuo, "legal currency," was also interpreted as dadao, "large knife," or dahuo, "large currency."

convincingly demonstrated that these weapons were left in the Qi territory during the military expedition under the Yan King Zhaowang, Zhi, from 284 to 279 B.C. (Zhang 1973: 244; Shi 1982; Yu 1996a).

Settlement Pattern. Spatial distribution pattern of Warring States sites reveals that all sites with evidence of political authority, marked by elite burials, and economic importance, marked by presence of coins hoards, coin molds, and state-manufactured pottery, were found on the plain. Besides settlements and burials, coin hoards became a distinctive class of data in this period. The linear pattern of distribution coincides with the east-west trade route going through the region. The presence of kilns, coins, and potter's tools at NJB and DPLC indicates a close association of monetary exchange and craft production.

The majority of sites yielded artifacts bearing signs of state administrative control of production and exchange, such as coins bearing names of states, cities, or monetary units and pottery stamped with state agencies, such as *shi*, *li* and *lizheng*. The DXZ volume measurement container bearing the stamp of *shi*, "market," which stands for the state market control agency, indicates that the state was imposing standard measurement system at the region (Yu 1997). According to historical account, *li*, "block," a community of up to 100 households, was the basic administrative unit for controlling the populace by the time of regional states and empires in the first millennium B.C. (Tu 1990:110). Organized by residential rather than kinship affiliations, these community blocks formed the basic unit for providing taxation, *corvée* labor, and military service (Tu 1990: 104-126). In case of violation of law, all members of the community, particularly the *lizheng*, "the block supervisor," would shoulder the legal responsibilities.

Some of these community units were potters' communities, which specialized in pottery production (Qiu 1980: 288). According to contemporary regulations, only state-registered craftsmen, who had a tax obligation to the state, could formally engage in commerce and craft production (Li 1985:470). The presence of pottery stamped with seals identifying the municipal affiliation of the craftsmen and their supervisors at MPB and DPLC indicates that the local communities had been involved in state-controlled production or traded in pottery vessels from state-controlled manufactures.

Table 4 suggests that DPLC had the most categories of material dealing with long-distance trade, state control, and craft production during the contemporary period. The table indicates that pottery production, bronze smelting, currency minting, and market exchange were present at the site. The presence of mint indicates specialized production for the purpose of facilitating market exchange. However, it is not clear whether the

local production of coins was controlled by local elite or by the state of Qi. The combination of these functions at DPLC suggests that it emerged as a center for craft production and trade in the Warring States Period.

Table 4. Evidence of Trade, Craft Production, and State Controlled Economy from Warring States Period Sites in the Jinan Region

Sites	state-manufactured pottery	potter's tools or kiln	bronze coins	coin molds
MPB	+			
CTY			+	
NJB			+	
DXZ	+			
DPLC	+	+	+	+

The distribution of coin hoards coincides with the trade route in the plain area. Small knife coins from the ZY hoard and a fragment of a small knife coin found at CTY was probably made locally as the ceramic molds for this type of coins have been reported from DPLC and other parts of Shandong (Song 1991). Except for a stylistic distinction in inscription, these small knife coins are virtually indistinguishable from the archbacked small knife coins minted in the state of Yan (Zhu 1984: 149-155; Li 1985: 389). The circulation of these small knife coins in the Qi-Yan border region and Zhongshan territory is indicated by their presence in large money hoards unearthed at Xiaojialou (XJL) in Cangzhou and at Dongchengnancun (DCNC) in Lingshou (TCACR 1973; Gao 1982). This indicates that the regional economy was once part of a large monetary network encompassing both the Yan and Qi territory by the mid Warring States Period (Sun Jingming 1991). Further, the presence of *yihuo* coins from the state of Yan indicates the trade relationship with the northern state continued in the late Warring States Period.

The majority of hoards (7 out of 8) yielded Qi state coins and 90 % of coins counted in all hoards (1542 out of 1691) are Qi state currency, including several types of inscribed large knife coins and three types of round coins. Names of several Qi cities were represented on the coins, such as Jimuo, Ju, and Anyang. Information from these hoards reveals that Qi state currency, which was centrally manufactured in the Qi heartland and rarely circulated beyond the Qi state boundary, played a dominant role in the local economy during the late Warring States Period (Zhu 1984; Yu 1996b).

The inventory of the bronze coins found at the settlement sites and hoards suggest that the local community maintained extensive trade connections with major Qi cities to the east and the state of Yan and its adjacent areas north of Jinan. The absence of inscribed bronze cowries and stamped gold plate, which were

circulating in large volumes south of the region, indicates minimal monetary transaction with the southern economy dominated by the state of Chu (Kong 1982; Zhu 1984: 211, 317; Li 1985: 393).

Finally, the discovery of two bronze weapons commissioned by Yan King Zhi in Jinan allows us to make a possible link between archaeological remains and specific historical event, in this case, the invasion of Yan between 284 and 279 B.C. This presents direct evidence of intensive military confrontation that the local society had witnessed in the late Warring States Period and adds a political dimension to the economic interaction represented by the distribution of currency.

Since this period does not have a well-excavated settlement, technological change in local tool assemblages can not be directly observed. The local production of bronze currency, however, indicates that metal became widely used as a medium for commercial transactions.

Qin and Western Han Period Settlement Pattern (221 B.C.- A.D. 8)

Settlement data of the Qin and Western Han Period are presented in Figure 6.

Excavated Sites with Residential Features. In the mountainous area, wuzhu, "five zhu (weight unit)" coins, bronze arrowheads with iron stems, roof tiles, and diagnostic potsherds have been excavated at XTR (Ren and Cui 1998: 1).

In the plain area, Han residential remains have been excavated at the site of NJB. A total of eight child urn burials, 172 pit features, eleven ditches, and eleven wells have been reported, which date to early and mid Western Han. The majority of pit features were interpreted as storage pits since the interiors were carefully smoothed. Potsherds, fragments of iron and bronze artifacts have been found in the fill of pit features and wells. Pottery artifacts include a wide variety of food vessels, spindle whorls, and ceramic millstones. Iron items include fragments from hoes, plowshares, knives, and swords. Bronze artifacts include arrowheads, belthooks, gilt-bronze door ring holders, and wuzhu coins.

Isolated Burials and Cemeteries. In the western end of the plain, two pairs of extraordinarily large burial mounds have been located at SRS and Fulushan (FLS) (Ren 1997). In the central part of the plain area, commoner's cemeteries have been reported at WYS (JCM 1972), and Zhangzhuang (ZZ) (Sun 1999). In the eastern part of the plain, large Han burial mounds have been located at Beibi (BB), Biyang (BY), Dongcao (DC), Dingwang (DW), Dongxing (DX), Dianzi (DZ), Luozhuang (LZ), Meijia (MEJ), Miaojia (MIJ), Maliang

(ML), Mingshui (MS), Wangjin (WJ), and Weishan (WS)(ZXEC 1992: 539; Ning 1994: 90; XZEC 1999: 392). Commoner's cemeteries have been reported at WTGZ, NLS, and XEMS (Ning 1994: 40).

Hoard. A coin hoard containing Qin-style banliang, "half liang (weight unit)," round coins and Qi round coins has been reported at Xixingzhuang (XXZ)(Ning 1994: 137). This hoard is the only Qi remain among the available data.

Surface Collection and Chance Finds. In the western part of the plain area, Ren (1997) reported a large walled town site at Luchengwa (LCW) submerged under heavy sedimentation from the Yellow River. It features a relatively square layout with a north-south orientation. The rammed earth wall measures approximately 2 kilometers on each side. Although Han architecture remains have been found in the bottom of modern wells within the enclosed area, few artifacts remain on the surface as result of sedimentation.

Ren (1997: 12) located the remains of a large specialized workshop for manufacture of roof tiles and wall bricks at Chujicun (CJC) immediately north of the walled town. At least ten kilns and scatters of roof tiles, bricks, potter's paddles, *weng* urns, and large water containers have been reported at the site, which are dated to the Western Han Period (Ren 1997: 13). A large number of Han burials have been reported in the current river channel of the Nadashahe River south of the town wall.

In the eastern part of the plain, data from several surface collections at the walled town site of DPLC have been reported (Wu 1930; Ning 1994; Zheng and Yuan 1997). The site has a square-shaped layout with a strictly north-south orientation. The rammed earth wall measures 1.9 kilometers on each side. The width of the wall measures 24 meters at top and 40 meters at base. The remaining sections of the wall still stands 1 to 5 meters high. Archaeological reconnaissance in 1975 reported large volume of Han remains and identified traces of gates and roads (Zheng and Yuan 1997:154).

The investigation identified a specialized zone for iron smelting and pottery production in DPLC. The iron casting remains are concentrated in an area of 200 meters by 210 meters in the southwest quarter of the enclosed area, including charcoal, ash, iron ore, and debris from iron smelting (Yang and Shi 1955; Zheng and Yuan 1997: 154, 181). Wu (1930: 480) describes the layer of burned clay and debris from iron smelting at the area as approximately 0.6 meter in thickness. A pottery production area with a concentration of kilns was reported north of the iron production area (Ning 1994: 80; Zheng and Yuan 1997: 154).

In the northwestern area of the town, locally known as *Dianjidi*, "palatial foundation," the presence of a rammed earth foundation, possibly for a large palatial structure, has been reported. Artifacts associated with this area include large quantities of decorated floor bricks, roof tiles, and column bases.

Adjacent to the west wall of DPLC, Wu (1930: 480) collected two fragments of soapstone molds for two types of *wuzhu* coins among bricks and roof tiles. Ten more soapstone molds for casting the *banliang* and two types of *wuzhu* coins were found at the site in 1975 (Zheng and Yuan 1997: 167). One mold for *banliang* coin (diameter 2.4 cm) was carved from a mold for casting a small version of *banliang* coin (diameter 1 cm), as the impressions of the latter still remain on the back of the mold. The variety of coins represented by the molds indicates that the local mint was engaged in production of currency for an extended period.

Collected from DPLC with unspecified provenience were architectural remains and a full range of artifacts associated with urban life. Architectural remains include stone column bases, earthenware sewage pipes, roof tiles, decorated bricks, and roof ends decorated with various motifs or inscriptions of auspicious phrases of *qianqiu wansui*, "forever glorious," and *wansui fugui*, "forever conspicuous." Ceramics include various types of pottery vessels for food preparation and consumption, spindle whorls, toy figurines, and fragments of molds for stack-casting iron hoes. Besides soapstone coin molds, stone artifacts also include mortars and grinding stones. Bronze artifacts include fittings for the sunshades on chariots, belt hooks, mirrors, seals, coins, and arrowheads with iron stems (Ning 1994: 81; Zheng and Yuan 1997: 163-165).

Iron artifacts were found in great abundance. They include cast-iron molds for casting iron implements and a wide variety of finished iron implements (Table 5).

Table 5: Types of Iron Artifacts Collected at DPLC

General Class	Types of Iron Artifacts	
Agricultural tools:	shovel, spade, forked-hoe, hoe, plowshare, sickle	
Craft tools:	adze, socketed axe, wedge, saw, hammer, chisel, wrench, awl, knife	
Weapon:	battle knife, sword, ji halberd, battle axe, spearhead, arrowhead, battle hook	
Cast-iron Molds:	plowshare mold, hammer mold, spade mold, shovel mold	
Domestic Items:	ding tripod, fu cauldron, lamp, ladle, clip	
Miscellaneous:	axle-cap, gear, chain, paper weight, scale weight, seal for branding horses	

Sources: Zheng and Yuan 1997: 169-181; Ning 1994:80.

Metallurgical analysis of iron samples shows that a variety of iron-working techniques had been employed, including forging, quench-hardening, heat treatment, and decarbonization, which produced high grade steel and durable malleable cast iron (Zheng and Yuan 1997: 181).

Eight iron artifacts have cast inscriptions (Zheng and Yuan 1997: 183). A single-character inscription possibly representing a family name for the owner of a privately operated iron workshop is found on a set of cast-iron molds for casting plowshares and four finished plowshares. A cast-iron mold for casting iron hammer bears a two-character inscription of *Tai'er*, "Tai 2," which combines the initial for the Taishan Commandery south of the region with a serial number. An iron seal bears the term *Yangqiuji*, "Calvary of Yangqiu," for branding military horses for the local government of Yangqiu, a local town in Jinan. Finally, an iron paperweight bears an auspicious phrase of *rili*, "profitable everyday."

Outside the town walls of DPLC, evidence for another iron workshop has been found at the site of Quanzhuang (QZ). Remains of a smelting furnace, iron hoe, bricks, tiles, potsherds have been identified at an area of 30 meters by 20 meters with a heavy concentration of burned debris (ZXEC 1992: 535).

A Han settlement site with rammed earth wall has been identified at Juhe (JH) (Fu et al. 1934). The remains of smaller Han walled settlements were also identified at Gucheng (GC), Huicun (HC), and Wenzu (WZ) (Ning 1994: 44). These small town sites, however, have not been investigated archaeologically.

Little information is known for other sites. Molds for the *banliang* coins of early Western Han as well as weapons have been reported at Yeizhangou (YZG)(ZXEC 1992: 537). In addition, two stone molds for casting the small *banliang* coins were reported in Zhangqiu without specific locality (Yu and Song 1998: 386).

Settlement Pattern. At the regional level, while both the plain and mountain area were inhabited in Han, the plain became more intensively developed as represented by the emergence of two large town sites at LCW and DPLC. Functional specialization between sites can be observed for this period. Both LCW and DPLC feature a combination of rammed earth walls, craft production, and elaborate architectural remains, such as decorated bricks and roof ends, which are absent in other contemporary sites. Further, elite burial mounds are distributed in the hinterland of the two walled towns, indicating the political prominence of these centers.

Iron production and coin production were associated with DPLC, where wood and ore from the mountain slopes were close by. The techniques employed, particularly the use of blast furnace, ceramic stacked-up molds and cast-iron mold for iron casting, give clear indication for mass-production of metal implements. Iron casting with blast furnace was distinctive to the Han Empire in contemporary Old World. Further, the presence of malleable cast iron at DPLC, which involved a lengthy heat treatment up to 1000°C for improving the mechanical properties of cast iron, indicates that the technology for the manufacture of inexpensive and

durable iron products has been adopted in the local workshops (Wagner 1993: 338). The wide range of agricultural activities associated with iron implements, such as plowing, weeding, and harvesting, suggests that iron had been used in the full range of subsistence production.

Evidence for specialized production of iron tools at regional centers indicates closer economic integration between the urban centers and their hinterland. Agricultural implements were produced by manufactures located in the towns and distributed to rural consumers. The use of blast furnaces for iron-casting and sophisticated heat-treatment techniques indicates a change in the pattern so that local environmental resources were exploited as they placed high demand on the wood supply. The changing pattern of economy and ecology, however, can only be inferred as data on mining and logging operations are not available.

The importation of cast-iron molds from the imperial iron monopoly in Taishan Commandery south of the Mount Tai suggests a high-level interregional coordination in craft production. The diversity of bronze and iron artifacts at DPLC and NJB, as well as the virtual absence of polished stone tools in these sites, suggests metal had been used in many aspects of daily life at the basic level of local society.

At the community level, evidence for monetary exchange, elaborate residences, and craft production represent vibrant urban life at LCW and DPLC. Specialization in craft production can be observed from specialized areas for pottery production located at LCW and DPLC. At DPLC, where more information is available, areas of iron and pottery production are spatially separated. Both, on the other hand, were confined to the walled area with the presence of political authority represented by a palatial foundation. The presence of iron products bearing the initial of the imperial monopoly agency indicates that the imperial state was once engaged in production and distribution of iron items in Jinan and its adjacent regions.

In addition to archaeological evidence of imperial administration, such as the iron monopoly agency, large elite burial mounds around these town sites and the palatial foundation within DPLC reveal evidence of political authority. The pattern from settlement data alone, however, is not sufficient enough to reveal the shifting relationship between imperial and local power.

The apparent decline of hoarding activities in this period may be result of a decline of social unrest in the region under the imperial governance. Nevertheless, the XXZ hoard reveals that the standardization of currency in Qin as a key transition in the monetary system of ancient China, was not rigidly implemented locally, as coins from both Qi and imperial Qin were present in the hoard (Ning 1994: 137). In Han, local

production of imperial currency suggests that the local economy was closely integrated into the imperial economy through trade and taxation. The presence of coin production at DPLC and sites beyond the regional center, such as YZG along the trade route going through the mountainous area, suggests that more communities were involved in monetary exchange as the monetary economy increased in intensity.

Historical accounts suggest that the local production of coinage flourished until 113 B.C., when the imperial mint at *Shanglinyuan*, the imperial park, was given the monopoly to mint *wuzhu* coins. This would indicate that the production of *banliang* coins (issued from Qin to 118 B.C.) and some types of *wuzhu* (first issued in 118 B.C.) was controlled by the local elite (He 1998). The presence of molds for two versions of *banliang* coins with significant difference in their sizes and two types of *wuzhu* coins with stylistic differences in inscriptions indicates that the local mints were coping with various imperial monetary reforms in the historical accounts for achieving a national standard (Peng 1958). Historically, iron production went through a similar transition from local operation to imperial monopoly in 118 B.C. As both the family name of private owner and the initial of imperial workshop have been found on cast-iron molds from DPLC, clearly both have been involved in the production at different times. Archaeologically, it is difficult to identify who controls the coin production and to what extent that the local authority was involved in the iron production. Further, it is not clear if changes in national economic policies were uniformed implemented locally as described in the history.

General Trends in Settlement Pattern of the First Millennium B.C.

An examination of the settlement patterns from four periods reveals several general trends in the changing spatial distribution and functional arrangement of sites in the local landscape, which is related to the transformation of politics, economy, and technology.

The site distribution is characterized by a gradual increase of the economic and political importance of communities in the plain area. Signs of localized political authority were found in river valleys in the mountains as well as on the plains during the Western Zhou and Spring and Autumn Periods. During the Warring States and Western Han Periods, however, coin hoards and regional economic centers were found on the plains, indicating a significant shift in land-use. The growing importance of the plains may have been stimulated by the increasing scale of economic operation and increasing intensity of political control, as all major sites and coin hoards are located along the route of transportation connecting the Central Plain and the heartland of Qi territory (Zhu 1972).

The mountainous area first became a frontier and boundary for the state of Qi. The close coordination between iron workshops on two sides of Mount Tai, DPLC in the north and Taishan Iron Monopoly in the south indicates that it had ceased to function as an economic barrier in the imperial era. Although significant changes of the site distribution in the mountains cannot be observed within the study region, when we look slightly beyond the ruins of the Long Wall to the peak of Mount Tai and the southern slope, evidence of imperial pilgrimage from Qin and early Han represents the transformation of the mountain range from a national frontier into a religious landscape for an imperial cosmology (Chavannes 1910).

A gradual change in site functions is characterized by the growing concentration of specialized production at certain communities, which created regional economic centers. From CTY in the Spring and Autumn Period to DPLC in the Warring States Period and in Western Han, walled towns demonstrate an increasing scale of specialized craft production. These sites produced currency for exchange and implements for subsistence production in the rural hinterland. The specialization reached its apogee in Han when cast-iron mold manufactured by an imperial monopoly agency in a different region were brought in to cast agricultural implements at the DPLC iron workshop. This indicates that the regional industrial center at DPLC had been incorporated into a centrally managed imperial economy that cut across regional boundaries.

A profound technological change in local life is observed in the settlement data. The prominence of non-metallic implements in settlements of the Western Zhou and Spring and Autumn Periods, such as CTY and XRT, suggests a continuum of a Neolithic tool assemblage in local life during the late Bronze Age. The low frequency of bronze agricultural implements and the absence of casting molds for them in archaeological sites indicate limited use of metal tools in subsistence production. The general trends in metal technology reveal that the use of metal (bronze) was first reserved for warfare and ritual artifacts, such as arrowheads, knives, and ritual items from XEMS, and gradually expanded to the realm of economic transaction. Finally, metal items from mass-production, in the form of iron, were used in essential aspects of daily life in the local world, such as agricultural production, which saw the general absence of non-metallic implements in Warring States and Han sites, such as DPLC and NJB.

In general, these specific changes in technology are closely tied to the changing economic and political structure. A trend of centralized control of economic exchange and craft production becomes increasingly evident. Evidence ranges from restricted access to the region in the late Spring and Autumn Period as a result of

the wall, to state currency, state-controlled pottery workshop, and standardization of measurement in the Warring States Period, and to state monopoly of iron production in Han. By the Western Han Period, state control was evident in the realms of both exchange and the subsistence production as the state iron workshops in regional centers were engaged in the mass production of agricultural implements.

In the monetary system, active economic exchange is observed through the diversity of coins found in the region. This exchange became an underlying force for increasing economic integration that operated side by side with the increasing political interactions in the form of invasion and conquest over several centuries. For instance, the invasion of Yan King Zhi in the early third century B.C. could not have been independent of the economic underpinning as the two regions were already using a common currency in the preceding centuries. Further, the increasing economic integration in the form of monetary exchange preceded the political unification of Qin and the Qin policy of standardizing currency in 221 B.C. Then, it was at least a century after the political unification that a well integrated imperial economic system started to be effective at the local level, represented by highly standardized iron production and the production and circulation of wuzhu coins.

Discussion. Territorial control at the regional level represented by the construction of the Long Wall became evident in the archaeological record by the end of the Spring and Autumn Period. In the second half of the millennium, the transform of economic and political structure took place within the local society and gradually even the most rudimentary aspects of local life were effected by and engaged in the centralized political structure. So far, we have seen little of local people and their responses to these profound changes in the local world. How did their relationship to each other, their lifestyle, and their general perception toward their passage to afterworld change in relation to these movements? In the next section, I will use burial analysis to provide some answers to these questions.

2. BURIAL ANALYSIS

As a final transition in life's passage, death affected not only individuals but also the social linkages that created social groups. The funeral ceremony would have explicitly called on the participants to examine the social relations that brought them together and were being recreated in the process. The position of individuals in the sets of social relations determines how intensely and widely the impact of their deaths will be felt, both emotionally and structurally (McGuire 1992: 203). Burial ritual was involved in the reproduction and structural transformation of a society, both as a "structured structure" and a "structuring structure" (Swartz 1997: 102).

As with the settlement pattern analysis, I will analyze the burial pattern for each period and then give an overall pattern. This analysis emphasizes these aspects of burial ritual, expression of ritual assemblage in burial tradition and expression of wealth, status and political authority. Ritual assemblage is defined as a strong tendency for certain types of vessels to appear in grave goods as a set. I assume that the pattern of ritual assemblage in burial tradition expresses certain views of afterlife. Since the function and, in some cases, the symbolic meaning of artifact types is known from independent sources, I can establish the structural meaning of a burial tradition by giving meaning to categories of food vessels. A significant shift in the pattern of ritual assemblage, therefore, is an indication of a transformation of conceptualization about the passage to afterlife.

Vessels form a major portion of archaeological inventory, particularly grave good assemblage. This study uses Chang's (1973) structural approach to analyze the meaning of food vessel assemblage in burials. Vessel types are placed in three general categories by function, including food vessels, beverage vessels, and washing vessels respectively (Ma 1988). Food vessels were used for preparation, storage, and presentation of cereal, meat, and vegetable dishes. For instance, the *ding* and *li* tripods were used for stewing and serving meat, the *yan* and *zeng* steamers for steaming grain, *dou* for serving meat and vegetable dishes, and *dui, zhou, fu,* and *gui* for serving cereal food. Beverage vessels were used for storing and serving water and wine, which include the *bei* cups, the *hu* and *lei* bottle-like containers, and the *weng* urns. Hand-washing vessels include the *yi* ewers for pouring water and the *pan* basins for receiving water. They were used in the hand-washing ritual associated with dining, which involves two persons to assist the wash (Ma 1988: 272; Sun Ji 1991: 259). In Han, the *xi* basin was used as a simple alternative. Some vessel types were used in more than one function. For instance, the *yu* containers, the *bo* bowls, the *guan* jars, and the *weng* urns were used as serving and storage containers for both cereal food and water. This research adopts the terminology used in the original report.

Some vessel types were perceived to embody greater symbolic significance than others. According to the textual account and bronze inscriptions, the *ding* tripod was the most important vessel type for feasting and offering sacrifices in ancestor ritual (Ma 1988: 84). These activities served to consolidate political authority and kinship solidarity. The vessels and the institutions of food serving associated with them were among prominent status markers in the Zhou burial ritual, particularly *lieding*, a set of *ding* tripods of different sizes forming a series in grave furnishings (Li 1985: 461).

The presence of historical accounts allows the social hierarchy observed in burial analysis be verified and meaningfully interpreted (Pearson et al. 1989). Historical accounts from the late first millennium B.C. offer a fragmented recollection of the Zhou institutions for the expression of rank hierarchy with appropriate ritual assemblage, nested coffins, and other symbolism. For instance, the sovereign ruler was given nine *ding* tripods and eight *gui* cereal food containers as a ritual set. Aristocrats of lower ranks, such as *qingdaifu* (ministers), *yuanshi* (knights), used the same ritual assemblage with descending number of vessels in each vessel type. Since the exact correlation between each rank and the ritual assemblage associated with it varies from text to text (Li 1985: 462; Li 1993a: 146), I primarily use textual information to identify relative status differentiation among elites without linking them to specific ranks in various textual accounts.

Western Zhou Burial Pattern

Burial Data. Western Zhou burials have been excavated at XRT, NJB, and DXZ (Appendix IV). Three elite burials of the Western Zhou Period were excavated at XRT but only M3 has its complete inventory of grave goods published (Cui and Ren 1998). For the other three elite burials, only types and numbers of bronze vessels were reported. Located on the edge of a cliff, M1 collapsed from erosion and only some bronze vessels survived. M3 was dated to late Western Zhou around 800 B.C. M1 and M2 are dated to the 8th century B.C. (Ren 1998:29). Since individuals of various ranks have been found in this cemetery without spatial segregation and inscribed bronzes from the ruling lineage of Si polity were found in different graves, Ren (1998: 30) argued that the XRT was the lineage cemetery for the ruling lineage of the Si polity. Two commoners' burials at NJB and one at DXZ have been reported (Ren et al. 1993; Xu 1995). NJB-M61 dates to early Western Zhou and DXZ-M17 dates to the general period of Western Zhou.

Pattern of Vessel Set. Vessel types in Western Zhou burials are represented in Table 6.

Table 6. Vessel Types in Western Zhou Period Elite Burials

Functional categories		and serv t and veg	ing vessels etable	General pu	rpose serving e vessel	Serving v	
Burials	ding	li	dou	guan	bo	fu	gui
XRT-M1*	+ .						+
XRT-M2*	+					+	
XRT-M3	+	+	+	+		+	
NJB-M61		+	+				+
DXZ-M17			+	+	+		

Note: burials marked with * have only incomplete information.

Table 6 indicates that a basic set of *ding* tripod and *fu* or *gui* container form the basis of the grave goods assemblage in local elite burials. Remains of fish and chicken were found in the bronze *ding* tripod and cereal food was found in the *fu*. The inscriptions on the *fu* suggest that Zhao, an elite person of the ruling lineage at the Si polity, made it for his mother, presumably the deceased, as a container for cereal food.

Among the commoners, a ritual assemblage is not visible due to the small sample. Collectively, activities of food stewing (represented by *li* tripods), meat and vegetable serving (represented by *dou* stemmed plates), cereal food serving (represented by *bo* bowls and *gui* cereal food containers), and food storage (represented by *guan* jars) are represented. Despite difference in material, many vessel types are shared by elites and commoners, such as *li*, *dou*, *gui*, and *guan*, indicating a similarity in the basic food vessel assemblage. The *ding* tripods, however, appear to be exclusive to elite persons despite the small sample.

Status, Wealth, and Political Authority. The information from elite burials at XRT reveals some differences in rank. The deceased were all buried in two layers of nested coffins. Based on his observation of the bronze collection collected from the collapsed M1, Ren (1998:29) suggests that it probably had a set of five ding and four gui. M2 and M3 both have a rank-defining set of two ding and two fu from excavation. These indicate that the deceased at XRT belonged to two different ranks in the Zhou hierarchy. Overall, elite status was primarily expressed through exclusive access to bronze ritual vessels. The inscription on the bronze vessel indicates that the elite status associated with the deceased derived from a direct kinship affiliation with the ruling lineage of a local polity.

The wealth difference is quite visible among three commoners' burials. Although they have similar quantities of pottery vessels, child retainer, dog sacrifice, and nested coffins were exclusive to NJB-M61. No metal objects were associated with the commoners.

Spring and Autumn Period Burial Pattern

Burial Data. Burials from this period have been excavated at XRT, BCG, and NJB. Three elite burials have been excavated at the XRT cemetery, which was continuously used by the same lineage from the Western Zhou Period, and extensive reports are available for two of them (M5 and M6). M4 and M6 date to the early Spring and Autumn Period (Ren 1998). M5 dates to the late Spring and Autumn Period (Ren 1998:29). Grave goods from an elite burial have been reported at BCG, which dates to the early Spring and Autumn Period (Zhu 1973: 64; Li 1985: 143). Sixteen commoners' burials have been excavated at NJB, which date from

early to late Spring and Autumn Period. The burials were spatially clustered in two groups, which probably represents two lineages. The inventory of grave goods from the NJB cemetery is presented in Appendix V.

Pattern of Vessel Set. At NJB, a ritual assemblage of pottery vessels containing one *li*, one *guan*, one *yu* and two *dou* is repeatedly represented in grave goods (Table 7). Seventy-five percent of burials have at least part of the proposed set (12 cases) and 94 % of burials used only these vessel types as their grave goods (15 cases).

Table 7: Ritual Assemblage in Commoners Burials of the Spring and Autumn Period at NJB

Set Pattern	Number of Burials	Percentage
Presence of four types from the ritual assemblage	4	25%
Presence of three types from the ritual assemblage	3	19%
Presence of two types from the ritual assemblage	5	31%
Subtotal:	12	75%

This set represents the basic activities of food preparation, presentation, and storage. In comparison with vessels in contemporary elite burials (Table 8), these vessel types were shared. These vessels, particularly the tripods, were used for ancestral ritual and communal feasting for the lineage. It could be argued that the fabric of kinship cohesion and social sanction were strongly emphasized among the local lineages at NJB in the passage to afterlife.

Table 8: Vessel Types in the Spring and Autumn Period Elite Burials

Functional categories	Servi for n veget	neat a		Servin vessel cereal	for		Gener purpo food	se	iner	Storage vessel for wine and water	Vessel for ha washir	
Vessel types	ding	li	dou	dui	gui	zhou	guan	yu	yan	hu	yi	pan
XRT-M4*	+				+							
XRT-M5	+	+	+	+		+	+		+	+		+
XRT-M6	+		+		+		+ +			+	+	
BCG*	+	+			+							

Note: burials marked with * has incomplete information.

The *ding* tripod, cereal food container of *gui*, *dui*, *zhou*, and the vessel set for hand washing ritual, including *pan* basin and *yi* ewer, appear to be exclusive to elite. These vessel types indicate a metropolitan life style associated with elaborate dining and related rituals.

Status, Wealth, and Political Authority. At XRT, three elite ranks were represented. The deceased in M6, a male elite, was furnished with a rank-defining set of nine ding tripods and eight gui cereal food containers among a redundant display of bronze vessels. The lieding set indicates that the deceased was given

the highest status for the local area in the idealized Zhou ritual hierarchy. The deceased in M5, a female elite, was furnished with a rank defining set of three *ding* tripods and two *dui* cereal food containers. A rank-defining set of five *ding* and four *gui* was reported from M4. The status difference among these burials is further expressed through the number of nested coffins. For instance, while M6 used four layers of nested coffins, M4 and M5 only had two. The elite status for the deceased at BCG is expressed through a basic set of one bronze *ding* tripod and one *gui*.

In contrast to the elite burials, a minimum expression of wealth and status difference can be observed among the two clusters of commoners' burials at NJB. Among all sixteen burials, the majority (14 cases) used one coffin and only one used two. Hair accessories made of bone are the only personal ornaments associated with the deceased, which appeared in three cases. No metal goods have been found in association with commoners at NJB.

The nature of political authority is represented by the categories of items that were exclusive to the elite. In addition to bronze vessels, the two deceased in M5 and M6 at XRT were furnished with chariots, ritual jades, weapons, and musical instruments (Cui and Ren 1998: 14-24). These indicate that coercive force and a command of ritual knowledge were emphasized as institutions that define elite status (Chang 1986). These were further emphasized by the fact that metal was used exclusively for artifacts associated with them.

No direct evidence of control from a higher level of political authority can be found in the contemporary grave goods, such as official title or rank that would attribute the deceased to social identities associated with a larger political hierarchy. Instead, the rank expression at XRT-M6 with nine *lieding* set suggests the highest level of authority in local political structure. As M4, M5, and M6 at XRT were all members of the same lineage which had been using the cemetery since late Western Zhou Period, it is clear that local political authority at XRT was lineage-based and remained stable for an extended period of several centuries.

The inscriptions on bronze vessels from XRT and BCG suggest active elite interaction with political powers lying beyond the region. The inscription on a bronze *gui* from the BCG burial indicates that the cereal food container was commissioned by Bodafu, a member of the ruling lineage of the Lu state, for his youngest daughter Jian as her dowry, wishing her a life of "perpetual longevity" (Zhu 1973: 64). During past research, dowry bronzes also made by Bodafu for his two elder daughters, Jiang and Yu, had been discovered in Shandong (Li 1985: 143). Further, the inscription on a bronze *pan* basin from XRT-M5 reveals that the

washing basin was commissioned by Dian, a member of the ruling lineage of the Si polity, for a female elite, presumably the deceased, married in from a Jiang clan (Fang and Cui 1998: 23). Fang (1998: 62) argues that the elite female probably came from the state of Qi, which was ruled by the Jiang clan until 391B.C. These indicate that marriage alliance among elite lineages was an important form of interregional interaction in this period.

Warring States Period Burial Pattern

Burial Data. Excavations of Warring States burials have been reported at NLS, GX, TQ, ZJW, QFS, NJB, WYS, and WTGZ. Elite burials include NLS-M1 and GX, ZJW, QFS, and TQ. The ZJW burial dates to the early Warring States Period (Liu and Wang 1995: 209-213, 225). NLS-M1 dates to mid Warring States Period (Li 1993a). QFS dates to the mid Warring States (Li 1991; Li and Yin 1991). GX dates after the mid Warring States Period (Luo 1980). TQ is dated to the general period of Warring States. Commoners' burials have been reported at NJB (28 burials), NLS (4 burials), and WTGZ (9 burials) spanning from early to late Warring States Period (Ren et al. 1993; Liu and Ning 1996). The inventory of grave goods from commoners' grave goods is presented in Appendix VI. Warring States burials were also reported at other sites, such as WYS (Liu 1954). Since the artifacts were not reported by grave for these burials, I exclude them from my analysis.

Elite burial NLS-M1 has five female retainers buried in individually furnished burials (Table 9 and 10). Since their grave goods do not contain bronze vessels, they should be considered as commoners. However, as the circumstances of their death differ from the other commoners, their grave goods will not be included with that of the latter in the analysis.

Every elite burial suffered loss of information to some extent. Both NLS-M1 and GX were looted in antiquity. For instance, the grave goods in a storage chamber in NLS-M1 were plundered in the Han Period. For GX, only the grave goods in a storage pit survived the plunder. Both ZJW and QFS only have reports on artifacts collected from the site after the burials had been destroyed by construction projects. TQ was partially excavated as the rest was superimposed by a modern building.

Pattern of Vessel Set. Looting and deterioration of organic material, such as lacquer ware, made it difficult to pinpoint exactly which types of vessel were present in the original assemblage of the elite burials. However, when we compare the vessel types of the elite with the retainers at NLS-M1, a basic set for elite life in the contemporary society starts to emerge. A ritual assemblage consisted of *ding, dou, hu, pan, yi, zhou,* and *dui* can be observed in the well-preserved burials of the retainers at NLS-M1 (Table 9).

Table 9: Pottery Vessel Types Represented in Five Retainers' Burials of NLS-M1

Functional categories		vessel for l vegetable	serving for cere	vessel eal food	storage vessel for wine and water		s for hand- ng ritual
Burial No. for five retainers in NLS-M1	ding	dou	zhou	dui	hu	yi	pan
No.1	+	+	+	+		+	+
No.2		+			+	+	+
No.3	+	+	+	+	+	+	+
No.4	+	+	+	+	+	+	+
No.5	+ +				+	+	+

The incomplete data from the elite burials (Table 10) closely resemble this assemblage, in which all functional categories were present. Due to the loss of information to looting, the presence of vessel types may be underrepresented. Therefore, it does not represent the full range of information.

Table 10: Bronze and Pottery Vessel Types the Warring States Period Elite Burials

Functional categories		essel for vegetable	,	g vessel eal food	genera food c			storage v		vessels for hand- washing ritual			
Burials	ding	dou	dui	zhou	guan	pen	yu	fang	hu	yi	pan		
NLS-M1*	+	+		+					+	+	+		
GX*	+	+	+		+			+	+	+	+		
QFS*	+	+					+		+				
ZJW*	+	+							+		+		
TQ*	+	+ +			+				+				

Note: burials marked with * have incomplete information.

These vessels represent activities of food serving and hand-washing ritual associated with dining, which show a continuum of the lifestyle associated with elite in the Spring and Autumn Period.

The general assemblage of vessel types for commoners' burials closely resembles that of the elite burials, such as the serving vessels for meat and vegetables of *ding* and *dou*, serving vessels for cereal food of *dui*, and *zhou*, general food storage vessels of *guan*, and hand-washing vessels of *pan* and *yi*. Not all commoners, however, placed these vessels in their burials. I will return to this point later. The use of *ding* and *yu* in commoners' burials appear to be mutually exclusive. However, the meaning of this pattern is not clear. The similarity in food vessel types used by elite and commoners indicates a continuum in life style from elite to at least some commoners. For instance, the new additions to the inventory of pottery vessel, such as *ding*, *zhou*, *dui*, *pan* and *yi*, all have their bronze counterparts in the elite burials of the contemporary period and the earlier period. This shift may indicate an emulation of a "metropolitan" life-style associated with the elite life in

contemporary Zhou centers, which is characterized by elaborate dining with feasting vessels and hand-washing rituals associated with dining.

Status, Wealth, and Political Authority. Evidence revealed in elite burials of the Warring States Period collectively suggests the presence of a more complex political structure with greater status differentiation, increasing occupational specialization, and uneven distribution of wealth. A pattern of great differentiation in status, wealth, and power can be observed among elite burials. Since the preservation varies for elite burials, I use mixed attributes of burial size and burial goods to discern the status differentiation.

The GX burial represents the presence of paramount leader within the region, which is indicated by its extraordinary size and the nature of artifacts. The GX burial once had a rammed-earth mound of 6.8 meters in height and 60 meters in diameter. The pit measures 46.8 meters in length and 34.8 meters in width at ground level and 7.5 meters in depth. The sheer scale of this burial mound rivals the mausoleums of the contemporary Qi kings located in the hinterland of Linzi (Luo 1997; Yu 1999).

Among a small number of artifacts that survived the plunder, including bronze ritual vessels, a cross-bow belt, and chariot accessories, a set of bronze fittings for a ceremonial "conference tent" stands out as a distinctive status marker for the deceased. The "conference tent" was described as *weiwo* in contemporary textual accounts, which was used by rulers in occasions of meeting, military campaign, and religious ceremonies (Luo 1980: 331). Although it is impossible to speculate on the nature of elite power in its full spectrum, this special function item suggests the deceased was associated with high political power.

The deceased at NLS-M1 held a rank of high nobility indicated by a set of five *lieding* tripods. The burial pit measures 13 meters long, 12.6 meters wide, and 3.3 meters deep, which is significantly smaller than the GX burial. The deceased, an elderly male, was buried in three nested coffins furnished with bronze ritual vessels, chariot accessories, ritual jades, musical instruments, and personal ornaments (Li 1993a: 146). A dismembered sacrificial human offering and five female retainers in individually furnished burials were found associated with the main chamber. The occupational specialty of the deceased as a military specialist was redundantly emphasized with a large quantity of weapons in the burial.

The elite burials at ZJW, TQ, and QFS represent those with modest status, as no more than three bronze *ding* tripods have been reported in each burial. Both ZJW and QFS have bronze weapons, representing military affiliation. QFS also have a collection of 136 arch-backed small knife coins bearing the inscription

ming, similar to those found at DPLC mold and in the ZY hoard. The deceased at TQ was probably a low-ranked elite involved in trade or the administration of trade. This is indicated by the presence of a standard measurement container stamped with state market control agency. The TQ burial also yielded evidence for iron and an iron-legged bronze tripod and four iron hoes have been found.

Among the commoners' burials of the Warring States Period, personal belongings other than pottery vessels include weapons, clothing accessories, hair accessories, implements of daily life, and artifacts of decorative and ritual purposes. In total, 68 % (28 cases) of burials had personal items other than pottery vessels. Forty-six percent (17 cases) of burials have metal items. Twenty-two percent (9 cases) of burials had weapons, including seven cases with bronze weapons, one with soft-metal imitation of weapon, and one with iron weapons. The fact that weapons, real or imitation, were repeatedly emphasized and redundantly displayed in burials of both elite and commoners suggests that weapons were no longer exclusive to elite and the general society perceived military achievement as an important source of social mobility.

The presence of a standard measurement container issued by the state market control agency in the TQ burial as well as coins found in QFS burial provides evidence for administrative control of exchange. They further indicate that some sector of the local population was engaged in state-regulated commercial transaction at such a frequency that they considered that the new economic order applicable to the realm of afterlife. Further, evidence of iron has been found in burials of both elite and commoners, which was primarily made into agricultural implements and weapons.

Western Han Burial Pattern

Burial Data. Western Han burials have been excavated at SRS (Ren and Cui 1997), WYS (JCM 1972), NJB (Ren et al. 1993), WTGZ (Liu and Ning 1996), and NLS (Li 1993b). SRS-M1 is the only Western Han elite burial that has been extensively reported. It dates to early 1st century B.C. For commoners' burials, 13 are found at WYS, 22 at NLS, four at WTGZ, and seven at NJB (Appendix VII). They date to early and mid Western Han.

Pattern of Vessel Set. Pottery vessels in 37 furnished Western Han pit burials include *guan* storage jar and *hu* bottle for food and beverage. Of the 37 furnished pit burials from four cemeteries, 49 % of burials (18 cases) only used the *guan* storage jars and 46 % (17 cases) only used the *hu* bottles. Only one case had both. Although a ritual set as defined by the consistency in co-presence of vessel types cannot be identified, a clear

convention in the choice of vessel types is evident as the majority of furnished Han commoner's graves were furnished with either *guan* storage jars or *hu* bottles. The consistency of this convention in cemeteries spanning over two centuries suggests a high level of homogeneity in the perception of passage to afterlife among the commoners. The use of these two forms of vessels seems to represent the most basic need of an individual, rather than a family, in the passage to afterlife.

A broad range of vessel types, however, was featured in the elite burial, including *ding, hu, fang, pan, jian, pen*, and *guan*. These indicate the storage and serving of food and wine. In addition, a large quantity of lacquer food containers has been reported. Due to deterioration, vessel types are unspecified. Although the number of elite burial is same, the distinction between elite and commoner in burial furnishing is clearly visible.

Status, Wealth, and Political Authority. Judging from the material remains alone, a combination of supreme power, status, and wealth is expressed in the burial SRS-M1, which, ironically, belongs to a king who was forced to commit suicide by the imperial court in 87 B.C. (Ren 1997: 14). The rammed earth mound over M1 was 12 meters high and 65 meters long on each side of its square base. The grave pit was dug into the peak of a small hill and had a ramp approximately 60 meters long. The burial chamber is 25 meters long, 24.3 meters wide, and 22 meters deep. It contained five nested coffins. The construction would have required enormous labor investment.

Expressions of political authority and status include a rank-defining set of nine bronze *ding* tripods. Other expressions of status and wealth include ritual jade disks, a jade mask, a set of jade body plugs, jade ornaments, chariots, wagons, bronze and iron weapons, and different forms of food vessels of bronze and lacquer. Ritual vessel types used by the elite of the previous period, such as bronze *ding* tripods, were still important symbols of elite power, which suggest that kinship cohesion was strongly emphasized as an important source of power in burial ritual.

Both gold and bronze currency were represented in SRS-M1. The presence of 20 gold ingots inscribed with the title wang, "king", Qi, "Qi", and Qiwang, "the king of Qi" suggests an emphasis on this new form of wealth used for elite transaction. Twenty bronze wuzhu coins were also found. While the gold ingots were issued by the royal house for the kingdom of Qi for elite transactions, the wuzhu coin was the imperial currency of Han. The information revealed by the inscribed gold ingots, bronze currency, and the burial itself reveals the

presence of three kinds of power structure at the national (Han), macro-regional (Qi kingdom), and local level, which were ultimately defined and consolidated by the kinship ties of Han royal clan.

In contemporary commoners' burials, personal items include iron daggers, bronze coins, bronze seals, carved bone ornaments, bronze belt-hooks, and bronze mirrors. In general, 49 % (18 cases) of furnished Western Han burials had personal items other than pottery, which are all metal. Twenty-two percent (9 cases) of furnished commoners' burials had coins and 5 % (2 cases) had iron weapons. Unlike the previous period, bronze coins were associated with both elite and commoners and a significant portion of commoners placed money in burials, even those of children.

In general, the local grave goods assemblage of the Western Han Period is characterized by wide gap between elite and commoners in regard to wealth and social activities represented by vessel types. Elaborate vessel types for feasting became exclusive to the elite. This indicates that certain aspects of social life, such as lineage solidarity, were promoted by the elite but not the commoners in their passage to afterlife. On the other hand, a continuum in the representation of imperial coins is observed for both elite and commoners' burials.

General Trends in Burial Data of the First Millennium B.C.

Since the sample is small and incomplete for the elite burials, the pattern revealed from it is very inconclusive and only offers a glimpse of the nature of changing political authority in the region. Further, the social identity of elite varies from case to case, which makes it difficult for diachronic comparison. Only when they were placed back into the general population of the local society, could these patterns be structurally revealing. Throughout the millennium, the prominence of food and food vessels in grave goods constitutes a deeply ingrained structure in the passage to afterlife at the local world. Shifts in social attitude and social relations can be observed in the changing vessel set chosen for the burial offering by different sectors of the local population.

From the diachronic distribution of vessels, I observed a distinctive trend in the idealized representation of daily life in burial ritual. In the Western Zhou and Spring and Autumn Period, the distinction in lifestyle between elite and commoners was marked by the exclusive access by the elite to the certain vessel types representing a metropolitan lifestyle, such as *ding* tripods and vessel set used for hand-washing ritual. In the Warring States Period, however, this apparent distinction no longer existed. Vessel types once exclusive to elite were found in the commoners' assemblage. This continuum in lifestyle suggests an emulation of

metropolitan lifestyle by the commoners. The pattern changed dramatically in the Western Han: elite and commoners expressed very different attitudes in burial rituals and vessel types for feasting and sacrifice became exclusive to elite. Further, evidence from TQ and QFS indicates that the deceased had been involved in the state-regulated exchange at such a high frequency that the representation of these economic activities became part of the ritual assemblage in their burials.

I observed similar trends in the representation of vessel types, personal items and weapons, whereas the frequency of burials containing these grave goods reached its peak in the Warring States Period followed by a decline in the Western Han (Figure 7) (The sample for Western Zhou commoners being too small, was excluded. Therefore, Western Zhou data are omitted from the next two tables).

Further, an increase in the diversity of grave goods, represented by the number of grave goods categories represented in burials, peaked in the Warring States followed by a decline in Han (Table 11).

Table 11: Variation in the Number of Grave Goods Types Represented in Commoner's Burials

No. of artifact types	Spring and Autumn	Warring States	Western Han
1	2	19	18
2	5	7	9
3	3	5	7
4	5	2	3
5	1	2	
6		3	
7		2	
8		1	
Total Cases	16	41	37

Since the majority of types are represented with one or two artifacts, the increase in diversity of the amount of grave goods types also indicates the diversity in number of grave goods, which represents distribution of expressed wealth.

Finally, numbers of nested coffins used in commoners' burials suggests that the elaboration in burial treatment peaked in the Warring States and declined in Han as well (Table 12)

Table 12: Number of Nested Coffins Used in Commoner's Burials in Three Periods

Nested coffins	Spring and Autumn	Warring States	Western Han
None or no trace	1	9	29
One	14	17	8
Two	2	14	
Three		1	

The correspondence of these trends suggests an ideology emphasizing higher social mobility in the Warring States Period, which was probably realized through military achievement as weaponry was a key category for the period. The homogeneity of the commoners' vessel set in the Western Han suggests a highly sanctioned burial ritual during the imperial era.

Despite a general decline in expressed personal wealth, metal items and currency increased in commoners' burials of the Western Han Period. Metal objects were absent in commoners' burials in Western Zhou and Spring and Autumn Period. In Warring States, 61 % of personal items were metal and all personal items were metal objects in Western Han. Bronze currency was only found in one elite burial in the Warring States Period and it was found in 24 % of commoners' burials as well as in the elite burial of the Western Han Period. These trends indicate the increasing prominence of metal in the life of common people and the ritual acknowledgement of state currency as a necessity for the passage to afterlife.

For elite burials, kinship cohesion is consistently emphasized with ritual vessels for feasting and sacrifice. However, the basis of elite kinship as a source of political authority shifted from membership in localized elite lineage at XRT to membership in the royal clan at SRS, which suggests an increasing centralization in political organization. A shift from a ranked status within a lineage-based polity to elite of specialized occupation as well as ranked status is evident. By the Warring States Period, different kinds of power can be observed.

In addition to the traditional institution of coercive power and ritual authority, economic power derived from state-controlled exchange gradually increased in prominence. For instance, currency and standard measurement devices issued by the state have been found in elite burials. By Han, sheer wealth, in the form of gold ingots for elite transaction, has emerged as a distinctive expression of elite power in addition to formal expressions of status and political authority.

Discussion. Having observed several major trends of change in settlement and burial data, we are confronted with such questions: what is the meaningful scheme that runs through them? What does the consistency, or lack of it, in patterns revealed from two sets of data tell us about the life and thought of the Jinan people in their changing world? I will explore these questions in the next section.

3. COMPARATIVE EXAMINATION OF GENERAL TRENDS IN TWO SETS OF DATA

A comparative examination of different trends makes it possible to see not only the pattern of change in local political structure, economy, and technology, but also the perception and responses to these changes among different sectors of the local population in their reproduction, negotiation, and legitimization of the social relations in burial ritual.

The Western Zhou and Spring and Autumn Periods. During the first half of the millennium, no significant difference emerged in the way that two major types of local landscape were related to the political and economic development. Signs of social stratification and possibly political authority, such as elite burial and hoarding of symbolically important objects at XEMS, XRT, and MTL, occurred in burials located on the plain as well as in the mountains. Although this was the late Bronze Age in China, bronze objects were small in number in settlement remains and were primarily used for arrowheads and small knives. The close spatial affiliation of molds for bronze casting with other residential features and elite cemeteries at XRT suggests that the production occurred at the community level with possible control by local authorities. The bulk of subsistence production was carried out using implements fashioned from non-metal material such as bone, shell, antler, and stone, which bear little sign of controlled production and distribution by a centralized authority.

Inscriptions on bronze vessels from contemporary burials indicate that these communities were ruled by locally based elite lineages. For instance, the cemetery associated with the community at XRT was continuously used by the ruling elite of the Si polity for over two centuries. Meanwhile, the political influence of this polity did not extend beyond the local level as objects with inscriptions referring to this lineage were only found at XRT within the region. The local elite interacted with their counterparts in other regions through marriage alliances as elite women from the states of Lu and possibly Qi married into the local communities as stated in the bronze inscriptions from elite burials at BCG and XRT. The intensity of elite interaction is represented by the elite conformity to the general rules of symbolism for elite hierarchy in the Zhou political sphere. The elites at XRT carried various ranks of the Zhou hierarchy as indicated by the *lieding* set found in their burials, which included the status of sovereign ruler at XRT-M6. This represents a local manifestation of the ranked and kinship based Zhou political structure of contemporary China. The elite status expressed in local burials, such as in the case of XRT-M6, suggests a high level of local autonomy and no signs of subordination to any greater political authority. This evidence indicates that the local elite had the intention and resources to deny the relationship of dominance and subordination, if it existed in reality, through their burial rituals.

In furnishing their graves, both elite and commoners stressed the continuity of the fabric of kinship solidarity to afterlife by placing food and vessels for sacrifice and feasting in burials. At NJB, consistent representation of a vessel set in two clusters of burials, possibly representing two lineages, indicates a strong shared perception of the passage of the afterlife among members of these two corporate groups. While the elite used all the vessel types found in commoners' graves, the elite used additional vessel types, such as the *ding* tripod and the vessel set for hand-washing rituals, which represent a metropolitan lifestyle of the Zhou elite.

Categories of objects exclusive to elite burials, such as weapons, musical instruments, ritual bronze vessels, and chariots, indicate that authority, defined by coercive power, ritual knowledge, and kinship solidarity was maintained by the elaborate rituals involving food and dining.

In the representation of technology in burial ritual, bronze was exclusive to elite burials. Metal objects were not featured in any commoners' burials. This is consistent with the low frequency of metal artifacts associated with subsistence production in settlement data.

The settlement and burial data together demonstrate that the local political structure was characterized with a localized, lineage-based political authority. Metal was primarily used as political and social capital rather than implements of production. The local economy was characterized by a locally based, Neolithic mode of production, in which lithic and bone artifacts formed the basic tool assemblage.

After the mid first millennium B.C., significant change took place in the settlement data. The construction of a regional wall in late Spring and Autumn Period indicates restrictive access to the region and the emergence of regional powers capable of engaging in military competition at an immense scale. Many social implications, however, came to be archaeologically observable in the next period.

The Warring States Period. The presence of currency, state-issued standard measurement containers, and pottery manufactured under state-control in different parts of the region suggests that the local economy was being incorporated into a larger, centrally managed economic structure in the Warring States Period. They indicate the emergence of territorial and administrative control by a centralized authority.

Corresponding to these changes in political structure, significant change took place in the pattern of interregional interaction. For instance, evidence for specialized production, trade, and political authority concentrated on the plain area, as elite burials, coin hoards, and a mint were only found in plain. The distribution of these sites along the east-west transportation route suggests an increasing emphasis on inter-

regional interaction. The concentration of pottery production, a mint, and evidence of market exchange, such as coins, at the site of DPLC indicates that the threshold of urban life was reached in the region. The mountain, on the other hand, became the site of an imposing monument of territorial control, the Long Wall of Qi.

The pattern of interregional interaction shifted from marriage alliances and shared symbolism to evidence of territorial control and intensified economic interaction. The inventory of currency found locally suggests intensive economic interaction with the northern and eastern regions associated with the states of Yan and Qi and minimal economic interaction with the southern economy dominated by the state of Chu.

In technology, there is a decline of non-metal implements in settlement sites. Since excavated sites for this period were few, it is not clear to what extent metal implements were used in subsistence economy. However, the use of metal currency, which has been found in several settlement sites and hoards, indicates expanded metal use in local life.

Data from burials present further evidence on the nature of political authority and the varied responses to the trends suggested by the settlement patterns. The expression of militarism among the local population, represented by weapons in both commoners' and elite burials, is consistent with the pattern observed in settlement pattern, such as the construction of the Long Wall and weapons left by invading troops from Yan. Further, sharing of aspects of a metropolitan lifestyle among commoners and elite, a general increase of wealth in commoners' burials, and the disproportional distribution of this wealth suggest a high social mobility for this period, which may be based on military achievement when viewed in relation to increasing militarism revealed by historical account.

Information from elite burials offers a glimpse of the paramount political authority in the region, represented by the sheer scale of the burial construction and symbolic significance of the artifacts found in the elite burial at GX. Signs of occupational diversification start to emerge. For instance, military power was emphasized with a redundant display of weapons at NLS-M1, which displayed a high but not sovereign rank, indicating subordination to higher authority within or beyond the regional border. On the other hand, the localized, lineage-based political authority at XRT, which characterized the traditional political structure in the region, ceased to exist after the mid first millennium B.C.

Presence of artifacts used in state-regulated trade in elite burials, such as coins found in the QFS burial site and standard measurement container at TQ, probably represents a perceived extension of state defined

economic order to the afterlife. This indicates that the local society, at least the elite, was engaged in these economic activities with relatively high frequency.

Despite its prominence in hoards and settlement finds, the large knife coin from the state of Qi was absent in contemporary burials, which is consistent with the pattern across the Qi territory (Zhang 1991). Yu (1990, 1991) postulates that this currency was fixed at a high face value guaranteed by the state; thus people chose not to carry it across boundaries beyond which the state power was perceived to be ineffective. As the result, the large Qi knife coin was neither found beyond the Qi border nor in the realm of afterlife, while the small knife coins, as common currency with full metal value, were traded afar and buried after death. However, this cannot explain the lack of imitation money for use in burials. The inconsistency in frequency of currency found in hoards and in burials suggests that the majority of the local population did not perceive this newly emerged form of wealth as negotiable in the afterlife. Neither did they recognize that the economic order defined by the centralized authority continued to be effective in the afterlife. This is unlike their view that the fabric of kinship continues after death.

In technology, the use of bronze expanded from the ritual and military spheres to the realm of trade and personal ornamentation for commoners. Bronze objects were no longer exclusive to elite burials, indicating increasing access to products of specialized manufacture among the local population. Iron first appeared in the region during this period primarily as agricultural implements and weapons. The presence of iron in both elite and commoner burials indicates that the new metal was made accessible to the public.

In general, settlement and burial data both demonstrate that as centralized control of territorial states became prevalent in the local society, a series of significant changes took place in the political and economic structure, in people's relationships with each other, and in people's relationships with the local landscape. These data further suggest that the local people were mobilized for military campaign, presumably in inter-state competition, and new technologies were actively introduced for warfare and production. Finally, the widespread signs of metal currency, as well as the local production of it, indicate not only an increasing intensity in economic interaction, but also a shift in the way that the economy was controlled.

The Qin and Western Han Periods. The last two centuries witnessed the emergence of empire with evidence of state involvement in the most rudimentary levels of local life. Signs of full-blown urban life and

monetary economy were evident locally. The level of specialization in craft-production at DPLC indicates that a sizable portion of local population was involved in mining, logging, smelting, casting, and transporting.

In landscape, centers of political and economic gravity further concentrated on the plain. Two large walled town sites, specialized workshops for craft production, and elite burial mounds are located along the transportation route. This is consistent with the macro-regional pattern, where state workshops were often established along transportation routes. The pattern indicates an increasing emphasis on centralized control and economic integration. In the mountains, the regional defense structures, such as walls and garrisons, were deserted, unlike those in the northern frontier of the empire, which were connected and expanded (Ye 1987).

The pattern of interregional communication changed as well. After coping with several short-lived monetary reforms in the early imperial era, the local economy finally adopted a truly standard currency, the bronze *wuzhu* coin, used across the empire (Peng 1958). Further, the economic cooperation across the regional boundary accelerated, as seen in the importation of a cast-iron mold for local production from a state workshop from another region. Since such practice was frequently observed among Han iron workshops (Li 1997), it was probably a centrally coordinated practice for increasing efficiency in mass production.

Major trends in technology include increased mass-production of iron agricultural and craft tools with methods such as combination molds for casting a large number of products simultaneously, blast furnaces for cast iron, and various methods of treatment for improving the physical property of cast-iron products. Productivity was further enhanced by the increase in scale and specialization of workshops.

Iron agricultural implements, as well as iron weapons, were found with relative abundance in regional centers, such as DPLC, as well as in rural communities, such as NJB. They include plowing, weeding, and harvesting tools, indicating that iron technology had successfully replaced non-metal implements in essential aspects of subsistence production.

For elite burials at SRS, elaborate feasting vessels were redundantly displayed, which emphasized the kin solidarity of the royal lineage. The claim of sovereign status with a rank-defining set of nine *ding* tripods and the enormous construction effort expressed a high level of political autonomy at the regional level in the imperial period. In contrast, commoners' burials show a significant shift from the metropolitan lifestyle and the emphasis on the lineage solidarity observed in the previous period, represented by the absence of *ding* tripods and vessels associated with elaborate dining. This indicates that commoners did not emulate the elite lifestyle in

their burial ritual. Further, the frequency of burials containing weapons declined dramatically and so did the inventory of grave goods. These indicate a shift away from the emphasis on lineage solidarity in ritual expression and high social mobility associated with militarism observed during the preceding period.

Despite the homogenous expression of lifestyle, objects representing state-regulated transactions, such as bronze coins and seals, became evident in commoners' burials. Since coins ultimately depended on the authority of the ruler to guarantee the exchange of coins for goods at fixed rates, increasing use of currency in market transactions brought the local life closer to the state controlled economic network (Lewis 1999: 33). The use of coins in burials indicates that the economic order defined by the centralized authority became incorporated into the perception of the afterlife by commoners.

This change in mentality is probably a local response to the increasing use of currency in the domains of taxation and salary (Peng 1958: 70). For instance, in the imperial Han tax system, the commoners were taxed at a rate of 1/15 of their harvest. In addition, every adult (between the age 15 and 60) was taxed 120 coins (An 1993: 26). The emphasis on money in burials probably represents the ritual acknowledgement of money as important asset of "daily life."

In addition to bronze coins, inscribed gold ingots for elite transaction have been found in the elite burial at XRT. Unless the meaning of these items went through significant alteration as they became part of the death ritual, I propose that the use of precious metal ingots issued for elite transaction and bronze coins for daily exchange in burials represent the perceived continuity of state-regulated economic relationship in the afterlife. These items of wealth represent a source of elite power, economic power, in addition to the traditional institutions of power defined by elite lineage and coercive power.

In technology, metal objects of mass-production, such as bronze mirrors, belt-hooks, and coins increased in commoners' burials. This is consistent with the pattern of mass-production and long-distance redistribution in settlement data. It indicates that the products of specialized manufacture were accessible to the local commoners and items obtained from exchange, rather than self-sustained production, became an essential part of daily life.

In general, settlement and burial data from the Qin and Western Han Periods demonstrates that imperial control became actively involved in the trade and subsistence production of the local economy. Variation in the artifact assemblages of the commoners indicates a homogenous lifestyle characterized by metal

items of mass-production, such as bronze mirrors and coins. An imperial economic and social order formed a model for the contemporary perception of the society in the afterlife.

PART IV. CONCLUSION

Discussion with Relevant Literature. Using a regional approach, my study has illustrated some general trends associated with the final entry of Jinan into imperial society through local mediations of historical forces emanating from the larger society. As all history is local history, Jinan archaeology presents a local history written by the local people with remnants of their life and times. This is first of all a history of événements, the history of individuals and politics. Some local events must have had wider impact on local people, such as the construction of the Long Wall, the invasion of the Yan and Qin troops, and the establishment of imperial control. Other events concern stories of common people going through the natural phases their lives. Although their names are not known, the local people left a final statement of their perceived passage to the afterlife with burial remains. In some rare instances, we even know who they were as persons, and have a glimpse of their life. For instance, we learned the keen wishes from Bodafu, the father of three girls, for the wedding of his youngest daughter Jian from the inscriptions on dowry bronzes found at BCG. Although the time scale adopted for my study is appropriate for socioeconomic trends spanning centuries, one should always appreciate the life and times of the local people—the creators of this history—in their full individuality.

The history of *conjonctures*, dealing with slow but perceptible rhythms of the broader movements of economies, social structures, and political institutions, are the primary subjects of this research. The study illustrated increasingly centralized control within the local political structure during the first millennium B.C. Over a period of centuries, a decline of localized, lineage-based political authority, which characterized the local political structure before the mid first millennium B.C., was followed by an increase in the centralized control of territory, exchange, and production, and to some extent subsistence economy. In relation to this transition toward centralization, I have observed the rise of militarism and interregional confrontation as well as signs of high social mobility among the local population during the transitional period, suggesting a close link between the emergence of centralized authority and intensive interregional confrontation.

To step back from individuals, events, and socioeconomic trends, the research revealed some change in the history of the *longue durée*, such as the nature of landscape and its relationship with the local life, technology, and mentality. Landscape, a "structuring structure" with its potentials for transportation, defense,

agriculture, and mineral resources, as well as its symbolic underpinning that connected the local people with their own memories, ancestors, and natural deities through rituals, set the stage for the local life. As a "structured structure," the local landscape was gradually transformed into a state-dominated political landscape overlaid with defense walls of monumental scale, imposing burial mounds, and imperial towns and workshops along the transportation route. This is particularly striking for the mountain range as a whole, which first became the site for the state defense system and later became the site of royal pilgrimage evoking the deep-rooted religious ideas about mountain cult in the contemporary society.

The study also documented long-term change in the local economic structure and its technology, particularly the use of metal and currency. It observed the local manifestation of the gradual turn to the Iron Age and a monetary system, both profound transitions that took place in the Old World over a period of several millennia and conditioned the way that these civilizations developed (Weber 1964; Wertime and Muhly 1980). The introduction of metal currency is an important indicator of the economic transformation in which the exchange of goods among elites in prestige systems was no longer the dominant economic form, having been increasingly supplanted by market transactions (Barnes 1993: 149). The increasing use of iron tools in subsistence production and the elite control associated with their production, on the other hand, led to increasing integration between the local centers and their rural hinterland. This was achieved by adoption of methods for mass-production into the local production system. Once these methods of mass-production were implemented, they might place their demands and constraints on the social organization. For instance, production of iron in a blast furnace is most efficient at a high level of production, and mass production requires a large market, good transportation, and a large and reliable labor force (Wagner 1993: 409). To some degree, these conditions were the result of and further structured the political and economic organization of local life characterized by an emergence of centralized political structure.

I observed continuity and change in *mentalités*, those cognitive structures that bound societies together in culturally particular ways. The strong emphasis on kinship solidarity is a long-term structure that was deeply ingrained and most resistant to change in the local world. Throughout the millennium, the fabric of kinship was symbolically extended to the afterlife with the use of food vessels for communal feast and ancestral rituals, particularly in elite burials. From the polities controlled by the Si ruling lineage to kingdoms controlled by members of Han royal clan, the political authority was never fully removed from a kinship network despite the

shift towards centralized control in ways that the local people and economy were organized. Against the deeply entrenched structure of kinship solidarity expressed in burial rituals, I have observed punctuated changes in perceptions and values, such as the rise and decline of militarism and social mobility, the difference in perception of social life seen in grave goods represented by different sectors of local population.

An interpretation of the complex interplay between different kinds of histories operating at different time scales and rhythms requires an integrated approach using both archaeological and historical sources. Tu (1990) and Lewis (1990) argue that the action of the ruling elite to maximize resources directly at their disposal for interregional competition was the underlying force for increasing centralization. As the nature of competition shifted from ritualized chariot combat manned by the aristocrats to large-scale, infantry-based warfare, the elite gave land to peasants, who were attached to the aristocrats as members of sublineages, in exchange for their military service. The expansion of military duty from aristocrats to rural peasantry culminated in universal military service and the complete identification of the people with the army (Lewis 1990: 94). In this process, the traditional structure of lineage-based authority was deliberately undermined by new means of economic and political control aimed at building a direct connection between the state rulers and their subjects. In a nutshell, interregional competition for dominance and hegemony was the underlying force for the reorganization of political structure and economy, which brought intended and unintended consequences to society, such as the emergence of a new small-landholder peasantry class as providers of military recruits, corvée labor, and agricultural surplus to the centralized state.

Further, these sociopolitical changes as well as the new demands and opportunities emerging from them help to bring changes in the *longue durée*, such as technology, economic structure, and *mentalités* to the realm of local life. The change in land tenure offers valuable insight into the nature of technological and economic change. Despite the central place that metal (bronze) held in symbolizing political authority in the first half of the millennium, metal was not widely used in subsistence production until the rise of the centralized state and iron production after the mid first millennium B.C., which marks a final breakaway from the Neolithic mode of production. The relative cheapness of iron and its greater hardness have been offered as explanation for its replacement of bronze. However, these properties were the result of technological innovations for mass-production and quality control, which neither came with the introduction of iron technology nor emerged spontaneously with long-term experience of iron handling (Wagner 1993: 409).

What were the social forces underlying the attempts to overcome the technological obstacles for mass-production of metal objects, such as items for personal consumption, exchange, and subsistence production, as seen in DPLC? A plausible interpretation lies in the changing social conditions deriving from changes to social structure, which promoted elite-sponsored mass production of currency and agricultural implements as well as the active adoption of these specialized manufactured items by the commoners for exchange and subsistence production. The creation of a small-landholder peasantry class as a result of centralized control of populace encouraged the adoption of technological innovations in agriculture, as the commoners were allowed partial access to their own produce (Hsü 1980). The centralized state, on the other hand, encouraged agricultural production, and in turn received taxes to finance its wars of expansion and capital projects (Bray 1979-1980: 5). As a result, metal objects for daily consumption, which came in both iron and bronze, were mass-produced in elite-operated workshops and were increasingly used among local people.

The sequence of local trends observed from archaeological remains, particularly the decline of local lineage-based polities, emergence of large-scale defense projects that required massive mobilization of labor, and evidence of administrative control, high social mobility, and militarism, seems to support the proposed scenario. Economic control became more penetrating as commoners gained access to and then dependence on metal agricultural tools and currency. The increasing emphasis on currency in commoners' burial ritual indicates that producers had access to at least part of their agricultural produce and could store their value as money to increase their economic choices and fulfil their tax obligations. It further shows that the state-defined economic order had been incorporated in the worldview of the local people.

Through these local mediations in the socioeconomic domain, the coming of the Iron Age and the emergence of a monetary economy, both profound changes in the Old World, were realized in Jinan in the historically specific circumstances of the first millennium B.C. In their negotiation within the local arena, people with different political and economic interests harnessed the power of technological, economic, and symbolic facilities that constituted elements of local structure to further their own ends, in turn, altering the relationship of these elements. Eventually, the local structures were transformed as the meaning and relationship of their categories was constantly altered by their interested actions. As a result of this historically specific conjunction, the local developments of iron technology, monetary economy, and political structure acquired their distinctive characteristics through the "structures of conjuncture" (Sahlins 1985: xii; Hodder 1991: 88).

The pattern of change in the landscape is closely associated with these trends in the sociopolitical arena. As centralized control intensified and the scale of production expanded, the plains became more important economically, particularly the interregional transportation route, through which the local society was incorporated into an expanding political and economic structure. The efficiency in dry field agricultural production inferred from the increasing use of metal implements was partially responsible for the intensive settlement of the plains as well.

The close connection between changes in perception and changes in the sociopolitical structure is evident. Greater variability and elaboration in burial ritual was expressed among commoners when the local society was more involved in regional competition, indicating a higher social mobility. In contrast, lower variability was observed among commoners following the increase of mass-produced objects in the imperial period, indicating a change towards a homogenous expression of lifestyle among commoners. Further, a decline in the expression of lineage solidarity among commoners indicated by the decline in food vessels, followed by an increase of state-manufactured objects, particularly coins, indicates that a centrally organized socioeconomic order was manifested in the way people perceived the afterlife. In contrast, the strong emphasis on kinship solidarity among members of the royal clan suggests a different rate of change among elite. It shows that the political authority displayed an ambivalent attitude in cultivating kinship ties as a deeply ingrained symbolic power to reinforce the centralized control while recognizing kinship ties as an obstacle for the implementation of centralized governance.

In light of these complex interactions, the socioeconomic trends were entangled with the slow and imperceptible change in the *longue durée*. In these grand schemes of social change, historical individuals were divided into a multitude of selves in a history of various scales, that of structural, social, and individual. Resounding events were created by the complex interactions of their personal aspirations and the larger social movements, explicable only in terms of both the grand social trend and their aspirations and values as individuals. In this regard, the history of individuals was not simply "surface disturbances, crests of foam that the tides of history carry on their strong backs" (Braudel 1972: 21). Instead, the "historical individuality" of this particular social transition in Jinan was ultimately realized through the life of individuals like Jian, Zhi, Dian, whose names we have come across in the study of local archaeological remains, and those anonymous individuals lying in the historical landscape of Jinan.

Future Prospect. In this archaeologically informed "description" of local history spanning a millennium, a wide spectrum of information has been reviewed to capture the life and times of local people and changes they have experienced. Several questions derive from the research. First, the number of published archaeological sites appears to be significantly lower than surveyed regions with comparable complexity and the population density from textual account. For instance, Underhill et al. (1998) identified 64 Zhou sites and 80 Han sites in an area of 96 sq km in the Rizhao survey project in southeastern Shandong. A similar intensity of land use is expected for this region. In the future, systematic, regional survey and comparison with works from other regions would dramatically enrich and challenge our current understanding of the regional development (Bintliff 1997; Billman and Feinman 1999; Patterson et al. 2000).

Second, the nature of social control and economic organization in the lineage-based political structure preceding the rise of centralized authority is not well understood archaeologically. Those crucial social institutions described in historical narratives, such as the lineage control of land and people, often do not leave sufficient archaeological evidence at the level of everyday life in the local world. However, these institutions might have bonded the society together in ways more subtle and internalized than systems of rationalized political or economic control. Further, changes in these institutions are important for understanding their aspirations and values, which ultimately relates to changes in technology, economy, and political structure. Documents, no less than potsherds, are material culture (Barker 1995: 2). In this regard, a deeper understanding of long-term social change awaits an integrated study of textual history and archaeology, which calls for the development of a unified theory of material culture for the study of past.

Conclusion. The strengths of archaeological data remain in the time scale they represent and the range of social actions from which they derive, which contribute to the understanding of the complex interplay between different forces operating at different time scales in particular landscapes. In this study, I have attempted to bring the study of larger historical movements in a transitional period of ancient China to the level of "lived experience" in a local world, in which the interaction between distinctive local structures and the impinging mechanisms of centralized control are observed archaeologically. By "writing a history from below" in this materially based regional profile, I hope to have supplemented the grand schemes of social movement by revealing those mundane but profound changes unfolding in the local world.

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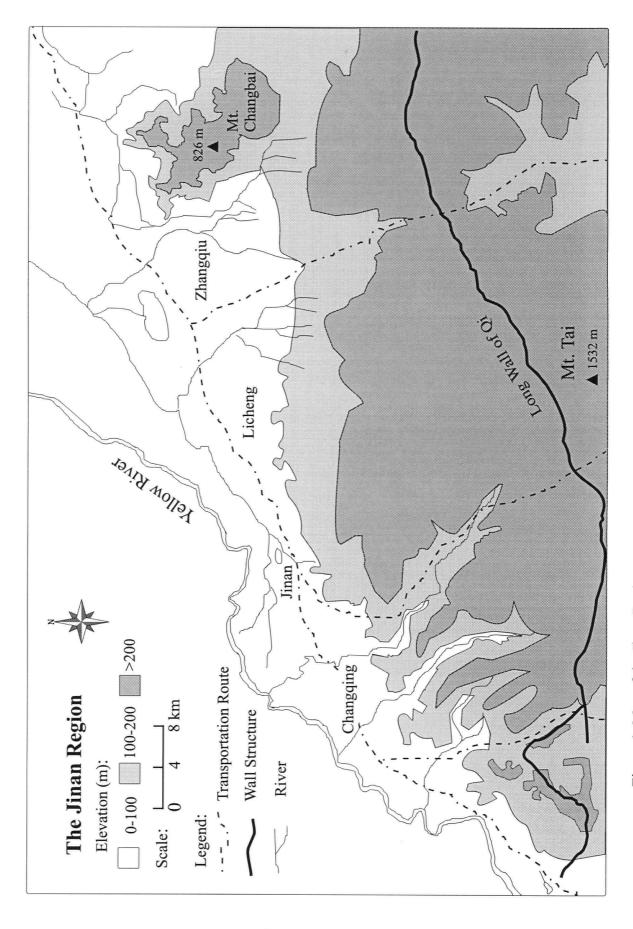
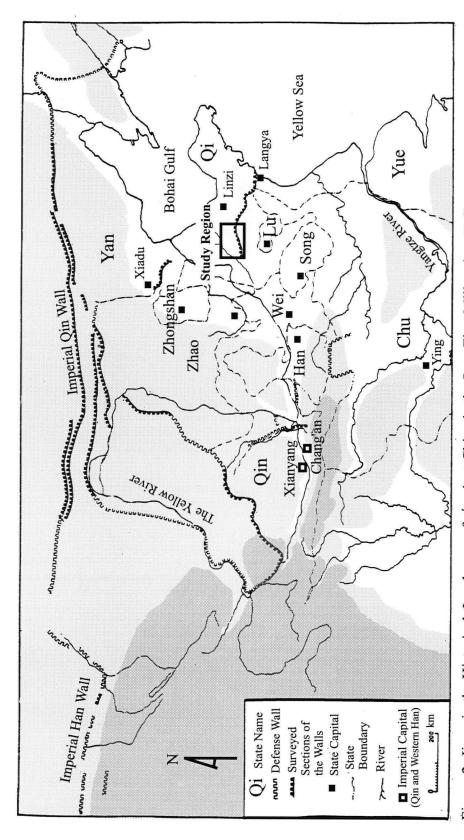


Figure 1. Map of the Jinan Region



(This is a composite map of the Warring States, Qin, and Western Han Periods, base-map adopted from Ye 1987:42) Figure 2: Jinan in the Historical Landscape of Ancient China in the Late First Millennium B.C.

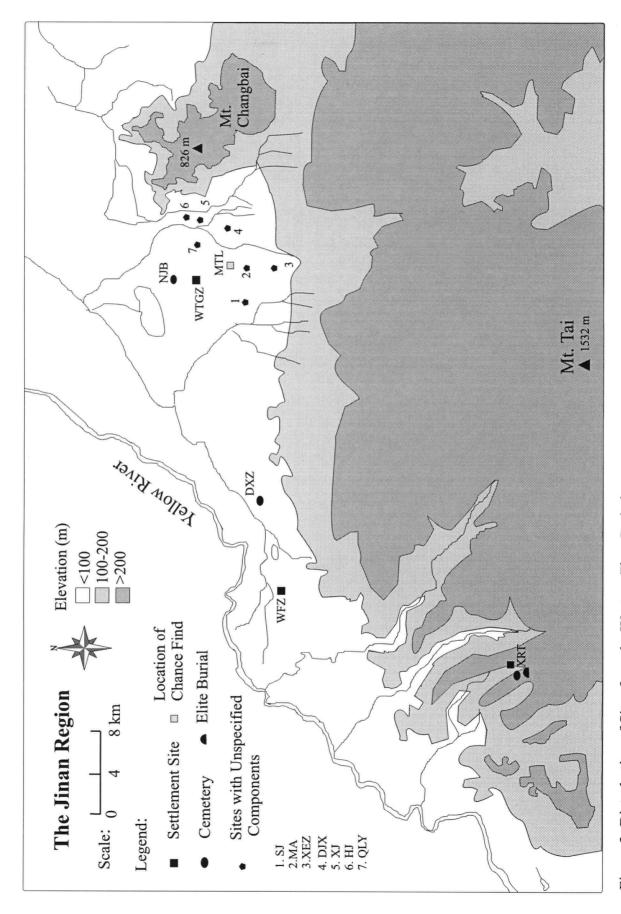


Figure 3: Distrubution of Sites from the Western Zhou Period

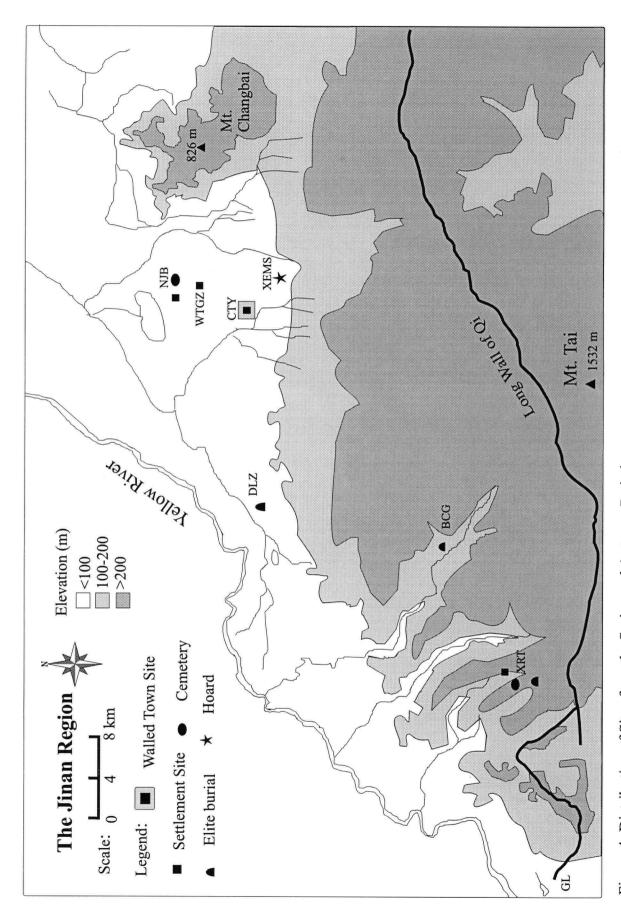


Figure 4: Distribution of Sites from the Spring and Autumn Period

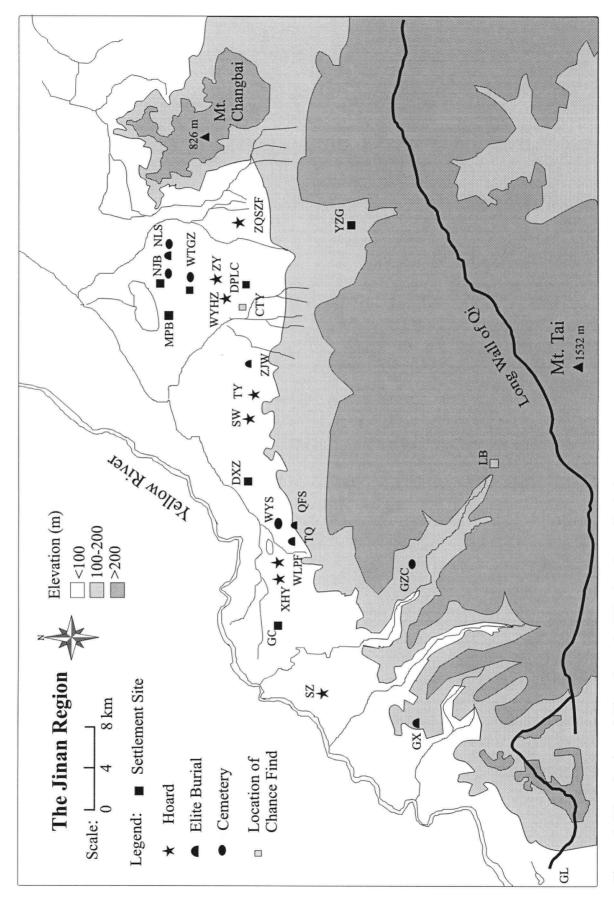


Figure 5: Distrubution of Sites from the Warring States Period

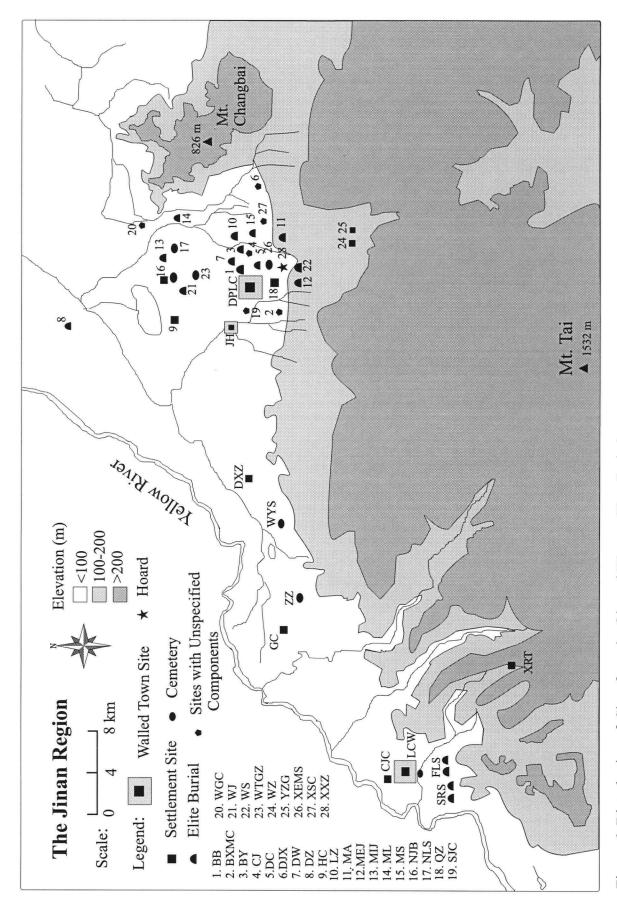


Figure 6: Distrubution of Sites from the Qin and Western Han Period

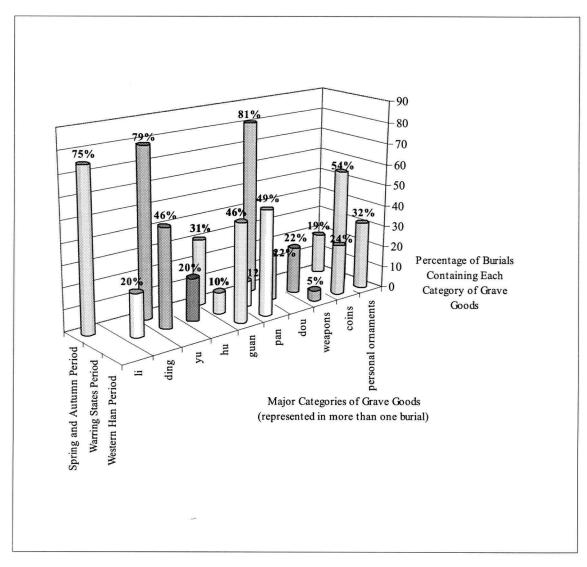


Figure 7: Changes in Major Categories of Commoners' Grave Goods in Three Periods

Appendix I. "The Greater East" in Shijing

The Greater East 大东

Messy is the stew in the pot;
Bent is the thornwood spoon. But the ways of Zhou are smooth as a grindstone,
Their straightness is like an arrow;
Ways that are for gentlemen to walk
And for commoners to behold.
Full of longing I look for them;
In a flood my tears flow.

In the Lesser East and the Greater East Shuttle and spool are idle. "Fiber-shoes tightly woven Are good for walking upon the dew." Foppishly mincing the young lords Walk there upon the road. They go away, they come back again; It makes me ill to look at them!

That spraying fountain so cold
Does not soak firewood that is gathered and bundled.
Heigh-ho! I lie awake and sigh.
Woe is me that am all alone!
Firewood that is gathered firewood
May still be put away.
Woe is me that am all alone!
I too could do with rest.

The men of the East, their sons
Get all the work and none of the pay.
The men of the West, their sons,
Oh, so smart are their clothes!
The men of Zhou, their sons
Wear furs of bearskin, black and brown.
The sons of their vassals
For every appointment are chosen.

Fancy taking the wine And leaving the sauce, Having a belt-pendent so fine And not using its full length!

In Heaven there is a River Han
Looking down upon us so bright.
By it sits the Weaving Lady stride her stool,
Seven times a day she rolls up her sleeves,
But though seven times she rolls her sleeves
She never makes wrap or skirt.
Bright shines that Draught Ox,
But can't be used for yoking to cart.
In the east is the Opener of Brightness,

In the west, the Long Path.
All-curving are the Nets of Heaven,
Spread there in a row.
In the south there is a Winnowing Fan;
But it cannot sift, or raise the chaff.
In the north there is a Ladle,
But it cannot scoop wine or sauce.
Yes, in the south is a Winnowing Fan;
There it sucks its tongue.
In the north there is a Ladle,
Sticking out its handle toward the west.

Translated from original in Chinese by Waley (1996:186-188)

Appendix II. Site Names Mentioned in the Thesis

(Presented in following order: abbreviation used in figures, romanization of site names, and site names in Chinese)

BB Beibi 北毕 BCG Beicaogou 北草沟 BXMC Beixumacun 北徐马村 BY Biyang毕阳 CJ Chenjia 陈 家 CJC Chujicun 褚集村 CTY Cheng-tzu-vai 城子崖 DC Dongcao 东曹 DCNC Dongchengnancun 东城南村 DJX Dongjianxi 东涧溪 DLZ Dianliuzhuang 甸 柳 庄 DPLC Dongpinglingcheng 东平陵城 DW Dingwang 丁王 DX Dongxing 东省 DXZ Daxinzhuang大辛庄 DZ Dianzi 店子 FLS Fulushan 福禄山 GC Gucheng 古城 GX Gangxin 岗辛 GZC Gaozhuangcun 高庄村 GL Guangli 广里 HC Huicun 回村 HJ Houjia 侯家 JH Juhe 巨合 LB Liubu 柳埠 LCW Luchengwa 卢城洼 LSW Lingshanwei 灵山卫 LZ Luozhuang 洛庄 MA Ma'an 马安 MAS Ma'anshan 马鞍山 MEJ Meijia 梅家 MIJ Miaojia 苗 家 ML Maliang 马良 MPB Mapengbei 马彭北 MS Mingshui明 水

MTL Muotianling 摩 天 岭 NJB Ningijabu 宁家埠 NLS Nalangshan 女郎山 QFS Qianfuoshan 千 佛 山 OLY Oilangyuan 七 郎 院 QZ Quanzhuang 权庄 SJC Sunjiacun 孙家村 SRS Shuangyushan 双乳山 SW Shenwu 神 武 SZ Sunzhuang 孙庄 TQ Tiangiao 天桥 TY Tangve 唐治 WFZ Wangfuzhuang 王府庄 WGC Wangguancun 王官村 WJ Wangjin 王金 WLPF Wulipaifang 五里牌坊 WS Weishan 危山 WTGZ Wangtuiguanzhuang 王推官庄 WYHZ Wangyahouzhuang王芽后庄 WYS Wuyingshan 无影山 WZ Wenzu 文祖 XEMS Xiao'emeishan 小 峨 嵋 山 XFH Xingfuhe 兴复河 XJ Xunjian 巡 检 XJL Xiaojialou 肖 冢 楼 XHY Xiheyai 西河崖 XRT Xianrentai 仙 人 台 XSC Xiushuicun 绣水村 XTS Xiaotangshan 孝堂山 XXZ Xixingzhuang 西省庄 YZG Yezhangou 夜 战 沟 ZJW Zuojiawa 左家洼 ZQSZF Zhuangqiushizhengfu 章丘市政府 ZY Zaoyuan 枣园 ZZ Zhangzhuang 张庄

Appendix III. Inventory of Bronze Coins Found in Hoards

	neral	Arch-backed	Qi large knife coin	Qi round coin	Yan	Qin round
typ	oes	small knife coin			round coin	coin
Ins	criptions	ming	Qi fahuo and Qi zhifahuo (the legal currency of Qi), Jimuo zhifahuo (the legal currency of Jimuo), Anyang zhifahuo (the legal currency of Anyang)	yiliuhuo (six cash), yisihuo (four cash), yihuo (one cash)	yihuo (one cash)	banliang (half liang)
	ZY	10				
	ZQSZF		294	243		
	WLPF		59	601	1	
sp.	TY		93			
hoards	SW		5	82		
h	XHY		+			
	SZ		83			-
	WYHZ		46			
	XXZ			+		+

Sources: Zhu 1984; Ning 1994.

Appendix IV. Burial Data for the Western Zhou Period Commoners' Burials

NJB 61 2 DXZ 17	li tripod	dou stemmed plate	gui grain container	guan storage jar	bo bowl	layer of nested coffins	dog sacrifice	child sacrifice
NJB								
61	1	1	1			2	1	1
2	2					0		
DXZ								
17		2		1	1			

APPENDIX V. Burial Data for the Spring and Autumn Period Commoners' Burials

cemetery site & burial no.	li tripod	va 1000/0evelage comaniel	dou stemmed plate	guan storage jar	he container	bone comb	bone hairpin	layer of nested coffins
	1	1	2	1				1
3 5	1	1	2	1				1
12		1	2					1
20	1	1	2					1
24			2					
30	1	1						1
40	1	1						1
41		1	2					1
51	1	1	2	1				1
58	1	1	2 2	1]	1
67	1		2					1
67 70	1		2		1			1
73			2					1
113	1	1		1				1
114	2	1	2				1	1
57	1		1			1	. 2	2

APPENDIX VI. Burial Data for the Warring States Period Commoners' Burials

Cemetery Site & Burial No.	ding tripod	yu food/beverage container	dui/zhou cereal food container	dou stemmed-plate	guan storage jar	lei wine container	bo bowl	three-legged plate	hu bottle	pan basin	yi ewer	bronze arrowhead	bronze sword	bronze spearhead	bronze ge-halberd	tin/lead ge-halberd	iron sword	iron dagger	pottery figurine	pottery spindle whorl	bone comb	bone hairpin	bone ornament	stone bead	cowry shell	jade han ornament	bronze/tin/lead ring	bronze awl	bronze belt hook/ button	bronze gui-shaped plaque	bronze V-shaped pendant	layers of nested coffins	dog sacrince	child sacrifice
78	1		1	1		1			1				1		1																	1		
137 7	2	1																				1	2									3		
10 14		1 1																														1		
16		1																														1		
17 31		1																				1										2 2		
32 33	1	1		3					,	1												1			2	2						2 2		
36		1		,					,													,							1		5	2		
39 50		1 1																																
68		1																														1		
69 71	1		1	2					2	2									8		1	1 6										2 2	1	1
72		1															1	1														1		
77 81																						1									5	1		
91	1		1							1													2				4	4				1		
102 103		1										1	1		1							1										1	1	
104																													1			1		
108				2							1	2	1		1														1 2			1		
110 123	1			3					1		1	3	1		1								2						2			1 2	1	
127		1		2					1													2										2		
130 NLS								1								1											25	5				2		
W7		1		3									1																			1		
E7					1																					1								
E16 E17					2																													
WTG 1		1		5					2	. 1																	2	,				2		
3	1	1		3					2	. 1																	2					2 2		
101 103					1		1													2	2			1										
107		1			•							5	1															1	2	. 1		1		
109 112	2	1		4 6					2	1 2					1																	1		
113	2	1		0					3	2																						2		
114														1																		2		

APPENDIX VII. Burial Data for the Western Han Period Commoners' Burials

cemetery site & burial no.	guan jar hu bottle	pottery figurine	iron dagger	bronze coin	bone ornament	bronze seal	bronze belthook	bronze mirror	layer of nested coffins
WYS 2 3 9 13									
2	1								
9	1								
13	i								
14	1			2					
24	1						1		
101	2								
11 10		22			1				
102	1				. 1		- 1		
NLS	•						•		
W2	3			1				1	1
W3	1							1	1
W5	2	1		1					1
W6 W8	2			12					1
W8	2						1		
W10	1 1					1		1	
W13	2			9			2		
W14 W15	2		1	20 3					
W15	2			3					
W16	2							1	
W17	4								
W21			1				1		
W11	2			11				- 1	
E2 E4	2 2						1		
E6	1								
E8	1								
E11	2								
S40	2								
S44	2								
S45 S57	2 2								
WTGZ									
2	2								1
104	- 1								1
105	1								1
111	1								1
NJB				•					
133				3					