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During the Age of Confucius (1000–250 BC)



The Archaeological Evidence

Lothar von Falkenhausen

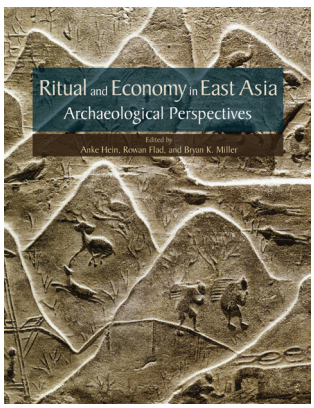
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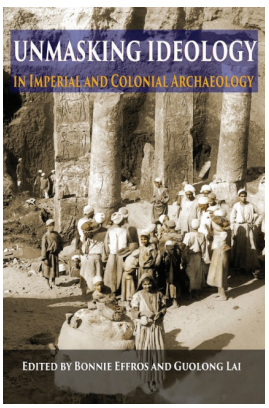
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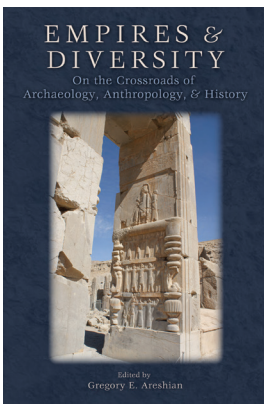
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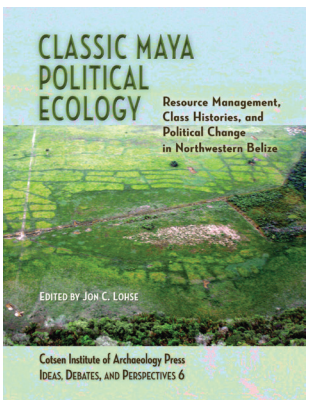
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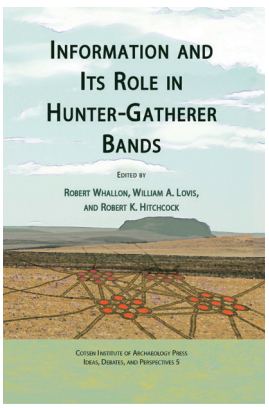
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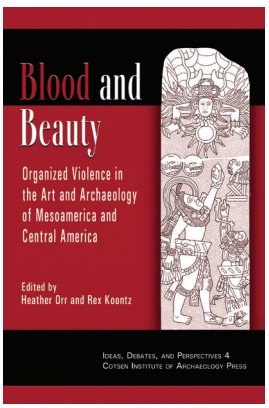
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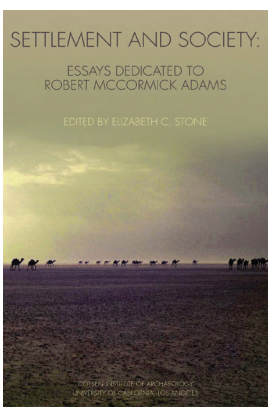
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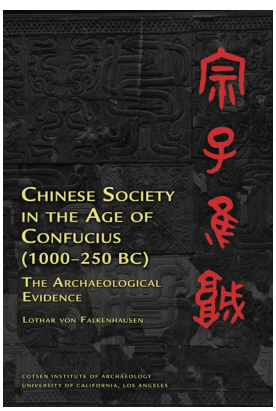
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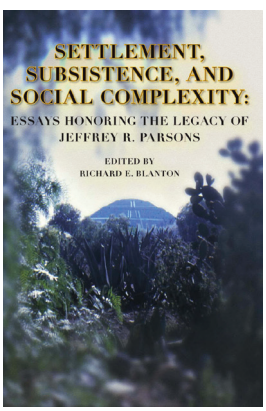
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ECONOMIC TRENDS IN CHINA

During the Age of Confucius (1000–250 BC)

The Archaeological Evidence

Lothar von Falkenhausen

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UCLA COTSEN INSTITUTE OF ARCHAEOLOGY PRESS

For Yan Xing, my muse

九州攸同
四隩既宅
九山刊旅
九川滌源
九澤既陂
四海會同
六府孔修
庶土交正
底慎財賦

The Nine Provinces have been made uniform

The lands within the Four Corners are filled with homesteads

The Nine Mountains have been denuded and planted in orderly rows

The Nine Rivers have had their sources cleaned

The Nine Marshes have been embanked

The Four Seas have been joined together

The Six Storehouses are well cared for

And the various soils have been compared and systematized

So as to plumb carefully their respective values and revenues.

Shangshu "Yugong"
(translation after Karlgren 1950:17–18)

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Preface

Whenever a Hollywood film studio scores a hit with the public, it will promptly issue a sequel. Written mostly in Los Angeles, the present book betrays such local influences: it follows—albeit not very promptly—in the footsteps of my *Chinese Society in the Age of Confucius (1000–250 BC): The Archaeological Evidence*.[1] It covers the same period and place: Late Bronze Age and Iron Age China; but rather than on social developments, its focus is on their economic underpinnings. The evidence on which its arguments are built, much of it here brought together for the first time, is more inchoate than in the case of *Chinese Society*, necessitating greater length and a wider variety of modes of presentation. But like any Hollywood sequel, *Economic Trends* is offered to the public in the hope that it will meet the same positive reception as its predecessor.

Like *Chinese Society*, this book starts with a historical and methodological orientation, followed by a series of case studies in which currently available bodies of archaeological evidence are scrutinized. The economy of pre-Imperial China provides an overall thematic focus, but as in the earlier book, an even more important aim than covering any particular topic exhaustively is to explore *what kind of arguments can presently be built with Chinese archaeological data*. Unsurprisingly, my extended meditations on the archaeological record will not always lead to concrete solutions to the complex questions raised. My intention is, instead, to stake out areas where future research-driven fieldwork and data analysis may yield greater clarity than is currently attainable, and to frame new questions that can be addressed—hopefully with ever more sophisticated methods—by better-qualified scholars.

1 Falkenhausen 2006a.

In the continuing absence of an in-depth English-language synthesis of the archaeology of Late Bronze Age and Iron Age China,[2] a certain amount of "thick description" will be necessary. And in the anticipation that, like its predecessor, this book will serve many of its readers as a kind of reference tool for the study of its period, bibliographic coverage is perhaps overly extensive in some places. But it is still far from complete. It is with both humility and pride that I acknowledge my enormous debt to colleagues in China and around the world, many of whom are my friends, and whose publications it gives me great pleasure to refer to. Without their ingenuity and hard work, the explorations recorded here could never have been attempted. Still, the immense amounts of both primary data and secondary scholarship generated during what is now more than a century of modern archaeological fieldwork in China doom any attempt to be truly comprehensive. All I can hope to do in this book is to open the readers' eyes to the relevance of contemporary Chinese archaeology in a wider cross-disciplinary context, and to the sophistication and productivity of its practitioners.

While some of the sites and finds discussed herein have long been known, I emphasize new discoveries. This is partly because the techniques employed in conducting excavations and analyzing the excavated materials are continually improving, making recent data more amenable to the kind of inquiry attempted here. At the same time, *Economic Trends* is not offered as an update to its predecessor; due to its different thematic angle, a number of new discoveries that would certainly have been discussed in *Chinese Society* had they been available at the time of its writing—in particular, many newly excavated cemeteries and tombs—could not be considered herein.

As with *Chinese Society*, the book's main target audience is twofold: readers who are interested in archaeology but have little or no knowledge of China; and students of China whose special focus is outside of archaeology. For the former, *Economic Trends* can serve as a basis for cross-cultural comparisons; to the latter, I hope it will provide insights into the early foundations of Chinese civilization complementing what one can learn from the better-studied textual record. For notwithstanding what is alleged in an influential reference work,[3] it has never been my practice to belittle the value of inscriptions, excavated manuscripts, and transmitted texts:[4] their philological study must obviously go hand in hand with archaeological investigation, and the results inform, albeit from a distance, many of the arguments made in the present book. In choosing to foreground the material record, my aim is, above all, to introduce new and as yet insufficiently well-known evidence that, when properly analyzed and contextualized, can serve to expand the text-based knowledge base, enrich it by alternative storylines, and complexify our understanding of early China.

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2 Shelach-Lavi 2015 offers an admirably judicious and still reasonably up-to-date, though necessarily brief, conspectus of the evidence. Of two useful recent handbooks, only Childs-Johnson 2020 covers aspects of this period in some of its chapters; Underhill 2013 stops earlier.

3 Wilkinson 2015:699.

4 My students have understood this (cf. Flad and Hein 2023). As to the ethical basis of my practice, may it suffice to gesture to Weber 1992 [originally published 1917/1919].

Acknowledgments

Some of the central ideas of this book were generated during the Sino-American collaborative project "Landscape Archaeology and Ancient Salt Production in the Upper Yangzi River Basin," which I co-directed between 1999 and 2004, and which is discussed in Chapter 10. For the funding of this project, I am indebted to the Wenner-Gren Foundation, the Henry Luce Foundation, the University of California Office of the President, the Council on Research at UCLA, and Peking University.

For support over the many years while this book was in gestation, I am grateful to the Institute for Chinese Studies at the Chinese University of Hong Kong, where I spent six months in 2007; the Alexander von Humboldt Foundation, which supported me during a term as visiting professor at the University of Münster in 2008; the International Consortium for Research in the Humanities at the University of Erlangen, which invited me for a visiting fellowship in 2011; the International Academy for China Studies at Peking University, where I held a visiting professorship in 2012; the Getty Research Institute, which appointed me as its Consortium Professor during 2012–2013; the John Simon Guggenheim Foundation, which awarded me a fellowship in 2019–2020; and, once again, the Council on Research at UCLA, which has supported me with annual research grants.

Work on the book has been ongoing in fits and starts for more than two decades. That I was eventually able to finish the text is owed in no small measure to my enforced immobility during the 2020–2022 Covid-19 pandemic. I would like to thank the UCLA administration for allowing me continued access to my office as part of Stage Two of its Research Ramp-up, and the University Library staff—in particular, Chen Su and Cheng Hong—for their painstaking delivery of emergency online research services during that trying period.

Like its predecessor, this book is preceded by a *Cambridge History* chapter.[5] I am grateful to Richard von Glahn and Debin Ma for inviting me to contribute to the *Cambridge Economic History of China*, and to the other contributors for their comments at a memorable preparatory conference held at UCLA in August 2018. For inclusion in this book, my *Cambridge Economic History of China* chapter, as well as several other portions of the text that have been previously published as articles or book chapters, have been thoroughly reworked and updated. These earlier efforts are cited in the appropriate places, and readers interested in further details are encouraged to consult them. I would like to use this opportunity to reiterate my gratitude to editors, peer reviewers, and readers for all their helpful input.

I first presented some of the core ideas of this book as the 2014 Dagmar Westberg Lectures at Johann Wolfgang Goethe-Universität, Frankfurt, which I reprised at Wuhan University in 2015 and at the École Pratique des Hautes Études, Paris, in 2016. In addition, I have presented snippets from this book on multiple other occasions in the form of lectures and conference papers. A detailed enumeration would be tedious; suffice it

5 Falkenhausen 2022a. Due to a not entirely uncontroversial editorial decision, that chapter is almost devoid of scholarly references, which are now supplied in the present book.

for me here to express thanks collectively to all my gracious hosts, conference organizers, fellow presenters, and members of the audience, whose insightful queries and comments have informed the present work.

At UCLA, I am grateful to my colleagues and students in the Department of Art History, the Cotsen Institute of Archaeology, the Center for Chinese Studies, the Global Antiquity Initiative, and the Pourdavoud Center for the Study of the Ancient Iranian World, who have been providing me with a congenial institutional home. My work and that of my colleagues has greatly benefited from a long-running Institutional Enhancement Grant from the Henry Luce Foundation (2008–2024), which I would like to acknowledge gratefully at this occasion. In addition, I would like to record my gratitude to the following institutions in China with which I have been associated during the period when this book was being written: Zhejiang University, which appointed me as Honorary Professor in 2014; Wuhan University, where I visited and lectured almost annually between 2012 and 2018; Xibei University, which honored me with a Changjiang Chair professorship (2018–2021), and where I continue to be affiliated; and the Shaanxi Archaeological Academy, which has been a generous and ever-resourceful host to the International Archaeological Field School at Yangguanzhai (2010–).

Many people helped in bringing this book to completion. Above all, I am extremely grateful to Andrew MacIver for producing the maps and to Wen Chenghao and especially to Wang Zichao for their painstaking work on the figures. Moreover, I am indebted to the generosity of Cao Dazhi, Christina von Falkenhausen, Rowan K. Flad, Fu Zhongyang, Tristram R. Kidder, Li Feng (Zhengzhou University), Li Ling, Jane Portal, Ren Chao, Shi Tao, Sun Zhouyong, Wang Di, Wang Jichao, Wang Jun, Wang Yifeng, Wei Xinying, and Zhao Hao, for making available images that are reproduced herein. For help in procuring and producing illustrations and other materials, I would especially like to thank Lai Guolong, as well as He Dechuan, Huang Yizhe, Meng Fanzhi, Zhang Li (Li Jaang), Zheng Hongli, and once again Shi Tao, Wang Zichao, and Wen Chenghao.

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As in *Chinese Society*, the title calligraphy was contributed by my old friend Feng Shi, to whom I would like to reiterate my sincere thanks. The Chinese title, which comes from the "Yugong" chapter of the *Shangshu*, translates to "The Six Storehouses are well cared for"; for the context, see the dedication page.

As my former teachers have passed away, friends, colleagues, visitors, and students have become ever more important as sources of inspiration and encouragement. In this connection, I would like to acknowledge foremost, and with immense gratitude,

my friend Li Ling, from whom, ever since our auspicious first meeting in Seattle in 1989, I have learned more than I can say. His beneficial influence can be felt throughout the book. An exhaustive list of all others who have contributed—often without being aware of it—to the fruition of my scholarship over the years would fill many pages. Here follows an alphabetical enumeration of friends, colleagues, and acquaintances not yet listed above who have facilitated the gestation of this book in one way or another: Sarah Allan, Iwo Amelung, the late Gregory Areshian, Anthony J. Barbieri, Elizabeth Berger, Ian W. Brown, Giorgio Buccellati and Marilyn Kelly-Buccellati, the late Pochan Chen, Chen Zhi, the late Lloyd E. Cotsen, the late Duan Qingbo, Reinhard Emmerich, Sarah E. Fraser, Thomas W. Gaehtgens, Enno Giele, Pierre L. Gouletquer, Gu Yunong, Han Guohe, Christoph Harbsmeier, Anke M. Hein, Jeehee Hong, the late Vyacheslav Vs. Ivanov, Yitzchak Y. Jaffe, Jiang Zhanghua, Jing Zhichun, Martin Kern, Maria Khayutina, Helena Kolenda, Rüdiger Krause, the late Dieter Kuhn, Michael Lackner, Weng Cheung Lam, Lothar Ledderose, Hui-shu Lee and Peter C. Sturman, Li Cheng, Li Feng (Columbia University), Li Kin Sum, Li Qingquan, Li Shuicheng, Lin Meicun, Liu Bin (Xibei University), Liu Li, François Louis, Ma Jian, Dirk Meyer, Miao Zhe, Peter N. Miller, Momiyama Akira, Okamura Hidenori, Laurent Olivier, Peng Peng, the late Michèle Pirazzoli-t'Serstevens, Jessica Rawson, Rong Xinjiang, Ken-ichi Sasaki, David C. Schaberg, Alain Schnapp, David Scott, A. Alexa Sekyra, Edward L. Shaughnessy, M. Rahim Shayegan, Jenny F.-S. So, Su Rongyu, the late Sugiyama Masa'aki, Sun Hua, Sun Zhibin, Taniguchi Mitsuru, Hans van Ess, Hans Ulrich Vogel, Thomas A. Wake, Wang Wei, Wang Weilin, Wang Yi, Wang Zichan, Olivier Weller, Peter S. Wells, Willeke Z. Wendrich and Hans Barnard, Wu Hung, Xu Shaohua, Yan Yunxiang, Yang Liping, Ye Wa, Yoshimoto Michimasa, Zhang Hanmo, Zhang Songlin, Zhao Rong, and Zhou Ya.

For help at the production stage, thanks are due to Aaron Burke, head of Cotsen Archaeological Press, and the members of the editorial board of the Press; to Randi Danforth and Taylor McBride for their efficient coordination; as well as Elinor Pearlstein and Jody Baboukis for their conscientious editing, to Sally Boylan for designing the book, and to Matthew White for help with the indexes

My apologies to all those whose help I may have accidentally forgotten to acknowledge.

Thanks are due, finally, to my family, who have been maximally supportive of me and my eccentricities over the years. Above all, my love and gratitude go to my loyal spouse Yan Xing, who has given me tremendous support and encouragement during the long years of writing, and who can always be relied upon to put up a creative challenge. This book is dedicated to him.

Technicalities

The transcription of Chinese follows the Hanyu Pinyin system, with the pronunciations of the *Xinhua zidian* taken as the standard. Tones are not marked except in order to differentiate homonyms where necessary (e.g., the Hàn dynasty vs. the Warring

States–period kingdom of Hán). The provinces of Shānxi (formerly spelled Shansi) and Shǎnxi (Shensi) are distinguished by rendering the latter as "Shaanxi," following the common convention in the People's Republic of China. Following another Sinological convention, I render the name of an ancient polity in northern Henan as "Wey," reserving the (theoretically) correct "Wei" for the Warring States–period kingdom of that name (the two are written with different characters, but pronounced with the same tone in Mandarin).

The Hepburn romanization (as modified in *Kenkyūsha's New Japanese–English Dictionary*) is used for Japanese.

Names of archaeological sites are given in the following three-level format: (1) locality (followed by a comma), (2) county or city, and (3) province (in brackets); for example, Dalupu, Yangxin (Hubei). Administrative units intermediary between the locality and the county level, such as villages, townships, or (formerly) People's Communes, are omitted (they are indicated as the name of a locality only when a more fine-grained place name is not known). The purpose of this format is to enable readers to locate a given site at least approximately: unlike lower-level units, counties and cities are indicated on many readily available maps.

In order not to put off the non-Sinological readership, I have left the text and notes virtually free of Chinese characters. The General Index doubles as a glossary by providing characters for all Chinese names and terms mentioned, as well as brief explanations. The characters for survey areas and archaeological sites are given in separate lists, arranged by province and county. Characters for the names of modern scholars mentioned may be found in the Bibliography. In footnote references to Chinese-language publications, Chinese authors' names are always given in full, and in Pinyin. With Chinese authors of works in non-Chinese languages, only the last names are given in footnote references, and the authors' preferred spellings are followed. In the bibliography, since the personal name follows the family name in Chinese names, commas between the two are consistently omitted. Works by authors publishing in both Chinese and other languages, and who use non-standard spelling for their name when publishing in languages other than Chinese, are separately alphabetized under the Pinyin spelling and their own preferred spelling; in such cases, cross-identifications are provided.

The Bibliography follows the style of the now-defunct *Journal of East Asian Archaeology* in providing translations of all titles in Asian languages (for consistency's sake, rather than copying any translated titles provided in the original publications, I am providing my own translations). The order of enumeration is strictly alphabetical, without consideration of the inner boundaries of Chinese morphemes. Word boundaries—not marked in Chinese—are delimited according to my own *Sprachgefühl*, resulting in some, but probably not very many, idiosyncrasies vis-à-vis other authors' practices. The modern secondary literature is quoted by author, classical texts and inscription compendia by title. Classical references are provided only to standard editions: *Shisanjing zhushu* for the Confucian classics, with the exception of the *Zhou*

li, which is cited according to Sun Yirang's *Zhou li zhengyi*; and, wherever possible, *Zhu zi jicheng* for the works of the classical philosophers. These references include text and chapter names, the number of the chapter in the edition used, and the page in that edition; when a reprint with modern page numbers is used, that number is given in addition. References to translations of classical loci referred to are not consistently provided, as these can easily be found, different readers will have preferences for different translations, and new, improved translations keep coming out. Wherever translations are provided in the book, they are mine unless otherwise indicated.

All measurements are given in the metric system. One frequently occurring unit with which many Anglophone readers may not be very familiar is the hectare (ha), which equals ca. 2.5 acres. One hectare equals 10,000 square meters (m^2), or some 100,000 square feet; and 100 hectares equal one square kilometer (km^2), approximately one-third of a square mile. The abbreviation "m asl" stands for "meters above sea level." The city of Xi'an, for instance, is at ca. 405 m (1,330 feet) asl.

Introduction

> Economy means work, putting a value on things, regulation of their consumption, wealth accumulation, transfer of cultural achievements from generation to generation.[1]

How did the inhabitants of Late Bronze Age and Iron Age China earn their livelihood? Who were the principal economic agents, and what was their role or status in society? How much surplus were they able to produce? Who controlled that surplus, and how was it redistributed? What was the economic role of cities? How were the logistics of resource extraction and craft production organized and coordinated? How did technological innovation affect production? How did governmental authority interact or interfere with economic activity? And how did economic conditions change over time? Such questions are relevant to archaeological research all over the world. In China, thanks to a century of excavation and research, it has recently become possible to answer them with increasing precision. Admittedly, the answers archaeology can give are usually indirect, gleaned from ephemeral remains. Any archaeologically grounded understanding of broader economic trends must be painstakingly distilled from a multitude of kaleidoscopic glimpses into concrete economic conditions in many different places. The present book endeavors to develop such an understanding—not for all of Chinese history, but for the crucial 750 years or so that preceded China's first imperial unification.

1 Bücher 1893/1918 (reprint 1925–1926):1:30.

Geographical and Chronological Scope

This book focuses on the region in continental East Asia where polities characterized by complex forms of social organization first emerged in the early second millennium BC, and where the earliest historically recorded royal dynasties flourished. This region will be referred to as the Chinese Heartland (Map 0.1).[2] As of ca. 1000 BC, it comprised the Middle and Lower Yellow River Basin, the western part of the Shandong peninsula, the Huai River Basin, and the northern part of the Middle Yangzi River Basin (i.e., the Han River Basin), which together covered an area of 650,000 km^2 or so (comparable to that of Texas). During subsequent centuries, the Heartland expanded into all directions, so that, by 250 BC, it had also come to encompass the entire North China Plain, the eastern fringes of the Eurasian Steppe belt from eastern Gansu to southern Liaoning, the entire Shandong peninsula, much of the Sichuan Basin, and the southern portions of the Middle Yangzi River Basin, as well as the Lower Yangzi region. Comprising an area of some 2 million km^2 (approximately the size of Mexico),[3] the Heartland's estimated population was then some 40 million inhabitants.[4] The economic developments traced in this book undoubtedly played an important role in bringing about this remarkable expansion.

The areas surrounding the Chinese Heartland will herein be referred to as the "Borderlands." I emphatically do not regard the term "Heartland" as a synonym for the "core" of a world economy in Immanuel Wallerstein's World System Theory; nor do I mean to designate "Borderlands" as "periphery" in Wallerstein's sense.[5] Both "Heartland" and "Borderlands" are merely a geographic shorthand: so as to clarify economic developments in Late Bronze Age and Iron Age China, it will inevitably be necessary to point out contrasts between the areas governed by the historically attested royal dynasties and those adjacent parts of continental East Asia that were beyond their control.[6] Within the Chinese Heartland, as well, certain contrasts will emerge. For the purpose of brevity, I shall be

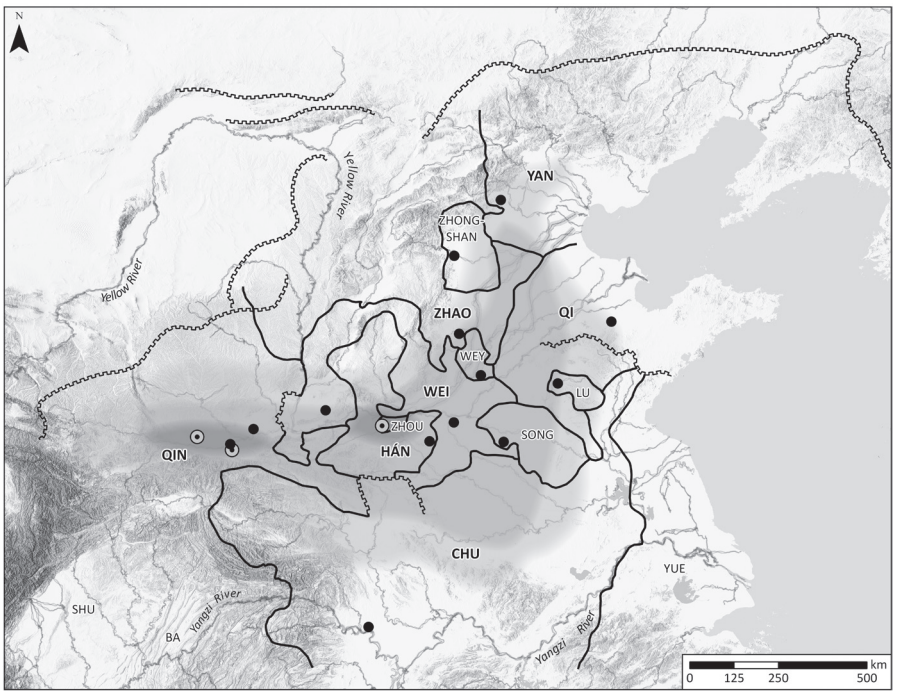
2 To avert potential criticism stemming from the undisputed fact that "China" was not yet the name of this part of continental East Asia during the period under consideration, let me clarify that here I use "Chinese" purely as a modern geographical designation.

3 The size of the unified Qin empire (221–207 BC), which encompassed large swaths of formerly marginal territory, is thought to have been ca. 2.3 million km^2; the size of imperially controlled territory more than doubled under the Hàn dynasty (Taagepera 1979:126–129).

4 Calculating back from the earliest preserved empire-wide census figure of 59,594,978 persons in AD 2 (*Hàn shu* "Dilizhi xia" [Zhonghua ed., 28B:1640], Ge Jianxiong (in Ge Jianxiong 2000–2002:1:265–312) estimates that from the Western Zhou to the Warring States period, the population of the Chinese Heartland quadrupled from ca. 10 million to more than 40 million. Archaeological evidence for significant population growth is presented in chapters 1 and 4. Considering that growth was likely uneven in different parts of the Chinese Heartland, and accounting for the expansion of the major polities at the expense of their smaller neighbors, Ge's figures may not contradict Yuan Lin's (2000) contention, based on a creative use of textual loci, that the population of economically prosperous Qi increased ninefold between Western Zhou and Warring States times.

5 For further discussion of World Systems Theory, see pp. 505–510 and 617.

6 In two important recent works of synthesis, Miyamoto Kazuo (2020, 2023) has similarly emphasized and archaeologically characterized the contrast, during the Bronze Age and the Iron Age, between the agrarian core of Chinese civilization and the wider Eurasian world beyond.



Map 0.1. The expanding Chinese Heartland, ca. 1000–300 BC. The shaded area indicates the approximate extent of the Western Zhou kingdom at the end of the Early Western Zhou period, ca. 950 BC (darker shading is used for the metropolitan areas, lighter shading for outlying regions). Overlaid upon it are the territories of the seven major Warring States–period kingdoms, as well as those smaller polities still in existence ca. 300 BC, with their approximate boundaries (based on Tan Qixiang 1975, with modifications). Major Warring States–period border fortifications are shown, as are the "Great Walls" to the north and northwest, which date mainly to Early Imperial (Qin and Western Hàn) times; they constitute a maximalist definition of the Chinese heartland. Larger dots mark the Zhou royal capitals, smaller dots those of the other polities included.

referring to the Yellow River Basin and adjacent areas, including the Shandong peninsula and the North China Plain, as "North China," and to the region south of the Qinling and Dabie mountain ranges—roughly, the Huai and Yangzi River systems—as "South China."

In traditional historiography, the time covered in this book largely corresponds to the eight centuries of the Zhou dynasty (ca. 1046–256 or 255 BC) (for a chronological chart, see Table 0.1). The name Zhou designated a place—the "Plain of Zhou" at the foot of Mt. Qi in present-day central Shaanxi—as well as a people-group, a polity, and the ruling lineage of that polity. The Zhou originated as a regional power on the northwestern margins of the Chinese Heartland. They are documented as a subordinate polity in the oracle-bone inscriptions of their dynastic predecessors, the Shang (ca. 1600–ca. 1046 BC). Having founded a rival royal dynasty about 1059 BC (or possibly in 1056 BC), the Zhou overthrew the Shang in ca. 1046 BC (or possibly in 1044 BC).[7]

7 Alternative dates according to Zhang Pengcheng 2023.

TABLE 0.1. Chronological Chart

Time	Archaeological Periods	Historical Periods		Synchronisms in Old World History
1050	1050	ca. 1046		End of New Kingdom (Egypt)
1000	EARLY WESTERN ZHOU			Aryan Invasions (India) *David (d. ca. 962)* (Israel)
950	950			
		WESTERN ZHOU		Etruscan city states (Italy)
900	MIDDLE WESTERN ZHOU			Dark Age (Greece) 25th Dynasty (Egypt)
850	850			Rise of Assyrian Empire (Mesopotamia, Syria)
800	LATE WESTERN ZHOU			Carthage founded (814) (N. Africa)
		781?		
	770	771?	771?	Rome founded (753)
750		758?	TRANSITION PERIOD	
	EARLY SPRINGS AND AUTUMNS	738?	722	*Sargon II (enthroned 721)* (Assyria)
700				Hallstatt Period (Central Europe)
			SPRINGS	Assyrian invasions of Egypt (671, 663)
650	650			
	MIDDLE		AND	*Zoroaster (ca. 628–551)*
600	SPRINGS AND AUTUMNS			Neobabylonian Empire (612–539)
		EASTERN		Greek colonies in Sicily
550	550			*Buddha (ca. 560–480)*
			AUTUMNS	*Confucius (ca. 551–479)*
	LATE			
500	SPRINGS AND			Achaemenid Empire
	AUTUMNS		481/479	(Persia/Mesopotamia/Syria/ Asia Minor/Egypt)
450	450		453	*Socrates (ca. 470–399)*
		ZHOU		
	EARLY			Peloponnesian War
400	WARRING STATES		403	(431–404) (Greece)
				Roman Republic (509–27)
	375			
350	MIDDLE			*Alexander the Great (356–326)*
	WARRING STATES		WARRING	
300	300			Maurya Empire (321–185) (India)
			STATES	First Punic War (264–241)
	LATE	256/255		
250	WARRING STATES	249		
	221		221	
	QIN	QIN		Parthian Empire
200	206	206		(Persia/Mesopotamia)

For the next two and a half centuries—during the period that is conventionally called the Western Zhou—they ruled from several capital centers in present-day Shaanxi, two of which, Zongzhou in the Plain of Zhou and Feng/Hao near Xi'an (the latter sometimes counted as two separate cities), have been identified archaeologically (see pp. 209–220). Another royal capital was established some 400 km further to the east, at Luoyang (Henan), in former Shang territory. The Western Zhou period came to an end when the Shaanxi core of the Zhou kingdom was overrun by intruders from the northwest. Recently excavated manuscripts indicate that this invasion occurred not in 771 BC, as traditionally believed, but as early as 781 BC, and that it was followed by an interregnum during which two pretenders simultaneously claimed the throne (one of them was later written out of the historical record). Rather than in 770 BC, as previously accepted, the Zhou royal line may not have been reestablished at Luoyang until 758 BC, or possibly as late as 738 BC. Its members continued to reign in that eastern capital, albeit under much reduced circumstances, for another five centuries.[8]

The so-called Eastern Zhou period (770/758/738–256/255/221 BC) is further subdivided into two parts of approximately equal length: the Springs and Autumns period (conventionally 770–ca. 450 BC) and the Warring States period (ca. 450–221 BC).[9] The first of these owes its name to a transmitted text: the *Chunqiu* (Springs and Autumns), a year-by-year chronicle covering the years between 722 and 481/479 BC. The name of the second, aptly descriptive of centuries of protracted political and military conflict,[10] was later attached to a collection of historical anecdotes on that period, the *Zhanguo ce* (Stratagems of the Warring States). The decline of the Zhou royal house, which had begun during the final century or so of Western Zhou, increasingly shifted the balance of power to various regional polities that remained only nominally subordinate to Zhou authority. Over the centuries, most of these polities disappeared or were reduced to insignificance in the course of constant and increasingly brutal internecine warfare. Numerous upheavals and changes of régime played havoc within the individual polities as well. In 256 or 255 BC, the remnants of the Zhou dynasty were annihilated by the armies of Qin, another newcomer from the northwest, which had built a great capital city, Yong, in the former core territory of the Zhou, in the early seventh century BC (see pp. 224–228). By the time it annexed the Zhou royal domain, Qin was one of seven major kingdoms contending for hegemony; the others were Yan in the northeastern, Qi in the eastern, Chu in the

8 The revised dates come from Zhang Pengcheng 2023; they are mainly based on the *Xinian*, an unprovenienced Warring States–period Chu manuscript now in the collection of Qinghua University (*Qinghua Daxue cang Zhanguo zhujian*, vol. 2). See also Yoshimoto 2017; Zhang Pengcheng 2019; Pines 2020:100–107 (for an English translation of the *Xinian*, see Pines 2020:151–241).

9 Dates for the inception of the Warring States period range between 481 and 403 BC; the compromise date of ca. 450 BC more or less corresponds to the date of the division of Jin between Wei, Hán, and Zhao in 453.

10 The term "Warring States" is first attested in the works of Jia Yi (ca. 200–169 BC) (*Xinshu*: "Guo Qin lun xia," *Han Wei congshu* 1.469). I am grateful to Yuri Pines for this information.

southern, and Wei, Hán, and Zhao—the three successors of the collapsed former polity of Jin—in the north-central parts of the Zhou realm (see Map 0.1). By 221 BC, Qin had conquered them all, unifying the Chinese Heartland for the first time under a centralized imperial régime.

In building an archaeological chronology for this period, Chinese archaeologists have adhered to its historiographically based threefold subdivision: Western Zhou, Springs and Autumns, and Warring States. With the help of fine-tuned artifact typologies, each of these periods can be further subdivided into three subperiods with an average length of a little less than a century. Even more precise dating is sometimes feasible based on stylistic details or inscriptions. In one respect this chronology is convenient: it allows instant coordination with the historical texts. Yet it fits the archaeological evidence somewhat uneasily, for changes in the material record do not always—or even usually—coincide with those of political régimes. As a case in point, the two most salient breaks in the material-culture development of the period discussed herein—two events that have been characterized as ritual reforms, but which may actually signal wider changes in the sociopolitical and economic fabric of the Chinese heartland—occurred ca. 850 BC, during the Late Western Zhou, and over the course of the sixth century BC, during the Middle Springs and Autumns period (see pp. 261–263). Neither of these coincides with a break in the textually based chronology. Likewise, the material culture of Imperial Qin (221–207 BC) is virtually indistinguishable from that of Qin during the Late Warring States period—or, for that matter, from that of the unified empire during the initial decades of the succeeding Western Hàn period (202 BC–AD 9). In the future, someone will perhaps devise a new chronology based entirely on material-culture remains and disregarding the historiographic tradition; but as of now, pragmatic considerations dictate adherence to the currently accepted periodization.

Inevitably, the analysis in the following chapters proceeds in varying time frames; depending on context, an archaeological observation may refer, for example, to the Warring States period, to a subperiod thereof (such as Early Warring States), to the Iron Age, or to the entire Eastern Zhou period. This may sometimes leave the reader with a feeling of chronological imprecision. But the degree of resolution attainable in archaeological dating differs, often considerably, among the various bodies of evidence under analysis. Ceramic typology, for instance, tends to be more chronologically sensitive than lithic typology or the typology of wooden buildings. In some cases, the factors responsible for fuzziness in dating may owe to the skill levels of the researchers involved, or to the quantity of material available for analysis; more often, however, the relevant factors are inherent in the materials themselves—different kinds of objects, mediums, and techniques of artisanship change at different speeds. The reasons why this is so remain poorly understood.[11]

11 For art-historical treatments of this problématique, see Focillon 1955; Kubler 1962.

From the Late Bronze Age to the Iron Age

The 750-year time frame indicated in the title of the present book is approximate; it sometimes has been extended—both backward into the Late Shang period and forward to approximately the Qin unification—as necessitated by the nature of the material under discussion and the narrative threads pursued. In my earlier book I justified the use of the designation "Age of Confucius" for this entire period by pointing out that it comprises not only Confucius's lifetime (ca. 551–ca. 479 BC), but also the preceding four and a half centuries that constituted Confucius's frame of historical reference, as well as the succeeding two-plus centuries, during which Confucius's disciples defended his teaching in an ever more contentious marketplace of ideas.[12] Modern scholarship has tended to subsume this entire period under China's great Bronze Age, which began with the introduction of metallurgy about 2000 BC and saw the rise, during the Erlitou (ca. 1900–1600 BC) and Shang periods, of a bronze-casting tradition unique in the ancient world for the technological sophistication and artistic appeal of its products. Long before the Age of Confucius, bronze had become the prestige material par excellence, and it retained that status down to the time of the Qin unification.

Even so, some recent publications have used the term "Iron Age" to refer to the final centuries of the pre-Imperial epoch, and after much hesitation, I have decided to break with my own earlier practice and adopt this term here. So far, there seems to be no agreement on the exact stretch of time assigned to China's Iron Age;[13] in this book, I identify "Iron Age" with the approximately four hundred years from the mid-sixth century BC break in the archaeological sequence down to about a half-century past the end of Unified Qin.[14] One straightforward rationale for this is that iron began

12 In Michael Hunter's apt formulation (2017:159), "'Kongzi' [in the early Imperial period] was the symbolic hub of a metatradition of thinking about the raw ingredients of early Chinese discourse." In light of current scholarship (Harbsmeier 2019; q.v. for further references), it seems safe to say that the relevant intellectual dynamics were put in motion by the historical Confucius, who positioned himself as a crucial link between the Zhou dynastic founders and later generations (*Lunyu* "Bayi" 3.14; *Shisanjing zhushu* 3.11, p. 2467). Recent manuscript discoveries have yielded valuable clues about how ideas and texts were transmitted (Li Ling 2000a, 2000b; Drège 2014).

13 Bai Yunxiang (2005:44–45) dates the onset of China's Iron Age to the eighth century BC. By contrast, the authors in Childs-Johnson 2020 consider the "Iron Age" as coterminous with the Warring States period; similarly Yang Hong 1992 and Bronson 1999; for early reflections see Gernet 1961. In a brief but incisive communication, Thote (1997) problematizes the question, pointing out the fundamental difference of both the Bronze Age and the Iron Age of China vis-à-vis their counterparts in other parts of Eurasia. The chronological parameters here adopted (see also Luo Tai 2022) coincide with those proposed by Miyamoto (2023) for what he calls the "Early Iron Age of Chinese Agricultural Civilization" (as distinct from surrounding culture areas, where the Early Iron Age occurred at a variety of different dates).

14 The rise of a more integrated market system for metal objects under state control during the early Western Hàn period (Lam 2020b) may perhaps be taken as a convenient end point. Miyamoto (2023) considers the period of the Qin and Hàn empire as the "True Iron Age" of the Chinese Heartland. However sympathetic to this point of view, I find it unlikely that the term "Iron Age" will replace the current use of dynastic designations in the archaeological chronology of Early Imperial China.

to occupy a significant place in the material culture of the Chinese Heartland during these four hundred years, its importance gradually increasing thanks to technological innovations that enabled the mass production of iron weapons and tools. Their large-scale use is thought to have revolutionized both agriculture and warfare. Yet the current archaeological record confirms this only to a degree; as we shall see in Chapter 3, it remains difficult to assess the actual impact of iron use during the late pre-Imperial centuries with any statistical accuracy. Several excavated iron workshops, however, do seem to attest large-scale iron production from ca. the fourth century BC onward (see Chapter 7). On balance, therefore, the evidence now available seems sufficient to argue for a qualitative as well as a quantitative change in the technological system vis-à-vis the preceding epoch. The time span assigned here to the Iron Age may be further subdivided into two 200-year-long periods, with a division about 350 BC, after which truly industrial-scale iron production took off. Below I shall occasionally refer to these periods as the Early and Late Iron Age.

Another reason for my use of the term "Iron Age" is that it is in common usage among archaeologists across Eurasia. Like bronze technology in the late third millennium BC, iron technology reached East Asia from areas further west. Whereas in West Asia—and, in light of very recent evidence, on the western fringes of China as well—iron use goes back to the mid-second millennium BC,[15] the earliest traces of local iron production in the Chinese Heartland date to the eighth century BC, or possibly a little earlier.[16] The Central European Iron Age, likewise the result of technological diffusion from West Asia, is approximately contemporaneous with the Chinese Iron Age as defined herein. The adoption of a common terminology potentially facilitates the coordination of archaeological sequences and thereby may eventually lead to a better understanding of cultural as well as economic connections across Eurasia.[17]

That said, it must also be emphasized that, once introduced into China, iron-making technology developed along its own unique trajectory. As artisans switched from hammering to casting, they produced artifacts completely unique in the ancient world and attained—at least during the last two centuries of the Iron Age—an unparalleled scale of production. By contrast, the ironworking traditions in the peripheries of the Chinese heartland (in areas such as Heilongjiang, Mongolia, Xinjiang, and Tibet) in most ways resemble those farther afield in Eurasia. As observed by Enno Giele,[18] Chinese archaeologists, though eschewing the term "Iron Age" for the Chinese Heartland, unhesitatingly

15 For Eurasia-wide perspectives of the Iron Age see Wertime and Muhly 1980; Pigott 1999.

16 See pp. 141–143.

17 Studies integrating evidence from Chinese territory with evidence from Inner and Northeast Asia habitually use the term "Iron Age" (see, e.g., Miyamoto 2023; Usuki 2004); this seems particularly true of Russian scholarship (Chernykh 1992). Sometimes the duration of the Iron Age is extended by several centuries into what Chinese historians and archaeologists would refer to as the Imperial epoch. For reflections about a new age of cultural information exchange over long distance that integrated Europe with Central Asia and areas further to the east after ca. 450 BC, see Wells 2012.

18 Giele 2021.

use that term when accommodating these peripheral phenomena in larger chronological frameworks.[19] In this broader perspective, extending its usage to all of East Asia appears unproblematic and even desirable.

In the Chinese Heartland, the onset of the Iron Age as defined here coincides with a major break in socioeconomic developments and a thoroughgoing transformation of cities (see Chapter 4). Funerary evidence—above all, a comprehensive change in ritual-vessel assemblages that I have termed the "Middle Springs and Autumns Ritual Restructuring" (see Chapter 6)—signals major changes in religious beliefs and practices that in turn went hand in hand with a shift from a pyramidal social hierarchy to a system in which a small ruling élite separated itself from an increasingly undifferentiated mass of commoners.[20] On the economic side, as will be described in detail in Chapters 6–9, this marked the major juncture in the transition from a redistributive economy to a market economy that was at least partly monetized, and was followed by a general rise in the standard of living.[21] Notably denser rural settlement within the Chinese Heartland (see Chapter 1) and the burgeoning number and size of cities (see Chapter 4) both manifested significant population growth. Elsewhere, I have referred to the aggregate of economic changes during this period as the "Warring States Period Economic Miracle."[22] But as the onset of these changes predated by about a century the Warring States period as historiographically defined, it may be more accurate to speak of an "Iron Age Economic Miracle." In this book I shall attempt to characterize, and at least in part explain, this phenomenon in a long-term perspective through its archaeological manifestations. In order to establish the necessary background, developments during the preceding 450 years—that is, the Late Bronze Age—must be included in our scope of inquiry.

Politically, the comprehensive socioeconomic transformation that is traceable in the archaeological record shadows the transition from ritual-centered, patrimonial states to centrally administered régimes headed by ever more powerful rulers and, ultimately, to the long-enduring political system of imperial China.[23] This development is amply documented in the written sources from the period. Although archaeology is notoriously ill equipped to capture political events, the insights pertinent to socioeconomic processes that archaeology *can* reveal constitutes useful proxy evidence. I have no wish to take a stance on the question of whether economic developments are *necessarily* primary vis-à-vis social and political ones—though the evidence reviewed in this book suggests that this may have been *sometimes* the case in Late Bronze Age

19 Interestingly, a similar contrast had existed during the second and early first millennia BC between the idiosyncratic, highly sophisticated bronze industry of the Chinese Heartland—including its offshoots in the Yangzi River Basin—and more generic ones elsewhere in East Asia. I am partly indebted to Wang Zichan (personal conversation, 2021) for this insight.

20 See Falkenhausen 2006a:290–399.

21 Von Glahn 2016; Kakinuma 2011.

22 Falkenhausen 2022a.

23 See Chang 1974, 1976b; Keightley 1999, 2000; Li Feng 2008 (on which see also Falkenhausen 2014a), 2013; Pines 2002, 2009, 2012.

and Iron Age China. Ultimately, of course, the economic, social, and political spheres are inextricable; Immanuel Wallerstein has aptly derided their conceptual separation as a "liberal ideological predilection."[24]

The synthesis attempted herein runs the danger of being excessively teleological, of judging from hindsight, and of overestimating the linearity of observable developments. Problematically, moreover, the crucial period from the sixth to the fourth centuries BC—the time during which the transition to the Iron Age, the Second Urban Revolution, the replacement of lineage-centered patrimonial polities by centrally administered bureaucratic régimes, and the shift from a redistributive economy to an early market economy are thought to have occurred—is poorly documented by contemporaneous written sources.[25] In the search for more and better information, archaeology, though hardly foolproof, may be our best hope.

Approach

Any connection between the archaeological record and broader socioeconomic processes needs to be justified by medium-range theory. With this in mind, I have tried herein to be explicit about any assumptions made in interpreting the data. At the same time, I have no wish to overload the text with extensive discussions of economic theory, which in any case I would hardly be qualified to deliver. My goal in writing this book has been a more modest one: to present evidence that may eventually inform new and theoretically more sophisticated work on ancient economies.

The Chinese Heartland during the Late Bronze Age and the Iron Age created its own written record, which in turn is complemented by later textual documentation. Authentic inscriptions on divinatory media and on ritual bronzes have survived in great numbers since the Late Shang period (ca. 1300–1046 BC). But the Zhou period is China's first fully historical epoch. Parts of the Confucian Classics probably go back to the Western Zhou or at least the Springs and Autumns period. In this respect, as well, the Iron Age brought about a sea change: it coincided with the spread and diversification of writing, inaugurating a period of major intellectual florescence. A considerable number of book-length texts that were compiled during that time have been transmitted over the centuries or have been recently rediscovered in the form of manuscripts written on strips of wood or bamboo. Their philological and linguistic study is important for understanding the political and intellectual history of the Zhou period, including the history of the period's economic thought. This field of scholarship has recently seen significant advances.[26]

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24 See Wallerstein 1975, new 2011 ed.:xxiii.

25 Whereas the Springs and Autumns period is quite extensively covered in the *Zuo zhuan*, which may be considered largely reliable despite its somewhat later date of compilation (Pines 2002), the historical evidence available for the subsequent quarter-millennium is very uneven; the crucial period between ca. 480 and 380 BC, in particular, is virtually bereft of contemporaneous or even nearly contemporaneous textual documentation.

26 Important recent English-language works include Chin 2014; Von Glahn 2016; Sabattini and Schwermann 2021; Ma Debin and Von Glahn 2022.

The focus of the present book, however, is on material remains. Their study requires a distinct methodological toolkit. In order for both textual and material evidence to unfold their full information potential, their study should proceed according to General Helmuth von Moltke's strategy during the 1866 Austro-Prussian War: *Getrennt marschieren, vereint schlagen* (March separately, strike jointly). In this book I therefore shall continue the experiment begun in its 2006 predecessor: I shall temporarily put aside the texts and base my reconstruction of pre-Qin economic history as much as feasible on archaeological materials alone. For this I must obviously restrict my coverage to those topics for which archaeological materials are actually available, excluding vast domains of inquiry of interest to economic historians for which no pertinent archaeological evidence happens to have been discovered so far. The results will thus necessarily be limited in scope. Even so, I hope that they will be conducive to a historically valid understanding that can stand on its own, side by side with the results of text-based studies. A balanced synthesis will be feasible only after each type of material has been comprehensively analyzed with appropriate methods. This book hopes to prepare the ground for such a synthesis, but its execution remains a task for the future.[27]

Cultural Configurations

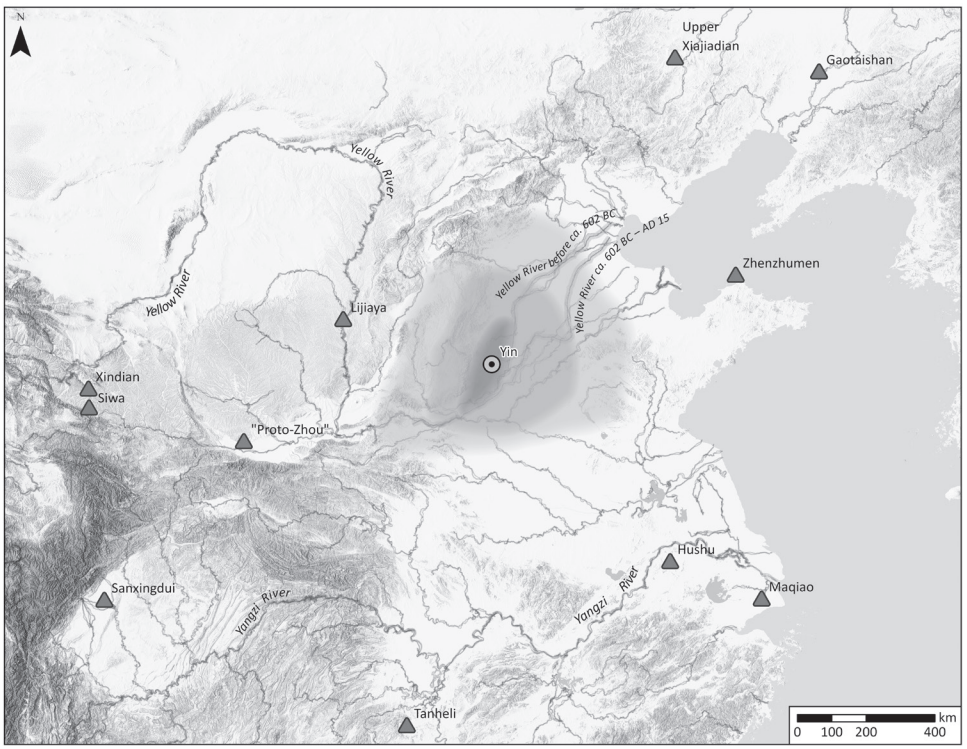
In recent years, the material culture of the historically attested Zhou civilization has been documented in ever greater detail. Simultaneously, archaeological work in the surrounding Borderlands has revealed contemporaneous material-culture complexes that are highly distinctive. Lacking indigenous written records, these *archaeological cultures* are prehistoric or—in cases where texts written within the Chinese Heartland have transmitted some information about their creators—protohistoric. By convention, they are referred to by the names of the archaeological sites where they were first identified. In China, such a nomenclature has been adopted for the cultures of the Neolithic period and the Early Bronze Age; Map 0.2, for instance, shows the approximate core territory of the Shang kingdom during the Late Shang period, surrounded by a plethora of archaeological cultures so named.

It has been suggested that that some of the regional cultures contemporaneous with the Shang and Zhou—in particular, the so-called "independent bronze industries"[28] in the Yangzi River Basin—represent "peer polities" fully on a par in their sociopolitical development with the historically known early dynasties in the Yellow River Basin.[29] The traditional emphasis by Chinese historians and archaeologists on the Shang and Zhou "mainstream" has been polemically ascribed to selective historical memory, incomplete preservation of texts, retroactive imposition of nationalist

27 For reflections on texts vs. archaeological materials in the context of the period under discussion, as well as further references, see Falkenhausen 2006a:10–13.

28 So designated in a pioneering article by Virginia C. Kane 1974–1975. Kane's argument was critiqued and refined by Hayashi 1980.

29 See, e.g., Bagley 1977, 1992, 1999.



Map 0.2. The Late Shang and their neighbors, ca. 1150 BC. Darker shading is used for the metropolitan area around Anyang (Yin), lighter shading for the outlying regions of the Shang kingdom. Also shown are the approximately contemporaneous archaeological cultures of the surrounding regions, with the locations of their type sites marked by triangles.

prejudice (or "Great Han chauvinism"), deliberate suppression of evidence, and imbalances in the amount of research undertaken. Although they deserved attention as a necessary corrective to established views when first proposed, recent evidence has made such ideas increasingly difficult to uphold. To be sure, the distinctiveness of the material record of the various Borderlands cultures contemporary with the Shang and Zhou dynasties must be duly acknowledged. At the same time, however, it is becoming increasingly clear that the sociopolitical entities represented by these cultures were less complex than the emerging dynastic states in the Heartland: their geographical extent was demonstrably smaller, as was the degree of regional uniformity within each culture area. Moreover, their high-end crafts products, though stylistically distinctive, were dependent in both technology and design upon imports from the Yellow River Basin, by comparison to which the quality of manufacture of the Borderlands products is often inferior. Notwithstanding the fact that some South Chinese innovations were eventually diffused to North China,[30] the North Chinese

30 E.g., the famous two-tone bells (Falkenhausen 1993:138–174); but even here, recent finds necessitate reconsideration, possibly diminishing the extent of the Southern impact (Falkenhausen 2018b).

impact on South China was incomparably greater and more profound. Examples for the economic interaction between the Heartland and the Borderlands are discussed in Part III (see pp. 534–548 for further comprehensive discussion of Heartlands/Borderlands relationships).

In their studies of the Late Bronze Age and the Iron Age, Chinese archaeologists have assigned textually recorded names of ethnic groups to various archaeologically identifiable "cultures" in the Borderlands (Map 0.3). Within the Chinese Heartland, as well, the material record of different regions is often designated—problematically, I believe—as the archaeological culture of textually known polities.[31] As these labels are well established in the literature, it is difficult to avoid them entirely. But as has often been pointed out, material-culture complexes do not necessarily, and often do not, coincide with social formations. (For instance, the Dalupu culture mentioned in Chapter 11 [pp. 560–561]—commendably but exceptionally named after its most prominent site of discovery, in Yangxin [Hubei]—is only one of several archaeological cultures and phases associated with the so-called Yangyue tribes.) The habit of essentializing archaeological cultures as a material reflection of sociopolitical or ethnic entities is by no means limited to China,[32] but that does not make it any less problematic.

In principle, "archaeological cultures" are no more than bundles of material traits that co-occur in a certain geographical area during a certain chronological period. The composition and chronology of these "cultures" are defined through stratigraphy and typology, the two main methods of archaeology.[33] What each archaeological culture stands for—for example, whether or not it corresponds to a specific people-group—must be determined from case to case. The definition and description of such archaeological cultures, and their correlation into a regional framework of cultural sequences, undoubtedly contains a great deal of important cultural-historical information. In China, for instance, the shifting constellations of Neolithic cultures from ca. 6000 to 1800 BC convey a palpable sense of the progression from many small and separate entities to ever larger units that touched each other's boundaries or even overlapped with one another, eventually coming to form what K. C. Chang called the "Chinese (or Longshan) Interaction Sphere." This tendency, which continued during the Bronze Age, may legitimately be read as reflecting a development toward increasing sociopolitical complexity.[34]

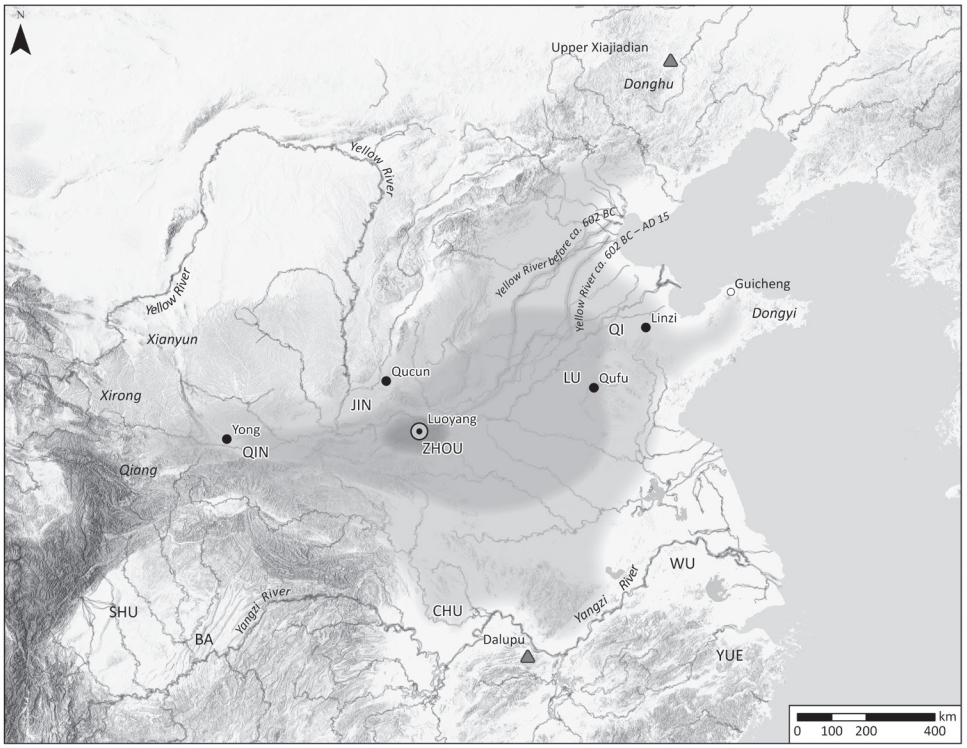
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31 See Falkenhausen 1995. For the sake of proportionality vis-à-vis regional cultures situated outside the Chinese Heartland, regional phenomena within the Zhou kingdom should be addressed archaeologically, not as "cultures" in their own right, but as "variants" or "phases" within the overarching Zhou *Leitkultur*.

32 See Kossinna 1911; Childe 1925; Jones 1997; Trigger 2006; Klejn 2012.

33 Buccellati 2017.

34 Chang 1986, superseding his earlier efforts. Chang's synthesis has been compared to Su Bingqi's simultaneously proposed system of "[cultural] phases arranged in regional filiations" (*quxi leixing*) (Su Bingqi and Yin Weizhang 1981), but whereas Su and his school tried above all to establish an archaeological basis for national historiography, Chang's main objective was to establish an anthropological model for the rise of Chinese civilization that can be integrated into wider social-science systematizations. One should caution that, in the wrong hands, such a view of cultural developments may lend itself to ideologically predetermined readings. Still, its basis in the evidence on the ground is undeniable.



Map 0.3. The Zhou and their neighbors at the end of the Bronze Age, ca. 600 BC. Darker shading is used for the metropolitan area around Luoyang, lighter shading for the outlying regions of the Zhou kingdom. Major regional polities and the locations of their capitals (except in the case of Chu, whose location during this period remains unverified) are indicated. Also shown are the locations of approximately contemporaneous non-Zhou kingdoms (capitalized) and tribal groups (italics) in the Borderlands, as well as some Borderland archaeological cultures and sites mentioned in this chapter.

Without delving too deeply into the systematics of archaeology, I would like to propose that archaeological cultures may often be best explained in economic terms, for example, as the material manifestation of exchange networks for certain kinds of objects.[35] This seems particularly true of Late Bronze Age and Iron Age China, where the production of many necessities of life had long ceased to be centered upon individual households and villages, but instead had become concentrated in workshops staffed by specialists that supplied wider constituencies of consumers. Rather than signifying group identity, for instance, the distribution of a certain kind of ceramics may indicate, above all, the geographic range within which the products of a certain ceramic kiln were exchanged or sold during a given period of time. As has been confirmed by ethnoarchaeological research,[36] different kinds of artifacts often vary in their distribution patterns, indicating manifold

35 See also Korolkov 2022a.

36 See, e.g., Hodder 1982.

complexities in the economic life of a population. At the archaeological level, this explains the frequently noted ambiguities and overlaps in "culture areas"—any one given locality could be, and very often was, simultaneously tied to several different economic centers.

This view of archaeological cultures seems to offer a promising alternative to the prevalent, almost subconscious identification of archaeological cultures with social or ethnic groups. Applied to the cultural configurations in Late Bronze Age and Iron Age China, it opens the way for a new understanding of the relationships between the Chinese Heartland and the Borderlands (see Chapters 10–12). For a Late Bronze Age example, we may look at the cultural constellation in the Jiaodong peninsula. Here, at the site of Guicheng, Longkou (Shandong), the Lai polity was established as a Zhou ally during the Early Western Zhou period. Its ruling élite resided in a large walled city that was occupied until the mid-first millennium BC and, several times enlarged, eventually occupying some 8 km^2. Excavations in the area have revealed two distinctive ceramic assemblages existing side by side, which the excavators have convincingly interpreted as representing the respective traditions of the area's indigenous inhabitants and of an intrusive Zhou-affiliated population segment.[37] At the same time, the archaeological finds also attest the integration of the Jiaodong region into wider economic exchange networks, possibly involving such local commodities as salt and marine mollusk shells.[38] The eventual disappearance of the indigenous material-culture tradition at Guicheng may well have mainly resulted from such long-term economic processes, which presumably exposed the local inhabitants increasingly to "Zhou"-type artifacts, rather than from the forceful imposition of "Zhou" cultural patterns onto subjugated ethnic "Others."[39] How these exchange networks may have functioned under the redistributive economic system of the Late Bronze Age will be discussed in Chapter 6.

In Part III, we shall have several occasions to observe how the long-established regional cultural traditions in the Borderlands became progressively less visible in the archaeological record of the Iron Age as the various Warring States kingdoms

37 Li Feng in Zhongguo Shehuikexueyuan Kaogu Yanjiusuo, Gelunbiya Daxue Dongya Yuyan he Wenhua Xi, and Shandong Sheng Wenwu Kaogu Yanjiuyuan (Li Feng and Liang Zhonghe [ed.]) 2018:727–746; see also James B. Stoltman in the same volume, 681–688, who inserts some cautionary marks about the basis for the attempted comparisons. Whether the bearers of the "intrusive" material culture were colonial occupants transplanted from the Zhou centers or locals who had adopted Zhou ways, or a mixture of the two, is impossible to determine by archaeological methods. The rulers of Lai themselves originally may well have been non-Zhou "Others" (see Wang Xiantang 1983). For more on Bronze Age salt production in Shandong, see pp. 534–548.

38 The archaeological report mentions cowries among potential exchange items, but it seems unlikely that cowries existed this far north; more likely, the inhabitants of the Jiaodong peninsula harvested other kinds of marine mollusk shells, which may have been used as inlay at the lacquer workshops of the Zhou metropolitan centers.

39 One hopes that in the future, systematic surveying in the Guicheng area will examine whether any changes in land-use patterns occurred following the founding of Lai and its integration into the Zhou kingdom.

expanded their economic reach. Rather than by political, cultural, or ethnic factors, such phenomena are probably best explained as the outcome of economic developments connected to the expansion of markets. As long-established relationships of economic exchange became transformed, formerly peripheral people-groups were either absorbed or pushed out under pressure from the Heartland.

Here we may take a preliminary look at an example from the margins of the Chu kingdom. The report on the Warring States–period walled city at Yaotou, Yuanling (Hunan), attributes the founding of that city to Chu territorial expansion into the formerly tribal areas to the west of Lake Dongting, and it identifies the excavated materials—which have no local antecedents and thus appear "intrusive"—as representative of "Chu culture."[40] What archaeologists mean when they talk about "Chu Culture" (or, perhaps more accurately, the Chu regional phase of Zhou culture) is a recognizable mix of material-culture traits that are most clearly manifested in ceramic assemblages. But rather than equating their appearance at Yaotou with the arrival of conquering Chu state representatives, it may be safer to say that their appearance means, above all, that the inhabitants of that area had gained access to Chu markets—a consequence of the expansion of the Chu commercial economy after the middle of the sixth century BC.

Even when a political takeover did occur, as eventually happened in the Yuanling region, economic integration may well have preceded it, rather than necessarily being its consequence.[41] And after the appearance of mainstream Heartland features in the material culture of a particular area, some regional characteristics often survived for a long time (e.g., at Tonglüshan, see pp. 553–563). One may imagine a whole range of different scenarios: (1) newly arrived representatives of the dominant culture coexisting with "Others" in the same locale in some kind of no-man's-land; (2) the new authorities giving a wide berth to still-prominent local groups during what one might call a "soft takeover"; (3) different local groups contending for cultural prestige, one by emphasizing the local heritage, the other by emulating Heartland ways; (4) individuals from the Heartland trickling into a region remaining under local control (as a diaspora; for an example, see pp. 528–537); and so on. Ideally, there will be archaeological criteria to help one decide, through a hypothesis-testing procedure, which scenario is correct in a given case. By applying finer chronological subdivisions and more exact dating techniques, it should be possible, moreover, to

40 Hunan Sheng Wenwu Kaogu Yanjiusuo 2015.

41 In cases where the presence of an intrusive population can be substantiated, as at the Warring States–period Qin tombs at Haojiaping, Qingchuan (Sichuan) (Sichuan Sheng Bowuguan and Qingchuan Xian Wenhuaguan 1982; Sichuan Sheng Wenwu Kaogu Yanjiuyuan and Qingchuan Xian Wenwu Guanlisuo 2014), as well, the archaeological visibility of this intrusion owes principally and precisely to the area's integration into Qin-centered market systems, which resulted in the spread of material-culture items of recognizably Qin manufacture into the former Shu cultural region. Similar considerations apply to the northeastern expansion of the Warring States–period kingdom of Yan (Miyamoto 2000b:205–235; 2019).

trace changes over time.[42] Natural science–based approaches can also be helpful; for instance, chemical analysis of ceramics may determine whether they were made using clays that were locally resourced or brought in from somewhere else. By contrast, archaeology usually cannot determine the specific people-group with which the users of certain material-culture items identified themselves; nor does that appear crucial when the material is interpreted as proposed here.

Economic Archaeology

Regardless of perspective, studying the economy of Late Bronze Age and Iron Age China invariably leads up to a narrative of tremendous growth. Naturally, one would like that growth to be expressed in precise numbers. But the textual sources are too scattered and unsystematic for any attempt at cliometrics (the application of formal economic methods in analyzing historical data). With material evidence, there is at least some hope that data generated with the appropriate methodology may someday yield statistically representative datasets that will be amenable to quantitative analysis.[43] For the area and period under discussion, some promising datasets have been forthcoming lately, and they will be addressed in the following chapters. But it is a long journey from datasets that are specific to a site or region to a quantitative assessment of broader economic tendencies; as of right now, that journey has hardly even begun. I do not know whether a truly comprehensive assessment of this sort will ever be possible. Still, I am confident that research will continue to yield data of the kind needed to advance into such a direction. Areas where such research might be profitably undertaken in the future will be pointed out on occasion below.

Above all, the presently available archaeological record concerning the economy of Late Bronze Age and Iron Age China can serve to document qualitative and psychological factors that affected the behavior of the human beings who participated in the economic life of the period. In the words of Raymond Aron,

> The difficulty of determining the causes of growth mainly arises from the fact that growth is a measured quantity, whereas the phenomena that determine it are essentially qualitative. What changes is people, their way of thinking and their way of working. The real phenomenon is social change of which the [economic] figures are merely an expression. . . . If one were to follow

42 So far, many of the absolute dates given in published reports are quite vague ("Springs and Autumns to Warring States") and excessively intuitive. Moreover, they are inconsistent from report to report. In the Chu region, many dating efforts are still beholden to the obsolete standard chronology of the *Changsha Excavation Report* (Zhongguo Kexueyuan Kaogu Yanjiusuo 1957), which, albeit still useful for its ceramic seriation, has long been shown to be quite mistaken in its assignment of absolute dates (see Wagner 1987).

43 Much archaeological fieldwork in China is still proceeding haphazardly with little attention to the potential for quantitative analysis of the evidence recovered. For reflections on this issue, see Falkenhausen 2006a:13–19.