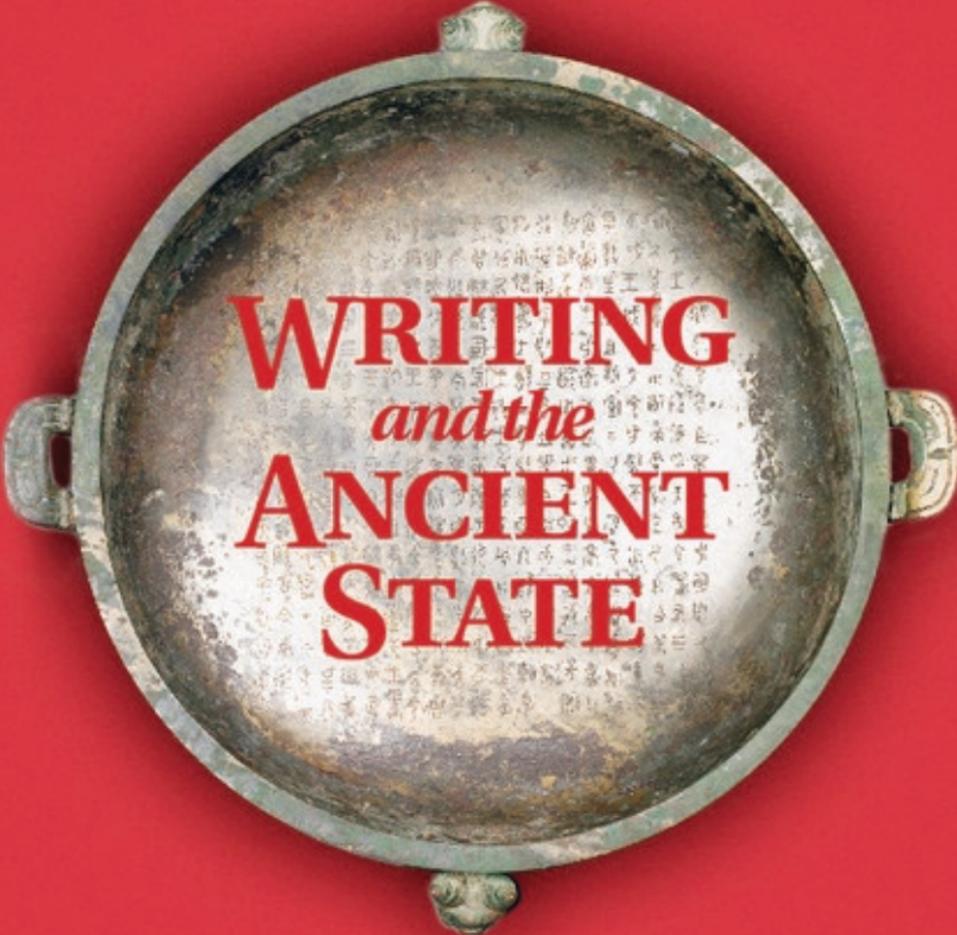


Wang
HAICHENG



WRITING
and the
**ANCIENT
STATE**

*Early China in
Comparative Perspective*

CAMBRIDGE

WRITING AND THE ANCIENT STATE

Writing and the Ancient State explores the early development of writing and its relationship to the growth of political structures. The first part of the book focuses on the contribution of writing to the state's legitimating project. The second part deals with the state's use of writing in administration, analyzing both textual and archaeological evidence to reconstruct how the state used bookkeeping to allocate land, police its people, and extract taxes from them. The third part focuses on education, the state's system for replenishing its staff of scribe officials. The first half of each part surveys evidence from Mesopotamia, Egypt, the Maya lowlands, Central Mexico, and the Andes; against this background the second half examines the evidence from China. The chief aim of this book is to shed new light on early China (from the second millennium B.C. through the end of the Han period, ca. A.D. 220) while bringing to bear the lens of cross-cultural analysis on each of the civilizations under discussion. The compiling of lists – lists of names, or of names and numbers – is a recurring theme throughout all three parts. A concluding chapter argues that there is nothing accidental about the pervasiveness of this theme: in both origin and function, early writing is almost synonymous with the listing of names.

Wang Haicheng is Mary and Cheney Cowles Endowed assistant professor in the School of Art at the University of Washington, Seattle. His research centers on the art and archaeology of ancient China and the comparative study of early civilizations. Recent and forthcoming publications include a book chapter on the material record of the Erligang civilization, a chapter on urbanization and writing in *The Cambridge World History*, and papers on calligraphy and the archaeology of agency. He has lectured widely in the United States and China.

WRITING AND THE ANCIENT STATE

Early China in Comparative Perspective

WANG HAICHENG

University of Washington



CAMBRIDGE
UNIVERSITY PRESS

CAMBRIDGE
UNIVERSITY PRESS

32 Avenue of the Americas, New York, NY 10013-2473, USA

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning, and research at the highest international levels of excellence.

www.cambridge.org

Information on this title: www.cambridge.org/9781107028128

© Wang Haicheng 2014

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2014

This publication is made possible in part by the Barr Ferree Foundation Fund for Publications, Princeton University.

Printed in the United States of America

A catalog record for this publication is available from the British Library.

Library of Congress Cataloging in Publication data

Wang, Haicheng, 1975–

Writing and the ancient state : early China in comparative perspective / Haicheng Wang.
pages cm

Includes bibliographical references and index.

ISBN 978-1-107-02812-8 (hardback)

1. China – Politics and government – To 221 B.C. 2. China – Politics and government – 221 B.C.–220 A.D. 3. Writing – China – History – To 1500. I. Title.

DS741.75.W36 2014

931–dc23 2013021179

ISBN 978-1-107-02812-8 Hardback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party Internet Web sites referred to in this publication and does not guarantee that any content on such Web sites is, or will remain, accurate or appropriate.

To my parents 王杰 *and* 林玉生

To my teachers 林梅村 *and* Robert Bagley

獨學而無友，則孤陋而寡聞。

Learning alone, without companions, makes one feel solitary, shallow, and ignorant.

Li ji "XUEJI"

I shall make you love writing more than your mother; I shall make its beauties be shown to you. Now, it is greater than any other profession. There is not its like in the land.

The Teaching of Khety, ancient Egyptian school text

CONTENTS

<i>List of Illustrations</i>	page ix
<i>List of Tables</i>	xiii
<i>List of Text Boxes</i>	xv
<i>Abbreviations</i>	xix
<i>Acknowledgments</i>	xxi
Introduction	1
I. WRITING AND THE LEGITIMATION OF THE STATE: HISTORY AS KING LIST	19
1 The Near East and the Americas	21
2 China	40
II. WRITING AND THE WEALTH OF THE STATE: PEOPLE AND LAND, CENSUS AND LAND REGISTER	53
3 The Near East and the Americas	55
4 China	175
III. WRITING AND THE PERPETUATION OF THE STATE: SCRIBAL EDUCATION, LEXICAL LISTS, AND LITERATURE	239
5 The Near East and the Americas	241
6 China	275
Conclusion	301
<i>Notes</i>	309
<i>References</i>	343
<i>Index</i>	373
	vii

ILLUSTRATIONS

1.1	Three inscribed colossi and their original setting at Coptos, Egypt.	<i>page</i> 22
1.2	Two seal impressions from Abydos, Egypt.	23
1.3	Hieroglyphic Stairway 1 at Yaxchilan, Mexico; the temple of Seti I at Abydos, Egypt.	25
1.4	Altar Q from Copan, Honduras; tomb painting of the priest Amenmes, Egypt.	26
1.5	Stela 18 from El Mirador, Guatemala; Stela 2 from Abaj Takalik, Guatemala; Stela 31 from Tikal, Guatemala.	27
1.6	Stucco frieze from the south palace of Group H, Uaxactun, Guatemala.	28
1.7	Inka mummy in parade; mummy bundle recorded in Codex Magliabechiano; Maya seated burial from Uaxactun, Guatemala.	29
1.8	The Genealogy of the Hammurapi Dynasty and the Assyrian King List.	33
1.9	Reconstructed floor plan of the Royal Palace of Qatna, Syria, and reconstruction drawing of the Royal Hypogeum.	35
1.10	Cuneiform prism and a hand copy with the Sumerian King List; part of a wooden writing board from Giza.	37
2.1	Plan of Zhengzhou, China.	43
3.1	Land tenure in Mesopotamia.	57
3.2a	Hypothetical sketch of an agricultural cell in South Mesopotamia.	58
3.2b	Field patterns in South Mesopotamia.	59
3.3	Proto-Elamite tablet containing an account of cereal rations for the labor gangs of two supervisors.	60
3.4	Tomb U-j at Abydos.	71
3.5	Sign repertory from tomb U-j.	72
3.6	The Palermo Stone.	73
3.7	The Narmer Macehead.	74
3.8	A niche stone from Saqqara, Egypt.	75
3.9	Drawing from a relief in the tomb of Mereruka at Saqqara, Egypt.	76
3.10	Names of royal domains and estates recovered from Abydos and Saqqara.	78
3.11	List of the funerary estates displayed on a wall of King Sneferu's temple at Dahshur, Egypt.	85
3.12	Plan of Kahun, Egypt.	90
3.13	Scenes of field survey in Egyptian art.	98

List of Illustrations

3.14	Scenes of the punishment of tax collectors.	102
3.15	The distribution of major state farms and storage facilities in relation to the Inka roads.	115
3.16	Plan of the Inka provincial center Huánuco Pampa.	116
3.17	Guzman Poma's illustration of a storehouse accountant at Huánuco Pampa reporting to the emperor.	117
3.18	Workshop guilds at Chan Chan and U-shaped administrative structures.	120
3.19	Map of Teotihuacan, Mexico.	122
3.20	Teotihuacan and Aztec compound glyphs.	123
3.21	The forty-two glyphs in the La Ventilla compound at Teotihuacan.	124
3.22	Construction of <i>chinampa</i> fields by the Aztec state.	127
3.23	Aerial photograph of Aztec <i>chinampas</i> .	128
3.24	The Maguey Plan.	130
3.25	Tenochtitlan's <i>chinampa</i> gardens.	132
3.26a	Pictorial household census in the Códice de Santa María Asunción.	135
3.26b	Pictorial land register in the Códice de Santa María Asunción.	136
3.26c	Pictorial land register in the Códice de Santa María Asunción.	137
3.27	Glyphic conventions and the calculation of taxes in Mexican codices.	138
3.28	Reconstructed cadastral map of the piedmont land parcels at Tepetlaoztoc, Mexico.	140
3.29	Soil glyph variants in the Códice de Santa María Asunción.	141
3.30a	Tax units for a local ruler's children as recorded in Códice Kingsborough.	143
3.30b	The income of a local ruler in Códice Kingsborough.	143
3.31	Maps of the Aztec empire.	145
3.32a	Folio 21v of the Codex Mendoza.	147
3.32b	Folio 37r of the Codex Mendoza.	148
3.33	Settlement maps of Caracol and its terrace area, Belize.	158
3.34	Settlement maps of Tikal (Guatemala) and Calakmul (Mexico).	159
3.35	The relationship between terracing and the site core at Caracol.	160
3.36	The Inka settlement at Ollantaytambo and its immediate surroundings.	161
3.37	Surveyed sites between Yaxchilan and Piedras Negras, Guatemala; the site core of Tecolote, Guatemala.	166
3.38	The fortress of Shalfak in the Second Cataract area of Nubia.	167
3.39	The fortress at Semna, Nubia.	168
3.40	Partial map of Petexbatun, Guatemala.	170
3.41	Urban gardens at Tamarindito, Guatemala; map of Sayil, Mexico.	172
3.42	The Classic Maya village buried by a volcanic eruption at Cerén, El Salvador.	173
4.1	Three stages in the history of Structure 2 at Yanshi, China.	180
4.2	Diagram showing elements of migration.	189
4.3	Plan of a village of Western Zhou date, Anhui Huoqiu, China.	192
4.4	Topographic map of north China in the A.D. twentieth century.	194
4.5	Map showing major states of the Warring States period.	200

List of Illustrations

4.6	One of a set of seven maps made in the state of Qin and a modern map showing the area covered by the Qin maps.	201
4.7	Two Qin maps labeled with military and administrative information.	202
4.8a	Military map from Mawangdui Tomb No. 3 (168 B.C.).	205
4.8b	Symbols and their designees on the Mawangdui military map.	206
4.9	A comparison between the Giza pyramid plateau and the First Emperor of Qin's mausoleum complex.	221
4.10	A comparison between the Egyptian work camp at Giza and a cemetery of laborers near the First Emperor of Qin's mausoleum.	223
4.11	An Eastern Han tomb mural depicting the submission of accounts at the provincial level.	234
5.1	A composite copy of the proto-cuneiform lexical list of vessels.	242
5.2a	The find spots of tablets in the palace at Ebla, Syria.	246
5.2b	The archive room at Ebla.	247
5.3	Excavation plans of Tablet Hill at Nippur, Iraq.	250
5.4	A school tablet from Nippur.	251
5.5	Vowels and consonants in ancient Mesopotamian, Maya, and modern Philadelphia schools.	252
5.6	A Type II school tablet from Nippur.	253
5.7	A Middle Kingdom onomasticon.	260
5.8	Student exercises for learning Egyptian.	265
5.9	Structure M8–10 at Aguateca, Guatemala.	268
5.10	Panel 2 from Piedras Negras.	269
6.1	An inscribed potsherd from Anyang; student exercise on paper from Dunhuang.	276
6.2	A Tang dynasty student's writing exercise from Dunhuang.	278
6.3	Master copies of the Han primer <i>Cangjie pian</i> from northwest China and central China.	283
6.4	Conventional formats for school texts in China and Mesopotamia.	287

PLATES

Color plates follow page xxiv.

- I Pictorial king lists from *Primeros Memoriales* and the Florentine Codex.
- II Plans of Chan Chan, Peru, and its Cuidadala Rivero; wooden models showing funerary ceremony at Chan Chan.
- III A kingly tomb at Erlitou, China.
- IV Inscribed stone tablets and bronze *ge*-blades of the Anyang period.
- V Bronze *ding* vessels from Erlitou and Zhengzhou.
- VI Inscriptions from Xiaoshuangqiao, near Zhengzhou.
- VII *Shi Qiang pan* and its inscription.
- VIII *Lai pan* and its inscription.
- IX The slab stela of Nefretiaabet.
- X Depiction of a records office from the tomb chapel of Tjay at Thebes, Egypt; an inscribed plaque for storing books.
- XI Agricultural terraces of the Inka state.

List of Illustrations

- XII Page 1 of the screen-fold almanac in Codex Borgia, with a diagram.
- XIII Pictorial household census in the Códice de Santa María Asunción.
- XIV Folio 46r of the Codex Mendoza.
- XV The “subway” diagram of Maya polities.
- XVI The Fenton Vase from Nebaj, Guatemala.
- XVII Maya vase, Kerr no. 3413.
- XVIII Maya vase, Kerr no. 5453.
- XIX Reconstruction of Room 1 wall paintings, Bonampak, Mexico, by Heather Hurst and Leonard Ashby.
- XX Maya vase, Kerr no. 8728.
- XXI A late Shang inscribed bronze vessel.
- XXII Da Ke *ding* and its inscription.
- XXIII Tallies issued by the king of Chu to Lord E of Qi.
- XXIV List making in early Maya art.
- XXV Maya vase, Kerr no. 1196; a monkey scribe and a human scribe from Guatemala.
- XXVI Master models and student copies of the Han primer *Jijiu pian* found in northwest China.

TABLES

I.1	Comparative chronology of early states.	<i>page</i> 15
I.2	Major historical periods and dynasties of Mesopotamia.	16
I.3	Major historical periods and dynasties of Egypt.	16
I.4	Major historical periods and dynasties of China.	17
I.5	Major historical periods in the Maya lowlands.	17
I.6	Major historical periods of Central Mexico.	17
I.7	Major historical periods of the Andes.	18
3.1	Inka decimal units from 10 to 10,000 households.	108
3.2	Tabulation of labor assignments recorded in Text 3.22.	110
3.3	The Inka life stages.	112
3.4	Income of Tepetlaoztoc's ruler Don Diego.	144
3.5	Tribute in goods from the Aztec empire's central provinces.	150
3.6	Population estimates at selected Maya polities.	156
3.7	A selection of labels on Maya vases.	174
4.1	Households and tax for Dongyang county, middle or late Western Han.	232
5.1	A mathematical tablet from Nippur.	255

TEXT BOXES

1.1	Molina's account of royal ancestral ceremony in Cuzco.	page 28
1.2	Commentaries to the Aztec king list in <i>Primeros Memoriales</i> .	31
1.3	The Genealogy of the Hammurapi Dynasty.	32
1.4	Epilogue to the Code of Hammurapi.	36
1.5	The Sumerian King List.	36
2.1	Reconstructing the Shang king list from oracle bone inscriptions.	44
2.2	Sima Qian on the Mandate of Heaven.	45
2.3	The Mandate of Heaven in <i>Lü shi chun qiú</i> .	46
2.4	Inscription of the <i>Shi Qiang pan</i> .	47
2.5	Inscription of the <i>Lai pan</i> .	49
2.6	Inscription of the <i>Da Yu ding</i> .	50
3.1	Ur III yearly inspection of the labor force.	60
3.2a	Ur III summary accounts of agriculture for three years.	62
3.2b	Ur III summary accounts of agriculture for ten years.	62
3.3	Ur III record of the annual expenditures of a province.	63
3.4	A letter to the king of Mari from one of his generals.	66
3.5	Census of troops in the Old Babylonian period.	67
3.6	Neo-Assyrian list of tax exemptions.	68
3.7a	Egyptian offering formula of the Fourth Dynasty.	77
3.7b	Egyptian offering list of the Sixth Dynasty.	77
3.8	A Fifth Dynasty entry in the Palermo Stone.	80
3.9	Inscription from Metjen's tomb chapel of the Fourth Dynasty.	80
3.10	Inscription of the Maništušu Obelisk.	82
3.11	Inscription of a Mesopotamian <i>kudurru</i> .	83
3.12	A Middle Kingdom Egyptian decree concerning laborers.	86
3.13a	A Middle Kingdom Egyptian list of servants.	88
3.13b	A Middle Kingdom register of fugitives.	88
3.14a	A Middle Kingdom house register from Kahun: first stage.	91
3.14b	A Middle Kingdom house register from Kahun: second stage.	92
3.14c	A Middle Kingdom house register from Kahun: third stage.	92
3.15	A New Kingdom town-register.	93
3.16a	New Kingdom investigation record of tomb robberies.	94
3.16b	New Kingdom investigation record of the traders for looted goods.	95
3.17	A census of the workmen's village at Deir el-Medina.	95

3.18a	Text A of the Wilbour Papyrus.	96
3.18b	Text B of the Wilbour Papyrus.	97
3.19	<i>Duties of the Vizier.</i>	99
3.20	An Egyptian text from the <i>Miscellanies</i> .	101
3.21	Papyrus Harris I.	102
3.22	Spanish transcription of the labor tax paid to the Inka.	108
3.23	Using insignia as group identification in the Inka empire.	111
3.24	Two Spanish accounts of the counting of the people by the Inkas.	113
3.25	Spanish commentary to the tribute pages in the Codex Mendoza.	149
3.26	Ur III expenditure of labor for shipping taxes to the capital.	152
3.27	Keeping inventory of the Aztec warehouses.	152
3.28a	Inscription of Senusret III.	165
3.28b	Excerpt from Papyrus Harris I.	165
3.29	A Middle Kingdom dispatch from Semna.	169
4.1	Shang divination records about state farms.	181
4.2	Traces of Shang bookkeeping.	182
4.3	An oracle inscription resembling a dispatch.	182
4.4	Inscription of the <i>Shi Chen ding</i> .	185
4.5	A New Kingdom record of investiture.	186
4.6	Inscription of the <i>Mao Gong ding</i> .	187
4.7	Inscription of the <i>Yi Hou Ze gui</i> .	188
4.8	Inscription of the <i>Da Yu ding</i> .	189
4.9	Inscription of the <i>He zun</i> .	191
4.10	Inscription of the <i>Da Ke ding</i> .	196
4.11	Inscription of the <i>Fifth Year Qiu Wei ding</i> .	196
4.12	Inscription of the <i>San Shi pan</i> / <i>Ze Ren pan</i> .	197
4.13	Han Ordinances on Fords and Passes.	207
4.14a	A possible title page from a Han passport.	207
4.14b	A possible identity page from a Han passport.	208
4.14c	A Han government instruction on describing wanted criminals.	208
4.15a	Inscription of the Lord E of Qi boat tally.	208
4.15b	Inscription of the Lord E of Qi wagon tally.	209
4.16	The Nauri Decree of Seti I.	210
4.17	Inscription of the <i>Xiao Yu ding</i> .	211
4.18	Sima Qian on Shang Yang's reforms.	212
4.19	Qin model texts from the Shuihudi documents.	213
4.20	Warring States quality-control inscriptions on bronze weapons.	216
4.21	Qin statutes on artisans from the Shuihudi documents.	217
4.22	The notation of commoners' names.	219
4.23	Registering youths in Chu.	225
4.24	A Chu legal document from Baoshan Tomb 2.	226
4.25	A Chu legal document from Baoshan Tomb 2.	227
4.26	A Western Han will.	228
4.27a	Qin statues on granaries from the Shuihudi documents.	229
4.27b	Qin statues on food rations from the Shuihudi documents.	230
4.28	Notice to transfer a population register.	230

4.29	Qin statutes on agriculture from the Shuihudi documents.	231
4.30	Annual accounts from the Yinwan documents.	232
4.31	A covenant text from the Houma documents.	235
5.1a	Nippur list of trees and wooden objects.	251
5.1b	Subsection for chariots in the list of trees and wooden objects.	254
5.2	Cuneiform model contracts concerning the sale of a house.	255
5.3	Praise of Lipit-Eshtar.	256
5.4a	A supervisor's advice to a young scribe.	257
5.4b	In praise of the scribal art.	257
5.5a	Mathematics in public works.	258
5.5b	A mathematical problem from the Rhind Papyrus.	258
5.6	A Middle Kingdom onomasticon.	259
5.7	A New Kingdom onomasticon.	261
5.8	A Middle Kingdom execration text.	262
5.9	A Mesopotamian poem inspired by a lexical list.	263
5.10	An Egyptian model letter.	263
5.11	<i>Satire on Trades.</i>	264
5.12	In praise of the teacher.	271
5.13	Calancha's account of the activities of the "khipu makers."	271
5.14	An Egyptian tribute to learning.	273
6.1	Han statute on scribes.	280
6.2	<i>Er ya</i> ("Approaching what is correct").	281
6.3	<i>Cangjie pian</i> ("Bamboo Bundles by Cangjie").	282
6.4	<i>Jijiu pian</i> ("Bamboo Bundles for Quick Reference").	284
6.5a	A poem from the <i>Odes</i> .	289
6.5b	Praise of Lipit-Eshtar.	290
6.6	<i>Nanshe and the Birds.</i>	290
6.7	A Qin model forensic report from the Shuihudi documents.	291
6.8a	A passage from the <i>Han Feizi</i> .	294
6.8b	A passage from <i>Meng qiu</i> ("Initiate").	294
6.9a	A poem in praise of King Wen from the <i>Odes</i> .	296
6.9b	A hymn in praise of King Šulgi.	296
6.10a	A hymn from the <i>Odes</i> .	298
6.10b	Inscription of the <i>Shi Hui ding</i> .	299
6.11a	A poem from the <i>Odes</i> .	299
6.11b	King Šulgi built schools.	300

ABBREVIATIONS

- ASAE *Annales du Service des Antiquités de l’Égypte*
- BS *Baoshan chumu*. Beijing: Wenwu Chubanshe, 1991, 2 vols.
- CAJ *Cambridge Archaeological Journal*
- CANE *Civilizations of the Ancient Near East*. Jack M. Sasson, John Baines, Gary Beckman, and Karen S. Rubinson (eds.). New York: Scribner, 1995, 4 vols. Reprinted in a two-volume format by Hendrickson (Peabody, MA) in 2000.
- CEO *Creating Economic Order: Record-Keeping, Standardization, and the Development of Accounting in the Ancient Near East*. Michael Hudson and Cornelia Wunsch (eds.). Bethesda, MD: CDL Press, 2004.
- CHAC *The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* Michael Loewe and Edward L. Shaughnessy (eds.). Cambridge: Cambridge University Press, 1999.
- CSSH *Comparative Studies in Society and History*
- EC *Early China*
- ECT *Early Chinese Texts: A Bibliographical Guide*. Michael Loewe (ed.). Berkeley, CA: Society for the Study of Early China, 1993.
- EE *Explorations in Ethnohistory: Indians of Central Mexico in the Sixteenth Century*. H. R. Harvey and Hanns J. Prem (eds.). Albuquerque: University of New Mexico Press, 1984.
- ETCSL *Electronic Text Corpus of Sumerian Literature*
- FW *The First Writing: Script Invention as History and Process*. Stephen D. Houston (ed.). Cambridge: Cambridge University Press, 2004.
- HC *The History of Cartography*. J. B. Harley and David Woodward (eds.). Chicago: University of Chicago Press, 1987 and 1994, 2 vols.
- HJ *Jiaguwen heji*. Beijing: Zhonghua Shuju, 1978–82, 13 vols.
- HM *Houma mengshu*. Beijing: Wenwu Chubanshe, 1978.
- IAS *The Inca and Aztec States 1400–1800: Anthropology and History*. George A. Collier, Renato I. Rosaldo, and John D. Wirth (eds.). New York: Academic Press, 1982.
- JAOS *Journal of the American Oriental Society*
- JC *Yinzhou jinwen jicheng*. Beijing: Zhonghua Shuju, 1984–94, 18 vols.
- JCS *Journal of Cuneiform Studies*
- JEA *Journal of Egyptian Archaeology*
- JESHO *Journal of the Economic and Social History of the Orient*

Abbreviations

- JFA *Journal of Field Archaeology*
JNES *Journal of Near Eastern Studies*
LSCQ *Lü shi chun qiu jiaoshi*. Shanghai: Xuelin Chubanshe, 1984, 2 vols.
MDAIK *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo*
NSECH *New Sources of Early Chinese History: An Introduction to the Reading of Inscriptions and Manuscripts*. Edward L. Shaughnessy (ed.). Berkeley, CA: Institute of East Asian Studies and Society for the Study of Early China, 1997.
RA *Revue d'Assyriologie et d'Archéologie Orientale*
SHD *Shuihudi Qinmu zhujian*. Beijing: Wenwu Chubanshe, 1990.
Shi ji *Shi ji*. Beijing: Zhonghua Shuju, 1982, 10 vols.
SSJZS *Shisanjing zhushu*. Beijing: Zhonghua Shuju, 1980, 2 vols.
WWS *The World's Writing Systems*. Peter Daniels and William Bright (eds.). Oxford: Oxford University Press, 1996.
ZAW *Zeitschrift für die alttestamentliche Wissenschaft*
ZJS *Zhangjiashan Hanmu zhujian (247 hao mu)*. Beijing: Wenwu Chubanshe, 2001.
ZLW *Zhongguo lishi wenwu*
ZQQJ *Zhongguo qingtongqi quanji*. Zhongguo qingtongqi quanji bianji weiyuanhui (ed.). Beijing: Wenwu Chubanshe, 1993–98, 16 vols.

ACKNOWLEDGMENTS

I wish I had kept a tablet recording my debts to all those who have helped me in writing this book. Even though I would never be able to balance my account, as a good scribe should, I could at least inscribe them in a book. But the help has been too generous and too constant, and I have been too neglectful of my duties. I can only provide a list of names (this at least serves my book's theme), hoping I have not overlooked any.

There is no neat order to my list, but Robert Bagley must be at the top. His powerful reasoning and sharp observation have shaped my book, from the largest argument to the minutest use of semicolons (don't use them, he says). It was also by his introduction that I became acquainted with John Baines and Stephen Houston, two great scholars of early writing, walking encyclopedias of the Egyptian and Maya systems of communication. Or perhaps I should say, online encyclopedias: to judge by the speed of their replies to my endless strings of queries, they never leave their email. The third member of my battery of experts is Norman Yoffee, who not only keeps me posted on the latest bibliography in cuneiform studies but has also drawn me into an ever-widening circle of comparativists, opening up whole new vistas for me. James Scott, an author I first encountered through Norman's work, generously read my last draft and showered encouraging notes on a distant admirer. For matters related to the ancient Near East, I have benefited from classes taken with Steve Tinney and Tom Hare, as well as from discussions with Jerrold Cooper, Gonzalo Rubio, Hans Nissen, and David Wengrow. For the Americas, John Pohl and Gary Urton are my valued informants. Many specialists of early China have offered their suggestions and comments at various stages of my writing: Anthony Barbieri-Low, William Boltz, Lothar von Falkenhausen, Hou Xudong, David Keightley, Lai Guolong, Michael Nylan, David Schaberg, and Edward Shaughnessy. The book might also be said to owe its existence to a historian of modern China, my colleague Madeleine Yue Dong, who for five years has constantly prodded me to finish it. I also thank the anonymous reviewers for their expert advice.

Several institutions have been indispensable in supporting my research over the years. I list them in chronological order: at Princeton University, the Princeton Institute for International and Regional Studies, the Program in East Asian Studies, the P. Y. and Kinmay W. Tang Center for East Asian Art, and the Department of Art and Archaeology; in Kyoto, the Metropolitan Center for Far Eastern Art Studies; at the University of California, Berkeley, the Center for Chinese Studies; at the University of Washington, the Mary and Cheney Cowles Endowed Professorship. A generous grant from the Barr-Ferree Foundation Publication Fund at Princeton University has significantly

enriched the book's complement of illustrations, and the Millimann Endowment at the University of Washington has spared me the labor of making the index myself. For handling with ease the difficult task of production I am deeply grateful to the experts at Cambridge University Press: Beatrice Rehl, Asya Graf, Camilla Knapp, James Dunn, Betsy Hardinger, and Catherine Fox.

For generous help in obtaining photographs I am grateful to Guillemette Andreu, Felix Arnold, John Baines, Ma Baojun, Claudia Brittenham, Annie Caubet, Zhang Changping, Paul Collins, Sharon Day, Duan Dexin, Günter Dreyer, Joshua Englehardt, Imre Galambos, Song Guoding, Ulrich Hartung, Stephen Houston, Xu Hong, Mimi Huang, Wang Hui, Shao Jun, Barbara and Justin Kerr, Ángeles Lázaro, Peter Manuelian, Mary Miller, Steven Owyong, Richard Parkinson, Rachel Roberts, Elizabeth Saluk, Joann Schwendemann, Payson Sheets, Samantha Sherbourne, Eric Shnittke, Adam Smith, Shannon Sweeney, Santiago Uceda, Gary Urton, Bruce White, Lei Xingshan, Zhou Ya, Shan Yueying, and Liu Yun. The site plans in [Figures 2.1](#) and [4.3](#) were redrawn by Kyle Steinke.

My greatest debt of gratitude is to my family. My parents were my first teachers in literacy and they are my model of ceaseless learning – they have learned to use Skype to monitor my progress! I hope that they are pleased to see their names in their native script on the dedication page. My sisters, Ruili and Ruina, have shouldered all the responsibilities of taking care of our parents so that I can pursue my research in a remote country. My children Silu (Sheila) and Damo (Andrew) have become accustomed to my working over weekends and holidays; in my absence they have somehow become ferocious readers of adventure stories and energetic writers of mystery stories. They laugh at their parents' awkward usage and weird pronunciation of English ("It's scientifically impossible for you guys to speak correct English," as Andrew would say), but parental dignity and authority are fortunately saved by their mother's lessons in Chinese: Molly is the wise headmistress, patient teacher, and wonderful cook of our cottage school, from which none of us will ever want to graduate.

WRITING AND THE ANCIENT STATE

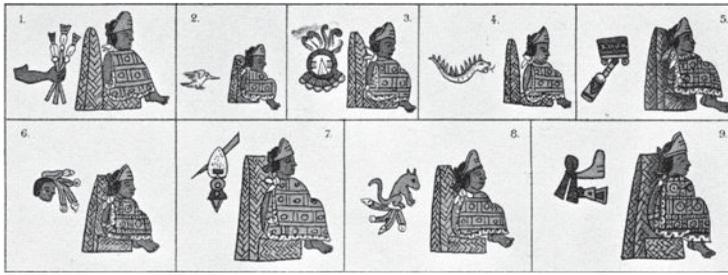


PLATE I Using name glyphs to identify kings in Central Mexico: two versions of pictorial king lists showing the first six rulers of Tenochtitlan. *Bottom*, from the *Primeros Memoriales* of the Spanish chronicler Fray Bernardino de Sahagún (Academy Manuscript, fol. 51r). The accompanying Nahuatl glosses explain the various insignia, including the rulers' name glyphs. After Sahagún 1993, folio 51r, reproduced with authorization of Real Academia de la Historia, reproduction © RAH. *Top*, the same rulers recorded in the Florentine Codex, also by Sahagún, without image-related glosses but with the same name glyphs as those at left. After Sahagún 1950, Book 8, Chapter 1.

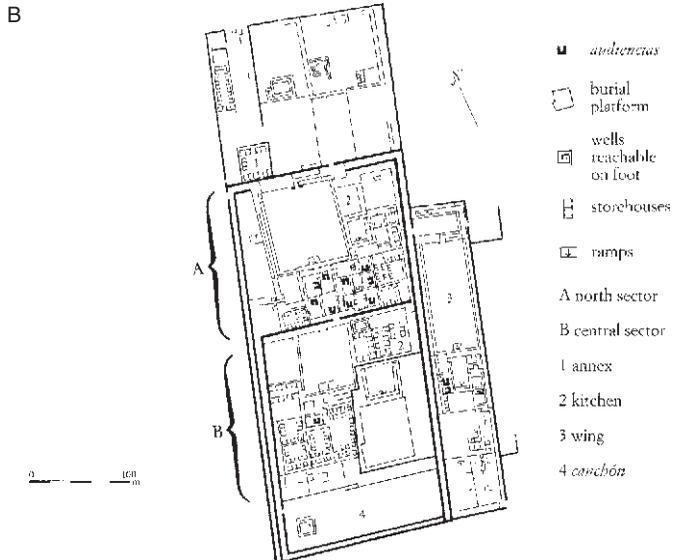


PLATE II Invisible scenes: the display of royal mummies inside the royal compounds in Chimú's capital city, Chan Chan. A. Plan of Chan Chan, showing the last phase before the Inka conquest. There are



PLATE II Continued

nine or ten royal compounds (shaded area, named after archaeologists). Each compound was occupied by a king; after his death, by his mummy and probably also by his lesser heirs and retainers. After von Hagen and Morris 1998, p. 147, Figure 97. *B.* Plan of one of the last royal compounds, Ciudadala Rivero, ca. A.D. 1400. Notice the one very narrow entrance located in the north wall, after Minelli 2000, p. 97, Figure 56. *C.* Wooden model showing funerary ceremony, probably in the forecourt next to the burial platform shown in *B.* The model contains five sets of figures: one male mummy bundle and two female ones behind him, the subjects of veneration; two funeral cortèges; two processions of sacrificial victims, llamas, and a human. Bone remains from the actual sites confirm the existence of animal and human sacrifice. The walls that surround the courtyard may have been as much as ten meters high, judging from the excavated data; the friezes of fish decoration are attested on actual walls. *D.* Funerary procession showing two pallbearers shouldering a pole with a mummy bundle strapped to it. *E.* Procession of llama sacrifice. Photographs courtesy of Santiago Uceda.

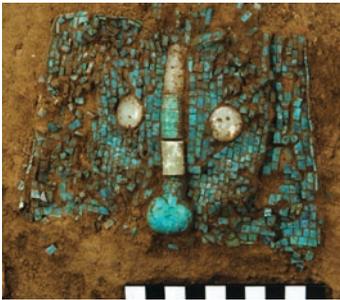


PLATE III A kingly tomb at Erlitou, principal city of the first state in China (ca. 1800–1500 B.C.). The male occupant of this tomb held a 70-cm-long serpentlike object above his chest; a bronze clapper bell lay next to the serpent. The serpent was made from more than two thousand pieces of turquoise attached to some organic material. The scale bar at upper right represents a length of 20 cm, the one at lower right 10 cm. Several turquoise-inlaid bronze plaques that resemble the head of this serpent have been found in Erlitou elite burials, but this is the first image to include a body. Photographs courtesy of Xu Hong.

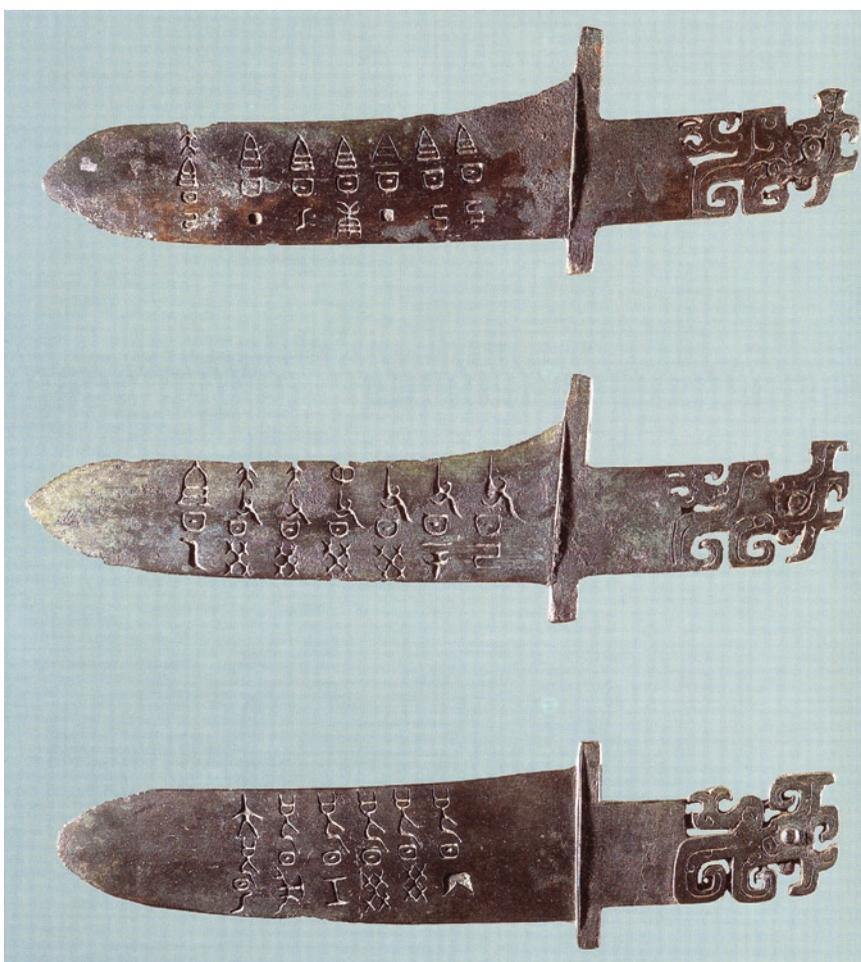
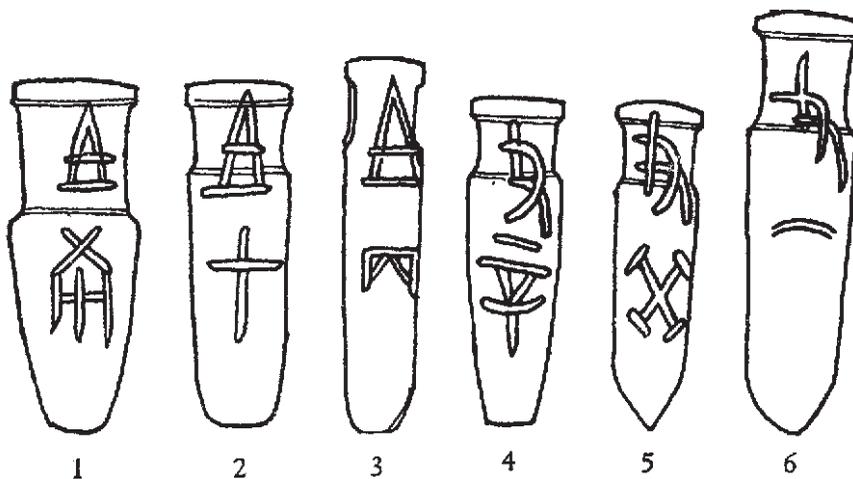


PLATE IV Venerating names as embodiments of ancestors. *Top*, six stone tablets from a twelfth-century B.C. tomb at Anyang, bearing the names of six different ancestors written in vermilion, after Liu Zhao 1995, p. 624, Figure 1. *Bottom*, a set of three bronze *ge*-blades of the Anyang period (twelfth to eleventh centuries), no archaeological context. The top one was cast with a group of seven ancestral names of the generation of grandfather (Grandfather X₁, Grandfather X₂, ...). The middle one consists of a grandfather and a group that runs from Father Y₁ to Father Y₆. The bottom one lists from Older Brother Z₁ to Older Brother Z₆ (see Chen Mengjia 1956, pp. 499–500, for details). Photograph courtesy of the Liaoning Provincial Museum.



PLATE V Bronzes from a city-state and an empire, shown to scale. *Left*, bronze *ding* from Erlitou (ca. sixteenth century B.C.). Photograph courtesy of Xu Hong. *Right*, bronze *fangding* from Zhengzhou (ca. fifteenth century B.C.), one meter high. Photograph courtesy of the National Museum of China.

	二	三	帚	匕	自	卓	陶
甲骨文							
金文							
朱文							
	旬	东	天	走	天	尹	父
甲骨文							
金文							
朱文							



PLATE VI The earliest corpus of Chinese writing known at present. It was written in vermilion on clay jars buried together with sacrificial animals at Xiaoshuangqiao, a contemporary or slightly later site 20 km north of Zhengzhou. *Top*: The corpus seems to include numerals, titles, kinship terms, and possibly a deity's name as shown on bottom right. The characters in the fourth and the last rows are from Xiaoshuangqiao, the second and the sixth rows from the oracle bone inscriptions a century or two later, and the third and the seventh rows from bronze inscriptions a little later than the oracle bone inscriptions. The first and fifth rows are their transcriptions in modern Chinese. Table after Song Guoding 2003, p. 42, Table 1. Photographs courtesy of Song Guoding.

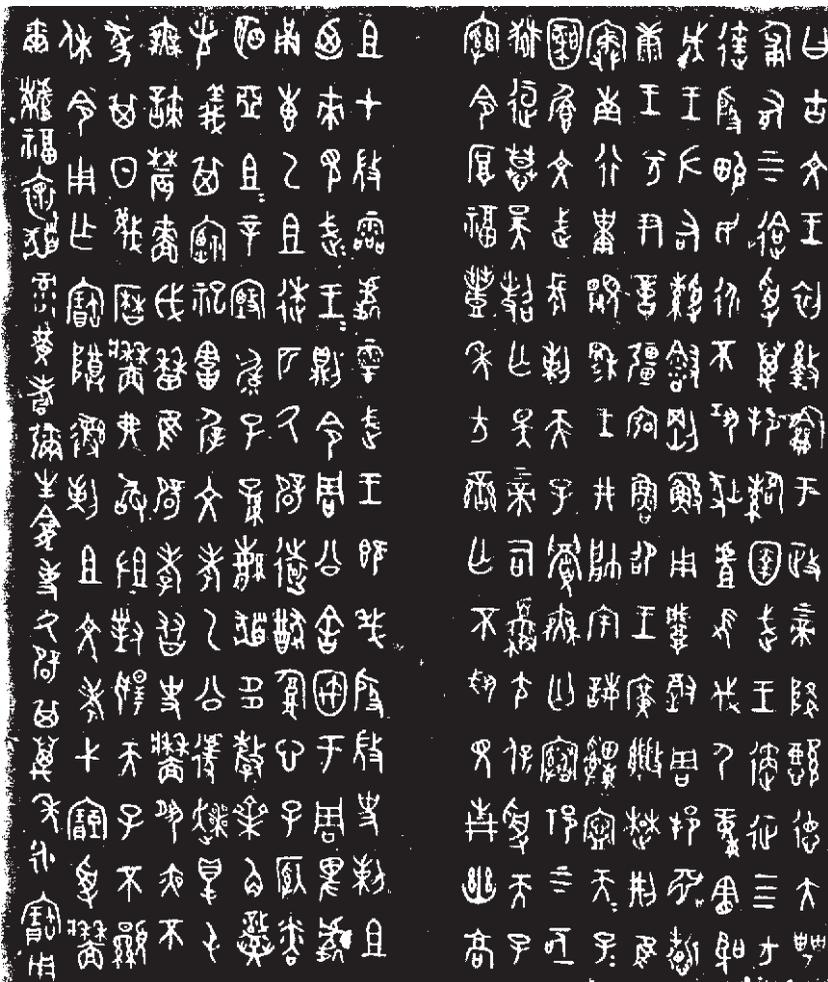


PLATE VII A scribe records history: the Western Zhou kings named on the *Shi Qiang pan*, second half of the tenth century. Inscription after *Shaanxi Chutu Shang Zhou Qingtongqi* (Beijing: Wenwu Chubanshe, 1980), Vol. 2, pp. 44-5. Photograph courtesy of the Baoji Museum of Bronzes.



PLATE VIII Another Western Zhou king list: the *Lai pan*, second half of the ninth century B.C. For obvious reasons the *pan* vessel type was favored for lengthy inscriptions. Photographs courtesy of the Baoji Museum of Bronzes.



PLATE IX Incorporating bookkeeping into an artistic composition: the slab stela of Nefretabet. Fourth Dynasty. Photograph by Bruce White. Translation after Strudwick 2005, p. 431; see also Manuelian 2003, p. 8.

Above the seated Figure of the Owner

The king's daughter, Nefretabet.

Short Offering List

In front of the deceased: Cool water, implements for hand washing.

Upper row: incense, *hatet* oil, green eye cosmetic, black eye cosmetic, figs, *ished* fruit.

Lower row: *sekhepet* drink, wine, *nebes* fruit, *nebes* fruit bread, *wah* fruit.

Above the Offering Table

Four hieroglyphs, probably indicating: meat, ribs, fruit, fowl.

Below the Offering Table

Left: A thousand of all clothing, fowl, and alabaster.

Right: A thousand of bread and beer; a thousand geese, oxen, and antelopes.

The Linen List

idemy linen

100 (cubits area)	90 (cubits area)	80 (cubits area)	70 (cubits area)
1,000	1,000	1,000	1,000

sesher linen

100 (cubits area)	90 (cubits area)	80 (cubits area)	60 (cubits area)
1,000	1,000	1,000	1,000

aat linen

100 (cubits area)	90 (cubits area)	80 (cubits area)	50 (cubits area)
1,000	1,000	1,000	1,000

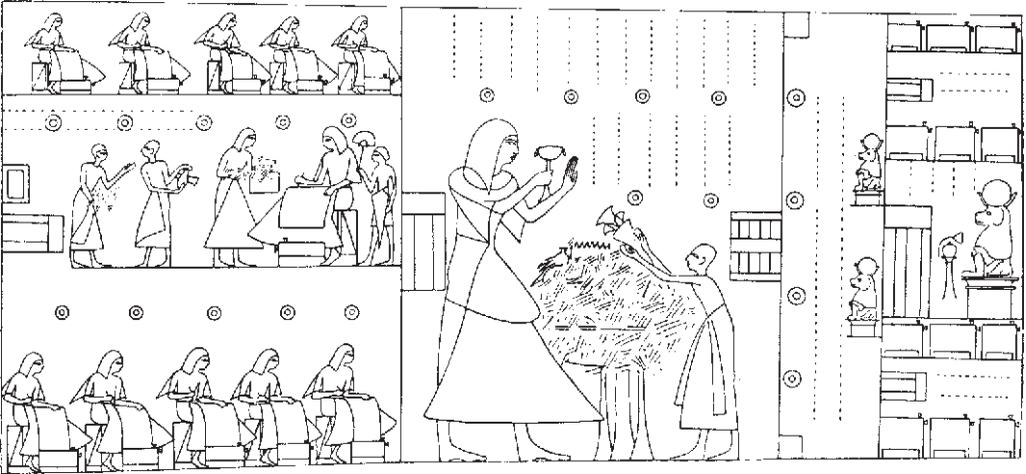
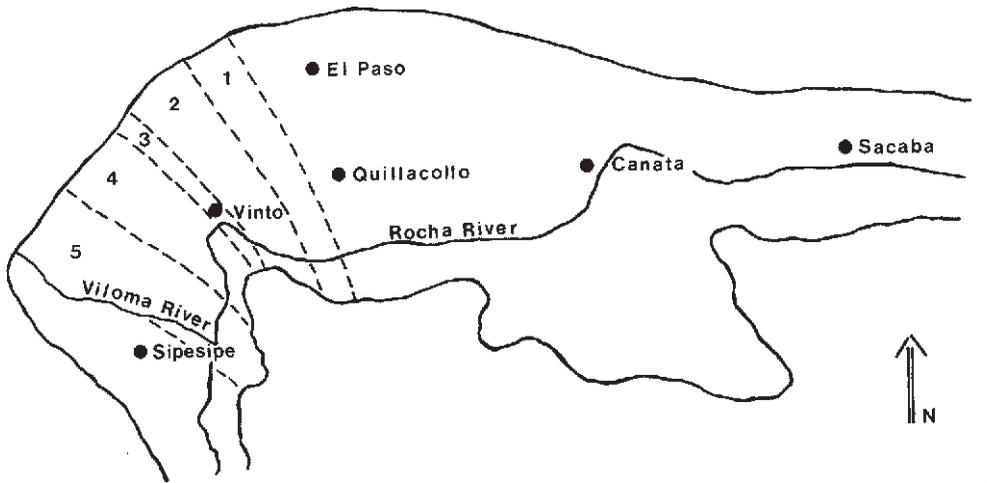


PLATE X The storage and guarding of knowledge: archives and archive keeping in the New Kingdom. *Top*, depiction of a records office from the tomb chapel of the royal scribe Tjay at Thebes, late Nineteenth Dynasty. Notice the baboon gods of Thoth guarding the entrance to the archive. After Parkinson and Quirke 1995, p. 61, Figure 41. *Bottom*, a blue-glazed plaque, perhaps originally tied to or inserted into the side of a container such as the book chests depicted surrounding Thoth in the archive at top. It names Amenhotep III of the Eighteenth Dynasty, and a line at the base gives the title "The Book of the Moringa Tree." © Trustees of the British Museum.



Approximately 5 Kilometers

PLATE XI Transforming the natural landscape for legibility: agricultural terraces of the Inca state. *Top*, the royal estate at Písac. Photograph courtesy of Gary Urton. *Bottom*, the strip division of the state farm in the Cochabamba Valley. Five large strips of land were allocated to five ethnic groups; each was further divided into smaller strips (not shown) for internal distribution. After Wachtel 1982, p. 207, Figure 8.1.

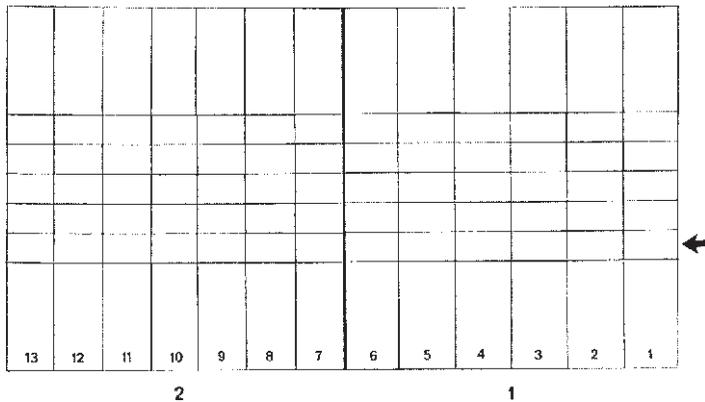
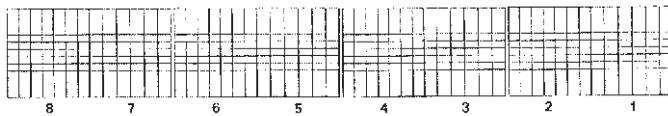


PLATE XII Tables in Mexican pictographic recording systems. *Top*, page 1 of the screen-fold almanac in Codex Borgia. After Gisele Diaz and Alan Rodgers, *The Codex Borgia: A Full-Color Restoration of the Ancient Mexican Manuscript* (New York: Dover Publications, 1993), [Plate I](#), by permission of Dover Publications. *Bottom*, diagram of the screen-fold almanac in Codex Borgia, presenting the 260 days of the cycle in five registers spanning eight pages, reading right to left. After Boone 2004, p. 340, Figure 11.22.

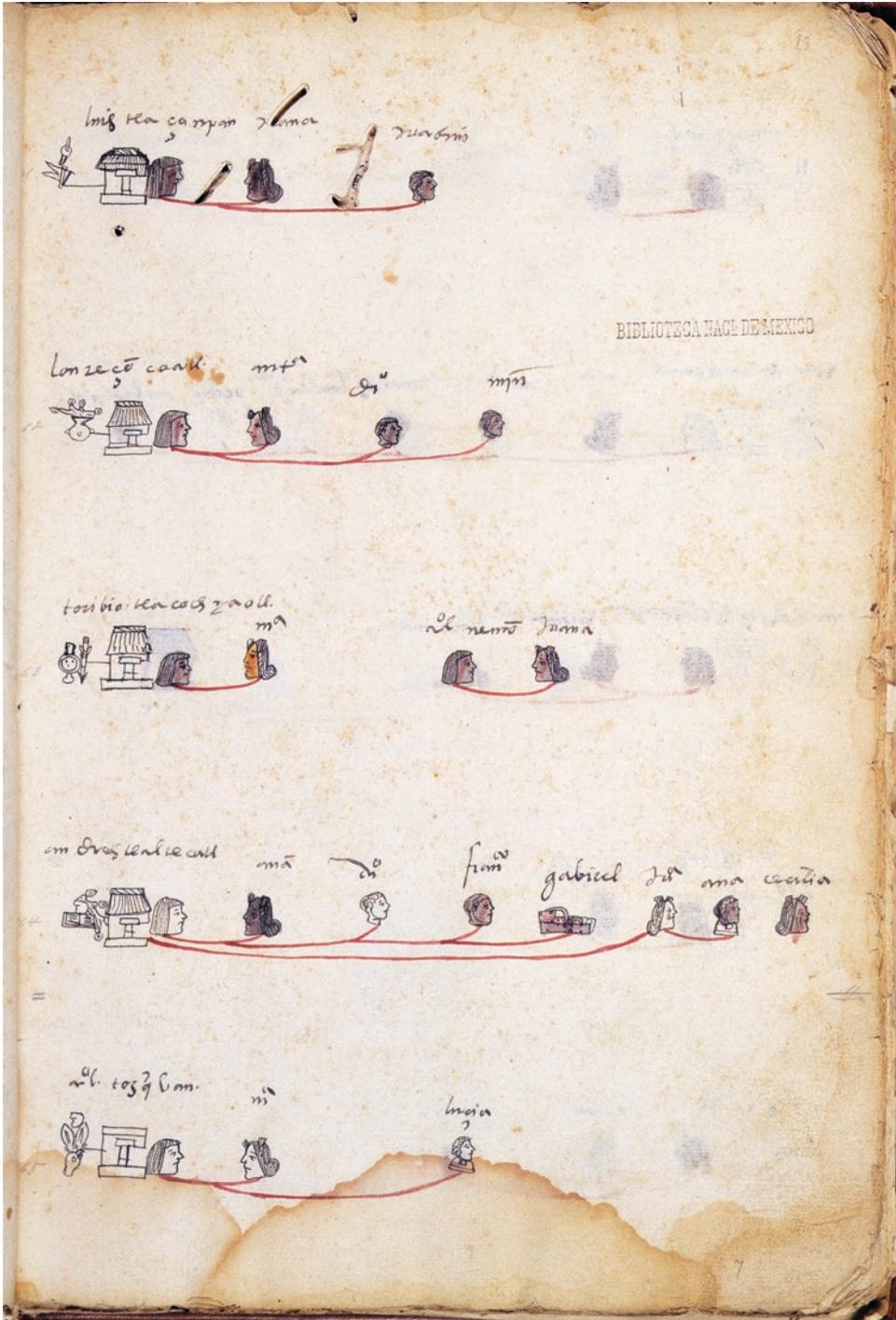


PLATE XIII Pictorial household census in the Códice de Santa María Asunción. After Williams and Harvey 1997, folio 17r, by permission of the University of Utah Press.

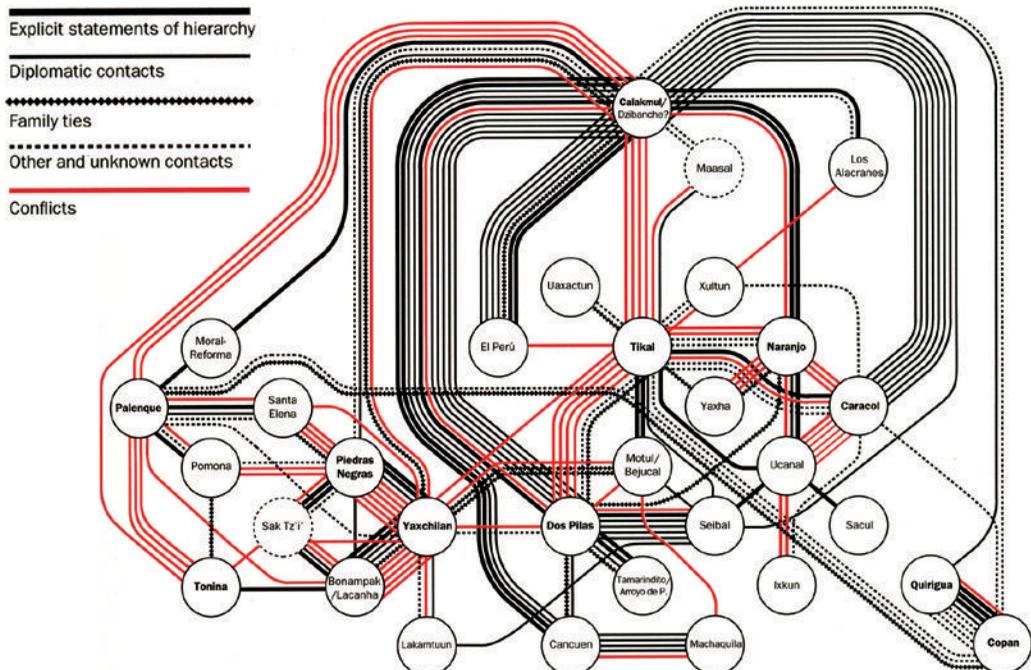


PLATE XV A complex web of dynastic relationships: the “subway” diagram of Maya polities. Only the better known city-states are mapped. After Martin and Grube 2008, p. 21.



PLATE XVI The tallying of accounts as a subject of display: the Fenton Vase from Nebaj, Guatemala. © Trustees of the British Museum.



PLATE XVII The making of delivery receipts. Maya vase, Kerr no. 3413. Photography © Justin Kerr.



PLATE XVIII The ups and downs of intercity rivalry: a Calakmul emissary presenting tribute to the ruler of Tikal. Maya vase, Kerr no. 5453. Photography © Justin Kerr.

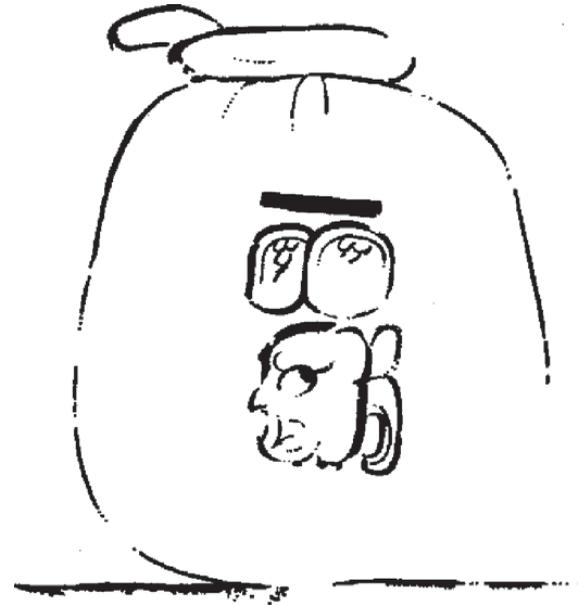


PLATE XIX A splendidly animated tribute list: the murals in Bonampak Room 1. *Middle left of the bottom register*, the three dancers are performing a feather dance; the nobles above them represent the tributary places and tribute bundles. Reconstruction of Room 1 wall paintings, Bonampak, by Heather Hurst and Leonard Ashby. Image courtesy and © Bonampak Documentation Project. All rights reserved. *Line drawing*, a bundle of cacao beans labeled with the quantity it contains, similar to one depicted in Plate XVIII. After Stuart 2006, p. 190, Figure 9.6.



PLATE XX “(It is) his vessel, his drinking cup, for fresh (?) cacao” (the owner’s name and titles follow). Part of the so-called Primary Standard Sequence (PSS) on a Maya vase (Kerr no. 8728), occupying a horizontal band encircling the vessel exterior below the rim. David Stuart has recently suggested renaming this epigraphic formula the Dedication Formula (DF, 2005 Maya Meeting at Austin). It makes an interesting comparison with Chinese bronze inscriptions (which were usually cast inside the vessel: [Plate XXII](#)). Photography © Justin Kerr.



PLATE XXI A late Shang inscribed bronze: an early eleventh-century B.C. *jia* in the collection of the Saint Louis Art Museum, Gift of J. Lionberger Davis 221:1950, by permission of the Saint Louis Art Museum. The inscription, visible beneath the handle, reads, “On the day *guisi* the king awarded the Xiao Chen Yi ten strings of cowries, which he used to make this sacred vessel for Mu Gui. It was in the king’s sixth *si*, during the *yong* cycle, in the fourth month. *Ya Yi*.” Rubbing and translation after Bagley 1987, p. 174, Figure 10.1, and p. 525, no. 2.



PLATE XXII Royal grant commemorated on a monumental scale: the *Da Ke ding*, a late Western Zhou bronze tripod 93.1 cm high. Photograph and rubbing courtesy of Zhou Ya. For a partial translation see [Text 4.10](#).



PLATE XXIII Costly writing: the tallies issued by the king of Chu to Lord E of Qi. *Middle right*, boat tally; *middle left*, wagon tally. *Right and left*, section drawing reconstructing the original arrangement of five parts per tally. Gold was less prized in ancient China than elsewhere in the ancient world, but in the Warring States period its use in art grew more common, especially for inlaying inscriptions on bronze vessels and bells and other bronze objects; these inscriptions now appear on the exterior rather than the interior of the bronze (see also [Plate XXII](#)). Photograph courtesy of the National Museum of China. Drawing after Falkenhausen 2005, p. 82, Figure 3.2.



PLATE XXIV List making in early Maya art. *Left*, “head variants” on a shell-shaped earflare in stone, possibly representing a list of gods. After Schele and Miller 1986, p. 79, Plate Xa. *Right*, lidded ceramic vessel with a list of day names. From Tikal’s Mundo Perdido royal compound (Kerr no. 5618). Photography © Justin Kerr.

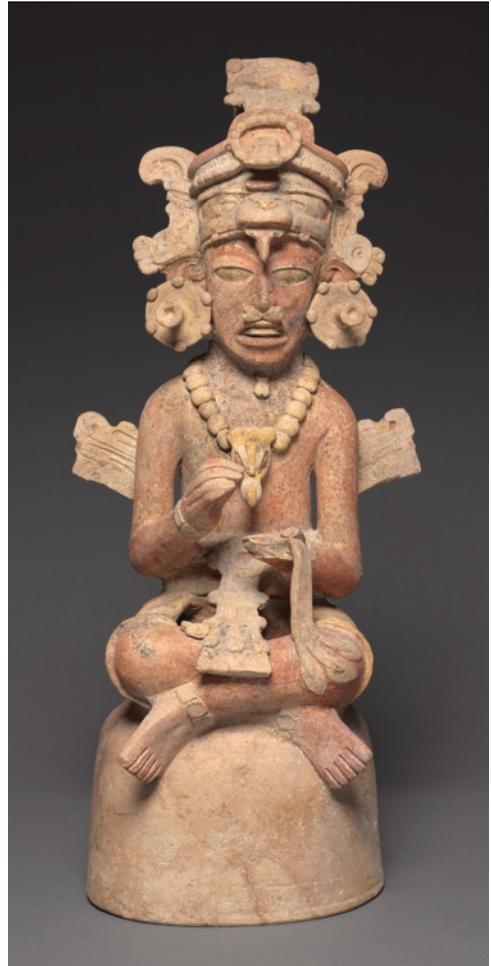
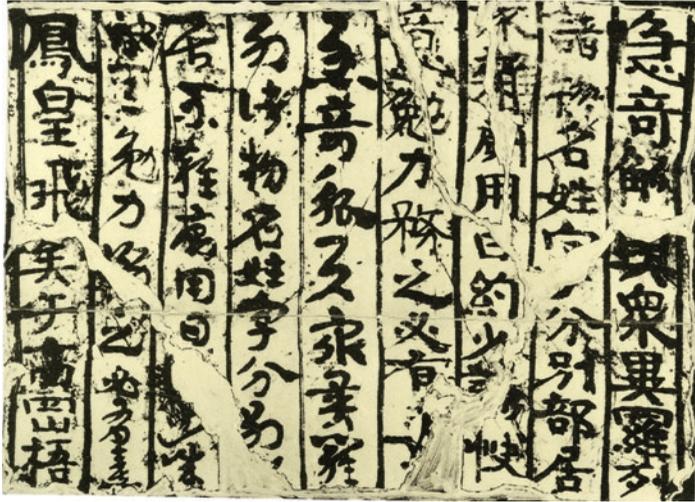


PLATE XXV The symbolic division of glyphs and numbers. *Top*, teaching writing and arithmetic–calendrical notations (Maya vase painting, Kerr no. 1196). Photography © Justin Kerr. *Bottom left*, a monkey scribe associated with the writing of the glyphs, with a stylus (now lost) modeling a small mask in his hand. Deity, 250–600. Guatemala, Petén region, Maya style (250–900). Earthenware with colored slips, 56.5 × 22.0 × 35.5. The Cleveland Museum of Art, John L. Severance Fund 1994.12.1. © The Cleveland Museum of Art. *Bottom right*, a human scribe associated with numerical notations using a brush pen (? , now lost) to write on a piece of bark paper. Noble, 250–600. Guatemala, Petén region, Maya style (250–900). Earthenware with colored slips, 59.0 × 26.0 × 22.0 cm. The Cleveland Museum of Art, John L. Severance Fund 1994.12.2. © The Cleveland Museum of Art.

(b)



(a)



(c)

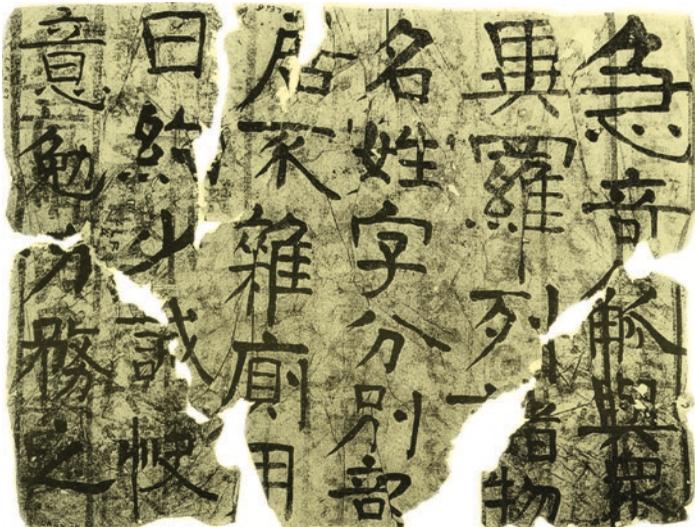


PLATE XXVI Master models and student copies of the Han primer *Jijiu pian* found in northwest China. *a.* Two views of a copy written in Han clerical script (*li shu*) on a three-sided wooden prism found at Dunhuang. The prism carries the first chapter of the primer. The handwriting is neat and confident and may have served as a master model. After Gansu Sheng Wenwu Kaogu Yanjiusuo 1991, Vol. 1, Plate 185, by permission of Gansu Sheng Wenwu Kaogu Yanjiusuo. *b.* A copy on a piece of paper written alternately in clerical and cursive (*zhang cao*) scripts. Found at Loulan in Xinjiang province. The cursive characters are written with more confidence, with skillful lifting and pausing of the brush tip, and they were probably executed by a teacher. The clerical characters are clearly by a student. *c.* Evidently a beginner's copy, on the other side of *b.* Five paper fragments, Or.8212/484 (M.173) L. F.ii.07, Or.8212/480 (M.169) L.A.II.x.04, Or.8212/483 (M.172) L.E.i.06, Or.8212/482 (M.171) L.C.i.017, Or.8212/481 (M.170) L.A.II.x.05, restored into one piece. After Hou Can and Yang Daxin 1999, Vol. 2, p. 316. Copyright, the British Library Board 2012.

INTRODUCTION

Writing a book about writing is an intimidating task, not the least because every reader can be counted on to have a theory about it. I have not met a literate person who is not interested in the phenomenon of writing. The immense literature on this subject testifies to its appeal. But it also sets a challenge. Readers want to know, without delay, What is your take?

This book is a comparative study of the use of writing to create and maintain order in early states. Drawing its evidence from six regions – Egypt, Mesopotamia, the Maya lowlands, Central Mexico, the Andes, and China – it aims to use our knowledge of other early states to help us take a fresh look at China. The present introduction has three main tasks. First, it makes a case that writing, order, and early states constitute a coherent subject for investigation. Second, it explains the thinking behind comparative study, as I understand it, and relates it to the interdisciplinary study of writing. And finally, it briefly locates in space and time the early states that form our sample.

WRITING, ORDER, AND THE EARLY STATE

The early state was an enormous institution that subordinated most of its population to a small number of rulers. In spite of the ups and downs of rulers and dynasties, as a model for social arrangement it has survived the vagaries of history. Our modern state is only a late variant of the model. What is the binding agent that has been holding the great mass of people in subjugation for millennia? One ingredient, it seems to me, is the need for order and security in a dangerous and unpredictable world. To cope with it our ancestors very early formed groups. Just what it was that drove the gradual development from the tiny human group (“band”) to the gigantic state still eludes us, but the main steps in the development are plain to see.

Living together creates relationships among individuals. To navigate through the web of relationships, people use classification. Classification imposes order on a vagrant and unruly reality, enabling us to perceive a chaotic world as an orderly one. How the faculty of classification originated has long been debated by sociologists and cognitive scientists, with an entirely social origin and an innate one in the human mind forming opposite poles in the debate.¹ It seems safe at least to say that every individual possesses an innate capacity to *learn* to classify. We learn to classify people, animals, plants, tools, and gods, always with the same motive: to simplify things and to make life easier. The result of this intellectual exercise is knowledge, which is storable and communicable,

and which provides rules to guide action. Written knowledge and society's use of it are at the heart of this book.

Just as there are social divisions of labor, there are diverse domains of knowledge. It is the nature of the social arrangement that determines what is essential knowledge for the survival of a particular social group and its members. What is the nature of the state, a huge and complex social arrangement? What knowledge is essential to its survival? A definition of the state is called for.

Benedict Anderson, with the modern nation-state in mind, defines the state as "an imagined political community – and imagined as both inherently limited and sovereign," that is, imagined as a well-defined territory under the rule of a person or an assembly.² In essence this is not much different from Thomas Hobbes's explication of the state, which, in Quentin Skinner's recent summary, regards the state "as a fictional or moral person distinct from both rulers and ruled."³ With the early state in mind, Norman Yoffee defines the state as consisting of a governmental center, an attendant hierarchy of officers and clients, and a territory under the political control of the center.⁴ The two definitions – one psychological and the other institutional – are perfectly compatible, and both are invoked in this book.

Anderson focuses on people's mental image of their community. Taking mass literacy for granted, he argues that the way people imagine their group depends to a large extent on knowledge of the world gained from the print medium. However, even without mass literacy and printing, which were not available in the early state, a collective identity could be created by using a shared body of knowledge of the state. At the core of this knowledge was the king, the symbol of the community. What exactly was known about the king depended in part on one's proximity to him, but in part also on the king's strategy for legitimizing the institution of kingship. Kingship is probably the most common form of state government, and the first part of this book examines the king list as the primordial assertion of the state's legitimacy. The succession of kings gave the state a concise history, a simple digest of the past that could conveniently be displayed to assert the message of royal ideology. History is made for a reason, and in early states the reason was not to record what happened but to substantiate and justify an ideology of rule. This motive is not transparent in a list of royal names, the simplest form of history, but it is hard to miss once we turn our attention to the institutional setting in which such lists were constructed. The Chinese "Mandate of Heaven" doctrine is one of the most familiar of these constructed royal ideologies. Chinese historians have so long looked at the past in the way it prescribes that its nature as a human construction has been difficult to see. The Sumerian King List, a celebrated Western counterpart on which we have more perspective, will help us understand history making in China.

The second part of this book looks at the role played by writing in the state's extraction of wealth from its populace. Royal display was a major function of early writing; indeed it may have driven the invention of some writing systems (Egyptian, Mesoamerican). But there is no question that in Mesopotamia, at least, writing originated in administration. Indeed in [Part II](#) we will find that, not only in Mesopotamia, the writing that was put on display was often taken from or shaped by texts that originated in administration. Administrative texts – above all the most powerful ones, censuses and maps – feature prominently in Anderson's reading of the state as an imagined community. What he emphasizes, however, is the imagination, cultivated and conditioned, that fosters the

common people's identification with the state. In the early state, this collective identity was not purely a matter of loyalty (nor is it in the modern state). Discontent, fear, and resentment of the state apparatus, paradoxically, were equally strong contributors to a sense of cohesion, and it was administration that was responsible for these sentiments.⁵

When we think of administration we are inclined to equate it with bureaucracy. From Max Weber to Michel Foucault there have been many studies of how modern bureaucracies function and what the rationale of government is.⁶ Some historians of the early state, conscious of the paucity of their written evidence, hesitate to make use of the insights of these studies, but should they? Do material remains have nothing to say about bureaucracy? For the study of modern bureaucracy Weber had at his disposal abundant written documents produced by modern bureaucracies, hence his conclusion that "[t]he management of the modern office is based upon written documents ('the files'), which are preserved in their original or draught form."⁷ More importantly, he could observe its functioning as an onlooker and as a subject ruled by bureaucracy. To study the art of government, Foucault could examine written treatises on government by European thinkers from the sixteenth century down to his own day. Few such sources are available to the historian of the early state. But a shortage of written evidence does not mean that there was no bureaucratic administration in early states. It certainly does not mean that there was no human creativity in governing worthy of our attention.

On the contrary, the early state was built by highly creative minds – "built on the urge to rule and on visions of order."⁸ And these visions of order are manifest in engineering that has imprinted itself in the archaeological record: cities, monumental buildings, and landscape terracing, to name only a few. Bureaucracy was the instrument created by ambitious imaginations to realize their visions of cohesion and obedience, and writing in Mesopotamia was invented to serve bureaucracy.⁹ Weber himself, aware of the abundant cuneiform documents from early Mesopotamian states, well understood their essentially bureaucratic nature.¹⁰ Chapter 5 in Machiavelli's *The Prince* is titled "Concerning the way to govern cities or principalities which lived under their own laws before they were annexed." Although no treatises like Machiavelli's have come down to us from ancient Mesopotamia, there is little doubt that thoughtful Mesopotamians had come up with their own solutions to his problem. Our task is to understand these solutions and their rationales. In an illuminating study of modern states, James Scott has stressed the state's need for what he calls "legibility," that is, for a clear and detailed knowledge of its population and resources. I follow Yoffee in believing that ancient states had similar needs.¹¹ Usually these needs were met with written lists. Although the states of Central Mexico and the Inka state in the Andes stored their administrative knowledge using pictorial and nongraphic recording systems, in format these records are not very different from written lists. With or without writing, legibility was achieved by simplification and classification: "the essence of the act of writing (and of drawing) is to reduce a complex and often chaotic reality to a comprehensible order" – that is, a rational ordering of society.¹²

We owe to Weber the insight that "the consequence of a rational ordering of society was discipline, the potentiality for subordination and the loss of the individual's autonomy, an estrangement from simpler forms of communal association, a growing fragmentation of social existence and values, and a sense of disenchantment."¹³ Was writing

invented and viewed primarily as a force for disciplined order, an instrument for domination? Those who follow Claude Lévi-Strauss have no doubt that the major function of writing is to facilitate the exploitation of human beings by the ruling class.¹⁴ But few concrete examples have been adduced to substantiate Lévi-Strauss's sweeping claim, which is only a sort of guilt-by-association argument made using an anecdote from a small Nambikwara group. In the same vein Jack Goody, noting that a "major sociological or anthropological question about the relation between writing and the polity has precisely to do with state formation, bureaucracy, and the subsequent role of early writing in helping to unify large empires such as China," answers the question not with solid evidence from any early state but only by asserting that "the earliest stages of literacy in most of the 'primary' civilizations were exactly contemporaneous with pristine state development."¹⁵

State formation is an ongoing process of establishing and keeping a legitimate monopoly of force and taxation within a certain territory.¹⁶ Traditional studies of early state formation have rightly focused on innovations that accrued during this process. In [Part I](#) the discussion of the written king list as a legitimizing force suggests that writing was such an innovation, one that had an intimate relationship with state formation, but it does not address how the state acquired the wealth necessary to support the functioning of its government. The state cannot run on ideology alone; it is as concerned with the present as with the past. Foucault's interest in government as an activity points in an empirical direction.¹⁷ In the early states two crucial components of the activity were collecting tax and forming an army. These depended on the state's knowledge of its subjects, its knowledge of population and property. People and resources needed to be put on the state's radar screen, identified and classified, and it was the institutions of the state that conferred identity on them.¹⁸ The government's activity thus had a distinctly classificational character. This also is a quintessential characteristic of writing. It is time to define writing.

Discussions of early writing tend to operate with two distinct definitions, one narrow and one broad. The narrow definition reserves the word *writing* for the exact graphical transcription of spoken language. The broad definition extends the word to embrace graphical recording systems whose conventionalized marks are not necessarily bound to a particular language.¹⁹ All the graphical systems employed by the early states treated in this book can be situated somewhere on a continuum between these two poles; indeed most of them developed from the second toward the first, for it is not in dispute that writing in the narrow sense grew out of writing in the broad sense. Recent research has made it very clear that the recording of spoken language was not the motive for the invention of the earliest writing systems. In Mesopotamia and Egypt, where documentation is most abundant, the development from graphic recording systems to "full writing" capable of reproducing the grammar and syntax of human speech was a gradual process that took several centuries.²⁰ Following Hans Nissen, Peter Damerow, and Robert Englund, we may conveniently call the precursor graphic systems *proto-writing*.²¹ As shown in [Part II](#), the pictographic recording systems of Central Mexico have much in common with the proto-writing of the Old World, for both have an organized, self-generative lexicon and a numerical system. To call the former systems proto-writing would be inappropriate, though, because the term carries with it an expectation that they would in time have developed into full writing, something that may or may not be so.

In any discussion that involves early writing, it is obviously important to keep clearly in mind the distinction between full writing and less-than-full writing. However, the aim of the present book is to investigate what early recording systems did rather than to label them. Whether representing language or not, their lexicons and numerical systems gave these early recording systems a remarkable ability to *sort* and *quantify*. The various king lists discussed in Part I are classifications of a particular type of people. In [Part II](#) we will encounter classifications of other segments of the society: the early state was keenly interested in making inventories of its population. To make an inventory of people – to count them – is to confer sameness on them. Once entered into the state’s register, the populace received a collective identity and was subject to the state’s surveillance. The coercive and punitive side of writing stressed by Lévi-Strauss will be very apparent when we learn how the state used its census to detect and punish those who tried to evade its conferment of the identity “taxpayer.” State officials were not immune to writing’s punishing power, either, as they soon found out when their deliveries did not match the written tax assessment. In population registers, we observe a rudimentary police state in the making. To scholars of modern European states, “[p]olice is a science of endless lists and classifications; there is a police of religion, of customs, of health, of foods, of highways, of public order, of sciences, commerce, manufactures, servants, poverty. . . . Police science seems to aspire to constitute a kind of omnivorous espousal of governed reality, the consortium of a Leviathan. It is also (again in aspiration) a knowledge of inexhaustibly detailed and continuous control.”²²

Early states were perhaps less concerned than modern ones with the prosperity or happiness of their subjects – and hence were less ambitious as to the extent of their knowledge – but their desire for knowledge and their use of written lists to organize it were not much different from those of modern states.

States that filled their treasuries without writing – most instructively the Inka state in the Andes – will help us grasp the power of writing by showing us what was involved in managing without it. Administering a state largely consists of managing taxonomies, and writing is an exercise in taxonomy. Knowledge is power, and writing accumulates it. But we should not look at writing’s disciplinary function from a purely practical point of view. Gary Urton, a scholar of the Inka *quipu* (knotted strings), proposes that bookkeeping in medieval Europe and pre-Hispanic Peru emerged in the keeping of precise records of transgressive behaviors, maintaining social norms by recording “confessions.” He argues that Foucaultian governmentality and its evolution in Western Europe had counterparts in the Andes, where we find “a preoccupation with statistics, political arithmetic, institutions for monitoring and regulating individual and group behaviors.” Both systems of government had strong moral and epistemological rationales, although their historical clash underlines their differences of morality and ethics.²³ Along a similar path, Michael Herzfeld treats modern bureaucratic actions as everyday rituals in the service of a religion that is nationalism.²⁴ Nationalism, the strong sense of group identity discussed by Anderson, is perhaps not a helpful concept for the study of early states, given its heavy freight of modern associations. Still, it is worth pondering how and by whom Anderson’s “imagined community” was formed, and how, in the ongoing process of state formation, a larger, more inclusive collective identity came into being.²⁵

It was only to a limited literate audience that writing could help spread knowledge of the king as the symbol of the early state. In [Part II](#) I argue that the state order was an

organized and systematically controlled symbolic system and that administrative writing brought more people into its orbit. Although we often classify extant writings as purely administrative documents or purely ideological documents, the two categories are by no means mutually exclusive.²⁶ Administrative writings had a profound symbolic meaning for everyone involved; display texts often contained down-to-earth laundry lists about the economy. As Herzfeld cautions, it is important to keep in mind “the symbolic representation of authority by those over whom it is exercised. To treat bureaucratic practice apart from popular reactions to it . . . is implicitly to accept the disembodied rhetoric of officialdom.”²⁷ We need to consider how writing was perceived by the people who were doing it, the people who were reading it, and the people who were being written about.

Among these overlapping groups connected by writing, the people who were doing writing formed a *script community* that supplied the early state with literate bureaucrats. A prerequisite for Weberian office management to function is “thorough and expert training.”²⁸ Likewise, for writing to endure there must be “strategies of pedagogy and apprenticeship.”²⁹ Literacy education for those who are entitled to participate in governance, especially elementary schooling, has always been part of the process of state formation.³⁰ Part III therefore views education as a process by which the state perpetuates itself. Writing’s role in the life of the state spans past, present, and future.

In early states the school was one of the most important institutions for the making and transmission of elite culture. It supplied the intellectual foundation of the state’s quest for order. Conversely, order was a prerequisite for culture. “If without order there could be no pure culture, it was equally true that without culture there could be no meaningful order.”³¹ Those privileged to acquire literacy saw writing as a civilizing institution; it enabled order and embodied culture.

In Mesopotamia, where ancient education is most fully documented, we will find that it long centered on lexical lists, and that an immense variety of texts can be understood as variations or elaborations on the lists that, in the course of schooling, became second nature to every pupil. As they learned these lists the pupils internalized their form, acquiring a list-making classifier’s view of the world, a view comparable to the Weberian “attitude-set of the official for precise obedience within his *habitual* activity.”³² Pupils also internalized the content of the lists, implicit in which was a scribal ideology that tended to the maintenance of the state.

In all three parts of this book we will over and over again encounter lists – lists of names or of names and numbers. I believe that this is no accident: early writing is almost synonymous with the listing of names. This has to do with its functions, of course, but also, as I suggest in the Conclusion, with its origin. To write, we might almost believe, is to make a list. I hope that after reading through the many examples quoted in this book, the reader will in the end feel rewarded by understanding something about human inventiveness that, for better or for worse, has profoundly influenced the course of human history.

COMPARATIVE STUDIES AND EARLY CHINA

Making comparisons is a universal human behavior, according to the anthropologist Donald Brown.³³ In this it resembles the penchant for classification mentioned in the preceding section, another behavior on Brown’s list. “To know thyself, compare thyself to others.” As a methodology in the humanities and social sciences, cross-cultural

comparative study has been with us since the nineteenth century. Although its early practitioners sometimes aroused suspicion or scorn, comparative study has taken firm root within several disciplines, notably anthropology, law, literature, religion, and sociology. The Institute for the Comparative Study of Civilisations at Oslo was perhaps the best known organization promoting it in the early years of the twentieth century. It sponsored seminars that were subsequently published and became classics in many disciplines, among them Franz Boas's *Primitive Art* and Marc Bloch's *French Rural History*.

There are two distinct types of cross-cultural study, distinct in theory if not always in practice. The first is the study of contact, exchange, and transmission. The second is the comparison of cultures assumed not to have been in contact. Both types have a historical dimension. Both seek to account for apparent similarities and differences, either by finding the immediate origins of specific phenomena or through more general insights into possible trajectories of cultural development. And both, if they are to yield anything more than vague and superficial analogies, require detailed and concrete knowledge of two or more data sets. Furthermore, because many phenomena are of interest to several disciplines, comparative study often demands competence in two or more fields. Writing and the state belong to such a public domain: anthropologists, historians, sociologists, philologists, and psychologists all have written extensively about them. Today the flagship journal in comparative studies is *Comparative Studies in Society and History*, founded in 1958; the state, especially in its medieval and modern forms in Europe, has always been one of its main themes. Writing has received less attention from comparativists, but it appeared early and prominently on the scene with the controversial publication of "The Consequences of Literacy" by Jack Goody and Ian Watt (1963).³⁴ The paper is controversial because the cognitive impact upon humans and human society that the authors attribute to the advent of literacy has large implications for many fields, including philosophy, sociology, and psychology. The consequent debate about the so-called literacy thesis has seen many publications on both sides.³⁵ Can an archaeologist and art historian working mainly with material remains hope to do research on writing that might open a new channel for dialogue? I have repeatedly asked myself this question since my second month in graduate school, when my adviser, Robert Bagley, suggested the origin of writing as a seminar topic.

My answer is that archaeologists can certainly contribute to the study of writing in its earliest social contexts, particularly in the context of state formation. The relationship between writing and society has been studied in two basic ways, and archaeologists have been active participants from the beginning. The first approach might be termed philological. It treats writing as a self-contained development that influences society but that is itself shaped only by its own internal logic. The classic statement is I. J. Gelb's *A Study of Writing* (1963), which sees all the world's writing systems as descending by a single evolutionary path from Mesopotamian cuneiform. In the only chapter that he devotes to writing and society, Gelb makes the sweeping pronouncement that "[w]riting exists only in a civilization and a civilization cannot exist without writing."³⁶ But then he immediately turns his attention to the importance of writing in *modern* society, devoting three short sections to the relationships between writing and speech, art, and religion. Considering that Gelb had an astonishing knowledge of administrative documents in ancient Mesopotamia, as we will see when we come to land tenure in [Chapter 3](#), it is surprising how little he has to tell us about writing's influence on early societies. His book's

central concern seems to be the autonomy of writing. In my area of study, early China, major studies of the Chinese writing system fall into the philological camp, although most reject the idea of Mesopotamian origins.³⁷

The other approach, which sees a two-way interaction between writing and society, has largely eclipsed the philological approach, at least as to the origin of writing, although it has not yet had much impact on studies of Chinese writing. A brief but classic statement was the archaeologist Gordon Childe's article "The Urban Revolution" (1950), which looked at writing in comparative perspective and saw it as primarily a response to administrative needs.³⁸ The understanding of writing as a tool of administration has gone furthest in studies of Mesopotamian cuneiform, notably *Archaic Bookkeeping* by Hans Nissen et al. (1993). Recently, however, some specialists have argued that in Egypt and Mesoamerica the earliest writing served ideological rather than administrative needs. Both sides of the question are represented in *The First Writing* (2004), a collection of essays by Old and New World specialists edited by Stephen Houston. (The book includes a global survey of writing systems by Bruce Trigger that amounts to a comprehensive refutation of Gelb's idea of unilinear development.) The debate over administration and ideology leads directly to comparative study.

Although several recent efforts by archaeologists at cross-cultural comparison give some attention to writing, few have yet combined comparative study with firsthand knowledge of the Chinese material.³⁹ This is a perennial problem in other ambitious comparative enterprises as well, in particular those concerned with the state, bureaucracy, and social power. Today, after a century of archaeology, we can raise an eyebrow at Weber for making large generalizations about Chinese economy and religion on the strength of a very limited knowledge of ancient China. But his followers do not seem to have availed themselves of the wealth of knowledge now readily available to them. Eisenstadt (1963) does not consider early China before the imperial period. In Michael Mann's monumental volume on the history of power from the fourth millennium B.C. to A.D. 1760, Shang China occupies one and a half pages.⁴⁰ S. E. Finer's *The History of Government From the Earliest Times* (1997) has a longer section on ancient China, but its quaint characterization of Chinese writing ("The Chinese script is very wonderful, very complicated, very archaic" or "The Chinese script is uniquely Chinese") is certainly out of date, and its knowledge of Chinese bureaucracy before Han is insufficient to contribute anything to Finer's argument.⁴¹ As for Trigger, despite the colossal energy and erudition he brought to his comprehensive comparison of all the major early civilizations, he often relied on dubious secondary sources. He believed that Shang China was a territorial state, a belief that owes more to ancient ideologies and traditional historiography than to modern archaeology.⁴² And he believed that serving religion was the main or even sole function of the earliest Chinese writing because his sources told him so, even though the prominence of inscriptions related to ritual in the early Chinese epigraphic record seems to be only a bias of preservation.⁴³ How can the comparativist "be fully acquainted with historical research in these fields and know the different controversies among historians, so that he can evaluate them, can beware of too facile use of any data or view, and can explore the extent to which such data can be analyzed according to the problems he analyzes and the categories he uses"?⁴⁴

Committed comparativists are well aware of this problem. One solution, proposed by the editorial in the first issue of *Comparative Studies in Society and History*, is to found

a forum “for comparable work on recurrent types of problem of general interest.”⁴⁵ It finds an echo in Houston’s preface to *The First Writing*: “Comparison is best done, not by a single person, often misconstruing data and debates in areas far from their specialty, but within an interactive setting that convenes authorities from diverse fields. From this will emerge, it is hoped, a shared vocabulary and a sharpened sense of problems and prospects relating to each system. Dialogue cannot exist unless scholars tune to the same wavelength.”⁴⁶

One fruitful product of such an approach was a seminal paper by John Baines and Norman Yoffee (1998) that singled out order, legitimacy, and wealth as the overriding concerns of the early state and in the process supplied a uniform vocabulary for comparative purposes. It has been a source of inspiration for the present book.

The dialogic approach to comparative study requires each partner to trust the expertise of the others, and a coherent result depends on collaborators whose wavelengths are attuned very closely indeed. A second approach takes different risks. The solitary comparativist (the word *solitary* is qualified in this book’s Acknowledgments section) hopes that extensive reading of the kind Weber did will equip him to read critically and form his own views in all the areas of his study. But a commando raid into unfamiliar territory will not do. This vivid simile is borrowed from the cuneiform scholar and archaeologist J. N. Postgate, who, in a plea for “increased cross-frontier awareness” between material-based archaeologists and art historians on the one hand, and text-oriented historians and philologists on the other, demands that “each side must take cognizance of the totality of the other side’s data base, and understand how the tempting prizes actually belong in their own context.”⁴⁷ In her tribute to Weber, Sylvia Thrupp, the first editor of *Comparative Studies in Society and History*, sets the bar as high as Postgate: “Max Weber through phenomenal labor set new standards and as D. G. MacRae in a recent review article recalls was himself uneasy about the adequacy of his factual knowledge of China.... In the handling of evidence the generalist has to meet the standards of specialists. He may disregard petty objections about stray exceptions to his statements but not criticism on the score of misinterpretation of evidence or neglect of relevant problems.”⁴⁸ There is no shortcut.

So how is the comparativist to handle evidence that lies outside his expertise? Ideally the advice of a specialist friend will guide him to an up-to-date general treatment of the topic he is concerned with, writing or the state for example. But this is only a starting point, and the next step is crucial. If he finds points of interest in the book or article, he should track down the author’s references both to their original sources and to whatever secondary sources offer different interpretations. In studying early writing’s functions, for example, he should try (1) to read in full (though necessarily in translation) the actual pieces of ancient writing quoted or cited in the secondary sources, and (2) to look at their archaeological contexts. Of course only specialist epigraphers can translate the original cuneiform, hieroglyphic, or Chinese bronze inscriptions, and it is inevitable that they will disagree about details. The comparativist cannot hope to resolve the disagreements, but the details are not always relevant to his topic; often they can be safely ignored. By tracking down references the comparativist finds a great many primary and secondary sources and, as his knowledge accumulates, develops his own views on long-standing issues while also discovering unexpected questions along the way.

This is the path I took in writing this book. What at first I thought only to be a Chinese archaeologist's foray into the alien world of writing turned out to be a belated education. I found myself increasingly drawn to the treasure trove of texts in the ancient Near East, to the codices of Mesoamerica, and to the rich ethnographic records left by indigenous and European chroniclers in the New World. In learning about these documents and their modern interpretations, I was struck by the shortage of studies focused on the relationship between writing and the state, on how early states used recording systems to achieve their goals of order, legitimacy, and wealth. So I set out to piece together the scattered sources to write my own description of this relationship, region by region. When a region had a long and continuous written tradition, as the ancient Near East did, I made my description chronological, pointing out significant changes and continuities.

Armed with these descriptions I then turned to early China. To the specialists who study it, the immense textual record of early China and the traditional understanding of it are so familiar that they can easily be taken for granted. Comparative study gives us a new perspective on the familiar. It is a machine that generates coincidences both planned and unplanned. The king lists and lists of royal gifts ostentatiously displayed in certain Chinese bronze inscriptions are traditionally studied for their relevance to chronology and lexicography. Set next to Near Eastern and Mesoamerican monuments, however, they gain new meanings as testimony to writing's functions in state ideology and economy. Like ethnographic analogy, comparative study cannot supply proofs; the fact that writing in Mesopotamia began as bookkeeping, for instance, does not ensure that writing in China began in the same way. But like ethnographic analogy, comparative study can alert us to possibilities that we might not otherwise think of, and in scientific inquiry it is a well-established rule to prefer multiple possibilities to the exploration of only one.⁴⁹ The enthusiastic attention given to scribal education by Assyriologists makes us ask ourselves how else a full-blown writing system could be maintained over time. How do we explain the absence of school texts in early China? Is early China devoid of school texts simply because the materials on which the texts were written have perished? Or are there perhaps a few survivors that have yet to be recognized for what they are?

In the course of this study many similarities between early China and other early states will emerge. Text types and practices that have never seemed anything but Chinese will turn out to be local forms of widespread phenomena – not peculiarities of early China but characteristics of early state societies. Finding similarities is usually the first result of comparative studies, because in the beginning of the process what we notice is not the uniqueness of a certain phenomenon but its analogies with what it is being compared with. In a gradual process of differentiation, of course, comparison will uncover specific points of difference within the general similarities.

Some of the differences that emerge in the present study are striking. Others might be the result only of loss of evidence, making them less easy to evaluate. Comparative study regularly presents us with the problem of deciding whether we are looking at genuine cultural difference or only at a gap in the evidentiary record of one of our cultures. How do we establish comparability if one side's database does not match the other's? Cautious colleagues are understandably reluctant to make conjectures about missing evidence. A few regard it as methodologically virtuous to proceed as though nothing were missing. Others prefer to confine their activities to a secure corner where the evidence

seems reasonably full. Three recent publications illustrate the latter approach. Liu Li and Chen Xingcan's *State Formation in Early China* (2003), dealing with periods from which no writing is extant, restricts its discussion of state formation to archaeological evidence. In the subtitle of his book *Bureaucracy and the State in Early China: Governing the Western Zhou* (2008) Li Feng confines his investigation to the Western Zhou period because it is not until then that pertinent bronze inscriptions, the evidence on which he builds his argument, become available. And Mark Lewis, a master of the texts transmitted from the Warring States period, mainly confines himself to that period in his *Writing and Authority in Early China* (1999).

These books are impressive until they are set next to a work that does not accept their limitations, such as Barry Kemp's *Ancient Egypt* (2006). Although some of the authors are conversant with the texts and archaeology of several periods, all choose to stay in one period and deal with one type of evidence. All react to problems and theories that originated in the comparative study of writing and the state, and from time to time they do make comparisons between China and other parts of the world. But in so doing they find themselves trying to compare a concrete example from China with a generality found in a secondary source. Consider this passage:

In his analysis of ancient Egyptian bureaucracy, Eugene Kamenka considers the separation of the Royal Household from the administration of the royal state as an important step towards permanent bureaucracy. By such separation, the official body of the central government, excluding those who served in the Royal Household, gained its character as a self-determined operational system. Although the system operated on behalf of the king, it was in principle not for the king. It is very likely that the fact that the mid-Western Zhou government was undergoing such a process of separation provided the initial impulse for the bureaucratization of the Zhou government.⁵⁰

A general characterization of an Egyptian development has here been used in support of a hypothesis about Western Zhou developments. But should we compare Western Zhou China with Old Kingdom Egypt, or the Middle Kingdom, or the New Kingdom, or simply with "ancient Egypt"? Or with Mesopotamia rather than Egypt? How do we compare long-term changes in regions that have independent histories?

Perhaps it is the difficulty of comparing whole histories that has caused historians of early China to view cross-cultural comparison with suspicion. But do the historians who reject comparison really manage to do without it? By no means, for they compare different periods of Chinese history constantly. How else could they decide that the earliest states in China were formed in the first half of the second millennium B.C., or that the first Weberian bureaucracy came into being during the Western Zhou period, or that territorial states with mature administrative techniques did not appear until the Warring States period? These comparisons within a culture are no less vulnerable to imbalances of evidence than comparisons across cultures. Dismissing the possibility of lost documents on perishable materials in the "archaic" Shang period, Lewis writes as follows:

Some scholars speculate that these earliest script forms had been developed for use in daily activities, but that the evidence of this has vanished with the perishable materials to which such writings were committed. In fact, the early graph forms are clearly tied in

form and significance to divination through the readings of lines, the brief formulae of the early inscriptions are a radically simplified form of a natural language, and the development of graphs can be directly traced to their role in religious cult. Whatever other roles writing played in Shang times, it was in the inscription of the religious activities of the rulers that the graphs found their definitive import, and it was their dual function as link to the spirits and emblem of royal power that first placed them at the center of Chinese civilization.⁵¹

Yet it is clearly within the realm of possibility that all the conclusions Lewis has drawn from his sample of early writing are artifacts of the bias of the sample. The possibility of lost evidence is always with us; the historian cannot evade it. A realistic rule to operate by might say that to make historically meaningful comparisons we should regularly assess the representativeness of the evidence we rely on, qualifying our conclusions whenever the taphonomic distortion requires it.⁵² Many archaeologists have learned that lesson painfully from discoveries they did not anticipate made soon after the publication of their theories.

Caution and prudence are not enough. Comparativists must allow a certain vagueness in their definitions of key terms such as *writing*, *the state*, and *civilization*. They must also study the long-term evolution of cross-cultural phenomena; script invention and state formation are good examples. They must realize that “[m]ost of the desirable evidence has irretrievably gone, ruling out any serious kind of quantification or deep exploration of what brought about changes.”⁵³ Some anthropologists insist on a rigorous statistical approach to cross-cultural comparison based on a large and clearly defined sample of societies. They demand a random and controlled sample of the kind scientists insist on for their experiments. Yet that is a luxury historians of premodern times cannot hope for. Identical oxygen atoms are not in short supply; *ex nihilo* inventions of writing can be counted on the fingers of one hand. And could a “rigorous statistical approach to a large sample of societies” really answer our questions anyway? A large sample of the world’s writing systems would show that the overwhelming majority were not invented *ex nihilo*. What does that unarguable statistical fact tell us about the origin of any particular system, such as the Indus script, or Chinese? Large and important areas of human experience will always remain inaccessible to statistical methods no matter how large the sample. In such areas the employment of statistics presupposes a radical impoverishment of human culture.

Anderson’s *Imagined Communities* has shaped this book, as the preceding section indicates, and so has another study of modern states, James Scott’s *Seeing Like a State*, which Yoffee introduced into the study of the ancient state. It is possible that scholars like Anderson and Scott, who often detect distinctively “modern” features in the states they study, would question the applicability of their work to premodern times. To this hypothetical objection, two answers might be made. First, I do not believe that they, or indeed any historian, would question the applicability of the word *state* to the societies that are the subject of this book, and if we are prepared to apply the same word to pharaonic Egypt, Western Zhou China, and the present-day United States, it follows that we see them as sharing essential features. States today have by and large the same goals, the same *raison d’être*, as did the first states five thousand years ago, and the human beings they seek to manage are surely much the same. Richly documented modern states can

help us understand ancient states for which our sources are much less full. According to Foucault, the nature of the state as an institution is “a function of changes in practices of government, rather than the converse.”⁵⁴ If we follow him in maintaining that the state has no essence, then there can be no essential difference between modern and ancient states. What has changed is only practices of ruling and attitudes toward the ruled.

A second, more subjective answer to the modern historian’s reservations might be to wonder whether modern states are really so distinctive or whether the differences are of degree, rather than kind. It was the wealth of research materials available for modern societies that enabled Anderson to arrive at his concept of the imagined community, but once alerted to the concept, we may find that it leaps to the eye from the more scantily documented ancient societies we study.

Kemp reminds us that, past and present, we all belong to the same species.⁵⁵ Humans today face the same existential challenges they did five millennia ago, and they have so far devised only a limited range of responses. Writing and the state have been two particularly durable ones. The Chinese historian Yü Ying-shih likewise insists that it is vital for historians to test history against their own personal experience.⁵⁶ Human nature, emotion, and reasoning have not changed dramatically in historical times; if this were not so, all research in the humanities, including history, would be impossible. The scholar who devotes herself to intensive study of an ancient state typically, after years of immersion, exclaims, “They are just like us!” I myself often have this sentiment. I may be wrong, of course, for I am no more an authority on the modern state than Scott or Anderson is an authority on ancient China. No one has the energy and expertise to carry out the kind of detailed comparison of ancient, medieval, and modern states that would be needed to test claims for unique modernity or to establish once and for all what ancient and modern states have in common and how they differ. But like Kemp, I come away from the study of the ancient world with the feeling that the people are familiar, that essentials have not changed. And those of us who feel this way believe that our colleagues working on the modern states have much to offer us.

Comparison of modern and ancient states is thus an important part of this study.⁵⁷ This does not mean borrowing catchy concepts and grand theories. If census and maps are fundamental to Anderson’s concept of the imagined community, then I want to ask whether such documents, and the administrative activities that produced them – enumeration and the drawing of boundaries – existed in early states, and if they did, how they might have influenced the imaginations of ancient people. Because I am not satisfied with the perfunctory treatment often given to such documents in studies of writing and early states, especially in studies of China, in [Part II](#) I have put considerable weight on accounting, a subject that, as readers of *Archaic Bookkeeping* will agree, is a good deal more interesting than it sounds.⁵⁸ I have included many quotations, some quite lengthy, from primary sources such as censuses and land registers in English translation. (I apologize for not being able to achieve consistency in the Romanization of untranslatable words, but I do consistently convert the transliteration of Chinese words originally in Wade-Giles to the pinyin system.) I have also included much archaeological evidence of administrative activities, such as enumeration and boundary making, evidence that has the power to communicate with us visually rather than verbally. There is nothing original in this model of presentation; I learned it from two classics: Postgate’s *Early Mesopotamia* and Kemp’s *Ancient Egypt*. As Postgate and Kemp demonstrate, no

paraphrase is so telling or so illuminating as actual quotations and illustrations. There is also the practical consideration that if instead of my quotations and illustrations I had given only citations to the sources in which I found them, my book could be read only in a library as large as the one in which I wrote it. I hope that the early texts collected here, together with the illustrations of pertinent archaeological materials from various traditions, might serve not only to give the reader a concrete feel for ancient realities and ancient voices but also to be a convenient starting point for thinking about problems that are not touched on in this book or that may never have occurred to me.

So to reiterate and summarize, the three parts of this book are devoted to the functions of early writing in three institutional fields: royal ideology, administration, and education. Each part includes two chapters: one for China, and one, divided into subsections, for the other five regions. The separate treatment of China is a function of my own specialization, of course, but it does not mean that my book is addressed exclusively or even primarily to early China specialists. On the contrary, it is addressed at least as much to comparativists who study other cultures and who find up-to-date information about early China hard to come by. So I have two audiences in mind: China specialists and scholars from other fields who share my devotion to cross-cultural studies. This latter group, I am happy to say, is large and growing. Once a writer is equipped with a comparative lens, the compulsion to look through it is hard to suppress.

EARLY STATES IN SPACE AND TIME

The early states discussed here are those of Mesopotamia, Egypt, Mesoamerica (the Maya lowlands and Central Mexico), the Andes, and China. Rather than attempt to introduce them in any detail, it must suffice here to give a few dates and general references. A chronological chart appears at the end of this introduction ([Table 1.1](#)), followed by some chronological tables ([Tables 1.2–1.7](#)). All five cultural areas are described in detail in Trigger (2003), which is particularly useful for its thorough bibliographic citations. On the subject of early writing Houston (2004) is invaluable, and it too includes a comprehensive bibliography.

In Mesopotamia the period of greatest interest is the millennium and a half from the first steps toward writing to the period of the Babylonian school texts – about 3200 B.C. to 1800 B.C. – but evidence from other periods will enter the discussion at times. Useful general references are Postgate (1994a), Van De Mieroop (2007), and *CANE* (see Abbreviations).

In Egypt the upper time limit is about the same – writing seems to have appeared in Egypt and Mesopotamia more or less simultaneously – but here texts from the late second millennium (i.e., the New Kingdom) will be important. A particularly illuminating general study is Kemp (2006). *CANE* is also very useful, and for issues relating to early writing and royal display, Baines (2007; several papers that I cite in their original places of publication are newly republished here).

For Central Mexico and the Maya, the periods of greatest interest are Late Formative, Classic, and Postclassic down to the time of the Spanish conquest – in other words, from about the third century B.C. to the A.D. sixteenth century. Useful general introductions are Coe (2011), Houston and Inomata (2009), and Coe and Koontz (2008).

TABLE I.1. Comparative chronology of early states.

	Mesopotamia	Egypt	China	Maya lowlands	Central Mexico	The Andes
2000						
1500				Postclassic	Aztec Empire	Inka Empire
					City-states	Chimu Kingdom
1000				Terminal Classic	Tollan	
				Late Classic		
500				Early Classic	Teotihuacan	
A.D.			Eastern Han	Late Formative		
B.C.			Western Han			
			Qin			
			Warring States			
500			Spring and Autumn			
			Late Western Zhou			
1000		New Kingdom	Early Western Zhou			
			Anyang			
1500	Old Babylonian	2nd Intermediate	Erligang			
		Middle Kingdom	Erlitou			
2000	Ur III	1st Intermediate				
	Dynasty of Akkad	Old Kingdom				
2500	Early Dynastic I-III	Early Dynastic				
3000	Jemdat Nasr	Naqada III				
	Late Uruk					

Note: Only periods discussed here are indicated.

Source: Adapted from Trigger 2003, p. 32, Figure 2.2.

TABLE I.2. Major historical periods and dynasties of Mesopotamia (rough dates, all B.C.).

Early Uruk	4000–3500
Middle Uruk	3500–3200
Late Uruk	3200–3000
Jamdet Nasr	3000–2900
Early Dynastic I	2900–2700
Early Dynastic II	2700–2500
Early Dynastic III	2500–2350
Dynasty of Akkad	2350–2250
Gutian interregnum	2230–2100
Gudea of Lagaš	2100
Ur III Dynasty	2113–2004
Isin Dynasty	2017–1793
Larsa Dynasty	2025–1763
Mari Lim Dynasty	1800–1759
Old Babylonian Period	1900–1595 (Hammurapi: 1792–1750)
Kassite Period	1595–1155
Old Assyrian Period	1900–1750
Middle Assyrian Period	1400–1000
Neo-Assyrian period	1000–612
Babylonian Dynasties	900–627
Neo-Babylonian Period	627–539
Achaemenid Empire	539–330

Source: Based on CANE, Vol. 1, *Timeline*; Postgate 1994a, p. 39, Figure 2:10; and personal communication from Norman Yoffee.

TABLE I.3. Major historical periods and dynasties of Egypt (rough dates, all B.C.).

Naqada II	3500–3200
Naqada III	3200–2950
IIIa2 (tomb U-j)	
IIIb (dynasty o)	
IIIb2 or IIIc (= Dynasty 1)	2950
Early Dynastic period (Dy. 1–3)	2950–2575
Old Kingdom (Dy. 4–8)	2575–2160
First Intermediate Period (Dy. 9–mid-11)	2160–2055
Middle Kingdom (Dy. mid-11–13/14)	2055–1650
Second Intermediate Period (Dy. 15–17)	1650–1550
New Kingdom (Dy. 18–20)	1550–1069
Third Intermediate Period (Dy. 21–24)	1069–715
Late Period	715–332

Source: Based on Baines 2004a, p. 153, Table 6.1; Kemp 2006, p. 14.

TABLE 1.4. Major historical periods and dynasties of China (rough dates until 771 B.C.).

Erlitou Period	1800–1500
Erligang Period	1500–1350
Huanbei Period	1350–1250
Anyang Period (late Shang Dynasty)	1250–1050
Western Zhou Period	1050–771
Spring and Autumn Period	770–476
Warring States Period	475–221
Qin Empire	221–207
Western Han Period	206–A.D. 8
Xin Dynasty	9–23
Eastern Han Period	25–220

Source: Based on Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 2003, pp. 81, 188, 253, 294; CHAC, pp. 25–9, Table 1.

TABLE 1.5. Major historical periods in the Maya lowlands (rough dates).

Late Formative	300 B.C.–A.D. 250
Early Classic	250–600
Late Classic	600–800
Terminal Classic	800–900/1100
Postclassic	900/1100–1500

Source: Based on Houston and Inomata 2009, p. 18, Figure 1.7; Sharer with Traxler 2006, p. 98, Table 2.2.

TABLE 1.6 Major historical periods of Central Mexico (rough dates).

Late Formative	400 B.C.–A.D. 500
Classic (Teotihuacan II–III)	150–650
Epiclassic	650–900
Early Post-Classic (Tollan)	900–1200
Late Post-Classic (city-states)	1200–1427
Aztec Empire	1428–1521

Source: Based on Coe and Koontz 2008, p. 12.

TABLE 1.7 Major historical periods of the Andes (rough dates, all A.D.).

Late Intermediate (Chimu kingdom)	1000–1400
Late Horizon (Inka empire)	1400–1532

Note: Moche, Wari, and Tiwanaku are omitted because they are not discussed in this book.

Source: Based on D’Altroy 2002, p. 37, Figure 2.2.

In the Andes the period of interest is the century immediately preceding the Spanish conquest. The Inka state of that period is documented abundantly, not by texts of its own but by the Spanish conquerors and chroniclers. A good general introduction is D’Altroy (2002). Urton (2003) provides valuable reviews and new theories on the interpretation of the *kipu*.

In China I range from the time of the earliest known city-states, early second millennium B.C., down to the Han period (206 B.C.–A.D. 220) and, in some contexts, even later. Good general references are *CHAC* (for a critical review see Schaberg 2001c) and Twitchett and Loewe (1986). For the convenience of non-Sinological readers I have tried wherever possible to cite English sources, but inevitably much material is available only in Chinese.

Although when referring to rulers I have used masculine pronouns throughout, it should be kept in mind that female rulers, such as Hatshepsut in Egypt, are documented in several of the civilizations in my sample.

PART I

WRITING AND THE LEGITIMATION OF THE STATE: HISTORY AS KING LIST

Fundamental to the state is an idealized image of itself, an ideology, a unique identity ...
Ideology requires a past, a history.

Barry Kemp [2006](#), pp. 60–1

1

THE NEAR EAST AND THE AMERICAS

In the written records left by early states, one of the text types most frequently encountered is the royal genealogy. A dynasty needs an ideology to legitimize its rule, every ideology invokes a version of history that illustrates it (“we do things this way, because the founding fathers...”), and the simplest form of that legitimizing history is a list of kings’ names. In constructing a social memory that creates a sense of communal identity, groups of people often focus on a selection of names important to the group. In early states, it is the ruler who selects the names, imposing his (occasionally her) own line of succession as the history of the state. In other words, the state is represented as the royal household writ large.

The ruler’s presentation of his claim to legitimacy does not have to be done in writing. Recently a few Mayanists have voiced doubts about the centrality of genealogical descent to Maya understanding of kingship.¹ But the infrequent mention of genealogy in Early Classic Maya texts may only mean that it was effectively communicated by nonverbal means such as rows of stelae in plazas before temples.² This chapter surveys a number of ways in which the rulers of early states gave material form to their history, asking in each case what audience was addressed. The written king list is only one of these ways, though naturally the most informative for us. Its legitimizing function and its audience are comparatively clear, and in China, as we will see in [Chapter 2](#), it has not yet ceased to be the starting point from which ancient history is written. Let us begin in Egypt, where the earliest known written king lists were written down and displayed.

EGYPT

Working a century ago at the Predynastic town site of Coptos in southern Egypt, Flinders Petrie recovered three limestone colossi, figures that originally stood more than three meters high.³ On their sides the figures bear carved emblems or signs. The best preserved group of signs, laid out in four rows, is shown in [Figure 1.1](#), along with another statue that bears similar signs. The signs are very large – each one is about 10 cm high – and because the top row was at about the height of a normal person, they were easily available for inspection. The fragmentary condition of the figures makes it hard to know whether all of them bore the same group of signs, but they do apparently have some signs in common. Günter Dreyer proposes to read all the signs as royal names, with King Narmer ([Figure 1.1](#), row c, right sign), first king of the First Dynasty, appearing in the middle of a king list that largely antedates the First Dynasty.⁴

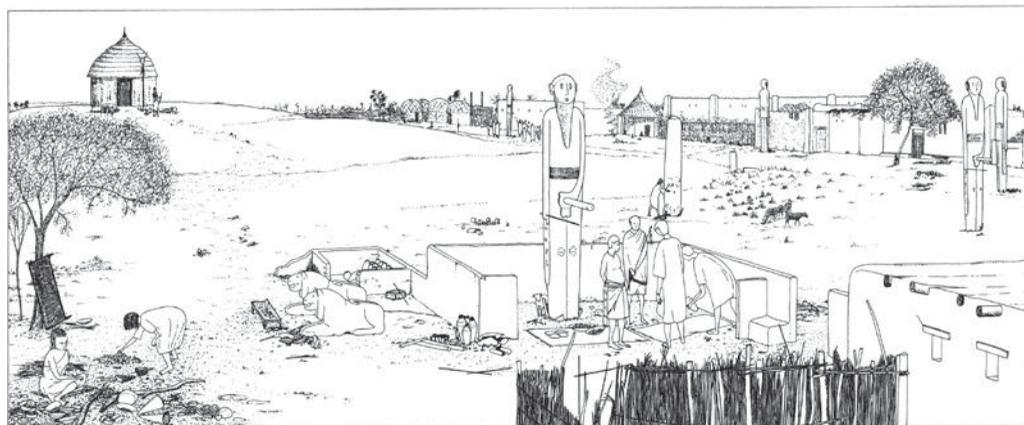
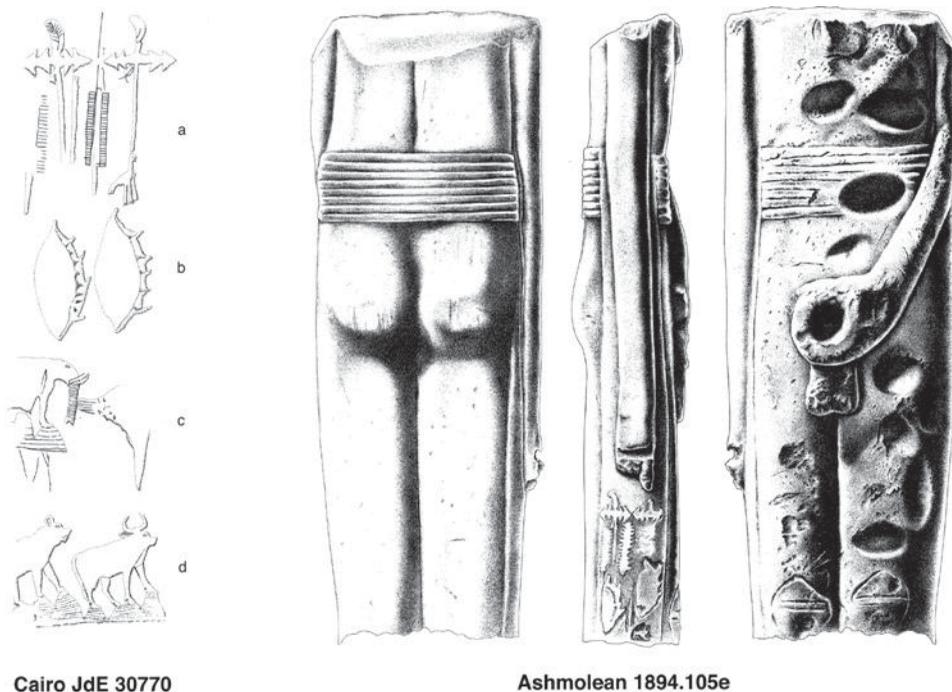


FIGURE 1.1 Name emblems displayed on a colossal scale in Predynastic Egypt. *Top right*, the torso and upper legs of one of three colossi from Coptos, Egypt, now kept in the Ashmolean Museum, Oxford. *Top left*, four rows of carved emblems on the side of another of the three colossi, now in the Egyptian Museum, Cairo. *a*. A pair of standards topped with a “thunderbolt” emblem and feather alternating with what might be a pair of sawbones from the Red Sea sawfish; a small stork or ostrich has been added. *b*. A pair of Red Sea shells. *c*. An elephant, its feet resting on conical hills, and a bird (rear part only preserved), perhaps Horus above a spike. *d*. A lion or hyena and a bull, their feet resting on conical hills. *Bottom*, reconstruction of the original setting, showing the position of the emblems on the sides of the colossi at about the eye level of a viewer. Illustration and part of caption after Kemp 2006, p. 130, Figure 45.

The Coptos colossi may have had more than one layer of meaning (e.g., a cult of the phallus, guardian statues), but they do not seem to be representations of real ancestors. They were, however, vehicles for the display of significant names, perhaps royal names, in the precincts of a temple (Figure 1.1, bottom). Some of the Coptos signs are

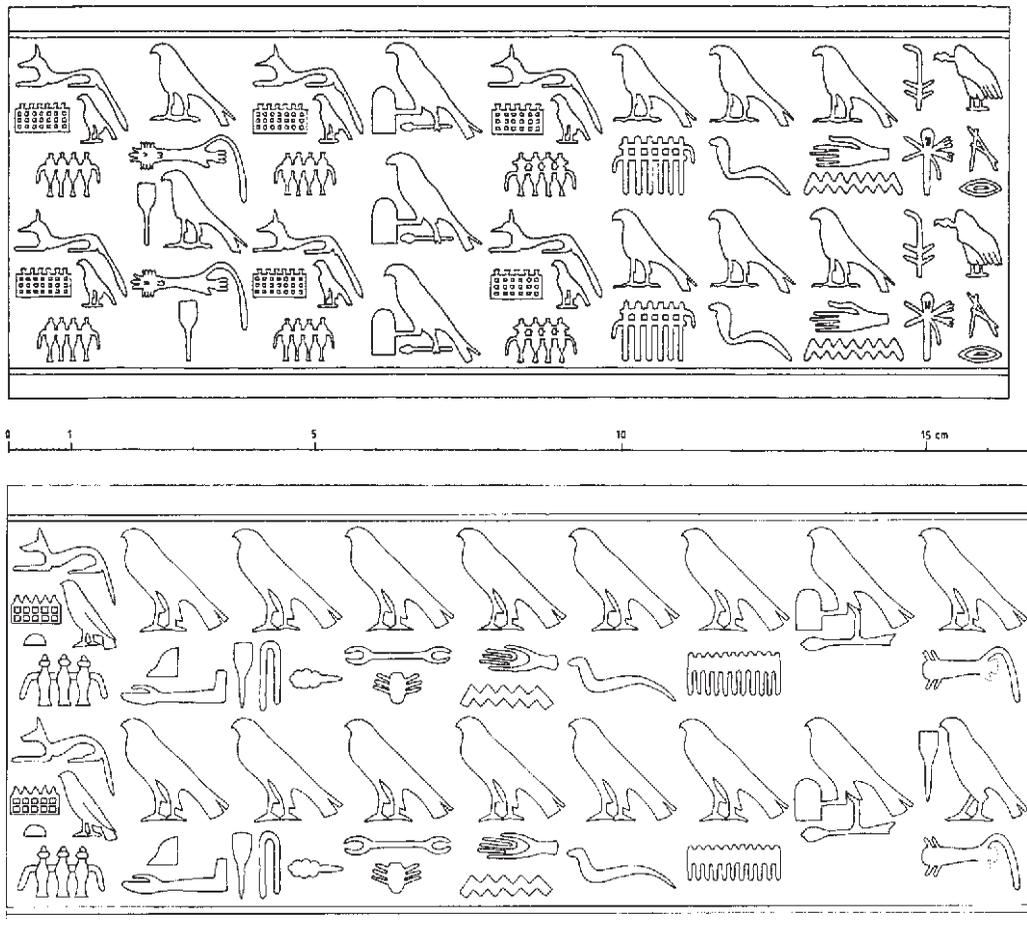


FIGURE 1.2 King lists mass-produced: reconstructed seal impressions from the royal necropolis of the First Dynasty at Abydos, southern Egypt. Both seals are read from left to right (Egyptian is read in the opposite direction from the way the individual hieroglyphs face). *Top*, the seal of Den, which lists in chronological order the kings of the First Dynasty from Narmer to Den and Den’s queen mother Merneith. *Bottom*, the seal of Qaa, which lists all the eight kings of the First Dynasty in retrograde order from Qaa backward to Narmer. After Dreyer 1987, p. 36, Figure 3, and Dreyer et al. 1996, p. 72, Figure 26.

also attested in other predynastic contexts, notably among the signs on the pottery and ivory tags from the royal tomb U-j at Abydos (Naqada IIIa, ca. 3150 B.C.), which has yielded by far the earliest examples of writing yet known in Egypt.⁵ If Dreyer is correct in seeing the Coptos emblems as royal names that turn up again in the U-j inscriptions, which cannot be much later, it would be reasonable to conclude that in Egypt, emblems signifying proper names contributed to the initial repertory of signs that was later incorporated into an emergent writing system.⁶

As vehicles for the display of significant names, the Coptos colossi stand at the beginning of a long Egyptian tradition. Two seal impressions belonging to kings Den and Qaa of the First Dynasty were recently found in the royal necropolis at Abydos.⁷ Figure 1.2 reconstructs the two rolled-out impressions, which presumably were made from two cylinder seals. The upper one in Figure 1.2 is Den’s seal, which lists in chronological

order the kings of the First Dynasty from Narmer to Den and Den's queen mother Merneith. The lower one in [Figure 1.2](#) belongs to Qaa and lists all the eight kings of the First Dynasty in retrograde order from Qaa back to Narmer.

The two sealings demonstrate that from a very early time, Egyptian rulers kept lists of their ancestors and were concerned with their past. Arguably these king lists formed the original core of the "stream of tradition."⁸ Donald Redford argues that the lists were compiled from the serial recording of year names used for administrative purposes.⁹ But of course naming years after the king's deeds only strengthens the equation of history with dynastic history. Although seals had a practical use in administration, their power perhaps resided more in their symbolism and psychological effect than in their practical function as identification of a specific administrator or office.¹⁰ Despite their (usually) small size, sealings were very suitable for display. They could be mechanically reproduced over a range of objects, from oil jars to temple doors, thus publishing them to a large audience. If the purpose had been only to identify a king's belongings, a seal with his name alone would have sufficed. By including his four predecessors' names, in chronological order, Den invoked his lineage as a proof of his legitimacy, reinforcing his assertions of ownership. The two royal seals under discussion thus appear to be functioning as something more than markers of ownership. Their mortuary context suggests that they were used to record and to worship the royal ancestors.¹¹

By invoking the royal lineage, Egyptian kings sought to legitimize their own kingship.¹² In this respect it may not be unreasonable to compare the seals of Den and Qaa with the stone vases bearing First and Second Dynasty kings' names buried underneath the Step Pyramid of Djoser (Third Dynasty, ca. 2650 B.C.). Baines argues that this "ancestral" material in the king's tomb was a grandiose mobilization of an admired past.¹³ The two seal impressions, also from a royal necropolis, were far cheaper to make, but the impact of sealings was perhaps comparable to that of Djoser's lavish display, because they could have been applied to any number of objects in the royal tombs. As for the arrangement of Qaa's dynastic list in retrograde order, retrograde king lists in the New Kingdom were used to invoke past kings in the daily temple rituals and festivals.¹⁴ Perhaps this practice dated back to the Early Dynastic period.

MAYA

Maya king lists are probably the closest parallels to the Egyptian ones. Both employed royal name markers like cartouches ([Figure 1.3](#)), royal representations ([Figure 1.4](#)), backward and forward presentations of time, and, most important of all, spectacular display in solemn architectural settings. In Classic Maya the retrograde presentation of time was manipulated emphatically, and in three dimensions. Yaxchilan Hieroglyphic Stairway 1, which reflects Maya concern with legitimate succession, is an example ([Figure 1.3](#), top). In its six steps are carved serial accession dates and the rulers' names. Along with the names, sixteen ancestral representations enclosed in cartouches are distributed among the glyphs. The latest date is on the lowest step (step VI); the date of the first member of the Yaxchilan dynasty is on the top step (step I, far left). "Accordingly, as spectators ascend they move to the beginnings of the royal family; as they descend, they return to contemporary people and events, in a kinetic reexperience of dynastic succession."¹⁵ To the Maya the ancestors are metaphorically presented as "stacked stairs."

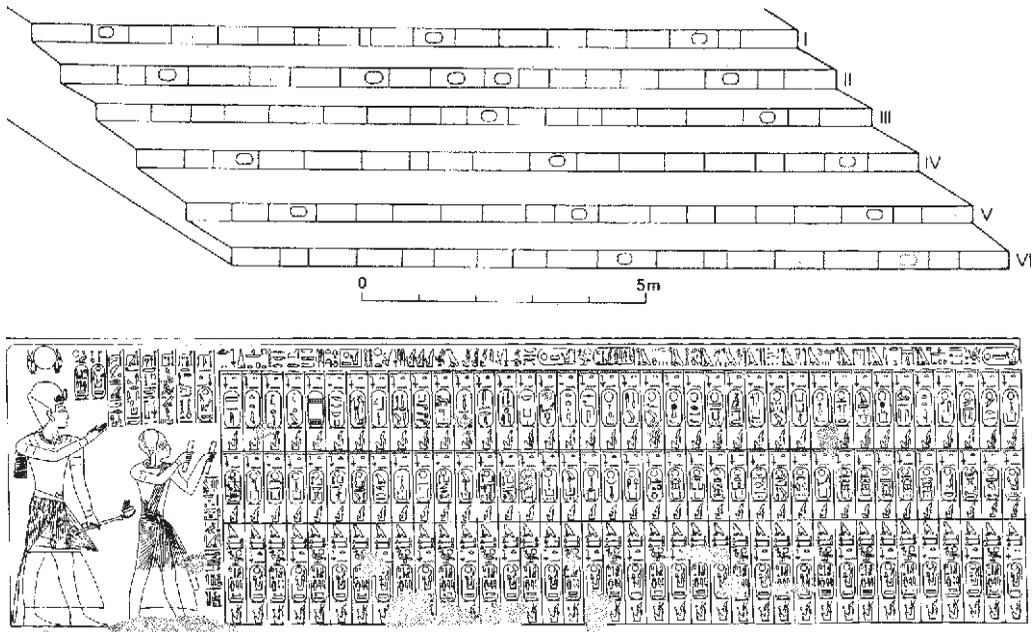


FIGURE 1.3 Linking the reigning king to the founder of the state: king lists in architectural settings in Maya cities and Egypt. *Top*, axonometric view of Hieroglyphic Stairway 1 at Yaxchilan (ca. A.D. mid-eighth century). Sixteen cartouches containing royal ancestral representations are distributed irregularly among other glyphs carved on the faces. The lowest one probably represents the living king, Bird Jaguar IV, who built this stairway. After Houston 1998, p. 356, Figure 20. *Bottom*, King Seti I and his son Prince Ramesse revering their predecessors. The first two rows of names written in cartouches start from the founder Menes at upper left and run to the reigning king Seti I at bottom right. Seti’s name was repeated nineteen times to fill out the third row. From the temple of Seti I at Abydos, southern Egypt (ca. 1300 B.C.), after Kemp 2006, p. 63, Figure 18, above. The stacking effect with the living king at the bottom in both cases is striking, as is the use of cartouches to signal kings.

These Maya stairways were designed not only as entrances to temples and palaces but also as theatrical stages for public performances, such as the presentation of war captives in front of the triumphant king and nobles.¹⁶ Takeshi Inomata argues that the actors were highly visible to a large audience (including the non-elite population) occupying the plazas in front of the stairways.¹⁷ But the king list embedded in Yaxchilan Hieroglyphic Stairway 1 was probably not easily contemplated from afar; moreover, the non-elite spectators envisioned by Inomata are unlikely to have been literate. The intended audience of the Maya king list might therefore have been only the actors on the stairs: the rulers, nobles, ambassadors and envoys from other cities, and the elite captives (if they were in the mood!). In the Maya region – and also in the Mesopotamian city-states, as we will see – a shared communication system was employed and understood by political rivals.¹⁸

If the foregoing interpretation is correct, the audience for the Maya royal inscriptions, or at least a part of it, was different from that of Egyptian inscriptions. From the very inception of Egyptian civilization, conquered foreigners appear frequently in art and writing, but they do not seem to have been the targeted viewers of royal inscripational display. People outside the “Two Lands” were presumably thought to be illiterate, or at

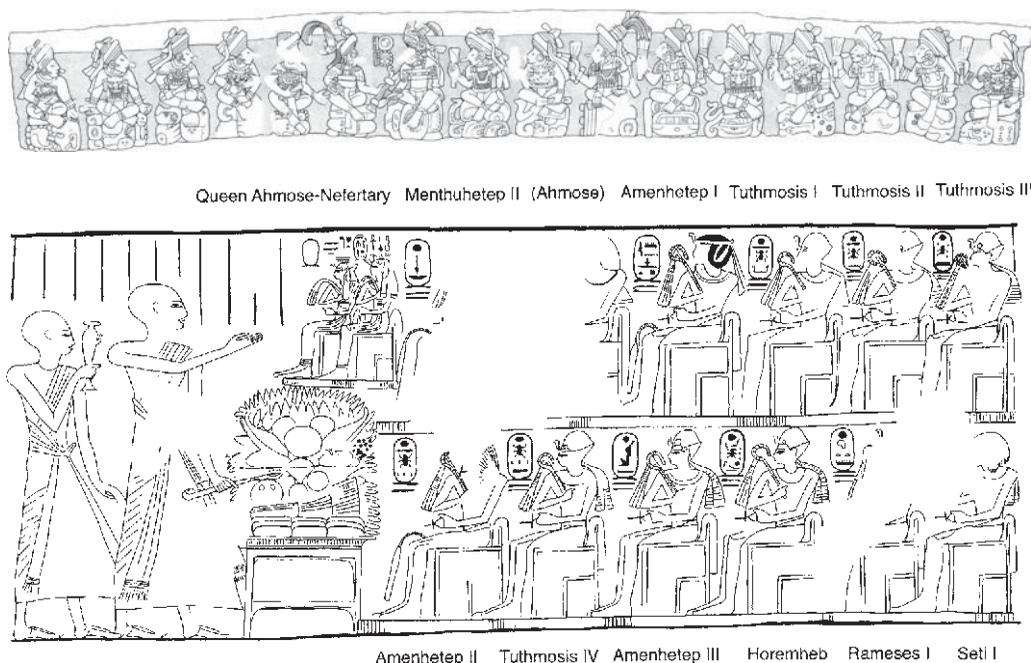


FIGURE 1.4 Facing the royal ancestors in person: representations of the royal ancestors identified by their written names in Maya and Egyptian monuments. *Top*, rolled-out drawing of Altar Q from Copan (A.D. 775–6). The altar’s four vertical sides bear a string of sixteen kings of Copan seated on their name glyphs. The western side (original front face) depicts two pairs of kings facing toward each other across two glyphs that give the accession date of the patron of this altar, Yax Pasaj, who sits to the right of the date glyphs. To the left of the glyphs sits the founder of the Copan dynasty, Yax K’uk’ Mo’, who is handing his scepter to the patron king of Altar Q. Epigraphic and strontium isotope analyses suggest that he spent his young adult years elsewhere before establishing the Copan kingdom; see Price et al. 2010. The dynastic king list unfolds leftward from the founder around the three sides of the altar until it comes full circle to bring the living king face to face with the founder. See Stuart 2011, pp. 275–7, for more details. After Baudez 1994, p. 97, Figure 40. *Bottom*, tomb painting of the priest Amenmes (Nineteenth Dynasty, early thirteenth century B.C.), showing him worshiping the statues of thirteen “legitimate” kings arranged in chronological order. The seated kings are identified by their names enclosed in cartouches. After Kemp 2006, p. 63, Figure 18.

least ignorant of the Egyptian script. Hence there was no reason to display inscriptions to outsiders. In the Mesopotamian city-states, by contrast, and also in Central Mexico after the fall of the Toltec capital of Tollan, political rivals shared a communication system.

No matter what the intended audiences for Egyptian and Maya displays of royal lineage, it seems clear that the written list of royal ancestors was an important component of royal display in both civilizations. But there are other ways to represent and display the royal ancestors besides writing down their names. In the words of Stephen Houston, “[W]riting does not seem to have been an indispensable resource of early royal representations.”¹⁹

In the Late Formative period the Maya made iconographically complex depictions of dead kings that did not involve their names (Figure 1.5; to see the profiles, rotate the images ninety degrees clockwise). To be sure, these early downward-facing royal depictions – called *floating ancestors* by Mayanists – look rather schematic and not much like portraits, but their headgear seems intended to differentiate them (Figure 1.6).²⁰ In other

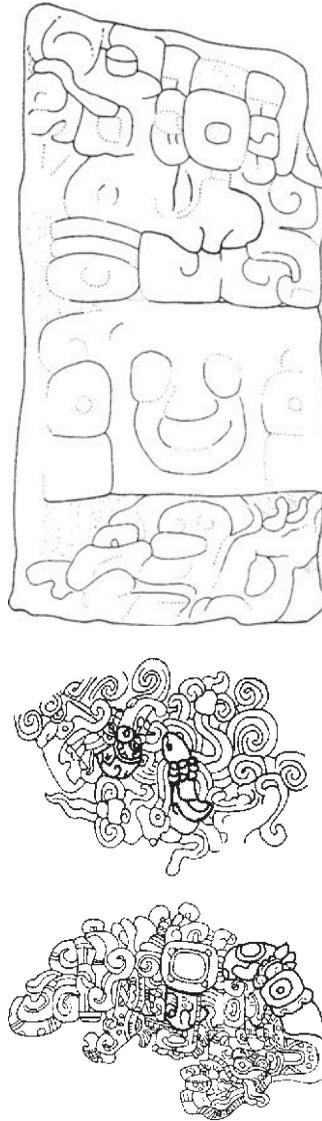


FIGURE 1.5 Downward-facing royal ancestors in Late Formative Maya (300 B.C.–A.D. 250). *Top*, Stela 18 from El Mirador. *Middle*, Stela 2 from Abaj Takalik. *Bottom*, Stela 31 from Tikal. After McAnany 1998, p. 282, Figures 5–6.

words, neither a written name nor an exact likeness is required to signify a particular individual. There may have been a pan-Mesoamerican conception “in which the head or face is seen as the essential manifestation of the body, as in the far earlier Olmec heads.” This may also explain why name glyphs, when they were used to identify persons, often occur in the headdresses of Mesoamerican lords.²¹ Interestingly, the structure that the stucco frieze in [Figure 1.6](#) embellishes may have been an ancestral shrine.

In the Classic period the Maya made effigies of ancestors that were “brought together with the living in ways that reflected mutual relationships and responsibilities.”²² Special buildings erected on top of the ancestors’ tombs seem to have made it possible for a tomb to be ritually reopened and “renewed,” although the corpse of the ancestor was

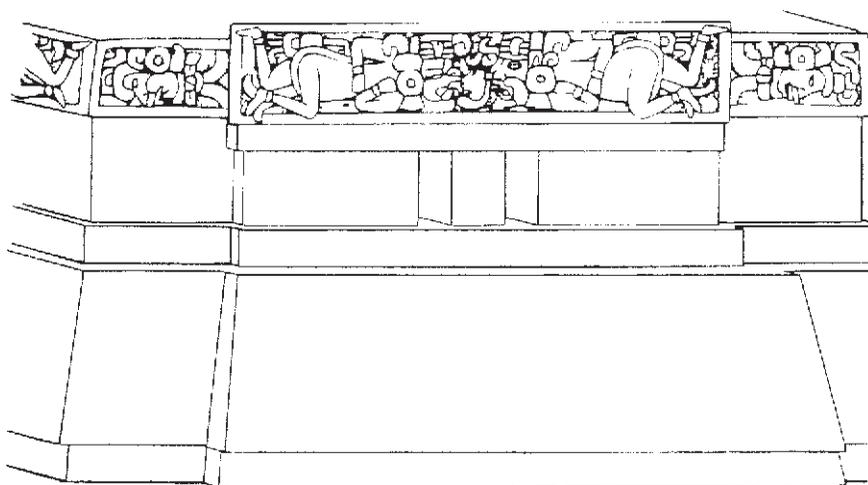


FIGURE 1.6 Distinguishing ancestors without the help of writing in Early Classic Maya (A.D. 250–600): stucco frieze from the south palace of Group H, Uaxactun. Two ancestors (heads only) flank two full-bodied figures in the center. The ancestors are distinguished by their headgear. After McNany 1998, p. 283, Figure 8.

not normally visible to the living.²³ A Late Formative cult of Maya royal ancestors may have employed royal mummies. Individuals were buried as seated mummy bundles (Figure 1.7, bottom). Before interment, the bundles are likely to have been held in a temporary storage place and perhaps displayed there for some time.²⁴ In the Andes we will see the display of royal mummies carried so far as to look very much like a material substitute for a king list.

THE ANDES

Inka royalty kept the embalmed mummies of their ancestors in temples and palaces (Figure 1.7, top). Other mummies were kept in ancestral crypts called *pucullo* and *chullpas*.²⁵ The mummies were regularly attended, visited, adorned, consulted, and fêted. During major festivals in the Inka capital Cuzco, they were brought out in the great plaza Huacaypata to be displayed, feasted, and served with maize beer. They also witnessed the investiture of knights (Text 1.1).²⁶ This is perhaps the most concrete and direct way to mobilize royal ancestors, bypassing both written names and ancestral images. “Mummies are, in a way, the ultimate long-term representation: the body itself, for which no substitute would serve.”²⁷ The dynastic history was embodied in an actual “gallery of kings.”²⁸

Text 1.1. Inka royal ancestral veneration made into state ceremony, as described by the Spanish priest Christoval de Molina in the late sixteenth century.

(In August, during the Situa ceremony performed to repel sickness, the priests brought out the statues of the Sun, of the Creator, and of the Thunder.) They also brought out the bodies of the dead lords and ladies which were embalmed, each one

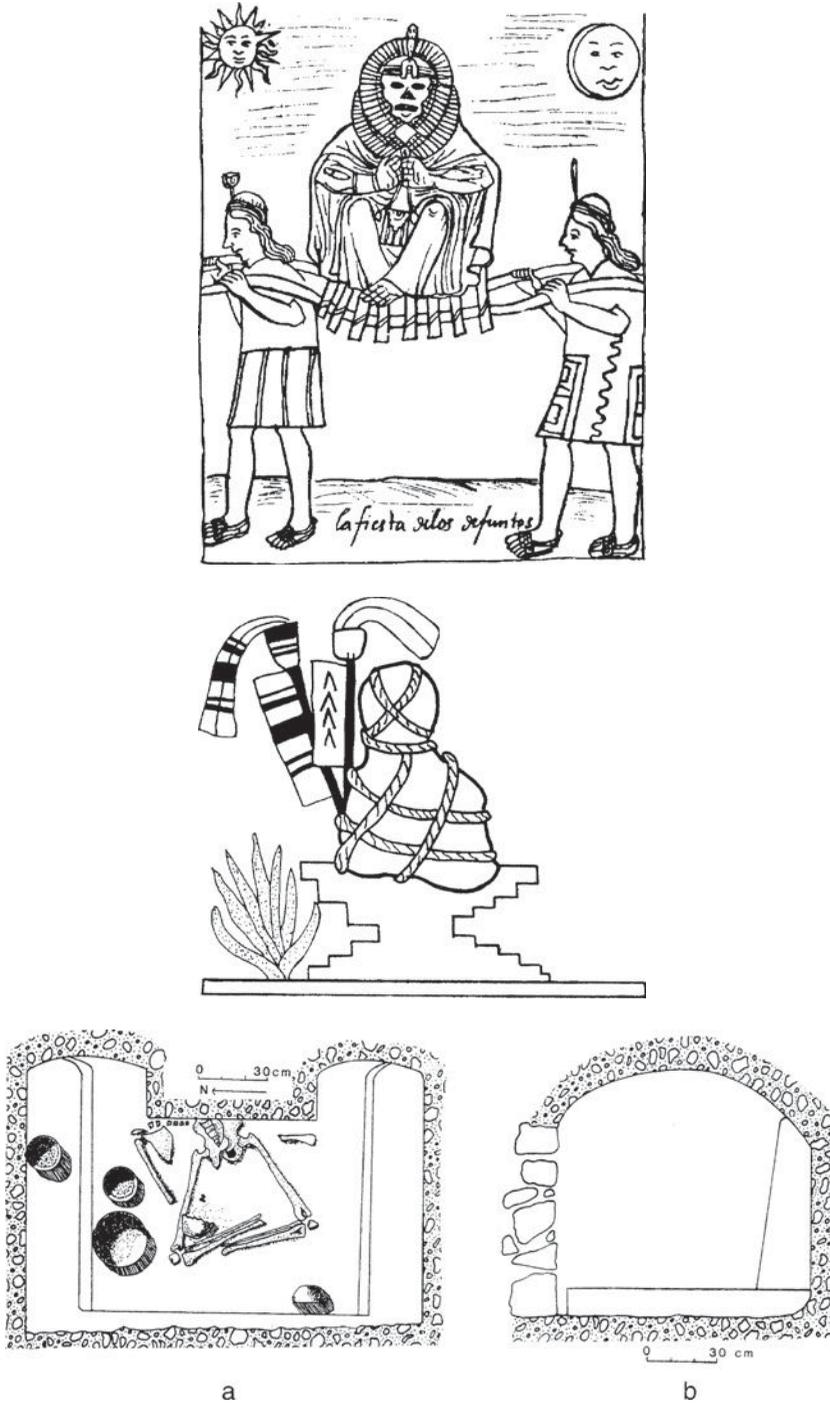


FIGURE 1.7 The gallery of kings: mummy bundles for display in Mesoamerica and South America. *Top*, Inka mummy in parade, a sketch by the Spanish chronicler Guamán Poma, after Moseley 2001, p. 66, Figure 22. *Middle*, mummy bundle in Central Mexico before cremation as recorded in Codex Magliabechiano, after McNaney 1998, p. 277, Figure 2. *Bottom*, Maya seated burial from Uaxactun, after McNaney 1998, p. 277, Figure 3.

being brought out by the person of the same lineage who had charge of it. During the night these bodies were washed in the baths which belonged to them when they were alive. They were then brought back to their houses, and warmed with the same coarse pudding ... and the food they had been most fond of when they were alive was placed before them, and afterwards the persons who were in charge of the bodies consumed the food. ... At about eight or nine in the morning the principal lord Ynca ... came forth into the great square of Cuzco. ... At this feast they brought out all the embalmed bodies of their lords and ladies, very richly adorned. The bodies were carried by the descendants of the respective lineages, and were deposited in the square on seats of gold, *according to the order in which they lived*. [Emphasis added.] All the people of Cuzco came out, according to their tribes and lineages, as richly dressed as their means would allow; and, having made reverences to the Creator, the Sun, and the lord Ynca, they sat down on their benches. ... They passed the day in eating and drinking. ... The priests came in procession, and the families of Hurin and Hanan Cuzco, each with the embalmed bodies of their ancestors ... in the evening they took back ... the embalmed bodies to their houses.

(In December at the feast for the new knights in the great plaza) they brought out all the *huacas* into the square, as well as the bodies of the dead Yncas, to drink with them; placing those who had belonged to the Hanan Cuzco on the side where that lineage was stationed, and the same with those of Hurin Cuzco. Then they brought food and drink to the dead bodies, as if they were alive, saying: "When you were alive you used to eat and drink this; may your soul now receive it and feed on it, wheresoever you may be." For they believed and held it for certain that souls did not die, but that those of good men went to rest with the Creator.

After Molina 1873 (ca. 1570–84), pp. 25–7, 47–8.

From [Text 1.1](#) we can infer that the audience for the display of the royal mummies was very large, including not only nobles but also poor individuals, minor lineages, and foreigners.²⁹ But dynastic history could not have been learned only by staring at the mummies. Because kinship and descent were central to any claim for legitimacy, there had to be other ways to preserve (or fabricate) the royal bloodline and royal deeds. According to John Rowe, the ruling house trained specialists to memorize the official accounts of royal accomplishments. These accounts were recited in narrative poems at special occasions, such as the coronation of Manco Inka, which the Spaniards witnessed in 1534.³⁰ The seventeenth-century priest Pablo Joseph de Arriaga wrote that in the major Inka ceremonies, "[w]hile they are singing these songs, which tell foolish things about their ancestors, they invoke the huaca [idol or place of worship; a sacred object] by name."³¹ Along with the oral transmission of dynastic history, important events and genealogies were recorded in paintings (although none has survived) and probably also in the knotted strings called *kipu*.³²

The Inka were not the only people who used the royal corpse in the ancestral cult. At its capital, Chan Chan, the Chimú kingdom of the north coast of Peru (A.D. 900–1470, conquered by the Inka), also ceremonially displayed royal mummy bundles, though perhaps only at the time of the funeral. Chimú kings were interred in specially designed

burial platforms that were located deep inside the same enormous, massively walled, labyrinthine royal compounds they had occupied in life (Plate I).³³

The Chimú employment of dead royalty is vividly illustrated by a set of wooden artifacts that forms a sort of miniature theater. One male and two female mummy bundles are set out on a platform in an architectural model that probably depicts a courtyard inside one of the Chimú royal compounds (Plate I). One interpretation of the scene is that it depicts a ceremony performed soon after the individuals' deaths and before their interment. The entire process, from an offering of drink accompanied by solemn music to the presentation of sacrifices to actual funerary processions, seems to have happened within the compound.³⁴ Because access was no doubt tightly controlled – towering walls surrounded the compound – it is unlikely that a large audience was involved. Unlike the Inka, the Chimú seem to have favored an ideology of exclusion, one that granted only a select group the right to witness the drama staged before interment.³⁵ The rest of the population probably knew only that the past kings resided in their nine or ten looming compounds. Whereas the Inka regularly brought out the royal mummies for worship by all the inhabitants of the capital, the Chimú buried their kings in tombs that were permanently sealed, from which mummies could not be retrieved.³⁶ Contrast with Inka burial customs is also seen in two earlier states of the Andes – Wari and Tiwanaku – where no ideology calling for the preservation of mummified bodies can be discerned in archaeological evidence.³⁷ However, it has been suggested that some giant stone figures found at Tiwanaku represent rulers or nobles and that they were used in public ancestor-veneration rituals.³⁸

CENTRAL MEXICO

Pictorial king lists were perhaps most popular in Central Mexico. Although all the extant king lists were painted after the Spanish conquest, it is generally believed that their basic visual vocabulary is pre-conquest.³⁹ Their most common format depicts the rulers in dynastic sequence, usually from top to bottom or from left to right, in a codex (Plate I). However, the figures are usually captioned by name glyphs that are highly standardized and that may have had a phonetic component.⁴⁰ Plate I shows two lists of the first six rulers of the Tenochtitlan dynasty. The figures do not seem to be differentiated enough to be told apart like portraits of individuals; it was the name glyphs, the sequence, and the accompanying orally transmitted history that distinguished one ruler from another (see Text 1.2).

Text 1.2. Nahuatl commentaries to “Those Who Ruled Mexico Tenochtitlan” in *Primeros Memoriales* (explaining Plate I, bottom).

Acamapichtli the elder began the rulership, and while he ruled for seventy years, nothing happened because lords were installed for the first time in Toltzalan Acatzalan, as it was called. And the second ruler, who followed when Acamapichtli died, was named Huitzilihuitl. He ruled twenty-one years. Nothing happened when he ruled. And the third to become ruler in Mexico after both Acamapichtli and Huitzilihuitl had died, who became [ruler] following them in third place, was named Chimalpopocatzin.

And he ruled only ten years. And in his time wars began. There was anger toward the Tenochca. And when Chimalpopocatzin died, Itzcoatzin was installed as ruler; he became fourth in the rulership. And in his time war was made; he conquered the Tepaneca. And Itzcoatzin ruled fifteen years. In his time was the beginning of wars; they made conquests everywhere. And when Itzcoatzin died, Montechuzomatzin the elder, Ilhuicamina, was installed, and he ruled thirty-five years. In his time occurred what was called being one-rabbitied; that is, in his time there was a famine in the one year sign One Rabbit. And when Motechuzomatzin the elder died, then Axayacatzin was installed in the rulership, and he ruled fourteen years. And in his time it happened that the Tlatelolca were conquered.

After Sahagún 1997, pp. 185–6

Mexican pictorial king lists preserved in codices were perhaps something more than static records. We know that Mixtec codices were hung on walls during royal feasts so that poets could recite the royal history from the codex while performers acted it out.⁴¹ Because most of the extant native Mexican histories are local in character but were displayed at “international banquets” attended by several royal houses, the audience for this royal display may have consisted mainly of elite equals or rivals (the web of relationships between these royal houses must have been very complex, like that of European royalty in recent centuries). Here the intended audience would be somewhat similar to that of the Maya hieroglyphic stairways discussed earlier.

MESOPOTAMIA

In the greater Mesopotamian region, four king lists or royal genealogies are extant: the Sumerian King List, the Genealogy of the Hammurapi Dynasty, the Assyrian King List, and the King List of Ugarit.⁴² All the copies and variants of the four lists are preserved on clay tablets or prisms (Figures 1.8 and 1.10, Texts 1.3 and 1.5).

Text 1.3. The Genealogy of the Hammurapi Dynasty.

Aramadara,
Tubtiyamuta [followed by a list of seventeen more “ancestral” names]
Sumuabum [followed by the names of eight well-known kings, the last being]
Ammiditana

[A line is drawn across the tablet to mark the beginning of the next prayer; see Figure 1.8 top, reverse]

The dynasty of the Amorites,
The dynasty of the Haneans,
The dynasty of Gutium,
(Any) dynasty which is not recorded on this tablet,
And (any) soldier who fell while on his lord’s service,

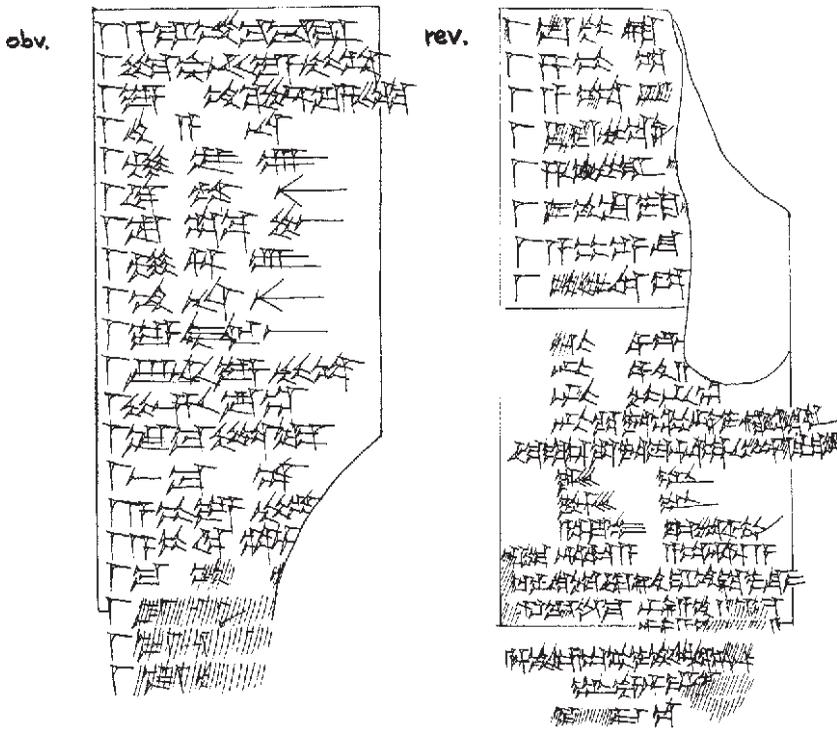


FIGURE 1.8 Invoking the royal ancestors for the well-being of the present king: ritual king lists of the Old Babylonian period (nineteenth to eighteenth century B.C.). *Top*, the Genealogy of the Hammurapi Dynasty. Hand copy of a clay tablet in the British Museum (BM 80328), after Finkelstein 1966, p. 96. From obverse (left) to reverse, top to bottom, it lists twenty-eight royal ancestral names in the first twenty-eight lines. The sign that appears at the beginning of each line means “one”; it routinely appears in this position in most of the so-called lexical lists. After the royal names a line is drawn across the tablet to mark the beginning of the prayer that invokes other spirits. *Bottom*, the reverse of the Assyrian king list from Khorsabad, Iraq. Again notice the sign “one” before each name. After Gelb 1954, Plate XIV.

Princes, Princesses,
All humanity, from the East to the West,
Who have no one to care for them or to call their names,
Come, eat this, drink this,
(And) bless Ammi-saduqa, son of Ammiditana, king of Babylon.

Transcription of the names after Finkelstein's transliteration (1966, pp. 95–6); translation of the prayer after Lambert 1968, p. 1; see also Postgate 1994a, p. 85, text 4:9.

Although no archaeological context is known, their small size and inexpensive writing surface make it unlikely that any of these lists was ever used for display. However, there can be no doubt that the texts were compiled for ideological reasons, to legitimize the status quo. In this sense the Mesopotamian king lists are not different from the others that we have so far examined. Who then were the receivers of the royal messages, and how were the messages broadcast?

Forty years ago J. Finkelstein proposed that, in its written form, the Genealogy of the Hammurapi Dynasty was used by the living king to intone the names of his ancestors. The setting for this invocation of the royal names was a ceremony called *kispu*, a ritual offering to the dead royal ancestors. Subsequent studies of this text and the closely related Assyrian King List (Figure 1.8, bottom) and the King List of Ugarit have largely confirmed Finkelstein's interpretation of their ritual function.⁴³ The invocation of nameless soldiers and contemporary dynasties in the prayer testifies to the belief that even though there were many forces that could affect the king's well-being, the most important were royal ancestors, who therefore were named in the prayer.

Most of our evidence about royal ancestor veneration comes from Mari, but it consists mainly of administrative texts concerning the provision of food for offerings.⁴⁴ On the evidence of two Sumerian laments, Dina Katz argues that a physical, figurative representation of the dead was used in Mesopotamian funerary rituals, at least by families of high social and economic standing, presumably including the royal families.⁴⁵ Ancestor statues are attested in the royal palace of Qatna (Tell Mishrifeh in central Syria), dated to the early second millennium B.C. In the antechamber leading to the royal hypogeum were found two 80-cm-high sitting basalt statues *in situ*, with offering bowls set in front of them (Figure 1.9). The excavators interpret the underground chamber and the above-ground hall connected to them by a corridor as the setting for *kispu* ceremonies, presumably presided over by the living king.⁴⁶ The intended audience would have included the dead (real or imagined) royal ancestors. But the tablet containing the king list and prayer was meant to be read not by the dead but by the living. It was through the voice of the living king that the royal ancestors heard their names and the prayer. It is unclear whether living members of the royal family other than the king attended this ceremony, nor is it known how many other nobles and temple personnel would be present. The living audience cannot have been very large, however, if only because access to the royal palace was restricted.

On the other hand, the names of certain kings were regularly invoked by the wider audience of royal public monuments. Foremost among them was the name of King

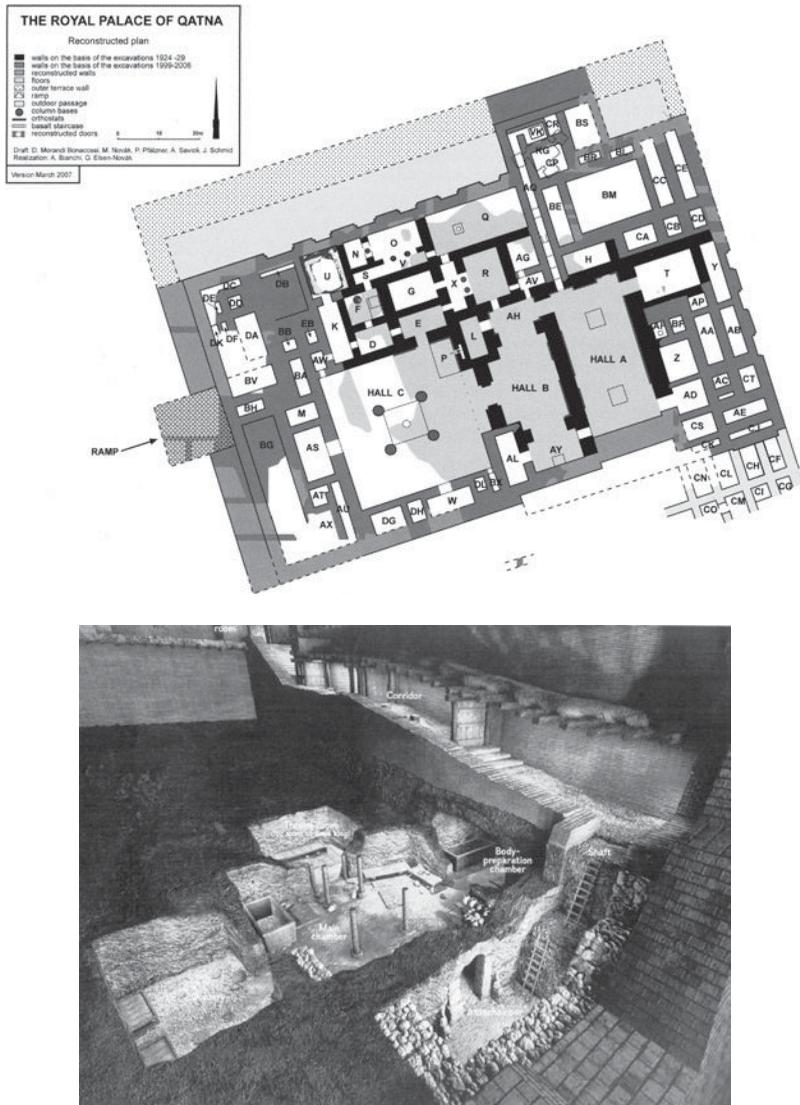


FIGURE 1.9 The architectural setting for the reading of the king list in Mesopotamia. *Top*, reconstructed floor plan of the Royal Palace of Qatna, which was a second millennium B.C. kingdom in central Syria. Part of the *kispu* ritual for the royal ancestor cult was probably conducted in Hall A. *Bottom*, reconstruction drawing of the Royal Hypogeum, where another part of the *kispu* ritual might have been carried out in the presence of the royal ancestors' statues and corpses. The corridor leading to the tomb complex is marked "AQ" in the floor plan at top. After Pfälzner 2007, p. 44, Figure 16; p. 55, Figure 31.

Hammurapi, who asked all wronged men to come to his stela of the law code and (presumably with help from a literate person) pronounce a short text in praise of him, the first word of which is, not surprisingly, his name Hammurapi (*Text 1.4*). Mesopotamian kings were always concerned with the invocation of their names to ensure a good after-life.⁴⁷ Certainly Hammurapi succeeded in making his name live by inscribing it on stone.

Text 1.4. In praise of the king, Epilogue to the Code of Hammurapi.

Hammurabi, lord, who is like a father and begetter to his people, submitted himself to the command of the god Marduk, his lord, and achieved victory for the god Marduk everywhere. He gladdened the heart of the god Marduk, his lord, and he secured the eternal well-being of the people and provided just ways for the land.

After Roth 1995, p.134.

In the case of the Sumerian King List the exact function has not been established (Figure 1.10, top, and Text 1.5). It is more than a mere list of the royal names, and in the extant copies there is no prayer. In fact specialists are somewhat at a loss to place this text in the Sumerian writing tradition.

Text 1.5. The Sumerian King List, first thirty-nine lines.

After the kingship descended from heaven, the kingship was in Eridug. In Eridug, Alulim became king; he ruled for 28800 years. Alaljar ruled for 36000 years. 2 kings; they ruled for 64800 years. Then Eridug fell and the kingship was taken to Bad-tibira. In Bad-tibira, En-men-lu-ana ruled for 43200 years. En-men-gal-ana ruled for 28800 years. Dumuzid, the shepherd, ruled for 36000 years. 3 kings; they ruled for 108000 years. Then Bad-tibira fell (?) and the kingship was taken to Larag. In Larag, En-sipad-zid-ana ruled for 28800 years. 1 king; he ruled for 28800 years. Then Larag fell (?) and the kingship was taken to Zimbar. In Zimbar, En-men-dur-ana became king; he ruled for 21000 years. 1 king; he ruled for 21000 years. Then Zimbar fell (?) and the kingship was taken to Šuruppag. In Šuruppag, Ubara-Tutu became king; he ruled for 18600 years. 1 king; he ruled for 18600 years. In 5 cities 8 kings; they ruled for 241200 years. Then the flood swept over.

After ETCSL 2.1.1.

The idea that underlies this king list is that kingship is a divine gift (“descended from heaven”) that has been transmitted undivided down an orderly succession of kings, rotating among different cities since the beginning of the world. The political motive behind this ideology, it has been argued, was to legitimize the rule of the Dynasty of Isin, which was unable to trace its ancestry back to the royal Amorite genealogy from which its rival, the Dynasty of Larsa, claimed legitimacy.⁴⁸ By the time the list was compiled, roughly the late third or early second millennium B.C., Mesopotamian civilization had flourished for more than a thousand years and many “dynasties” had come and gone.⁴⁹ The compilers of the Sumerian King List therefore had to find a way to reconcile the discrepancy between the essentially linear principle of a king list and the fact of many competing dynasties.

The problem was solved by omitting dynasties (such as Larsa and the earlier Lagash dynasties) that stressed Amorite royal descent and by rearranging dynasties that had actually been contemporary to make them sequential. A linear history served the dynastic ideology well. But the compilers were not content with a list of “historical” figures.

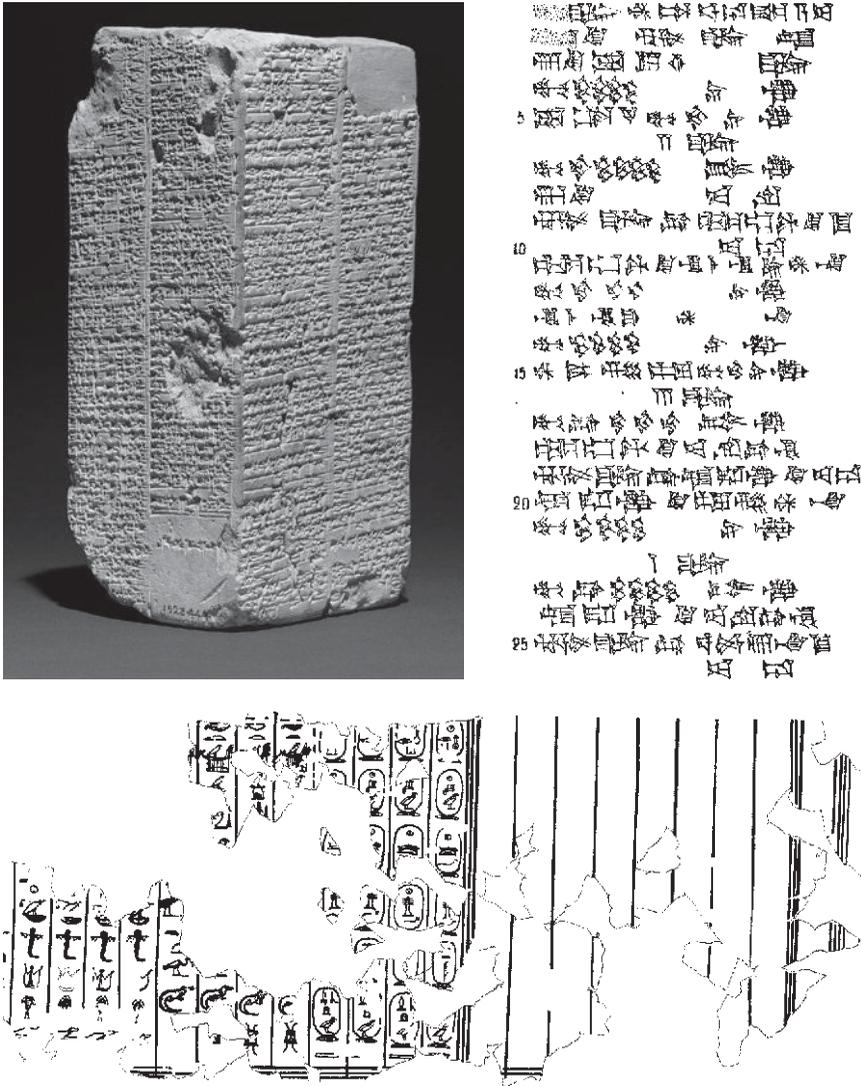


FIGURE 1.10 Understanding origins and teaching history in the ancient Near East. *Top left*, cuneiform prism with the Sumerian King List, Old Babylonian period (ca. 1740 B.C.). Ashmolean Museum, University of Oxford (AN 1923.444). *Top right*, hand copy of the first twenty-five lines of the first column. The subtotal lines stating the number of kings who ruled in one city are lines 6, 16, and 22. The format is similar to an accounting text. After Langdon 1923, Plate I. *Bottom*, part of a wooden writing board from the Old Kingdom tomb G 1011 at Giza. The first column at the right lists six king names in chronological order. This column is repeated three more times. Presumably a scribal exercise. After Brovarski 1987, Plate I.

Before the mortal kings, they added fantastic semidivine kings whose lengths of reign were as carefully specified as those of the later kings. For each city, a subtotal of years of rule by these divine figures was given whenever the seat of kingship was transferred to another city (see Text 1.5). This “invented prehistory” finds a good parallel in New Kingdom Egypt. The scribe who compiled the famous Turin king list did basically the same thing as his Mesopotamian colleagues, tracing time back to the earliest days of the

cosmos, when gods had ruled like kings. Historical dynasties that overlapped in time were strung out into sequential ones.

Kemp attributes the compilation of the Turin list to a tidy-minded scribe, for its precise reckoning (e.g., the god Thoth reigned 7,726 years) is typical of what Kemp terms “the bureaucratic mind.”⁵⁰ The same can perhaps be said for all the written king lists in early civilizations. But knowing that the compilers were tidy-minded bureaucrats does not tell us much about the settings in which the lists were used. Unlike the monumental Egyptian king lists (Figures 1.3 and 1.4), the Turin list was written on papyrus and hence was probably not meant for display. The Sumerian King List may also not have been for display. Could it be that these king lists written by scribal bureaucrats were administrative aids of some kind? Certainly administration influenced their compilation. It has been shown that one source for the Sumerian King List and the Egyptian king lists was the date list or year list, which was administrative in function.⁵¹

But if the scribe already had a year list at his disposal, why did he need a king list?⁵² And why did he need one that included remote kings who had nothing to do with the present administration? Administrative needs cannot explain the compiling of a comprehensive list of all previous kings and gods. Such lists argue that their compilers took an antiquarian interest in the remote past.⁵³ They manifest the learned scribes’ curiosity, their desire to know the origin of the state, the world, and ultimately the universe. The establishment of early states evidently created the illusion – and their stability required it – that there had always been states since the very beginning of the world. For the ancients, the origin of the state was explained by the origin of kingship through divine gift; and deities of the time before human beings were thought to have behaved like mortal kings.⁵⁴

The desire to know the origin of everything is of course still with us, and one motive behind it is to understand or justify the present. For modern scholars, however, the origin of the state is not only about kingship, and the origins of human beings and of the universe are problems for biologists and cosmologists. But there are similarities between us and the ancient scribes. The compilers of the Sumerian King List and the Turin king list were probably erudite scribes with various sorts of material at their disposal. Their work involved both laborious research and imagination. The presentations of their results, like modern academic publications, were probably aimed not at a wide readership but at a limited circle of their fellow scribes. Although they were most likely supported by the royal house, their compositions should not automatically be regarded as propaganda for the ruling king. Together with other written works, the king lists constituted a scribal tradition to be passed down from one generation of scribes to the next. The most likely setting for the transmission of king lists is therefore the scribal school. Evidence for this comes from Egypt.

At the beginning of the twentieth century, two wooden writing boards were found in two elite tombs at Giza.⁵⁵ The first board (Figure 1.10, bottom) consists of, among other things, a column of six names of kings in cartouches. The column is repeated four times (the first four inscribed columns in Figure 1.10, bottom). The six names are in retrograde order: kings Neferirkara and Sahura of the Fifth Dynasty, Khafra and Djedefra of the Fourth Dynasty, (Djoser) Teti of the Third Dynasty, and Bedjau (Hetepsekhemwy?) of the Second Dynasty (compare the same six names in Figure 1.3 [bottom], the twenty-ninth, twenty-seventh, twenty-third, twenty-second, seventeenth, and ninth, respectively).⁵⁶

It has been suggested that this writing board could well be from a school exercise the tomb owner wrote when he was alive, for on the same board there are other lists of gods' names, place names, and so on, whereas the second writing board is full of place names.⁵⁷ These lists are very typical of scribal education, to which we return in [Part III](#). Here, suffice it to say that the writing of names constituted a large part of early scribal training. It is perhaps significant that the order of the royal names in this school exercise is chronologically correct. Notice also that they span several hundred years. Was a kind of elementary "history" teaching involved here?

The Sumerian King List was also used in the school curriculum. As shown in [Text 1.5](#), in structure it is highly repetitive. The body of the list consists of names and lengths of reign. As just noted, names held an important place in the early training of scribes; lists of personal names were used as school texts in Old Babylonian scribal schools. Moreover, in format the king list resembles common accounting texts that Mesopotamian scribes became acquainted with early in their school days. As we will see in [Part II](#), nothing could be more characteristic of accounting in early bureaucratic states than the clearly marked subtotal lines stating how many kings ruled for how many years in a given city ([Figure 1.10](#), top right, lines 6–7, "2 kings; they ruled for 64,800 years," 16–17, "3 kings; they ruled for 108,000 years," and 22–23, "1 king; he ruled for 21,000 years").⁵⁸

SUMMARY

Before turning to the evidence from China, let us summarize what has been said about king list traditions in the five regions of our sample. There were two kinds of king list, one describing the recent past, one the remote past.⁵⁹ Most of the preserved Maya and Central Mexican king lists seem to belong to the former category. Mesopotamia and Egypt possessed both types. The case of the Central Andes is not clear, but a "king list" made of mummies could not very easily include extremely remote ancestors, and the inclusion of mythical ancestors would require some special contrivance.⁶⁰

As to the material means employed for representing royal ancestors, they vary. In Mesopotamia, Egypt, and the Maya cities, royal names were written. In Egypt, the Maya cities, Central Mexico, and the Andes, royal depictions occur.⁶¹ In Egypt and among the Maya, the depictions were often accompanied by written names; in Central Mexico, by name glyphs. The gathering of mummies for display is attested in the Andes (long and short term), and in the Maya cities and Central Mexico (short term).

Except in Mesopotamia, all king lists had a display function in an architectural setting. The surviving Mesopotamian king lists, though not written for display, were nevertheless used in a ritual setting for ancestral veneration (the Genealogy of the Hammurapi Dynasty). And although we only have materialized king lists at our disposal, we should not forget the oral commentary that may at times have accompanied them, as recorded for the Andes. Names in king lists are in a sense *aides-mémoires*. They evoke a larger picture, a larger oral narrative.⁶² Finally, the long king lists dealing with the remote past in Egypt and Mesopotamia were probably used for scribal training. In most cases, including scribal training, the direct audience for king lists seems to have been restricted to what John Baines and Norman Yoffee call "the inner elite," and perhaps also a part of the "sub-elite."⁶³

2

CHINA

Scholars of Chinese history love to emphasize the abundance and continuity of its written records, in particular the so-called Twenty-Four Standard Histories (or Twenty-Five or Twenty-Six) covering a period of about five thousand years.¹ This monumental oeuvre is indeed unique in world history. The story of the writing of each member of the set is long and complicated, but all members share some basic features of structure and intent. At the core of these histories are the so-called basic annals (*benji*). They are chronicles of former kings and emperors, but not all are included. Only rulers of *legitimate* dynasties were entitled to a place in the basic annals. Importantly, it was the historian who had the final say on legitimacy, not the rulers he wrote about, for by the time of writing, the dynasty had already been succeeded by another one, and the author was often a subject, usually an official or a committee of officials, of the successor. By choosing which dynasty to write about when there were several competing dynasties, the author invariably made a clear statement of his own moral judgment. This emphasis on annals, with their legitimizing overtones, was already apparent in the *Shi ji* ("Historical Records," generally attributed to the Han court historian Sima Qian), which was completed in the first century B.C. and later retrospectively chosen as the first of the Standard Histories.²

But in one crucial respect the *Shi ji* is different from the rest. It covers not merely one or a few dynasties, as the other standard histories usually do, but purportedly *all* the dynasties in history up to the author's own time.³ In our terms this means not only the period we call "early China" – say, from 1800 B.C. to 100 B.C. – but also a preceding age ruled by five legendary emperors who did not constitute a dynasty, but instead were each identified as the progenitor of one of the later dynasties. At the center of this tidy history is a complex genealogical tree, the trunk of which is a long king list. Legitimacy depended on a link to that list.

The *Shi ji*'s king list is based in part on older royal genealogies still extant in the first century B.C. but subsequently lost.⁴ The loss of those earlier genealogies made *Shi ji*'s account of ancient history orthodox and unassailable; it was never seriously questioned until the 1920s, when, under Western influence, a scholarly movement called Doubting Antiquity began to deconstruct the transmitted king list with the help of textual criticism. The repercussions of this movement continue today, as impassioned defense of the orthodox view meets spirited challenge. The debate is regularly reinvigorated by the appearance of newly excavated texts. Some argue that these texts confirm the orthodox history; others argue that they undermine it. The evidence is always fragmentary. The question eventually boils down to one of faith in ancient texts: can their statements be

taken at face value? Do they tell the truth or not?⁵ Each side maintains that the burden of proof rests with the other.

What interests us here is that the debate is focused on a royal genealogy regarded by both sides as *the* history of ancient China. Like their ancient counterparts, it seems, modern historians are not free from Derrida's "genealogical anxiety."⁶ How did the obsession with a written king list come about? What is the early history of the list that has come down to us, and what is its prehistory? We need to go back to the earliest times for which archaeology supplies unequivocal evidence for the existence of states.

ERLITOU AND ERLIGANG

One of the first states in China, a kingdom ruled from a site today called Erlitou, rose to dominate part of the middle Yellow River region in the first half of the second millennium B.C.⁷ Five elite tombs neatly arranged in two rows were recently excavated at Erlitou in a courtyard within a grand compound structure. In one of the tombs the deceased held just above his chest a 70-cm-long serpentlike object inlaid with more than two thousand pieces of turquoise (Plate III).⁸ It seems plausible to interpret this as an elite tomb belonging to or close to the ruling family. The five tombs are set apart from the outside world by the compound that surrounds them, showing the sort of marked separation from the rest of the population that we would expect in a group of royal burials. The separation appears all the more pronounced because the excavators have not identified any stable and specialized cemetery outside the walled elite area.⁹ However, in our present incomplete knowledge of the site, it is hard to guess the organizing principle behind this set of five burials. The terse description in the preliminary report hints that there are further tombs in the courtyard, and it says also that there are two more as yet unexcavated courtyards within the compound, courtyards that might contain further burials. Do the five tombs so far excavated correspond to a sequence of five rulers? Or – remember the way Chimú kings were buried – might it be that each of the three courtyards was dedicated to the cult of a single king?

Organized cemeteries help the living exhibit proof of their descent. Because proof of descent is proof of the right to inherit the ancestor's resources, it has economic importance.¹⁰ In the case of the royal succession, it has the further importance that it demonstrates the heir's right to the ancestor's political power. Accordingly, impressive cemeteries and mortuary temples for rulers and their families were maintained in most early civilizations.¹¹ Cross-cultural analogy agrees with later Chinese practice in leading us to expect also that a dynastic cemetery at Erlitou would have been furnished with a memorial temple or temples. However, it is not easy to guess what went on in the ancestral temple. Did it serve as a residential and administrative place for the personnel who took care of the ancestral tombs? Or was it a "house" for the ancestors to reside in and receive their offerings in? Or perhaps both?

A mortuary or ancestral temple presumably requires the presence of the ancestors, but how their presence is signified in the temple varies from one culture to another. In many cultures images serve this purpose. In China before the fifth century B.C., however, representational art was a minor theme and portraiture of any kind is unknown. Representations of human beings in the early Bronze Age scarcely go beyond the stick figures in some of the pictographic emblems inscribed in Anyang bronzes, and these

are several centuries later than the Erlitou site.¹² Poems likely to date from the Western Zhou period in the *Odes* anthology suggest that in Western Zhou times an actual person (a grandson) was assigned to impersonate the ancestor during offering ceremonies.¹³ However, some permanent, material representation of the ancestor is likely to have existed outside those ceremonies as well. Texts of the fourth century B.C. and later inform us that the lineage temples housed wooden ancestral tablets; the tablet is said to have had the ancestor's name written on it and to have been kept in a stone container.¹⁴ Moreover, tablets of stone or jade inscribed with an ancestral name are known at Anyang as early as the twelfth century B.C., and a set of three bronze ceremonial weapons inscribed with a collection of ancestral names probably also dates from the twelfth or eleventh century (Plate IV).¹⁵ We know from our New World examples that writing is not the only way to construct and display a royal lineage; other options include depicting the ancestors, gathering their mummies, and grouping their tombs. But at least the first two of these do not seem to have been used at Erlitou. The deceased do not show signs of mummification or other pre-interment treatment for display, and pictorial depictions are unlikely. Perhaps emblems of some kind signifying personal names – something like Mexican name glyphs or Predynastic Egyptian name emblems – were drawn on tablets and used in the Erlitou temple to mark the presence of specific ancestors. If so, glyphs or emblems that denoted the ancestors' names could conceivably have played a part in the invention of writing, along the lines we have seen suggested in Egypt.

Around the middle of the second millennium B.C. the Erlitou state was succeeded by the far larger and more powerful Erligang state. In elite culture, at least, Erligang seems to grow fairly directly out of the Erlitou culture, but the Erligang state was actually a short-lived empire, the first in the history of East Asia. Its archaeological manifestation is the Erligang culture, defined by a type site at modern Zhengzhou, capital of Henan province.¹⁶ The double-walled city there seems to have been the largest in the state, presumably the capital. Although most of it is unfortunately underneath the modern city, salvage excavations and surveys in the past fifty years have revealed its general layout (Figure 2.1). Twenty or so stamped-earth palatial foundations (hatched in Figure 2.1) are all located inside the inner city wall. The exact functions of the various buildings are not known, but it seems clear that this inner city was reserved for elites, and it is possible that some of the foundations correspond to royal ancestral temples. Burials and workshops are scattered throughout the outer city. The royal family probably maintained a distinct cemetery for its members, perhaps within the walled city, but as yet no royal tombs have been found. A few minor elite burials have been excavated, but they cannot tell us what an Erligang royal tomb would look like.

However, three rich caches of cast bronze ritual vessels found just outside the inner city wall (numbered 25 and 46 in Figure 2.1) give us some idea of what might have been buried in a royal tomb. Set next to the modest bronze vessels produced at Erlitou, Erligang bronze vessels are more impressive in all respects (see the comparison in Plate V). Bronzes as big as the one-meter-high *fangding* in Plate V would seem to be an ideal vehicle for displaying inscriptions, and there was certainly no technical obstacle to inscribing them (technically an inscription is only another form of decoration). But no Erligang bronze is inscribed. Writing was almost certainly in use in this period, but it was not used on bronzes. Its existence in other media seems to be confirmed by the recent find of brush writing on Erligang pottery from a contemporary site at Zhengzhou

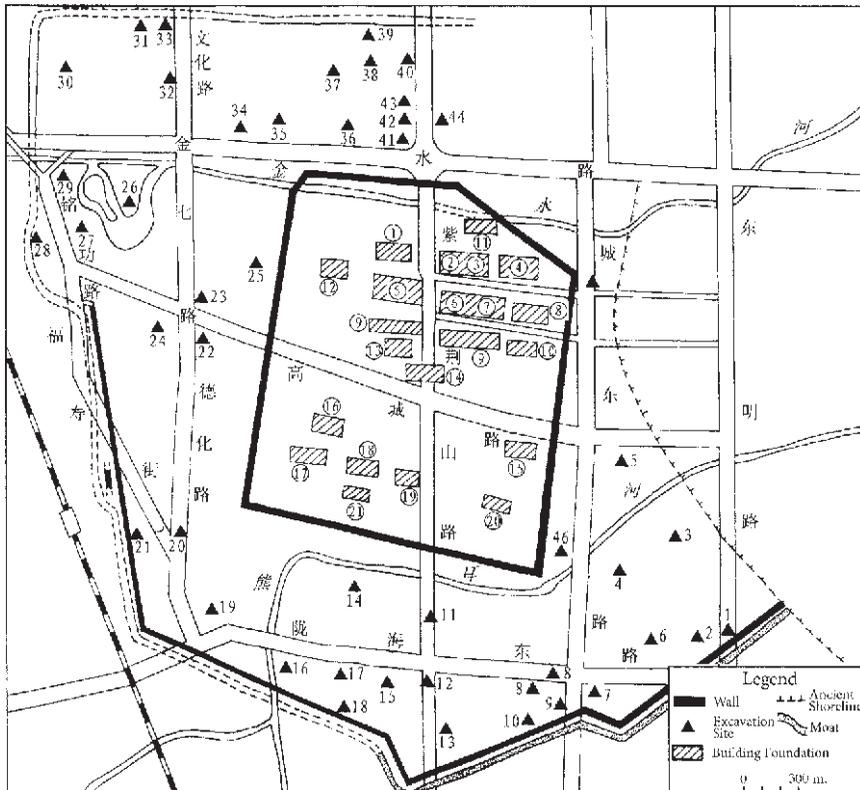


FIGURE 2.1 Zhengzhou, capital of the Erligang empire, total area about 13 square km, perhaps the largest city in the world in the second millennium B.C. The inner city was filled with palatial buildings (only foundations remain). The outer city had burials and workshops. Three caches of bronze ritual vessels have been found just outside the inner city wall. Modified after Yuan and Zeng 2004, p. 60, Figure 1.

Xiaoshuangqiao (Plate VI).¹⁷ That the Erligang ruler did not inscribe bronzes may say something about the origin of Chinese writing. If writing was a tool that had recently been invented for mundane administrative purposes, adopting it for purposes of royal display might not have been obvious or automatic. The late arrival of royal inscriptions in Mesopotamia tells exactly this story.¹⁸

Even in a setting where writing was used mainly for administrative purposes, however, it seems possible that tablets representing the royal ancestors in their temples were labeled with their names. Groups of such tablets would then have constituted a kind of king list, one that might have functioned like the king lists used in the royal ancestral cult in Mesopotamia. As in Mesopotamia and Chan Chan, the audience for ancestral ritual would have been restricted to the elite close to the royal family. Lacking direct written or pictorial evidence, we can only guess at the role of writing in the ceremonies by which the Erlitou and Erligang rulers venerated their ancestors. When writing appears in the archaeological record of the following period, however, we find it in the service of the royal ancestor cult; indeed we find that we owe virtually the whole of the surviving epigraphic corpus to the fact that certain inscriptions relating to the ancestor cult were made on durable bone and bronze.

ANYANG, THE SHANG KING LIST, AND THE MANDATE OF HEAVEN

By the thirteenth century B.C. the Erligang city at Zhengzhou had declined, and the major city in north China was one located at a site near modern Anyang. For roughly the last two centuries of the second millennium this was the seat of the kings of the Shang dynasty.¹⁹ Foundations of palatial buildings, tombs both royal and nonroyal, sacrificial burials, and spectacular bronzes, many with brief inscriptions, have been found here in great abundance.²⁰ However, by far the most important of the Anyang finds, and the ones on which I focus here, are the divination inscriptions carved on bone and turtle shell, whose discovery in 1898 or 1899 led archaeologists to the Anyang site. The Anyang oracle texts constitute the earliest significant corpus of Chinese writing, and they show us a writing system that had already developed to the point of being able to record continuous discourse. Their content, as it happens, is peculiarly relevant to the subject of this chapter, for the topic divined about more often than any other was sacrifice to the royal ancestors.

From the oracle inscriptions twentieth-century scholars were immediately able to reconstruct the Shang king list. No actual king list has been found at Anyang – the content of the bone inscriptions is confined almost exclusively to divinations – but the diviners certainly had written royal genealogies at hand to consult, for the questions they addressed to the spirits on behalf of the king concerned above all the appropriateness of offering particular sacrifices to particular royal ancestors at particular times (Text 2.1).

Text 2.1. Reconstructing the Shang king list from oracle bone inscriptions.

1. Crack-making on *dingchou* (day 14), Xing divined: The king hosts Father Ding, performs the *xie*-ritual, no fault. (*HJ* 23120)
2. [Da Yi, Da Ding,] Da Jia, Da Geng, [Da Wu, Zhong] Ding, Grandfather Yi, Grandfather [Xin], Grandfather [Ding], [Father Yi], one sheep and one piglet. (*HJ* 1474)
3. In praying (for rain) to (the ancestors) from Shang Jia (to) Da Yi, Da Ding, Da Jia, Da Geng, Da Wu, Zhong Ding, Grandfather Yi, Grandfather Xin, and Grandfather Ding, the ten ancestors, (we will) lead-in-sacrifice (?) a ram. (*HJ* 32385)

Numbers 1–2, my translation; number 3 after Keightley 2000, p. 99, no. 132.

In the oracle bone corpus as a whole, a total of twenty-eight kings are named as recipients of sacrifice. (A twenty-ninth king, the last king of the dynasty, is never mentioned as *receiving* offerings.) The genealogy of these kings can be reconstructed from internal evidence. One important clue is the kinship term used by the living king to specify the ancestor to whom he proposes to offer sacrifice. Moreover, a core group of royal ancestors who were often venerated collectively in one ritual were normally listed in generational order (Text 2.1, numbers 2–3). This core list is in fact a genealogy of sorts; it is what specialists refer to as the main line of the royal genealogy. But the evidence of the inscriptions is sufficient also to reconstruct the positions of kings who were not on the main line.²¹

The kings who offer the sacrifices are never named; they are referred to only as “the king.” They can often be identified from internal evidence, however, and they prove to be only the last nine kings of the dynasty. The inscriptions thus establish that Anyang was occupied by the last nine of the twenty-nine Shang kings. The preceding twenty lived elsewhere, or lived before it became the custom to carve divination records on bone, or (perhaps in the case of the most remote ones) were mythical figures. The inscriptions also abundantly establish the importance of the deceased kings to the kings who were doing the sacrificing. What the living king divined about and then offered to his predecessors was often human sacrifice, sometimes on a very large scale (see, e.g., [Text 4.2](#), number 6), as excavations at the royal cemetery have confirmed in grisly detail.²² The thousands of victims buried in rows of pits at the Anyang royal cemetery are sacrifices to dead kings. Shang state religion revolved around a king list.

Remarkably, the king list that twentieth-century epigraphers reconstructed from the oracle bone inscriptions is known also from a transmitted text that was written almost a thousand years after the fall of the Shang dynasty: it is preserved in the *Shi ji* of the Han court historian Sima Qian (ca. 140–86 B.C.). The list reconstructed from the bone inscriptions and the list transmitted by the *Shi ji* are virtually identical.

For our purposes, what is important about Sima Qian’s list is the context in which it appears. It is presented as one of a consecutive series of king lists. Each list appears twice: once in a comprehensive genealogical table that puts all the lists end to end, and once as the skeleton for a dynastic history (Sima Qian calls these histories of kings *benji*). And in the *Shi ji* the end-to-end sequence of lists has an explicit rationale: it constitutes the history of legitimate kingship.²³ Sima Qian believes that legitimate kingship is bestowed by Heaven. In remotest antiquity Heaven gave its approval – the so-called Mandate of Heaven – to a series of sage kings one after another, then to a certain Xia dynasty, then transferred it from the Xia kings to the Shang royal house, then from Shang to Zhou, from Zhou to Qin, and finally from Qin to Han, the dynasty Sima Qian served. When the kings of a dynasty conducted themselves badly, Heaven shifted its support to a worthier line ([Text 2.2](#)). Heaven’s approval, in other words, is contingent on the proper conduct of kings – although Sima Qian’s idea of what constitutes proper conduct was not necessarily the same as that of other writers who invoke this ideology.²⁴

Text 2.2. Excerpts from *Shi ji*: Sima Qian (ca. 145–86 B.C.) on the Mandate of Heaven.

1. [The founder of the Shang dynasty speaking:] “Now The Xia has committed many crimes and Heaven has ordered me to condemn him.” (*Shi ji*, 3, p. 95)
2. [Zu Yi, a vassal of the last Yin (= Shang) king, King Zhou, addresses his master:]²⁵ “Heaven has terminated Yin’s mandate and has given others the divine turtle and there is nothing [on earth] which we can learn that will be auspicious. It is not that the former kings did not assist us, their offspring, but that Your Majesty was licentious and tyrannical so as to have severed the ties [with Heaven] yourself. For this reason Heaven deserted us and will not let us enjoy peace and nourishment, will not let us fathom the intentions of Heaven, and will not let us follow its constants. Now there is not one of our common people who does not harbor the thought of

your destruction. They say, 'Why doesn't Heaven display its awesome power and why doesn't the [one with the] great mandate emerge?' Now, Your Majesty, what are you going to do about it?" Zhòu said, "Wasn't I born with the mandate of Heaven!" Zu Yi went back to his home and said, "Zhòu is beyond remonstrance." (*Shi ji*, 3, p. 107)

3. [Sima Qian describes an announcement made by King Wu (personal name Fa), the son of King Wen, founder of the Zhou dynasty.] King Wu then wrote the *Tai shi* (the Great Oath) and announced to all the people: "Now Zhòu, the King of Yin, has used his women's words to sever himself from Heaven, to destroy his three annuaries and to distance himself from his cousins. He ended and abandoned his ancestors' music and made licentious songs to confound the orthodox songs and to please his women. For this reason, I, Fa, will respectfully carry out Heaven's punishment." (*Shi ji*, 4, p. 122)

After Nienhauser 1994, pp. 43, 51, 60.

For Sima Qian, kingship is transmitted by divine mandate from one royal house to another. Contemporaries and rivals of those houses do not appear in his grand genealogical table, for only one dynasty possesses divine authority at any one time. In short, what we find in the *Shi ji* is an ideology of universal kingship buttressed by a history that consists of a series of king lists put end to end. This should all sound very familiar: it is precisely what we have encountered in the Sumerian King List (Text 1.5), not to mention the Turin and later king lists in Egypt.

In the case of the Sumerian King List, however, we have some idea of the period and political context in which the list and its propagandistic rationale took shape. For the package that Sima Qian presents us with – a sequence of king lists and an ideology that makes them special – we can date a few of the constituent elements, but the time and circumstances in which they were brought together into a tidy bundle are a mystery. Certainly the package predates Sima Qian. Although they seldom speak explicitly of the Mandate of Heaven, the authors of texts transmitted from the Warring States period (the fifth, fourth, and third centuries B.C.) seem to understand history in much the same way he does (Text 2.3).²⁶

Text 2.3. The Mandate of Heaven in *Lü shi chun qiu* (ca. 239 B.C.).²⁷

Whenever a sovereign or king is about to rise to power, Heaven will certainly display a favourable sign to mankind in advance. At the time of Huangdi²⁸ Heaven had displayed creatures of the earth, such as earthworms or crickets, beforehand. Huangdi said that the energy of Earth was in the ascendant; and in those circumstances he singled out yellow for prominence among the colours and modelled his actions on Earth. In the time of Yu [founder of the Xia dynasty] Heaven had displayed grasses and trees that were not killed off in autumn or winter. Yu said that the energy of Wood was in the ascendant; and in those circumstances he singled out green for prominence among the colours and modelled his actions on Wood. In the time of Tang [founder

of the Shang dynasty] Heaven had first shown how metal blades were produced from liquid. Tang said that the energy of Metal was in the ascendant; and in those circumstances he singled out white for prominence among the colours and modelled his actions on Metal. In the time of King Wen [founder of the Zhou dynasty] Heaven had displayed fire, with scarlet birds holding texts inscribed in red in their beaks and roosting on the altars of Zhou. King Wen said that the energy of Fire was in the ascendant; and in those circumstances he singled out red for prominence among the colours and modelled his actions on Fire.

It will of course be the energy of Water that must displace fire. Heaven will in advance display how the energy of Water is in the ascendant. When that occurs, its colour of black will be honoured and actions will be modelled on Water [which was adopted by the Qin dynasty].

LSCQ, 13 (“Ying tong”), p. 677; English translation after Loewe 2004, pp. 466–7.

Warring States writers may have understood the workings of history more or less as Sima Qian did, but we cannot on present evidence trace a coherent Mandate of Heaven ideology any further back than Warring States. Bronze inscriptions older than the fifth century B.C. supply no clear ideological statement. Instead they employ a few terms that will be central to later formulations but that do not actually say nearly as much as has usually been read into them. As to king lists, before the Warring States period we have (besides the Shang list that we reconstruct from the Anyang oracle texts) only two partial lists of the Western Zhou kings embedded in two Western Zhou bronze inscriptions. Let us look first at these inscriptions.

In the first, the caster of the vessel, a nobleman named Shi Qiang, rehearses the kings of Zhou as a prelude to listing his own ancestors, who served those kings (Text 2.4 and Plate VII). As his title Shi indicates, Qiang was a scribe, or scribe-official. His family name, as we learn midway through the inscription, was Wei, and the post of court scribe seems to have been the family profession.

Text 2.4. Inscription of the *Shi Qiang pan* (Western Zhou, second half of the tenth century B.C.).

Accordant with antiquity was King Wen! (He) first brought harmony to government. The Lord on High sent down fine virtue and great security. Extending to the high and low, he joined the ten thousand states.

Capturing and controlling was King Wu! (He) proceeded and campaigned through the four quarters, piercing Yin [= Shang] and governing its people. Eternally unfearful of the Di (Distant Ones), oh, he attacked the Yi minions.

Model and sagely was King Cheng! To the left and right (he) cast and gathered his net and line, therewith opening and integrating the Zhou state.

Deep and wise was King Kang! (He) divided command and pacified the borders.

Vast and substantial was King Zhao! (He) broadly tamed Chu and Jing; it was to connect the southern route.

Reverent and illustrious was King Mu! (He) patterned (himself) on and followed the great counsels.

Continuing and tranquil is the Son of Heaven! The Son of Heaven strives to carry on the long valor of (kings) Wen and Wu. The Son of Heaven is diligent and without flaw, faithfully making offerings to (the spirits) above and below, and reverently glorifying the great plan(s). Heavenly radiant and incorruptible, the Lord on High, Hou Ji, and the witch protectors give to the Son of Heaven an extensive mandate, thick blessings, and abundant harvests. Among the borderland (peoples) and the man-savages, there are none who do not hasten to appear (at court).

Pure and retiring was the High Ancestor! (He) was at the numinous place of Wei. When King Wu had already defeated Yin, the Wei scribes and valorous ancestors then came to present themselves (in audience) to King Wu. King Wu then commanded the Duke of Zhou to dispense (to them) domicile at a low place of Zhou.

Happy and helpful was Ancestor Yi! (He) assisted and served his ruler, distantly planning (with) belly and heart (his) sons' acceptance.

Clear-eyed and bright was Grandfather Xin of the branch lineage! Transferring (the lineage) and nurturing sons and grandsons, (he had) abundant good fortune and many blessings. Even-horned and redly gleaming, appropriate were his sacrifices.

Extending and even was my cultured deceased-father, Duke Yi! Strong and bright, he obtained purity. Without owing agricultural harvests, surpassing shoots were the openings (of the new fields).

Final and convivial is Scribe Qiang! Morning and night not dropping, may (he) daily have his merits acknowledged. Qiang does not dare to stop, and in response extols the Son of Heaven's illustriously beneficent command, herewith making (this) treasured, sacrificial vessel. (Would that his) valorous ancestors and cultured deceased-father grant favor, and give Qiang vibrant freshness, fortunate peace, blessed wealth, a yellowing old age, and a prolonged life (so that he) may be worthy to serve his lord. May (he) for ten thousand years eternally treasure and use (it). (JC 1075)

After Shaughnessy 1991, pp. 3-4, 185-92.

Qiang's inscription lists the first six Zhou kings. At the time he cast the bronze, it seems, he served at the court of the seventh. "The Son of Heaven's beneficent command" to which he alludes was probably an honor or appointment from his king (perhaps his appointment to his father's post?) that provided the occasion for casting the bronze. His chronicler's impulse is unusual in the bronze inscriptions. He does not explain why he decided to preface his family's history with a list of kings, nor indeed why he narrated his own family's history.

The second Western Zhou inscription containing a king list appears on the *Lai pan*, a bronze vessel from the ninth century B.C. This time the first eleven Zhou kings are named. Lai evidently cast his bronze in the reign of the twelfth king, the next-to-last Western Zhou king, and he must have lived about a century later than the scribe Qiang. Instead of making the dynastic history a preface to his own family's history, he intermingles the two (Text 2.5 and Plate VIII).

Text 2.5. Excerpt from the inscription of the *Lai pan* (Western Zhou, second half of the ninth century B.C.).

I, Lai, proclaimed:

“My greatly manifest August High Ancestor Shan Gong was able courageously to watch over his virtue and thus aid and assist Kings Wen and Wu in battering Yin [Shang], in accepting and receiving Heaven’s Excellent Mandate, in holding fast to the Four Directions, in establishing their residence within the territories they had laboured [to conquer] and in being a counterpart of God on High.

“Ah! My August High Ancestor Gong Shu was able to help and accompany King Cheng in receiving the Grand Mandate, in containing and extirpating those who would not offer tribute, and in thereby securing the myriad polities of the Four Regions.

“Ah! My August High Ancestor Xinshi Zhong was able to polish and brighten his mind, to be mild to those who were far and kind to those who were near, thus joining and assisting King Kang in containing and bringing into the fold those who did not appear at court.

“Ah! My August High Ancestor Hui Zhong Lifu was diligent and harmonious in his official duties and had achievements in leadership, by means of which he joined Kings Zhao and Mu in appeasing and rectifying the Four Directions and in clipping and attacking Chu Jing.

“Ah! My August High Ancestor Ling Bo attentively brightened his mind and never relaxed [in his] service, thereby protecting Kings Gong and Yi.

“Ah! My August Subordinate Ancestor Yi Zhong made order by remonstrating and was able to support and preserve his lords Kings Xiao and Yi in their having achievements on behalf of the Zhou kingdom.

“Ah! My August Deceased Father Gong Shu, reverently and respectfully and being harmonious and equitable in his official duties as well as bright and balanced in his virtue, venerated and protected his lord King Li.

“I, Lai, diligently have been continuing my August Ancestors’ and Deceased Father’s service, devotedly by day and by night I have been reverently attending to my affairs of death-earnestness. Hence the Son of Heaven has in manifold ways bestowed his munificence on me, Lai. May the Son of Heaven [live for] a myriad years without end, attaining great longevity, preserve and secure the Zhou kingdom, making order and governing the Four Directions.”

After Falkenhausen 2006b, p. 278.²⁹

In both of these inscriptions the sequence of kings agrees with Sima Qian’s king list for the Zhou dynasty. Accurate copies of both the Shang and Zhou lists had somehow reached him, but how and in what form? Among extant Western Zhou inscriptions, we find no copy of the Shang king list and only the two Zhou lists, or partial lists, just quoted. Notice also that whereas our information about the Shang royal genealogy comes from royal documents, the two Zhou lists we have are not royal inscriptions on royal objects. They are embellishments to a nobleman’s account of his own family, cast on a bronze of his own. The king lists we know from other cultures occur in royal contexts – for instance, in the Temple of Seti at Abydos in Egypt (Figure 1.3). If Chinese

kings ever made this kind of public display of their predecessors' names, we have no trace of it. There were no monuments in ancient China from which Sima Qian could have copied his lists. If there had been, he would certainly have described them for us.

As for early traces of the other constituent of Sima Qian's package – the idea of divinely ordained universal kingship – Western Zhou bronze inscriptions offer only a few hints, a few suggestive terms or phrases that occur in contexts far too laconic to tell us what they mean. We have just encountered one of them in the two inscriptions just quoted: "Son of Heaven," *tian zi*, a title for the Zhou king. Clearly this title implies a special relationship between the Zhou king and the Zhou deity *tian*. But what, exactly, was that relationship? Did it involve a dynastic legitimacy that had been taken away from Shang and conferred on the Zhou king's family? This the inscriptions do not tell us.

The characters that later meant "Mandate of Heaven," *tian ming*, do not occur in Western Zhou bronze inscriptions, but a few similar words seem to refer to a mandate from Heaven as though the receiving of it were a particular historical event. The *He zun* and the *Da Yu ding* (Texts 4.9 and 2.6) are the earliest bronzes whose inscriptions bear a phrase similar to (but a little more elaborate than) *tian ming*. Both specify that it was King Wen who received a "great mandate," and King Wu, his son, who defeated the Shang. A few lines later the *Da Yu ding* inscription seems to say that the Shang dynasty "lost its mandate" (Text 2.6).

Text 2.6. Beginning of the *Da Yu ding* inscription (Early Western Zhou, first half of the tenth century B.C.). Text 4.8 gives the inscription in full.

In the ninth month, when the King was at Zongzhou. I, Yu, was charged by the King as follows, "Thus speaks the King: Yu! the most glorious King Wen received the great mandate blessed by Heaven. When King Wu succeeded Wen and created a state, he punished its evil men, took under his protection [the states of] the Four Quarters, and governed their peoples. As to those serving in his administration, in serving wine they would not dare to get drunk, when assisting at the *chai* and *cheng* sacrifices, they would not dare make merry. Therefore, the awesomeness of Heaven hovers over me, [Heaven's] son, and the ever-protecting ancestors take under their protection the [states of the] Four Quarters. We know that Yin [i.e., Shang] lost its mandate because the feudatories of Yin and Yin's senior officers and princes all became lax through wine-drinking.³⁰ Therefore, Yin failed in discipline among its officials." (JC 2837)

After Dobson 1962, pp. 225–6, slightly modified; see also Allan 2007, pp. 39–40.

Sima Qian's basic annals of the Zhou agree that the recipient of the Mandate of Heaven was King Wen and then add that before he received the mandate his title was "earl" but that on receiving it he proclaimed himself "king."³¹ Both Sima Qian's account and the aforementioned inscriptions treat the receiving of the mandate as a punctual event, but neither spells out what the mandate says.³² Although the core of a Mandate of Heaven ideology – the idea that Heaven transfers legitimacy from one ruling house to another – seems to be present in the two inscriptions, we do not yet see the fully elaborated theory, in which the mandate's transfer from Shang to Zhou is prefigured by its

(fictional?) transfer from Xia to Shang. The word Xia does not occur in any Shang or Western Zhou inscription, not to mention a Xia king list.³³

When might Sima Qian's package – to repeat, an ideology of divinely ordained universal kingship bolstered by a sequence of king lists – have come together?³⁴ An ideology that makes political legitimacy dependent on the conduct of rulers might have had particular appeal after the fall of Western Zhou, when philosophers of all stripes looked nostalgically on Western Zhou as a time of ideal government and volunteered advice to rulers on how to return to that ideal time. The philosophical texts transmitted to us from the Warring States period use the ideology in just this way, preaching to rulers about what sort of conduct wins the mandate and what sort loses it. But the package might have had much the same appeal for a dynasty in decline, promising not to restore order but to prevent its loss, and we might thus with equal ease imagine it coming together shortly before, rather than after, the end of Western Zhou. And there is yet one more possibility, argued long ago by Creel, namely that the ideology dates from the very beginning of the Zhou period, having been invented, along with the Xia dynasty, as an apology for the overthrow of Shang.³⁵

Let us for the sake of argument take the middle option and suppose that the package was put together toward the end of Western Zhou, perhaps about the time the *Lai pan* was cast. How might this have happened? Where would the creator of the ideology have found the raw materials he needed – a copy of the Shang king list and (if he did not make it up from whole cloth) a copy of the Xia king list? Who was preserving the king lists of dynasties long dead?

Mesopotamia suggests an obvious answer: king lists are preserved by the scribal tradition and used in the scribal schools. The Shang kings did not sacrifice to the kings of any earlier dynasty. The Western Zhou kings may not have kept a list of the Shang kings. But it is entirely possible that the Shang king list, and others too perhaps, were preserved as scribal exercises in Western Zhou scribal schools, just as the Sumerian King List and the Turin list were copied and recopied in Mesopotamia and Egypt. As we know from Mesopotamia, such lists could also be maintained and transmitted by scribes who had antiquarian interests. Perhaps the maker of the *Shi Qiang pan* – the author of one of the only two king lists we have from the Western Zhou period – had such interests. His inscription tells us not only that he was a scribe at the Zhou court but also that his grandfather held a similar post at the Shang court. “When King Wu had already defeated Yin, the Wei scribes and valorous ancestors then came to present themselves (in audience) to King Wu.” Who more likely to preserve the Shang king list?

And who more likely than a high-ranking scribe-official to put the ideological package together? In Warring States and Han, when we find an explicitly elaborated Mandate of Heaven doctrine, it is not obviously a doctrine that a king would devise for himself; it is a doctrine that serves the interests of ministers remonstrating with kings. The European “divine right of kings” serves the king’s interests unconditionally, but the Mandate of Heaven makes divine support dependent on the king’s conduct. It says that the king must behave properly (what “properly” means varies from one philosopher to another) or Heaven will transfer its mandate to another ruling line. A king who accepts this ideology no longer bases his claim to the throne only on his descent from the founder of his house; he claims universal kingship sanctioned by Heaven, but at the price of acknowledging that Heaven’s watchful eyes are always on him ([Text 6.10a](#)).

Let us return to the provisional hypothesis that Sima Qian's package was assembled near the end of Western Zhou. On this hypothesis, a scribe-official took the already existing idea that the Zhou kings had the support of a god they called Heaven and made it into a claim to universal kingship. But that official also made Heaven's support contingent on the king's conduct, and to persuade his king of this contingency, he constructed a history of universal kingship, perhaps inventing the Xia dynasty and some sage kings in the process, in which Heaven transfers the kingship from bad rulers to worthier ones. It is easy to imagine all this happening in late Western Zhou at the hand of a high-ranking scribe who had a sense of history and a wish to use history to influence his ruler. In [Part III](#) we look in detail at the evidence for this kind of creativity in a scribal tradition.

But this account of the origin of the Mandate of Heaven ideology is only a hypothesis suggested as a program for future research, not a proposition I am prepared to argue in detail. That would require another book at least, and not even the most basic groundwork for it has been done.³⁶ With rare exceptions, historians who study the pre-Han period have not asked how the Mandate of Heaven doctrine originated.³⁷ The overriding concern of modern historiography, and of archaeology too, has been to verify the existence of the Xia dynasty and to verify the ancient history we read in Sima Qian. This is a research orientation that sets out by assuming that Sima Qian's account of the past is true – that unified rule of the whole of China did pass from one dynasty to the next from remotest antiquity; and if the account is true, then it does not have an origin. Yet unless we believe in a Heaven that intervenes to shape the fate of dynasties and the course of (Chinese) history, Sima Qian's package clearly did have an origin, and investigating its time and place of formulation should surely be the first priority of historians of the pre-Han period.

Historians have not begun this task for the simple reason that the ideology of divinely ordained universal kingship has never died. Scholars still today project into remotest antiquity the political unity of the Chinese cultural sphere and believe that the historical narrative that validates this unity is fact. The history of pre-Han China that we have inherited from Sima Qian – a history that continues, despite massive contrary evidence from archaeology, to see the pre-Han period in terms of a sequence of legitimate dynasties, each in its time ruling “the whole of China” (whatever that might mean) – is a legitimizing project that takes the classic form of a sequence of carefully selected king lists. Someone – a late Western Zhou king? or more likely, his prime minister? – has succeeded in substituting his king list for history.

PART II

WRITING AND THE WEALTH OF THE STATE: PEOPLE AND LAND, CENSUS AND LAND REGISTER

This our friend Robinson soon learns by experience, and having rescued a watch, ledger, and pen and ink from the wreck, commences, like a true-born Briton, to keep a set of books. His stock-book contains a list of the objects of utility that belong to him, of the operations necessary for their production; and lastly, of the labour time that definite quantities of those objects have, on an average time, cost him.

Karl Marx, *Capital*, Chapter 1

3

THE NEAR EAST AND THE AMERICAS

Administration is inseparable from ideology. Administrative texts and devices have an ideological dimension, and the assertion of ideology has an administrative component. To meet the soaring cost of administration and elite consumption, a state's government depends ultimately on its extractive capacity and its fiscal management. The establishment of bureaucracy laid the foundation for institutionalized appropriation and redistribution of the wealth produced by the populace. Most administrative texts from the early civilizations concern the income and expenditure of the state's institutions. The accounts kept of trifles in some of the texts give the impression that state administration was all pervasive, that it realized – and in so doing underlined – the state ideology's claim to total authority. Historians of the ancient economy are justly intrigued by the details of these documents, yet few have paused to ask why accounts were kept in the first place.¹ What made bookkeeping necessary? How did the ancients view the disembodied numbers and names in these documents?

We begin by looking into the uses and ideological underpinnings of accounting in early states, mainly in the extraction of wealth, occasionally in its expenditure. These two sides of the state's finance served and were buttressed by the state's ideology, which claimed to provide order and security, above all through religion. State-sponsored institutions generated a wealth of written and oral texts whose political and ritual significance have been energetically sought by scholars. But if we view these texts from a manager's perspective, we notice that many of them in fact show a mundane concern to animate religion. Religion is more than a set of beliefs: it needs architectural settings, stage props, and people. All these created administrative needs that were fulfilled by writing and other means of control.

Wealth extraction is every state's central concern. Because all the states in our sample were basically agrarian societies, the most common form of wealth in them was agricultural surplus.² Depending on the system of land tenure, we use *rent* and *tax* as inclusive terms for the compulsory transfer of wealth from the subjects to the state. Yet as we shall see, land tenure systems are complex everywhere, and it is sometimes virtually impossible to ascertain a system's nature, not only because of a lack of documentation but also because of the inevitable discrepancy between ideal and reality. In some early states the institutional management of arable land seldom distinguished between rent and tax. I therefore use the terms interchangeably when the boundary is blurry and sometimes use *tax* as the all-inclusive term, in agreement with the literature. Along with the direct surrender of agricultural products, labor constituted another important

aspect of taxation in various forms that are hard to label. Depending on our definition of freedom, we might call them *corvée*, *slave labor*, *dependent labor*, *indentured labor*, *conscript*, and so on. A special category of early taxes is *tribute*, a payment from a subordinate polity to a superior “in acknowledgement of submission or as the price of peace, security, and protection” (according to the *Oxford English Dictionary*). Tribute is different from rent and tax in that the latter are transfers from individuals or groups to states, whereas the former is a transfer between states or less tightly organized polities.³ The bureaucracy of the tribute-paying state is directly involved in collecting and transporting rents and taxes, whereas the recipient state needs only to store and expend the tribute it receives.

How did early states extract wealth from their subjects? The state ideology aims to persuade the populace to donate its produce to religious institutions in exchange for their service tending the gods, to the rulers and their assistants for mediating between people and gods, and to the dependents of the temples and palaces for their labors. Reciprocity is the official logic. We have no way of knowing whether the ruled accepted the state’s view of the transaction, seeing their taxes as a fair price for the order and security received, for if piety did not work the state could always resort to coercion.⁴ But whatever the populace felt able or willing to pay, the system of taxation was designed for the ease and efficiency of the tax collectors. Early states used two basic indexes to assess taxes: persons and property, the latter consisting mainly but not exclusively of land. Very often fixed rates were used because this was easiest for the state. But even the simplest measures required substantial administrative input. We shall see that the early states used a variety of means, among which writing was only one, to exert the control over people and land that made it possible to siphon off resources from them. Let us start with Mesopotamia.

MESOPOTAMIA

Assyriologists agree that in Mesopotamia there were three basic types of landownership corresponding to three types of social sector (Figure 3.1), but the relative importance of the types in Mesopotamia’s economic history is highly contested. Landownership certainly varied geographically and temporally.⁵ For our inquiry into writing’s role in the functioning of the state, however, uncertainty about the nature of the economy does not matter very much, for most of the texts were produced within and for the state institutions. This is not a bias of preservation and recovery but reflects the institutional background of the origin and early development of writing. We can therefore proceed within this institutional setting to look at how writing helped early states extract surplus produce from their subjects.

Land Allocation

There is no doubt that in Mesopotamia public institutions owned large tracts of land and had teams of dependent laborers to cultivate them. Temples as well as palaces were largely self-supporting households whose economy was chiefly redistributive. But the buildings and core personnel of these institutions were located in the cities and

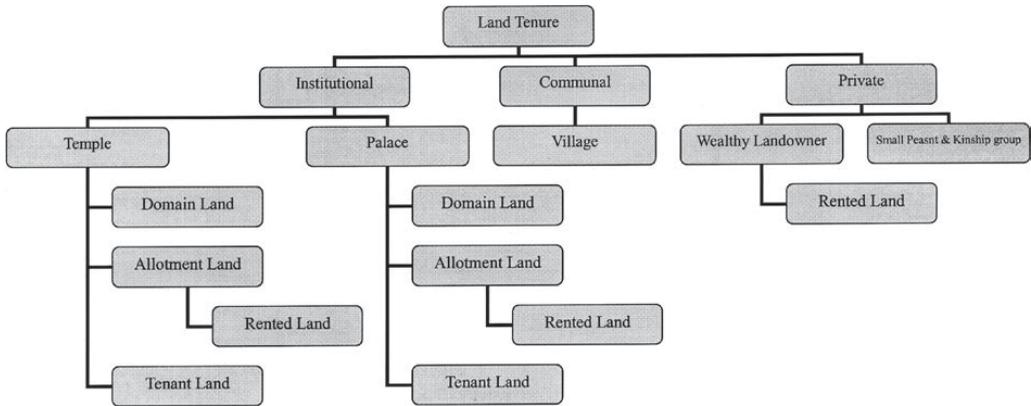


FIGURE 3.1 Land tenure in Mesopotamia.

hence were away from the land. In concrete terms, redistribution required someone to “get the supplies to the urban residents and bring certain raw materials and manufactured items back to the villages.”⁶ This involved planning and coordination on several levels.

To assign its fields to its various dependents, the institution needed both to locate the fields and to name the dependents or groups of dependents. In Figure 3.1 at least the domain land had to be subdivided so that each dependent laborer (or labor gang) had a specific plot of land to work on. The most economic and easiest-to-administer method of large-scale land assignment would be to take a continuous tract of land that could be divided into more or less contiguous parcels. This is indeed what the earliest states did. It was a massive restructuring of the countryside, a very concrete part of the “ruralization” that Yoffee sees as concomitant with “urbanization.”⁷ Because agriculture in southern Mesopotamia depended on irrigation – another factor that needed cooperation – the parceling of the fields had a dynamic relationship with the direction of the waterway (Figure 3.2a). The pattern of individual fields in long strips laid parallel seen in Figure 3.2b, right, is reconstructed from a kind of yield-assessment text of the Ur III state.⁸ But it might go back to the late Uruk period, for the rationale behind it applies equally well there. It had to do with irrigation and with a plowing method that employed teams of oxen.⁹ Only large institutions could afford oxen as draft power. The plow worked most efficiently in long furrows, which minimized the number of turns required. More importantly, the pattern was highly legible to the field surveyor. The calculation of surface area was simple: in most cases the surveyor needed only to know the lengths of two sides.¹⁰ Actually the calculation was often done the other way around: the area that each individual or team of laborers could cultivate was decided in advance by the administrators. In Ur III times the standard field for each gang of workers was about 100–125 *iku* (ca. 36–45 hectares).¹¹ So the official in charge of assigning fields simply divided the land into strips with fixed widths (to accommodate the plows) but varying lengths to give fields of 50, 100, 200 *iku*, and so on. Of course, in reality the fields could not be so uniform, but it was easy for the administrator to add or subtract irregularities.

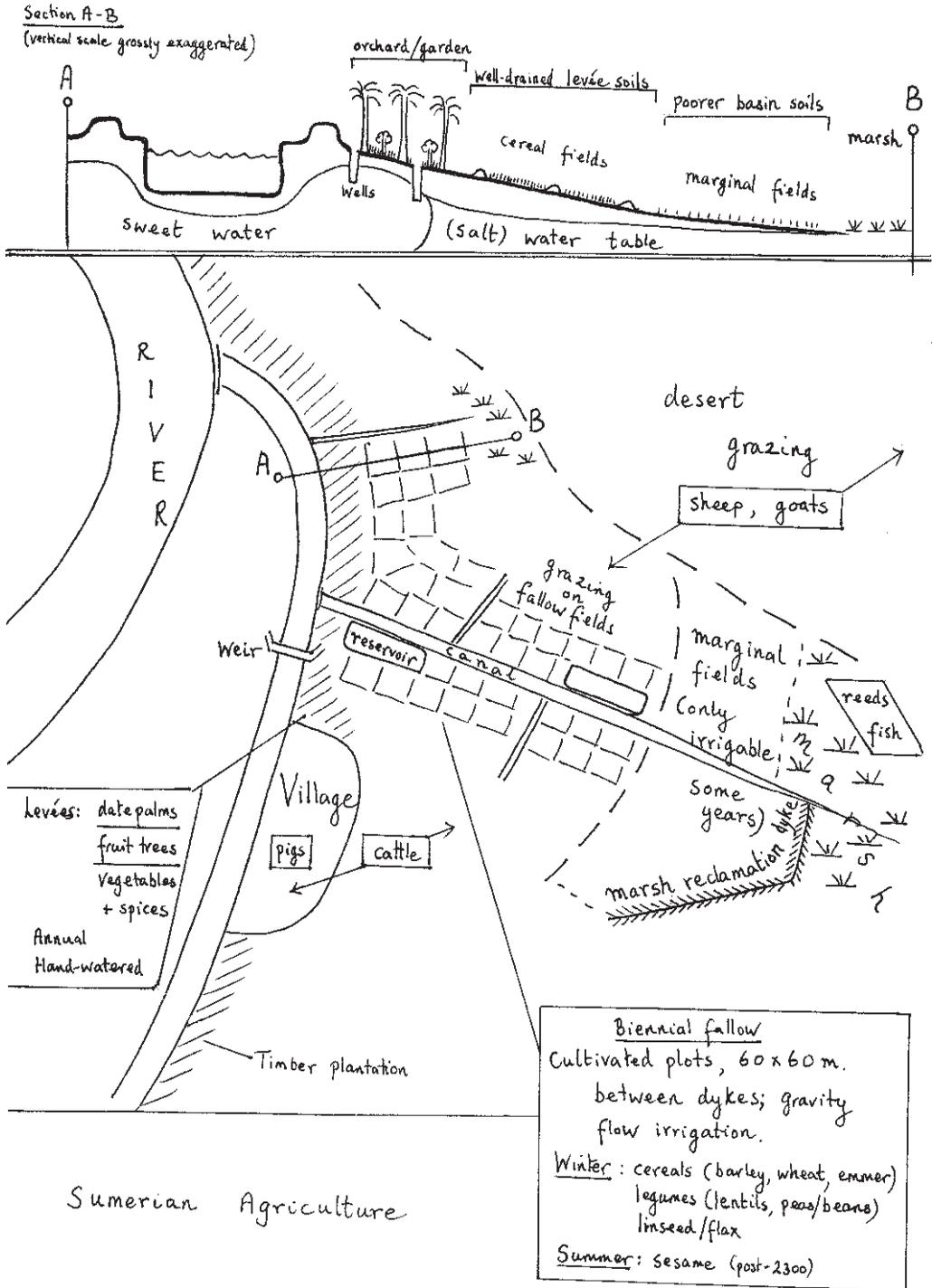


FIGURE 3.2a Hypothetical sketch of an agricultural cell in South Mesopotamia. After Postgate 1994a, p. 175, Figure 9:1.

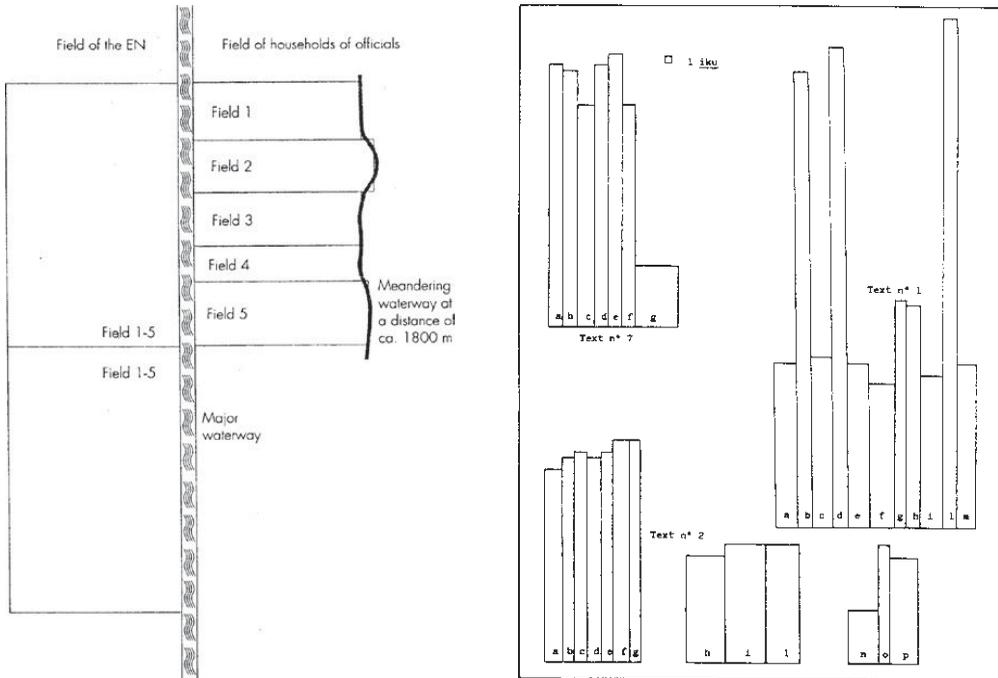


FIGURE 3.2b Field patterns, reconstructed from texts, in two different periods of South Mesopotamia. *Left*, from an archaic text recording the division of fields among high officials in Jemdet Nasr. After Englund 1998, p. 207, Figure 83. *Right*, from yield-assessment texts of the Ur III period. After Postgate 1994a, p. 188, Figure 9:6a.

Naming the Laborers

To establish a unit area for each individual or team of laborers was to assess his or its performance on an equal base.¹² This implied that responsibility had been extended to the lowest level of the society. Yet a prerequisite for responsibility is a person's name. A parcel of field should be attached to a named party. It was here that writing entered the scene. Institutional agriculture had a pyramidal command structure. In Figure 3.3 the chief supervisor, who kept the simplest record of fields and the parties responsible for them, probably did not note down every laborer's name. Judging from Ur III management of labor (Text 3.1), he could delegate that task to the foremen, who in turn controlled smaller numbers of people, whose names presumably could be committed to memory without the help of writing. The workers under each foreman seem normally to have come from only a small number of families, and only the family heads reported to the foreman. Because at each level of control the number of personal names was not so high as to strain memory, we might be tempted to suppose that writing was not necessary. Bookkeeping was not about the capacity of memory, however, but about holding someone responsible by some kind of proof. The overseer reported to the state institutions; the state's bookkeeping was the mechanism of accountability. The higher level of administrators would use the overseer's book to evaluate his own performance; the bureaucrat's proof of labor was not cereal but his books. It was probably at the field supervisor's level that commoners' names entered the state's archives for matching people with land and rations (Text 3.1).

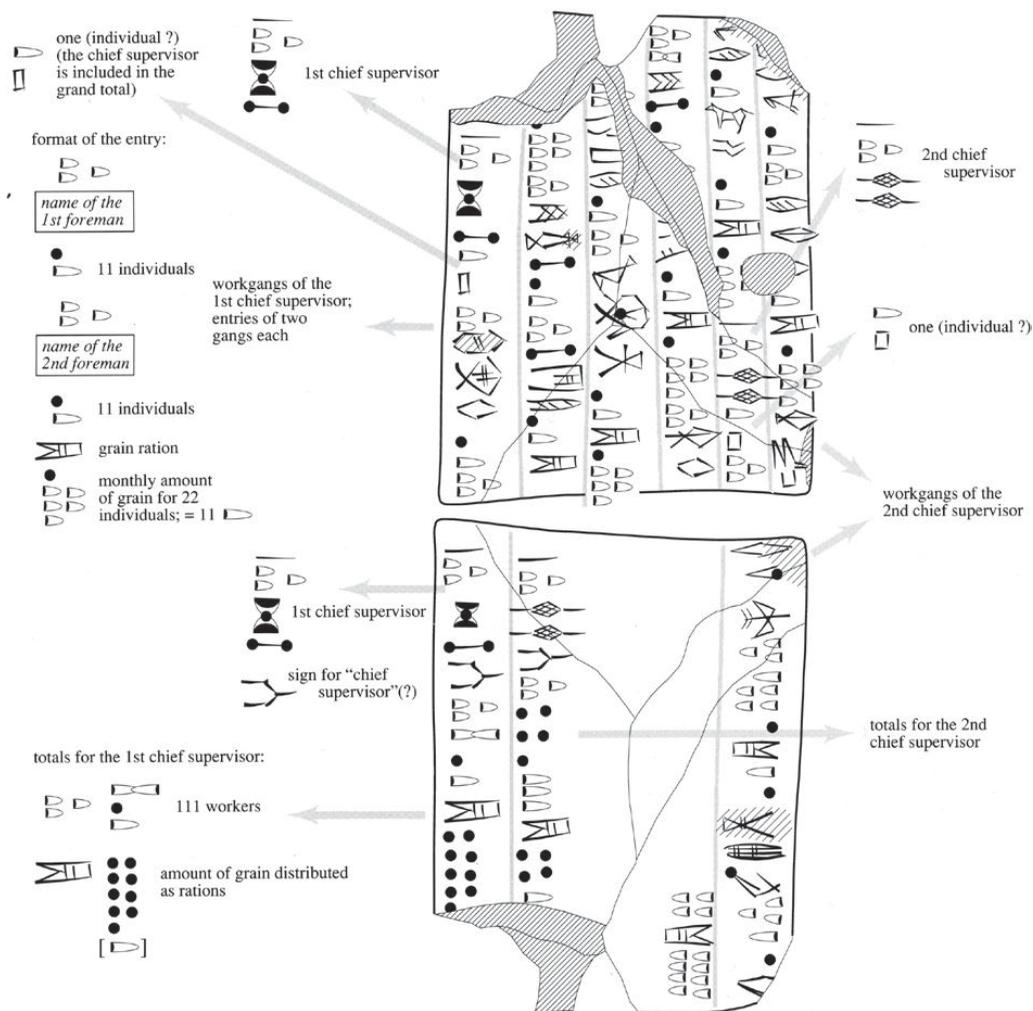


FIGURE 3.3 The command chain at the lowest level. Proto-Elamite tablet containing an account of cereal rations for the labor gangs of two supervisors. After Nissen et al. 1993, p. 78, Figure 64.

Text 3.1. Ur III yearly inspection of the labor force (gurum₂-ak rosters).

Deceased: Ur-TAR.LUH, (replaced by) E-urbidug, A-class worker, the foreman, Girmi-išag, C-class worker, (the assistant – erased), his sons, Ur-Geštinanka, B-class worker, Lu-Sukalandul, E-class worker his sons, were assigned to forest no. 1; Dugani, M-class worker, was assigned to forest no. 2; KA-Šara, B-class worker, Lugal-KA-gina, E-class worker, his son, were assigned to forest no. 3; old: Ur-abba, (replaced by) Lu-Šara, B-class worker, his son, was assigned to forest no. 4; deceased: Lugal-Engur-da, (replaced by) Lu-gina, B-class worker

...

Ur-emaš, C-class worker, son of Ur-TAR.LUH, was assigned to forest no. 10;
Under the supervision of E-urbidug.

Notes to classification:

A-class: prebend-holder, full-output worker receiving regular rations, foreman in charge of ten forests.

B-class: prebend-holder, head worker in a given forest, full-output worker receiving regular rations.

C-class: prebend-junior prebend-holder, supernumerary full-output worker receiving regular rations.

E-class: one-fourth-output worker receiving $\frac{1}{4}$ of the regular rations.

M-class: head worker in a given forest, full-output worker receiving rations in the amount of seventy-five *silas* of barley per month and four *minas* of wool per year.

After Steinkeller 1987, pp. 78–80 and 108; see also Postgate 2007, p. 308, Figure 2.

Accountability, Responsibility, and Planning

Knowing each field's surface area invited the summation of the total arable land. In the earliest writing we thus find tablets stating the total amounts of land belonging to the city ruler, his wife, and his officials.¹³ These were probably allotment lands that were attached to official titles, and not to personal names, maybe because the titles and their holders had a one-to-one correspondence so that the persons were known to the readers of the records. But why did the institutions want to know the totals? Among other reasons there was the need to calculate how much seed was required for the fields, whose planted area changed constantly owing to fallowing, opening new lands, and so on. One archaic tablet does exactly this.¹⁴ Seed was either kept in the countryside or stored in central granaries after harvest, but the amount had to be calculated before harvest so that some person responsible for the division of the harvest would know how much grain should be set aside and stored.¹⁵

Calculating the amount of seed needed for the next year was an act of budgeting, as was the estimate of yield right before harvest. Some scholars have doubted the budgetary function of early bookkeeping, but the evidence is against them. A redistributive agrarian economy needed some kind of planning to survive. Every item of expense before the next harvest had to come from the current one. Summary accounts and balance sheets are the most direct testimony to forward planning (Text 3.2a–b). The dependent laborers as well as the elites were fed and clothed by the institutions they belonged to. The mechanism for doing this is known as the *ration system*. Food was distributed monthly, fat and clothing yearly. To measure out these goods, the officials in charge of the granaries needed the information contained in summary accounts and balance sheets (Text 3.3).¹⁶ If the surplus grain could not be used up by the institutions and was likely to spoil, the institutions would need agents to trade it for locally unavailable goods.¹⁷ This trade balanced accounts and generated vouchers between the institutions and the trading agents.

Text 3.2a. Ur III summary accounts of agriculture for three years.

74,426 *iku* (= 267.72 sq. km) of field, its grain is 124,035 royal *gur* (= 37,210,500 liters) from which 129,000 *gur* 5 *sila* (= 38,700,005 liters) were deli[vered]

[excess of 4,965 *gur* 5 *sila* (= 1,489,505 liters)]

[Year: (Šulgi year 28?)]

[. . . *iku* of field, its grain is . . .]

from which 118,200 *gur* (= 35,460,600 liters) were delivered

deficit of 7,502 [+] *gur* (= 2,250,600 + liters)

Year: the royal daughter married the king of A[nshan] (Šulgi year 30)

76,698 *iku* (= 275.89 sq. km) of field, its grain is 91,830 *gur* (= 27,549,000 liters)

from which 42,462 *gur* 100 *sila* (= 12,738,700 liters) were delivered

deficit of 42,207 *gur* 200 *sila* (= 12,662,300 liters)

Year: Simurru was destroyed for the third time (Šulgi year 28)

[Fields?] divided among five *šabra*-officials.

After Van De Mieroop 2004, p. 58 and 1999, pp. 131–2.

Text 3.2b. Ur III summary accounts of agriculture for ten years.

636,586 *iku* (= 2,289,88 sq. km.) of field

The grain used for seed and as fodder for the plow oxen is 52,724 *gur* 1 $\frac{2}{3}$ *sila* (= 15,817,201 $\frac{2}{3}$ liters)

The yield of grain is 1,060,976 *gur* 200 *sila* (= 318,293,000 liters)

from which 779,293 *gur* 205 *sila* (= 233,788,105 liters) were delivered

60,000 *gur* (= 18,000,000 liters) were from KUD.DU fields

Total of 839,293 *gur* 205 *sila* (= 251,788,105 liters) were issued.

221,682 *gur* 295 *sila* (= 66,504,895 liters) is the deficit of the yield.

3,805 *gur* 80 *sila* (= 1,141,580 liters) for grain xx

29,536 *gur* 71 $\frac{1}{2}$ *sila* (= 8,860,871 $\frac{1}{2}$ liters) grain at hand (?)

5,890 *gur* 140 *sila* (= 1,767,140 liters) for stipends for the governor('s household)

2,730 *gur* 60 *sila* (= 819,060 liters) for stipends for (the household of) the governor's children

2,428 *gur* 100 *sila* (= 728,500 liters) for the *šabras'* (households)

2,524 *gur* 110 *sila* (= 757,310 liters) for the *e-kinga* and the harbor??

Total: 46,914 *gur* 261 $\frac{1}{2}$ *sila* (= 14,074,461 $\frac{1}{2}$ liters) delivered in individual years.

From the year Šashrum (Šulgi 42) to the year Throne of Enlil (Amar-Sin 3). Ten years.

After Van De Mieroop 1999, pp. 131–2.

Text 3.3. An Ur III record of the annual expenditures of a province.

84,666 gur 47 sila (25,399,847 liters) grain, measured according to the standard of King Šulgi, grain from domain lands
1,902 gur 20 sila (= 570,620 liters) grain from xxx, grain derived from fees
13,026 gur 285 sila (= 3,908,085 liters) old grain
Total: 99,595 gur 52 sila (= 29,878,552 liters), total available assets
From which:
49,790 gur 161½ sila (= 14,937,161½ liters), expended for the central tax-contributions
12,270 gur 195⅓ sila (= 3,681,195⅓ liters), in the Girsu district
6,442 gur 185 sila (= 1,932,785 liters), in the district at the banks of the canal to Nina
11,326 gur 140 sila (= 3,397,940 liters), in the Gu'abba district, for offerings and grain rations;
5,073 gur 251¼ sila (= 1,522,151¼ liters) grain for fields to be plowed
117 gur 180 sila (= 35,280 liters) grain for fields to be "turned over"
86 gur 120 sila (= 25,920 liters) grain for young plow oxen
2220 [+] gur (= 666,000 liters) []
[] 40 sila [], grain for []
(Total:) 89,461 gur 143⅔ sila (= 26,838,443⅔ liters), deductions in one year
14,400 gur (= 4,320,000 liters) grain for Enlil
A grand total of 103,861 gur 143⅔ sila (= 31,158,443⅔ liters) was expended;
an excess of 4,266 gur 91⅔ sila (= 1,279,891⅔ liters).
Account of the grain in the totality of the Girsu province.
Year: Amar-Sin, the king, destroyed Urbilum.

After Van De Mieroop 1999, p. 133.

The consensus is that the Mesopotamian administrative records "derive from two principles: accountability, that is, the obligation to keep records for property that is not one's own, and responsibility, that is, formal physical custody of property that is not one's own."¹⁸ Accountability entails hierarchy, which was most strictly observed within institutions. An official was always answerable to a higher party; the king was answerable to the gods. The division of labor in state institutions made each property the responsibility of a particular manager, and the records of the property were the manager's proof that he had discharged his responsibility. Accountability also implies auditing. Citing M. I. Finley's attribution of a "police function" to accounting in the Classical world, some Assyriologists argue that the primary intention of the Mesopotamian bureaucratic apparatus was to keep track of obligations and check administrative abuses.¹⁹ In this view the administrative texts were mainly a tool to control the bureaucrats.

In fact, however, writing controlled not only the institution's officials but also its resources, including its laborers, and this made it an instrument not only of accountability but also, as in the modern economy, of planning. Some Assyriologists, this time invoking Jack Goody, maintain that the ultimate purpose of ancient accounting was economic planning, much like the planning that modern companies do.²⁰ They argue that

accounts furnished the authorities with data indispensable for planning and controlling the economy. Their view has been disputed, but the dispute is not so much about the existence of planning in early states as its extent. The very act of making inventories of available resources and estimating their likely yield within a specific accounting period reflected a desire to know what was and what would be in the state's treasury. "In this agrarian world the worries of the bureaucrats remain constant: how to match land and people, how to reserve seed and fodder for man and beast, how to employ the available labour as efficiently as possible at the least cost and how to obtain goods which can derive only from import."²¹ The kings were no less worried than their subordinates. Of prime importance to kings, particularly as leaders of the army, was an accurate knowledge of available resources in men as well as materials (Text 3.4).²² This knowledge had to be very abstract. Kings did not go into the fields to collect data at first hand. They heard reports of summaries, which were generated in turn from summaries based on more concrete records from lower levels of administration. In this chain of documentation, the higher in the hierarchy, the more abstract the documents tended to be. Planning depended on abstraction, on the big picture, not on concrete details.²³

Perhaps what is at issue in the dispute over planning is what we mean by the word. If we use *planning* to refer to tracking the balance of incoming and outgoing products so as to decide the allocation of resources over a short period, then it means short-term budgeting. Most Assyriologists seem to be agreed that Mesopotamian accounting had this function. If, on the other hand, our interest is long-term planning and efforts to increase efficiency, evidence is harder to come by; the documents are meager and their interpretation is controversial. Some documents list summary records over a span of more than one year. The archaic tablets have records for as much as eight years. But the exact meanings and purposes of these documents are not clear. Postgate argues that some ten-year accounts of Ur III agricultural production were intended "to provide the government with the statistics required for forward planning of the economy."²⁴ The best evidence of long-term planning would be overt statements of fiscal principles or administrative documents that self-identified planning as their function, but neither exists in the known cuneiform corpus. In China we have actual documents from the A.D. eighth century giving the annual budget of the central government of the Tang dynasty, and we shall see that in the fourth century B.C. there were theories (and probably also the practice) of long-term budgeting, but we have no written evidence from earlier periods.

But in the absence of documents, do we really have no way to ascertain the existence of long-term budgeting and cost planning in early periods? Perhaps archaeology can at least help us gauge the need for them. All the architecture of the urban centers and public institutions was the product of planning, not only planning of settlement layouts and shapes of buildings but also, and more importantly, planning for the mobilization of the requisite materials and manpower. Colossal projects like building a ziggurat could not do without a large chunk of the commandable resources. Gudea is depicted holding on his knees a tablet carved with the plan of an elaborate enclosure wall, probably for a temple.²⁵ Can we doubt that his ministers also made a budget for the cost of building this temple? The statue was surely a public display of the king's piety toward the gods. But it conveyed at the same time a message of the king's power to plan.

It seems that early state planners were concerned mainly with striking a balance between wealth extraction and expenditure, not with improving efficiency in a modern sense. To

judge from the long periods of survival of the city-states, this economic balancing act was quite successful. Keeping income and expenditure in balance was not only a matter of record keeping, however. It needed active control of the storage and issue of staple foods and other goods for rations, wages, famine relief, and trade capital. Surprisingly, however, apart from a few storage rooms located within public buildings, in Mesopotamia little textual or archaeological evidence has been found for large-scale storage facilities, granaries included.²⁶ This must be a bias of our evidence, for redistribution could not have functioned without such facilities, and they are well documented in other early states, as we will see.

Accountability, responsibility, and planning are thus the discernible functions of cuneiform administrative documents. All had to do with control. Order was central to early state ideology, and they all helped to create and maintain it.²⁷ In addition, we should not forget the power of a habit once it has taken root in everyday life. Habit cannot be explained purely in a rational way. Steinkeller has argued that most Ur III documents were made after the actions had been taken. He regards this as evidence that economic transactions did not depend on writing for their execution, and hence that transactions were written down only for purposes of reporting and planning. But even if he is correct that the *extant* documents were written after the fact, they may be clean copies based on notes made earlier, in the field, while transactions were ongoing, a possibility he too easily discounts. We should remember that by the Ur III period, formalized accounting had been practiced for a thousand years. The Ur III scribes were indoctrinated in the scribal schools to believe in the absolute necessity of writing, including its necessity to their careers (see [Part III](#)). That a transaction should go unrecorded would be unthinkable.

Three Views of Bookkeeping

Inevitably, with the routinization of administration, the totality of the administrative documents became the real image of the state in the minds of rulers, bureaucrats, and commoners alike. The master records told the rulers how much land was cultivated, how much grain was in the granary, how many dependents were to be fed, and so on. These abstract numbers plus a few names arranged in a list format catalogued the resources of the state; together with lists of the bureaucracy, they represented the fact of the ruler's dominion. It is uncertain whether this knowledge was deliberately kept secret, but doubtless only a few key figures at the highest level were privileged to view the documents. The establishment of central archives within palaces is direct testimony to the institutionalization of this knowledge of the state ([Figure 5.2a–b](#)).²⁸ Restricted access to palaces effectively prevented unauthorized personnel from viewing the documents.

The bureaucrats were the actual collectors of the information that was the foundation for the final report. We probably should not imagine that all the minute details of the Ur III documents were demanded by the higher authorities. Instead, once the bureaucratic procedure was established, it could be driven by internal imperatives, by the appeal that more detail and greater accuracy had for the professional bookkeeper. Bookkeeping was the administrator's trade, the way he made his living, and the driving force behind ever more elaborate procedures was surely the creative administrator. Rulers impressed by the detailed accounts that their subordinates produced were happy to support more accounting. We know that rulers demanded written reports ([Text 3.4](#)). Failure to supply those reports probably incurred punishment, as indeed happened in early China.

Text 3.4. A letter to the king of Mari from one of his generals.

To my lord speak! Your servant Yamsum (says), "About giving flour to the soldiers – my lord has become tired of all that writing. I talk to him (Haya-Sumu) about giving flour to the soldiers, and he does not send word. Because of the flour, which he does not give me, I did not enter (the palace) to (attend) his dinner for 8 days. Now, there are (just) [n] donkey loads of grain rations. The division commander, Ubariya, and the lieutenant under my authority receive grain rations like the soldiers. From now on, let his (Haya-Sumu's) general receive 3 *homers* of rations like me; let his division commander and his lieutenants receive rations like the soldiers. My lord must not give them flour. Like the soldiers of my lord, they must receive (unmilled) grain. Now, from this day on, let the soldiers receive 21-liter grain rations. I and his general shall eat from our fodder.

"Further: About the herbs of sorcery that Šimatum sent my lord – that matter is true, not false. My lord must watch that matter closely.

"My lord wrote me about dead and runaway troops. My lord (said), 'Write down a name-list and send it to me!' Because I watch the troops closely over here, I have sent for the soldiers on furlough, (that is), now 20 days ago. Let the soldiers on furlough arrive here, and I shall inspect the name-list on the tablet and see (who are) the troops on hand and the runaway troops, and [I] will send a complete report to my lord."

After Heimpel 2003, p. 297.

All trade knowledge shapes the way its possessors see the world. The scribe lives in a world simplified for arithmetical convenience. Mathematics may seem utterly practical, and it was indeed used in solving practical problems, such as calculating the number of man-days needed for digging a canal. But in their calculations the Mesopotamian scribes used *standard* rates, like the coefficients they had learned in school.²⁹ In the scribe's thinking, a male laborer could excavate such-and-such a volume of earth and eat such-and-such a quantity of grain per day, regardless of the actual conditions of work and individual appetite. As Van De Mieroop points out, "The ground could be stone hard or soft, which must have affected how much earth a man could dig up." But the condition of the ground was not in the scribe's quiet inner mind; he did not have a coefficient for it. In his mind the world was standardized and legible, just like the neat wedges he impressed on his clay tablet. His standard rates may originally have been based on firsthand observation, but once they became mathematical formulas taught in the schools they were detached from reality. "We can only wonder what pain this inflicted on the working population."³⁰ To set a quota is to apply a universal rule; disregarding the commoners' moral economy makes taxation easier to carry out.³¹ The clash between standardization as a process of state-building and the complexity of real life is inevitable.

How did commoners view the administrative texts? An answer is hard to come by, first because we do not know how many people in addition to scribes could read and write. This is a historical question that needs to be addressed period by period, but the shortage of documentation makes an answer almost impossible. The difficulty is compounded by our uncertainty as to the demographic distribution in early Mesopotamia. How many people were living in the cities, and how many in the countryside? Presumably the city dwellers had more exposure to written documents than their rural counterparts.

Moreover the population at large existed in the state archives only as a patchwork. As several scholars have shown, not even in the most totalitarian state, that of the Ur III Dynasty, did all the people work all year round for the state. Many of them worked only part-time, and only during their period of service did they appear in the written record in the form of personal names with gender and age specified (Text 3.1). No state-wide census or household register has come down to us. Probably the Ur III state did not need a systematic census, because there was no universal tax of the kind we will see in early China imposed on individuals and private property. The large institutions were basically self-contained. Or perhaps it is only the partial nature of our evidence that gives this impression. At least one main concern of the state – conscription for military service – must have compelled the bureaucracy to maintain some sort of census. A set of census tablets drawn up a few centuries after the Ur III state, during the reign of Hammurapi's son Samsuiluna, shows that the state took pains to register the pool of capable soldiers, distinguishing regular soldiers from substitutes (hired replacements for those ordered to perform military service) and reserves.³² Each man was recorded by his name, profession, residence, and the names of his father, son, or brother (Text 3.5). The police function of the census is apparent from entries that record persons who avoided the draft by fleeing to other places (“decamped to Ešnunna”). No doubt the commoners were aware of being enlisted on the scribe's tablet, and voting by feet was a common form of resistance. We encounter the conflict between the state and the populace evidenced by the state census again when we come to Egypt.

Text 3.5. Excerpt from census of troops in the Old Babylonian period.

1 man	Ahu-šina, young, who is living in the house of Ipqatum, the man of Sippar;
1 man	Warad-Kubi, son of Inbuša, who is living in the house of Etel-piša, the divination priest;
1 man	Belšunu son of Utul-Ištar, who is living in the house of Belanum son of Wardum;
1 man	Lipit-Tišpak, son of Mar-iltum Kurhitti-muštešer, his brother Kubburum, pupil at the school, his brother who are stationed with Nabi-Sin, who is living in the . . . ;
1 merchant	Ubarum, young Pirhum, his brother, who is pasturing Damqi-ilišu's goats;
1 merchant	Awiliya, son of Belšunu, overseer of the merchants, who is living in the house of Hudu-Libbi . . .
1 gardener	Etirum, son of Išme-karab, man of Dur-Rimuš, who is to be found in the house of Ibni-Amurru, in the country, but has decamped to Ešnunna;
1 gardener	Warad-Ištar, son of Inbuša, man of Dur-Rimuš, who is to be found in the house of Ibni-Amurru, in the country, but has decamped to Ešnunna;

(Total:) 13 men (regular soldiers) of the first rank, (with) their son (or) brother (indicated), who were mustered in Lasumi and Kismar.

Nannatum the apprentice scribe.

The month of Addaru, the 17th day, [the year Samsu-ilu]na the king ...

After Postgate 1994a, pp. 243–4, and Greengus 1979, p.73.

In addition to censuses prepared for military purposes, the much later Neo-Assyrian empire has left us a fragmentary register of individual holdings, which was probably not a domesday book for imposing taxes but a list of tax exemptions under King Sargon (Text 3.6).³³

Text 3.6. Excerpt from a Neo-Assyrian list of tax exemptions (or a “domesday book”?).

Arnabâ, son of Se'-aplu-iddina, gardener; his mother: a total of 2.

Ahabû, gardener; Sagibu, his son, adolescent; Il-abadi, his son, of 4 spans' height; 2 women: a total of 5 people.

10,000 stalks of vine; two houses; 10 hectares of arable land of their own.

Total, *in* the town of Hananâ, *In the district of the city of Sarugi.*

Sin-na'id, gardener; *Nusku-ila'I*, ditto; Našuh-qatar, his son, of 4 spans' height; 1 woman; 2 daughters: a total of 5.

Ahunu, gardener; his mother: a total of 2 people.

In all, 3 gardeners, 1 weaned son, 2 women, 2 daughters, for a total of 8.

15,000 stalks of vine; 6 hectares of arable land; 1 house.

Total, (*in*) the town of Mari-Til-Uari, near the town of Til-abnâ.

After Fales and Postgate 1995, p. 122.

Whether or not the state conducted a census, a good part of the population must in one way or another have interacted with it and thus been under direct state surveillance. Working for and receiving rations from the state institutions (including the military) were the most direct means by which commoners were made conscious of the state. To understand their view of written documents, it would help to know how aware they were of the process of making documents. Steinkeller argues that most documents were written in offices after the activities they described had been completed somewhere else because the main writing surface, clay, was not suitable for taking notes in the field: clay was bulky and needed to be damp for impressing the stylus, he argues, and other more convenient tools, such as wooden boards, seem to have been rare in Ur III times.³⁴ This would imply that most of the people who were the subject of the administrative records did not actually see them being written. However, it seems perfectly possible that the scribe taking notes in the field had an assistant to make clay tablets for him on the spot.³⁵ Nor does the rare attestation of wooden boards

in texts necessarily mean that they were not widely used. The Neo-Assyrian palace reliefs showing scribes noting down trophies on the battlefield suggest that, whatever writing surface is being depicted (clay tablet? wooden board?), taking notes in the field was perfectly possible.³⁶ It seems likely that the act of writing was considerably more visible than Steinkeller suggests and that illiterate people had frequent opportunity to witness it. For accountability to be effective, the people being counted had to be aware that they were being counted. People must have known that their names were being recorded by the scribes so that their performance could be checked against quotas. The scribes were the interaction zone between the populace and the state, and for the populace, the extractive power of the scribes was concretized in their surveying rods, whips, and writing tools (Figure 3.13). The Sumerian proverb “You can have a king and you can have a lord, but the man to fear is the tax collector” was universally true, and one focus of that fear, in literate Mesopotamia, was surely writing. In the mind of the commoner, the documents that recorded his name and obligations might well have been equated with the state.

In colonial Southeast Asia, the hard-pressed peasantry assaulted the administrative quarters where the state’s records for the head tax, the land tax, and *corvée* were kept. “By destroying those records, peasants hoped to destroy the state; by destroying the state, they hoped to destroy taxes.”³⁷ Early Mesopotamia may have fared better than colonial Southeast Asia because the peasant’s subsistence was secured by state-supplied rations; the peasantry’s moral economy, its conviction that everyone should have the right to subsistence, was not violated.³⁸ However, it must be stressed that the rations allowed were just enough to keep people alive. The manner in which the state treated its dependent laborers was not fundamentally different from the way the laborers cared for its livestock. From the outset men, women, land, and animals were all counted and measured as “commodities.”³⁹ The dependent laborers must surely have felt that writing was the means of their exploitation.

EGYPT

Landownership in ancient Egypt was no less complex than in Mesopotamia, so scholars are still debating whether the payments made to the state should be characterized as taxes or rents.⁴⁰ Although all land in theory probably belonged to the king by virtue of his divine status, much as in Mesopotamia, in practice Egyptian landholdings fall into three categories: institutional, communal, and private. However, our information about landholding and its management comes mostly from royal and nonroyal institutions connected with mortuary cults. Land endowments created in the name of the dead were maintained for many generations, some lasting for more than a thousand years. Text 3.9, Metjen’s chapel inscription, documents that this Fourth Dynasty endowment consisted of plots from the funerary foundation of the Second Dynasty queen Nimaathapi. Because of the longevity of these institutions – much longer than a dynasty – their relationship with the state could become too complicated to disentangle; often they were operating very much on their own terms, ignoring political ups and downs. For this reason, and contrary to our expectation for a seemingly centralized state, Egypt had no codified system for revenue collection.⁴¹ Yet to function, the state had to guarantee itself a steady income. The administration’s response to the

patchiness of its fiscal management was an ever more elaborate accounting practice. Above all, the state strove to keep an up-to-date inventory of revenue-yielding property and people, an effort in which tracking large amounts of detail depended on the use of writing.

Bookkeeping from the Predynastic Period to the Old Kingdom

TOMB U-J. The earliest writing on bone tags and pottery from tomb U-j, introduced in [Chapter 1](#), is the first indication of writing's usefulness in making inventories ([Figures 3.4, 3.5](#)). The inscriptions on the U-j burial goods probably notate quantities and sources or destinations, most likely royal estates. The tags were originally tied to the goods they referred to – for example, bales of cloth – so that there was no need to specify the names of the goods.⁴² The excavators noticed that large pieces of bone appear to have been first inscribed in a grid with many copies of a single group of signs and then cut off along the grid lines.⁴³ It seems to follow that before making the tags the scribes had a list, mental or written, of the royal estates' names and of the quantities of the products associated with them. A written memorandum seems more likely, because the quantity and variety of the burial goods, including food and drink, were clearly enormous. Although badly looted, one of the chambers still contains more than four hundred wine jars imported from Palestine. Neatly laid out storage chambers filled with immense quantities of provisions continued to be a part of princely burials until near the end of the Third Dynasty.⁴⁴ The layout and contents of tomb U-j may tell us what the royal warehouse and granary looked like. If dead kings and high courtiers had such impressive provisions, their living descendants must have had comparable or even bigger stocks of grain and other valuables in their living places, and there must have been officials in charge of noting the incoming and outgoing of the goods. Thus it is possible that notations similar to the U-j tags were used to keep track of the royal stores in life. The numerical tags recording small numbers in tomb U-j must themselves be evidence of inventory making. Similar ivory tags are attested in the royal tombs of the First Dynasty, such as the one that records “123 beads” in King Aha's tomb. On the bottom of a stone dish from the tomb of Djet, two reigns later, we find an enumeration of alabaster objects written in cursive script in ink.⁴⁵

The regular inventorying of the royal property was a significant event worth noting down in the royal annals of the Fifth Dynasty. In the Palermo Stone ([Figure 3.6](#)) there are entries denoting this act – for instance, “third occasion of (making) the inventory of the House-of-Horus-and-Seth.”⁴⁶ Indeed I suspect that the funerary use of accounting notations was modeled on secular bookkeeping of the kind that lies behind the Palermo Stone. The use of tags to identify contents or record other administrative information is well attested in the Middle and New Kingdoms ([Plate X](#) bottom), Mesopotamia, and Han China.⁴⁷ Tags in durable materials were especially suitable for long-term storage.

PAPYRUS. The bookkeeping on perishable materials posited for Dynasty 0 brings us to the origin of papyrus manufacture. The earliest known papyrus comes from the tomb of Hemaka, the chancellor of King Den of the First Dynasty.⁴⁸ The uninscribed papyrus roll was inside a small wooden box found in one of the many storage chambers. Hemaka's career moved from administrator of royal domains to head of the state's treasury, all

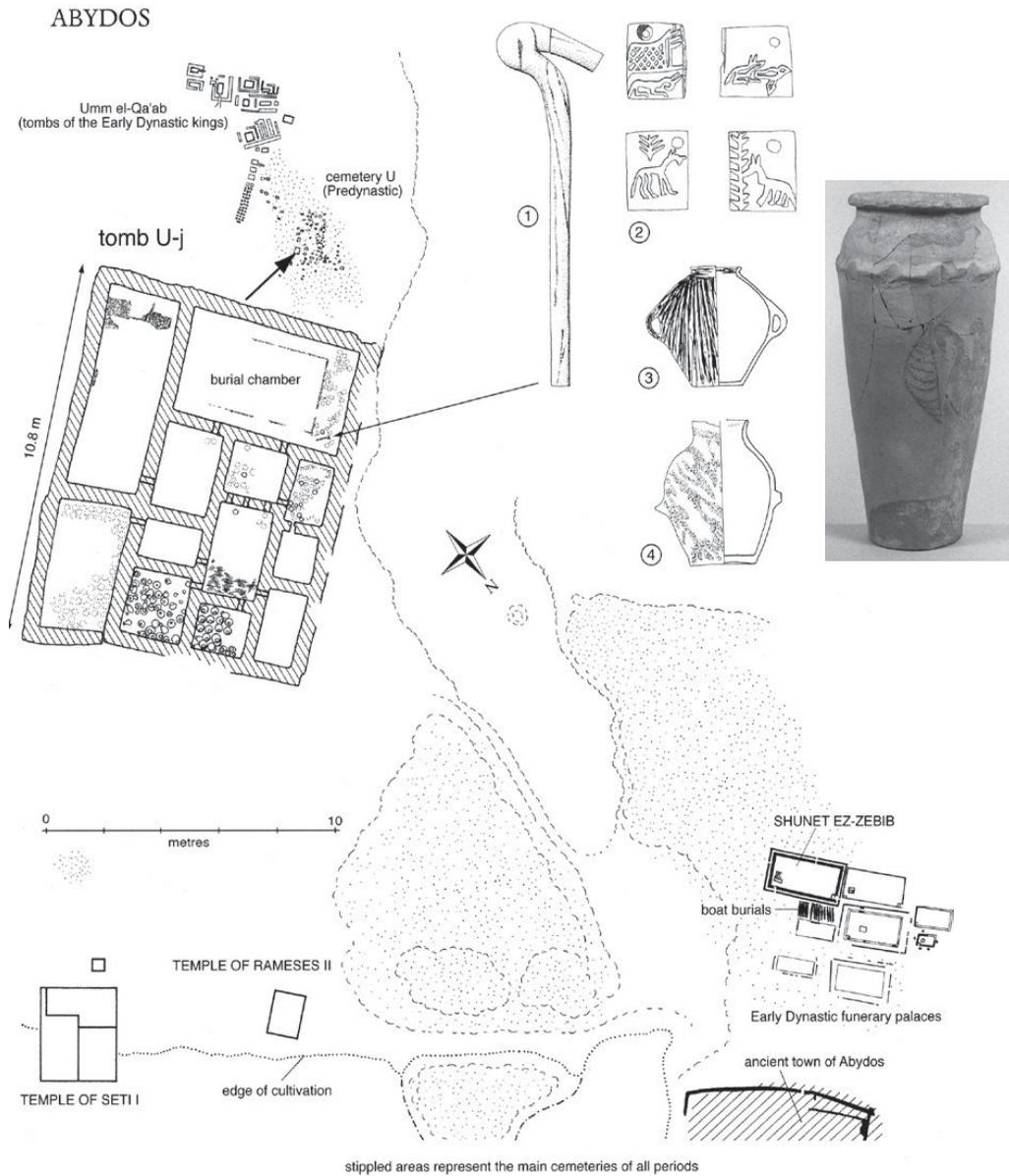


FIGURE 3.4 Inventorying royal burial goods. Tomb U-j at the royal necropolis of Abydos, with selected burial goods from its storage chambers. (1) Ivory scepter. (2) Four ivory tags incised with the earliest known hieroglyphic signs. The perforations allowed them to be tied to the goods they labeled. (3) and (4) Two examples of the ca. 200 imported Palestinian pottery storage jars left untouched by tomb robbers. After Kemp 2006, p. 90, Figure 30. *Top right*, an example of the large indigenous storage jars with a 20-cm-high single sign written in ink on the outside wall. Photograph courtesy of Deutsches Archäologisches Institut · Kairo.

his positions involving the intensive management of wealth.⁴⁹ Was this roll of blank papyrus intended for him to use in the other world? Unlike Mesopotamian clay tablets or Chinese wood and bamboo strips, papyrus rolls were not made by the scribes themselves but were manufactured by specialized laborers and supplied ready for use.⁵⁰ The



FIGURE 3.5 Sign repertoire of the inscriptions on the ivory tags and pottery jars from tomb U-j. Multiple attestations of a single sign are usually listed in a row. Assembled from Dreyer et al. 1998, pp. 183–87.

Mesopotamian clay tablet was an almost natural outcome of a long history of using clay in prehistoric administration.⁵¹ Papyrus, in contrast, is more like an invention. Because Baines sees the invention of Egyptian writing as taking place mainly in a setting of royal display, he supposes that the invention of papyrus postdated the invention of writing by a century or so, occurring when the function of writing expanded into the administrative sphere during the First Dynasty.⁵² But an earlier date for its invention and for its use in administration is possible, on the evidence of another group of signs from

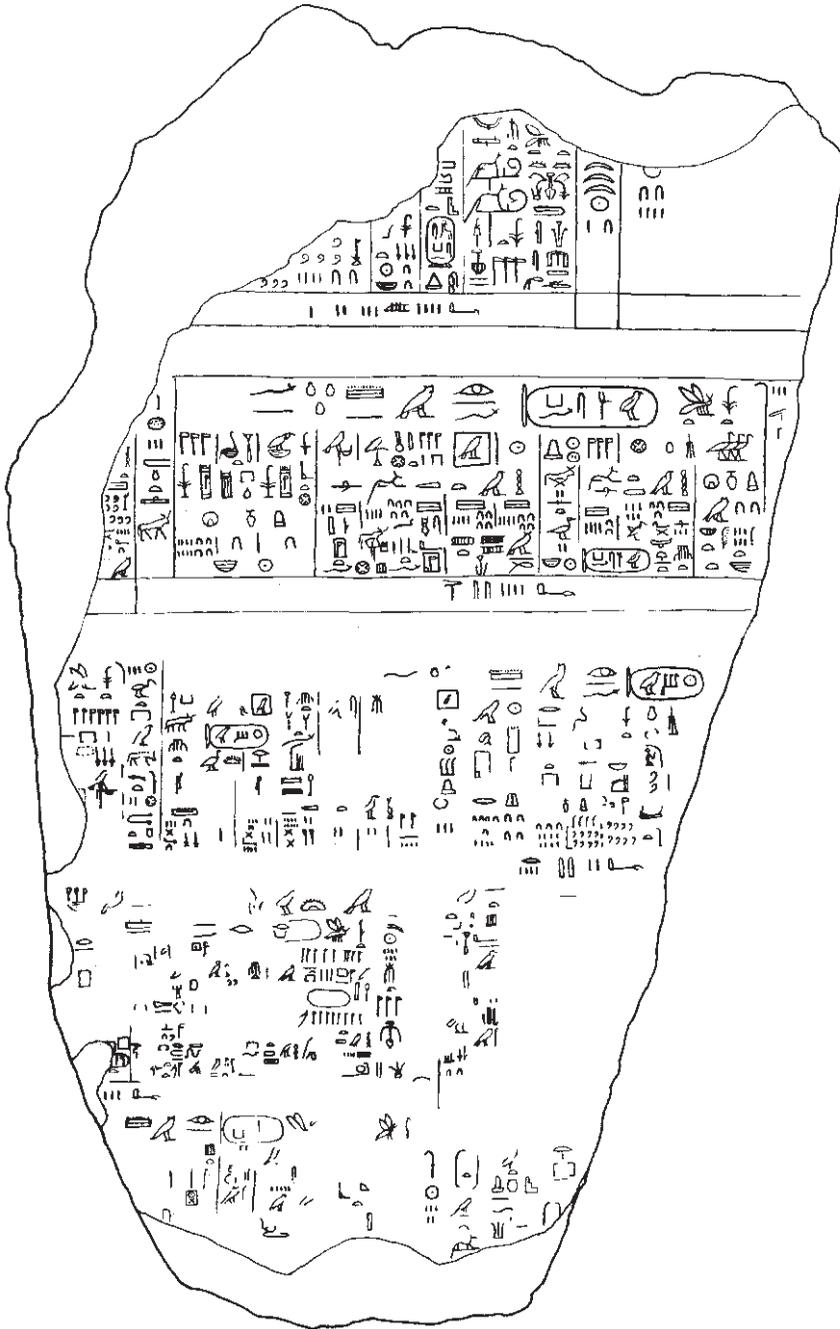


FIGURE 3.6 Royal annals displayed: the Palermo Stone, verso. Sixth Dynasty (late third millennium B.C.). After Wilkinson 2000, Figure 2.

tomb U-j. More than one hundred pots were inscribed with large signs written in ink (Figure 3.4, top right). Baines suggests that these pottery signs are the earliest known cursive forms of the script (i.e., precursors of hieratic), forms used mainly for administration in restricted contexts yet to be attested but extended to ceremonial display in the



FIGURE 3.7 Inventorying war booty: the Narmer Macehead, First Dynasty. After Robins 1997, p. 35, Figure 28.

context of the royal funeral.⁵³ Even if these cursive signs were never written in groups of more than two, as Baines suggests, they could have been used for bookkeeping on papyri in a format resembling that of the proto-cuneiform tablets from Uruk and Susa (Figure 3.3).

The hypothetical early use of papyrus in administration must be tested by future findings, but Narmer's macehead (Figure 3.7), which is only a few generations later than tomb U-j, suggests what early bookkeeping on papyrus might have looked like. The lowest register on the right depicts, albeit symbolically, a tabular account of war booty. Numerical signs in decimal position are carved under a bound captive, a seated captive, a goat, and a bull.⁵⁴ In his earlier writings Baines suggested that during the Early Dynastic and Old Kingdom periods the "list was a more direct evolution from administrative use, and to a lesser extent from monumental use, than belles-lettres would have been" and that continuous discourse was not written until centuries after the invention of writing.⁵⁵ I suspect that listing precedes monuments and that the tabular format's popularity in monumental display resulted from its priority, its suitability for conveying administrative information, and its compatibility with the artistic convention of laying out pictures in registers.⁵⁶ To make an inventory is to sort things into thematic groups. List making seems to be an automatic solution to this need. It is in the context of administration that we find the most obvious motive for making lists. More will be said on the onomastic origin of writing in Part III and the Conclusion.

THE OFFERING LIST. Although we lack direct evidence from earlier papyri, we can nevertheless gain some idea of the classificational aspect of bookkeeping in one of the most popular genres of Egyptian writing: the offering list. Offering lists designed for display first appear on the so-called niche stones of the Second Dynasty. The niche stone was a small inscribed limestone slab that replaced the plain brick niche of the mastaba tomb of First Dynasty court officials; it was the forerunner of the classical slab stela of the Fourth Dynasty.⁵⁷ It usually depicts the deceased seated before an offering table accompanied by short lists of food and other offerings. What attracts our attention here is the rigidly structured tabular list usually on the far right of the panel (Figure 3.8). In layout this list resembles what we have seen on the Narmer macehead (Figure 3.7), enlarged and set in a carefully delineated grid. Like the rectangular cases on proto-cuneiform tablets (Figure 5.1), each compartment contains either a number or

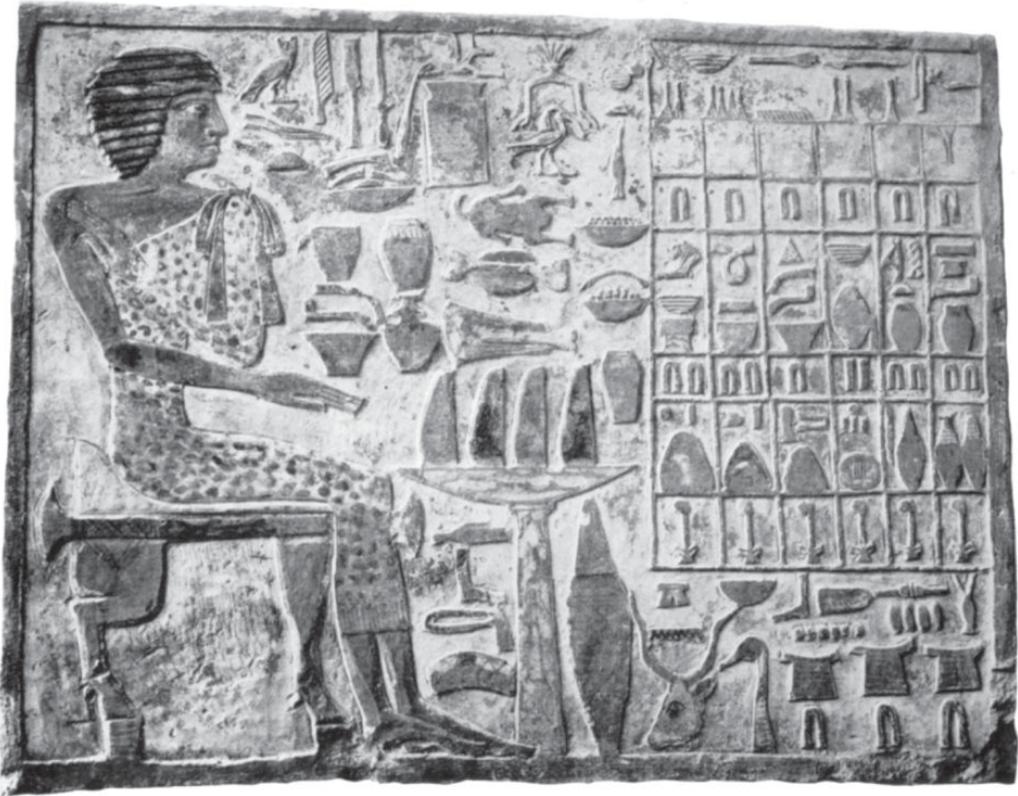


FIGURE 3.8 Displaying tomb inventories as a substitute for real offerings: a niche stone from Saqqara. Late Second or early Third Dynasty. After Smith 1958, Plate XIII.

the name of the goods offered. Where did this tabular list come from? We may recall that the tags from tomb U-j record either numbers or place names but leave the commodity's name unrecorded because the tag was tied to the commodity itself. I have argued that mass production of the tags depended on the prior existence of tabulation providing a one-to-one correspondence between the name of the goods, their quantity, and their place of origin or destination. The offering list shown in [Figure 3.8](#) looks like just such a tabulation. Cutting along the lines of the grid would give us a set of tags with numbers and names.

It is worth noting that the earliest offering lists for public display are attested not in the royal tombs of the Early Dynastic period but in the tombs of officials. William Stevenson Smith long ago suspected that the earliest niche stones might have had a provincial origin because they “all represent inferior private workmanship contrasting with the careful work of the royal reliefs of the period.”⁵⁸ Is it possible that someone low in the official hierarchy decided to transcribe the papyrus offering list into stone, thereby inventing something that caught on, eventually to be adopted and perfected in the royal tombs? I have mentioned that during the Early Dynastic period it was normal to pack the tombs with enormous quantities of provisions. In the Old Kingdom the quantities declined sharply. Kemp suspects that the decrease in the goods actually buried with the deceased and the appearance of lists of funerary

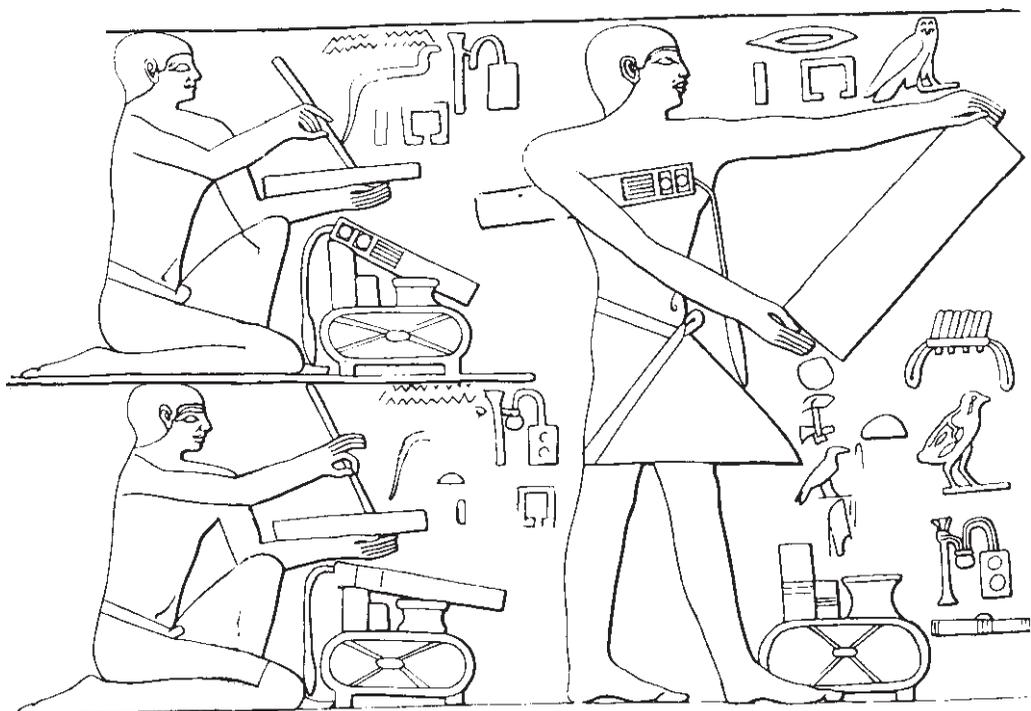


FIGURE 3.9 Reading out the tomb inventory. The steward Khai reads out an inventory for the deceased from a papyrus prepared by the funerary scribes behind him. Their scribal kits, including palettes, pointed erasers on cords, water pots, pens, and papyrus rolls are shown. Drawing from a relief in the tomb of Mereruka at Saqqara, ca. 2350 B.C. After Aldred 1998, p. 87, Figure 47.

estates (in the form of personified estates with captions) at the transition from the Third to the Fourth Dynasty indicate the first establishment of funerary estates for the mortuary cult.⁵⁹ A more general interpretation of the tomb decoration that now appears is that its productive content was meant to be a semimagical substitute for real offerings.⁶⁰ Combining these interpretations we may say that for economic reasons the originally secular goods inventory was gradually transformed into something that had the magical power to represent reality. At first poorly designed and carved, the tabular inventories were later fully incorporated into the compositional design of the slab stela (Plate IX).⁶¹ Often combined with a new written genre – the offering formula – the now totally idealized offering list took a prominent role in the funerary cult that it kept to the end of the dynastic period and beyond (Text 3.7a–b and Plate IX caption).

The fusion of bureaucracy and religion is best illustrated by the scenes from the Sixth Dynasty tomb of Mereruka at Saqqara, in which funerary scribes are shown making tomb inventories that the steward read out during the funeral (Figure 3.9). We see this interaction between administration and religion also in early Chinese mortuary cult. In the Warring States and Han periods, tomb inventories and gift lists were publicly read out by scribes and then buried with the deceased.⁶² In each case, it was the administrative documents that appeared first; religion then appropriated their forms. We can still see vestiges of the secular tomb inventory in the investigation records of

the famous tomb robbery in the late New Kingdom Valley of the Kings, to be discussed below (Text 3.16).

Text 3.7a. Offering formula on the sarcophagus of Minkhaf from Giza (Fourth Dynasty).

- (1) An offering which the king gives and an offering which Anubis, who dwells in the sacred land, gives that offerings may be established for him, for the king's son Minkhaf daily.
- (2) a thousand of Upper Egyptian grain, a thousand of Lower Egyptian grain, a thousand of barley, a thousand of wheat, a thousand of *besha* grain, a thousand dates, a thousand of *dudju* flour.
- (3) a thousand *ra* geese, a thousand *tjerep* geese, a thousand *set* geese, a thousand *semen* geese, and a thousand pigeons.
- (4) a thousand *shabet* boats, a thousand *wahet* boats, a thousand *setjer* boats, and a thousand *nehbet* boats

Text 3.7b. Excerpt from a long offering list from the chapel of Ankhmeryre at Saqqara (Sixth Dynasty).

water for pouring	1	<i>ut</i> bread	1
fire for incense	1	<i>reteh</i> bread	1
<i>setj-heb</i> oil	1	<i>hetja</i> bread	1
<i>heknu</i> oil	1	<i>neheru</i> bread	2
<i>sefetj</i> oil	1	<i>depet</i> bread	4
<i>twawt</i> oil	1	<i>pezen</i> bread	4
best cedar/pine oil	1	cakes	4
best Libyan oil	1	<i>imy-ta</i> bread	4
...

After Strudwick 2005, pp. 429, 432.

LAND REGISTER. Of course, as Baines has pointed out, display and communication were complementary, not mutually exclusive.⁶³ It was not only for utilitarian reasons that the U-j scribes made their tags from ivory. The U-j tags are the first attestation of the proud display of what were essentially administrative records, something that continued throughout the dynastic period. The major subjects for written display were the names of the various royal foundations and the quantities of their contributions to the state revenue. Mention has been made in Chapter 1 of the use of sealing as a medium for display in the Early Dynastic period. A good number of seal impressions recording

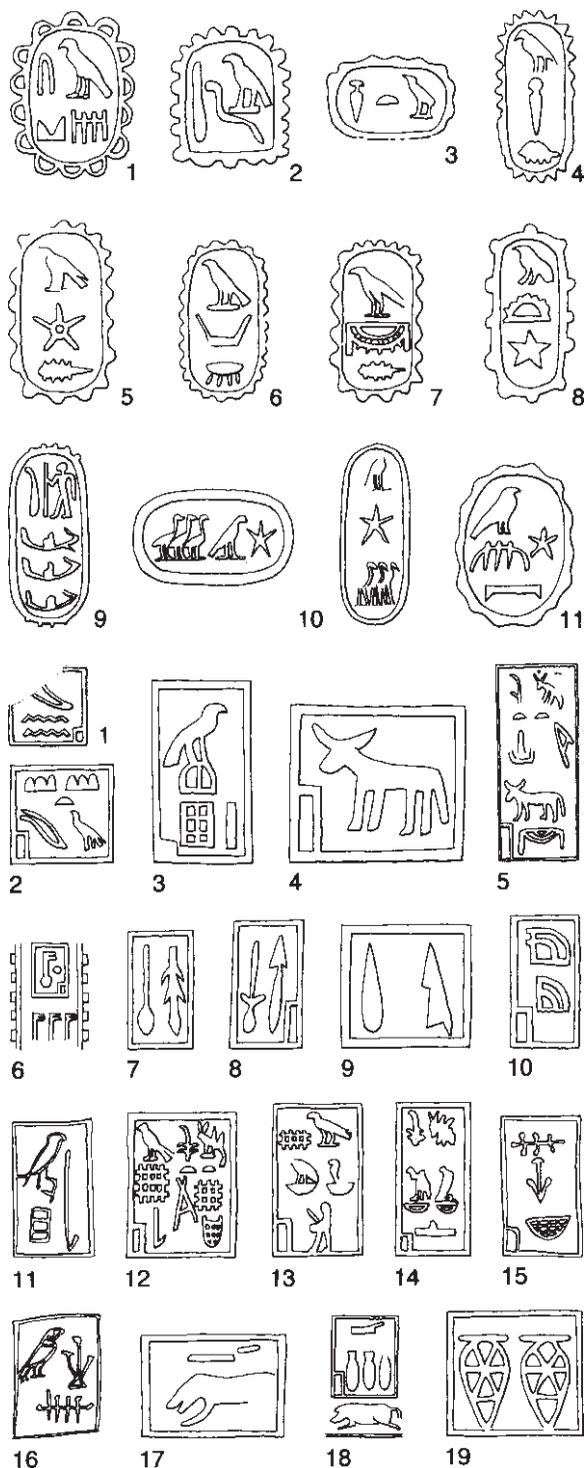


FIGURE 3.10 A simple cadaster? Royal domains and estates of the Early Dynastic period as listed by modern scholars. *Upper three rows*: cartouche-enclosed names of royal foundations preserved on sealings from Abydos and Saqqara. *Lower rows*: names of estates for provisioning the royal tombs preserved on sealings and inscribed stone vessels from Abydos and Saqqara. After Wilkinson 2001, pp. 119–20, Figures 4.1–4.2.

the names of royal domains and estates have been recovered from the necropolises at Abydos and Saqqara; these names were also inscribed on stone vessels connected with provisioning the tombs.⁶⁴ When modern scholars group these place names in one illustration, as in [Figure 3.10](#), they may well be mimicking an ancient practice of listing state property in a crude form of land register. Early stone reliefs that group city symbols together to represent conquered foreign places might be understood as having turned such a register into a display motif.⁶⁵

A core concern for any state is to maintain direct control of land and people, and this requires institutionalized knowledge in the form of land registers and population censuses. As mentioned earlier, this kind of control depends on its abstractness: names and numbers are abstractions, not tangible entities. The state had a compelling need to survey its resources, and its land and population surveys had to be conducted regularly to keep them up-to-date. Because the arable landscape fluctuated according to the Nile's annual inundation, there were bound to be changes in the boundaries of the cultivation. A farmer did not work the same tract of field all the time.⁶⁶ Population statistics are constantly changing, too: people are born, grow up, age, and die. All these variables affected the accuracy of the state registers.

Not surprisingly, then, at least from the First Dynasty, the state conducted a regular survey of the state's resources, called the Following of Horus. To the court this was an event so important that it was used to supply year names on large tags labeling produce, which by the First Dynasty had replaced the tiny tags of U-j.⁶⁷ The annals of the Palermo Stone indicate that the Following of Horus was biennial; its regularity and predictability made it particularly suitable for naming a year at that year's beginning. The exact nature of the survey is not clear, but it seems to have been a tour of inspection that enabled court officials to keep up-to-date records of the agricultural potential of the provinces.⁶⁸ Some scholars interpret an entry from the reign of Den of the First Dynasty as referring to a census of Egypt's population; Wilkinson instead translates the entry in question as "organizing the agricultural holdings of the northwest and all the people of the east."⁶⁹ In either case, registering the population seems to be referred to. The resources being inventoried in the Following of Horus were at first unspecified; later it was described as a counting "of fields and gold." An entry for the sixth year of Userkaf, first king of the Fifth Dynasty, records the king's donation of offerings and land to various recipients by way of endowment for religious institutions. At the end of the entry it is recorded that there was a "census of cattle" taken in this year ([Text 3.8](#)). It may only have been herds of animals that were counted (but perhaps all animals, not only cattle).⁷⁰ Alternatively, it may be that cattle were chosen to symbolize the total wealth of the state because of their high perceived value since well before the dynastic period.⁷¹ The latter interpretation receives support from the other information contained in the same entry. The king's pious donation of offerings and land to temples across Egypt is neatly laid out on the stone as if copied from original documents on papyri ([Text 3.8](#) and [Figure 3.6](#)). There can be little doubt that the royal house kept central archives documenting its wealth and expenditure in this tabular format.⁷² It also seems clear that the court selectively published its archives to show the benevolence and piety of the king. That is, the expenditure side of the royal accounts was publicized, not the side documenting extraction from the populace; a wise decision.

Text 3.8. An entry for the sixth year of King Userkaf in the Palermo Stone (Figure 3.6, verso of the Palermo Stone, second register, second entry starting from the year sign on the extreme right).

the dual king Userkaf: he made his endowment for:

the souls of Heliopolis:

20 (measures of) offering-bread and -beer at every “sixth”-festival;

arouras of arable land: $36 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8}$? (i.e., $36\frac{7}{8}$) *arouras* from the ...

(estate) of Userkaf;

the gods of (the sun temple) “occasion of Ra”:

24 *arouras* (of arable land) (from the ... (estate) of Userkaf);

two oxen (and) two pintail ducks every day;

Ra:

arouras of arable land: 44 *arouras* in the nomes of Lower Egypt;

Hathor:

44 *arouras* (of arable land in the nomes of Lower Egypt);

the gods of the estate of Djebaut:

54 *arouras* (of arable land) (and) erecting a pedestal (in) his temple (in) Pe of the Xoïte nome;

Horus:

2 *arouras* (of arable land) (and) building (the wall of?) his temple;

Nekhbet of the god’s-palace of Upper Egypt:

ten (measures of offering-bread and -beer every day);

the gods of the god’s-palace of Upper Egypt:

48 (measures of offering-bread and -beer every day)

third occasion of the cattle census

4 cubits, two-and-a-half fingers

After Toby Wilkinson 2000, pp. 153–4; see also Strudwick 2005, p. 70.

COMMEMORATING LAND TRANSACTIONS IN EGYPT AND MESOPOTAMIA. Extracts from the royal archives were also preserved and displayed by recipients of royal beneficence, but for different reasons. The chapel of the high official Metjen at Saqqara, dated to the beginning of the Fourth Dynasty, contains the contracts of Metjen’s acquisitions of land, backed up by excerpts from royal decrees relevant to his landholdings (Text 3.9).

Text 3.9. Metjen’s landholding certificate.

1. (Document of record) the land administrator, nome ruler, Overseer of Commissions in the Kynopolite nome, Overseer of Messengers:
2. (Re:) the Mendesian nome, town of Ram’s Area: a field of 4 *arouras* (2.7 acres), the people, and everything in the funerary-estate decree of the scribe of stores (Metjen’s father). They have been given to one son (Metjen), and he (Metjen)

has been made to get the funerary-estate decrees from his (Father). For he has a document

3. that has been assigned to him at his disposal. To the Overseer of Commissions of the Western Saite nome:
4. There have been founded for him (Metjen) 12 Metjen-foundations of the Saite, Xoite, and Letopolite nomes, whose yield he shall have on festivals.
5. There have been bought for him from many landholders a field of 200 *aruras* (136 acres),
6. so that offering-hall bread might come forth every day in the *ka* chapel of the King's Mother Ni-maat-hapi,
7. and an estate 200 cubits long by 200 cubits wide (344.5 × 344.5 feet), with a wall equipped and set with good wood, a very big pool made in it, and planted with figs and grapes.
8. A record of it is in the royal archive, and their names (of the landholders from whom Metjen purchased the land) are in the royal archive.
9. Very many trees and vines have been planted, from which much wine might come.
10. A vineyard of a hundredth of an *arura* (297 square feet) has been made for him inside the wall, planted with vines.
11. I-meres, a Metjen-foundation (the name of the 200-*arura* field), and Sobek's Mound, a Metjen-foundation (the name of the estate).

After Allen 1999, p. 213, numbers corresponding to column numbers. See also the translations of blocks 7–11 in Eyre 1994b, p. 67, and Baines 1999, p. 32, and the whole translation given in Strudwick 2005, pp. 192–3, Decree III and IV.

Quoting royal decrees was an acknowledgment of the power of writing. Similar quotations occur in records of the appointment of officials in China and Egypt (Texts 4.4, 4.5). The text with embedded royal decree could serve as a contract between the giver and the recipient, guaranteeing an income. Baines suggests that Metjen's acquisition of the vineyard in Text 3.9 (blocks 7–11) was chosen for detailed treatment by the text's author because it was considered one of Metjen's main achievements. The description was probably adapted from documentary practice in hieratic on papyrus, but it "greatly transcends the documentary."⁷³ The inscriptions are beautifully cut, deep and sharp, and they are prominently located in the chapel, which was a semipublic place.⁷⁴ They surely represent a costly effort to immortalize perishable administrative documents and to ensure a steady income both to the deceased and to those who were employed to maintain his mortuary service.⁷⁵ This monumental transcription of mundane economic texts is comparable to the recording of land transactions and royal entitlements on Mesopotamian stone monuments. I have not discussed these in the previous pages on Mesopotamian accounting, and they merit some comment here.

In third millennium Mesopotamia the transfer of property was sometimes commemorated by putting inscriptions, occasionally accompanied by imagery, on stone artifacts (Text 3.10).⁷⁶ Assyriologists have dubbed these stones “ancient *kudurru*” because of their similarity to a group of much later stone artifacts, called *kudurrus*, that bear inscriptions. These objects most often take the shape of tablets, the dominant form for administrative documents, but other shapes include stela, statue, disk, vessel, and cylinder. They are generally very small, ranging from about 4 to 25 cm high, although a few exceed this range, the largest being the obelisk of the Sargonic King Maništušu, 144 cm extant height. In size, perhaps, most of these stone objects do not qualify as monuments, but two things argue that they were meant to be displayed to a wide audience. One is that stone was a scarce material that had to be imported from outside Mesopotamia. Anything made of stone is likely to have been a prestigious object intended for lasting display. The other is the likelihood that these objects were deposited in temples, although no secure archaeological context has been documented for any of them. Because most of the inscriptions record multiple transactions (Text 3.10), their modern editors propose that “once the buyer accumulated a considerable number of such records (either multiple or individual), he had them copied on a stone *kudurru*, which he then deposited in a temple, to serve as a permanent and public record of his purchases.”⁷⁷

Text 3.10. King Maništušu bought land: Synopsis and excerpt from the Maništušu Obelisk.

Side A: Introductory statement; Transaction A1-A3; details concerning A1-A3

Side B: Transaction B

Side C: Transaction C1-C3; details concerning C1-C3

Side D: Transaction D

Side A: “Maništušu, king of the totality, bought . . .

[transaction A3:] 73 *iku* of land; its price is 243.1.2 *gsg* of barley; at the price of 1 shekel of silver (for) 1 *gsg* of barley, its silver (equivalent) is 243 $\frac{1}{3}$ shekels of silver; (this is) the price of the field; 36 $\frac{1}{2}$ shekels of silver is the additional payment of the field; 1 TÚG.ŠU.SÈ.GA cloth (for) DINGIR-*ba-ni*, son of *Ra-bi*-DINGIR of *La-mu-um*, the temple-administrator of Zababa; 1 TÚG.ŠU.SÈ.GA cloth (for) PÙ.ŠA-*Ma-ma*, son of *Ur-^dNin-kar*; total of 2 TÚG.ŠU.SÈ.GA cloths; (this is) the gift of the field; total of 2 men, the “lords of the field,” the recipients of the silver, descendants of *La-mu-um*, the temple-administrator of Zababa.

[Details concerning A1-A3:] Total of 1333 *iku* of land; the field’s border to the north is (the property of) *Si-lu-ga-ru₉-ut*; the field’s border to the west is (the property of) *La-mu-um*, the royal land; the field’s border to the east is the Tigris (?); the field’s border to the south is (the property of) *En-bu*-DINGIR. . .

After Gelb et al. 1991, pp. 116, 122–3.

The third millennium practice of memorializing the acquisition of property in stone found an echo in the late second millennium and the first millennium in the *kudurru*

(Text 3.11).⁷⁸ The subjects of the inscriptions on surviving *kudurru* include, in roughly descending order of frequency, royal grants of land, nonroyal purchases of land, royal adjudications, royal affirmations of previously held land, royal grants of prebend only, royal grants of exemptions only, nonroyal gifts of land, nonroyal gifts of prebend, and various royal and nonroyal events.⁷⁹ It is apparent from the list that the king is most often responsible for effecting the events recorded in the inscriptions but that the inscriptions are for nonroyal use. The fact that a few *kudurru* were found in temples suggests that they were deposited in the temples either for display or for the god's protection or both. The inscriptions themselves reveal that both functions were intended, for they invoke the divine to prevent ill treatment of the stone objects themselves, suggesting that the artifacts were publicly displayed and that there were real threats to their survival as memorials (Text 3.11).⁸⁰ By making these monuments and placing them in temples, their makers sought to secure divine favor for themselves and their heirs.

Text 3.11. Commemorating royal grants of land, prebend, and tax exemption. (This stone monument, dating from the reign of Nazi-Maruttaš (1307–1282 B.C.), was excavated in 1970 in Larsa, in a side room of a chapel of the Ebabbar, a temple dedicated to the sun-god Šamaš, together with another, similar monument dating to the reign of Kudur-Enlil and an undatable fragment from a third. See Margueron 1972.)

narû of fields, prebend, orchard, of Puzru, cantor of the Ebabbar; "Protector" (is) its name. A 30 (*gur*) (field), (measured at the rate of) 3 *ban* seed grain to the *iku* (reckoned according to) the "big cubit," farmland of (the settlement) Rabûti: (on) the bank of the Tigris, province of Sîn-ašarêdu. Bordering above, to the north, the Tigris; bordering below, to the south, (property of) Takušiš; to the east, (property of) Paragašîtu, daughter of the king; to the west, the long sides, (property of) Amêl-Marduk. A one *pānum* share, (measured with) the 5 *silā ban*, of the Ebabbar, Burnaburiaš, the king, granted to Puzru, son of Ea-nābû-šû, his servant. He brought him near the Ebabbar. A 30 (*gur*) (field), (measured at the rate of) [3 *ban*] seed grain to the *iku*, (reckoned according to) the "big cubit": farmland of the narrow reed marsh of the Gate of the Wall, (on) the bank of the canal Ša-ilu-nûri, province of Sîn-ašarêdu. Bordering above, to the north, Bît-...; [bordering] below, to the south, Bît-Maza; to the east, Bît-[PN]; to the west, Bît-...]. A 30 (*gur*) (field), (measured at the rate of) 3 *ban* seed grain to the *iku*, (reckoned according to) the "[big] cubit" farmland of Bît-...]-kal-ruqûti (on) the bank of the Bêl Canal, province of the Sealand. [Bordering above], to the north, (property of) Lûsā-ana-nûr-Sîn, shepherd; bordering below, to the south, (property of) Atta-ilû-ma; to the east, the Bêl Canal; to the west, Ti-ri-ik-kal-li-x. A 10 (*gur*) field, (measured at the rate of) 3 *ban* seed grain to the [*iku*], (reckoned according to) the "big cubit," farmland of Larsa, (on) the bank of the New Canal, province of the Sealand. Bordering above, to the north, the New Canal; bordering below, to the south, the Royal Canal; to the east, the temple of Šamaš; [to the west, property of U]langa, a *šangû*-priest of Larsa. [(An x (*gur*) (field), (measured at the rate of) 3 *ban* seed grain to the *iku*, (reckoned according to) the "big cubit"], farmland(?) of the wall of Larsa. [Bordering above, to the north,] the palace orchard; [bordering below, to the south,] in the midst of the flat space of the city; [to the east, ...; to the] west, the city wall. [...]*ši-ip (lu)-ni* 2 *ban*, prebend of

the temple of Bēlet-ilī. [When] Nazi-Maruttaš, the king, so granted to Puzru, cantor, his [servant], he exempted him from (any work obligation on) canal, dry land, (from) tax on cattle or sheep. Whensoever (in) the future, (someone), either trusted officer or mayor, (someone) from among the royal troops, as many as there may be, from among family, relations, kin by marriage, who would rise up, (who) would violate (what is here commemorated) with regard to the land (and) prebend of god and king, saying he is a brother or relation, (who) would bury the *narû* where it cannot be seen, (who) would burn (it) with fire, (who) would cause a powerless, half-witted, simple, convictionless, brutish (person), a babbler, a weakling to raise (it) up – May (the gods) Anu, Enlil, and Ea curse him with a malevolent curse of no release! May Ninurta, lord of borders and *kudurrus*, obliterate his border! May he uproot his [*kudur*]ru! May Šin, great lord, fill him with leprosy and may he bed down like a wild ass outside the city! May Bēlet-ilī not settle (anyone) for his house(hold) and so cut off in his house birth of cattle, sheep, donkey, (and) human! May Gula create a persistent sore in his body, and may he acquire an unsoothable malady! May he bathe in blood and pus like water! [about five lines missing]. . . . May he dig a canal but it carry no water! May he own a [hom]e in the city but pass the night in the gutter! May he fence in a [mea]dow but may saltpeter seize it! [Na]zi-Maruttaš, mighty king, king of Babylon, [cra]fted (this) and in the sanctuary of Gula, x its inner part(?) x he placed (it).

After Slanski 2003, pp. 72–3.

If we compare the ancient *kudurru* and the Middle-Late Babylonian *kudurru* with the Egyptian inscriptions examined here – Metjen’s chapel inscription and King Userkaf’s annals entry in the Palermo Stone – some general patterns emerge. Functionally all of them commemorate the transfer of movable and immovable property, above all land, from one party to another. The desire to make the transaction record immutable is evident in the use of stone and in the installation in a sacred place. To put the text in a sacred place was to display it, although the audience was of course limited to those who had access. Although it is debatable whether we should call all of these display texts legal documents, they do contain copies of legal documents, and they had a recognized evidentiary value, especially those which concerned royal grants to individuals and nonroyal institutions.⁸¹ Not only did they confer prestige, but also, and more importantly, they could be used to protect the recipients and their heirs against royal failure to keep a promise. It is therefore not surprising that both parties kept archives of these transactions (Text 3.9, block 8). The emphasis on landownership is striking. In Mesopotamia the earliest known display text, dating a few centuries after the invention of writing, is the record of a land transaction and a direct copy of a secular document.⁸² If the U-j inscriptions are mainly the names of royal estates, as seems likely, then in Egypt too the earliest display writing records landholdings. The pyramid of King Sneferu (Fourth Dynasty) at Dahshur contains in one of its temples the most complete extant list of funerary estates (Figure 3.11).⁸³ As mentioned earlier, such lists probably derived from a crude and summary form of the official land survey. The earliest continuous texts on the ancient *kudurrus* are dated to the Fara period (ca. 2500 B.C.), slightly later than the first royal inscriptions containing grammatical

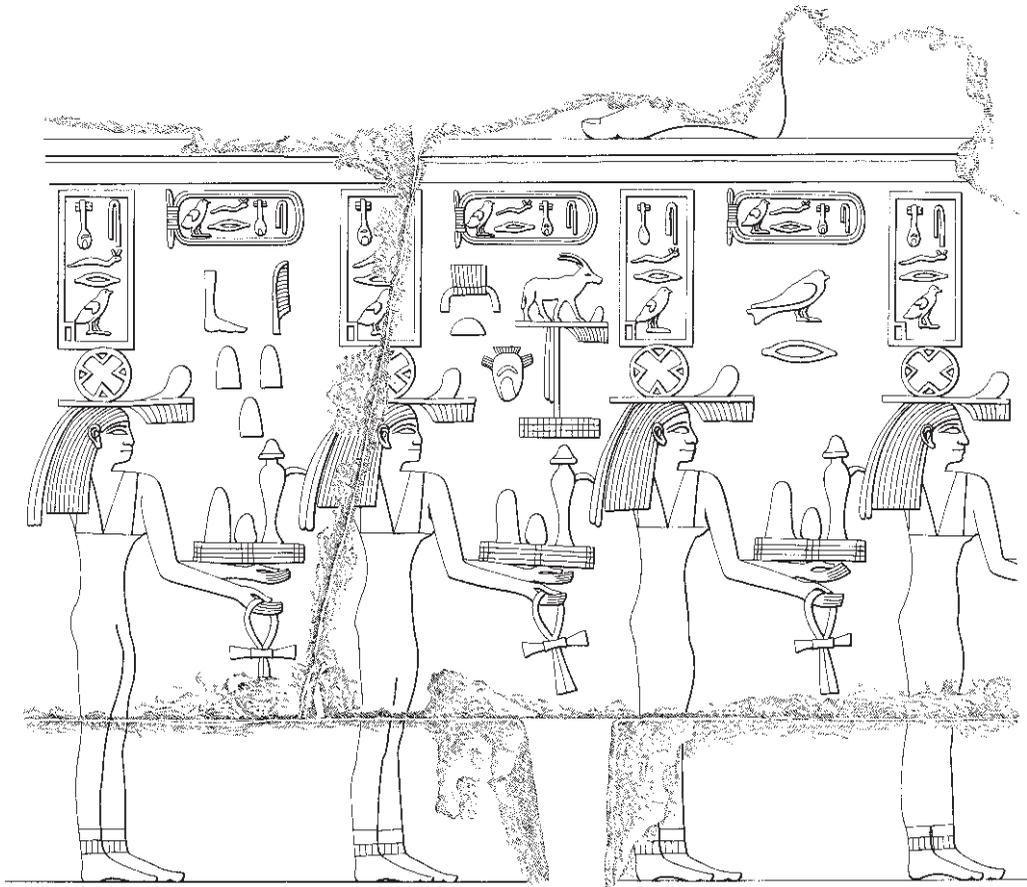


FIGURE 3.11 Animating land registers on a grand scale: part of a list of the funerary estates providing income for the pyramid temple of King Sneferu, as displayed on an internal wall of his temple at Dahshur, Fourth Dynasty. Each estate is personified as a female bearer carrying a tray of food offerings. The name of each estate is written beneath Sneferu's cartouche name, and the estates are classified by nome (administrative district). Compare Plate XIX. After Kemp 2006, p. 167, Figure 59.

and syntactical elements (ca. 2700 B.C.) and contemporary with the first appearance of literature.⁸⁴ It may well be that one of the forces driving the move to continuous written discourse was legal transactions. This seems to be the case in Egypt, where some of the earliest continuous texts on monuments are about entitlement to land.⁸⁵ The need to express something with language rather than by format might well have arisen first in the complex relationships involved in land transactions, such as kinship relations, field boundaries, and so on (Texts 3.9–3.11). Because land was one of the state's two most vital resources (the other was people), it is not surprising that land transactions were monitored by the royal house so as to keep the official land-survey records up-to-date.

CENSUS. The foregoing comparison between early Mesopotamian and Egyptian display texts shows that in both civilizations one main category of content was administrative and legal (the distinction between the two is not always clear-cut). So far our discussion has focused on the register of land and material goods. What about people?

Unlike land, individual commoners seldom appear in display texts in tombs and temples, although texts relating to land may refer also to the people, animals, and other property attached to the fields.⁸⁶ The few papyri surviving from the Old Kingdom do deal with aspects of human management, but most of them belong to the special category of temple economy and thus cover only one sector of the population.⁸⁷ The most informative documents that contain registers of people are the Gebelein papyri, which seem to have included the lowest class of agricultural workers, *corvée*, and artisans. They are listed by locality together with their status, such as “recruits.” The Gebelein texts confirm that these people had their names registered in official accounts and thus were under the control of the local institutions. This is what one would expect of the control mechanism of the early states: “the responsibility for registration and recruitment of work forces” rested with the local power base.⁸⁸

The recruiting of labor was of course done locally, but the use of the laborers was much centralized, as the Palermo Stone’s tantalizing entry from King Den’s reign seems to suggest (see earlier discussion). State projects such as the construction of pyramids leave no doubt about the central direction of temporary laborers. In the Old Kingdom the labor force was directed by the overseers of works to perform tasks connected with building, crafts, agriculture, and other activities, but no relevant administrative documents have been recovered.⁸⁹ In the Middle Kingdom there appeared an “Office of (enforced) Labor” that has left us some revealing documents about the management of human resources.

Bookkeeping During the Middle Kingdom

CONTROLLING HUMAN RESOURCES. The Papyrus Brooklyn 35.1446 probably originated from Thebes during the late Middle Kingdom.⁹⁰ It contains seven texts, some of which are probably connected. One text is a copy of a royal decree that shows the king intervening in a labor dispute probably caused by internal confusion within the bureaucracy ([Text 3.12](#)).

Text 3.12. A royal decree concerning laborers.

Year 6, month 3 of Peret, day 3:

(Copy of) another royal decree brought to the office of the reporter of the Southern City.

A royal decree to the lord vizier, the overseer of the 6 great mansions, Ankhu: Look, this decree of the king is brought to you to inform you that the Treasurer of the king, the overseer of fields of the Southern City, [Hauankhu’s son Ib]ia, has made petition, saying: ‘The field labourers in my estate, from the “Labour Office” of the Residence, are taken away from Itatsekhetiu [a place name], (though) they were given to me from the “Office of Labour”. Redeem me, my lord, letting me be given (people) in exchange (for them)!’ – so he said. Look, what has been done is heard. Look what is ordered to the appropriate authority who is in the Residence: ‘You shall have directives issued for the appropriate authorities who are in the Southern City!’ May you act accordingly. Look, the king is safe and sound! (May) your heart be likewise!

After Parkinson 1991, p. 85.

The decree reveals several aspects of the functioning of Egyptian bureaucracy. For use on his estate a local official named Ibia was assigned a certain number of laborers from the "Office of Labor." But these laborers were then reassigned to another estate, so he petitioned the king requesting replacements. The king issued a decree and sent it to the vizier, who passed it on to the authorities at Thebes. Reading the decree one gets the impression that most of these transactions were conducted in writing. Like Metjen's chapel inscriptions, which quoted royal decrees, this decree quotes Ibia's petition as though it were a written one (notice the use of the first person).⁹¹ The next quotation is from the king's order, but this time it sounds like dictation, for the decree was drafted by the king's representative in the form of a letter to the vizier. In representational art, Egyptian kings are rarely depicted in the act of writing, and their high officials not much more often; someone else reads or writes for them. But this artistic convention should not cause us to doubt that literacy was a required accomplishment for kings as well as officials. Mesopotamian and Egyptian letters, royal or not, regularly begin with a quotation from the previous letter, by way of reminding the recipient of the subject of the correspondence, just as we do in our own letter writing (email does it automatically).⁹² It is a sign that the keeping of files for future reference (accountability) had taken root in literate circles. Each office in the chain of command kept the original letter and made a copy, which it passed down to the next level. The copying of royal decrees illustrates the patchy nature of Egyptian administration mentioned earlier, for which I can do no better than to quote again Kemp's precise characterization:

Government in ancient Egypt was by royal decree, the system of administration was the sum of those decrees, and the resulting overlaps and confusions of responsibility were tackled by fresh decrees in response to specific complaints. This cycle of decision – petition of complaint – redress was a basic part of bureaucratic life, to the extent that collections of model letters used in the training of scribes often contained a model letter or petition of complaint.⁹³

Because royal letters embodied the authority of the king, after the school texts they were probably the texts most often copied. We will see one of the model letters mentioned by Kemp in [Chapter 5 \(Text 5.10\)](#).

The decree in [Text 3.12](#) is about a transfer of labor organized by the Office of Labor, but the details of the laborers involved did not appear at this level of administration, not even their numbers. That information was left to other administrative documents. Again the Brooklyn papyrus provides us glimpses into the use of writing to control human resources. One text on this roll is a fragmentary list of ninety-five servants who probably belonged to the estate of a vizier's son, Ressenab, who later succeeded to his father's office.⁹⁴ Half of the servants are Asiatics who were prisoners of war given to Ressenab. Their original names were listed together with the names of the native Egyptian servants, but for the sake of easier identification the Asiatics were also given Egyptian names in a separate column.⁹⁵ Some of the Egyptian servants are listed in this column by their nicknames. A third column indicates the servants' special capabilities, and the last column their genders ([Text 3.13a](#)).

Text 3.13a. Excerpt from a list of servants.

The king's servant, the son of Ressonbe, Ankhu	He is called Hedjeri	House-man	Man
The female Asiatic, Rehwy	She is called Ka(i)punebi	Weaver of šsr-cloth	Woman
Her son, the son of Nefu, Ressonbe	He is called Renefres		Child

Based on Hayes 1955, pp. 87–109.

Stephen Quirke argues that the list was not for a state archive but was a private record made for Ressenbe as proof of ownership in response to a competing claim by a private plaintiff.⁹⁶ From a descriptive text that accompanies the list, it emerges that the plaintiff was none other than Ressenbe's own daughter. Although not for the state archive, the list was nevertheless filed with the Office of the Reporter of the Southern City, which also copied the king's decree we have just seen (Text 3.12, second sentence). It seems that this Office of the Reporter was a sort of public records office and that one branch of its archives was concerned with labor issues.⁹⁷ If the Brooklyn papyrus originated from this office, it would perhaps not be mere coincidence that the remaining text on the papyrus again deals with the transfer of laborers, though of a different nature.

Text 3.13b. Excerpt from a register of fugitives.

In the table that follows, (a) indicates the fugitive's name, (b) his place of origin or the place or person from which he had escaped, (c) gender; (d) orders from the central labor base. Years later the cases were reviewed and three columns added: (e) whether the fugitive had been captured ("here"), had returned voluntarily ("returning"), or was still at large ("being/to be brought"); (f) closure of the case; (g) checkmark indicating closure.

f	e	d	c	b	a	g
STATEMENT BY THE SCRIBE OF THE VIZIER, DEDUAMEN: IT IS CLOSED	HERE/	(an order) was issued to the Great Enclosure, year 31, month 3 of Shumu, day 5, for (his) being given to the farmlands together with his dependants for all time [in accordance] with the ruling of the court.	[man]	The orchard- [land of...]	Sab's son Montuhotep	Closed

-	TO BE BROUGHT/	(ditto), day 9, to say (that he has been) handed over to the ‘Office of Labour’ [on his day], and carried off for joining on his day (for labour duty) with the accursed Skipper of the Treasury, the accursed Deduamen’s son Montuhotep.	[man]	The dependants [of..]	Khusobek’s son Dedusobek	-
STATEMENT BY THE SCRIBE OF THE VIZIER, DEDUAMUN: IT IS CLOSED	HERE	(ditto), to release (her people) in the law-court, being (an order) issued in order to execute against her the law pertaining to one who flees without doing his labour-duty.	Woman	The scribe of the farmland of Thi[nis]	Sainhur’s [daught]er Teti	Closed
STATEMENT BY THE SCRIBE OF THE VIZIER, AMENSONEB: IT IS CLOSED	RETURNING	(ditto), to execute against him the law of one who [willfully] deserts [...]	Man	The scribe of the farmland of Khen[y{?}]	Wabet’s son Resnakht	Closed

Adapted from Parkinson 1991, pp. 100–1; the four entries correspond to numbers 57, 58, 63, and 64 in the original; see Hayes 1955.

This second text is a register of eighty fugitives who fled the labor duty imposed by the state’s “Office of (enforced) Labor” (Text 3.13b).⁹⁸ Like the administrative documents of the Old Kingdom, this one was written within ruled lines. It summarizes three case reviews that were conducted at roughly ten-year intervals. From the entries it is apparent that for the state to control its human resources the first thing necessary was to identify people, above all to know their names. But names were not unique, because naming was a highly local practice; people in different places might share the same name – for example, names based on divine names.⁹⁹ To reduce ambiguity, paternal information, gender, address, and sometimes social relationships were added (“the son of so-and-so,” “a man of such-and-such a place”). It is not hard to imagine that the

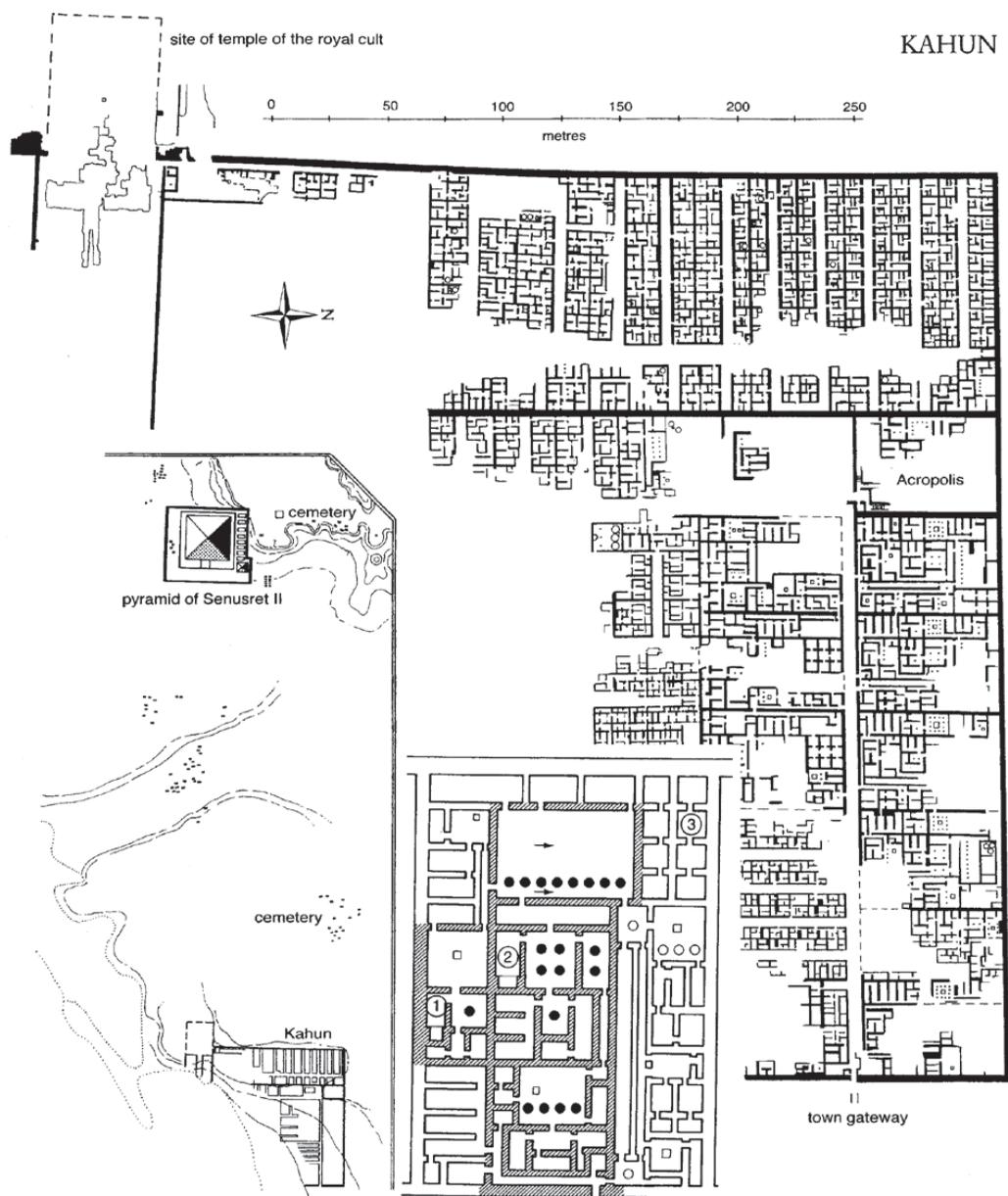


FIGURE 3.12 Tidy mind and strong will: the orthogonal plan of the Middle Kingdom town of Kahun, attached to the pyramid of King Senusret II. About ten large town houses were reserved for high officials; the rest of the population was assigned to modular houses of roughly uniform size. Superimposed on the city plan is a composite plan of one of the large town houses. The unhatched parts were storage spaces, including a granary (numbered 3). Each big house had a granary for supporting part of the city's population, in contrast to the central granaries of Inka cities (see Figure 3.16). After Kemp 2006, p. 212, Figure 76 (city plan); p. 214, Figure 77 (house plan).

local authority kept such registrations to assign labor duty and to assess and collect taxes. When subjects tried to dodge the state's claims, the bureaucracy comparing its registers would notice immediately and would wield its punitive power accordingly. We should probably not imagine that there was nowhere to escape; the papyri indicate

that some fugitives, like those in Mesopotamia who fled to avoid being drafted, were never captured (Text 3.13b, second entry).¹⁰⁰ However, it does not seem that there was abundant opportunity either, for one runaway’s family was held hostage until she was arrested (Text 3.13b, third entry).¹⁰¹ There seem to have been cases in which the fugitives “voluntarily” returned (Text 3.13b, fourth entry), but one wonders whether this was not because the news of family hostages had somehow reached them. If the state could connect a person with a particular family, it would not hesitate to exploit kinship for its own ends. Collective punishment was an effective means of control in early states, as we shall see most clearly in China.

TOWN PLANNING AND HOUSEHOLD REGISTRATION. The police function of population registration was probably best realized in the cities. Kemp has shown how ancient Egypt gradually perfected urban planning, which reached a peak during the Middle Kingdom.¹⁰² The geometrically logical planning of the pyramid town Kahun (Figure 3.12) was done by strong-willed scribes who were worried about the illegibility of an organic urban layout and the attendant difficulties of administration and policing. Because Kahun does not look like the result of gradual accretion, it is reasonable to imagine that the entire town was built from scratch and that people were then settled in it according to preconceived assignments. Because the population consisted entirely of state officials and conscripts fed by state rations, it was already organized before it moved into the town.¹⁰³ The Kahun papyri include many name lists of men, boys, women, conscript stone haulers, pure-priests, temple staff, and so on, just like lists we have seen (Text 3.13).¹⁰⁴ In the planners’ minds, populating the town would be simply a matter of pairing the name of each individual household, team, gang, or person with one of the modular houses. Although we do not have a census list for the entire town, we do possess some household lists for individual families, both wealthy and ordinary. A list for a priest’s household, very similar to the list preserved on the Brooklyn papyrus (Text 3.13a), includes the names of more than twenty servants.¹⁰⁵ Three more lists document the fluctuating size of a soldier’s household in three stages (Text 3.14a–c).

Text 3.14a. A house census from Kahun: First stage.

[...(date?)...]

[Made in the bureau] of the vizier, in the section for household-documents

[grea]test of tens of Upper Egypt Sery

by the estate overseer, accountant of cattle Nebipu son (?) of Kef(?)-[...]

scribe of the assessor [S]eneb, baker (?) Sen(?)-[...]

estate guard Bebu

The household document of the soldier Djehuty’s son Hori... [the second (unit?) of]

troops inst[alled (in?)...]

His wife Satsopdu’s daughter Shepset	woman of Gesiab
His son Snefru	Infant

Text 3.14b. A house census from Kahun: Second stage.

The household-document of the soldier Djehuty's son Hori... [the se]cond (unit?) of troops installed (in?) [...]sector

His wife Satsopdu's daughter Shepset	woman of Gesiab	
His son Snefru	child	
His mother Harekheni	her daughter Iset	
Her daughter Qatsenut	her daughter Rudet	child
Her daughter Mekte	her daughter Sneferu	child

Text 3.14c. A house census from Kahun: Third stage.

Year 3, month 4 of flood, day 15 under the Person of the dual king Sekhemkara living for ever and eternity.

Copy of

The household-document of the soldier Hori's son Snefru, his father being on the second (unit?) of troops.

His mother Satsopdu's daughter Shepset	pure-priest of Gesiab
Mother of his father Harekheni	ward of the cemetery-workers, northern sector
Sister of his father Qatsenut	"
Sister of his father Iset	"
Sister of his father Satsneferu	"

Entered under the household [-document of] his father year 2

Swearing of this household in the bureau of the vizier in year 5, month 1 of winter, day 8, as the household of a dead man (?)

Drawn up in the bureau of fields, northern sector

army scribe Sanehat, northern sector

in the presence of the greatest of tens of Upper Egypt Montemhat son of Imyerkhenret

by the estate overseer, accountant of cattle Senebeni, northern sector

scribe of the board Senbef son of Aau

[estate] guard [...]

After Collier and Quirke 2004, pp. 110–5; see also Parkinson 1991, pp. 111–12.

These lists were not part of a population census but were prepared for such legal purposes as property transfer and inheritance.¹⁰⁶ One location where legal proceedings took place was the Office of the Vizier; sometimes the vizier himself would be present on tour.¹⁰⁷ From the texts it seems that this office had a section in charge of filing household documents. At Kahun, control of the population seems to have been the responsibility

of the Accountant of People, the Bureau for the Issue of People, and the Bureau of Fields, where the surviving household lists were drawn up. It is interesting that the lists were made by the Accountant of Cattle rather than the Accountant of People. Collier and Quirke take this as a sign of the crossing or blurring of categories in administrative practice.¹⁰⁸ We might also remember, however, that on the Palermo Stone the term *cattle census* may be shorthand for a counting of the state's wealth (Text 3.8). Regardless of the internal bureaucratic divisions, it is almost certain that the state used individual household lists to make a comprehensive census for purposes of fiscal and police control. As Ulrich Luft concludes from his reading of a Kahun letter that concerns a man's delay in reporting for duties, "nobody could escape the attention of the authorities for a longer period. That means the Egyptian administration had kept personal registers for the settlements as it is evident from name lists."¹⁰⁹ Those who frustrated the state's interest – for example, by escaping labor duty – would be held in the "great enclosure" located somewhere in the town, as the list of fugitives tells us Sab's son was (Text 3.13b).¹¹⁰ The *Duties of the Vizier* (see Text. 3.19) tells us that even undutiful officials could be sent to this compound and be registered in the criminal list, with their offenses specified in the same form as in column "d" in Text 3.13b (Text 3.19, section 6).

Bookkeeping During the New Kingdom

POLICING THE CITY AND THE VILLAGE. The police function of household registration continued into the New Kingdom. A register dated to the end of the Ramesside period is preserved on the verso of a papyrus concerned with the investigation of tomb robberies (Texts 3.15–16).¹¹¹ Peet argues that the records of tomb robberies were written several generations before the household list, the piece of papyrus having been reused by scribes who, as other papyri record, found it and other old papyri in a jar. The thieves in the tomb robbery cases recorded on the recto were living in the same area that the household list pertains to. It lists 182 houses ordered from north to south in the west of Thebes. Although there is no accompanying map, there are three landmarks that can help orientation: the great temples of Seti I, Ramesses II, and Ramesses III (the lines that have square brackets in Text 3.15).

Text 3.15. Town-register of the west of Thebes between two named locations.

Year 12, third month of summer, day 13. Town-register of the West of Nō from the temple of King Menmarēy to the Settlement of Maiunehes.

The house of the temple of King Menmarēy in charge of the prophet Hapiwēr [the temple of Seti]

The house of the priest Ahautinefer.

The house of the prophet Sem of the temple of Amenhotpe.

The house of the priest Pnekhtresy ...

The house of the temple of Usimarē' Setpenrē' in the House of Amūn in charge of the *sem*-priest Khaemōpe [the temple of Ramesses II] ...

The house of the chief stableman Paukhed ...

The house of the gardener Pased.
The house of the sandal-maker Sutenu ...
The house of the scribe of the treasury Setekhmōse ...
The house of the temple of Usimarē' Miamūn in the House of Amūn [the temple of
Ramesses III at Medinet Habu] ...
The house of the scribe of the army Kashuti.
The house of the prince of the West of Nō, Peweryo ...
The house of the fisherman Neswennekh.
The house of the coppersmith Petheh ...
The house of the brewer Paukhed.
The house of the chief warehouseman Dhutemhab ...
The house of the landworker Peison belonging to the scribe Oneri ...
The house of the herdsman Penhesy son of Thari ...
The house of the physician Minkhau ...
The house of the goldsmith Nesptah ...

After Peet 1930, pp. 93–5.

The purpose of this household list is not very clear, but a list that precedes it gives some hints. The list is titled “On this day reception of the gold, the silver, the copper and the garments of the *šrmt* by the scribe Dhutmōse, the scribe Khonsmōse, and the attendant Shedemua.” A list of personal names follows, to each of which is attached an amount of gold, silver, copper, or garments. All these names occur also in the household list, leading its editor, T. Peet, to wonder whether it was intended for use by those responsible for levying the *šrmt* mentioned in the other list’s title, probably a kind of tax not otherwise known to us.¹¹² If Peet is correct, this text makes a good case for the fiscal function of the population census. However, the text on the other side suggests other possible functions. From the investigation record it seems that the convicts’ family backgrounds were crystal clear to the authorities (Text 3.16).¹¹³ One wonders whether the Theban authorities did not have a household list to use as a guide in recovering the looted tomb goods (Text 3.16b, first paragraph).

Text 3.16a. Excerpt from a copy of the investigation of tomb robberies.

[11th convict] Found in possession of the thief, the great criminal, the workman Hori son of Amenua of the Necropolis, as his share:

Good gold, 1 *deben* 7 *kite*.

White gold, 3 *deben* 5 *kite*.

Silver, 16 *deben*.

Total good gold, white gold and silver, 21 *deben* 8 *kite*.

Total: good gold, white gold and silver, 236 *deben* 8 *kite*.

Found: 240 *deben* 5 *kite*.

Surplus: 3 *deben* 7 *kite*.

Corner-pieces inlaid with a representation of the Birth of Horus in good gold, 4.

Copper in the form of vessels of beaten work, 48 *deben*.
Royal linen, *mek*-linen, good Upper Egyptian linen, rolled and bound, various garments, 63.
Ivory, 1 ... of an inner coffin ...
Ebony, 1 small lid (?) of a coffin.
Sweet oil, 2 *kb*-vases ...

Text 3.16b. Excerpt from a copy of the investigation of the traders for looted goods.

Received in Year 17, second month of winter, day 21, from the temple of Maat in Nō, out of the gold and silver recovered from the thieving workmen of the Necropolis, which [they] were found to have given to the traders of every house, and which was recovered by the vizier Khaemwēse and the chief priest of Amen-Re King of the Gods, Amenhotpe.

The trader Nessobk son of Seniri belonging to the army commander chief of the Hittite troops Amennūfer, 6 *deben* 4 *kite* of silver.

The trader Horemakheru, ditto, 1 *deben* 5 *kite* of gold and 3 *deben* 5 *kite* of silver ...

The trader and slave Paiika belonging to the troop-captain Paiunezem of the temple of Re, 6 *deben* 6 *kite* of silver ...

After Peet 1930, pp. 89–90.

The layout of the west Theban settlements, much less regular than Kahun, can only have increased the need for town registers. But a settlement comparable to Kahun in its rigid town planning – the workmen’s village Deir el-Medina on the westernmost edge of the sprawling city of Thebes – also yielded two lists of inhabitants arranged by household in the same manner as at Kahun (Text 3.17).¹¹⁴ The two lists were drawn up at two different times: sons listed as living with their fathers in the first stage had acquired their own houses by the second stage (the last house in Text 3.17); mothers who in the first list lived with their husbands were in the second residing with their sons and daughters-in-law (the first house in Text 3.17). The functions of the lists are not clear, because their original filing context is lost. They may have been used for ration distribution or, as suggested in the case of the Theban house register, for monitoring these royal tomb builders, some of whom indeed joined in the plundering of the very tombs they built. The lists would surely have helped the authorities disentangle the ties of kinship that linked households: Djehutymose in the third entry of Text 3.17 was living two doors down from his sister Tenetpaip, the wife of Amennakhte in the first entry.¹¹⁵

Text 3.17. A census of the workmen’s village at Deir el-Medina.

House of [Amennakhte son of Bu]kentuef, his mother is Tarekhan
His wife, Tenetpaip, daughter of Khaemhedje, her mother is Tenetkhenuemheb

His mother, Tarekhan, daughter of Neferhotep, her mother is Kahty
His sister Kaytmehty, daughter of Bukentuef, her mother is Tarekhan
House of Paankha son of Hormose, his mother is Nebuemheb
House of Djehutymose son of Khaemhedje, his mother is Tenetkhenuemheb
House of Penpare son of Nebnefer [...]

After McDowell 1999, p. 51.

RAMESSIDE LANDHOLDING. We now come to the late New Kingdom, the Ramesside period, a period that has left us some lengthy papyri concerning the affairs of state revenue. We have encountered several types of text that deal with lands and people, but most of them were on a small scale. The two New Kingdom papyri that we turn to now are, by contrast, very large, both in physical dimensions and in scope. Papyrus Harris I is forty-two meters long, and the Wilbour Papyrus is more than ten meters. Both contain extensive lists of landholdings and of people connected with the lands. Because their original archival context is lost and crucial internal information is lacking, there have been different opinions as to their ultimate purposes. Although the Wilbour Papyrus, dating to the reign of Ramesses V, is a few decades later than Papyrus Harris I, which belongs to the last year of Ramesses III, it will be convenient here to start with it and then proceed to Papyrus Harris I.

The Wilbour Papyrus has two texts. Text A, on the recto, is a list of various institutional landholdings in an approximately ninety-mile stretch of Middle Egypt. Text B, on the verso, enumerates royal domains in the charge of various officials and located “on the fields of” a number of institutions, in the same region as the fields of text A (Text 3.18).

Text 3.18a. Excerpt from text A of the Wilbour Papyrus.

The Temple of Millions of Years of the King of Upper and Lower Egypt Userma'atre
in the House of Amun

Domain of this house under the authority of the high priest [of Amun]

Domain of this house in the hand of the agent [Pre]nakht

Measurement to the north of the village of Inroyshes

Cultivation in the hand of the scribe Hori: 5 (*aroura*), 5 (sacks per *aroura*), (makes) 25 (sacks)

Apportioned for the House of Bata, Lord of Sako: 1 sack (3)¹/₂ (*oipe*)

Measurement in the *p'.t*-land to the north-east of [...]

Cultivated for him (?), the deputy Nesamun: [...], (making) 100 (sacks)

Another: [30 (*aroura*)], 5 (sacks per *aroura*), (making) 150 (sacks)

Another: 20 (*aroura*), 5 (sacks per *aroura*), (making) 100 (sacks)

After Haring 1997, p. 289.

Text 3.18b. Excerpt from text B of the Wilbour Papyrus.

Khato-land of Pharaoh under the authority of Seti, the mayor of Mi-wēr, (administered) by the hand of the district-scribe Pentwēre

Its fields: Region west of Mi-wēr (on) fields of the Landing-place of Pharaoh (in) Mi-wēr arable land, *arouras* 40, Balance 30, Balance, Arable Land, 30, Balance 20

Region north of the Temple of Suchus (on) fields of this house arable land, *arouras* 50

Region west of Gerg (on) fields of Phar[aoh] arable land, *arouras* 50

[Region of Pi-Khasē on fields of] Great Seat in the House of Ptah arable land ...

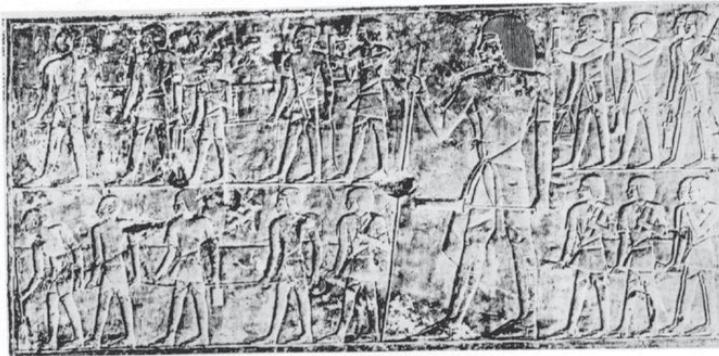
...

Total, Arable Land, 40, Making *arouras* 20, Balance 15

After Gardiner 1948, Vol. 3, p. 122.

The two texts combined were essentially a written cadaster based on a single land survey. Because the survey was conducted when the inundation had reached or was reaching its peak, the fields surveyed were probably only higher ones that were not flooded.¹¹⁶ The complex relationships between the various individuals and institutions (including the palace) confirm once again the patchy nature of Egypt's revenue collection. There are so many institutions involved in this document that it is almost impossible to ascertain who conducted the survey on whose behalf. (The surveyors' names and titles were presumably stated at the beginning of the papyrus, which has been lost; in the surviving part they are referred to by ditto marks.) However, if most institutions were financially self-governed, the only authority that could have made a document embracing them all would be the central government. The Wilbour Papyrus was done by four scribes working at different times but from the same set of original data. There is internal evidence showing that it was unrolled and rerolled several times.¹¹⁷ All these observations argue that it was composed in a central archive that held regional land registers and that it was stored for archival purposes.¹¹⁸

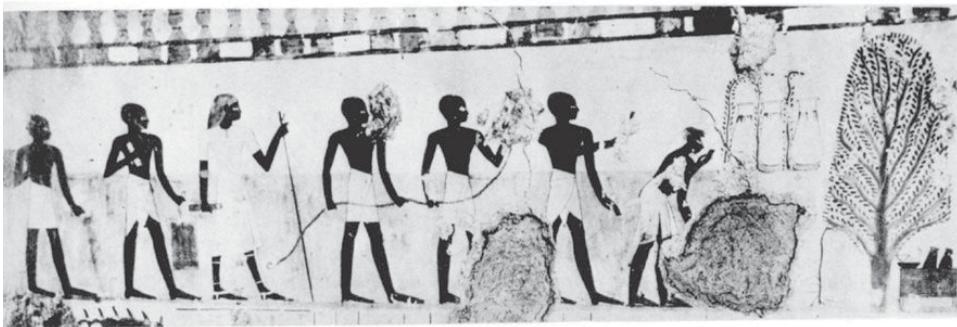
In the New Kingdom the central archive was called The Place of the Documents of Pharaoh.¹¹⁹ The only preserved example is the one at Amarna, where the famous Amarna letters were stored, and it is too badly damaged to yield much useful information. Fortunately, we have an image of such an archive preserved in the tomb of a royal scribe of the late Nineteenth Dynasty (Plate X, top). The rows of chests depicted in the picture probably contained state records, filed by notations on the outside or by attached faience plaques (Plate X, bottom) – in principle not different from the bone tags used in tomb U-j nearly two thousand years earlier (Figure 3.4). If we ask why the state archive stored information about the revenues of institutions not directly related to the state, the answer seems to be that the ancient Egyptians did not define their state as narrowly as we would. For them it was “the total of Egyptian territories, people and institutions under royal authority.”¹²⁰ Because only the king had ultimate authority over all these people and institutions, the vital statistics of all of them were his legitimate concern. From a practical point of view, the state archive also served as a sort of public record from which people could retrieve information for other purposes, especially lawsuits, as indicated in the *Duties of the Vizier* (Text 3.19, section 10).¹²¹ The archive was



I



2



3



4

FIGURE 3.13 Scenes of field survey in Egyptian art. After Berger 1934, Plates 10.2–10.4.

also of practical value to the king and his advisers when they needed to penetrate the web of interrelationships connecting different institutions so that they could decide how much the king could give as donations to temples, rewards to officials, and relief to the people in times of famine.¹²² We shall see shortly that the great Papyrus Harris I, which is all about the king's pious donations to the gods, was drafted using master records like the Wilbour Papyrus.

To a large extent the successful running of the Egyptian state depended on the careful keeping of administrative records, especially the crucial records relating to land and people. It was these records that made possible the self-governance of various institutions. When disputes arose and lawsuits occurred, the records, especially the royal decrees, would be called into evidence, as we have seen. Written cadasters, especially at the local level, sometimes bore such elaborate descriptions of the boundaries of each parcel of land that they could be regarded as written maps. The Wilbour Papyrus does not have an accompanying cadastral map; the Egyptians seem not to have developed a strong tradition of cartography.¹²³ Moreover, the list of abuttals in the written cadasters cannot compare in precision with modern cadastral maps. Yet their precision was probably not far from what the field surveyor of the time could achieve; and they were not lacking in "permanence of record."¹²⁴ Contemporary tomb scenes of field survey and didactic writings (especially the *Duties of the Vizier*) all emphasize the inviolable nature of the field boundaries once a parcel has been surveyed by the scribes (Figure 3.13; Text 3.19, section 10).

Text 3.19. Excerpts from the *Duties of the Vizier*.

[Section 3.] Now, he shall enter to greet the Lord, each day when the affairs of the Two Lands have been reported to him in his residence. He shall enter the Great House when the overseer of the treasury has drawn up his position at the northern flagstaff. Then the vizier shall move (in) from the East in the doorway of the great double-gate. Then the overseer of the treasury shall come to meet him and he shall report to him saying: "All your affairs are sound and prosperous. Every responsible functionary has reported to me saying: 'All your affairs are sound and prosperous; the palace is sound and prosperous'." Then the vizier shall report to the overseer of the treasury saying: "All your affairs are sound and prosperous. Every department of the residence-city is sound and prosperous. The closing of the enclosures on time and their opening on time have been reported to me by every responsible functionary." Now after both officials have reported to each other, the vizier shall send out to open every doorway of the palace so as to ensure that everything which has to leave (leaves). It is his messenger who sees to it that (it) happens by means of a writ.

[Section 6.] Now, as for every act of the vizier when hearing (cases) in his bureau, as regards anyone who is [not] efficient in every [duty] concerning which he (the vizier) questions him, namely the one who will be unable to exculpate himself in a hearing (lit. hearing of him) instituted on the matter, (he) shall be entered on the criminal register which is in the "great prison"; the same goes for the one who will be unable to exculpate his messenger. If their wrongdoings (will) occur for a second time, then there shall be reported and passed on (to the vizier) that they are (registered) on

the criminal register (and) a statement on the case for which they were (previously) entered on the register in accordance with their offence.

[Section 8.] As for any messenger whom the vizier sends for concerning any petitioner, he (the vizier) will let him (the messenger) go to him (the petitioner). However, as for anyone who shall make a petition to the vizier concerning fields, it is to him (self, the vizier) that he orders (summons) him, in addition to consulting (lit. the hearing of) the overseer of fields and the council of the mat. He will allow him (lit. make to him) a delay of two months for his fields in Upper and Lower Egypt. But as for his fields that border on the Southern City (and) the Residence, he allows him (lit. makes to him) a delay of (only) three days, as according to the law. He hears every petitioner according to the (lit. this) law which is in his hand (i.e. whose enforcement he is charged with).

[Section 10.] It is he who makes the endowment with every *šd*-field. As for any petitioner who says: "Our boundaries are moved", then one shall inspect that (i.e. whether) they (the boundaries) are under the seal of officials. If so, then he will take away the *šdw*-fields of the particular council which moved them (the boundaries).

After van den Boorn 1988, pp. 55, 121, 147, 185.

THE SYMBOLIC POWER OF BOOKKEEPING. If we can trust the captions to the survey scenes, boundary stelae should be set up "like the sky" after each survey, each bearing the name of the owner of the land, the name of the king, and a record of the extent of the land. On the evidence of the caption, the old man in Figure 3.13, no.3, leaning forward with his right hand raised toward his face has been interpreted as a sworn official who is placing his scepter over a stela and pronouncing an oath, affirming that the "witness-stela" is standing in its proper place. The Cairo Museum has a stela of this kind given by Tuthmosis IV to a priest.¹²⁵ The inscriptions on the boundary stelae were presumably summaries of cadasters written on papyri and stored in the central archive. The papyri must have been sealed by the responsible officials, for we read that if boundary stelae were found to have been moved, the investigating authority should check whether their new locations carried official authorization "under the seal of officials" (Text 3.19, section 10).¹²⁶ Suzanne Berger interpreted this passage as implying that the stelae themselves were sealed, but a durable sealing surely could not have been applied to a stone surface, so it should be the papyrus copies that bore the seals.¹²⁷

Oath, scepter, stela, and seals thus invested the written cadaster with symbolic value. Because the arable land of the Nile Valley was constantly changing according to the annual flood, it is doubtful that the boundary stelae were inscribed anew after each new survey. It is more likely that the inscriptions remained unchanged while the stelae that bore them were shifted. In this respect they were unlike the famous boundary stelae of Akhenaten, which were located in the desert and defined the unchanging limits of the Amarna city.¹²⁸ And they were more like Mesopotamian boundary markers (not to be confused with the ancient *kudurru* or the Babylonian entitlement stones, which did record boundaries but which were deposited in temples as proof of ownership). The updated papyrus cadasters deposited in the state archives probably served as the ultimate token of landownership and tax liability. Commenting on the cognitive aspects of surveying, Giorgio Buccellati makes the point that "surveying is the conceptual

equivalent of coinage” in that it guarantees real estate just as coinage guarantees movable wealth. To the surveyors and the surveyed, the specialized tools of surveying – for example, the measuring rope in [Figure 3.13](#) – represented “(a) the formality of the operation as a guarantee that proper technical standards had been employed, and (b) the integrity of property measured and its ensuing title of ownership.”¹²⁹ I would extend Buccellati’s argument to suggest that the writing tools carried by the accompanying scribes in [Figure 3.13](#) and the resultant written cadasters had the same symbolic power for both parties. The purpose of field survey was to estimate yields and tax. From the Wilbour Papyrus we learn that the tax assessors used three different rates corresponding to three types of soil.¹³⁰ As I have argued in the case of Mesopotamian quotas, these fixed rates must have ignored the complexities of local conditions. Complexities did not matter to scribes, only to farmers. One text in the *Miscellanies* used in educating scribes assures us, in an exaggerated way to be sure, that no matter how bad the harvest, the scribes would take from it the predetermined tax registered in their documents. The juxtaposition of the writing tools of the scribe with the chastising staves and rods of the accompanying apparitors and Nubians sums up the authority of the all-pervasive state ([Text 3.20](#)). We will learn more about the scribal ideology in [Part III](#).

Text 3.20. The scribe is not taxed like the peasant.

To the following effect: I am told that you have abandoned writing and whirl around in pleasures, that you have applied yourself to working in the field and have turned your back upon the god’s words. Have you not recalled the condition of the cultivator faced with the registration of the harvest-tax after the snake has carried off one half and the hippopotamus has eaten up the rest? The mice abound in the field, the locust descends, the cattle devour. The sparrows bring want upon the cultivator. The remainder that is on the threshing floor is (almost) at an end, and is for the thieves, while the value of the cattle on the hoof is lost, the team being dead through threshing and ploughing. (Now) a scribe has landed at the river-bank and is about to register the harvest-tax; the apparitors carrying staves and the Nubians rods of palm. They <say>: “Give corn!”, though there is none. They beat <him> furiously. He is bound and thrown into the well; he is soused in a headlong dipping. His wife has been bound in his presence, his children are in fetters. His neighbours abandon them and are fled. (Thus) their corn flies away. But a scribe, he is a controller of everyone. He who works in writing is not taxed, he has no dues (to pay). Take note of this.

After Caminos 1954, p. 247, with modifications made by John Baines; see also Gardiner 1941, p. 19.

The knowledge the state acquired by matching tax assessment and actual delivery was not used against the poor farmers alone. On the north wall in the mastaba chapel of the vizier Khentika of the Sixth Dynasty is a scene showing five district governors brought before the vizier for judgment and two more officials who were punished, probably for failure to remit the prescribed quantities of tax ([Figure 3.14](#)).¹³¹ Of interest here are the two scribes in front of the vizier. They are identified as two scribes from two

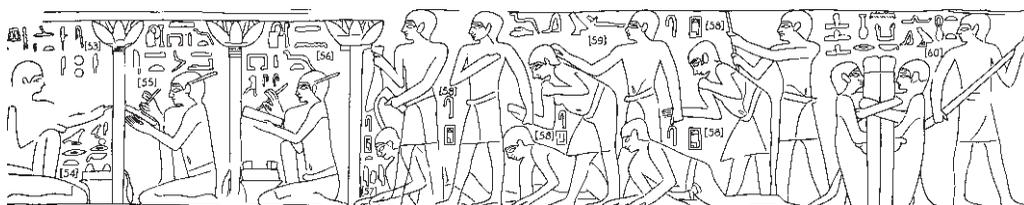


FIGURE 3.14 The punishment of tax collectors, Sixth Dynasty. Translation and drawing after T. G. H. James 1953, p. 45, and Plate ix. [53] ‘The unique friend and lector priest, Ikhekhi’. / [54] ‘I am with you, greatly’. [James notes that the sense is probably that Ikhekhi claims to have the interests of those being punished at heart.] / [55] ‘Scribe of the estate, Ishetmar’a’. / [56] ‘Scribe of the estate Shepses’. / [57] ‘The headman, Ipi’. / [58] ‘The headman’ [repeated four times over other men]. / [59] ‘I told him to come’. / [60] ‘Fine presents for your *ka* [spirit]: the like has never happened before’.

estates. Are they calculating what the two convicted officials owed? If the judgment was made on the basis of a written tax assessment and of registers showing what was actually collected, the officials held responsible for the oversight surely felt the power of writing. T. G. H. James suggests that the sarcastic exclamation addressed to the two tied officials by the two stick-wielding attendants means that “district governors were more in the habit of handing out such treatment than of receiving it” (see caption 60 to Figure 3.14).¹³² Presumably officials who managed better in their tax collections would be rewarded.

We shall see that in China the system of oversight by matching written accounts between superiors and subordinates was ritualized but still exerted great pressure on the reporting parties. Reporting administrative achievement in a ritual setting is attested in Egypt as well, but our evidence is limited to the highest administrative level, and the reporting party is the king himself. Papyrus Harris I contains a long series of addresses by King Ramesses III to the gods, the living, and the important officials of the realm, with lists of the endowments he made to the principal temples of Egypt inserted between these addresses (Text 3.21).

Text 3.21. Synopsis and excerpts from Papyrus Harris I.

[introduction and summary of the entire text]

[vignette representing Ramesses III in front of the gods]

[address to Amun, including a report of the king’s endowments]

I filled its treasuries with things of the lands of Egypt: gold, silver and every (kind of) valuable stone, amounting to hundreds of thousands. Its granaries are overflowing with good and enduring grain. <Its> fields and its herds are numerous like the sands of the shore. I charged the Southern Land for it, as well as the Northern Land ... I fashioned Your statue that rests inside it – “Amun United with Eternity” is its august name – ornamented with real valuable stone ... I made vessels on offering-stands for it of good gold, (and) others of silver and copper, (in) unlimited (amounts). I increased the divine offering that is presented in front of You, consisting of bread, wine, beer, geese, *iwaa*-cattle, *rnn*-cattle, *wndj.w*-cattle, and numerous oxen; antelopes, gazelles, which are sent to his slaughterhouse ...

[list a: the new foundations, their personnel, and their means of production]

List of things, livestock, gardens, fields, ships, shipyards and towns, which Pharaoh gave to the House of His Noble Father Amonrasonter, Mut and Khonsu, and all the gods of Thebes, as property for ever and always ... The Temple of the King of Upper and Lower Egypt Userma'atre Meriamun in the House of Amun, in the southern and the northern districts, under the authority of officials of temples of this house, equipped with everything: 62,626 heads...

[list b: yearly revenues of the temple estates]

[list c: additional supplies from the king]

[list d: grain from the festival offerings]

[list e: offerings for the yearly celebrations of the king's accession and the festival of Opet]

[list f: materials used for the production of statues]

[concluding address to the gods]

[similar structure repeated three more times for other gods]

[grand totals of all lists]

Tabernacle(s) de statues-groupe (?)	
d'Amonrasonter:	2756 (statues) divines
(Personnes):	113433 têtes
Bovidés et petit bétail divers:	490386 (têtes)
Terres:	1071780 <i>aroures</i>
Jardins et bosquets:	514
Bateaux <i>qérer</i> et <i>mensh</i> :	88
Cités de Kémet (Egypte)	160
...	
Or parfait:	7205,1 <i>deben</i>
Argent:	11047¼ <i>deben</i>
Total de l'or et de l'argent:	18252,1¼ <i>deben</i>
Lapis-lazuli véritable:	47,6 <i>deben</i>
...	

[address to the living]

[king's speech to important officials]

Thus says King Usimare Meriamun, the great god, to the dignitaries, the leaders of the land, the infantry, chariotry, Sherden, ordinary troops, (and) every citizen of the land of Egypt: "Listen! I will inform you of my benefactions that I have done while I was king of the people. The land of Egypt was abandoned, every man was a law unto himself ... (re)established order (in) the entire land, which had languished ... See, I am (now) at rest in the Land of Silence, like my father Re. I mix with the great Ennead, in heaven and earth, and the netherworld. Amen-re has established my son in my place and he has taken my office in peace as Ruler of the Two Lands, (he) being seated on the throne of Horus as Lord of the Two Banks ... Ramesses IV Heqma Meriamun, a (divine) youth, son of Amun ... Touch his sandals, make obeisance before him, bow

down to him, follow him always ... Present your tribute to him <at> his august palace. Lay before him the gifts of the flat lands and the foreign hill-countries. Accept willingly his commands and decrees which are spoken among you ... Amun has ordained for him his kingship upon earth and he has doubled for him his lifespan beyond (that of) any king; the King of Upper and Lower Egypt and Lord of the Two Lands: Usimare Setepenamun, the Son of Re and Lord of Diadems, Ramesses IV Heqma Meriamun, given life forever.

After Haring 1997, pp. 162, 167, 174, 188; Grandet 1994, Vol.1, pp. 323-4; and Peden 1994, pp. 213-23.

The religious and political tone of this document is undeniable. The text is dated in its first line to the last year of Ramesses III, nine days before his son Ramesses IV ascended the throne. Throughout the text Ramesses prays to the gods and preaches to the living as a deceased king on behalf of the new king. Apparently the final text was commissioned by the new king Ramesses IV. The dual audience – the gods and the living – poses difficulties of interpretation. Was the papyrus used for public display on the walls of a monumental building, or was it the blueprint for something later to be inscribed on walls, or was it a burial item for Ramesses III's tomb? Ben Haring's evaluation of these scenarios does not reach a conclusive answer. But one thing is certain: the document is an "exhaustive report of the benefactions for the gods of Egypt accomplished during the reign of Ramesses III," intended to guarantee him a warm reception by the gods after his death and also to express "Ramesses IV's wish for a long and prosperous reign."¹³³ The key word here is *report*, for it underlines one of the main functions of early writing, a function we have encountered already in Mesopotamia. Like Mesopotamian rulers, the Egyptian king, as the intermediary between humanity and the gods, had to report to the gods his achievements during his tenure of the office of kingship, just as officials had to report to their superiors in *Duties of the Vizier* (Text 3.19, section 3). The king's report was in written form, and it was based on data collected and summarized in a great many detailed administrative documents such as the Wilbour Papyrus (Text 3.18), but it was much further summarized. In Papyrus Harris I the lists give no identifying details of the lands (where exactly?), animals, personnel (who?), goods, and income mentioned. The grand totals add items together without regard to their varying natures, making the texts entirely useless for legal or administrative purposes.¹³⁴ But to the gods they must have been satisfactory proof of the king's fulfillment of his "labor duty." Though detached from reality, the grand totals were symbols of state control. We are told that the total number of people assigned by Ramesses III to the main temples of Egypt was 113,433 and that the total area of arable land was 1,071,780 *arouras*, or about 2,950 sq. km (Text 3.21).

It is surely correct to see continuity here with the donation inventories on the Palermo Stone (Text 3.8), but certain differences are also apparent. The Palermo Stone was inscribed with hieroglyphs, the standard script for display purposes for more than three millennia. Papyrus Harris I, on the other hand, contains a mixture of script types. The captions to the three vignettes are written in hieroglyphs, but the speech on the vignettes is done in cursive hieroglyphic, a script form developed in the Middle Kingdom for

writing religious and other high-value texts. Both were written vertically. The rest of Papyrus Harris, including the addresses by Ramesses III and the lists, was written horizontally in hieratic, a script used mainly for administration. Whether the papyrus was a draft for something else or itself the finished product, the calligraphic investment on the part of the scribes who produced it was immense.¹³⁵ The hieratic parts, the bulk of the text, are written with assurance and fluency and must have been aesthetically appealing to informed readers. It is possible, although evidence is hard to come by, that among the literate nobility, fine hieratic writing was just as prestigious and highly valued as monumental hieroglyphic. The subject of calligraphy and society in the early states is one that richly deserves attention but, lying a little outside the scope of this work, it must be left for a separate study.¹³⁶

THE ANDES

Territorially speaking, the Inka empire was very similar to ancient Egypt in that both states comprised long but narrow stretches of land. The Andes region, however, is far more complex in ecology and ethnicity, not to mention far longer. Governing this vast empire was a daunting challenge, and the Inkas did not attempt to control the entire land to an even depth of administration. The central part around the capital city, Cuzco, was under the direct control of the state; the farther from the center, the less intensive the administration.¹³⁷ Although the central area alone was at least the size of any Mesopotamian city-state, the Inka managed the revenue of the entire state by using *kipu* rather than writing. What does this say about the role of writing in early states? Before we can assess its implications we must understand the administrative needs of the Inka state and how *kipu* met those needs. As usual, let us start with the problem of land tenure.¹³⁸

Land Tenure

In Mesopotamia and Egypt the existence of communal land tenure is controversial. In the Andes it is not in doubt; under the Inka, the dominant pattern of landholding was collective. To local communities the Inka state allotted land that was intended to provide for the subsistence of the common people of the community, its leaders, and its cult. The state did not interfere much with the internal affairs of these local communities. Its revenue – which supported the state cult, the rulers, the armies, and the state labor force – came almost entirely from state lands of various kinds. It had two basic ways of acquiring state lands: appropriation of local lands and creation of new lands through terracing and irrigation projects. Land reclaimed by the state was physically marked off by boundary markers. Unlike the shiftable boundary stelae of Egypt, with its annual inundation, the Inka markers were meant to be permanent.¹³⁹ Even without them, however, the planned royal and aristocratic estates, with their spectacular man-made terraces, visibly stood apart (Plate XI, top). The boundaries of large state farms were also firmly fixed by oral tradition and public knowledge, as evidenced by litigation records written immediately after the Spanish conquest in the sixteenth century. In these lawsuits over land, both parties recognized the fields that belonged to the Inka state farms.¹⁴⁰ The state farms were divided into narrow strips of uniform width

but unequal length, for easy assignment to different ethnic groups of farmers (Plate XI, bottom).¹⁴¹ Recall that in southern Mesopotamia the strip shape also prevailed in institutional landholdings, for the same reason of easy assignment and control (Figure 3.2b). The transformation of the rural landscape in Mesopotamia finds a spectacular echo in the Andes.

The twofold division of arable land into local and state holdings (or threefold, if we separate the land belonging to the state cult from the rest of the state's lands), the clear demarcation of holdings by boundary markers and oral tradition, and the division of fields into regular strips all reflect determined simplification on the part of the Inka state. The logic behind the land divisions was that once the territorial configuration was decided it would remain unchanged. Each unit was self-regulatory, operating on its own. Only the state land required the attention of the state administration; the state had no need to monitor the land owned collectively by local communities. There were no smallholders like Hekanakht of the early Middle Kingdom. The most remarkable illustration of the state's noninterference in nonstate landholdings is that during a bad year in one region it did not try to make up its losses locally by taxing communal land but instead made do with the produce of state farms elsewhere.¹⁴² There is no sign that the state actually helped the suffering local communities, but the state granaries may have shouldered some responsibility in times of famine.¹⁴³ We might imagine the Inka system of state farms as not much different from Ur III agriculture, a large part of which was operated by the state institutions, were it not for the fact that the institutional land of Ur III could be divided into subcategories, one of which – tenant land – did not exist in the Inka system (Figure 3.1). In the Inka state farms, plots were allotted to the farmers for their subsistence, but they seem to have been small and their produce was used solely to sustain the farmers.

These subsistence fields within the state farms point to another, more important difference between Ur III and the Inka. The domain land of the Ur III state was cultivated by institutional laborers all year round. The laborers were fed and clothed by the institutions through the ration system. They were organized into many plow teams, each consisting of a few people plus a supervisor.¹⁴⁴ On the Inka state farms the labor force had more complex origins but simpler organization. The state farms in the Cochabamba Valley in Plate XI are a case in point.

The Administration of State Farms

COMPOSITION AND SUBSISTENCE OF THE FARMERS. The farm land in the Cochabamba Valley originally belonged to the natives of the western part of the valley. The state appropriated the land simply by relocating most of the people. The land thus emptied was then cultivated by fourteen thousand farm workers brought to the valley from many other places. There were two basic classes of worker. One consisted of permanent colonists who had been forcibly removed from their original homeland and transported to the valley, just as the natives of the valley had been transported elsewhere. These colonists were charged with maintaining storehouses. The other class was composed of *corvée* laborers drafted from various ethnic groups living nearby; it included a certain number of the original residents. The *corvée* laborers worked for the state farms only part-time, on a rotating basis, and were charged with sowing and harvesting the fields. The relative

size of the two classes is not clear, nor is it entirely clear how they were sustained while working for the state. At least part of the subsistence for the colonists came from the produce of fields allotted to them within or adjacent to state lands.¹⁴⁵ As for the *corvée* laborers from nearby places, they presumably commuted between their homes and the state farm and thus could support themselves from their own produce.¹⁴⁶ The state granaries located in the valley also issued some food to the workers, perhaps fulfilling a traditional expectation of reciprocity, even if what was given was only the poorest grade of food.¹⁴⁷

On the whole, one gets the impression that there was no long-term ration system of the kind we have seen in Mesopotamia and Egypt. The weak involvement of the state in the farmers' subsistence economy was made possible by a very simple organization of the workers on state farms, who retained their ethnic identity and were supervised by their own leaders. Each ethnic group was assigned to a number of clearly defined strips of fields (Plate XI, bottom). The Inka administrators in charge of the state farms could then deal with the ethnic leaders alone; they did not need to keep tabs on the whole workforce.

The simplified land tenure system entailed a simple revenue system. This depended almost entirely on the produce from the state land, hence the only tax levied on the subjugated populace was a labor tax, called *mit'a*, performed on a rotating base. To quote Murra's characterization, there was "no tribute in kind."¹⁴⁸ But how did the Inka levy a labor tax without writing? We have seen that in Mesopotamia and Egypt the basis for assessing labor duties was the state census, which was made in writing. The Inka labor tax was also assessed according to periodic censuses, so the question becomes how the Inka state kept track of its population without the help of writing.

KHIPU AND THE DECIMAL SYSTEM OF ADMINISTRATION. To understand the Inka census and labor tax assessment system, we need to know the Inka decimal system of administration, for the two were conceptually very close, so much so that John Rowe has hypothesized that they were initiated together.¹⁴⁹ The administration was run by the *decimal officers*, who were organized into a pyramidal hierarchy by the size of the decimal units under their supervision. These officers were local ethnic leaders drafted into the Inka administration. Each decimal unit was composed of a number of households liable to labor tax (Table 3.1).

The decimal enumeration was obviously an idealized structure created to satisfy the state's craving for legibility – a central theme of this book. Murra remarks that the man-made decimal structure "required considerable administrative tinkering, if not vivisection, to fit ethnic realities."¹⁵⁰ As we shall see in the following example, however, the Inka state did not hesitate to impose the decimal structure, because the inconvenience, not to say misery, fell only on the subjugated population. The gain in convenience for the record keeper was great.

In 1549, immediately after the Spanish conquest, a general inspection was conducted throughout the former Inka state to make an estimate of human and other resources (the interests of the new conquerors were no different from those of their predecessors). The seventy-two teams of inspectors did not carry out a house-by-house census. Instead, they consulted local lords and their *kipu* keepers, who had continuously recorded demographic and other quantitative data both before and since the conquest. The colonial scribes then transcribed the data into Spanish according to the readings of the *kipu*

TABLE 3.1. Inka decimal units from 10 to 10,000 households.

Title of official	Scope of jurisdiction (households)
<i>hunu kuraka</i>	10,000
<i>pichkawaranqa kuraka</i>	5,000
<i>waranqa kuraka</i>	1,000
<i>pickapachaka kuraka</i>	500
<i>pachaka kuraka</i>	100
<i>pichkachunka kamayuq</i>	50
<i>chunka kamayuq</i>	10

After D'Altroy 2002, p. 233, Table 10.1; see also Julien 1982, p. 123, Table 5.1.

keepers. One such surviving document concerns the last standing labor obligation of the ethnic groups inhabiting the Huallaga Valley (Text 3.22).

Text 3.22. Spanish transcription of the labor tax (*mit'a*) paid to the Inka by one ethnic group (actually two groups; see main text), Chupaychu, as recorded in the *kipu* kept and “read” by the local lord.

[Cord 1] They were asked [by the Spanish inspectors] what services did [the Chupaychu] give to the Inca in Cuzco *a la continua* and they said that 400 Indian men and women remained in Cuzco *a la continua* to build walls and if one died they gave another.

[Cord 2] They also gave 400 Indians to plant the fields in Cuzco so people could eat *y hacer su camarico*.

[Cord 3] They also gave 150 Indians *a la continua* as *yana* of Guayna Capac.

[Cord 4] 150 more to guard the body of Topa Ynga Yupanqui after he died, *a la continua*

[Cord 5] 10 *yana* more to guard his weapons

[Cord 6] 200 Indians more to guard the Chachapoya

[Cord 7] 200 Indians more to guard Quito

[Cord 8] 20 Indians more for the guard of the body of Guana Cava after his death

[Cord 9] 120 Indians more to make feathers

[Cord 10] 60 more to extract honey

[Cord 11] 400 Indians to weave fine cloth

[Cord 12] 40 Indians to make more dyes and colors

[Cord 13] 240 Indians to guard the sheep [camelids]

[Cord 14] 40 Indians to guard the fields which they had throughout this valley; the maize grown was mostly taken to Cuzco and the rest to the warehouses [at Huánuco Pampa].

[Cord 15] 40 additional Indians to plant hot peppers which were taken to Cuzco

[Cord 16] and they also gave 60 Indians and sometimes 45 to make salt

[Cord 17] 60 Indians to make [raise] the coca leaf which they took to Cuzco and to the warehouses of Huánuco [Pampa] and sometimes they hauled 200 sacks and at others 40

[Cord 18] 40 Indians to accompany the Inca in person to hunt deer
[Cord 19] and 40 Indians more to make soles and they took them to Cuzco and to the storehouses
[Cord 20] 40 more carpenters [woodworkers] to make plates and bowls and other things for the Inca and they took them to Cuzco
[Cord 21] 40 more potters to make pots and they took them to Huánuco [Pampa]
[Cord 22] and 68 more Indians to guard the *tampu* at Huánuco
[Cord 23] 80 more to carry loads from the *tampu* to Pumpu [some five to six days' march] and from Sutun Cancha to Tambo [one day's, coming back]
[Cord 24] 40 more Indians to guard the women of the Inca
[Cord 25] 500 to go with the person of the Inca to war, to carry him in hammocks, and they went to Quito and to other places
[Cord 26] 500 more Indians, to plant and [do] other things without leaving their territory.

After Murra 1982, pp. 240–3.

The first thing that strikes us in reading [Text 3.22](#) is the decimal numbers of the labor assignments. We know that the Inka accounting *kipu* used a decimal system of numeration similar to our own: any place can hold up to nine units (e.g., 9), any value beyond 9 moves to the next higher place (e.g., $9 + 1 = 10$).¹⁵¹ The knots on the pendant strings of accounting *kipu* register only numbers. Some *kipu* also have subsidiary strings that must have supplied further information, perhaps the nature of the items counted.¹⁵² However, as our own use of numbers shows, a decimal system is not limited to recording round numbers. Why do the great majority of the labor assignments in [Text 3.22](#) use only round numbers? The answer emerges if the information recorded in the *kipu* just quoted in Spanish transcription is tabulated ([Table 3.2](#)).

Julien analyzes these figures along the following lines.¹⁵³ The assessor was dealing with 4,108 households, from which he expected to obtain 4,108 laborers. Accustomed to operating in units of 40 *pachakas* (4,000 households), he began by leaving aside the surplus 108 households. The fact that most of the labor gangs listed in the second column of the table are integer multiples of 40 suggests that he made the bulk of his labor assignments by assessing all 40 *pachakas* according to the same set of rates. He required each of the 40 to provide him with 3 gold miners ($40 \times 3 = 120$), 10 masons to work in Cuzco ($40 \times 10 = 400$), 10 cultivators to work in Cuzco (400), 5 men for the garrison in Chachapoyas (200), 5 men for the garrison in Quito (200), 3 feather workers (120), 10 weavers of tapestry cloth (400), 1 dye maker (40), 6 herders of Inka herds (240), 1 guard for corn fields (40), 1 cultivator for *ají* fields (40), 1 hunter for royal deer hunts (40), 1 sole maker (40), 1 woodworker (40), 1 potter (40), 2 carriers between local *tambo* (80), 1 guard for the women of the Inka (40), and 25 soldiers/carriers/cultivators of Inka lands ($40 \times 25 = 1,000$, which he will divide into two equal groups of 500 soldiers/carriers and 500 cultivators). Making labor assignments in this way was easy, and numbers of laborers that were multiples of 40 were easy to record on *kipu*.

At this point the assessor had demanded 87 workers from each *pachaka* (a total of $40 \times 87 = 3,480$ workers). Remaining to be assigned were another 13 workers from each

TABLE 3.2. Tabulation of labor assignments recorded in Text 3.22.

Assignment	Total (workers)	Percentage of 4,000
Gold miners	120	3
Silver miners	60	1.5
Masons in Cuzco	400	10
Cultivators in Cuzco	400	10
Retainers of Huayna Capac	150	3.75
Guards for the body of Thupa Inca	150	3.75
Guards for the weapons of Thupa Inca	10	0.25
Garrison in Chachapoyas	200	5
Garrison in Quito	200	5
Guards for the body of Huayna Capac	20	0.5
Feather workers	120	3
Honey gatherers	60	1.5
Weavers of tapestry cloth	400	10
Dye makers	40	1
Herders of Inca herds	240	6
Guards of corn fields	40	1
Cultivators of <i>ají</i> fields	40	1
Salt miners (variable)	60/50/40	1.5/1.25/1
Cultivators of coca	60	1.5
Hunters for royal deer hunts	40	1
Sole makers	40	1
Woodworkers	40	1
Potters	40	1
Guards for the way station of Huánuco	68	1.7
Carriers between local way stations	80	2
Guards for the women of the Inca	40	1
Soldiers and carriers	500	12.5
Cultivators of Inca lands	500	12.5
Totals	4,108	102.7

Source: After Julien 1988, p. 265, Table 4.

pachaka (a total of $40 \times 13 = 520$) and an additional 108 workers from the surplus 108 households that he had up to this point neglected (no one would be spared). These $520 + 108 = 628$ workers he distributed among an assortment of tasks, but not by applying a fixed set of rates to them – e.g., not by making 5 percent of them silver workers and so on – presumably because he could not cope with the arithmetic but perhaps also because some of the tasks were performed by groups of specialists. Whatever his exact procedure, he divided the remaining 628 workers into 60 silver workers, 150 retainers of Huayna Capac, 150 guards for the body of Thupa Inka, 10 guards for the weapons of Thupa Inka, 20 guards for the body of Huayna Capac, 60 honey gatherers, 50 salt miners, 60 cultivators of coca, and 68 guards for the *tambo* of Huánuco. The figure of 68 looks very much like a number left over after the other assignments, all in round figures, were made.

CREATING STATE SPACES. The foregoing analysis by Julien enables her to reconstruct the basic procedure by which Inka officials assessed and distributed labor duty. First, the officials took a census and used it to organize the population into decimal accounting units. Second, they distributed labor duties evenly by applying a standard rate to each

accounting unit. Each of the two steps reflects a logic of extreme simplification. The second step, the application of a standard tax rate, was common in other ancient states, and it is perfectly straightforward. But the first step deserves closer examination. The assessor's figure of 4,108 households came from the periodic census, which I discuss shortly. Here we should note that it is no accident that the figure comes close to the administrator's ideal of 4,000: the Inka state artificially brought these households together to conform to its decimal accounting units. According to the record the Spaniards made of their general inspection, the main ethnic group that lived in the Huallaga Valley was the Chupaychu. However, the number of Chupaychu households was apparently smaller than the ideal 4,000. To fill up the total, the Inka state imported another neighboring ethnic group, the Yacha, to live together with the Chupaychu. This is confirmed by archaeology, which documents the intrusive architectural and material remains attributable to the Yacha.¹⁵⁴

Long-distance relocation was surely a devastating hardship for the uprooted (think of the forced resettlements of Indian populations carried out by the U.S. government in the nineteenth century), but to the state it offered a number of advantages. As many scholars have noted, it broke resistance and enhanced security by dispersing dangerous ethnic groups; it enhanced production by concentrating economic specialists; and it created an ethnic microcosm in Cuzco to which the Inka could point as evidence of a divine mandate over the Andes.¹⁵⁵ But to these must be added its immense contribution to administrative simplification. It kept small the number of accounting units and hence the number of Inka officials in charge of them. And it made the arithmetically ideal decimal system – a system easily implemented with *kipu* – a concrete reality. Equipped with a record-keeping system that was incapable of tracking complex realities, the Inka made reality conform to the capabilities of their record keeping.

Local and long-distance resettlement, and the concomitant construction of uniform accounting units, served to create what Scott calls *state spaces* for the effective control of the population.¹⁵⁶ One special feature of Inka state spaces is that within any given settlement the reshuffled ethnic groups retained their ethnic identities and social organization. Apart from local resettlements of the kind we have seen in the Huallaga Valley, there is not much archaeological trace of the patchwork of spaces, but the Spanish chroniclers have left us detailed accounts of the use of visible symbols and clothing to identify ethnic groups (Text 3.23).

Text 3.23. Using insignia as group identification.

The vassals were not permitted to move from one province to another on their own free will. In fact, all vassals had to reside in their towns; they could not leave or wander around or take trips through strange lands without permission from their *caciques* (ethnic leaders). The men and women of each nation and province had their insignias and emblems by which they could be identified, and they could not go around without this identification or exchange their insignias for those of another nation, or they would be severely punished. They had this insignia on their clothes with different stripes and colors, and the men wore their most distinguishing insignia on their

heads; each nation was identified by the headdress... They were so well known by these insignia that on seeing any Indian or when any Indian came before him, the Inca would notice what nation and province the Indian was from; and there is no doubt that this was a clever invention for distinguishing one group from another.
 After Cobo 1979, pp. 196–7.

TABLE 3.3. The Inka life stages.

Stage	Male	Approximate age	Female	Approximate age
1	warrior	25 (or 33) to 50	warrior's woman	33 years
2	old man who can walk	60 or 70	old women	50 years
3	deaf old man	80, 100, or 150	old woman who sleeps	80 years
4	disabled people		disabled people	
5	helper, companion	18, 20	very beautiful girls of marriageable age	13 years
6	adolescent youths	12, 18	girls with their hair cut short	12, 18 years
7	children who set net snares	9, 12	gatherer	9, 12 years
8	children who play	5, 9	female child who plays	5, 9
9	tender children who go about on all fours	1, 2, 3 to 5 years	female infant who goes on all fours	1, 2 years
10	infant	1 month, newborn	tender infant girl who is in a cradle	1–5 months

Source: Simplified after D'Altroy 2002, pp. 184–5, Table 8.2.

In this way the Inka officials could control the movement of people, not on an individual basis but by group identity. The state's simple managerial method was to rely upon indigenous community organizations. In the same convenient way, the state counted its population and recorded the result on *kipu*. Let us now return to this population census.

KHIPU AND CENSUS. To make a census of population is simultaneously to count and to classify.¹⁵⁷ The criteria of classification depend on the needs of the state. For the Inka state, the overriding criterion was the ability to work, because the only form of tax was labor.¹⁵⁸ The state devised ten categories, each subdivided into male and female, corresponding to people's ability to do useful work *for the state* (Table 3.3).

John Rowe reasons that the tenth grade was created simply to bring the total number of categories to ten.¹⁵⁹ Males and females are classified separately because of the sexual division of state labor. Some of the jobs in Table 3.2, such as weaving, were assigned to female workers. At first glance the categories seem to be defined minutely enough to allow a detailed census of the population. But if we compare census lists from Mesopotamia and Egypt we notice the crucial difference that the Inka census recorded no named individual. What was recorded in the census *kipu* for any given community could be boiled down to twenty numbers for the twenty types of laborer (or nonlaborer). No names, no kinship information, no addresses.

A census of this type could be made in a very simple and concrete way. From Spanish accounts it seems clear that the Inka census was not conducted from house to house. The two descriptions in [Text 3.24](#) allow us to paint a likely picture of the procedure. After the Inka conquered a place, the official in charge of counting, the *runaquito*, would summon all the people to a big place. He would use his calculi, wool and grain, to count the people one by one, keeping a separate count for each of the ten categories in [Table 3.3](#). This was not much different from the earliest use of clay tokens in Mesopotamia to count concrete things, such as the sheep in a herd.¹⁶⁰ The Inka administrator did not want names any more than the Mesopotamian shepherd needed names for his sheep. When the count was complete, decimal administrative units were created, with local leaders to head them. The local leaders thereafter were required to keep records of the growth, death, marriage, and so on of their own people. At the next periodic census, the leaders would report to the Inka census official the current information so that changes and accommodations could be made accordingly.

Text 3.24. Two Spanish accounts of the counting of the people by the Inkas.

[*Castro and Ortega Morejón, 1558.*] The order that was maintained in counting the Indians is that he who was sent by the Inka, whom they called *runaquito*, on entering the valley assembled all of the lords and Indians in it by their *guarangas* and *pachacas* and *chungas* [units of 10] and had all of the *quipos* brought there in the order of the last *visita*, . . . and if the population was increasing so that another lord of a *guaranga*, a *pachaca* or a *chunga* could be made, he made a report and made all of his *quipos* for the Inka account all of this, so that as the population kept multiplying, lords were made.

[*Felipe Guaman Poma de Ayala, 1615.*] The Inka ordered [him] to count, enumerate, and adjust the Indians of this realm – with the wool of the deer, *taruga* – he matched the Indians with the wool – and he matched [them] with a grain called *quinua* – he counted the *quinua* and the Indians – his ability was very great, and he was better than with paper and ink.

After Julien 1988, pp. 266–7.

In Mesopotamian administration, as we have seen, detailed information was collected at the lowest level of administration and reported up the hierarchy, at each level being combined with similar reports and digested, becoming more general and abstract the higher it went. In Inka administration the detailed information was never collected. The combining and digesting were done not to the information but to the population. Although the Inka census contained little information, what it contained was adequate for assessing labor tax, and because the assessment took exactly the same form as the census ([Table 3.2](#)), accounting *kipu* were suitable for both tasks.

STOREHOUSES AND TRANSPORTATION. The involvement of the state officials in administering conquered populations was minimal and depended heavily on the trustworthiness of local accounting. But the minimal penetration of the state into local communities also meant that it did not need to support laborers who worked for the state but were

close to home. If the state farms in the Cochabamba Valley were worked by a labor force that was largely self-sustained, the food produced on them could be directed elsewhere. The maize and other crops harvested from the Cochabamba state farms were first placed in storehouses throughout the valley.¹⁶¹ In one place, Caotapachi, archaeology has documented 2,400 storehouses, perfectly aligned and arranged in two groups of 1,200.¹⁶² The witnesses in the land dispute records mentioned earlier all testified that from the storehouses the maize was taken to a way station along the famous Inka highway and from there transported to Cuzco. They also claimed that the maize was used to feed the army.¹⁶³ The army was of course one of the main consumers of redistributed food in all early states. What is distinctive about Inka military rationing is that the Inka army was constantly on the move, in part because of the empire's rapid and continuous expansion and in part because of the many rebellions that its loose control of the conquered regions invited. This military situation required a smooth road system to traverse the formidable terrain of the Andes. The prime users of the state roads had state business, including soldiers, porters, llama caravans, nobility (especially the king and his entourage), and relay messengers.¹⁶⁴ To this list we should add the millions of colonists forcibly resettled by the state. The need to supply all these travelers en route had to be met by storehouses distributed in accordance with the traffic pattern (Figure 3.15).¹⁶⁵

The map in Figure 3.15 shows that some of the storehouses were close to the state farms, but others were not. Notable among the latter was the huge storage facility located at Huánuco Pampa, a major provincial center in the Peruvian central highlands.¹⁶⁶ The eleven long lines of storehouses overlook the city from a hill to the south (Figure 3.16). The storehouses have two forms: rectangular and circular. The rectangular houses uphill were used for storing the low-class tuber; the circular ones were for the prized maize. Some storehouses were used for goods other than food, but their fraction of the total was very small. The neat layout of the storage area, the limited variety of the goods stored, and their easy identification with distinct architectural forms simplified the keeping of inventories.¹⁶⁷ The excavators of Huánuco Pampa suggest that the large, long buildings grouped below the storehouses in the southern part of the city were used for storage preparatory work and record keeping. There was also a series of residences that perhaps housed the people responsible for the operations.¹⁶⁸ The persons in charge of the storehouses used *kipu* to keep track of the incoming and outgoing goods and reported to their superiors, as depicted in Guaman Poma's drawing (Figure 3.17). The drawing in fact depicts the report to the Inka emperor of the storehouse contents at Huánuco Pampa.¹⁶⁹

The Administration of Cities

PEOPLING THE CITY. In many respects Huánuco Pampa resembled the centrally planned Middle Kingdom city Kahun. Both were built on virgin soil according to a master plan (compare Figures 3.12 and 3.16). The entire population, therefore, was brought in from other places. The residents of the two cities consisted of several categories of people, including permanent state functionaries and a temporary labor force. However, there are also some notable differences between the two cities. One is the larger number of temporary laborers in Huánuco Pampa supplied by the universal labor tax (*mit'a*); a few of those who served in the city appear in the labor assignment record in Text 3.22.

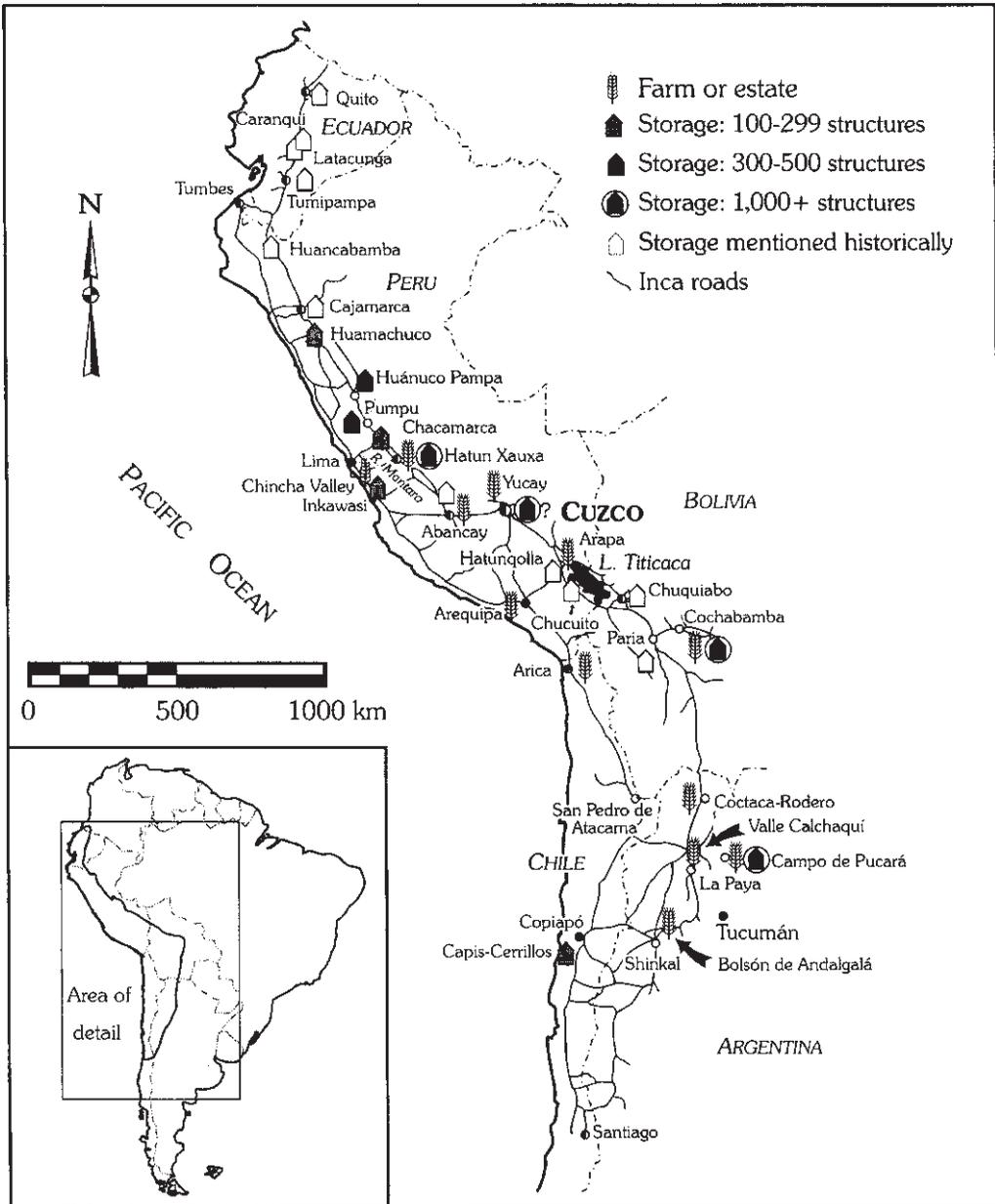


FIGURE 3.15 The distribution of major state farms and storage facilities in relation to the Inca roads. After D'Altroy 2002, p. 271, Figure 11.1.

Unlike *mit'a* laborers in the state farms, who were largely self-sustained, those who came to serve the city temporarily were provided by the state with rather standardized and mass-produced housing, utensils, and food. Limited evidence suggests that they lived almost dormitory-style and ate in common kitchens.¹⁷⁰

FEEDING THE CITY. The supplies for those kitchens came from the central storage in Figure 3.16. Huánuco Pampa originally consisted of about four thousand structures; more than 12 percent of the total of covered floor space was storerooms. The excavator

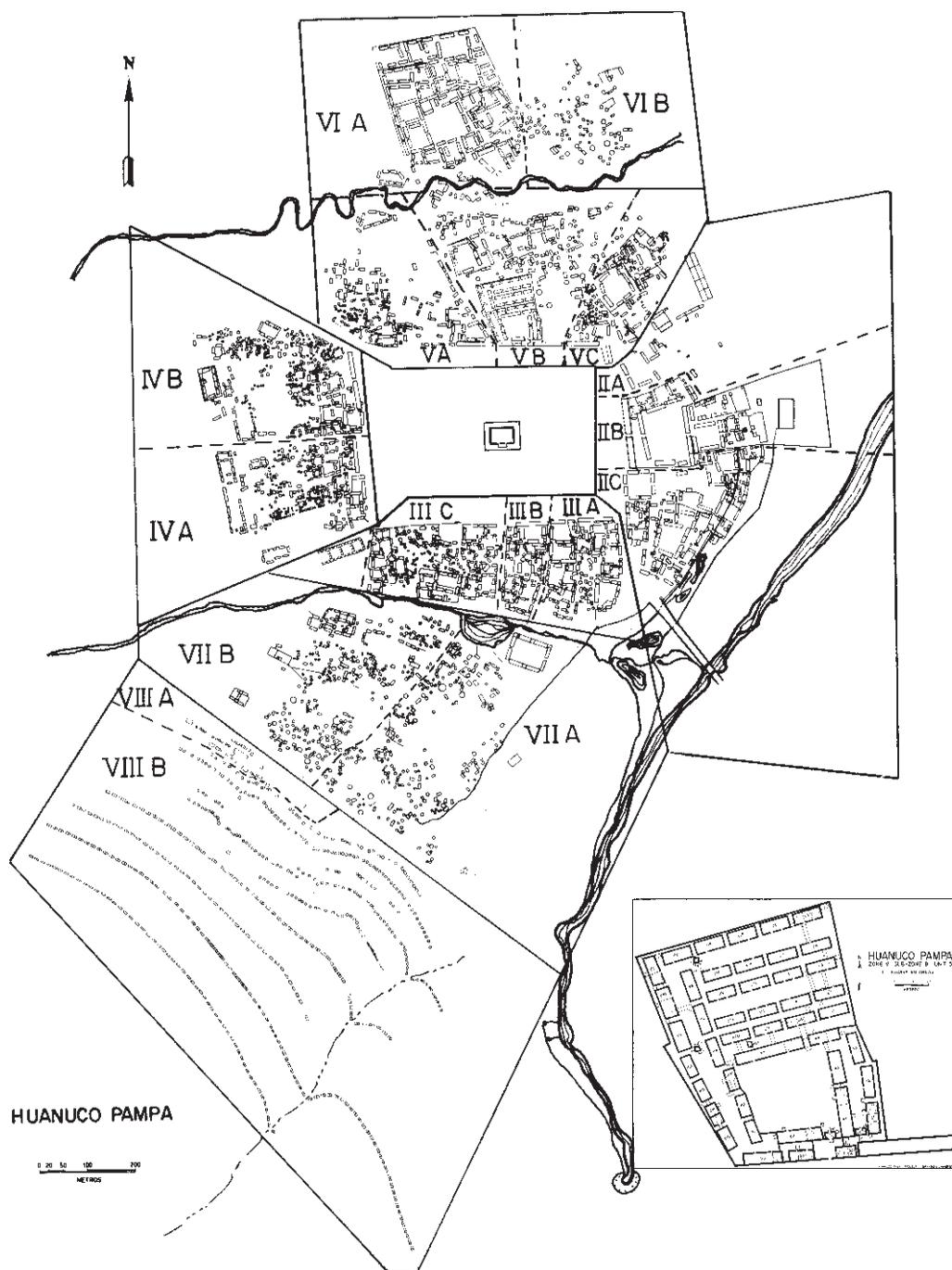


FIGURE 3.16 Planning and provisioning of an enclosed state space: the Inka provincial center Huánuco Pampa. The plan shows the zones into which the city was divided for archaeological purposes, but it may reflect a quadripartite division that originated with the Inka planners. Zone VIII B is the central storage district. Notice the circular and rectangular forms of the storehouses. The inset is a plan of the workshop for women weavers located in zone V B, with its single guarded entrance. After Morris and Thompson 1985, pp. 71, Figure 8 (inset), and p. 78, Figure 11.

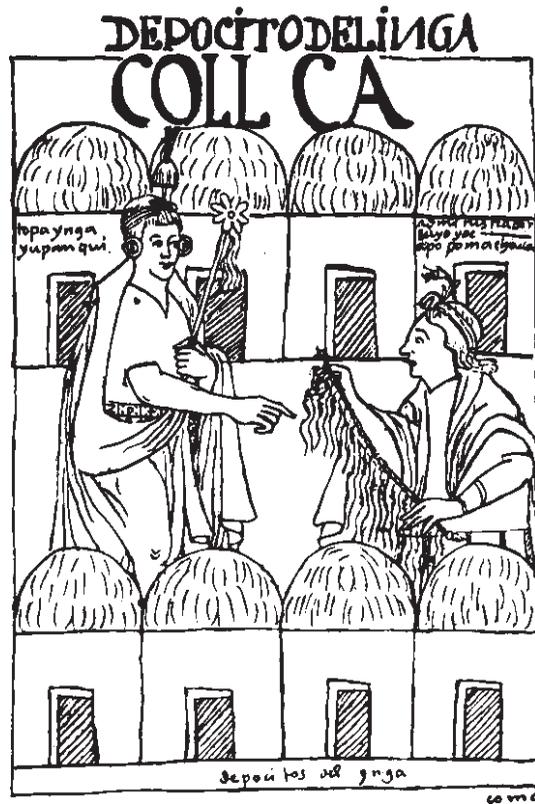


FIGURE 3.17 The importance of numbers: Guaman Poma's illustration of a storehouse accountant at Huánuco Pampa reporting to the emperor Thupa Inka Yupanki, with the help of *khipu*. After D'Altroy 2002, p. 282, Figure 11.2.

Craig Morris is convinced that the food stored in the city was used to maintain state operations – for instance, by supplying traveling state personnel – and that most of it was intended for use within the city itself.¹⁷¹ The great central storage of Huánuco Pampa contrasts sharply with arrangements at Kahun, which spread its granaries among the large houses as redistributive centers (Figure 3.12, numeral 3 in the plan). Kemp reads the Kahun design as a reflection of the “characteristically Egyptian modular or ‘crew’ approach to administering large bodies of people, in which they were subdivided into two or (as here) more self-contained groups.”¹⁷² One well-known such group organization is the *phyle* system, which shared out permanent institutional jobs to groups of people on a rotating basis.¹⁷³ The crew approach was also characteristic of Inka administration, as evidenced by its heavy reliance on ethnically organized *corvée* laborers serving the state in rotation. However, the Inka state sought to provision its urban *mit'a* laborers and other residents from a central storage. One possible reason is the timing of the tasks in the Inka city: because these did not require constant attendance, the city's population (and hence need for rations) fluctuated significantly. Rationing from one central storage would keep the number of administrators to a minimum.

The limitations of accounting *khipu* must also have tended to keep the accounting practice of Inka administrators simple. In Mesopotamia and Egypt the commonest type of administrative document was the receipt, which stated that party A had received

item X from party B.¹⁷⁴ The few eyewitness accounts of the administration of Inka storage do not give the impression that even so simple a matter was recorded on *kipu*. Hernando Pizarro, a brother of Francisco, the conqueror of Peru, informs us that in the first year following the invasion (1533), he and his soldiers removed some goods from a storehouse along the Inka highway. The record keepers then “untied some of the knots which they had in the deposits section [of the *kipu*], and they [re-]tied them in another section [of the *kipu*].”¹⁷⁵ The administrators were balancing their accounts, apparently, but it is doubtful that they recorded who removed the goods and who the responsible supervisor was. Even if the *kipu* could encode names, as Urton suggests, it seems unlikely that names would have been encoded in accounting *kipu* very often. The names of recipients (like the names of people in the census) would have been too numerous to record, and the number of issuing administrators might have been small enough for them to be held accountable without attaching their names to their accounts. It was the numbers that needed to be recorded.

The state feasts documented in Spanish texts and confirmed by archaeology served large numbers of unnamed partakers. At Huánuco Pampa the main plaza in the city center, the two smaller plazas to the east, and the compound surrounding them were probably used for great feasts, to judge by their monumental architecture, their large interior and exterior spaces, the associated material remains of large-scale preparation and serving of food and drink, and the musical instruments for accompanying ceremonies (Figure 3.16, zone IIB).¹⁷⁶ The state feast was an enlarged version of the widely recognized reciprocal relationship between the provider of labor and the provider of food.¹⁷⁷ It was one of the most direct links between the state and the subject. Large-scale feasting was not unique to the Inka state, but the Inka state seems to have relied especially heavily on this ceremonial form to control its subjects. A feast consumed a large quantity of stored wealth on a single occasion. The associated administrative needs were mainly about expenditure. The planners and record keepers needed to know the number rather than the names of the participants, and this was information easily kept on *kipu*.

MONITORING CRAFTS IN THE OLD AND NEW WORLDS. A small portion of the population was very tightly controlled by the Inka state. These were the skilled craft specialists organized in closely supervised workshops. The most famous were the “chosen women,” called *aqllakuna*: young unmarried women who were in the religious and economic service of the state until by state order they were married. The excavators of Huánuco Pampa have convincingly identified one walled compound there as the workshop for these women (Figure 3.16, zone VB; see the inset for details). The most notable features of this compound are its orderly layout and its monotonous architecture. There was only one narrow access to the whole compound. Materials recovered on the premises point to large-scale weaving (numerous spindle whorls; bone and metal implements for weaving) and brewing (many large jars of a kind believed to have been used for making the native maize beer).¹⁷⁸ The presence of metal pins used to fasten women’s garments and the absence of artifacts associated with men lead the excavators to the reasonable suggestion that the residents of this compound were the unmarried chosen women, for the barracks-like layout of the compound seems more suitable for singles than for families.¹⁷⁹ The number of people living in the forty or so identical residence-workshops has been estimated at between one hundred and three hundred, probably somewhere in

the middle. The witness's account in [Text 3.22](#) mentions drafting four hundred women weavers to work for the Inka, but it is not clear whether all of them were sent to the same compound.

If we were to seek a modern parallel for this Inka state factory, it is probably colonial plantation agriculture that would come first to mind. Certainly the Inka factories are an extreme form of state space. Confining workers under close surveillance probably meant that there was little need to keep records of their performance – certainly less need than in a Mesopotamian or Egyptian workshop. In Mesopotamia and Egypt, workers in the textile, brewing, and grain-processing industries do not seem to have resided in the workshops.¹⁸⁰ Ur III has left us detailed accounts by the foremen in charge of female laborers in grain-processing workshops. Each foreman controlled about thirty-six women, far fewer than worked in the Huánuco Pampa workshop, yet their workdays and free days were meticulously recorded, including days after the deaths of several named women.¹⁸¹ The Isin workshop studied by Van De Mieroop kept extensive lists of the names of the workers in four groups working in four sections of the workshop. “The number of workmen per section can vary daily from none up to eighteen men” because their assignment to the workshop only occupied about half their time.¹⁸² In addition to the name lists, the supervisory personnel of the Isin workshop made detailed records at three stages of the manufacturing process: (1) receipt of raw materials from other institutions or individuals; (2) distribution of these materials to the craftsmen; and (3) disbursement of the finished products.¹⁸³ In the case of the Huánuco Pampa workshop, there was probably no need to make records at stage 2, because a worker who stole materials would have had nowhere to hide and no way to dispose of what she stole. And as suggested earlier, the small size of the bureaucracy in charge of the storehouses and other state institutions may have made receipts at stages 1 and 3 unnecessary.

Comparison between Inka and Old World workshops thus suggests that there was more than one way for a state to exercise control over important industries. Using writing enabled administrators to keep track of workers who spent only the working day in the workshop. But a state willing to imprison its craft specialists could keep track of them without writing. This more concrete and secure approach was widely employed by early states in the Andes. The concentration of full-time artisans in Chan Chan, the Chimú capital, is a case in point. The Chan Chan artisans were organized in a hierarchical, guildlike manner. Most of them were housed in single-family units concentrated in the four self-contained barrios surrounding some of the royal compounds ([Figure 3.18](#), top left, dotted area). Interspersed among the houses were workshops administered from U-shaped structures from which either raw materials or tools were distributed. The more skilled artisans lived in better houses within the so-called retainer areas, which were directly attached to the royal compounds. Their control seems to have been tighter, for these workers shared a large kitchen served by a U-shaped structure ([Figure 3.18](#), top right). Their products were warehoused in the central storage complexes within the royal compounds ([Plate II, B](#)). The storage complexes were again served by U-shaped structures.

This peculiar architectural type has been interpreted as an accounting device by John Topic in an intriguing archaeological and comparative study of bureaucracy at Chan Chan.¹⁸⁴ The structures were distributed throughout the city. They have three walls enclosing a U-shaped space. The walls are thick and contain well-shaped cavities. There

are two basic types of cavity: bins and niches. Bins are found in the U-shaped structures dispersed in the barrios (Figure 3.18), niches in the ones inside the royal compounds (Plate II, B; for a picture, see Figure 3.18, bottom right). Topic's basic assumption is that these cavities had some sort of predefined place value in the *kipu* used by the Inka administrators. This would allow the Chimu administrators to put tokens such as beans or pebbles in the cavities to record quantitative information:

If the niches represented a category, putting markers into them recorded the value of that category. The markers put into the niches could have been the actual commodities being counted ... but they could also have been markers that represented commodities [i.e., tokens]. One niche, for example, might represent the amount of maize in a storage area; another might represent the number of sets of clothing that a group of weavers was required to deliver. Niches might have been subdivided by putting the counters into pots or bags within them: thus a niche could represent maize, with one bag representing maize to be delivered to storage, another representing maize currently stored, and a third representing maize required for consumption in the immediate future. In my interpretation, then the U-shaped structures are not so much control structures as accounting structures, and they might keep account of items that were not in storage as well as items that were in storage.¹⁸⁵

Topic then goes on to argue that over time the locations of the U-shaped structures changed from positions in which they could directly control commodity flow to positions in which they can only be interpreted as controlling information flow. His interpretation is consistent and compelling, the more so given the absence of evidence for any other Chimu administrative device. It also conforms to our impression that in early states that lacked writing, tight control could be achieved by physically congregating subjects and commodities in closely monitored state spaces. In such spaces it was numbers of people and commodities, not names, that were indispensable. A well-known example is the great city of Teotihuacan in the Valley of Mexico.

CENTRAL MEXICO: TEOTIHUACAN

Teotihuacan has puzzled every scholar who has tried to understand it (Figure 3.19). It seems to have developed into a gigantic and populous city quite rapidly and stayed prosperous for nearly eight hundred years without a writing system capable of recording connected discourse, despite the archaeologically established presence of Zapotec writing, Maya writing, and literate Maya people residing in an ethnic enclave within the city.¹⁸⁶ A small group of standardized emblematic glyphs is documented in durable materials, especially wall murals, but it does not seem to have developed significantly in the direction of linear phonetic writing (Figure 3.20). The glyphs seem to have denoted names and titles of some sort, but because they were usually placed in pictorial or narrative settings, seldom with more than one or two other glyphs, understanding them may have depended more on context than on phonetic associations. Janet Berlo argues that they are comparable to the Mixtec and Aztec pictographic writings preserved on codices, especially the botanical emblems that were used in the codices to denote toponyms.¹⁸⁷

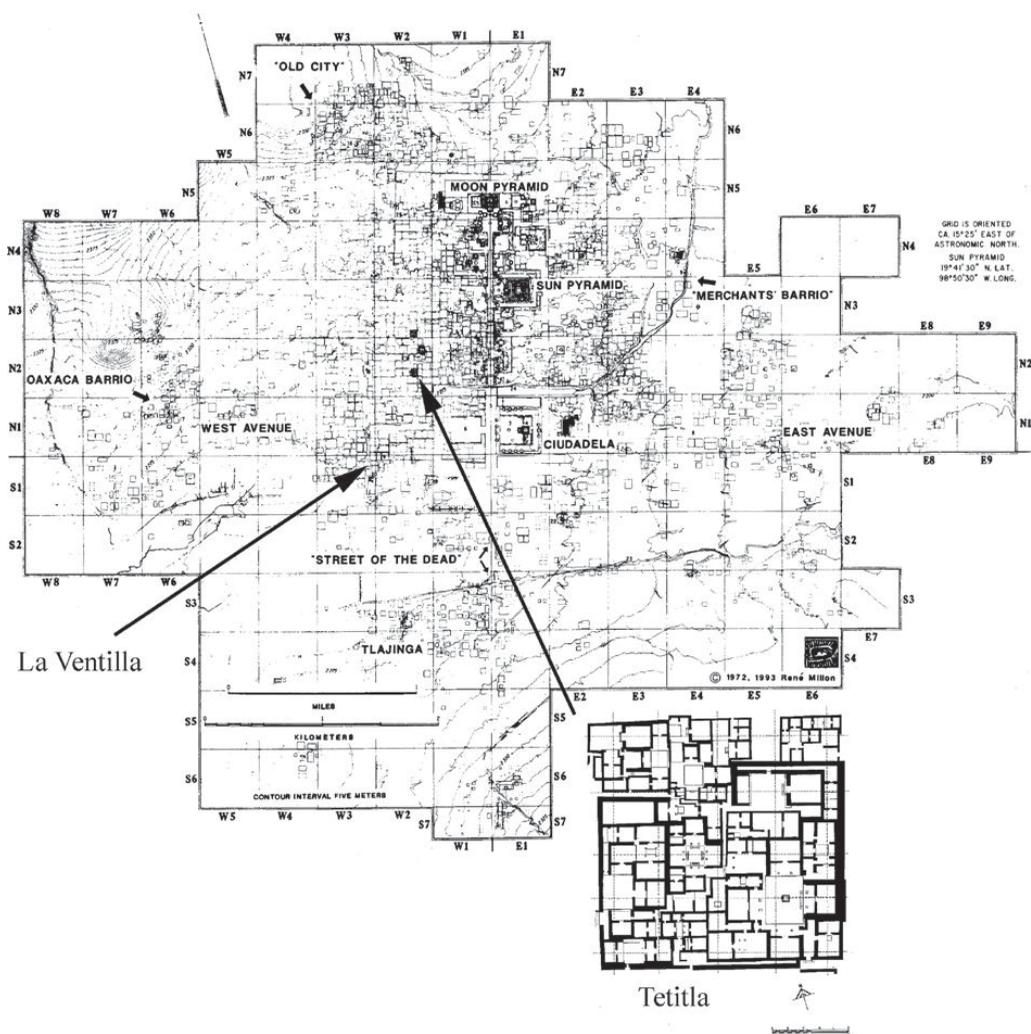


FIGURE 3.19 A royal strategy for attracting peasants: building a dream city “where time began.” This archaeological and topographic map of Teotihuacan shows its layout in its heyday around A.D. 600. Tetitla (inset at lower right) and La Ventilla are the two compounds mentioned in the text. After Berrin and Pasztory 1993, p. 18, Figure 2; inset of Tetitla compound after Manzanilla 2004, Figure 5.6.

Recognizing Teotihuacan Writing

Extending Berlo’s work, Karl Taube has recently called attention to a tantalizing link between the Aztec and Teotihuacan recording systems. He points out that in many Teotihuacan murals there are “weird combinations of elements” that cannot be satisfactorily interpreted as pictures but that seem instead to be a kind of writing, rather like Aztec compound glyphs that use human body parts in combination with objects from the natural and cultural worlds to designate place names (Figure 3.20).¹⁸⁸ In Aztec codices, discussed in the next section, some of the personal and place names were written phonetically – for instance, the places Mapachtepec and Itz(y)ocan (Berdan’s transcription is “Ytzucan”) in the Codex Mendoza (Figure 3.20). Mapachtepec means “place of the hill of the raccoon.” Instead of depicting a raccoon, *mapachtli*, on the hill,

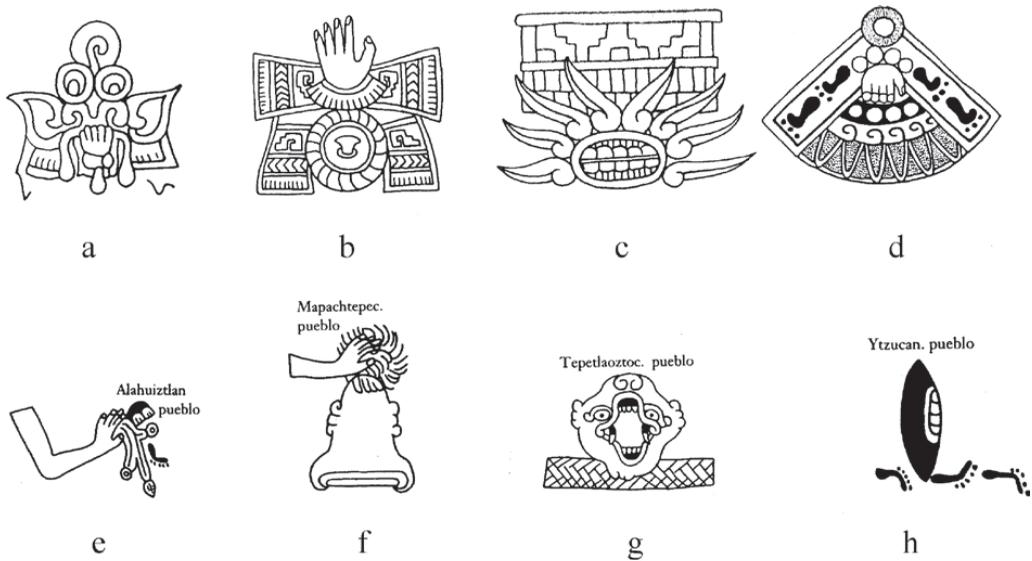


FIGURE 3.20 A possible link between Teotihuacan and Aztec recording systems: compound glyphs denoting place names that combine human body parts with natural or cultural objects. *Top row*, Teotihuacan, from Taube 2000, Figure 20, nos. e–h. *Bottom row*, Aztec, from Codex Mendoza (Berdan and Anawalt 1997), folios 37r, 47r, 21v, and 42r.

tepetl, the scribe used two glyphs representing a hand, *mahtl*, and a bunch of Spanish moss, *pachtli*, to spell Ma(itl)-pach(tli)-tepe(tl)-c(o). Itz(y)ocan means “place that is full of obsidian.” The road glyph, depicting a line of footprints and read *ohitli*, was used by the scribe to convey the sound “o” in Itz(y)ocan, which contains the possessive-quality-denoting suffix *-yo*.¹⁸⁹ Citing the Aztec evidence and Maya parallels as well, Taube argues that the disembodied Teotihuacan glyphs might contain specific semantic or phonetic values that had nothing to do with what they depicted. A more familiar example of this strategy is the Egyptian use of body parts for their phonetic values.¹⁹⁰ We should bear in mind, however, that to detect phoneticism at Teotihuacan is not enough to establish the use of writing there. Phoneticism is not the real difference between early recording systems (e.g., the proto-cuneiform, U-j, and Mesoamerican pictographic traditions) and “true writing” narrowly defined. *The real difference is the intention to represent speech.*¹⁹¹

There has not been any report of the use of codices at Teotihuacan, but it remains a possibility. One can even imagine that there were more signs on Teotihuacan codices than were used in murals. The discovery of as many as forty-two glyphs at the Plaza de los Glifos, located in the elite compound La Ventilla (Figure 3.19), suggests that painted manuscripts on native paper might have been used at Teotihuacan. The red glyphs were painted on the central patio floor, each of them in a rectangle delineated by thin red lines (Figure 3.21). Especially noteworthy are three rectangles, each containing three compound glyphs. Taube suggests that the three glyphs within each rectangle should be read together as a linear text rather than as separate signs, and, together with the red ruling lines, this large array of glyphs recalls passages in later painted manuscripts, such as tribute lists (Figure 3.30) and screen-fold almanacs (Plate XII).¹⁹² Taube’s comparison with the almanacs is especially compelling, not only because of the shared

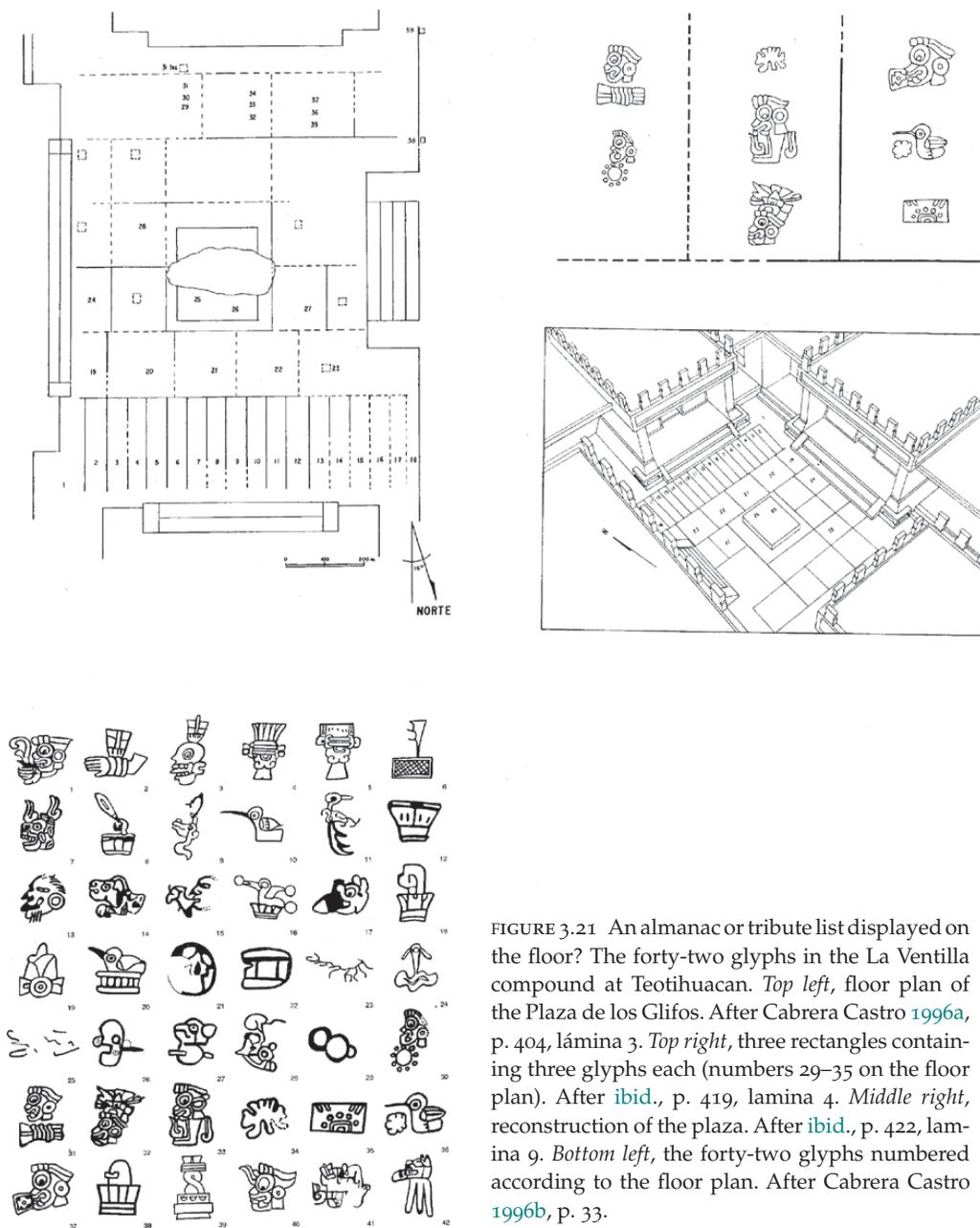


FIGURE 3.21 An almanac or tribute list displayed on the floor? The forty-two glyphs in the La Ventilla compound at Teotihuacan. *Top left*, floor plan of the Plaza de los Glifos. After Cabrera Castro 1996a, p. 404, lámina 3. *Top right*, three rectangles containing three glyphs each (numbers 29–35 on the floor plan). After *ibid.*, p. 419, lámina 4. *Middle right*, reconstruction of the plaza. After *ibid.*, p. 422, lámina 9. *Bottom left*, the forty-two glyphs numbered according to the floor plan. After Cabrera Castro 1996b, p. 33.

tabular format but also because an almanac is just the sort of text we might expect to see displayed in a solemn architectural setting like the Plaza de los Glifos (Figure 3.21).¹⁹³ As a wild guess, it might be noticed that the row of eighteen rectangles in Figure 3.21 could correspond to the eighteen months of the Mesoamerican 365-day calendar (e.g., the Maya *haab'* and Nahuatl *xihuitl* calendars). The presence of 14 as a coefficient at Teotihuacan lends some support to the use of the 365-day calendar there (the 260-day calendar has no numbers higher than 13).¹⁹⁴

Taube's study of the Teotihuacan recording system confines itself to the extant material – the display glyphs – and his conclusions do not venture beyond the realm of display writing. He comments, "One of the more striking traits of this writing is its emblematic quality, which is well suited for the vibrant mural tradition of Teotihuacan. Esther Pasztory ... notes that the innumerable walls throughout the city invited the development of mural painting, and this may also be true for the manner in which Teotihuacan writing developed."¹⁹⁵

This statement might remind us of Baines's suggestion that the earliest Egyptian writing developed in a display context, and the similarities between the two systems warrant further comparisons. Both systems are preserved only on durable surfaces, yet in each case there remains the possibility that perishable materials (codices and papyri) were also used. Their sign repertoires are characterized by depictions from the fauna, flora, and cultural worlds familiar to their users (compare [Figures 3.5](#) and [3.21](#)). The signs were often combined to denote names, especially toponyms. Some of the Teotihuacan glyphic compounds may have been expressed phonetically (notice the disembodied hand sign from the Plaza de los Glifos in [Figure 3.21](#), no. 2). I have argued that the information contained in the U-j bone tags, such as the names of royal estates, was economic in nature. What did the places represented by the Teotihuacan toponyms signify? If Taube's parallel with Aztec tribute lists like the Codex Mendoza holds, we might imagine that the Teotihuacan toponyms denoted tributaries that the mighty city once recorded on now-perished codices.¹⁹⁶ David Kelley suggests that the open nature of Mesoamerican pictorial recording systems made it possible for tribute lists to be compiled and interpreted in several different languages.¹⁹⁷ Display on monuments may not have been the original motive for the invention of glyphs, but it was one of their uses from an early time. The collapse of Teotihuacan might have entailed the destruction of these codices and the death of the recording system. When site destruction occurs, administrative texts stored in palaces, unless they are written on clay that fire only makes harder, are sure to disappear. Codices would not have survived the deliberate burning of temples and elite residences in the last days of Teotihuacan.¹⁹⁸

Extreme Concentration

To make a guess at Teotihuacan's need for written record keeping we must examine the city's unusual internal organization and its relationship to the territory around it. Teotihuacan had no rival or subordinate with a large population (the only other city in the region had been buried under a volcanic eruption much earlier). It grew by the rapid concentration in or near it of most of the farming population of the Valley of Mexico.¹⁹⁹ What caused this massive population movement from countryside to city is not clear, but the state must have had a hand in it. Metropolitan Teotihuacan occupied an area of about 20 km²; estimates for its peak population range from 60,000 to 150,000.²⁰⁰ The more than two thousand "apartment compounds" housed nearly all the residents. Each compound was enclosed by thick walls and had only two or three entrances ([Figure 3.19](#), inset). Two or more apartments shared one compound; each apartment probably held one household. The crowded living pattern and the consequent problems of sanitation and health might have been perceived by immigrants as disadvantages, yet they

continued to flow into the city. One attraction was surely the city's grandeur and aura of sacredness.²⁰¹ No one could overlook these qualities, and the awe they inspired was no doubt a conscious objective of the city's planners. Certainly it was the product of central planning, laid out with religious and militaristic meanings in mind, although whether there was a single master plan that was faithfully carried out in a short period, as Saburo Sugiyama seems to suggest, is open to doubt.²⁰²

The question I want to raise here is whether the planners also had the conscious aim of attracting the populace to live in orderly compounds so that the state could easily administer its people. In this connection the idea of a "royal strategy" as defined by Houston and his colleagues might be helpful. This was "a deliberate set of linked policies, culturally conditioned and historically variable, that were systematically applied by monarchs to their subjects, allies, and enemies." Such strategies involved many inducements, including coercion.²⁰³ Without strong inducements from the city at Teotihuacan we would be hard pressed to explain the near depopulation of the rest of the Valley of Mexico. Teotihuacan's farmers had to commute between their fields and their dwellings in the city, although perhaps they could live in field houses in the busy season.²⁰⁴ This cannot have been convenient, but the farmers' convenience was not the state's concern. In the view of Jeffrey Parson, the unnaturally low population density and the scarcity of obvious public architecture elsewhere in the Valley during Teotihuacan's heyday "represent dramatic reversals of previously long-established trends in the southern Valley of population growth, increased site size, and increased scale of public architecture," and on that account are likely to reflect deliberate policies. Parsons speculates, rightly in my view, that they were consequences of the Teotihuacan state's decision "to nucleate food producers and food consumers into a tight formation." And the state took this decision, I suspect, because of the limitations of its administrative apparatus. Concentrating the population in the city was a strategy that "facilitated direct state control over production while at the same time simplifying redistribution."²⁰⁵ The Teotihuacan administrators could probably have achieved their ends a little less draconically by employing true writing, which presumably they could have learned from their Maya guests (traders?). It may simply be that, though aware of this option, they were content with their own solution to the problems of administration.

CENTRAL MEXICO: THE AZTECS

For the Aztecs, Teotihuacan was a legendary place. Its legacy was more symbolic than practical, however, and it did not pass down its administrative strategies to the Aztec empire. Teotihuacan was a solitary city without serious rivals or allies. The Aztecs ruled a hegemonic empire built on a coalition of three powerful city-states: the famous Triple Alliance of Tenochtitlan, Texcoco, and Tlacopan, overlords that controlled many smaller city states. Although Tenochtitlan's subsistence economy "disperse[d] food producers and non-food producers much more widely and thickly over the landscape" than did Teotihuacan's policy of concentration, the dispersion had limits.²⁰⁶ Especially during the last days of its empire, the island city of Tenochtitlan invested heavily in swamp drainage and intensive *chinampa* farming around the city and in Lake Chalco-Xochimilco (Figure 3.22, top left).

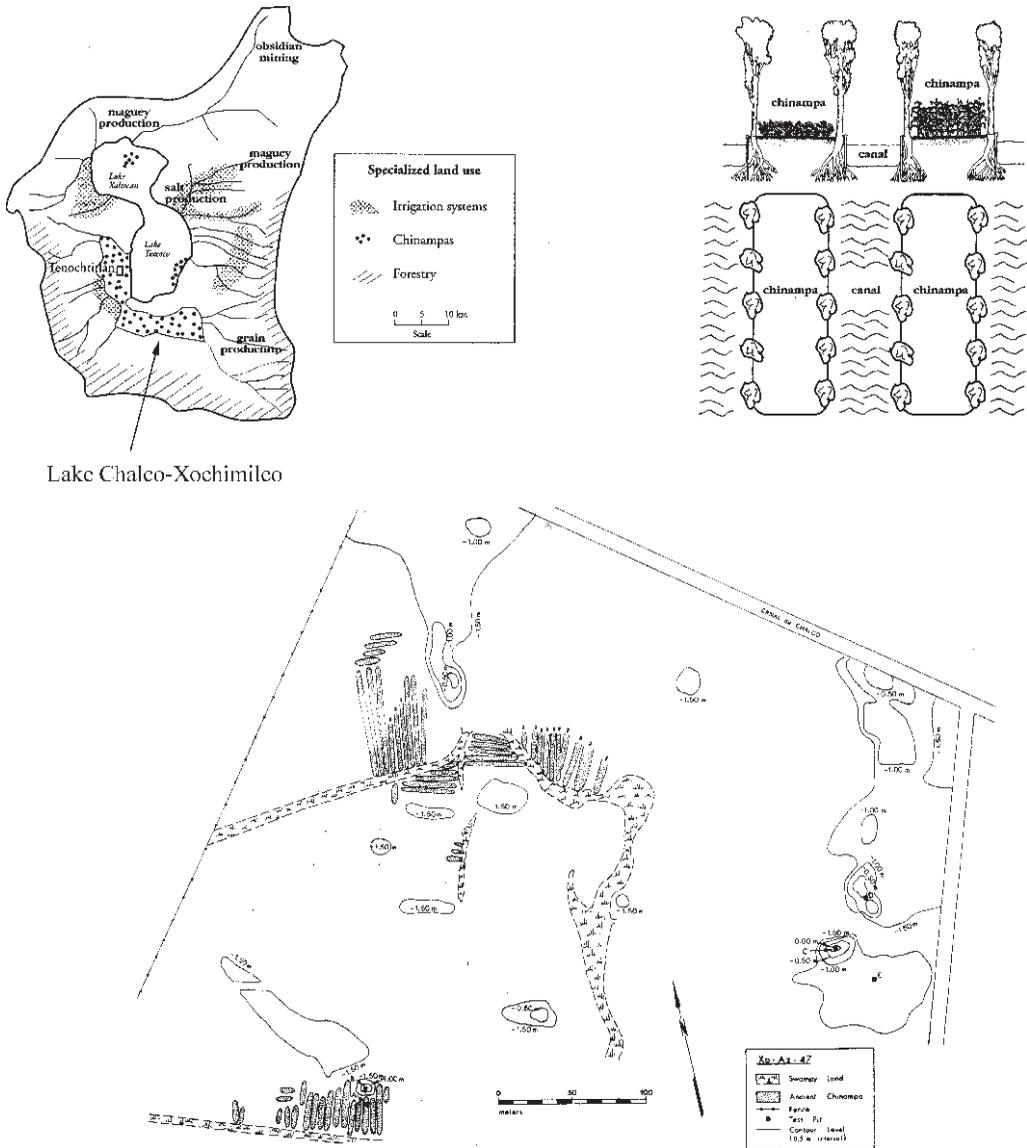


FIGURE 3.22 Ensuring the food supply: construction of *chinampa* fields by the Aztec state. Top left, map showing the *chinampa* districts (dotted area) in the Valley of Mexico. After Trigger 2003, p. 305, Figure 14.3a. Top right, vertical cross section and plan of a *chinampa* field. After *ibid.*, Figure 14.3c. Bottom, plan of an excavated *chinampa* district. After Parsons et al. 1985, p. 75, Figure 16.

Chinampa

Unlike the mainly piedmont land used by Teotihuacan farmers, *chinampas* were plots of land artificially constructed in lakes (Figure 3.22, top right).²⁰⁷ To build a *chinampa*, posts were driven into the shallow lake bottom to make a rectangular boundary. Vines and branches were interwoven between the posts to form an enclosure. Masses of fertile soil and aquatic vegetation were excavated from the surrounding lake bottom and used to fill the enclosure, which was further anchored by planting trees along its perimeter. The



FIGURE 3.23 Aerial photograph of the Xochimilco basin, showing Aztec *chinampas* built neatly within orthogonals formed by canals. After Coe 1964, p. 92.

enclosure was filled to a height far enough above the water level for the soil to provide the proper moisture for seeds to germinate and grow.

This simplified description does not do justice to the complexities or to the labor invested in building, cultivating, and maintaining *chinampas*. What is of interest here is the physical layout that resulted from the construction method. Each *chinampa* was a long narrow field, usually twenty to forty meters long by two to four meters wide but sometimes as large as one hundred meters long by five to six meters wide. Most *chinampas* were bordered on at least three sides by canals that were navigable by flat-bottomed canoe. Today the whole Xochimilco basin appears in aerial photographs as a network of canals laid out generally perpendicular to one another (Figure 3.23). The long narrow plots visible within this pattern of orthogonals correspond to *chinampas* that most likely date from the late Aztec period; in vertical section across the short axis, the plots have a mounded profile distinctive of *chinampas* (Figure 3.22, top right).²⁰⁸ Land reclamation on this very large scale (ca. 200 km²) was not a simple operation. The Aztec ruling class

must have resorted to intensive *chinampa* agriculture under pressure to feed a growing population of city dwellers.²⁰⁹ The rigid layout, so reminiscent of the state fields we have seen in Mesopotamia and the Inka empire, is testimony to state involvement (compare Figures 3.23, Plate XI, and 3.2b).

For the farmers this layout may have been quite practical. Perhaps more important, for the administrators of the fields it had the double appeal of simplicity of administration and conformity to the aesthetic of order characteristic of all states and their functionaries.²¹⁰ Its administrative possibilities are illustrated by the Maguey Plan, a sixteenth-century map drawn in indigenous style (Figure 3.24).²¹¹ Several major diagonal canals and streets (the latter marked by footprints) cross one another at right angles on the plan. At first glance this accords nicely with the canal system captured in the aerial photograph shown in Figure 3.23, and, perhaps mainly because of the accord, Michael Coe puts the two pictures side by side in his article on *chinampas*. However, on closer inspection we notice an important difference between the two. In the aerial photograph the canals are either parallel or perpendicular to the long sides of the ancient *chinampa* fields, but on the plan the angle is oblique, so the major canals and streets transect the fields. How might we explain this difference? Let us ignore the major canals and streets for a moment and concentrate on the rest of the plan. It becomes immediately clear that it maps a community consisting of more than four hundred residential sites.²¹² Each site comprises a small house platform (a gray rectangle with a sign for “house”), adjoined by some six or seven narrow rectangular *chinampa* strips. The layout of these individual sites is highly uniform. With only slight irregularities the community is divided into narrow strips of equal width by secondary streets alternating with canals, both running north-south in Figure 3.24.

Now let us put the orthogonal pattern of the major canal and street system back into the plan. It seems that one of the two systems came into being first and the other was later imposed on it, rotated for some reason off the axis of the first. Whatever the reason for the rotation, its presence argues that the plan represents a real landscape and not an idealized or hypothetical one, because an ideal scheme presumably would show everything in neat alignment. The residential community was real, therefore, but clearly it also was planned. The number of *chinampa* fields adjacent to each household does not seem to vary significantly, indicating that the land was allocated by a central authority to households of equal status. By studying the pictographic text later added to the map, Calnek argues that this community was located in an area near the city of Azcapotzalco to the west of Tenochtitlan and along the western shore of Lake Tezcoco, one of the *chinampa* zones in the Valley of Mexico (Figure 3.22, top left). This Tepanec city and its empire were conquered by Tenochtitlan at the beginning of the latter’s imperial expansion, and the land represented in the map was appropriated at that time.²¹³ The appropriation was recorded in the chronicle of the sixteenth-century Spanish historian Fray Diego Duran: “The largest and best fields were given to the royal government. Other lands were distributed among the nobles and a third group of fields was divided among the wards of Mexico, each ward receiving a certain amount of land to maintain the cult of its gods. These are the lands which we now call calpolalli [*calpulli*], that is to say ‘lands of the wards.’”²¹⁴

Duran gives no details about how the land was distributed, but the distribution certainly involved reallocation and therefore central planning. Moreover, it coincided with

the large-scale land reclamation through *chinampa* construction mentioned earlier. I therefore suspect that the Maguey Plan or its prototype was made by state officials to assist them in planning the construction of new *chinampa* fields and allocating them to individual households. On the map each site is usually associated with a profile human head plus a name glyph, the type of pictograph we have seen in Aztec king lists in [Chapter 1 \(Plate I\)](#). On stylistic grounds Donald Robertson dates the painting of the heads and name glyphs to the years immediately after the conquest. He suggests that the map “can be either a copy with some changes of a Pre-Conquest map or a very early Post-Conquest manuscript drawn up *de novo*.”²¹⁵ The Nahuatl gloss over each name glyph must be of post-conquest date.

Calnek suggests that the map was originally a simple property register of the type kept by community officials in pre-Hispanic times.²¹⁶ Strictly speaking, a property register is a written inventory of properties, whereas the Maguey Plan is clearly a map of households and associated *chinampa* fields. We might on that ground call it a cadastral map, yet the information it contains is very limited, amounting only to the location of each named household and the number of its *chinampa* fields. The community Calnek refers to, in Nahuatl called *calpulli*, is the one mentioned in the earlier quotation from Duran. It was the basic unit of Aztec social organization, corresponding to a barrio or ward, and it held communal land that it assigned to individual families. Alonso de Zorita, a Spanish judge who left us a vivid contemporary description of Mexican life based on a decade of observation and administrative activity in the newly conquered colony, informs us that the headman of a *calpulli* was

responsible for guarding and defending the *calpulli* lands. He has pictures on which are shown all the parcels, and the boundaries, and where and with whose fields the lots meet, and who cultivates what field, and what land each one has. The paintings also show which lands are vacant, and which have been given to Spaniards, and by and to whom and when they were given. The Indians continually alter these pictures according to the changes worked by time, and they understand perfectly what these pictures show.²¹⁷

Zorita mentions the use of such “pictures” in litigations over land, but the Maguey Plan contains less information than the ones he describes, so it seems unlikely to have been used for this purpose. It looks more like an overall scheme used for designing a new *chinampa* district. As pointed out by Richard Townsend, many farmers in the new *chinampa* zones were not *calpulli* members but resident tenants tied to the land, tenants who paid rent in kind to landowners living in Tenochtitlan: “These laborers were essentially dependent on the state and were supervised by state-appointed administrators.” In other words, the new *chinampa* zones were state farms.²¹⁸ Taking advantage of the fact that *chinampa* construction invited regular shapes, the state redesigned the landscape to achieve tight control by means of a legible settlement layout. The Maguey Plan was surely more legible than the Ramesside town register we saw earlier in this chapter ([Text 3.15](#)).

Peopling Tenochtitlan

Like the Maguey Plan, the settlement pattern of the island city of Tenochtitlan shows a landscape of great regularity. According to Aztec tradition the city was founded near

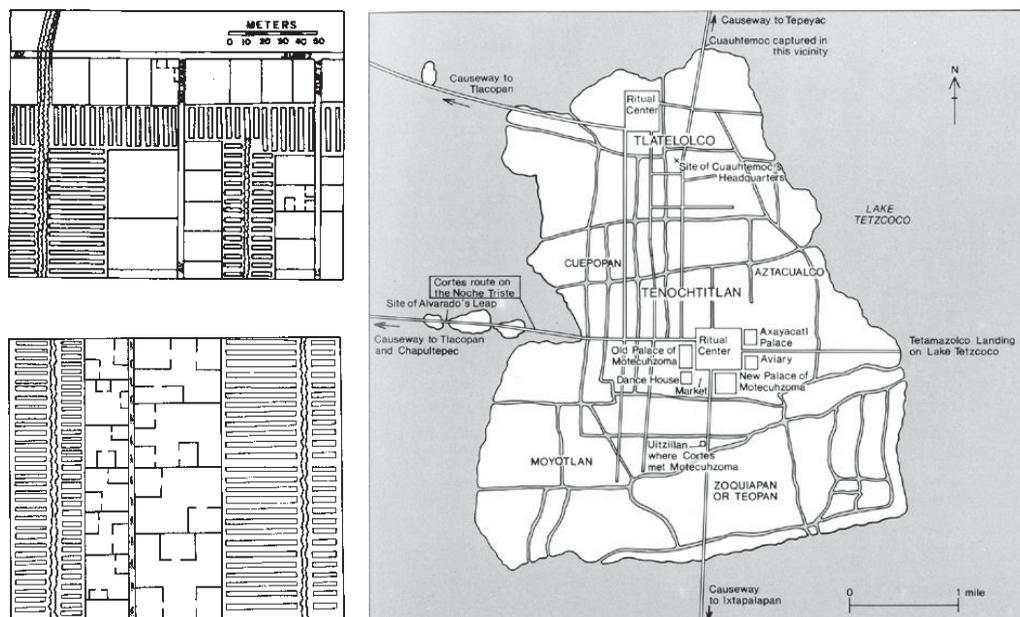


FIGURE 3.25 Master plan and modular neighborhood for constructing a great city. *Chinampa* gardens in Tenochtitlan. *Right*, plan of Tenochtitlan with its system of service canals. After Townsend 2000, p. 29, illustration 11. *Top left*, settlement pattern in the barrio of Huehucalco just south of the causeway to Tlacopan, as reconstructed by Calnek from colonial sources. The long strips of *chinampas* were separated from each other and from adjoining residential areas by shallow ditches, and they faced canals (wavy lines). After Calnek 1972, p. 109, Figure 4. *Bottom left*, hypothetical reconstruction of a residential area by Berdan, based on Calnek's data. The house sites (big rectangles) face streets or footpaths. Each house was composed of a number of separate rooms facing an open patio. After Berdan 2005, p. 16, Figure 1.6.

the western shore of Lake Texcoco at a location described as swamp and marshland, in other words in terrain similar to the lake bed reclaimed by *chinampa* construction at Xochimilco (Figure 3.25).²¹⁹ Its system of service canals at once reminds us of the rectangular pattern of canals shown in aerial photographs of Xochimilco (Figure 3.23). Like the narrow *chinampa* fields constructed within each rectangle in the bed of Lake Chalco-Xochimilco, the residential spaces and garden plots within Tenochtitlan were built to conform to the canal system.

Because the Aztec city lies beneath the heart of modern Mexico City and is largely inaccessible to archaeological excavation, reconstruction of the settlement pattern relies mainly on archival studies of early colonial documents (especially property maps) dealing with the ownership of residential sites and *chinampa* gardens inside the city. Using these records, Calnek is able to reconstruct a neighborhood located just south of the Tlacopan causeway (Figure 3.25, top left and right). If we compare Calnek's neighborhood with the Maguey Plan, we notice first the strictly linear layout shared by the two communities, that telltale imprint of strong-willed planners that we have seen also at Kahun in Middle Kingdom Egypt and at Huánuco Pampa in the Inka state (Figures 3.12 and 3.16). The regular alternation of north-south streets and canals is also similar. But there are some differences. In Tenochtitlan, Calnek's reconstruction of several neighborhoods has demonstrated that "[t]he layout of individual sites, and of entire districts,

was closely coordinated to that of primary and secondary streets and canals. The size of individual residential areas and *chinampa* gardens was, within relatively narrow limits, predetermined by the execution of a plan which must have included standardized estimates of the spatial needs of typical urban domestic groups."²²⁰

In the Maguey Plan, on the other hand, the residential sites and their fields were not aligned with the primary canal and street system, as we have seen. Nevertheless the standard size of the allotments – household area and adjacent *chinampas* – suggests that this community, too, was the result of state prescription.

State planning of settlements does not necessarily require a map. In Egypt, discussion and planning seem to have been done on site, at full scale.²²¹ Yet in view of the Maguey Plan and the strong tradition of cartography in Central Mexico, it would not be surprising if the Aztecs exploited their pictographic tradition to regulate their settlements, and Tenochtitlan is surely the city most likely to have been built to a detailed plan. Like the Maguey Plan, the hypothetical master plan of Tenochtitlan would probably have been painted on native *amatl* paper. Given the sheer size of the city and its population (estimated at 12 km² and more than 100,000 people), the plan would have had to be schematic, more abstract than the Maguey Plan. A piece of paper large enough to show and name all the sites of individual residences would have been impossibly unwieldy. The Maguey Plan records only four hundred households and is already a large sheet (2.385 by 1.68 meters).²²² For the plan of Tenochtitlan we should probably imagine something resembling the reconstructed city map in [Figure 3.25](#), right, supplemented by the blueprint for a standard neighborhood, something like the one reconstructed by Calnek ([Figure 3.25](#), top left), which would serve as a module to be reproduced throughout the city. Nevertheless the ultimate aim of planning is to allocate space, and for residential sites this means matching the space with a personal name, as on the Maguey Plan. A plan of the same type labeled with the names of Tenochtitlan's more than ten thousand households would have required a system for writing ten thousand distinct names.²²³

Another way to keep track of Tenochtitlan's households might have been to divide the city into manageable units resembling the community depicted in the Maguey Plan. An obvious unit to choose was the *calpulli*, and we know that Tenochtitlan had many *calpulli* (eighty, by one estimate).²²⁴ The headman of a *calpulli* would have needed only one or two hundred name glyphs to identify the households he was in charge of on a "picture" of the kind Zorita describes, and we do in fact possess a group of cadastral maps and registers that fit Zorita's description. Far more detailed than the Maguey Plan, they are the Códice Kingsborough, Codex Vergara, and Códice de Santa María Asunción. All three come from Tepetlaoztoc, a populous region in the domain of the Acolhua people in the eastern basin that was subject to Texcoco, a member of the Triple Alliance. The codices show pictorial record keeping to have versatile capabilities comparable in many ways to those of bookkeeping in the ancient Near East and Egypt. Let us take a close look at one of these pictorial records.

Pictorial Bookkeeping About Land

The Códice de Santa María Asunción (hereafter Asunción) is a native pictorial manuscript painted in the mid-sixteenth century, about twenty years after the conquest.²²⁵ It records censuses of households and landholdings for twelve rural communities in Tepetlaoztoc.

Study shows that the Asunción was initially drafted for tax reassessment between 1539 and 1544. After the catastrophic pestilence in 1545, it was updated to reflect the effects of the epidemic. It contains three separate listings for each household in the twelve communities. First is the household census, usually five households to a page (Plate XIII and Figure 3.26a). Then come two distinct cadastral registers of household lands, usually four households to a page. One cadaster, glossed *milco(n)coli*, records field perimeter measurements; the other, glossed *tlahuelmatli*, records field surface areas (Figure 3.26b–c).

In the household census the entry for each household begins with the name glyph of the household head, a house glyph, and a line connecting the two. This can be read, “Here is the household of so-and-so.” The Maguey Plan is similar, but it employs only one type of house sign. Here there are two, for two different ethnic affiliations. One is the flat-roof house, the conventional *calli* glyph, interpreted to mean Nahua households (the bottom row in Plate XIII and Figure 3.26a); these are in the majority. The other is a (pitched) thatched-roof house, the *xacalli* glyph, probably identifying Otomi households (the topmost four rows in Plate XIII and Figure 3.26a).

Immediately to the right of the house glyph in each entry is a right-facing head that denotes the household head. The remaining members of the household are represented by head signs placed in a line to the right of the household head. The head signs are chosen from a set of twelve that use conventionalized features and attributes to specify age grade and gender (Figure 3.27, top left). These features include hairstyles, a tear below the eye for widows (Figure 3.26a, fourth row, the sixth head from left), and a wrinkled face for old people (fourth row, last head from the left). Children are identified by a cradle (fourth row) and (for girls) a cape. Additional demographic information is conveyed by modifications of the twelve signs. Thus, the face of a deceased person is colored red (most of the people in Plate XIII were dead!); a face tinted yellow signifies illness (third row, second head from left). If a person moved away, a footprint (like the ones denoting streets in the Maguey Plan) was added under the corresponding head, sometimes along with a toponym sign designating the new location. Relationships between household members are indicated by red connecting lines and by orientation (couples face each other).

This rudimentary family tree does not express precise kinship, nor is a name glyph given for anyone except the household head. However, this may mean only that kinship was not relevant to the assessment of taxes, which was the purpose of this census. What mattered was only the identification of the taxpayer, usually the household head, although the separate connecting line between the widow and the house sign in the fourth row of Plate XIII probably signifies that she, too, was a taxpayer. So it seems that the recording system was tailored to the administrative need; had there been a need, new glyphs and numbers could have been added to denote kinship terms, exact age, and individual names. We have seen the same fit between administrative needs and recording system in Inka *kipu*. The two systems recorded the census differently because the two states required different information. The Aztec state wanted information about each household, including each person’s civil and tax status. The Inka state used a similar age-grade system to determine each person’s tax status (Table 3.3), but it did not care to know each individual’s name, age grade, or kin relationships, for the only form of taxation was the labor tax, and it did not need to record individual landholdings because there were none (the only nonstate landholdings were communal and were not taxed). In Central Mexico, as we shall see, the commoners needed to pay not

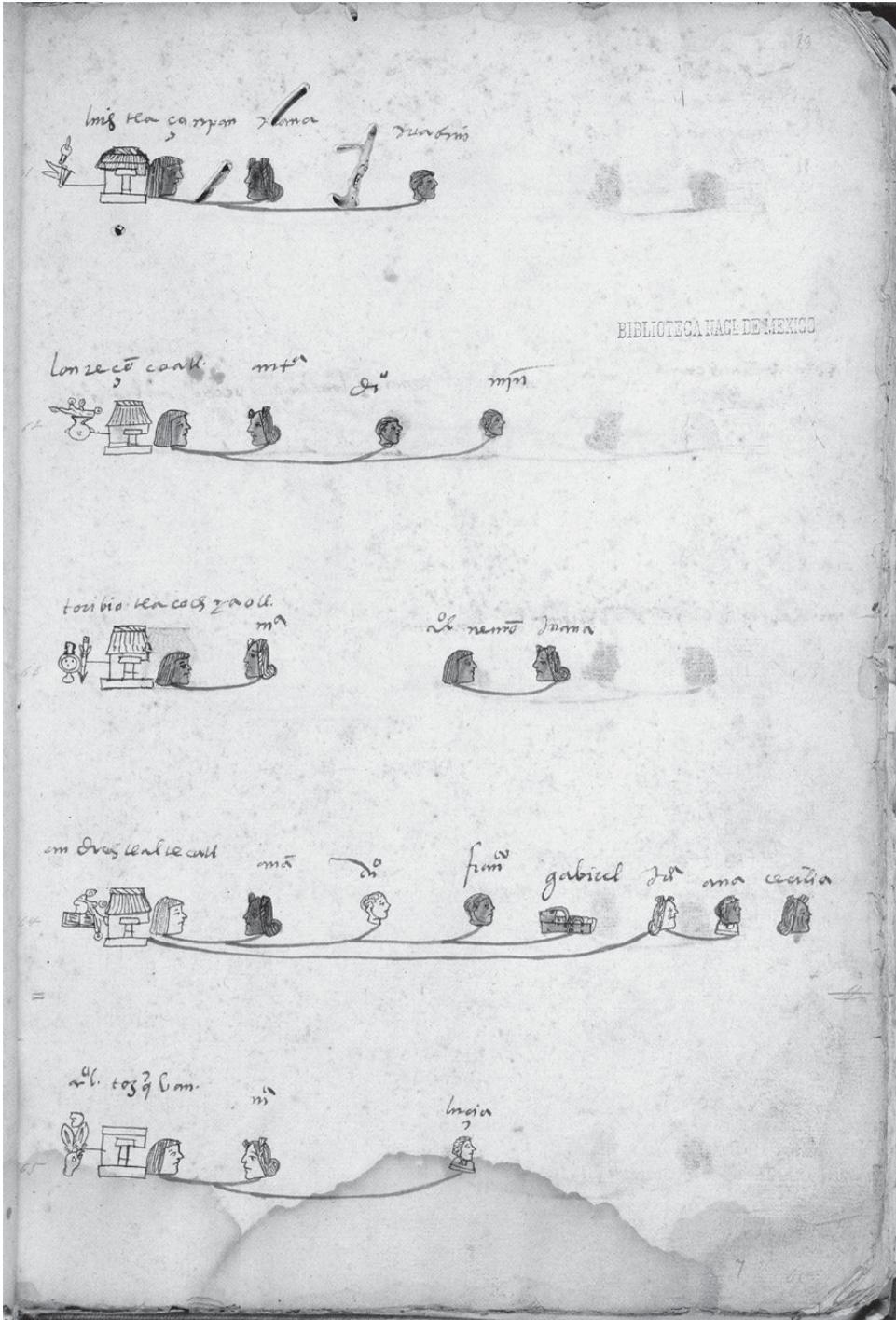


FIGURE 3.26a Pictorial household census in the Códice de Santa María Asunción. After Williams and Harvey 1997, folio 17r, by permission of the University of Utah Press. See [Plate XIII](#) for color.

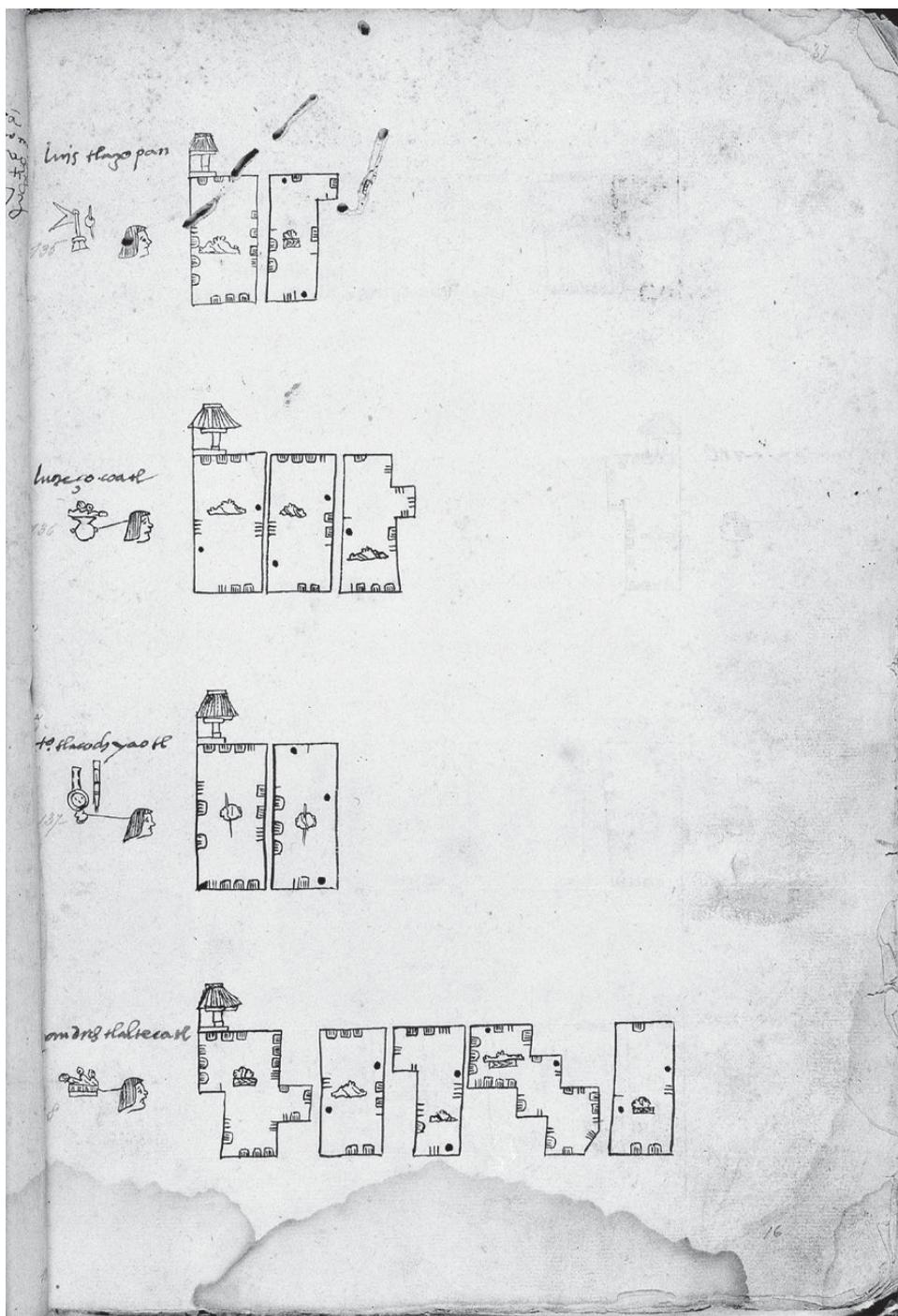


FIGURE 3.26b Pictorial land register in the Códice de Santa María Asunción showing field shapes and perimeter measurements. After Williams and Harvey 1997, folio 16r, by permission of the University of Utah Press.

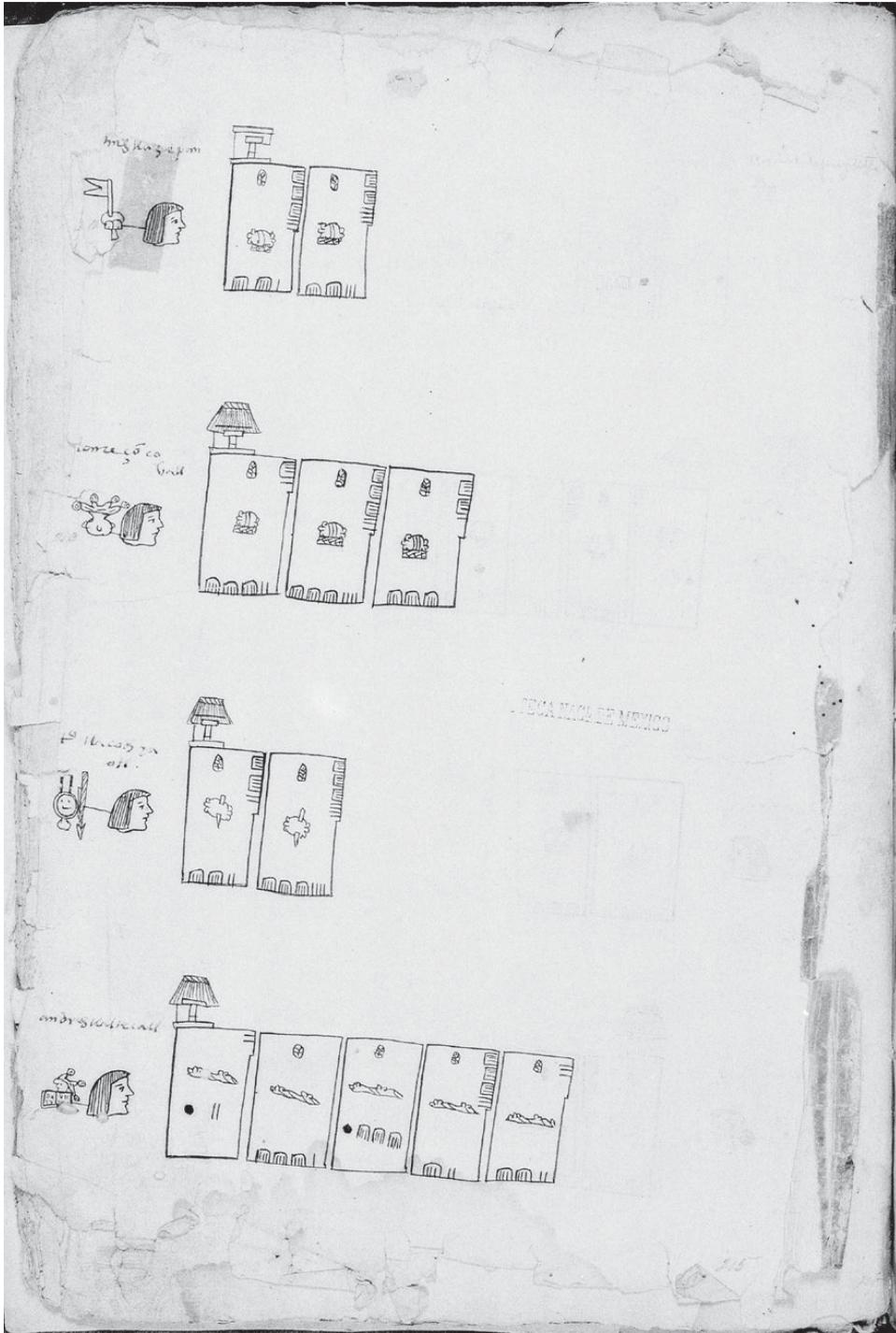


FIGURE 3.26c Pictorial land register in the Códice de Santa María Asunción recording the area of each parcel for the convenience of tax assessment. After Williams and Harvey 1997, folio 25v, by permission of the University of Utah Press.

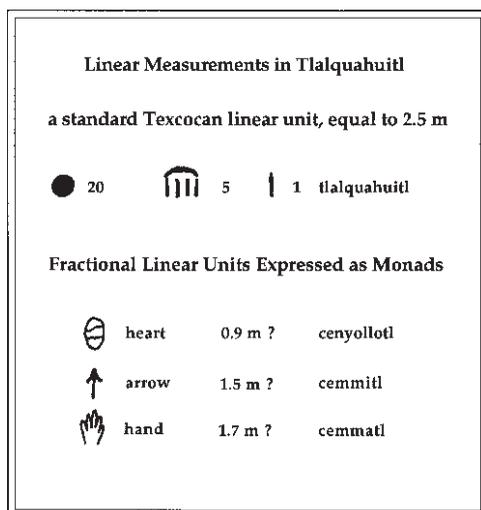
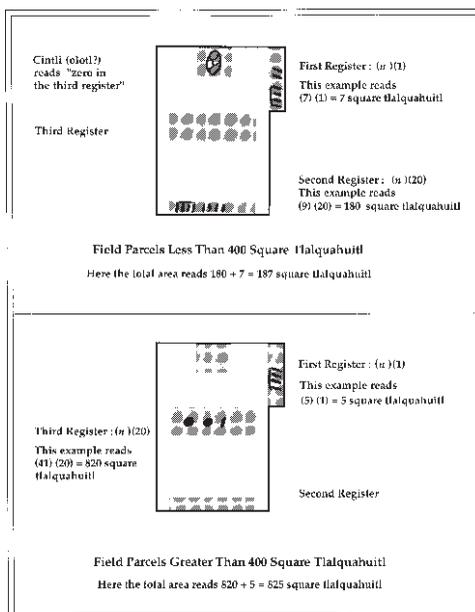
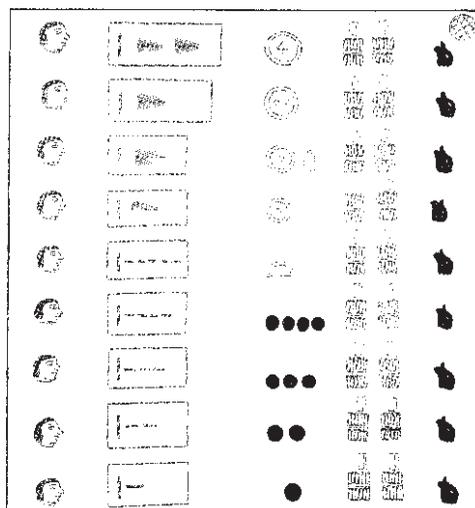
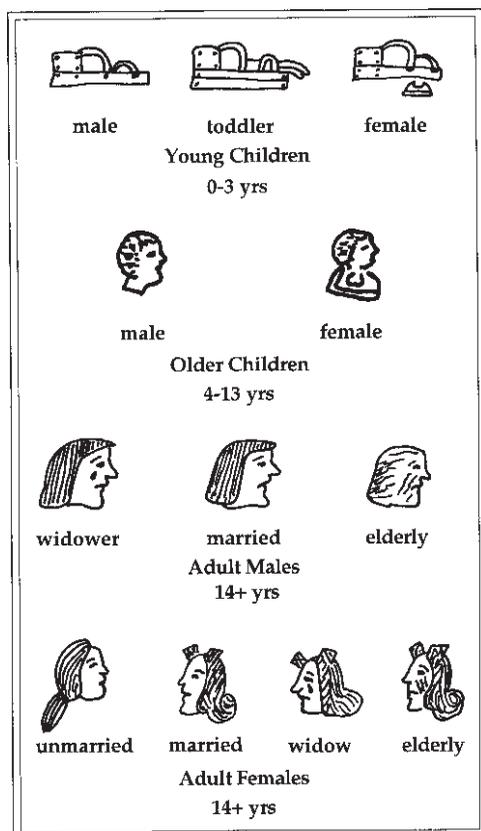


FIGURE 3.27 Glyphic conventions and the calculation of taxes in Mexican codices. After Williams and Harvey 1997, p. 22, Figure 9; p. 26, Figure 12; p. 36, Figure 17; and p. 38, Figure 19.

only labor tax but also tax in kind, the assessment of which was necessarily more complex than tax assessment in the Andes.

The households registered in Asunción's household census are listed again, in the same sequence, in the *milcocoli* land register, which records the perimeter measurements of the parcels belonging to each household (Figure 3.26b). The word *milcocoli* probably means "field shapes." Distances indicated along the sides of each field give its size. The distances are expressed using three standard linear units (20, 5, and 1) and three fractions of a unit. The reading of one of these distances would be something like "so many standard measures plus a fraction" (Figure 3.27, bottom left). The measurements given are precise, but the fields themselves are only sketched; none of the early states in our sample tried to draw fields to scale. The shapes and dimensions show that the *milcocoli* register was intended to record arable land only, hence the tax being assessed was an agricultural tax, not a tax on real estate. This can be inferred from parcels with nearly rectangular "cutouts" that measure around 200 m², in shape and surface area resembling Aztec-period Tepetlaoztoc residential floors (Figure 3.26b, bottom row). Other cutouts might correspond to trees, rocks, and paths leading to houses. Unlike the *chinampa* fields in the Maguey Plan, which were regular in shape and surface area and presumably easy for the tax assessors to survey, the piedmont land parcels at Tepetlaoztoc were irregularly shaped (compare the Maguey Plan with the reconstructed cadastral map based on Asunción in Figure 3.28). Moreover, whereas the exceptional fertility of *chinampa* fields meant that they could be cultivated continuously for a long time, piedmont land had to be fallowed, and different parcels varied in productivity according to soil type.

These differences made surveying and recording more difficult in the piedmont, and the pictorial records are correspondingly complex. For example, a glyph that describes soil type is placed in the center of each parcel (Figure 3.26b). Each of these soil glyphs is a combination of two or three basic graphic elements taken from a set of nine: dots, stone, mat, spine perforator, lips, green-maize stalk, eye, water, and hill. The codex contains 104 such combinations, which can be grouped into 18 categories at three taxonomic levels: seven generic, nine specific, and two varietal (Figure 3.29). The taxonomic structure of these soil glyphs is one of the best indications that Mexican pictographic recording systems operated by the same classificational principle as other early writing systems. A comparison between the taxonomy of soil types and the taxonomy of jars in a proto-cuneiform school tablet (Figure 5.1) helps us appreciate the pictographic recording system's ability to meet administrative demands. In addition to soil glyphs, other glyphs were created to record and update cadastral data related to tax assessing – for example, glyphs for "rented field" and "field under fallow." Land transfer could be indicated by placing the name glyph of the recipient above the transferred field.

Assessing Tax

The tax-assessing function of the codex is most explicit in the third part, the one glossed as *tlaheulmatli* ("surface area of a field"; Figure 3.26c). The ingenious decipherment of this part by Williams and Harvey cannot be recounted here, but their result should be given. Essentially, the tax assessor used the linear measurements recorded in the previous part, the one glossed *milcocoli*, to arrive at a value for the area of each field parcel. He then wrote this value inside a rectangular "field" sign using a vigesimal positional

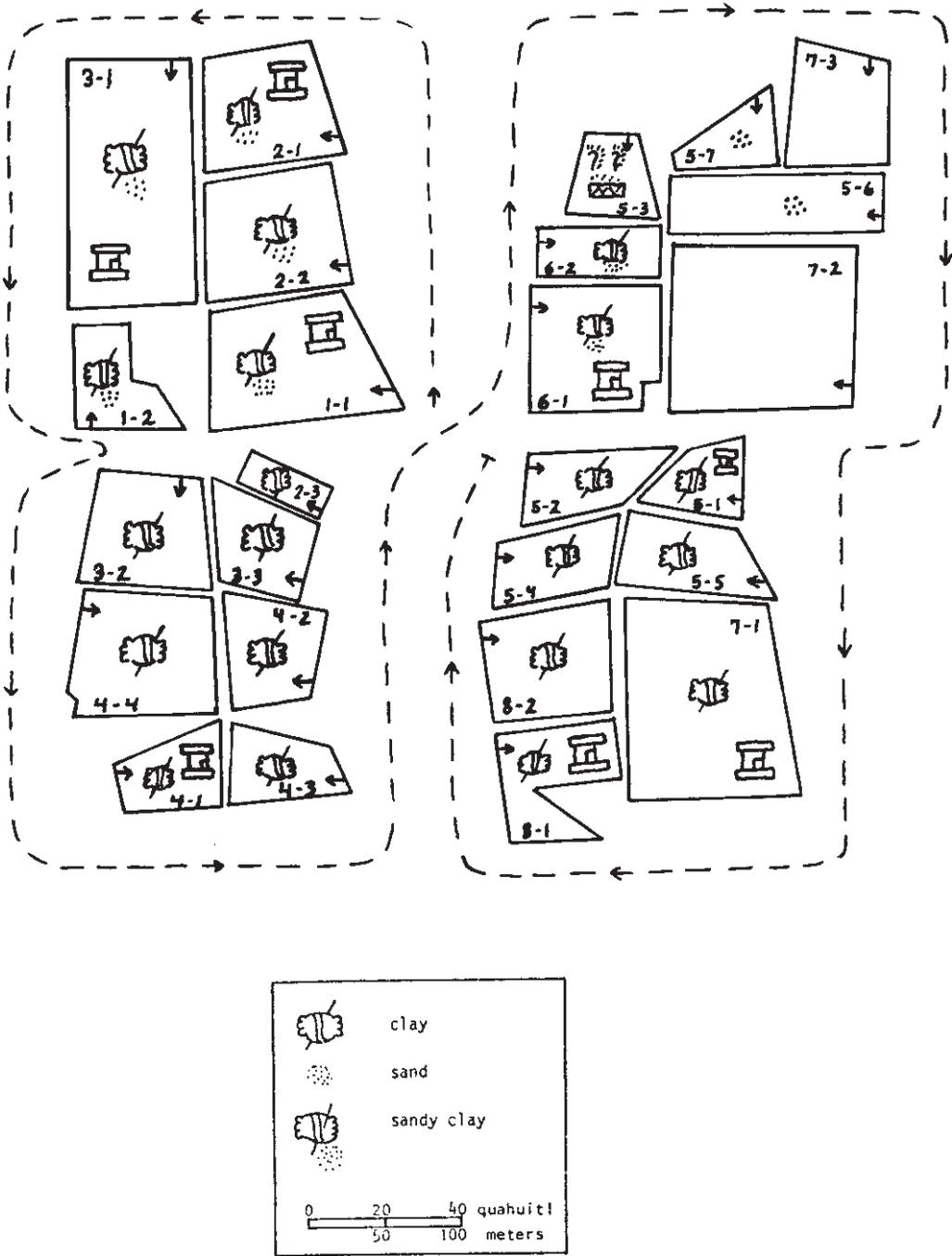


FIGURE 3.28 Reconstructed cadastral map of the piedmont land parcels at Tepetlaoztoc, showing field and settlement pattern and soil types. Arrows indicate the presumed land surveyor's view of each field. After Williams 1984, p. 119, Figure 5.6.

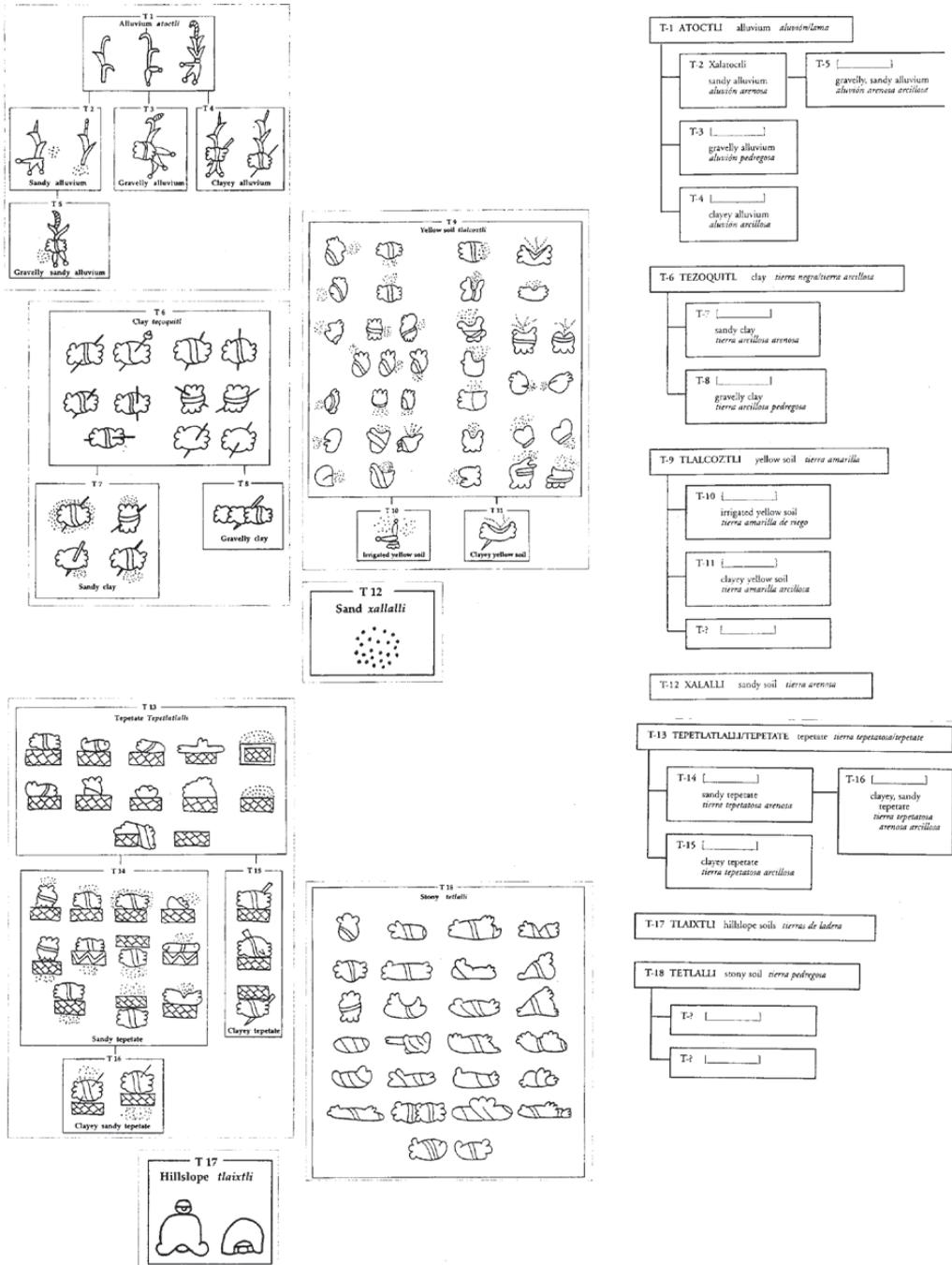


FIGURE 3.29 Mexican pictorial recording that might be compared with proto-writing: soil glyph variants in the Códice de Santa María Asunción. After Williams and Harvey 1997, pp. 31–4, Figure 16 and Table 5.

notation: in the sign's first register the unit is 1 square *tlaquahuítl* ("wooden measuring rod," a standard Indian linear unit of land measurement); in the second, 20 square *tlaquahuítl*; and in the third, 400 square *tlaquahuítl* (Figure 3.27, bottom right). Four hundred square *tlaquahuítl* was a standard land unit; any parcel that measured less than 400 square *tlaquahuítl* was flagged at the top of the "field" sign with a glyph that meant zero. On the page shown in Figure 3.26c, every parcel except the one at bottom left was flagged as less than one standard land unit.

How was this register used? The conquistador Hernán Cortés tells us that tribute was assessed at a fixed rate according to standard land measures. This is confirmed by another codex, the *Códice de Otlazpan*, which gives us a "tax table." The table does not say what the tax rate was for parcels smaller than one standard unit, but it shows that for each standard unit of 400 square *tlaquahuítl* the rate was one (basket of) cacao beans (Figure 3.27, top right). The tax tables we use today when filing our federal tax returns come inevitably to mind: standardization always entails simplification, and the two are never absent when the state is involved. Standardization reduces calculation, and it makes recording easier and more transparent. The key to achieving dramatic simplification is to work with units that are easy to manipulate because they are based on the numerical system in use (sexagesimal, vigesimal, decimal, or other). We have seen how the Inka administrators tailored reality to their decimal administration. The Aztec state organized its tax and tribute assessments using a vigesimal strategy. Let us begin with Asunción and proceed upward to the city-state and empire levels with other tribute lists.

Asunción does not have the form of a tax list – a list that specifies how much tax is due and from whom – but it was created for taxation purposes. I have mentioned its regular layout of five households per page in the census section, and four per page in the two land registers. This allocation of page space was probably tailored to the vigesimal system, for groups of four or five pages amount to twenty households, and units of twenty households agree with the work squads (*cuadrilla*) mentioned in early documents, which say that a "scorekeeper" was in charge of twenty houses, and a "centurion" (*macuiltecpanpixque*) in charge of one hundred houses.²²⁶ Williams and Harvey noticed that the households listed in Asunción seem to fall not into groups of twenty but into smaller groups of three to five: a recurrent pattern on the list is one large landholding household (e.g., the fourth row in Figure 3.26c) followed by several households with smaller holdings. Accordingly they suggest that it was these smaller groups (originating perhaps in local units of social organization, mini-lineages of a few related households) that were responsible for paying tax in kind and labor and hence correspond to the work squads (*cuadrilla*) of other documents. In support of their interpretation they cite another codex from the same Tepetlaoztoc group, *Códice Kingsborough*, in which each child of Don Diego, the ruler of Tepetlaoztoc, is recorded as receiving tax from groups of four to thirteen households (Figure 3.30a).²²⁷ Nevertheless the Kingsborough page immediately preceding the one they cite, a record of the taxes Don Diego himself received, shows that at least on the level of the whole Tepetlaoztoc regional state the tax units were standard work squads of twenty and one hundred households (Figure 3.30b and Table 3.4). On this page both the number of households in each community and the quantities of goods and labor levied are arithmetically significant in the vigesimal system; most are divisible by 20. The labor

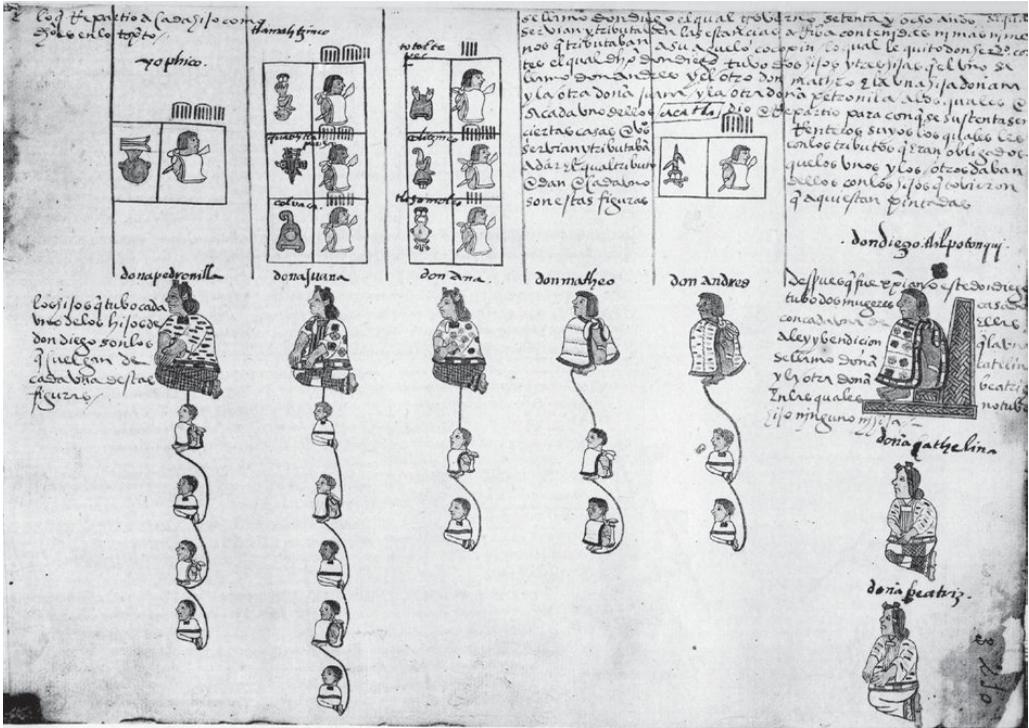


FIGURE 3.30a Tax units for a local ruler's children as recorded in Códice Kingsborough. After Paso y Troncoso 1912, f. 3 lám. A.

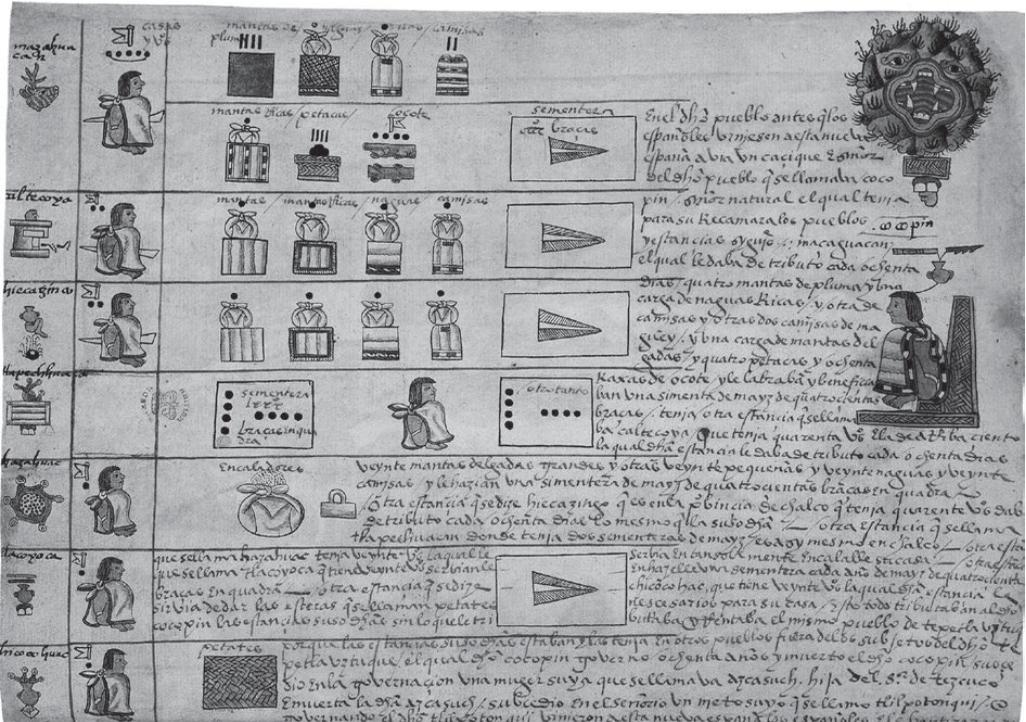


FIGURE 3.30b The income of a local ruler in Códice Kingsborough. After Paso y Troncoso 1912, f. 2 lám. B. See Table 3.4 for a tabulation of its contents.

TABLE 3.4. Income of Tepetlaoztoc's ruler Don Diego (due every eighty days).

From the community of Maçagyacan (100 households)
4 feathered <i>mantas</i>
1 load of shirts
1 load of skirts
2 loads of maguey shirts
1 load of fine <i>mantas</i>
4 mats
80 bundles of <i>ocote</i>
From the community of Caltecoya (40 households)
20 large, fine <i>mantas</i>
20 small <i>mantas</i>
20 skirts
20 shirts
From the community of Hiecazingo (in Chalco; 20 households)
20 fine <i>mantas</i>
20 small <i>mantas</i>
20 skirts
20 shirts
From the community of Chiconcoac (20 households)
<i>petates</i> for the ruler's house
From Tlapechhuacan (in Chalco; no number of households specified)
labor on 2 maize fields
From Tlacoyoca (20 households)
working of 1 maize field measuring 400 <i>brazas</i> on each side
From Hazahuac (20 households)
labor to maintain the <i>tlatoani's</i> house
From Maçagyacan, Caltecoya, and Hiecazingo
labor from each to work 1 maize field measuring 400 <i>brazas</i> per side

Data drawn from Códice Kingsborough (Figure 3.3ob).

Source: After Hodge 1991, p. 122, Table 5.2.

tax levied by the Inka state according to its decimal administration comes immediately to mind.

The Assessment and Collection of Imperial Tribute

THE STRUCTURE OF THE EMPIRE. In the foregoing pages, levies made by a city-state on the commoners of its home district, which supplied much of its food and labor, have been called taxes. As explained at the beginning of the chapter, I reserve the word *tribute* for revenue extracted from conquered polities by a militarily dominant state.²²⁸ Empires are by nature expansionist, and for the Aztec empire – the empire of the Triple Alliance – the immediate motive for expansion was the desire to obtain wealth for the capital cities. To that end an imperial tribute system was created. Although the empire did not depend on tribute exclusively, tribute was a major source of its revenue.²²⁹

How did the empire manage the assessment and collection of tribute? Like any empire, it had a core – the “central provinces” – and a periphery, the “outer provinces.”²³⁰ The central provinces, encompassing the Valley of Mexico and areas

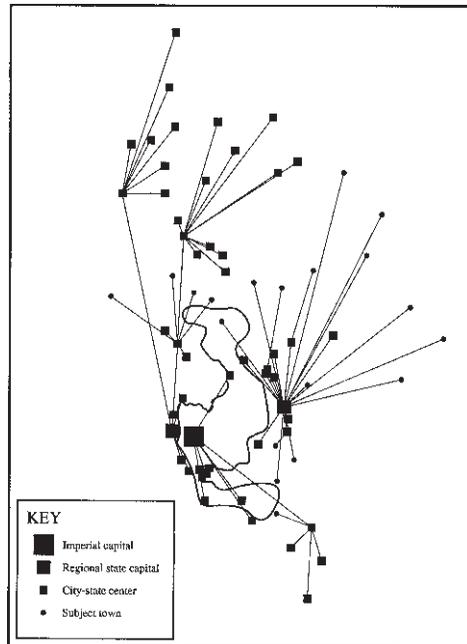
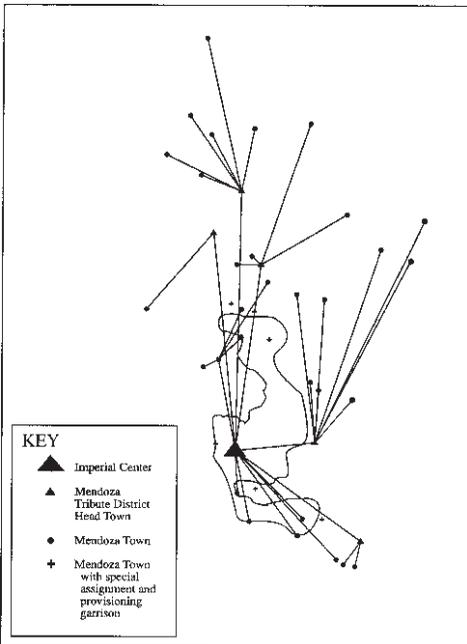
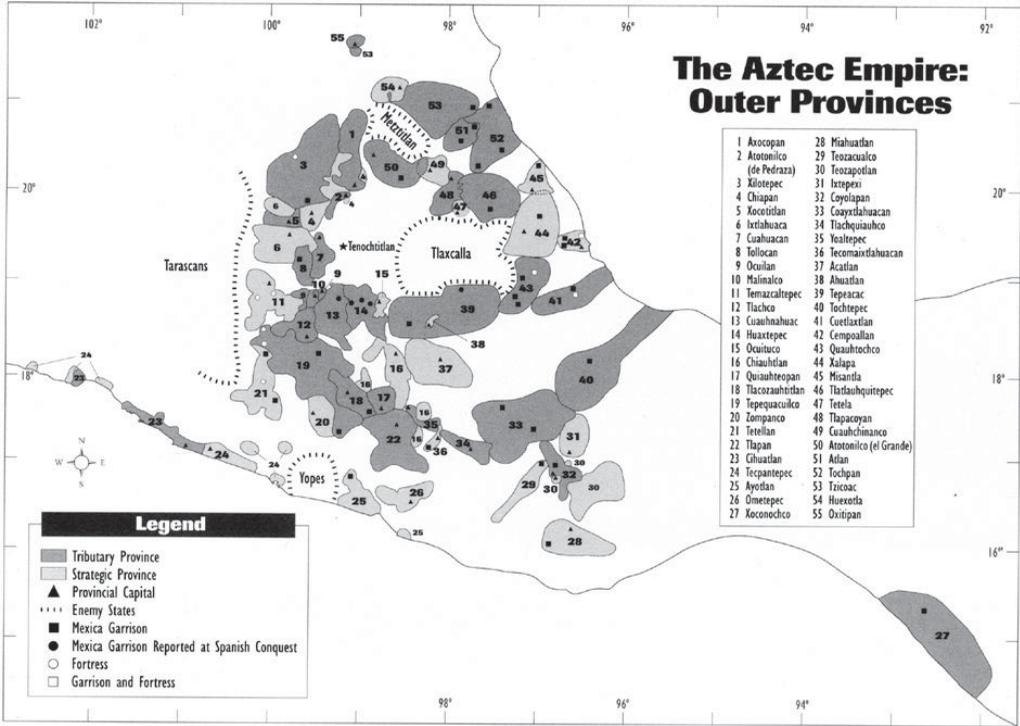


FIGURE 3.31 Imperial strategies. *Top*, map of the Aztec empire with its two kinds of outer province shaded. The blank circle inside is the area of the central provinces. *Bottom left*, tribute collection points in the empire's central provinces according to the Codex Mendoza. Lines indicate paths by which tribute moved toward Tenochtitlan. *Bottom right*, the structure of political dependency in the empire's central provinces. After Berdan et al. 1996, p. 27, Figures 2-4 and 2-5; and p. 138, Figure 6-1.

adjacent to it, contained thirty or forty city-states. The outer provinces were a patchwork of tributaries and unconquered or thinly populated areas (Figure 3.31).²³¹ The imperial tribute system was established first in the Valley of Mexico and then in the outer provinces. It was administered separately from the government of the provinces: the government relied heavily on the people and institutions of the conquered city-states, whereas the tribute system reported directly to the empire's capitals. Its functionaries were specialists responsible chiefly for assessing and collecting tribute, and it was in their operations that Aztec bureaucracy took its most developed form. Yet even this highly centralized fiscal administration operated on astonishingly simple principles.

Our knowledge of the Aztec tribute system comes from three imperial-level manuscripts: two pictorial tribute documents (the *Maticula de Tributos* and the second part of the *Codex Mendoza*) and a textual account of tributary provinces dated to 1554. The *Maticula de Tributos* may be a pre-conquest manuscript; the *Codex Mendoza* may be a copy of it made in the early 1540s.²³² In content the two are very similar, but the *Codex Mendoza* appears to be the more complete, so the following discussion focuses on it. It contains thirty-eight tributary provinces arranged in a sequence that begins in the central provinces and moves counterclockwise to the outer provinces. Let us begin as it does, with the central provinces.

CENTRAL PROVINCES. Seven tributary provinces, former city-states, were located in or near the Valley of Mexico. They had altogether about ninety tribute collection points (Figure 3.31, bottom left). Anywhere from one to forty-three of these collection points reported to an imperial tribute collector, who in turn reported to a paramount administrator probably resident in Tenochtitlan. The imperial tribute collectors, who were drawn from the nobility, directed local collectors, who came from the ranks of the commoners.²³³

Mary Hodge points out that the imperial government deliberately chose not city-state centers but smaller communities as collection points. For example, Acolhuacan, the major collection point in the Acolhua area, was located in the north, well removed from the centers of political administration at Coatepec and Ixtapalucan in the south (Table 3.5 and Figure 3.31, bottom left, the hub point to the right of Tenochtitlan). The distribution pattern of the tribute collection points was therefore different from that of the political centers (Figure 3.31, bottom right). One obvious reason for keeping the two apart was to bypass conquered elites, who would naturally be reluctant to give up tribute that had previously been theirs. Keeping the tribute network separate also "facilitated more efficient and direct flow of goods and information to the capital."²³⁴ The number of collection points in each province was proportional to the empire's degree of control. Thus in the two tribute pages that the *Codex Mendoza* devotes to the politically secure Acolhua area, we find a total of twenty-six collection points: Acolhuacan and twenty-five smaller ones that sent their collections to Acolhuacan. One of the two pages is reproduced in Figure 3.32a. Its left and bottom margins contain the name glyphs of sixteen towns – that is, sixteen of the twenty-six collection points – beginning with Acolhuacan itself. Inside this L-shaped frame, about half of the scheduled tribute from the Acolhua area is shown. The other half is shown on the second page (not reproduced here), framed by the name glyphs of the other ten towns (see Text 3.25).

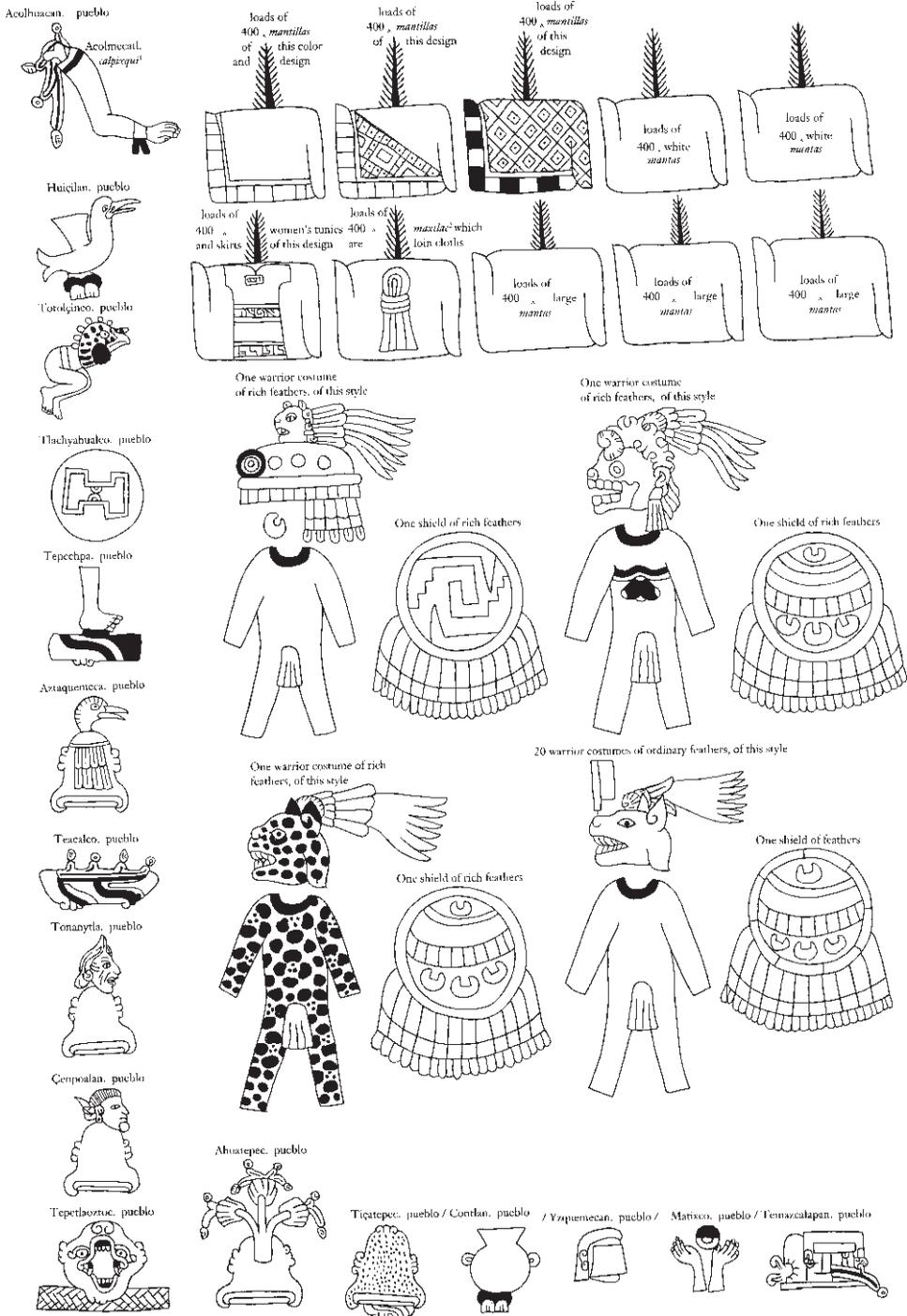


FIGURE 3.32a Tribute list for one of the central provinces of the Aztec empire: folio 21v of the Codex Mendoza. After Berdan and Anawalt 1992, Vol. 4, p. 48.

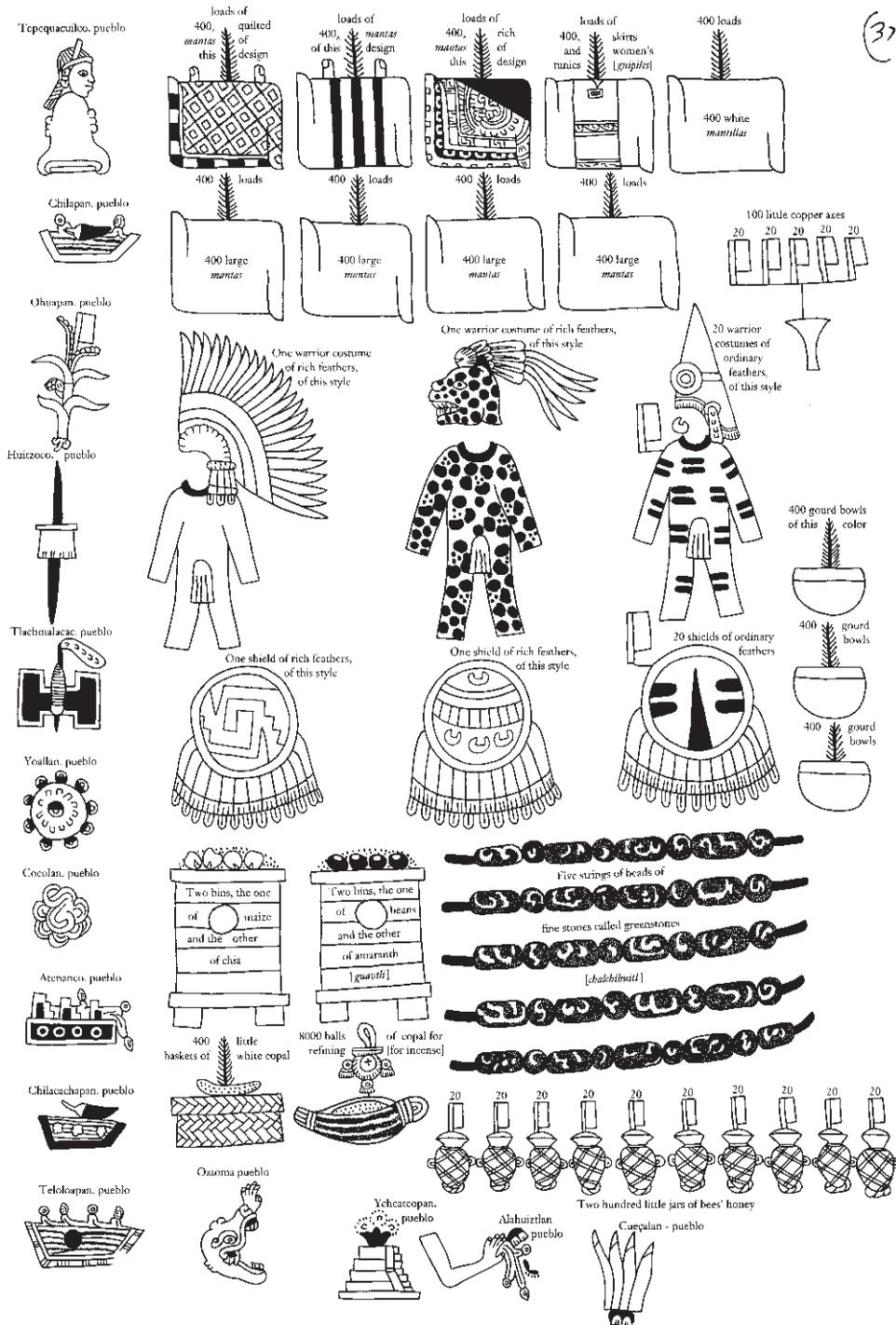


FIGURE 3.32b Tribute list for an outer province of the Aztec empire: folio 37r of the Codex Mendoza. After Berdan and Anawalt 1992, Vol. 4, p. 79.

Text 3.25. Spanish commentary to the two tribute pages of the Acolhuacan province (see Figure 3.32a).

The lords of Mexico, after having conquered the twenty-six towns drawn and named on the following two pages, placed in each town *calpixques* and, in the principal one, a governor to rule over them, to maintain peace and justice, assure tribute payment, and prevent rebellion. The tributes, shown further on, which all the towns paid together are the following:

Two thousand loads of large cloaks of twisted cloth;

Also one thousand two hundred loads of rich, narrow cotton cloaks of the colors drawn, which are small capes the lords and *caciques* wore;

Also four hundred loads of *maxtlatl*, which are loincloths;

Also four hundred loads of women's tunics and skirts – all of which they gave and paid in tribute twice a year;

And also they gave in tribute three warrior costumes trimmed with rich feathers, and as many shields, of the colors and styles drawn, which they gave each year;

And also one hundred warrior costumes trimmed with ordinary feathers, and as many shields, of the styles and colors consecutively drawn, which they paid in tribute once a year.

And also four large wooden bins, full, the one of beans, another of chia, another of maize, and another of *huautli*, which is amaranth seed. Each bin contained four to five thousand *fanegas* [6,300–7,875 bushels], which they gave in tribute once a year.

After Berdan and Anawalt 1992, Vol. 4, p. 47.

It is instructive to compare the tribute lists in the Codex Mendoza and the Códice Kingsborough. A list like the one in Figure 3.32a is a schedule of tribute due to the empire from a whole province; the list in Figure 3.30b itemizes taxes levied for the local ruler's income. This difference is reflected in the slightly different layouts of the two pages. In the Kingsborough list, goods of specific types and quantities were levied from each community according to the number of households it had. In Mendoza, by contrast, there is no one-to-one correspondence between goods and towns; as the Spanish commentary tells us, the towns all paid the tribute together. Mendoza does not tell us how the tribute was assessed, but the tribute required from different provinces differed in quantity and type, so the tribute schedule clearly had a systematic basis. We are told that the central provinces contributed mainly foodstuffs and utilitarian goods, whereas the outer provinces mainly surrendered more exotic but less bulky goods.²³⁵ The cost of transportation was clearly a major concern, and local availability another.

But on what basis was the *quantity* of each commodity assessed? We have seen that the local tax assessors had household censuses and landholding registers. Did the imperial tribute collectors have similar records that they used to draw up tribute schedules? Here the similarities between Figures 3.32a and 3.30b may help us. The most obvious similarity lies in the numbers assigned to each kind of good: 1 (the bar in Figure 3.30b and the unnumbered depicted objects implying 1 in Figure 3.32a), 20 (the dot in Figure 3.30b

TABLE 3.5. Tribute in goods from the Aztec empire’s central provinces tabulated according to Codex Mendoza.

Province	Petlascalco	Acolhuacan	Chalco	Tlatelolco	Cuahtitlan	Hueyпочtlan
<i>Counts of warrior clothing and shields</i>	65	121	2	80	62	62
<i>Bundles of mantas</i>						
Colored	800					
Large white			800			
Small decorated					800	400
Small white					400	
Twisted cloth	2,400	2,000				
Wide mantas				800		
Maguey fiber						1,200
<i>Bundles of clothing</i>						
Loincloths	400	400				
Women’s garments	400	400				
<i>Food</i>						
Beans (bins)	1	1	2		1	1
Chia (bins)	1	1	2		1	1
Chianpinolli (baskets)				40		
Huauhtli (bins)	2	1	2			1
Maize (bins)		1	6		1	
Maguey honey (jars)						400
Cacao (baskets)				40		
<i>Woven mats</i>						
Petates					4000	
Rush seats					4000	

Source: After Hodge 1996, p. 28, Table 2–5A.

and the flaglike sign in Figure 3.32a), and 400 (the tree sign in Figure 3.32a). As we have seen, these numbers derive from vigesimal tax units (twenty and one hundred households). The assessment of imperial tribute must have been based on similar units, albeit at some higher order of magnitude. Table 3.5 presents data for six of the seven tributary provinces recorded in the Codex Mendoza. Apart from the numbers of costly items of warrior clothing, round numbers are just as conspicuous here as they are in the Códice Kingsborough’s tax list for the local ruler of Tepetlaoztoc (compare Tables 3.4 and 3.5). The reader may have noticed that the sixteen Acolhua collection points for imperial tribute listed in Figure 3.32a actually include Tepetlaoztoc (see the bottom-left corner; notice the same toponym in Figure 3.30b, upper-right corner). If the units on which Tepetlaoztoc’s local tax was levied had been vigesimal, adding them together would have yielded a larger vigesimal unit that could have been used for the assessment of imperial tribute. As we have seen, Asunción’s tax units at the local community level do not in fact conform to the ideal vigesimal work squad, and similar documents from other regions likewise show actual tax units that do not match the ideal twenty-household unit; one such unit had only eleven households.²³⁶ At each level of administration,

however, the assessors rounded upward, and the result was a gross (and oppressive) simplification of reality. In the end the assessment amounted to an almost arbitrary fixed demand from the center of the empire. Again, the parallel with Inka labor tax assessment is inescapable. It is no wonder Pedro Carrasco's comparative study stresses similarities between the two empires.²³⁷

The standardization of tribute collection is also evident in its timing. To impress the tribute-sending subjects, collection was scheduled according to the festivals in Tenochtitlan. Timed according to a uniform calendar imposed by the imperial state, it disregarded the empire's complex mix of climatic zones.²³⁸ The Codex Mendoza records collections that were annual (Text 3.25), semiannual (Text 3.25), quarterly (Table 3.4, Tepetlaoztoc; in Codex Mendoza this is marked by four flowers, the twenty-day sign), and daily. In addition to scheduled tribute, the central provinces were obliged to send goods and services on demand, but this unscheduled tribute did not complicate bookkeeping, for surviving codices show that it was measured in the same vigesimal fashion as scheduled tribute.²³⁹

To complete our discussion of the central provinces, the empire's core zone, we need briefly to mention its nontribute obligations. Hodge suggests that these were mainly drafts of labor: the core was required to supply warriors and labor for public works. As in the case of the Inka *mit'a* labor service, the draft of laborers was carried out not by the imperial administration but by lower-level political units, a strategy that kept administrative needs simple.²⁴⁰

OUTER PROVINCES. The empire controlled its outer provinces by an administration even simpler than the one that ruled the core. Berdan's research group on Aztec imperial strategies distinguishes two forms of organization in the outer provinces: tributary provinces and strategic provinces.²⁴¹ The strategic provinces were buffer zones between the empire and enemy states. They sent token gifts as a sign of submission but were not required to send tribute. Their main obligation was only to provision the imperial army in their regions.²⁴² As for the tributary provinces, the empire did not require from them the personal service and *corvée* labor that it required from the central provinces, presumably because of distance, nor is any unscheduled tribute documented. Its chief concern with them was simply to maintain a regular supply of tribute goods.²⁴³ The Codex Mendoza's tribute lists for these provinces differ from its lists for the central provinces only in the types of goods exacted (Figure 3.32b).

As Calnek has pointed out, the Aztec empire was organized on the principle that local rulers should retain control over their own people and resources. The empire relied on local rulers to command military contingents, to supervise labor forces, and to help in the collection of tribute. Calnek writes, "These policies greatly reduced the need for creating any form of overarching bureaucratic administration, but at the same time limited the extent to which centralized authority could act outside the immediate territorial limits of the dominant city-state."²⁴⁴ Although the tribute system employed specialized collectors, their number does not seem to have been large, and the actual burden of collection and delivery probably fell on the local authorities.²⁴⁵ The transportation of taxes in the Ur III state makes an interesting contrast here. A group of Ur III texts assembled by Tonia Sharlach recording the work of sailors and dockhands involved in shipping provincial taxes to the capital shows that "the act of shipping large quantities of cereals, reeds and so on to the royal authorities incurred labor expenses for Umma's provincial administration" (Text 3.26).²⁴⁶ Because Umma was under the direct control of the state, this means that the administrative cost of collecting its taxes, including the cost of making documents, was billed to the state.

Text 3.26. Expenditure of labor for shipping taxes to the capital.

“5 (male) workers for 8 days, from Idsalla to Ur, having towed a boat (containing) barley;

for 10 days, having unloaded the boat;

for 8 days, having towed an empty boat

Foreman: Lu-balasiḡ. Seal of Abbagina. (Date: Amar-Sin 9).

Seal: Abbagina, scribe, son of Lugal-magurre.”

1 boat of 60 *gur*, 2 (*ban*)-each (i.e., 2 *ban* for each worker) for 22 days – its grain (total), approximately 1 *gur*, the barley was loaded (on the boat) for Nippur.

After Sharlach 2004, pp. 38–9.

The Aztec empire probably spared itself these costs by relying on the local authorities to collect and transport tribute. The work of making and updating household censuses and landholding registers was left to the local level. Exacting fixed quotas of tribute was a vastly simpler way to raise revenue than taxation based on minute and up-to-date knowledge of lands and people. By delegating and decentralizing, the tribute system kept administration to a minimum.

DAILY BOOKKEEPING. But this argument for administrative simplicity has focused entirely on revenue extraction. What about expenditure? What happened to the stream of revenue once it entered the capital? There it had to be stored and redistributed; the imperial income had to be spent, and for this the bookkeeping could not be delegated. What records were kept at the capital? Here we are entirely in the dark. The eyewitness Bernal Díaz recounts that Motecuhzoma’s steward “kept an account of all the revenue that was brought to Montezuma in his books, which were made of paper – their name for which is *amatl* – and he had a great house full of these books.”²⁴⁷ Díaz is referring to incoming goods and to tribute lists like the Codex Mendoza. The Spanish friar Sahagún tells us that the Aztec tribute goods in Tenochtitlan were stored in central warehouses (*petlascalco*) under the care of tribute overseers, who maintained a careful accounting of all incoming and outgoing goods, but Sahagún does not describe their accounting (Text 3.27).

Text 3.27. Keeping inventory of the Aztec warehouses as recorded in the Florentine Codex.

FIFTH PARAGRAPH, where is told how they stored all the food. Petlascalco: there was stored all the food. Dried maize grains thus were kept in wooden grain bins; more than two thousand [measures of] grains of dried maize – a store of twenty years for the city. And in wooden storage bins were dried beans, chia, amaranth seeds, wrinkled chia, salt jars, coarse salt, baskets of chilies, baskets of squash seeds, and large squash seeds. And there was kept the jail, the wooden cage, where they imprisoned and confined evildoers.

SIXTH PARAGRAPH, in which is described the house of the majordomos and stewards. Calpixcalli or Texancalli: there assembled all the majordomos and tribute

gatherers. There they were lodged [to await the command of the ruler, (lest) he require something, or] to bring down and put in order that which was their trust as tributes, [and there they arranged in order the various foods] which every day they gave the ruler. And if the ruler knew something ill of a majordomo, perchance of something he stole from the tributes; or that all his charge, the tributes, perhaps did not equal the correct count when all his store was tallied and examined; then he jailed the majordomo in a wooden cage; he exacted the penalty, that he die. Then he cast out his women [and his children from his home]. Then quickly the house of the majordomo was closed up, and all his goods remained in the house. All belonged to the ruler.

After Sahagún 1950, Book 8, Chapter 14, p. 44.

One chronicler reports the daily food consumption of the palace of Nezahualcoyotl (ruler of Texcoco) in the same fashion as a tribute list: 400,000 tortillas, 100 turkeys, 20 baskets of large chilies, and so on.²⁴⁸ Can we suppose that the daily accounts of the central warehouses looked like this, like the Codex Mendoza? Surely not. For accounting on the scale required, a far more economical means of recording would have been needed, something significantly less artistic and more practical.

DISPLAY AND PAPER WORK. What exactly is the Codex Mendoza? With its meticulously detailed and finely painted images of goods such as textiles and costumes, not to mention the round numbers it specifies, it calls to mind the niche stones and slab stelae of Old Kingdom Egypt (Plate XIV; compare Plate IX). And the offering lists on the slab stelae, though they may have originated in real tomb inventories (Text 3.7), were not administrative documents; they employed ideal numbers and fine drawing because they were display texts. Although the round numbers in the Codex Mendoza were administrative realities, its artistry implies that it too was for display, probably to a small audience at the court. Perhaps it was not so very different in function from the display of income on the walls of an Egyptian tomb.

Let us press the analogy a little further. Despite their origin in administrative documents, the offering lists were written in a display script; for everyday bookkeeping, Egyptian scribes used a cursive script. Is it possible that Codex Mendoza's recording system likewise had a practical, "cursive" counterpart, a system used daily in the central warehouses? If so, what might it have been like?

As we have seen in Asunción, the native Mexican pictorial recording system was perfectly capable of making detailed records. It had a flexible repertoire of taxonomic glyphs, glyph orientations, connecting lines, colors, and cadastral maps – one that could easily have been extended as need arose – and it also had the phonetic tools to record large numbers of personal names and toponyms. My impression is that it offered roughly the same bookkeeping capabilities as proto-cuneiform and that it used colors and cadastral maps even more effectively than Mesopotamian and Egyptian scribes did (the latter used only black and red).²⁴⁹

Unlike Mendoza, which is artistically much finer, Asunción has the appearance of a local, nonimperial, strictly functional document. Yet its recording system is still by no means so streamlined that we can imagine scribes using it to track the daily inflow and outflow of goods in Tenochtitlan's warehouses. Records of the kind kept in Asunción – censuses and land registers – were made once or twice a year, not many times a day.

If there was a “hieratic” counterpart to Codex Mendoza’s “hieroglyphic,” it must have extended much further the devices for detailed recording that Asunción hints at, and it must have notated them in a much more cursive way. But we have no tangible evidence for such everyday record keeping. The same problem stands in the way of understanding Maya administration, to which we now turn.

MAYA

Bruce Trigger disappointingly omits the Classic Maya from his extensive discussion of landownership in early civilizations “because of the lack of relevant information.”²⁵⁰ On the extraction of wealth, he offers a comment that verges on truism: “Almost nothing is known about how the Maya upper classes extracted surplus wealth from commoners. The vastness of state projects and the opulent life of Maya rulers suggest, however, that the Maya upper class, and kings in particular, did it very effectively.”²⁵¹ Patricia McAnany’s review of studies of the Maya economy, though written two decades ago, needs little modification today:

Despite the efforts of a handful of Maya archaeologists, investigations into the organization of the Maya economy continue to lag behind studies of ideological, social, and political organization. Unravelling the economic organization of the prehistoric Maya still poses one of the greatest challenges to our understanding of this civilization. Unlike Mesopotamia, Mesoamerica has no “fossilized” clay tablets that preserve a record of everyday economic transactions; while great headway has been made during the last decade in the decipherment of Maya hieroglyphic inscriptions, this script appears devoid of direct economic information. Furthermore, we do not know to what extent the documentary evidence of Maya protohistoric economic organization, in which bustling “merchant-batabob” conducted and apparently controlled long-distance trade, is an appropriate analogue to prehistoric forms. The stelae, the lavish burials, the emblem glyphs, the chronicles of kings – all point to socially stratified, hierarchically organized polities. But what, exactly, were the economic foundations of these polities?²⁵²

McAnany’s remarks are a pointed reminder of the importance of written texts in reconstructing past economies and of the difficulty of extracting details of administration from archaeology. Archaeology can paint big and general pictures; specifics must come from texts. Unfortunately we have no economic texts from the Maya themselves. In Central Mexico and the Andes, the colonial texts written immediately after the Spanish conquests give us eyewitness accounts of those civilizations at their height, but the Maya civilization had been in decline for centuries by the time the Spaniards arrived.

Landownership

Trigger, whose discussion relies chiefly on texts, avoids the Maya problem altogether. McAnany, a Mayanist, does not have this option. She tackles the problem of land tenure by combining evidence from colonial documents and archaeology and by resorting to frequent analogies from other parts of the world, notably China.²⁵³ As noted in [Chapter 1](#), she has systematically assembled the archaeological evidence for creating

ancestors and ancestor worship in the Maya lowlands. Comparing it with colonial documents detailing the role of lineage heads, she argues that the existence of selective ancestor veneration indicates “that proprietary resource rights have crystalized, generally at the level of a macrofamily grouping such as a lineage.”²⁵⁴ In the absence of evidence for private land transactions, she regards the lineage as the main landholding group and lists three ways in which land rights were established: inheritance from ancestors, encroachment upon the land of others, and claiming new land by the principle of first occupancy. In her model, royalty, deriving power from the genealogical depth of their lineages, would either inherit some of the best land or would co-opt land claimed by weaker lineages.²⁵⁵

This lineage-based landownership model has no place for either institutional or private landholding of the kinds we have seen in the other early states of our sample. The model has interesting implications, but it raises difficult questions regarding the sources of state revenue. First, it implies that one major source of provision for royalty and the elite was their own lands. Who cultivated their lands for them? Were their farm workers drafted like the Inka *mit'a* laborers, or were they dependent peasants like the Ur III state farmers? Second, McAnany argues that the prerogative to levy taxation in kind on the commoners belonged to the state, not to the local elite. In her model there were no smallholders, so the responsibility for paying these taxes would have fallen on the local lineage head, an arrangement similar to that encountered in the city-states of the Aztec empire. But as McAnany notes, lineage sizes varied greatly. What was the size of the Maya tax unit? How did the state assess the taxes?

Third, McAnany believes that both the state and the local elite could extract labor service from the commoners for a variety of tasks: farming, domestic chores, and public building. She suggests that these “[l]abor drafts do not represent a simple geometric amplification of the large collective work groups organized at the lineage level; rather, they are an exercise of social control by centralized powers that can be linked with punitive actions for noncompliance.”²⁵⁶ But the only mechanism of social control mentioned by McAnany is the ideological link between labor and ritual.²⁵⁷ How else did the state exert control? Did it conduct censuses of the population? Finally, one further source of state revenue that McAnany does not examine in detail is the tribute paid by a subordinate polity to its overlord. Because this aspect of Maya political economy is actually the one best represented in the extant representational and epigraphic materials, it is here that we should pursue our attempt to understand the functions of writing in state revenue making. Remembering our examination of the Aztec tribute system, let us ask how tribute was assessed, collected, and transported to a dominant state in the Maya area. To answer this question we must know something of the political history of the Maya region. Political history has a direct bearing on the other questions I have raised as well.

Politics

The Late Classic Maya political landscape was dotted with a multitude of polities, by one count as many as sixty.²⁵⁸ A few, notably Tikal and Calakmul (Figure 3.34), were very large; most were small places like Quirigua (Table 3.6).

The study of any political landscape characterized by city-states needs to consider the *time depth* of each city: its origin and relationship with other cities. To my knowledge

TABLE 3.6. Population estimates at selected Maya polities.

Site	Site area	Area (km ²)	Estimated population	Period
Copan	Central	0.6	6,000–9,000	Late Classic
	Periphery	23.4	9,000–12,000	Late Classic
	Rural	476.0	3,000–4,000	Late Classic
	Total	500.0	18,000–25,000	Late Classic
Komchen	Total	2.0	2,500–3,000	Late Classic
Quirigua	Central	3.0	1,200–1,600	Late Classic
Seibal	Central	1.6	1,600	Late Preclassic
	Periphery	13.6	8,000	Late Preclassic
	Total	15.2	9,600	Late Preclassic
Tikal	Central	9.0	11,300	Late Classic
	Periphery	111.0	50,700	Late Classic
	Total	120.0	62,000	Late Classic
Calakmul	Central	1.5		
	Periphery	70.0	50,000	Late Classic
Caracol	Central	2.0		
	Periphery	177.0	115,000–145,000	Late Classic
Piedras Negras	Central	0.8		Late Classic
	Periphery	3.0	2,000	Late Classic

Source: After Sharer 2006, p. 688, Table 12.3; Calakmul, after Folan et al. 1995, pp. 310 and 314; Caracol, after Chase and Chase 2003, p. 109; Piedras Negras, after Houston et al. 2003, pp. 216–17. See also Rice 2006, p. 265, Table 13–1, whose figures are usually higher than the ones given here.

this has not been systematically done in the cases of Mesopotamia and Mexico, for the obvious reason that archaeological and epigraphic materials are unevenly distributed. What we usually see is a horizontal, synchronic distribution of many city-states that is the end product of a long and complex history of political interaction, a history that matters in this study because of the role played in it by writing. In the case of Mesopotamia, where writing seems to have been invented at Uruk around 3200 B.C., we must ask how literacy spread outward during the ensuing centuries and how it was implicated in the development that led from a few early cities such as Uruk and Tell Brak to some thirty city-states by the end of the Early Dynastic period. In the case of the Maya we are perhaps spared dealing with the origin of the writing system, because the Maya owed writing to the Olmec (see [Conclusion](#)). But the problem remains of understanding the spread of Maya literacy and the proliferation of Maya polities. From a few Preclassic cities such as San Bartolo, Maya writing spread outward in tandem with the founding of large numbers of new cities in the Early and especially the Late Classic periods.

Thanks to vigorous epigraphic research and the correlation of epigraphic evidence with archaeological remains, we are beginning to understand the process of urbanization in the Maya region.²⁵⁹ The picture that is emerging shows the process to have been highly patterned. Of the few cities that survived the Late Preclassic collapse, the most important were Tikal and Calakmul. By whatever means, these two cities managed to prosper and establish long-lived dynasties of rulers, some of whom may even have had direct contact with mighty Teotihuacan in Central Mexico. As the two cities

grew in population, surface area, and complexity of dynastic politics, members of the ruling dynasties led migrations of parts of the population to other sites, where they established new dynastic lines. The newly founded cities developed complex relationships with their “hometowns” and with other city-states. According to the epigraphers, the resulting political situation was one of “conflict and alliance between royal dynasties . . . against a backdrop of long-standing enmity between Calakmul and Tikal, two centers of great age, sustained growth, and unusually large size” (Plate XV).²⁶⁰ Neither Calakmul nor Tikal came as close to unifying the Maya area as the empire of the Triple Alliance did Central Mexico, but the forms of hegemonic rule in the two regions were similar.

Because the Maya area is the only one in our sample that never saw the establishment of a unified regional state, and because most of its cities were very small, opinions regarding the nature of Maya political organization have tended to extremes: central versus segmentary, empire versus chiefdom. For our purpose, which is to understand the use of writing in state administration, it seems advisable to examine the revenue-making strategies of the larger and smaller Maya polities separately. Tikal, Calakmul, and perhaps Caracol, cities of great age and size, may have developed centralized bureaucracies. Smaller and younger city-states probably had fewer tiers of official hierarchy. Among the three cities in the first category, I concentrate on Caracol, which provides the best archaeological evidence for land use. For the second category I choose Piedras Negras because of its rich epigraphic materials and well-focused excavations.

Terraces and Causeways

Caracol is located in western Belize close to the Maya Mountains. In Late Classic times, when it was at its peak, it had a layout very different from Teotihuacan or Tenochtitlan but typical for Maya cities, including Tikal and Calakmul (Figures 3.33 and 3.34). What we see is not a compact Chicago downtown but a dispersed Los Angeles, with a site core of one or two square kilometers and settlement clusters scattered over an area of about 177 km² around it. There are no physical markers of city boundaries here or at Calakmul either.²⁶¹ Caracol’s excavators are inclined to fuse the site core and the surrounding 177 km² “into a single metropolitan city.”²⁶² Others argue that it was a “densely settled rural landscape on which a moderately large . . . royal and ceremonial core has developed.”²⁶³ The site core is distinguished not by its building density but by building size and by the absence of agricultural terracing (Figure 3.35). It may be most natural to think of it as the city proper and the supporting area as the suburbs. However we choose to define the Maya city, it seems clear that the area under Caracol’s direct control was very small. It is also apparent that the subsistence basis of the polity lay within the area of direct control, in a landscape heavily modified by extensive agricultural terracing.

The project of mapping Caracol’s terraces, directed by Arlen and Diane Chase, has completed three 1-km² sample blocks located at distances ranging from 1 to 5 km from the site core. An additional area of 0.25 km² immediately adjacent to the core has also been mapped (Figure 3.35, inset). Together, these four samples show that terraces were constructed throughout the site. They also show that most of the residential buildings

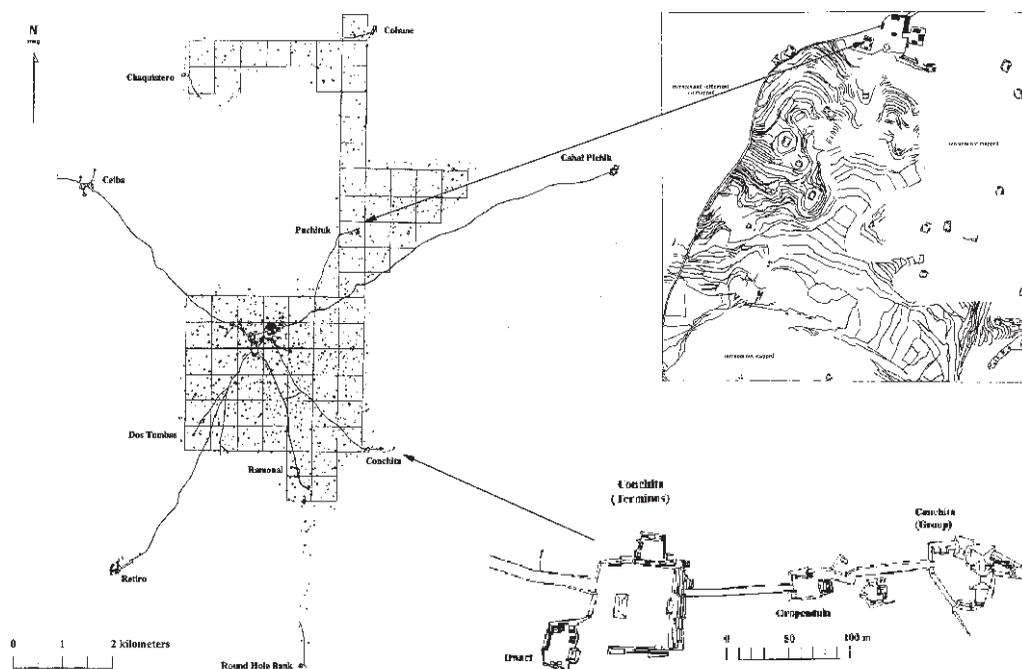


FIGURE 3.33 An Inka-like mini-state at Caracol? *Left*, settlement map of Caracol. Diagonal lines represent causeways, the ends of which are termini. *Top right*, a 1-km² block-mapped terrace area adjacent to the Puchituk terminus. *Bottom right*, map of the Conchita terminus. After Chase and Chase 2003, p. 110, Figure 10.1; p. 112, Figure 10.2; Chase and Chase 1998, p. 67, Figure 6 (terrace).

were located either among the terraces or on hilltops overlooking them (Figure 3.33, top right). Chase and Chase propose that the construction of most of Caracol's terraces correlates with a rapid increase in population in the early part of the Late Classic period, that is, between A.D. 550 and A.D. 650. They further suggest that the intimate mix of residences and fields and the regular alignment and organization of the terraces reflect coordinated efforts directed by a central government.

To buttress their interpretation, they argue that the site's complex system of causeways was constructed in the same period to facilitate administration of the entire settlement.²⁶⁴ The causeways at Caracol range from 2.5 to 12 m wide, and their known lengths range from less than 50 m to more than 7 km. Most of them run to the site core from formal architectural nodes that the excavators call *termini* (Figure 3.33, bottom right). It seems that the *termini* are arranged in two rings about the core, the inner one having a radius of about 3 km, the outer one a radius that varies from 4.6 to 7.6 km (Figure 3.33, left). The excavators believe that

causeways served an important function within Caracol. They did not merely join elite residences to the epicenter. The more numerous special-function plazas, bounded with low-range buildings that served as *termini*, are thought to have also functioned as embedded Caracol administrative nodes that were fully contextualized within a continuous settlement matrix ... In sum, the causeway system unified the *termini*, site core, and site epicenter. The Maya of Caracol could make a round-trip from one terminus to another

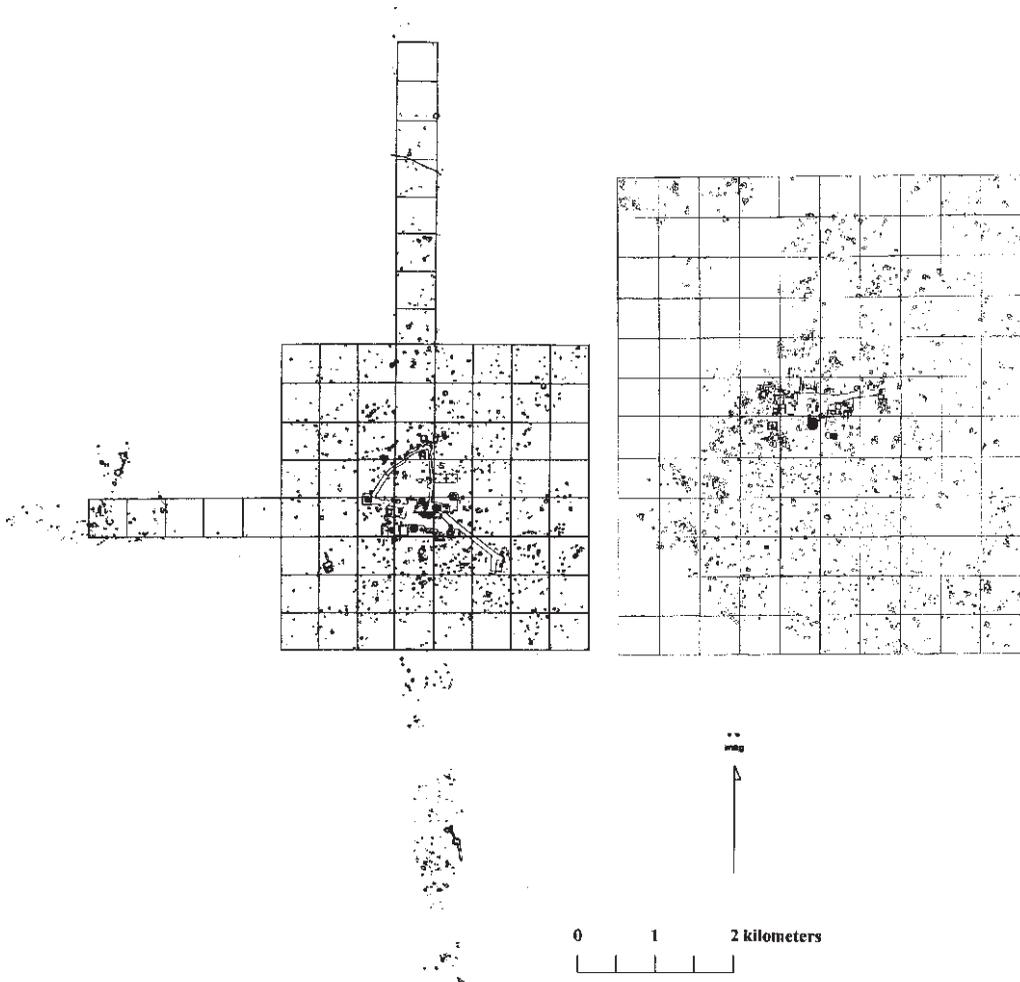


FIGURE 3.34 Two great rivals side by side. Settlement maps of Tikal (*left*) and Calakmul (*right*), drawn to same scale. After Chase and Chase 2003, p. 115, Figure 10.5; and p. 116, Figure 10.6.

(within the 5 to 10 km radius) within a single day, thus facilitating communication, transportation, and distribution of goods.²⁶⁵

Basing themselves mainly on their finds at Caracol, Chase and Chase have been active proponents of applying the central state model to the Maya region. Houston and his colleagues, on the other hand, although allowing that Caracol, Tikal, and Calakmul might have been centralized states, suspect that they were exceptions rather than the norm. They also incline to interpret the agricultural terracing system at Caracol differently from Chase and Chase, remarking that “the outlines of terraces appear to follow the contours of local topography, connecting to local causeways it is true, but perhaps for purely practical reasons, as a means of accessing the terraces along cleared routes.” In support they point to the apparent formality of agricultural systems constructed without state planning in Southeast Asia and South America.²⁶⁶

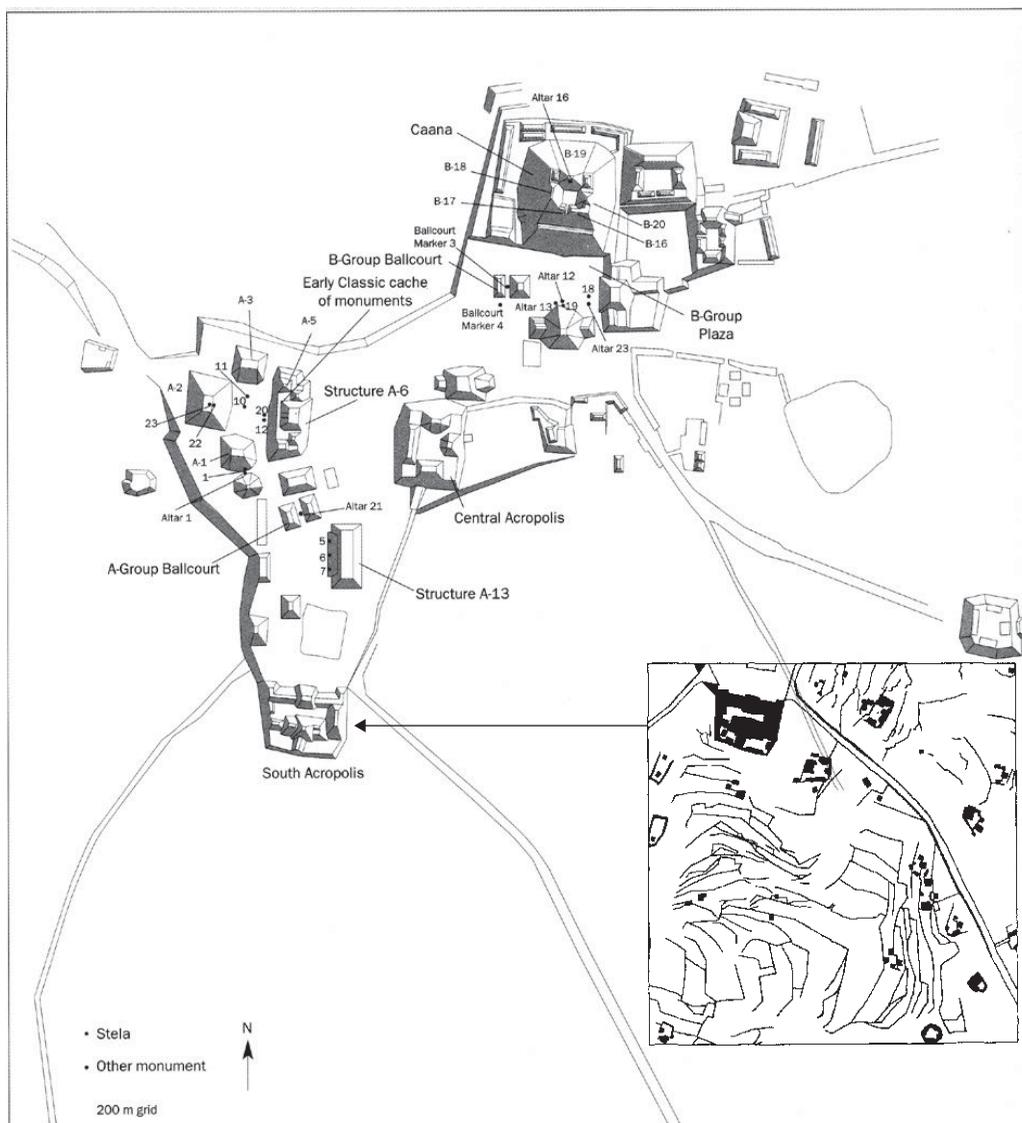


FIGURE 3.35 The principle of first occupancy in claiming new land: the relationship between terracing and the site core at Caracol. After Martin and Grube 2008, p. 84; Chase and Chase 1998, p. 64, Figure 4 (inset).

It is difficult to take sides. As a human modification of the natural landscape, terracing possesses at once a distinct orderliness and a respect for topography. We have seen spectacular terracing on the Inka royal estates at Písac (Plate XI, top). Another good example of planned terracing is the Inka royal estate at Ollantaytambo (Figure 3.36). The eastern sector of the settlement at Ollantaytambo was evidently planned on a regular grid, a feature seldom encountered in Inka town planning. Because the terraces constituted an integral part of the estate as a whole, we can infer that they were planned at the same time as the settlement. Yet their layout shows “the Inca’s concern for topography, geomorphology, and hydrology.”²⁶⁷ Some were built so that they could be fed

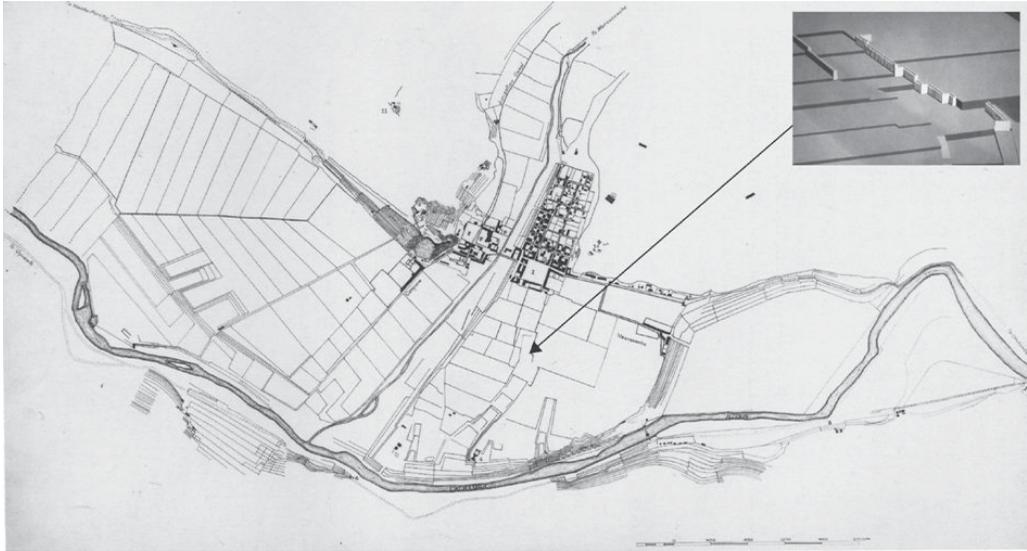


FIGURE 3.36 The mesh of town grid and royal terrace: the Inka settlement at Ollantaytambo and its immediate surroundings. After Protzen 1993, p. 38, Figure 1.19. *Inset*, computer model of the upper terraces of the El Callejón draw, showing an unusual system of walls flanking the terraces. After *ibid.*, p. 97, Figure 4.4.

by underground streams; some were sunk into the outwash fan of the river to exploit a microclimate slightly warmer and less windy than open fields. The terraces called El Callejón exemplify the latter type (Figure 3.36, inset). State involvement at El Callejón is evident in the beautiful craftsmanship of the terraces and in the unusual walls, whatever their purpose, that flank the terraces. These fancy terraces and massive remodeling of the terrain seem to be largely an attribute of Inka royal estates, most of which were located in the Urubamba Valley close to the capital, Cuzco.²⁶⁸ The labor invested in them far exceeded the practical needs of agriculture. They were an aesthetic expression of the Inka ruler's power, a daily reminder of it, as Cobo informs us, for the subjects who passed them.²⁶⁹ But we should not imagine that the estates in this valley arose from a single plan. Rather, each estate was created individually for a different Inka king. In the same way the highways of the Inka road system were linked together by piecemeal additions.

If we compare the Inka royal estates and road system with the terracing and causeway systems at Caracol, two points emerge. First, the terraces at Caracol do not show marked differences of craft and design among themselves. If the royal lineage possessed its own lands, as McAnany suggests, they do not stand out in the archaeological record. But perhaps royal lands were distinguished only by their proximity to the site core (in keeping with McAnany's principle of first occupancy); perhaps the terraces mapped by Chase and Chase adjacent to the core belonged to the king (Figure 3.35, inset). Chase and Chase, who do not address the question of royal estates, assume that specific households worked specific portions of the terrace system, but they also note that "there are neither clear spatial relationships between specific fields and specific households nor clear divisions of the fields into potential household-related lots." How they would

relate this distributional pattern to their central planning scenario is not explained. If they are imagining land assignment by the Caracol state, they do not say so.

Second, the Caracol causeway system resembled the Inka road system (Figure 3.15) in facilitating administration and transportation by linking farmlands, but Caracol's system was tiny by comparison, and the difference of scale is important in estimating the degree of direct control exerted by the state. The Inka state's control was confined to nodal points along its roads. Caracol's ruler could tour his territory in a day, so he presumably exerted much tighter control over the lands and people within the two rings of termini (Figure 3.33). Houston speculates that Maya polities, which were usually 20–30 km in diameter, or about 1,500 km², might have been kept small by the spatial limitations of direct administrative supervision.²⁷⁰ On the evidence of hieroglyphic texts recording king K'an II's victory over Caracol's neighbor Naranjo, Chase and Chase argue that during its heyday (A.D. 631–680) – the period when, in their view, it was an empire – Caracol ruled a territory of seven to twelve thousand square kilometers.²⁷¹ As Houston cautions us, however, we still do not know what the rule of a hegemon amounted to in practice. Many local dynasties that acknowledged themselves subordinate to an overlord seem to have been politically autonomous.²⁷² The temporary subordination of Naranjo, whose dynasty had a very long history, to Caracol does not justify regarding Caracol as a territorial state. That Naranjo's quick revival after A.D. 680 corresponds to a hiatus in the epigraphic record at Caracol suggests, on the contrary, that Caracol never achieved a stable territorial state and perhaps never attempted one. The same is probably true of Tikal and Calakmul.

Tribute

What then were the motives of hegemons and their subordinates? Did the overlord confer protection in return for tribute? Or did he seek hegemony only for the sake of status? Painted vases and murals suggest that sometimes, at least, the dominant polity sought to extract tribute such as precious goods and captives. The Fenton Vase depicts a vassal lord presenting a precious shell to a dignified overlord sitting on a dais (Plate XVI). Between them a basket of delicacies sits atop bolts of cloth. Of special interest to us is the smaller figure who shares the dais with the overlord. He seems to be running his fingers across the open pages of a screenfold codex, perhaps to tally accounts.²⁷³ It is noteworthy that of the five figures in the scene, all but the vassal lord wear one or two water lilies thrust into their headdresses, even the overlord. Michael Coe plausibly interprets a water lily in this position as a substitute for the brush pen.²⁷⁴ If this reading of the scene is correct, then we might imagine that in a Maya hegemonic state not only did literate courtiers compile tribute lists to monitor payments from subjects, but the literate ruler might check the books himself. Some Maya paintings suggest that in tribute scenes the scribes were not only checking deliveries against their records but also keeping a running record of what was delivered to the palace (Plate XVII). Connecting an important office called *aj k'uhun* with archaeological and iconographical evidence, Sarah Jackson and David Stuart suggest that it was responsible for the maintenance and guardianship of tribute goods.²⁷⁵ Because these courtly scenes clearly had a strong element of display, we might surmise that the act of bookkeeping in such a setting had a ceremonial significance. We have encountered something similar in Egypt (Text 3.21), and we will encounter it again in China.

If the relationship between an overlord and a vassal was stable, we would expect the assessment and payment of tribute to be regular and routine. In the Aztec imperial case we have seen that, because it was left to the tribute-paying vassal to make population censuses and field registers, the scheduled tribute was a fixed claim based on grossly simplified knowledge of local facts. Unscheduled tribute that oscillated according to the political fortunes of the states involved was probably even more arbitrary. An unprovenanced Maya vessel depicting a Calakmul emissary presenting tribute to the ruler of Tikal may belong to this category (Plate XVIII).²⁷⁶ The long-standing rivalry between the two hegemon must have precluded any sustained tributary relationship between them. When one paid tribute to the other, the tribute was probably only a provision of the treaty that had concluded their latest war. Unfortunately, though treaties survive from other early states in our sample (the Stela of the Vultures records a treaty between Lagash and Umma, and we have copies on clay and papyrus of a treaty that Ramesses II and the Hittite king Hattusili III inscribed on silver tablets), we have no Maya treaties.²⁷⁷

What would a Maya tribute list have looked like? The painting in Plate XVIII shows a large round cloth bundle of cacao beans set emphatically in the foreground. It bears the label 3-PIK. The numeral classifier *pik* (8,000) is a pan-Mesoamerican unit, based on the shared vigesimal system, for the counting of cacao beans and other discrete goods.²⁷⁸ We have seen this unit, *xiquipilli* in Nahuatl, in the Codex Mendoza (the pendantlike sign with a cross in the middle, Figure 3.32b and Plate XIV). Commenting on the tribute scene with two monkey scribes in Plate XVII, Houston and his colleagues suggest that it was an important duty of Maya scribes to record levies of goods “by means of purely numerical notations.”²⁷⁹ Now, the administration of the tribute economy was not complex, and numbers are of course the heart of any administrative document; purely numerical Maya notations could probably have done whatever Inka *kipu* did. But do we have any reason to suppose that a Maya tribute list would limit itself to numbers? Why would it not combine vigesimal numbers, toponyms, and glyphs or depictions of the tribute goods in the way familiar to us from the Aztec lists? Maya scribes were surely capable of executing all of these. The Classic Maya themselves made a distinction between numerical notations and the “true writing” of the glyphs.²⁸⁰ It may be this that persuades Houston and colleagues to insist on purely numerical notations for administration, but (as I argue in Part III in connection with Maya education), the distinction did not necessarily correspond to a professional divide among Maya scribes. We might at first glance suppose that intricate Maya hieroglyphs required such painstaking execution as to make them ill suited for taking running notes, but the ease with which modern epigraphers draw these glyphs in their public workshops suggests to me that noting down a few tributary goods would not have been difficult. Nor is it inconceivable that there once existed a simplified form of Maya hieroglyphic designed for faster writing, a Maya equivalent of the stick figures of the Egyptian semicursive hieroglyphic and hieratic scripts. Perhaps the scribes in the vase paintings are making cursive notes that will later be turned into splendid codices.

In short, there seems no reason to rule out the existence of Maya tribute lists with elaborately painted glyphs, in other words, Maya counterparts to the Codex Mendoza. That something like the Aztec tribute lists existed in the Maya region might indeed be deduced from the famous Bonampak murals. Houston and colleagues have recently argued that the iconography of Bonampak Room 1 features “overt, almost ostentatious,

displays of accumulated wealth" (Plate XIX).²⁸¹ They point out that the nobles cloaked in white cotton mantles and the dancers performing a feather dance in effect animated the tributes sent to the court: the dancers were dancing quetzal feathers; the nobles in white cloaks were walking tribute bundles – bearers of cotton mantles, *Spondylus* shells, quetzal feathers, and cacao beans. Behind the lady standing next to the throne we see a large bundle of cacao beans labeled 5-PIK ka-(ka)-wa, to be read *jo' pik kakaw*, "forty thousand cacao beans" (5 × 8,000).²⁸² Below the throne, infrared photographs show further tribute bundles, including *Spondylus* shells, also labeled in multiples of 8,000.²⁸³ In the Bonampak murals we thus find depictions, names, and vigesimal numbers of tribute goods. Perhaps we even find toponyms. Some of the tributary nobles in Plate XIX are labeled, and Houston and colleagues suggest that one of the labels – "he is the messenger of the Red or Great Water Lord" – refers to a site in the vicinity of Bonampak.²⁸⁴ If the labels of the other tributary lords refer in the same way to the places they came from, then we can read them as personified tributary *places*. The mural then becomes strikingly similar to the reliefs in the Valley Temple of King Sneferu at Dahshur, which show the estates that provided income for the temple personified as female figures bearing trays of offerings, each figure labeled with the name of an estate (Figure 3.11). If this reading is warranted, the major content of the Bonampak murals in Room 1 can be understood as a glorified tribute list, a Maya equivalent of the Codex Mendoza done on an architectural scale. Codex Mendoza addressed its display to a small audience; the Bonampak murals are nearer the scale of the Egyptian reliefs. But in all three cases the content of royal display was economic in nature and derived from administrative documents.

Border Control in the Old and New Worlds

The payment of tribute was a central feature of Classic period court ritual.²⁸⁵ A search through Justin Kerr's database of painted Maya vases yields 150 examples with the keyword *tribute*.²⁸⁶ However, the tribute economy cannot have supplied all the needs of the state. Like the outer provinces of the Aztec empire, the tributary places of a Maya hegemonic state mainly furnished luxury goods to adorn the sumptuous elite life depicted in so many vase paintings and murals. For subsistence a Maya city depended entirely on domestic production, as can be seen from the terracing system at Caracol. Unlike the *chinampas* in Tenochtitlan, which mainly produced fresh vegetables for the city dwellers, the terraces at Caracol were the breadbasket of the state, supporting a population estimated at more than 100,000.²⁸⁷ The challenge for the rulers was to control these people and their lands so as to maintain a regular flow of food and labor. Studies have shown that Maya commoners had a measure of geographical mobility. Many of the people who followed a leader to establish a new city and dynasty did so of their own free will.²⁸⁸ Although Maya farmers worked on fixed plots of land (contrary to the long-held theory that slash-and-burn agriculture only permitted shifting cultivation), they could be persuaded to leave their homes by a variety of factors: overexploitation, the charisma of a leader, the promise of new lands, and so on.²⁸⁹ Because land without farmers to farm it is useless, an overriding concern for any state is to retain its subjects. One of Caracol's strategies was to concentrate its people and farmland in a small area dominated by causeways. Might the termini at the ends of the causeways have been checkpoints to prevent people from leaving the state?

With so many city-states coexisting in a relatively small area, the Maya states presumably maintained political boundaries of some sort.²⁹⁰ Charles Golden and his colleagues hypothesize that Yaxchilan built several secondary political centers to function as boundary outposts along its northern border with the Piedras Negras state (Figure 3.37, top).²⁹¹ Survey and excavation are still going on, but preliminary mapping has shown that at least one of these secondary centers – Tecolote, in Guatemala – looks very much like an exercise in defensive design. In the site core, the central plaza is located in a large flat area, but other buildings are “clustered on the hilltops surrounding the plaza, ignoring the extension of the flat expanse for hundreds of meters beyond the site core” (Figure 3.37, bottom). The discovery of walls north of Tecolote reinforces the impression of a defensive outpost, although their date has not yet been clearly established. The survey team attributes two functions to these outposts: to guard against attack and to launch offensives. One may wonder whether such fortresses did not also control the movement of civilians. Here it may be instructive to compare the Middle Kingdom forts along the Egypt–Nubia border. In the rugged and broken terrain of the Second Cataract area, King Senusret III (1870–1831 B.C.) built a series of forts “designed to fit over an irregular natural prominence” (Figures 3.38 and 3.39).²⁹² A short inscription by Senusret carved on a stone tablet from one of them, Semna (Figure 3.39), states their function (Text 3.28a), which had not changed centuries later when the Papyrus Harris I summarized Ramesses III’s achievements (Text 3.28b).

Text 3.28a. Building frontiers: Inscription of Senusret III (1870–1831 B.C.).

The southern boundary which was created in the 8th year under the Majesty of King Senusret III to prevent any Nubian from passing it when faring northwards, whether on foot or by boat, as well as any cattle of the Nubians. An exception is a Nubian who shall come to barter at Iken [a fortified trading post], or one with an official message.

After Kemp 2006, pp. 25 and 240.

Text 3.28b. Defending borders and absorbing foreigners: Ramesses III (1186–1155 B.C.).

I cast down the Meshwesh, Libyans, Isbet, Qayqasha, Shaytep, Hasa, and Baqana, (they being) laid prostrate in their own blood (and) made into heaps. I drove them back from traversing the border of Egypt. I brought back (those) whom I had spared, (those) whom I had apportioned as abounding booty, (they being) pinioned like birds before my horses, their wives and children by the 10,000’s, their livestock by the 100,000’s. I settled their leaders in forts bearing my name. I appointed troop-commanders for them and tribal chiefs, branded and reduced (to the status of) slaves (with) cartouches in my name, their wives and children being similarly treated.

After Peden 1994, p. 217.

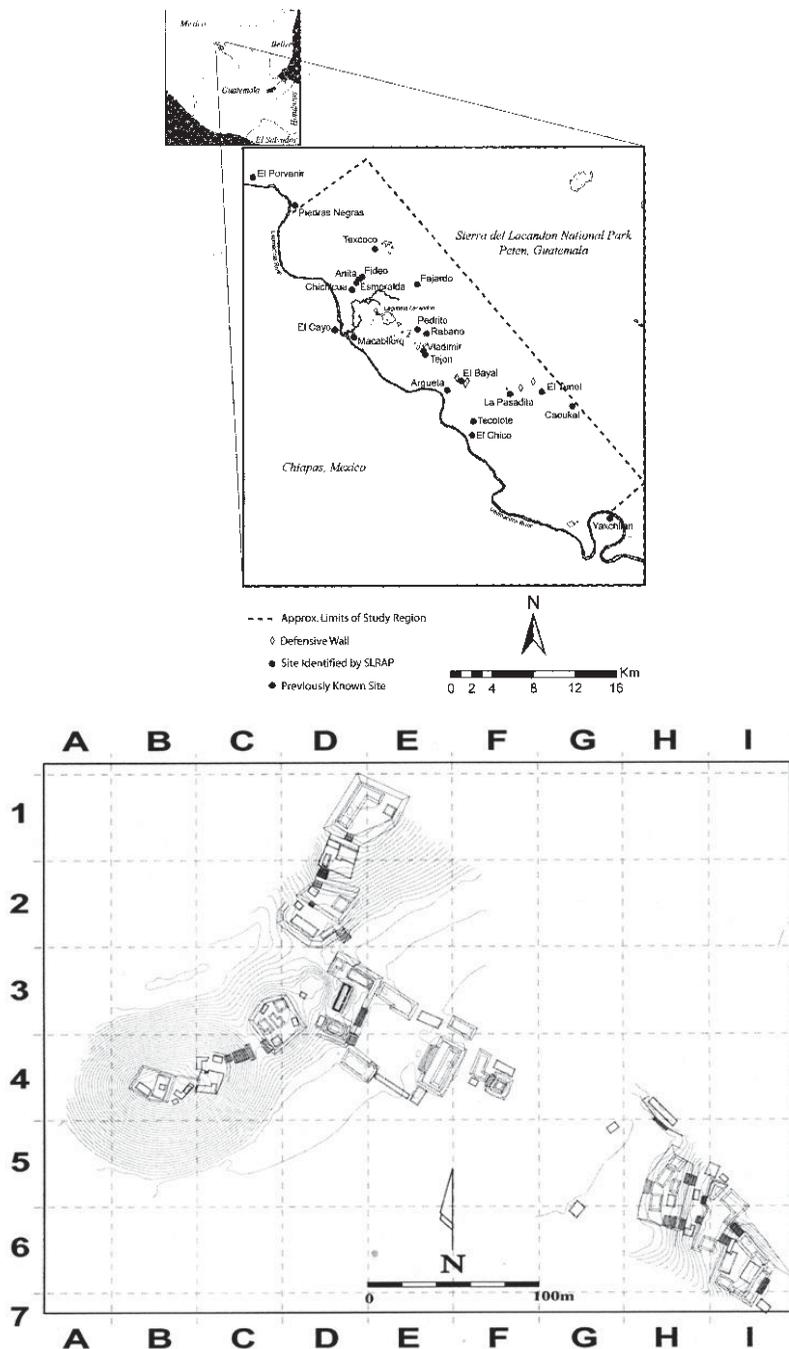


FIGURE 3.37 The guarding of boundaries between city-states. *Top*, surveyed sites between Yaxchilan and Piedras Negras. *Bottom*, the site core of Tecolote, Guatemala. Notice the hilltop positions of the buildings. After Golden et al. 2005, p. 12, Figure 1; and p. 14, Figure 4.

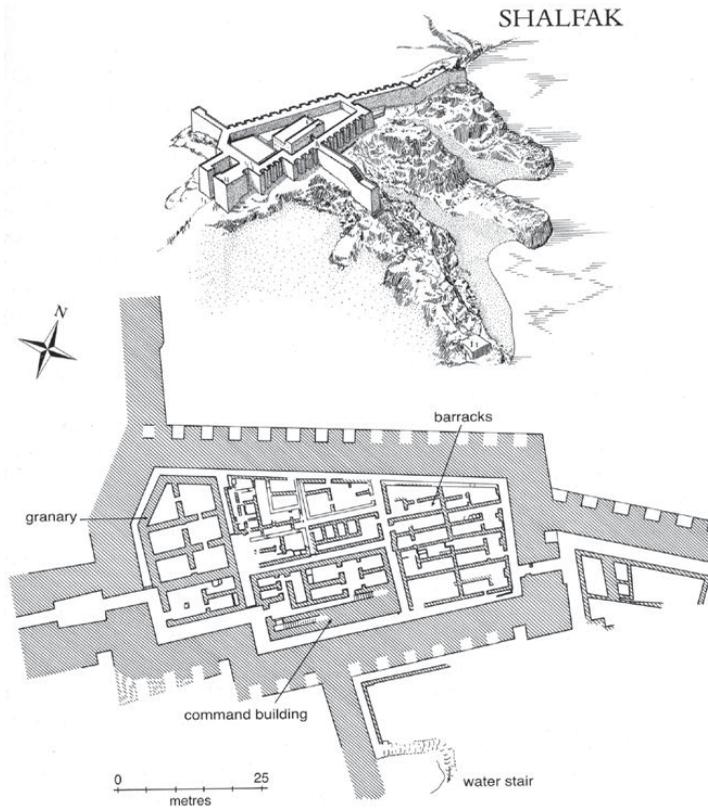


FIGURE 3.38 Holding the high ground: the fortress of Shalfak in the Second Cataract area of Nubia, built on a high rocky outcrop above the river. After Kemp 2006, p. 237, Figure 87.

In its aims the Egyptian policy sounds very much like U.S. border control, which seeks mainly to restrict inward flow. In the thinking of the ancient Egyptians, the only habitable country was their own. Fugitives from the labor duty imposed by the state's "Office of (enforced) Labor" generally stayed within Egypt; Egyptians who left the country, like the famous Sinuhe, must have been few.²⁹³ The northern and southern borders had to be protected above all against the incursions of foreigners. In the Maya region, however, where polities were small and their resources limited, things may have been different. The Maya city-states were probably more like precolonial Southeast Asian states, where minimizing flight was a constant concern.²⁹⁴ In a small city-state like Piedras Negras, where it may have been possible for the whole population to gather for communal rituals in an open plaza, moral authority exerted in face-to-face interactions might conceivably have been sufficient to hold the community together, but a populous state like Caracol could not have been ruled in this way.²⁹⁵ How did a large Maya state track its people? Inka officials recognized subjects by their ethnic markers; the Thai "devised a system of tattoos for literally marking commoners with symbols making it clear who 'belonged' to whom."²⁹⁶ Did the Maya use similar methods? Some Maya captives were enslaved, and in somewhat the same way that Ramesses III's war captives were branded with his name (Text 3.28b), a Maya captive's "otherness" might have been declared by body markings.²⁹⁷ But there is no evidence of the use of physical markers to identify

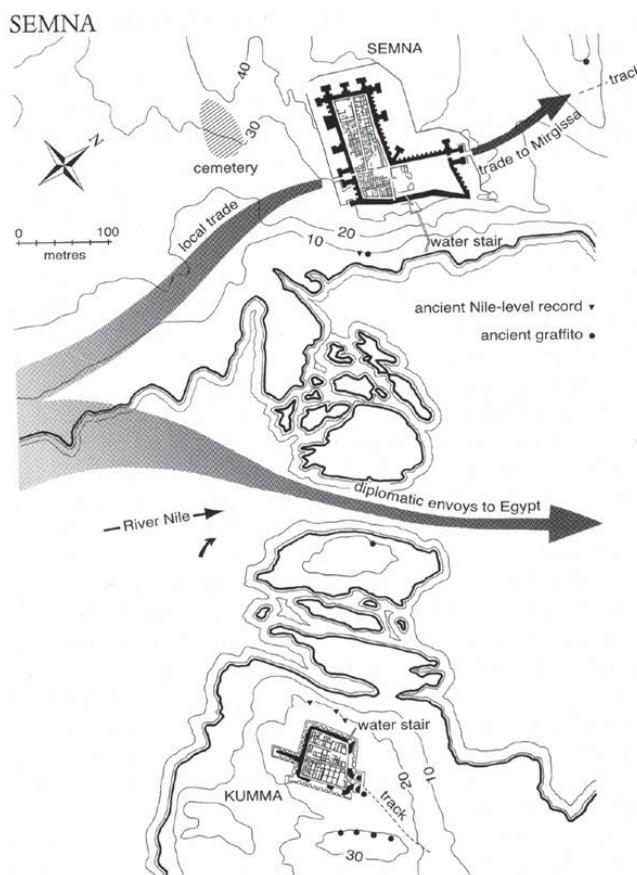
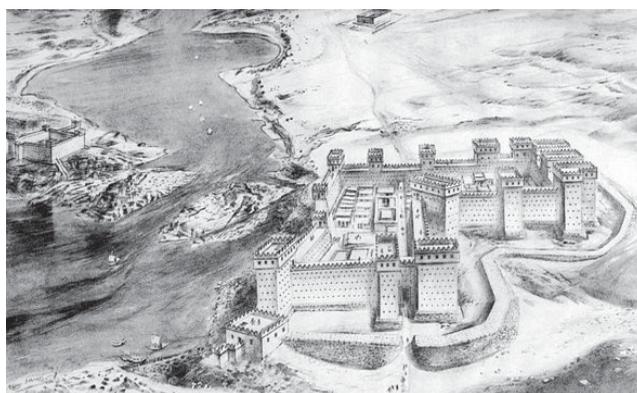


FIGURE 3.39 A checkpoint for trespassers, a way station for troops, diplomats, and traders: the late Middle Kingdom fortress at Semna. Shipments of taxes and exotic goods collected from the Egyptian temples' pious foundations in Nubia passed through Semna and other fortresses (e.g., Figure 3.38) in the cataract region and at times suffered from the illegal exactions of predatory commanders (*Text 4.16*). *Top*, reconstruction of the Semna fortress. After Parkinson 1991, p. 94. *Bottom*, map of the fortress system at Semna. After Kemp 2006, p. 238, Figure 88.

ordinary commoners in Classic Maya. We have seen that for easy identification foreign slaves in Egypt were registered under Egyptian names ([Text 3.13a](#)). In [Chapter 4](#) we will see that the Han empire used written “passports” to control people’s movements. Might the Maya have employed a census for population control?

The administrative activities of the Second Cataract forts are best revealed by a group of documents known as the Semna Dispatches ([Text 3.29](#)).²⁹⁸ Their contents show that the forts communicated with each other and with a commander at the Semna fort through routine written reports. Because the documents were discovered in a tomb at Thebes (part of the “Ramesseum library”) but are copies of originals written in the far south, it is clear that the central administration demanded to know what was happening at the frontier. As Senusret III’s inscription suggests, the state’s main concern in the south was the Nubians – their movements and the legality of their trading. Exact times of arrival and departure were recorded: “An acknowledgment of this letter has been made in a letter which has been sent to [the officer at Semna] about the ... Nubians who arrived at the fortress in month 4 of Peret, day 7, at the time of evening, and were sent back to the place whence they had come in month 4 of Peret, day 8, at the time of morning.” The patrol guards would bring in wanderers for questioning: “Then I questioned these Medjay-people, saying, ‘Whence have you come?’ Then they said, ‘We have come from the Well of Yebheyet.’”

Text 3.29. A report from a frontier fort from the Semna Dispatches.

Another letter brought to him [the high-ranking officer and recipient at Semna] from the liegeman Ameny who is at Kheseff-Medjaiu [name of another fort], being (a message) sent by fortress to fortress: This is a communication to the lord, that the soldier from Nekhen, Senu’s son Heru’s son Reniqer, and the soldier from Tjebu, Rensi’s son Senwosret’s son Senwosret, came to report to this humble servant on year 3, month 4 of Peret, day 2, at the time of breakfast, on a mission from the officer of the town regiment, Khusobek’s son Montuhotep’s son Khusobek [...], who is deputy to the office of the Ruler’s crew in the garrison of Meha, saying: ‘The patrol that went out to patrol the desert edge [right up to (?)] the fortress of Kheseff-Medjaiu on year 3, month 3 of Peret, last day, has returned to report to me, saying, “We found the track of thirty-two men and three donkeys, which they trod [.....]” [...] the patrol [...] my places’ – so [he said.....] order (?) of the garrison [.....] on the desert edge. This humble servant has sent [about it to Semna as (a message) sent by fortress to] fortress. It is a communication [about] it. [All the affairs of the king’s domain] are safe [and sound].

After Parkinson 1991, pp. 94–5; see also Smither 1945, pp. 8–9.

Did the Maya outposts generate similar written reports to each other and to the city they served? We have seen a pervasive use of letters in Mesopotamia and Egypt; could the Maya have employed their writing to produce the same genre of text? The tributary lord from Calakmul in [Plate XVIII](#) is captioned as a “messenger.”²⁹⁹ His message of submission was probably conveyed orally and by the tribute he brought, but might he not have brought diplomatic letters, too? If, as Houston, Stuart, and Robertson have argued,

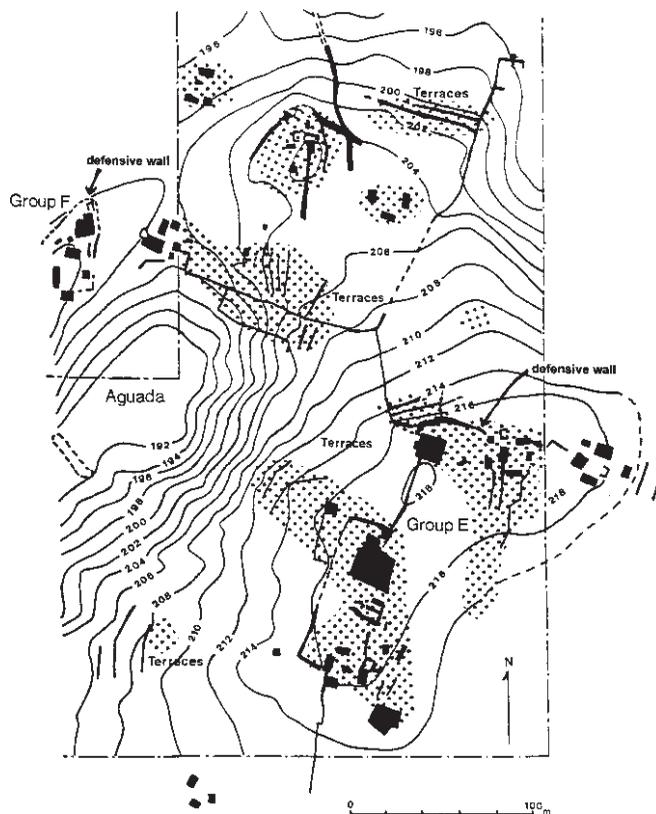


FIGURE 3.40 Internal boundaries in a Maya city-state: partial map of Petexbatun showing rural farms with wall and terrace systems. Stippled areas indicate high concentrations of soil phosphates. After Dunning 2004, p. 103, Figure 5.3.

all Maya writing wrote a single Maya language, then all scribes in the Maya area could have communicated in writing no matter which of the Maya dialects or languages they spoke. This would have made writing a powerful tool of diplomacy and trade.³⁰⁰ The diplomatic interactions depicted in paintings include face-to-face verbal communication; they may even have involved recitation of classic poems, a practice well documented in China, as we shall see. But in early China, rulers also corresponded with each other, using a shared written language.

Legible Landscape

Boundaries existed not only between Maya city-states but also within them, where they served to demarcate the arable lands. Early colonial documents pertaining to a prolonged land dispute indicate the importance of agricultural boundaries; McAnany calls them “a strong indicator that there existed a deeply rooted pre-Columbian tradition of both recording and disputing resource rights and that Maya concern with land entitlements and boundaries was not created by inept Spanish domination during the Colonial period.”³⁰¹ In places where stone was not a scarce resource, stone walls seem to have been used to bound the individual house lots or farmlands belonging to different

lineages. Of Petexbatun, Dunning writes, “Initially, property wall systems parceled land between corporate group residential compounds, often tying in agricultural terrace complexes. Later, hilltop residential compounds were ringed by defensive walls, in essence creating a landscape of fortified farmsteads” (Figure 3.40).³⁰² Intensive, permanent, and diversified agriculture around residential compounds in both urban and rural settings, together with dispersed and noncontiguous plots away from the residences, must have made boundaries and cadastral records essential (Figure 3.41). McAnany reminds us that

Maya conceptions and calculations of space and territory were just as sophisticated and thorough as were their conceptions of time. To assert that Classic Maya employed a complex system of reckoning time and yet did not delimit and frame the space of their settlements, cities, fields, and orchards in an equally exacting fashion is to rend apart a tightly interwoven cosmology.³⁰³

If McAnany is right, who was responsible for the cadastral surveys? McAnany seems to believe that the lineage head performed this task (and also, like the Aztec headman of a *calpulli* described by Zorita, the task of collecting tribute). Such an arrangement would put the burden of collecting cadastral and population information on the local elite. If Maya cadasters resembled the Asunción (Figure 3.26), then they would require from the lineage head only limited literacy, but if they were more like the detailed descriptions recorded in the Babylonian *kudurru* (Text 3.11), he would have needed more education, and we would want to ask how he acquired it.

In the absence of an actual Maya cadaster, these questions must be left open. Yet it seems worthwhile to contemplate how a scribe might have recorded the properties of the households at the site of Cerén in the Zapotitán Valley of El Salvador (Figure 3.42). Cerén was buried suddenly by a volcanic eruption in the early A.D. fifth century.³⁰⁴ Though acclaimed as the Pompeii of Mesoamerica, it was only a village, but its exceptionally fine state of preservation nevertheless offers a direct window onto the Maya agricultural landscape. As seen in Figure 3.42, that landscape was well ordered, with kitchen-garden plots for nonstaple foods near the houses, maize plots (*milpas*) beyond the kitchen gardens, and the ridges of the plots aligned with the buildings. The kitchen garden of Household 1 reveals zoned biodiversity at a micro scale, with each ridge devoted to a single species useful for food, drink, fiber, or medicine. Throughout the site economically important trees were planted for firewood, construction material, fruits, shade, and privacy.

This orderly arrangement of plots and plants must have greatly simplified the work of the property surveyor: the plants had already been classified by the farmers, so he needed only to write down their names. If he wanted to record the information the tax assessor required without a map of the properties, he would have to write something like the description of Metjen’s vineyard in Text 3.9 (blocks 7–11). But how much information did the assessor require? What did the state demand from the farmers – maize alone, or a wider range of things for the luxurious diet of the elite? Surviving texts and images reduce elite food and drink to two exemplary foodstuffs: tamales and water or water-based chocolate beverages.³⁰⁵ But the inscriptions on drinking vessels show that the elite consumed a variety of drinks, and their food was no doubt varied as well.

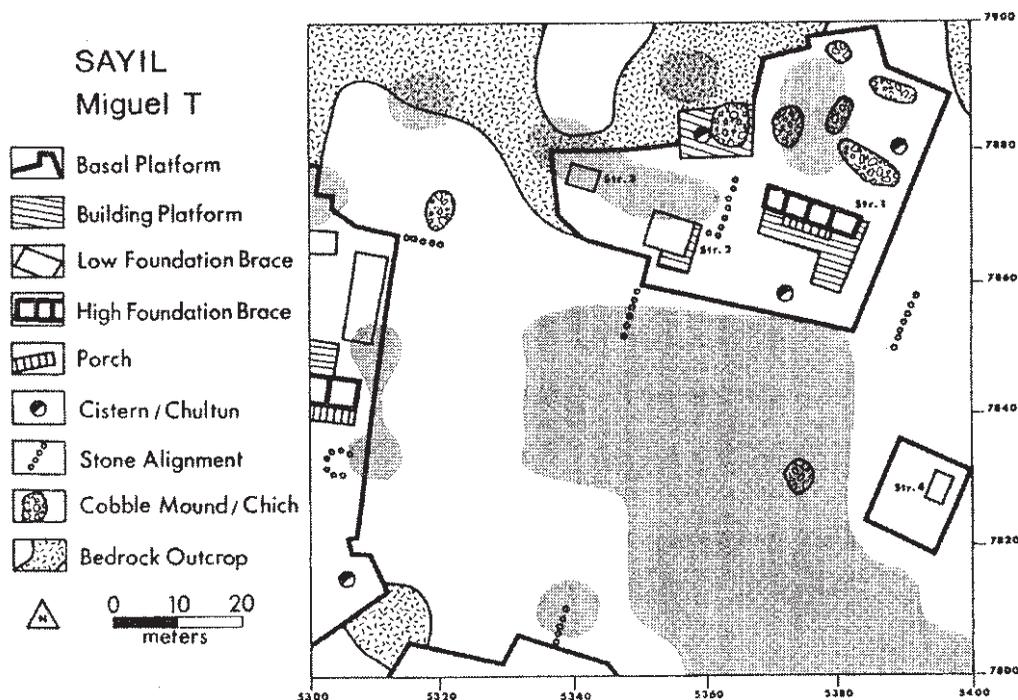
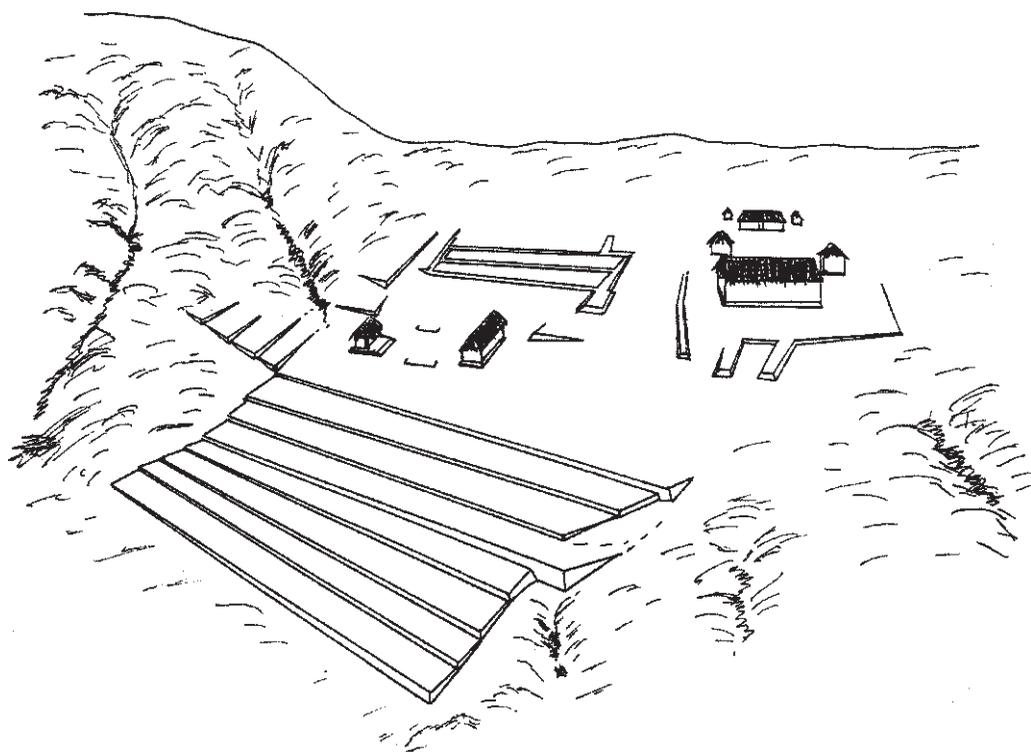


FIGURE 3.41 Urban gardens in the Maya region. *Top*, urban gardens at Tamarindito, Peten. *Bottom*, map of Sayil, Yucatan. Shaded areas indicate high concentrations of soil phosphates. The large shaded area south of the Structure 1 platform is believed to represent an intensively cultivated urban garden. Notice the stone alignments. After Dunning 2004, pp. 104–5, Figures 5.4 and 5.5.

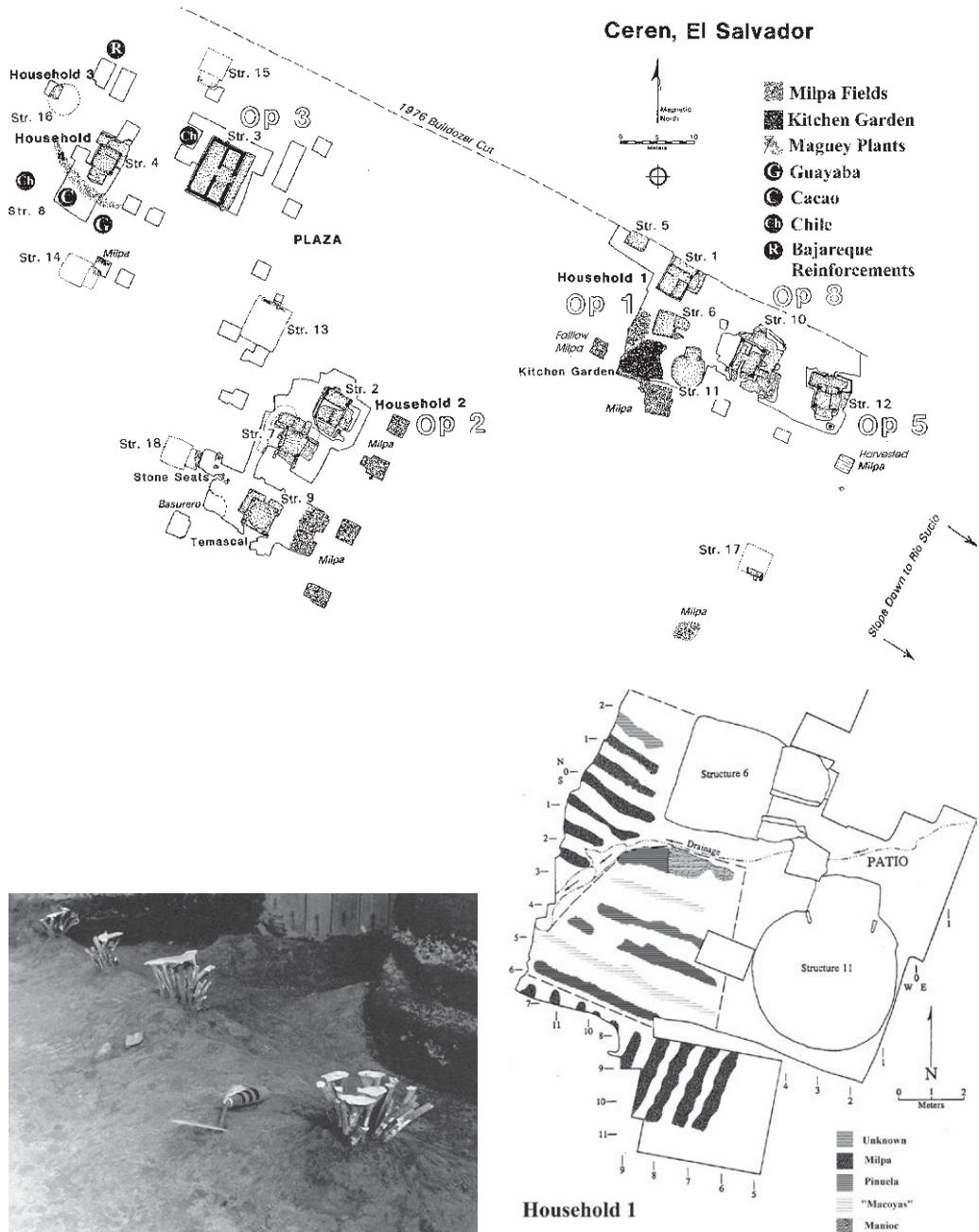


FIGURE 3.42 An archaeologist's dream: the Classic Maya village buried by a volcanic eruption at Cerén, El Salvador. *Bottom left*, dental-plaster casts of *macoyas*, annual plants that produce edible roots, growing on a ridge in the kitchen garden of Household 1. Here we would not take the orderly layout of species-specific plots to betray the intervention of state planners. Agriculture is an art that demands order. The neat pattern might also have helped land surveyors record each household's property. And finally, because "we occupy an orderly universe in which randomness is unwelcome," "a degree of regularity or at least of recurring patterning in the built environment is probably inescapable" (Kemp 2000, p. 335). Courtesy of Payson Sheets.

TABLE 3.7. A selection of labels on Maya vases (omitting the dedicatory verbs and other phraseology preceding the possessed noun *y-uk'ib*, “his/her cup”).

<i>Y-uk'ib'ta kakaw</i>	His/her cup for cacao
<i>Y-uk'ib'ta tzih</i>	His/her cup for pure (cacao)
<i>Y-uk'ib'ta tazih kakaw</i>	His/her cup for pure cacao
<i>Y-uk'ib'ta yutal kakaw</i>	His/her cup for ? cacao
<i>Y-uk'ib'ta ach' kakaw</i>	His/her cup for ? ripe cacao
<i>Y-uk'ib'ta yutal chab'il kakaw</i>	His/her cup for ? sweet cacao
<i>Y-uk'ib'ta iximte'el kakaw</i>	His/her cup for iximte' cacao
<i>Y-uk'ib'ta yutal iximte'el kakaw</i>	His/her cup for ? iximte' cacao

Source: After Stuart 2006, p. 193, Table 9.1.

The administrative documents that dealt with elite provisioning must have had a corresponding complexity. The beautifully painted inscriptions on drinking vessels not only mark ownership but also specify the type of chocolate drink that the vessel was to contain. Here are the opening phrases from three of these inscriptions:

- (1) (It is) his cup for ? cacao
- (2) (It is) his cup for *witik* cacao, (and) for *koxom mul* (?) cacao.
- (3) (It is) his vessel, his drinking cup, for fresh (?) cacao (Plate XX).

In their double function of accounting and display, these inscriptions resemble the bone tags from tomb U-j. By stripping off the dedicatory verbs and other phraseology preceding the noun “cacao” David Stuart has assembled a list of modifiers that represents the native taxonomy for chocolate (Table 3.7).

Again we see the familiar classificational character of early recording systems, well suited to the needs of accounting. In the absence of actual Maya accounting texts, we can only guess at what Maya accounting might have looked like. But if we are to form, however tentatively, a balanced impression of the functions of writing in early states, we must continue with our educated guesswork, especially in the case of China, the subject of the next chapter.

4

CHINA

Taking its cue from the transmitted textual corpus, the study of early Chinese history has always been heavily oriented toward intellectual history. In recent years the discovery in tombs of texts related to legal, administrative, and economic matters has drawn welcome attention to understudied subjects, but the texts have also created a false impression: because none of them is dated earlier than the fifth century B.C., the scholars who study them have decided that it was not until the Warring States period that states began to rely on documents to administer their domains. This timing agrees nicely with the traditional view of the Warring States period as a watershed in Chinese history, the moment when China took an imperial path and bureaucracy began to serve empire building. But the synchronization of bureaucracy and empire has less to do with past realities than with present limitations of evidence.

Trained as palaeographers rather than archaeologists, and hence unused to thinking about bias of preservation, the specialists who study excavated texts have taken the absence of texts from tombs earlier than the fifth century B.C. to mean that few texts were written before the fifth century. They have not asked themselves why texts of the last few centuries B.C. *have* survived. Texts have survived because collections of them were deposited, in a very small proportion of tombs, for reasons no one really understands.¹ Because we do not know why they were deposited, we are not in a position to guess when or where the practice originated. Moreover, once deposited, the texts depended for their survival on conditions in the tomb. Most excavated texts come from water-logged tombs or wells in the Yangzi region in the south. Almost none have come from the temperate Yellow River region in the north, the home of the earliest and most powerful states. Should we infer that bureaucracy existed only in the south? It is time we acknowledged the bias of the archaeological sample.²

Instead of dating bureaucracy by the earliest bureaucratic texts so far excavated, we should remind ourselves of Kemp's characterization of bureaucracy as "an attitude of mind."³ The New Kingdom in Egypt was an era of empire building on a previously unknown scale, in this respect resembling the early imperial period in China. But as we have seen in [Chapter 3](#), bureaucracy, attested by administrative documents and display texts alike, existed long before the New Kingdom. Whether in a city like Uruk or an empire like that of the Inka, bureaucracy permeated the social life of early states in the form of bookkeeping. Kemp's "attitude of mind" arose with the state.

Unfortunately the bookkeeping of the earliest states in China has yet to be found by archaeologists, and it may well have perished entirely; its loss would, after all, be

much less extraordinary than the survival of so much bookkeeping in Mesopotamia. Archaeologists nevertheless do not hesitate to assume the existence of administrative documents in the early Bronze Age north, because its material achievements – for example, city walls and spectacular bronzes – testify forcibly to the effectiveness of the state’s management of resources. But material evidence speaks more compellingly to archaeologists than it does to text-oriented scholars. Might there be written evidence to bolster the archaeologists’ case? The example of Egypt reminds us that administrative documents and formats can be preserved in display inscriptions. A few early China specialists have already sought for traces of bureaucracy in such inscriptions.⁴ This chapter aims to expand the search by making more use of material culture and of comparisons with other early states.

At issue is the administration of resources. Several recent studies of Chinese state formation have focused on the procurement of copper and salt.⁵ Important as these commodities were, they were not the state’s chief concern. I focus instead on the control of people and land, the twin sources of wealth crucial to the agrarian economies of all early states. If pressed to say which of the two was more important, I would agree with James Scott that the ultimate source of wealth for the early state was people.⁶ Land seems to have outweighed labor only after the A.D. eighth century, beyond our present purview.⁷

ERLITOU AND ERLIGANG

The last six decades have been the richest and most productive in the whole history of Chinese archaeology. One especially significant achievement has been to track the process of state formation through a series of distinct stages, each represented by an intensively surveyed and excavated city site. Let us begin with the earliest one, Erlitou.

Erlitou

The Erlitou state, the oldest city-state yet known to Chinese archaeologists, is named after a site located near the ancient Yiluo River, a tributary of the Yellow River in western Henan province. Four phases of continuous occupation can be distinguished in a history of about two centuries. In Phase I, beginning around 1800 B.C., the city seems to have sprung suddenly into existence by immigration from other places. Its size is estimated at about a hundred hectares, but this stratum has been so badly disturbed that little about its extent or layout is certain. The onset of Phase II witnessed rapid expansion to an area of three hundred hectares. Extensive coring indicates that a palatial area was bounded by four intersecting roads perpendicular to each other. Two large buildings were built inside this rectangle. Workshops to the south of the palace area probably began to produce bronze, turquoise, and other objects at this time. During Phase III, the area defined by the four roads was formally enclosed by walls, inside which five new buildings formed two monumental architectural groups. This layout survived into Phase IV, with a few new buildings added adjacent to the existing ones. The workshops continued to be active (Plate V) until, for unknown reasons, the site was abandoned.⁸

The urban center of Erlitou no doubt had a supporting zone in the Yiluo region. This can be plausibly mapped on the evidence of pottery assemblages recovered by regional surveys and excavations. A recent survey identified 178 settlements in an area of one thousand square kilometers, and the number is growing as archaeologists conduct more extensive and careful surveys.⁹ But did the Erlitou state actually control these smaller settlements? If so, how? What did the state extract from them?

Feeding Erlitou's urban population must have been a major concern for its rulers, for many of the city dwellers, including the specialists in the craft workshops, did not contribute to agricultural production. To judge from sacrificial remains and ritual vessels, the ancestors too needed constant offerings of food.¹⁰ By one calculation the city's population was somewhere between 18,000 and 30,000 persons.¹¹ Although estimating ancient populations is one of the thorniest problems in archaeology (among Mayanists, population estimates for a single city can vary dramatically, in the case of Tikal, for example, from 10,000 to 90,000 persons), the estimates for Erlitou are close to those for the biggest Maya cities and higher by an order of magnitude than those for the smaller Maya cities (Table 3.6). It is reasonable to assume that the Erlitou state fed the city dwellers by extracting surplus from the surrounding settlements, but it seems impossible to guess the mechanism of extraction.

In Mesoamerica and the Andes, parts of the ancient agricultural landscape are still visible for large-scale mapping, and archaeologists there have carried out many research projects focused on ancient farming, from the excavation of *chinampas* to phosphorus-concentration analysis. But the archaeology of agriculture in China is different. Most ancient fields lie beneath modern fields or habitation sites, and without full-scale excavation it is very difficult to reconstruct the ancient landscape. A few Neolithic paddy fields have been excavated in the Yangzi River region, but, except for one case discussed later, we know almost nothing about the actual shapes of dryland fields in the Yellow River region in early historical times. In Chapter 3 we have seen that studies of land tenure and the state's method of wealth extraction depend heavily on written texts, with archaeology sometimes providing concrete visual settings for the activities we read about in the documents. In the absence of documents we are not certain about the state's role in the reshaping of the natural environment even when the landscape is visible, as in the case of the terraces at Caracol. When it is not, and when, as at Erlitou, we lack documents as well, we have no evidence from which to deduce the forms of landownership.¹² How are we to say anything concrete about the state's fiscal administration and the functions of record keeping?

The complexity of the city economy reflected in the archaeological record forces us to conclude that there must have been administration of some kind. Although no excavation report has been published, the bronze foundry site at Erlitou is said to cover an area of about one hectare. So large a foundry would have been a state operation and would have needed a constant supply of raw materials, including both metal and great quantities of fuel. Someone "had to get the supplies to the urban residents and bring certain raw materials and manufactured items back to the villages, whether it was private enterprise merchants, or officials employed by a monolithic government organization."¹³ At Uruk, a Mesopotamian city comparable in size and complexity

to Erlitou, coordination between the urban and rural sectors was facilitated by the invention of writing.¹⁴ The building of monumental architecture and the production of elite objects would have been inconceivable without some sort of systematic management of the city's resources, a task the proto-cuneiform administrative tablets must have served well. A similar response to administrative needs at Erlitou is certainly a possibility.

Comparisons with Mesopotamian and Maya cities also help us think about the political status of Erlitou. Some archaeologists incline to classify it as a territorial state with no serious rivals.¹⁵ In their view Erlitou was an expansionist state that had established colonies well beyond the Yiluo region, reaching north and south into a large area between the middle Yellow River and the middle Yangzi River. The motive behind the expansion, they argue, was to procure copper, tin, lead, and salt for the core area's people and workshops. On balance, however, the evidence seems to favor something more modest, a polity confined to the Yiluo basin, comparable in size to a large city-state in Mesopotamia or Mesoamerica. Other walled settlements of the period – for example, the one found recently at Xingyang Dashigu, seventy kilometers east of Erlitou – might then be independent city-states.¹⁶ The walled area at Dashigu is about fifty hectares, a good deal smaller than Erlitou's three hundred hectares. Test excavations recovered Erlitou-type pottery assemblages but no elite buildings or bronze vessels. Some would interpret such a site as a regional center within an Erlitou territorial state, but no such political relationship can be read from the archaeological evidence; if an Erlitou ruling class had been resident at Dashigu, we might expect to find their buildings and bronzes there. It is equally possible that Dashigu had dealings with Erlitou but was independent of it, and that we should not be thinking of early second millennium north China in terms of a single territorial state but rather as a landscape dotted with multiple city-states.

New discoveries over the past few decades have shown that walled settlements of various sizes were much more numerous in late third and early second millennium China than we used to believe. Yoffee has argued that with a few notable exceptions, such as Egypt and Teotihuacan, the city-state model was a worldwide norm in the rise of early states, and, even in Egypt and Teotihuacan, regional unification seems to have been preceded by a time of smaller competing polities.¹⁷ If this was the political landscape of north China in the early second millennium, Erlitou would have been one of the larger ones among a number of city-states. The procurement of exotic materials and salt would not have required state-organized colonization of remote areas. Private enterprise operating in ethnic enclaves in foreign lands (such as the Assyrian merchant colony at Kanesh) and state-sponsored trading missions (such as the one Hatshepsut sent to the land of Punt) are other possibilities. The main concerns of the state's administration would have been internal, focusing on the extraction of wealth from subjects in the Yiluo basin. We can make a list of activities on which its administration might have concentrated – agriculture, construction of public buildings, bronze casting, the army – but we have no evidence to tell us what sorts of labor tax or tax in kind were levied on the subjects. Beyond their conviction of its importance, Chinese archaeologists have not yet told us a great deal about the Erlitou state. The case of its successor, Erligang, is fortunately very different.

The Erligang Empire

After about two centuries as a major urban center, the settlement at Erlitou went into decline. As mentioned in [Chapter 2](#), around 1500 B.C. the Erligang state emerged as the dominant power in north China. Probably by uniting under its rule many existing city-states, Erlitou among them, Erligang created an empire comparable in size to the first empire in Mesopotamia, that of the Dynasty of Akkad. Certainly it was far larger than the territory controlled by the Erlitou city-state. The strongest evidence for this political unification is the technically and stylistically uniform cast-bronze ritual vessels and ceremonial weapons that are found both at the presumed Erligang capital ([Figure 2.1](#) and [Plate V](#)), an immense city 85 km east of Erlitou at modern Zhengzhou, and at other sites remote from the capital, some known to have been fortified.¹⁸ This broad distribution of a uniform elite material culture, unattested earlier, is most plausibly explained as the result of a rapid military expansion, one that built fortified strongholds at strategic points. However, with no documents and only limited archaeological evidence at our disposal, we are as yet in no position to compare Erligang as to political economy with the territorial states in Mesopotamia, Egypt, the Andes, and Central Mexico.

As mentioned in [Chapter 2](#), the earliest writing yet known in China was found at a site contemporary with Zhengzhou. The inscriptions, mostly single graphs, were written in vermilion on clay pots that were ritually deposited with sacrificial animals near a palatial foundation ([Plate VI](#)). Perhaps the pots originally contained wine or other offerings. The writing they carry is no doubt a precursor of the writing system that has become familiar to us through the so-called oracle bone inscriptions found at Anyang. Despite the almost complete absence of other written remains, it is clear that Erligang had a writing system that was in its capabilities at least the equal of the Egyptian writing from tomb U-j (compare [Plate VI](#) with [Figure 3.4](#)). Both systems come to our notice in a ritual context, where their function was some sort of display, but we must remember that normally it is only after writing comes to be used for display that archaeology begins to find traces of it. Because administrative documents were almost certainly written on perishable materials like bamboo and papyrus, we will probably never find them. If our conjectures about the use of administrative writing in Egypt at that stage can be trusted, we might envision similar use in the Erligang state.

The list of activities dependent on administration for the Erlitou state – agriculture, the construction of public buildings and city walls, the bronze industry, the army – is equally applicable to Erligang, but the scale of those activities had increased enormously. The contrast in [Plate V](#) between bronze *ding* vessels from Erlitou and from Erligang is a visual reminder of the difference of scale that separates the political economy of the Erlitou city-state from that of the Erligang empire.

One further piece of archaeological evidence might be connected with administration. At Yanshi, close to Erlitou, archaeologists have excavated the remains of a walled city of Erligang date that in all likelihood was under the direct control of Zhengzhou. One large building found there was rebuilt several times in the city's history ([Figure 4.1](#)). Structurally different from residential palaces, it resembles large-scale storage facilities

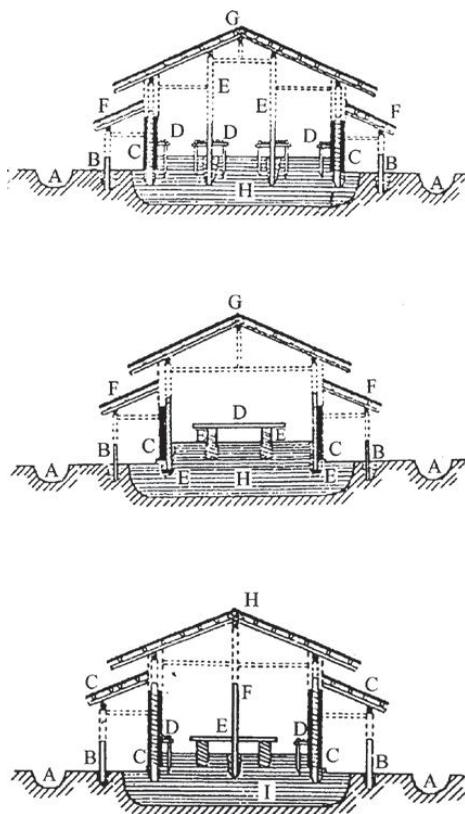


FIGURE 4.1 The storage of wealth: three stages in the history of Structure 2 at Yanshi, an Erligang city in Henan province. The building has structural similarities to Han granaries, but the evidence of shelves inside seems to indicate that other commodities were stored here. After Wang Xuerong 2000, figs. 3, 5, and 7.

known from later periods. If it was a storehouse, then it might be one of the settings in which Erligang administrators used writing. But without fuller archaeological information, and in the absence of documents or visual materials of the kind so abundant in Egypt and Mesoamerica, speculation about the administration of the Erligang state has little to go on. For more solid evidence we must turn to the principal city of the late Shang state, located at modern Anyang.

ANYANG

The Xiaotun site at Anyang was a major city in the last two or three centuries of the second millennium B.C. The famous oracle bone inscriptions found there indicate that one main source of state revenue was the produce of the state's institutional land. Royal crops were prefixed with qualifiers such as "the king's," "Shang's," "the great settlement's," or "our."¹⁹ Some of these farms had named locations; others were specified only by cardinal direction (Text 4.1).

Text 4.1. Shang divination records about state farms.

1. If the king orders the Many Yin (officers) to open up fields in the West, [we] will receive crops. (*HJ* 33209)
2. Crack-making on *guihai* (day 60): “Should the king order the Many Yin (officers) to work on the field at Yu?” Crack-making on *yichou*: “Should the king order [the Many Yin] to work on the field at Jing? To work on the field at Xun? (Kaizuka 1959–68, no. 2363)
3. We will receive the harvest that Fu cultivates at Zi. (*HJ* 900)
4. . . . if [we] greatly order the laborers, saying, “Work together in the fields,” [we] will receive harvest. (*HJ* 1)

Nos. 1, 3, and 4 after Keightley 1999, pp. 278–9; no. 2 after Chao Lin 1972, p. 9, no. 12, modified.

Evidently the state farms were opened up and worked by labor gangs led by various officers. The divination records in [Text 4.1](#) suggest that the Shang kings knew (at least roughly) where the farms were located and which officers were responsible for them. Where did they obtain this knowledge? We have seen that in Egypt simple land registers of the royal domains probably existed already in the Early Dynastic period. It seems likely that the Shang state possessed similar lists of fields and officers. In the oracle bone inscriptions more than a hundred toponyms occur in divinations in which the Shang kings inquire about the harvest.²⁰ Bone and bronze inscriptions mention an official inspection of fields that involved classifying them into four types.²¹ It has been argued that one character in the bone inscriptions refers to the field surveyor.²² The character for field (*tian*, 田), might show a field divided into square parcels by a grid of pathways or drainage ditches or both. If land reclamation was organized by the state, as the first divination record in [Text 4.1](#) indicates, fields might have been laid out in a way that facilitated land survey, but there is no archaeological evidence for the shapes of Shang farms.

As we have seen several times in other early states, standardized agricultural landscapes helped the state allocate land to manageable units of farmers. The nature of Shang labor gangs eludes us, but archaeological evidence seems to suggest that they depended on the state at least for agricultural tools. Large numbers of stone sickles have sometimes been found at Anyang in a single spot (one pit at Xiaotun contained a thousand sickles). These were most likely harvesting tools made by state workshops for distribution to the harvesters.²³ Efficient supply of tools depended on accurate knowledge of the users, their number, and their organizational units. The bone inscriptions mention instances of “the counting of people” (*deng ren*) in connection with agriculture and warfare.²⁴ Sometimes the numbers of persons and goods seem to be specific enough to warrant the conclusion that careful records were maintained ([Text 4.2](#)). However, the extant records do not tell us what kind of census information was collected beyond the number of persons, nor do they disclose whether there was statewide enumeration of the people.

Text 4.2. Traces of Shang bookkeeping.

1. Raising an army

Crack-making on *dingyou* (day 34), Que divined: “This season, if the king raises 5,000 men to campaign against the Tufang, he will receive assistance in this case.” (HJ 6409)

2. War booty

.. Junior Servitor Qiang followed (the king) to attack. Mei [enemy leader] of the Wei [enemy state] was captured, persons 24 ... persons 570; *xi* (?) 100 ... chariots 2; shields 183; quivers 50; arrows. (HJ 36481)

3. Game

On *renzi* (day 49) the king made cracks and divined: “Hunting at Zhi, going and coming back there will be no harm.” The king read the cracks and said: “Prolonged auspiciousness.” This was used (?). (We) caught foxes 41; *mi*-deer 8; rhinoceros 1. (HJ 37380)

4. Tribute

Wo brought in 1,000 (shells); Lady Jing ritually prepared 40 (of them). (Recorded by the diviner) Bin. (HJ 116b)

5. Animal sacrifice

Crack-making on *jimao* (day 16), Que divined: “In performing an exorcism for [Lady] Hao to Father Yi, cleave a sheep, offer a pig, pledge ten penned sheep.” (HJ 271)

6. Human sacrifice

On the eighth day, decapitate 2,656 persons. (HJ 7771)

No. 4 after Keightley 1999, p. 281; others my translation.

The records collected in [Text 4.2](#) suggest that accounting was a routine feature of state administration. Although these records were carved on bone, the sources for the figures they contain must have been now-perished administrative documents written on wood or bamboo strips.²⁵ Because by the late Shang period the writing system had already developed the ability to record continuous speech (as testified by lengthier oracle texts such as [Text 4.3](#)), its administrative applications could have gone well beyond the making of ledgers. The first two inscriptions in [Text 4.2](#) speak of campaigns against enemies; other inscriptions ([Text 4.3](#)) speak of enemy attacks on borders or frontiers, suggesting that Shang maintained borders to its domain. A few elite cemeteries at places outside the Anyang area have yielded assemblages of ritual bronzes very similar to those from Anyang, hinting at the possibility that these places were outposts of the Shang state.²⁶ The divination record in [Text 4.3](#) gives us a glimpse of the perils on the frontier.

Text 4.3. Late Shang dispatches? An oracle inscription.

Crack-making on *guisi* (day 40), Que divined, In the next ten days there will be no disasters. The king read the oracle and said, There will be calamities; there may

be someone bringing alarming news. When it came to the fifth day, *dingyou* [day 34], there really was someone bringing alarming news from the west. Guo of Zhi reported and said, The Tufang have attacked in our eastern borders and have seized two settlements. The Gongfang likewise invaded the fields of our western borders. (HJ 6057)

Slightly modified from Keightley 1999, p. 242, Figure 4.

How did frontier officials like Guo of Zhi make their reports to the capital? Did they use written dispatches like the Semna reports (Text 3.29)? Inscriptions as circumstantial as Text 4.3 make it clear that Shang scribes were fully capable of writing reports, not to mention letters and royal decrees. Guo of Zhi could have made his report in writing. He might even have been required to do so.

Scholars who ignore the loss of documents on perishable materials make themselves prisoners of the divination texts; indeed they often imagine that writing at Anyang had no function outside royal divination and that literacy was confined to diviners.²⁷ Writing was indeed employed in the religious activities of the ruling class, but the divination records quoted in Text 4.2 remind us that all sorts of other records were being kept, including (in the fourth divination) records of the acquisition of supplies for divining. On the other hand, writing was not essential to communication with the spirits. The vast majority of bones cracked for divination are uninscribed, and the ones that do have inscriptions were inscribed after the communication was finished. It was not communication with the spirits that drove the elaboration of a writing system in China. We would be hard pressed to explain how oracular responses conveyed by sets of cracks could call into existence an extensive Shang lexicon that distinguished many kinds of plants and animals and their numbers, ages and colors, many personal names, and countless toponyms.²⁸ As we have seen in other early states, it was in the sphere of administration – where the overriding motive was to exert control and the means of control was to make inventories and create accountability – that systematic exploration of the classificational nature of recording systems was fostered.

Keightley cautiously calls the administration of the Shang state “incipient bureaucracy” or “proto-bureaucracy.”²⁹ It seems to me that by the time of the divination texts, the bureaucratic thinking behind administrative records had already reached as far as the realm of the supernatural, bureaucratizing the form taken by communication with the spirits. From near the end of the Shang dynasty we have a few lengthy commemorative bronze inscriptions cast by Shang nobles. At this time awards from the king seem to have prompted nobles to make written reports of their achievements to be read by their ancestors, the same ancestors who received offerings in the vessels (Plate XXI).³⁰ When we read on a vessel that, on such-and-such a day, in reward for such-and-such a service, the king gave a nobleman gifts (carefully specified), whereupon the latter made the inscribed vessel for his ancestors, we may be reminded that in Mesopotamia and Egypt the commonest type of administrative document was the receipt. More importantly, the action of *reporting in writing* is the quintessence of developed bureaucracy. The two main functions of administrative documents in Mesopotamia and Egypt were to establish accountability and responsibility. Shang bronze inscriptions that list date,

event, and participants seem to be performing just those functions in the particular context of the ancestor cult. This new genre of bureaucratized written display was adopted and developed further under the Zhou dynasty, which conquered the Shang shortly after the genre came into being.

WESTERN ZHOU

The Western Zhou state has been regarded as the fountainhead of institutions that have come to define Chinese civilization. The Mandate of Heaven ideology discussed in [Chapter 2](#) is one such institution, and the bureaucracy discussed in this chapter is another. Because both figure occasionally in bronze inscriptions, epigraphers excited by new finds of inscribed bronzes have sometimes suggested that we no longer need to speculate about the functions of early writing but can rely on direct evidence. In fact, however, although the corpus of Western Zhou writing continues to grow, the genres of writing remain as restricted as ever. We do not possess a single Zhou administrative text; we can only infer that such texts once existed from the display texts that do survive. The display texts draw upon administrative texts, and they may talk about bureaucracy, but our evidence for administration and bureaucracy remains indirect. Our understanding of the control mechanisms of the Zhou state depends on inferences made with the help of analogues from other script traditions, where actual administrative texts survive in abundance on cuneiform tablets and in hieratic papyri.

Publishing Royal Archives

In an often-cited article, Lothar von Falkenhausen has argued convincingly that some bronze inscriptions of the Western Zhou period quote excerpts from contemporary administrative documents. Like the Shang inscription in [Plate XXI](#), they include a statement that can be termed the “announcement of merit.” These announcements were evidently taken from “records of investiture in which an aristocrat was given some form of administrative or military authority, either by the Zhou king or by another highly placed aristocrat (who often may have been acting upon royal orders). The charge, the ceremony in which it was conferred, and the gifts by which it was made manifest, constitute the main subject matter of the texts.”³¹

The existence of such records is confirmed by the inscription translated in [Text 4.4](#), which describes the written royal mandate being read out during a court audience. It seems evident that the royal house kept the original of the royal order and the nobleman’s lineage kept a copy, both of which would have been written on wooden or bamboo strips. The nobleman consulted his copy in composing the text to be cast in a bronze (where, probably for reasons of space, the royal order might be drastically abbreviated). Falkenhausen argues that Zhou aristocrats inscribed the investiture documents on bronze vessels and bells not because bronze was more durable than wooden or bamboo strips but because the vessels and bells were used in the ancestral cult and hence were suitable for transmitting written messages to the spirits for their “validation, ratification, and sanctification of human events and relationships.” Although we may doubt that the king’s appointment needed to be ratified by the appointee’s ancestors, it seems clear that his ancestors were at least part of the intended audience for his inscription,

and it is reasonable to suppose that placing it in a ritual bronze achieved some sort of sanctification.

Text 4.4. The investiture of Shi Chen as recorded in one of his bronze vessels (middle Western Zhou).

It was the third year, third month, first auspiciousness, *jiayu* day (no. 11); the king was in Shi Lu Gong in Zhou. At dawn, the king approached the grand chamber and assumed position. Supervisor of Horses Gong, accompanying Shi Chen to his right, entered the gate and stood in the center of the courtyard. The king called out to the Chief Document Maker to command Shi Chen with a written document: "Assist Shi Su in administering the people of Yi: those Little Servants, Food Providers, keepers of X, and official dog-keepers; and the people of Zheng: Food Providers and official keeper friends. [I] award [you] red slippers." Chen bowed with his head touching the ground. He dares in response to extol the Son of Heaven's illustrious and beneficent command, herewith making [for] his cultured grandfather, Xingong, [this] sacrificial *ding*-vessel. May Chen for . . . generations, sons' sons and grandsons' grandsons, eternally treasure and use [it]. (JC 2817)

After Li Feng 2008, p. 120.

That Zhou nobles reported their deeds to their ancestors reflects, it seems to me, the operation of a fundamental bureaucratic principle, namely that subordinates report to their superiors. That they did so in writing, and with quotations from administrative documents, reminds us of the report Ramesses III made to his gods in Papyrus Harris I (Text 3.21). In China or anywhere else, it is uncertain how far back in history this sort of written communication up the bureaucratic ladder might go, but given that creating accountability was a function of the earliest writing, it would not be surprising if it went back very far.

On comparative grounds it seems likely that the Zhou nobleman who inscribed a bronze with a record of his investiture and deposited it in his lineage temple intended thereby to display the royal benefaction to a select audience that included not only his ancestors but also whoever had access to the temple. Bronze inscriptions are too small to be read from a distance (Plate XXII), and, as Falkenhausen remarks, they "are usually placed on the bronzes in such a way that they could not conveniently have been read by humans, especially during the time when the objects were in use."³² But they could certainly have been read when the bronzes were not in use for ritual activities. The auspicious words at the end of Text 4.4, a standard formula in middle and late Western Zhou bronze inscriptions, were not a part of the original investiture record but follow the quotation from it. They express a wish that the bronze should be cherished forever, and we can hardly doubt that the sons and grandsons exhorted to cherish it were meant to read its inscription. One motive for casting the inscription was certainly to transfer the record of royal favor from perishable wood or bamboo strips to a medium in which it could be securely transmitted to later generations.

It is commonly held that in the Zhou world an elite person's status was determined by his position within his lineage. However, as in other early states, his status was also measured by his proximity, physically as well as metaphorically, to the king.³³ The

sandal bearer behind King Narmer on the Narmer Palette was surely a high-ranking official despite his seemingly menial task.³⁴ New Kingdom officials sometimes reproduced in the paintings in their tombs the scenes in which they had received royal gifts in life.³⁵ But the elite of other cultures did not always have this pictorial option. As pointed out in [Chapter 2](#), representational art did not begin to figure prominently in early China until about the fifth century B.C. As Egyptian examples show, however, another way for an official to advertise his proximity to the king is to announce it in an inscription. In the “autobiographies” carved in Old Kingdom tomb chapels, we find officials broadcasting that they were “sole companion” of the king.³⁶ The investiture inscription of the New Kingdom official Nebwenenef is very similar to those on Zhou bronzes in detailing the date, the scene of the audience, the king’s speech, and the gift he received in token of the office he was appointed to ([Text 4.5](#)). Should we imagine that in Egypt, as in Western Zhou China, a full record of the official’s investiture had been kept in duplicate, in the archives both of the king and of the official’s family? In both Egypt and China the substance of the record of a prestigious royal connection was “published” by inscribing it on a durable material and locating it in a sacred setting.

Text 4.5. The investiture of Nebwenenef by Ramesses II, as recorded in his tomb chapel.

Year 1, 3rd month of Inundation, when His Majesty sailed north from Thebes, having done the pleasure of Amen-re, ... Mut, ... and Khons ... in the beautiful Festival of Opet. Returning thence ... and landing at Abydos.

The (prospective) High Priest of Amun Nebwenenef was ushered into the presence of His Majesty. Now, he was (then) High Priest of Anhur and of Hathor Lady of Dendera, and local Primate of all Gods in the south from north of Thebes to Thinis in the north (near Abydos).

Then said His Majesty to him, “You are now High Priest of Amun! His treasury and his granary are under your seal. You are chief over his domain, all his foundations are under your authority. The domain of Hathor Lady of Dendera shall now be under the authority of your son [who shall inherit] the functions of your ancestors, the position you have occupied (until now). (I swear) as Re lives for me and loves me, and my Father Amun favours me, I set before (Amun) the (names of) the whole ‘Establishment’ ... (and of) the priests of the god, the great men of Amun’s domain who were in his presence. He was not satisfied with any of them, until I mentioned your name to him. So, serve him well, according as he has desired you! I know that you are efficient; do even more, and then his spirit will favour you, and mine also. He will cause you to abide at the head of his domains, he will grant you old age therein, and he will bring you to port in the sacred soil of his City (at death)...”

Then His Majesty gave him his two gold signet-rings and his electrum staff-of-office on being promoted to be High Priest of Amun, and Superintendent of (his) Treasury, Granary, workforce and all craftsmen in Thebes. A Royal Envoy was dispatched [to announce throughout the land] that the domains of Amun, all his property and all his staff were assigned to his (Nebwenenef’s) authority, by the favour of Amun’s Ruler (Ramesses II), enduring forever!

After Kitchen 1982, pp. 46–7.

At the same time, because royal favor was precarious and uncertain, we may also view the keeping of duplicate copies by the two parties as a way of formalizing a contract, rather like the stone monuments recording land transactions in Mesopotamia and Egypt discussed earlier. Despite some instances of social mobility, offices in the early states were largely hereditary.³⁷ Nevertheless the appointment of important officials was ultimately controlled by the ruler. In the appointment just quoted, Ramesses II ordered that Nebwenenef's son should succeed to his father's offices. What would happen to those offices when Ramesses died? In Western Zhou inscriptions the reasons given for an appointment often include the achievements of the appointee's ancestors: the current king renews an appointment that earlier kings had conferred on the appointee's ancestors because those ancestors had served with distinction.³⁸ If the current king needed reminding, perhaps the nobleman could point to his lineage's bronzes as evidence of what a search in the royal archives should disclose. Seen in this way the investiture inscription acted as a sort of durable license, an entitlement not only to political prestige but also to material profit. The lengthy list of gifts in [Text 4.6](#) underscores the importance of the economic transaction.

Text 4.6. A royal gift list embedded in the *Mao Gong ding* inscription (late Western Zhou).

I confer upon you: a jar of sacrificial wine, and a libation ladle with jade handle; an apron of scarlet, with leaf-green jade pendants; a circlet of jade and a jade "hu" tablet; a chariot with bronze fittings, with a decorated cover on the handrail; a front-rail and breast-trappings for the horses of soft leather, painted scarlet; a canopy of tiger-skin, with a reddish-brown lining; yoke bar bindings and axle couplings of painted leather; bronze jingle bells for the yoke bar; a mainshaft rear-end fitting and brake-fittings, bound with leather and painted gilt; a gilt bow-press and fish-skin quiver; harness for a team of four horses; gilt bridles and girthstraps; a scarlet banner with two bells. I confer upon you these gifts to be used in sacrifice and upon field service. (JC 2841)

After Dobson 1962, p. 219; quoted in Shaughnessy 1997, p. 64.

Falkenhausen suggests that records of investiture can be classified as legal documents "since they established (or reinforced) a bond between an aristocrat and his superior."³⁹ As previously mentioned, however, in the early states it can be difficult to distinguish administrative texts from legal documents, because both can involve careful descriptions of economic matters. Although the detailed gift list in [Text 4.6](#) encourages the suspicion that the text was meant to have a measure of legal force, I feel more confident of the presence of a legal element when I turn to a small number of bronze inscriptions that concern more overt transactions in land, people, and other goods (and hence are closer parallels to the transactions recorded on stone in Mesopotamia and Egypt). The dearth of early administrative and legal documents in China makes these inscriptions difficult to interpret, and almost every scholar who has studied them interprets them differently; the nature of land tenure in the Western Zhou period is especially controversial. But our purpose is only to study the functions of writing, and a general idea of the content of these inscriptions is enough to tell us something about the means by which the Zhou

state controlled land and people. Before we examine the inscriptions, however, a brief outline of early Zhou political history is in order.

Military Colonization

Originally a small polity located in present-day Shaanxi, the Zhou marched east and conquered the Shang dynasty in the latter part of the eleventh century B.C. Zhou expansion did not stop with the capture of Shang's capital city at Anyang. The Zhou royal house adopted the strategy of founding colonies both within and beyond the former Shang territory.⁴⁰ In somewhat the same way that Maya cities were "seeded," fortified settlements all across north China were established within a few generations. The two processes of urbanization differed, though, in that Zhou colonization seems to have been ordered by the Zhou king and led by his relatives, as evidenced by bronze inscriptions (Text 4.7), whereas many Maya cities seem to have been established by factions of the home dynasty split off by intradynastic competition and strife.⁴¹

Text 4.7. *Yi Hou Ze gui* inscription (Early Western Zhou).

It was the fourth month, the *chen* was on *dingwei* (day 44), <the king> inspected the King Wu and King Cheng attack on Shang map, [then] went to inspect the eastern countries map. The king stood in the Yi ancestral temple, facing south. The king commanded Lord Ze of Yu, saying: "Move to be lord at Yi. [I] award *sao*-fragrant wine 1 *you* jar, 1 Shang wine vessel, ... 1 red-lacquered bow and 100 red-lacquered arrows, 10 traveling bows and 1,000 traveling arrows; award land: its acreage 300..., its... 100 and..., its... towns 35, its... 140; award at Yi. King's men... and 7 clans, award 7 earls of Zheng and their retainers 1,050 men, award Yi common men 600 and... (and) 6 men." Lord Ze of Yi extols the king's beneficence, making (for) Father Ding, the Duke of Yu, (this) sacrificial vessel. (JC 4320)

After Shaughnessy 1989, pp. 14–15; see also Li Feng 2008, pp. 238–9.

Another possible difference between the Zhou and the Maya is that the lands the Zhou moved into were occupied already by people who may well have outnumbered the colonists, meaning that the colonization had to be backed up by military force. As pointed out by David Anthony, migration is a patterned human behavior with a discernible structure (Figure 4.2). The structure is more articulate when the migration has a military component, and as Anthony's diagram makes clear, any organized migration needs intelligence about the destination before the population actually moves, information obtained in advance of conquest by scouts or afterward by occupying troops. The appointment inscription given in Text 4.7 records the king's transfer of Lord Ze from his original domain at Yu to a new territory called Yi. Before ordering the move, the king inspected maps, presumably to decide on the details of the orders he would give. Apparently he or his advisers had at hand the information they needed about the land and people of Yi. Because the appointment was made at Yi by the king in person, Yi must

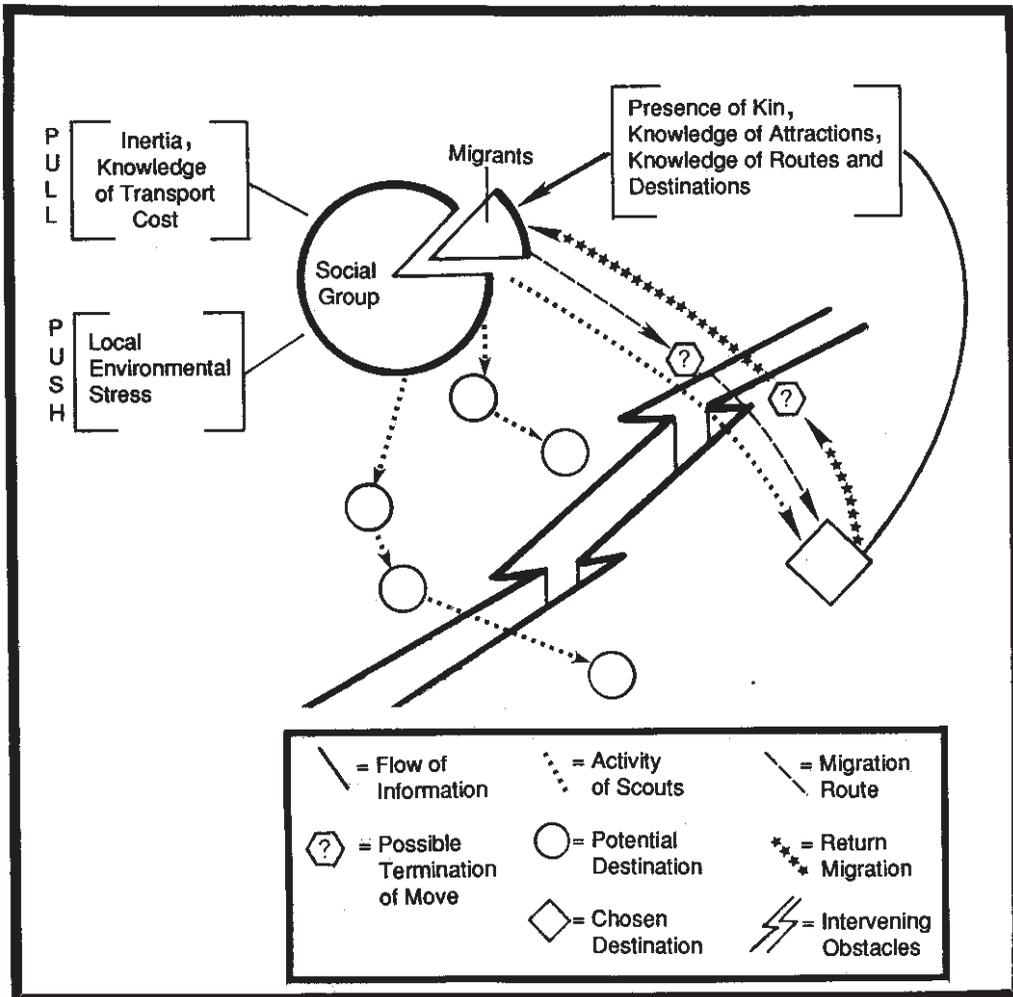


FIGURE 4.2 A patterned behavior: diagram showing elements of migration. Notice the return migration, which has received little attention in archaeology (but see Houston et al. 2003). After Anthony 1990, p. 900, Figure 1.

already have been conquered and surveyed by the Zhou army. If it had not been, how would the king know the area of the land he was awarding, the number of settlements that already existed, and the number of (part of) the local population? Because the king also ordered seven earls and their retainers from another location called Zheng to accompany Lord Ze, he must also have known something about the people, or at least the army, of Zheng. Another famous appointment inscription shows the king similarly informed about the size and classification of the population he orders to move (Text 4.8).

Text 4.8. *Da Yu ding* inscription (early Western Zhou).

In the ninth month, when the King was at Zongzhou. I, Yu, was charged by the King as follows, "Thus speaks the King, Yu! the most glorious King Wen received the Great

Mandate 'Heaven assists'. It remained with King Wu. He inherited the State governed by King Wen. He punished its evil men, took under his protection [the states of] the Four Quarters, and governed their peoples. As to those serving in his administration, in serving wine they would not dare to get drunk, when assisting at the *chai* and *cheng* sacrifices, they would not dare make merry. Therefore, the awesomeness of Heaven hovers over me, [Heaven's] son, and the ever-protecting ancestors take under their protection the [states of the] Four Quarters. We know that Yin lost its Mandate because the feudatories of Yin and Yin's senior officers and princes all became lax through wine-drinking. Therefore, Yin failed in discipline among its officials.

"In my early days, you held an important charge [as the king's tutor perhaps?]. I then was attending my first school, you would not press me, your sovereign, then. Now, having patterned myself on the virtue in government of King Wen and, in emulation of King Wen, giving orders to his senior officials, I am going to command you, Yu, to assist Rong reverently to bring all in consonance with the canon of virtue, be diligent, be constantly sending in [to me] your admonitions. May you enjoy your service and fear the fearfulness of Heaven."

The King said "Oh! I order you, Yu, to model yourself upon your deceased ancestor, the Duke of Nan." The King said "Yu, thus support us by serving even to death in the matter of your military duties. Proceed most carefully with the conducting of criminal suits. Constantly assist me, the Lonely One, to rule over the Four Quarters. As for me, I conform to and model myself upon the Former Kings in accepting [i.e., in taking under my governance] the peoples and their territories.

"I present to you a *you* of sacrificial wine, a tunic, an apron and slippers, a chariot and horses. I present to you the hunting flag of your ancestor, the Duke of Nan. Use this when you hunt. I present to you four noblemen in the service of the States and six hundred and fifty-nine freemen and slaves, ranking from charioteers down to commoners; thirteen noblemen of the Yi in my own service, and one thousand and fifty freemen and slaves. Order them to immediately [also] move from their land. Yu! in this way pay respect to those who are senior to you, do not neglect my commands."

I, Yu, in order to place upon record the grace of the King, accordingly had this precious *ding* made in honour of [my ancestor] the Duke of Nan.

In the King's twenty third year. (JC 2837)

After Dobson 1962, pp. 225–6; penultimate sentence in the fourth paragraph supplied by Li Feng 2006, p. 127.

A land survey and population census of some kind thus seem to have preceded at least some parts of the Zhou military colonization. (Might the survey and census at times simply have been taken over from the conquered polity?) Sadly, we do not know exactly what happened when the Zhou arrived in a new territory. New cities were built, but apart from scanty traces of city walls, archaeology has told us nothing about their layout. According to one celebrated bronze inscription, the decision to build an eastern capital (called Chengzhou, "Victorious Zhou") in conquered territory at present-day Luoyang was made by King Wu, the founder of the Zhou state (Text 4.9).⁴² How might he have planned the city he gave orders to build? Whether the city was planned on

site (as in Egypt) or on blueprints (as in Central Mexico), one practical concern was residences for the incoming population. Did the Zhou simply mark out the space and let people build their own houses? If conquered Shang elites were forcibly resettled in Chengzhou, as transmitted texts maintain, then we might expect the organization of the settlement to reflect the need to keep them under firm control.⁴³ As for the Zhou settlers, inscriptions suggest that they were organized before they arrived. In either case organization is likely to have involved registers of names. A middle Western Zhou inscription mentions registers of troops stationed at Chengzhou.⁴⁴ A transmitted text says that the state had rolls of the palace guards and soldiers.⁴⁵ It would not be surprising if name lists were first used for military purposes, because no institution has more need for discipline and control than the army, and we have indeed seen a Mesopotamian troop census from the Old Babylonian period (Text 3.5). But in Middle Kingdom Egypt we have also seen lists of the names of slaves and runaway laborers (Text 3.13). The Zhou had soldiers as well as, apparently, dependent laborers (Text 4.8), and the conquered Shang elites needed to be watched. We can reasonably suppose that the Zhou state kept name lists for a variety of subgroups of the population.

Text 4.9. *He zun* inscription (Early Western Zhou).

It was when the king first moved (his) residence to Chengzhou and again received King Wu's abundant blessing from heaven. In the fourth month, *bingxu* (day 23), the king addressed the ancestral young princes in the Capital Chamber, saying, "Formerly, with your deceased-fathers, the elders were capable of assisting King Wen. And so King Wen received this great mandate. It was after King Wu had conquered the great city Shang, then (he) respectfully reported to Heaven, saying, 'I shall inhabit this central state (and) from it govern the people.' *Wu hu!* Although you are but young princes without experience, look upon the elders' merit with respect to Heaven, and carry out the commands and reverently make offerings! Help the king make firm his virtue so that Heaven may look favorably upon our indolence." The king completed the address. He [the maker of the vessel] was awarded cowries, thirty strands, and herewith makes for Duke Mo (this) treasured sacrificial vessel. It is the king's fifth ritual cycle. (*JC* 6014)

After Shaughnessy 1997, pp. 77–8.

It is more difficult to envision how the Zhou colonists controlled farmland and the native inhabitants of the countryside. To begin with, we do not know how many of the Zhou colonists were themselves farmers. The inscriptions do not give the impression that the number was large (although here we should be cautious, because the inscriptions undoubtedly condense the original administrative documents). If a certain number of Zhou peasants migrated along with the Zhou elites, where would they have lived? Living in cities would mean commuting to farms outside the city walls, an arrangement we know from Teotihuacan. Alternatively, the Zhou farmers might build themselves villages away from the major colonial centers. Because the migrating farmers would probably have kept their original lineage organizations, their new villages would be

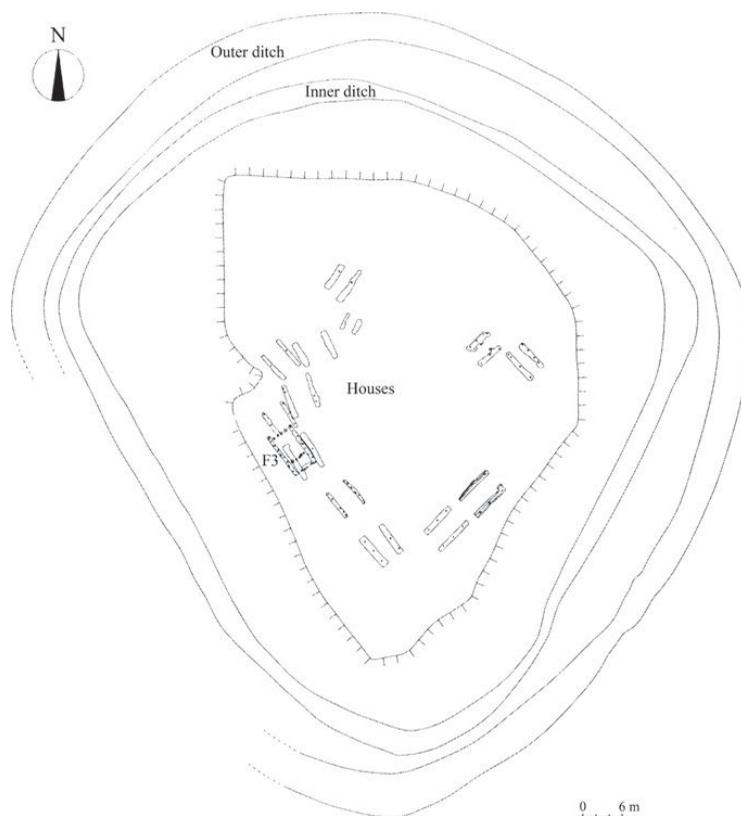


FIGURE 4.3 Enclosure by local initiative: a recently excavated village of Western Zhou date at Anhui Huoqiu surrounded by ditches. A good many Neolithic settlements enclosed by ditches are known. Warring States and Han texts tell us that villages were enclosed with walls (reminding us of the walled workman's village at Deir el-Medina discussed in [Chapter 3](#)), and that the villagers went out together to work in the fields after the door was unlocked in the morning and came back together at the end of the day before the local officials and elders locked the door. This collectivity sounds idealized, but it is possible that many villages in early China were enclosed by walls for safety and that the walls incidentally served the state's urge to control people's movements. Modified after *Zhongguo zhongyao kaogu faxian 2004*, p. 71; for a more detailed map showing the settlement pattern in four phases, see the final report in *Anhui Sheng Wenwu Kaogu Yanjiusuo 2010*, overleaf between p. 404 and p. 405.

organized in the same way. Texts and archaeology strongly suggest that the lineage-based settlement has been a persistent living pattern throughout Chinese history, and we have seen that it is not a uniquely Chinese phenomenon.⁴⁶ Neolithic villages were often protected by ditches, and though few Shang and Zhou villages have been systematically excavated, there is some evidence that protective ditches continued to be dug well into historical times ([Figure 4.3](#)). Such ditches defined the boundaries of the residential space, not of the farmland. As we shall see shortly, the estates of middle and late Western Zhou elites had man-made field boundaries. Might ordinary farmlands have been similarly demarcated? Du Zhengsheng argues that Zhou villages indeed possessed field boundaries in the form of forested land separating the village from the outside world, although we should note that his evidence is drawn mainly from transmitted texts. In his scenario there was plenty of free space, land reclamation was limited, and

buffer zones between villages were left uncultivated.⁴⁷ Without landscape archaeology, this picture is hard to prove or disprove, but it is similar to what we have seen in Central Mexico and the Maya region.

Land Allocation

As to taxes in kind, their existence is still under debate. The debate involves the “well-field system,” a system of land allotment described in a cryptic passage attributed to Mencius (fourth century B.C.). In this system, a square *li* of land is divided into nine squares, resembling the Chinese character *井* (井, “well”). In addition to cultivating eight plots for themselves (called “private fields”), eight families were supposed to cultivate jointly a central plot whose produce went to their lord as his revenue (called the “public field,” i.e., the lord’s domain).⁴⁸ Because the arrangement required the farmers to cultivate the lord’s land before they could work on their own, it amounts to something like the Inka labor tax: the farmers pay in labor rather than in kind. Whether any such system ever existed, and if it did exist how it actually operated, has been hotly disputed by eminent scholars ever since the 1920s, all of them analyzing the same textual materials of the fourth century B.C. and later. To review the debate here would serve little purpose. However, among the many contributions, Frank Leeming’s work deserves mention for its use of a fresh source to develop a provocative hypothesis.⁴⁹

Leeming uses a set of about three hundred topographical maps of parts of northern China made by Japanese agencies in the 1930s and 1940s. The maps are on the scales 1:50,000 and 1:100,000. Close examination of roads and footpaths reveals to Leeming formal rectilinear land layouts that are always oriented north-south and east-west (Figure 4.4). Leeming reasons that, once established, these topographical features are hard to move and that they therefore constitute the skeleton of a land layout of great antiquity. Because it is unlikely that individual land use could have spontaneously produced such regular landscapes over a vast geographical area, and because the state farms described in official histories could not have occupied all the land represented on the maps, Leeming hypothesizes that they are the product of official land allocation schemes. As we will see shortly, such schemes were prescribed in the law codes of the Warring States and Western Han periods, and as Leeming notes, they continued as late as Tang. As we have seen in other early states, large-scale land allocation must to some extent have reshaped the natural landscape, and where the terrain allowed it, a rectilinear layout, ideally legible to land administrators, seems to have been the preferred form. Measuring the dimensions and calculating the areas of typical units on his maps, Leeming finds a close correspondence with state land allocation practice as described in texts of Warring States and later. He then makes the suggestive observation that such “extensive and consistent landscape engineering” is unlikely to “have been possible *ab initio* . . . in countrysides already densely populated and with many centuries of farming history behind them.” When the land surveyors of later states created new landscapes to meet new land laws, they merely converted one system of rectilinear fields into another, and they did so by altering field lengths but leaving widths unchanged.

Hence, according to Leeming, the origin of the landscapes on his maps should be sought in the earliest land allocation schemes. He believes that the well-field system is the best candidate for the earliest scheme; indeed he believes that the strips of land on his maps accord with the method described in a Han text for converting a well-field

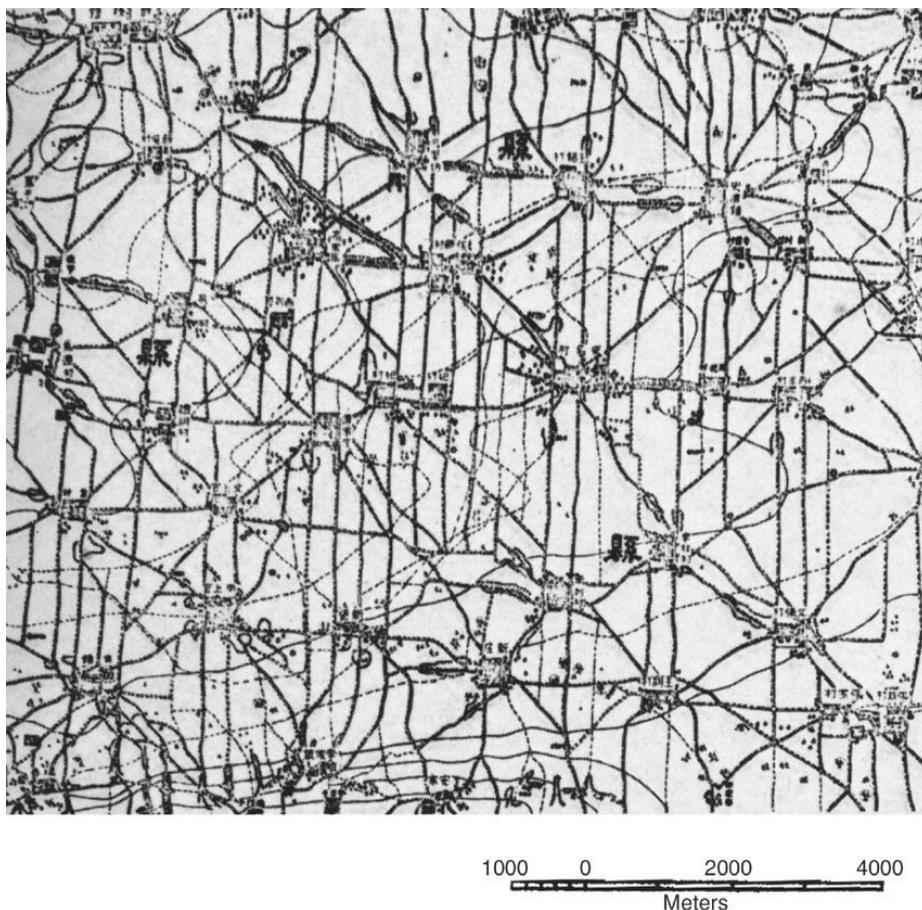


FIGURE 4.4 A legible landscape: north China in the A.D. twentieth century. This topographic map, made during World War II, shows the rectilinear land layouts divided by roads and footpaths in Xingping, Shaanxi province. Central Shaanxi was the heartland of many early and medieval states in China. The layout seen on the map may have originated in much earlier times. After Leeming 1980, Plate V, top.

square into rectangular plots. To make this argument he analyzes the patterns on several maps, showing, for example, how a Qin or Han surveyor ordered to provide a 100-*mu* plot of land to every household did so by converting two preexisting well-field squares into five equal-sized strips for allocation to five households, changing the subdivisions of the well-field squares in one dimension but in the other dimension keeping them as before. On Leeming's map of Xingping county in Shaanxi, "[t]he dominant feature of the layout is extremely clear and consistent strips of width 332 m," and 332 m was the length of the *mu* in the Qin and Han periods (the *mu* was a strip measuring 1 *bu* by 240 *bu*, or 1.38 m by 332 m). In Leeming's words,

This strip width illustrates with singular clarity the opportunities placed in the hands of successive governments by the fact of extensive land layout on the ground – any government wishing to regulate land-holding had only to determine the length of the standard holding along a strip of fixed width, and get it measured out on the ground, and the job was done.

It is suggested that wherever systems of strips occur on the maps, they originated in the opening of the boundaries (*qian mo* [north-south and east-west footpaths]) of the old square *jingtian* [well-field] layouts *in one direction only* – the opening of either the *qian* or the *mo* of the system which Qin suppressed by means of exactly this opening of the boundaries, converting the physical layout of the land from a static liability to a dynamic asset in the hands of the government.⁵⁰

Leeming's argument in favor of the existence of the well-field system in the Western Zhou period has not received much attention.⁵¹ The only way to test it would be by controlled excavation in the areas covered by the maps, along the lines of what Parsons and colleagues have done for the Aztec *chinampas* (Figure 3.22, bottom). Even this would probably not suffice to unravel the long history of changing plot shapes. A site well preserved by a sudden catastrophe, like Cerén in El Salvador, might be more helpful, and archaeologists in Henan have excavated one of late Western or early Eastern Han date, but so far only a small area has been exposed and earlier strata have not been reported.⁵²

Cadasters and Cadastral Maps

Nevertheless, Leeming's study usefully alerts us to the importance in land administration of field boundaries and standardized measures, a point stressed by Du Zhengsheng as well. We cannot doubt that boundaries and measures mattered to Zhou rulers, for bronze inscriptions show that throughout Zhou history one of the ways in which elites acquired land was by grant from the king or from a regional lord.⁵³ The inscription of the *Mao gui* records that Mao received from his lord four units of agricultural land in four different locations.⁵⁴ The character for the land unit is the same *tian* (田) that we have encountered in the oracle bone inscriptions in the sense "field." It seems likely that this unit was defined by a standard measurement of length. By analogy with ethnographic data from groups at a nonstate level in southwest China, one scholar has recently suggested that the unit was a locally established measure tied to the working ability of one adult farmer.⁵⁵

The suggestion is interesting, but the analogy overlooks the fact that by the time the *Mao gui* was cast, Zhou statecraft had a hundred years of development behind it. As James Scott has pointed out, standardization of measurement, especially measurement of cultivated land, is a crucial tool in the state project of simplification: "No effective central monitoring or controlled comparisons were possible without standard, fixed units of measurement."⁵⁶ The Zhou state was by no means so firmly centralized as the Qin empire, but the king and regional lords must still have had some knowledge of the arable land available to them for parceling out to their loyal supporters. When Egyptian kings displayed their pious donations of land on the Palermo Stone, they gave precise measurements and locations (Text 3.8 and Figure 3.6). The inscription of the late Western Zhou *Da Ke ding* records a royal award to Ke of fields located at seven places, which Ke commemorated by casting an enormous bronze (Text 4.10 and Plate XXII). The fields are not specified in units of land, but they may well have been in an original administrative document that the bronze inscription abbreviates.

Text 4.10. Excerpt from *Da Ke ding* inscription (middle Western Zhou).

The king thus said, “Ke! In the past I ordered you to take out and bring in my commands. Now I extend your charge. [I] award you an undyed apron and a dark lined sash. [I] award you fields at Ye, fields at Bei, fields at Jun attached to the Xing family (originally belonging to) the Suo family,⁵⁷ along with their retainers and women. [I] award you fields at Kang, fields at Yan, fields at Puyuan, fields at Hanshan. [I] award you scribes, petty officers, players of flutes, drums and bells. [I] award you the Suo men raised by and attached to Xing, [I] award you the Jing men working in the public fields.⁵⁸ Be diligent day and night, never disobey my commands.” (JC 2836)

My translation. See also Shaughnessy 1999, p. 328, and Falkenhausen 2011, p. 248.

Cadastral survey is important to any land transaction. Starting from middle Western Zhou, in addition to grants of land made to subordinates by the king and the regional lords, we begin to see unmistakable signs of land transactions between members of the elite. In Text 4.10, Ke received from the king land that had previously belonged to the powerful Xing family. Shaughnessy suggests that the king might only be ratifying an essentially private transaction between Ke and the Xing family.⁵⁹ Our next inscription provides somewhat stronger evidence for a transaction of the kind Shaughnessy proposes and for the accompanying acts of surveying land and drawing up cadasters (Text 4.11).

Text 4.11. Fifth Year *Qiu Wei ding* inscription (ca. middle Western Zhou).

It was the first month, first auspiciousness, *gengxu* (day 47); [Qiu] Wei took the *bang*-lord⁶⁰ Li to report to Jingbo, Bo Yifu, Dingbo, Liangbo and Bo Sufu, saying, “Li said, ‘I hold King Gong’s irrigation works at the two Rong rivers northeast of the Zhao Great Chamber,’ [and also] said, ‘I relinquish to you five fields.’”

The officials then interrogated Li, saying: “Did you sell⁶¹ the fields or not?” Li then acceded, saying: “I sold all five fields.” Jingbo, Bo Yifu, Dingbo, Liangbo and Bo Sufu then reached a verdict, making Li swear an oath. Then [they] commanded the Three Supervisors, Supervisor of Land Yiren Fu, Supervisor of Horse Shanren Bang and Supervisor of Work Fu Ju, and Interior Scribe’s friend Si Zou to lead and pace off Qiu Wei’s four Li fields, and then to relinquish domicile at his *yi*-settlement⁶²: his northern boundary as far as Li fields; his eastern boundary as far as San fields; his southern boundary [extending] as far as San fields and Zhengfu fields; and his western boundary as far as Li fields.

Bang-lord Li went to give Qiu Wei the fields. Li’s younger son Su, Li’s supervisors Shen Ji, Qing Gui, Bin Biao, Xingren Gan, Jingren Chang Yi, and Wei’s young son Zhu Qi feasted me. Wei herewith makes [for] my cultured deceased-father [this] treasured *ding*-cauldron; may Wei for 10,000 years eternally treasure and use (it).

It is the king’s fifth ritual-cycle. (JC 2832)

After Shaughnessy 1999, p. 327.

In this inscription, three officers, together with the “Interior Scribe’s friend,” are ordered to delineate the plaintiff’s fields. The description of a field’s boundaries by the naming of the adjacent fields is telling evidence that the borders between the lands of different landowners were visibly marked. We have seen similar descriptions inscribed on ancient *kudurru* from Mesopotamia (Text 3.10). A list of such descriptions would constitute a written land register, but the *Fifth Year Qiu Wei ding* inscription does not say that validating the transaction required entering it in an official register. The inscription does list witnesses, feasting, and an oath, all of which are common features of transactions in Mesopotamia.⁶³ The inscription in Text 4.12 reveals that the Zhou had not only written cadasters but also cadastral maps.

Text 4.12. *San Shi pan/Ze Ren pan* inscription (middle Western Zhou).

Because Ze encroached upon San’s *yi*-settlements, therefore (Ze) approached San using fields. Surveying: (start) from the Xian (River and) cross (it). Moving southward arriving at the Great Lake, making the first boundary marker; moving upwards, second boundary marker. Arriving at the Peripheral Willows again cross the Xian (River and) go up. Here at X Beauty move westward: mark a boundary at Bo City’s Birchleaf Pear Trees; mark a boundary at Fodder Lane; mark a boundary at the inside of Fodder Road. (Go) up Fodder (Road?), (and) ascend to the Expansive Springs: mark boundaries (at) Zhe Bank, Beautiful Hillock, and Firm Bank; mark a boundary at Dong Road; mark a boundary at Plains Road; mark a boundary at Zhou Road. Moving eastward mark a boundary to the right of the eastern border of Bo. Returning, mark a boundary at Li Road. Moving southward mark a boundary at Gu (?) Lane and Road. Moving westward, arrive at Wild Swan Tumulus. Surveying the fields of the settlement of Jing: from Palm (?) Tree Road (turn) left. Arriving at Xing *yi*-settlement’s Boundary Road, move eastward; one boundary marker. Returning, move westward; one boundary marker. Go up the ridge; three boundary markers. Descending, move southward (and) mark a boundary at Similitude Road. Go up Prefectural Ridge, ascend the bank, descend (at) Yu; two boundary markers.

Those officials of the Ze people who have surveyed the land: Field Masters of Mei (named) Xian Zu, Wei Wu Fu, (and) Xigong Xiang; People of Dou (named) Yu and Kao; Woodskeeper Zhen; the Shi Shi; the Chief Inspector; Lesser Gate Person (named) Yao; People of Yuan (named) Yu and Ren; the Supervisors of Works of Huai (named) Hu Xiao, Yue, (and) Feng Fu; the Supervisor of the People of Hong (named) Xing Kao. In all (there were) fifteen persons. Those [from San] who have verified and surveyed the land transferred by Ze: Supervisor of Lands (named) Ni Yin; Supervisor of Horses (named) Dong Zui; Supervisor of Works of the Kuang People (named) Lord Jing; Minister De Fu; the Xiao Zi of the San People; the Field Masters of Mei (named) Rong Wei Fu (and) Jiao X Fu; Supervisor of Xiang (named) X; X (and) You Cong Li of Zhou City. In all the supervisors of San (numbered) ten people. It was the king’s ninth month, the celestial markpoint resided at *yimao* (day 52). Ze caused Xian Zu (and) X Lü (each) to swear an oath saying: “We have paid over to the San Family agricultural implements. If we overturn [the agreement], having the fact of plotting against the San-lineage, then fine us one thousand *guan*, publicly denouncing us. (We hereby

transmit and part with them (i.e., the agricultural implements).” Xian Zu and X Lü then swore the oath. (Ze) then caused Xigong Xiang and Wu Fu (each) to swear an oath saying, “We have already paid over to the San Family marshy fields and farming fields. I had violation. (If we) overturn (this agreement), (then) fine (us) one thousand *yuan*.” Xigong Xiang (and) Wu Fu then swore the oath. They (i.e., the San Family (?)) made a map (of the newly bounded fields), in King of Ze’s preserve in the Eastern Hall of the New Temple at Dou.

Their (i.e., San’s) Minor Scribe in Charge of Contracts witnesses (it). (Signed,) Zhong Nong. (JC 10176)

Adapted from Skosey 1996, Vol. 3, Appendix B, pp. 387–92. Modification based on Li Feng 2011, pp. 289–90.

There are many uncertainties in the interpretation of this inscription; even the identity of the vessel’s owner is debated. It is clear, however, that the inscription records a treaty demarcating the boundaries between two states – San and Ze – that were probably located in present-day Shaanxi Baoji and probably under the Zhou king’s overlordship. The details of setting up boundary markers are comparable to the ones recorded in Babylonian *kudurru* commemorating royal grants of land (Text 3.11). But the Chinese text has the added political significance that it records the boundaries between two polities. It is a treaty, and the map that accompanied it may well have had for the San family a symbolic meaning as the embodiment of their state. This is a function of cartography that historians of modern states have been unwilling to recognize in the ancient world. Michael Biggs, for example, arguing that “the abstraction, objectification, and differentiation” of cartographic maps “are characteristically modern,” writes as follows:

The formation of the modern state depicted on the map was constituted in part through cartography – as a store of knowledge reflecting surveys that rulers sponsored to penetrate the ground over which they ruled; as a spatial form modeled on the map’s linear boundary and homogeneous space; and, in the imagination, as political authority symbolized by territory and the earth’s surface comprehended as a composite of states. By the beginning of the nineteenth century, rulership and ground had become fused in a peculiarly modern form – the territorial state.⁶⁴

This is part of a larger divide between historians of modern and ancient states that I have commented on in the Introduction. For the moment suffice it to say that in early China, cartographic maps can be traced back at least as far as early Western Zhou (Text 4.7). By middle or late Western Zhou we find inscriptions that mention a room in the royal palace called the Map Chamber.⁶⁵ Western Zhou maps may not have been explicitly drawn to scale, but the fact that Zhou maps would not meet our technical standards does not make them any less “a store of knowledge reflecting surveys that rulers sponsored to penetrate the ground over which they ruled.” Although the San and Ze polities may have been too small to qualify as states, in setting up boundary markers, compiling land registers, and drawing maps they anticipated the institutionalization of these practices in the territorial states that formed during the Warring States period (475–221 B.C.).

We now jump over a few hundred years to that period, omitting the Spring and Autumn period (770–476 B.C.), for which the textual information regarding administrative use of writing is very scanty.

WARRING STATES, QIN, AND HAN: WARFARE, WALLS, AND MAPS

The Warring States world had seven major players, with a number of small buffer states sandwiched between them (Figure 4.5). The traditional name for the period recognizes it as a time of endemic warfare.⁶⁶ The wars were unprecedented in duration and in the sizes of the armies and the land areas they operated over. To meet the demands of their military budgets, states carried out a variety of administrative reforms that relied heavily on writing for the control of people and land. Let us begin with the control of land.

Walling the Border

Warfare entails defense. A common strategy of the warring states was to build chains of forts at strategic passes to control the passage of armies. We have seen such forts in Egypt and possibly in the Maya region. What sets the Chinese defense system apart is the eventual creation of continuous walls linking the forts (Figure 4.5). The walls were built along rivers and up mountainsides to reinforce the natural barriers. They were constructed by essentially the same pounded-earth technique that we have encountered in the Erligang city wall at Zhengzhou (Figure 2.1). Walls mark boundaries both physically and psychologically. The Warring States defensive walls became the de facto political boundaries between competing states. They were seen both by the soldiers who garrisoned and patrolled them and by the people who sought to pass through them – armies friendly and hostile, diplomats, and merchants. However, none of these viewers saw more than a tiny section of a state’s boundaries. The state as a political entity enclosed by walls could not be comprehended in its entirety until it was abstracted onto a flat map.⁶⁷

The *Zhou li*, or more properly *Zhou guan*, “Offices of Zhou,” a text that might go back to the fourth century B.C. or even earlier, is a list of offices and job descriptions that purports to encapsulate the Western Zhou bureaucracy. The list includes a military officer called *liang ren* (“measurer” or “surveyor”), whose responsibilities included staking out and making written registers of city walls, markets, roads, ditches, camps, and so on. Another officer, called *si xian*, had a collection of topographic maps and was in charge of the state’s strategic passes. Another, called *zhang jiang*, was in charge of the borders; his job description is lost, but later texts define it as delineating frontiers.⁶⁸ Compiled perhaps after the end of Western Zhou, the *Zhou li* is evidently an idealizing text meant to provide a model of government hallowed by its ascription to a golden age in the past, but the names of some of the offices it mentions do occur in Western Zhou bronze inscriptions (e.g., the title Qiu in Text 4.11). Like the list of professions that appeared very early in Mesopotamia, a list of Western Zhou (or even older?) offices could well have been transmitted in scribal schools. Governments of the Warring States period must have kept up-to-date lists and perhaps also job descriptions that could have provided further raw materials

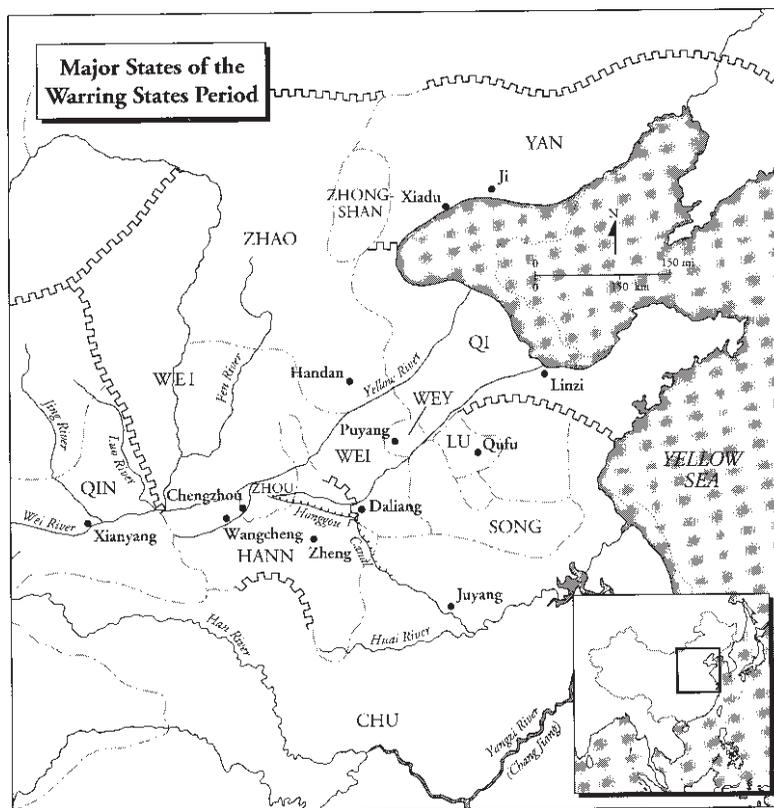


FIGURE 4.5 State walls and the image of the state: map showing major states of the Warring States period, with a few boundary walls marked. The southernmost wall, the one below the word “HANN,” was built by the Chu state. After Lewis 1999a, p. 594, map 9.1. On the symbolism of walls in comparative perspective, see a special issue of *Cambridge Archaeological Journal* titled “Were Cities Built as Images?” (*CAJ* 10.2, 2000).

for the *Zhou li*'s compilers.⁶⁹ If we take the *Zhou li* to reflect Warring States practice, then we can infer that military maps depicting a state's topographical features were systematically made and collected by state agencies, a point hinted at in other late Warring States texts as well. In one of them, *Han Feizi*, maps are equated with the actual land: “if (we) present the maps (to the Qin state to pledge subservience), (our land) will be reduced.”⁷⁰

Topographical Maps

We may gain some idea of the use of Warring States topographical maps from a set of seven maps made in the powerful Qin state shortly before the Qin unification in 221 B.C.⁷¹ The maps were found in a tomb in northwest China that probably belonged to a military commander or a local administrator. They were drawn in black ink on four small pieces of wood (Figures 4.6 and 4.7). Map 1 covers an area of about 68 km by 107 km that can be located on a modern map. The other six maps are overlapping details of the same area. The maps are oriented with north at the top, as indicated by the character *shang* (上, “up”), written at the bottom of map 2 (and pointing upward a bit like

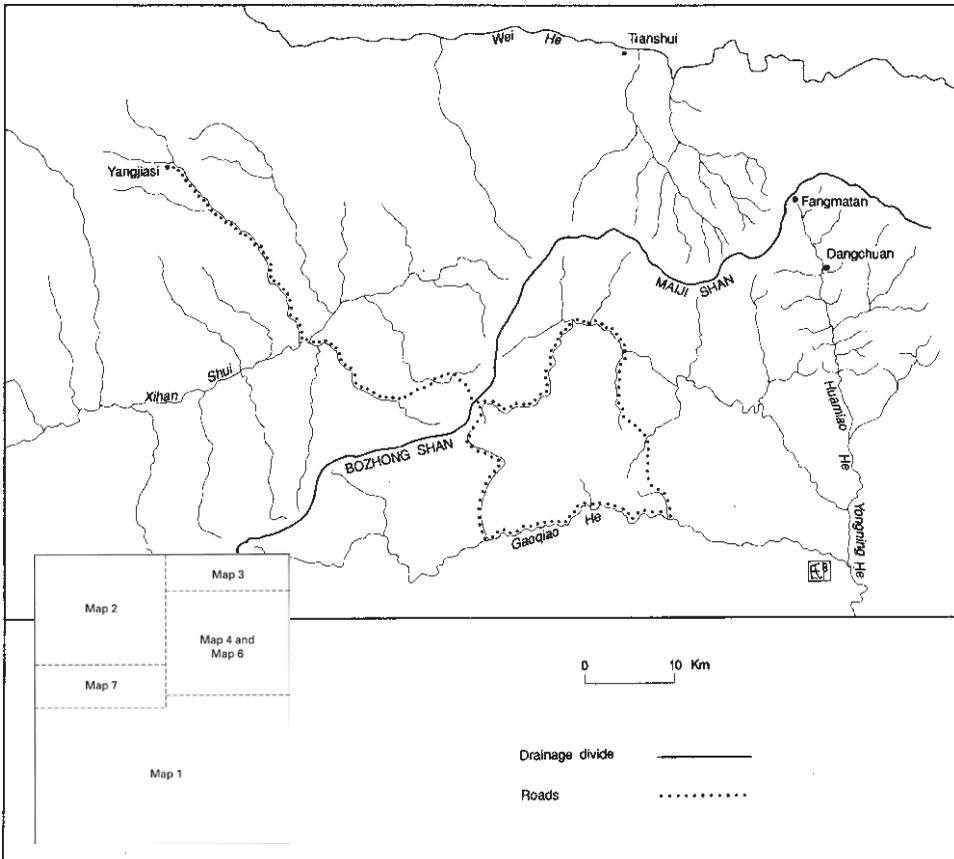
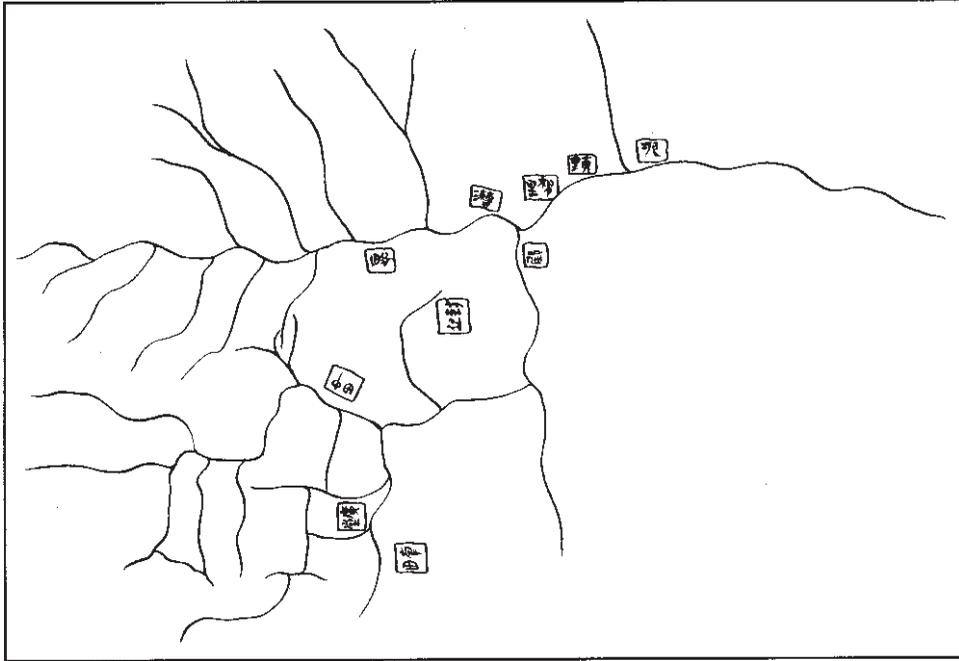


FIGURE 4.6 A set of seven maps made in the state of Qin. *Top*, the first map from the set (Figure 4.7 shows the second and the fourth maps). *Bottom*, a modern map indicating the area covered by the Qin maps. The inset shows the first Qin map in relation to the other six maps. Modified after Hsu 1993, pp. 90–2, Figures 1, 3, and 4.

the compass arrow on a modern map). In addition to written characters the map maker used several symbols. A place name within a square denotes an important settlement; for lesser ones, only the name appears. There is a passlike symbol with the character for “pass” (map 2, top right), and a pavilion-like symbol that probably refers to a county seat (map 2). Lines for rivers, roads, and drainage divides are not easy to tell apart, although in the center of map 4 we can recognize a road (a rather straight line) and a river (a meandering line). Important geographic features are located fairly accurately. The overall quality of the maps is impressive and suggests they were made by surveying or at least checking in the field.

Although the marking of passes suggests a military function for these maps, most of the sixty-six place names seem to have been regular settlements in the local administrative district, and on maps 3, 4, and 6, the map maker noted in writing the kinds and locations of timber to be found in the local forests. On map 4, distances to the timber sources are noted. The inclusion of this administrative and economic information might suggest that it was not military concerns alone that drove the making of maps and the delineation of boundaries within and between states. But it might be more accurate to say that in an era of constant warfare, administration was geared to military needs. Broadly speaking, the increasing scale of warfare demanded universal conscription and an economy dedicated to the war machine.⁷² The key to success was to mobilize the whole population for military and economic ends. In other early states we have encountered the policy of concentrating the population in tightly controlled state spaces. The warring states adopted similar strategies but on a much more ambitious scale. The “tightly controlled state space” became the entire territory enclosed by guarded walls. Hence we should regard the walls as not merely defending but also enclosing. In a study of almanacs excavated from a pre-unification Qin tomb, Yuri Pines links boundary walls with the choosing of auspicious days and the making of offerings before travel. He argues that walls

changed not only the physical but also the mental landscape. The territory beyond the walls became dangerous *terra incognita*; and for the authors of the Qin almanacs departure from the native state was considered to be a most inauspicious event. A special exorcist ritual had to be performed upon leaving the state, similar to the ritual performed upon leaving one’s native settlement. This ritual identity between the state and a native settlement indicates that an affiliation to Qin began replacing the parochial identities of the earlier age.⁷³

The control of people thus relied on psychology as well as on the state apparatus, but the apparatus was formidable. Important parts of it were the census and land allotment. These are discussed shortly, but first something must be said about the use of maps to keep watch on the population and the establishment of forts to curb its mobility. On the Qin maps the settlements appear only as place names. On a set of three early Han maps from Mawangdui Tomb No. 3 (168 B.C.), population information was recorded as well.⁷⁴ One of them is a map of an area in present-day Hunan province (Figure 4.8a). It is the earliest extant map that uses colors to differentiate features and indicate their relative importance, using red for most military features, light blue for

bodies of water, and black for everything else. It also uses more symbols than the Qin maps (Figure 4.8b). All except circles (small civilian settlements) and squares (towns) denote topographical or military features. There are forty-eight settlements dispersed outside the towns and the fortified military post. The notes next to some of them give distances to other places, the number of households (from 12 to 108 households per settlement), and then the remark “presently no inhabitants” or “will not return” or “incorporated into such-and-such settlement.” It seems that by the time the map was made, most of the settlements were uninhabited. Their people had probably been relocated to other regions. Like the Inka empire, the Han empire employed massive relocations of populations to secure its rule.⁷⁵ The Mawangdui map gives us a glimpse into the actual management of such operations, showing the kind of detailed information about settlement locations and populations that the state needed in order to carry out large-scale relocations. One wonders how much military force was involved. In any event, by the early Han period the state seems to have been using detailed maps to organize (or prevent) movements of its people, and the practice might well be older, a part of the Han state’s administrative debt to Warring States and Qin. The frequent relocation of state capitals during the Warring States period is well documented in texts and archaeology.⁷⁶

Large maps showing the whole of the Qin or Han empire could not have been made on wood, as were the seven Qin maps, but they could certainly have been made on silk, as were the Mawangdui maps. Pieces of silk could be sewn together to make a sheet as large as desired. On such a sheet, just as the six overlapping Qin maps could have been combined to produce the seventh, the imperial map makers could have produced a map of the Qin or Han empire by combining information from separate, smaller maps of the territories it possessed. In the Han historian Sima Qian’s famous account of the Yan state’s attempt to assassinate the future First Emperor of Qin, the assassin gained access to the royal presence by offering to surrender part of Yan’s territory: he made a formal presentation of the corresponding population register and map. His dagger, concealed within the (silk?) map, was exposed when the king unwrapped the map. Although Sima Qian’s story may be fiction, Warring States texts confirm the presentation of maps as a gesture of subservience, as we have seen.⁷⁷ Maps were tokens of territory ruled; the ruler’s viewing of them may well have been a court ceremony. As the expanding Qin state acquired territory, the map collection of the future First Emperor must have grown apace, and the curators of his collection may well have been constantly updating and enlarging a comprehensive map of his possessions. To imagine the satisfaction the conqueror derived from contemplating his map, we might recall the scene in Chaplin’s *The Great Dictator*, in which Adenoid Hynkel dances with an inflated globe.

Population Movement

The state moved people against their will; it also sought to control their voluntary movements. Travelers had to pass forts located at strategic points such as ferries and mountain passes. The control of such points must have involved documents comparable to the Semna dispatches. Bamboo strips found in an early Western Han tomb in Hubei province contain the Han ordinances on fords and passes (Text 4.13).

Distance;
incorporated into
such-and-such settle-
ment

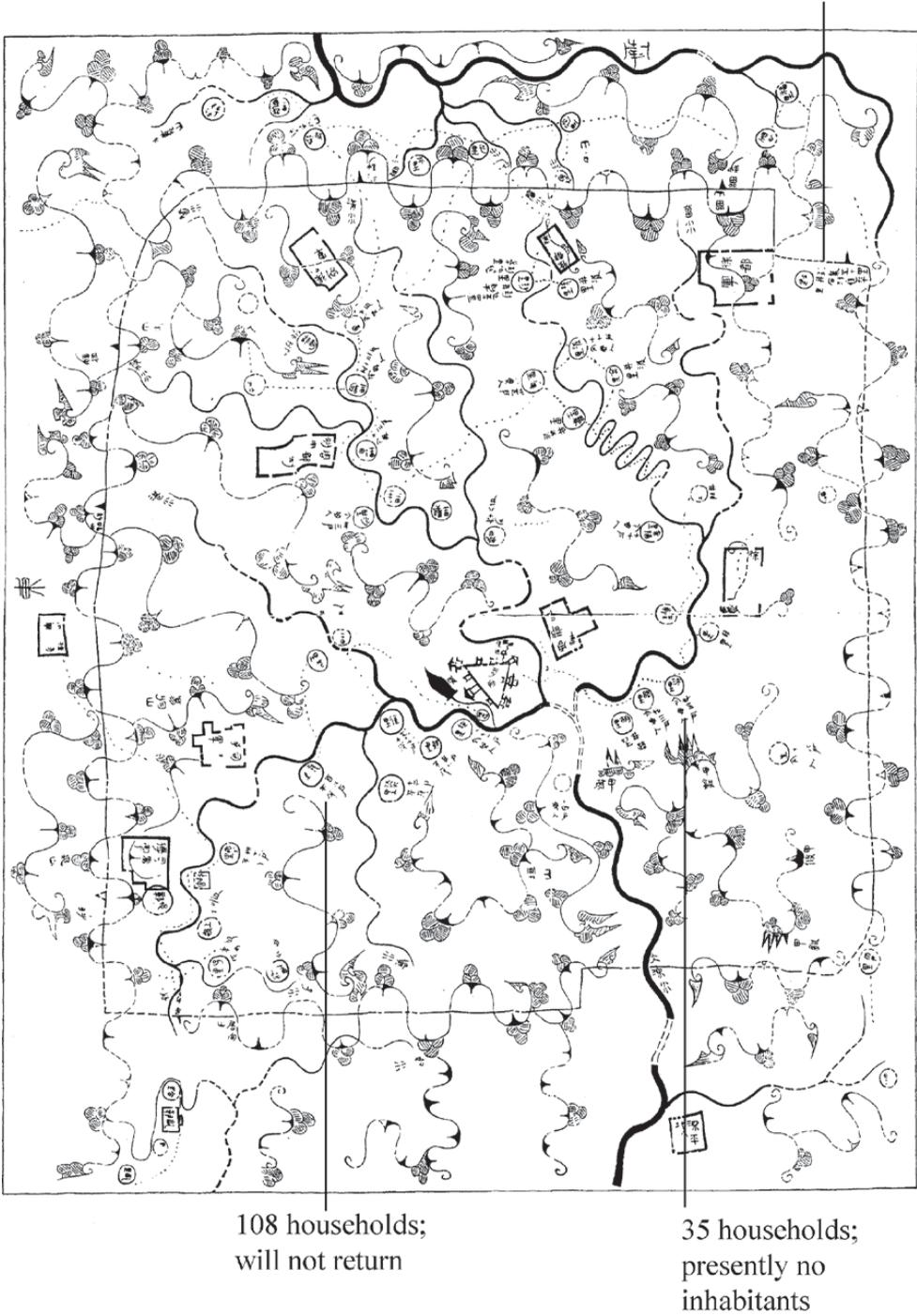


FIGURE 4.8a Military map from Mawangdui Tomb No. 3 (168 B.C.). After Hunan Sheng Bowuguan and Hunan Sheng Wenwu Kaogu Yanjiusuo 2004, p. 100, Figure 30.

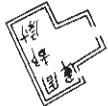
Symbol	Designee	No. Shown on Map	Remarks
Character	letter of direction	2	The characters east and south are printed on the left edge and the top of the map respectively. There is no fixed orientation for the lettering on this map.
	streams	20	The symbol is in blue-green; the width increases downstream.
Character	stream name	14	Most names are located at the origins of the streams and point downstream.
	mountain ranges		The curved design may signify the Chinese character for mountain. The small cloverleaf and triangular features are probably decorative.
Character	mountain or peak name	9	
	army installation	9	The double-outline symbol is in black and red; enclosed are the name and rank of the commander. The symbol size and shape are not uniform; the smallest one was drawn with a single outline. It is not clear if the size variation is related to military significance.
	headquarters	1	The double-outline triangle is in black and red; so are the watch towers and archery towers around it. There is a small watch tower south of the headquarters.
	defense region border and watch towers (feng)	7	Along the border (in red) there are seven red triangular symbols; six are named. One Chinese character for the name of the watch towers (feng) has to do with military communication.
	man-made lake	1	The lake, which is located next to the headquarters, is in a color close to blue-green; the embankment is in red.
	military storage or service depôt (chia)	4	These depôts are located between the headquarters and a large settlement, Shen-ping, to the north.
	forts or barricades (chang)	3	
	roads		Red dotted lines
	settlements	48	Settlements are termed li, pu, ch'eng, and others. All but one are named. Symbols vary from black and red double-outline, to red single-outline, to black single-outline.
		2	

FIGURE 4.8b Symbols and their designees on the Mawangdui military map. After Hsu 1978, p. 53, Table 3.

Text 4.13. Excerpt from the Han Ordinances on Fords and Passes.

The Censor-in-chief says: “As to those who go beyond the frontier and through the passes illegally, a final decision has not been [rendered]. [The Censor-in-chief] requests that whoever enters and exits the fords and passes at the frontiers illegally be tattooed and made to build walls [for men] and pound grain [for women]; that whoever passes the frontiers illegally [be sentenced to] amputation of the left foot and made to build walls; and that those officers and men in charge, if they do not catch them, [be sentenced to] redeemable shaving off of the beard.

For the Prefect, Assistant and the County Clerks the fine shall be 4 ounces of gold. Those who in full knowledge of the facts yet enter or exit [the frontiers and passes], and who lend or give another person a tally or passport so as to permit him with this to enter or exit illegally, should share the same crime. If it is not the case that what they made □ was □ but have on their own responsibility made passports to enter and exit the fords and passes, (*lacuna*) sentence them according to the Ordinance on Passports and the Ordinance on Illegal Trespassing and where the passports were made and the counties and towns that (transmit) the passports to the frontiers as well as the Commandants in Charge of Preparations for the Frontier, the Officials at the Passes, the subordinates in those Offices, the army officers and men guarding the frontiers ... (13 graphs, most indecipherable) ...

... let those who are forwarding documents to post stations on the frontiers [and] to the gates and guard-posts be able to enter and exit using tallies.”

- The (imperial) decision stated: “Approved.” (*ZJS*, p. 205, strips 488–91)

After Ōba 2001, pp. 122–3, no. 1.

The determination of the Han state to control the passage of travelers at key points was not confined to the frontiers. Entry to the metropolitan area around the capital city at Chang’an was subject to the same rigorous control.⁷⁸ However, actual examples of the passports required at the fords and passes have survived only in the arid northwest frontier region. We do not have copies of the Ordinance on Passports mentioned in [Text 4.13](#), but surviving passports show that their manufacture was fairly standardized and surprisingly “modern,” although the exact procedures by which they were issued and checked remain unclear ([Text 4.14a–b](#)).

Text 4.14a. A possible title page on the obverse side of a Han passport.

Six-inch passport, with indentation, for use in inward and outward passage between the Jin Pass and Juyan county, dated on *jiachen* [day 41], in the intercalary month of the seventh year of Shiyuan [80 B.C.]; series 1 to 1000, left-hand part to be retained at the office, right-hand part to be forwarded to the Jin pass. The two parts are to be fitted together for the procedure to be completed. No. 8.

After Loewe 1967, Vol. 1, pp. 112–13, no. 65.7.

Text 4.14b. A possible identity page on the reverse side of a Han passport.

Passport of Zhang Pengzu, officer commanding Tunhu section, Tuotuo [company], dated on *jiyou* [day 46], first month, fourth year of Yongguang [4 March 40 B.C.]

..., wife, adult, of Wansui *li*, Zhaowu [county], age 42

Fu, son, adult, age 19 years

Guangzong, son, non-adult, age 12 years

Nüzü, daughter, non-adult, age 9 years

Nanlai, secondary spouse, age 15 years

All with black colouring

After Loewe 1967, Vol. 1, pp. 112–13, no. 29.2.

Text 4.14c. A Han government instruction on “describing individuals specified by decree for arrest.”

In cases of desertion by officials, conscripts, civilians or officers of the colonies, a full report is to be submitted, listing the commandery, county, and ward of the man; his given name, surname, age, height, colouring; the clothing that he was wearing, and the equipment and baggage that he carried; the date of desertion, and the number of men involved. These details are to be reported ...

After Loewe 1967, Vol. 1, p. 68.

Fords and passes were closely guarded in the Warring States period as well. The statutes of the Qin state concerning food rations of passport holders (Text 4.27b) confirm that passports and tallies similar to those prescribed in the Han ordinances were used earlier, in Warring States times, but so far no wooden examples have been found. What we do have are tallies made of bronze that imitate the wooden and bamboo ones. The best examples are the spectacular tallies issued by the Chu state to Lord E of Qi in 323 B.C. (Text 4.15 and Plate XXIII).⁷⁹ Five tallies survive, each imitating the shape of a split-bamboo tablet, reproducing even the joint in the bamboo. Their inscriptions are cast and inlaid with gold. Two of the extant tallies bear the same inscription (Text 4.15a); evidently these two come from a set of five, all with the same inscription, that fitted together to form a complete bamboo cylinder. The inscription records the Chu king’s grant to Lord E of the privilege of conducting a toll-free trade expedition by boat. The other three extant tallies, all inscribed with Text 4.15b, come from another set of five that fitted together to form another cylinder. On this set the inscription concerns an expedition by wagon.

Text 4.15a. Lord E of Qi boat tally inscription, 323 B.C.

In the year when the Grand Minister of War Shao Yang had defeated the armies of Jin at Xiangling, in the Xiayi month, day *yi hai*, when the king dwelled in the pleasure

palace in suburban Ying, the Grand Intendant of Works Sui took a royal order and commanded the Jiyin official Dao X, the Zhiyin official Ni, and the Zhiling official Qi to cast [these] metal tallies for E Jun Qi's treasury. [They are valid for] fifty *kua* (?), one *kua* (?) being made up of three boats combined, and they are to be returned once a year.

[Depart] from the market at E, go downstream on the Yu River, go upstream on the Han River, stop at Yun, stop at Xunyang; go downstream on the Han River, stop at Xiang (?), go downstream on the Xia River, enter the Yun River; go downstream on the Jiang (i.e., the Yangzi River), stop at Pengze, stop at Songyang, enter the Lujiang River, stop at Yuanling; go upstream on the Jiang, enter the Xiang River, stop at Shi (?), stop at Taoyang, enter the Lei River, stop at Chen, enter the Zi, Yuan, Li, and You Rivers; go upstream on the Jiang, stop at Muguan, stop at Ying. When they show their metal tallies, they will not be assessed tariff, [though] they will not be lodged, equipped (?), or fed. When they do not show their metal tallies, they will be assessed tariff. If they transport horses, oxen, and sheep in and out of the tariff-collecting stations, then they will be assessed tariff at the Great Treasury, but not at the tariff-collecting stations. (JC 12113)

Text 4.15b. Lord E of Qi wagon tally inscription, 323 B.C.

In the year when the Grand Minister of War Shao Yang had defeated the armies of Jin at Xiangling, in the Xiayi month, day *yi hai*, when the king dwelled in the pleasure palace in suburban Ying, the Grand Intendant of Works Sui took a royal order and commanded the Jiyin official Dao Hai (?), the Zhiyin official Ni, and the Zhiling official Qi to cast [these] metal tallies for E Jun Qi's treasury. [They are valid for] fifty wagons, and they are to be returned once a year.

Do not transport metal, leather, or bamboo-shafted arrows. When [using] horses, buffaloes, or oxen, add up ten as the equivalent of one wagon; when [using] carrying-pole runners, add up twenty carrying-pole loads as the equivalent of one wagon, and subtract these [equivalents] from the total of fifty wagons.

[Depart] from the market at E, stop at Tangqiu, stop at Fangcheng, stop at Xianghe, stop at Youfen, stop at Fanyang, stop at Gaoqiu, stop at Xiagai, stop at Juchao, stop at Ying.

When they show their metal tallies, they will not be assessed tariff, [though] they will not be lodged, equipped [?], or fed. When they do not show their metal tallies, they will be assessed tariff. (JC 12110-2)

After Falkenhausen 2005, pp. 104-5.

Like the Babylonian *kudurru* whose inscription is translated in [Text 3.11](#), the Chu tallies were confirmation of a royal grant. They were Lord E's proof that he had received a tax exemption.⁸⁰ Comparing them with Western Zhou bronze inscriptions, Falkenhausen suggests that the state archives would have kept the original records of the grant written on bamboo. He suggests also that their language shows significant continuities with the ritual

language of the bronze inscriptions, and from this he deduces that the bronze tallies had a religious significance and that they reflect the ritual nature of government activity.⁸¹

His first suggestion seems persuasive. How persuasive his other arguments seem will depend on whether one shares his conviction that the origin and early development of writing in China took place chiefly in the sphere of ritual and religion. To an observer inclined to see administration as the most likely arena for the emergence of Chinese writing, an alternative reading of the tallies suggests itself. In Mesopotamia, Egypt, and the Maya cities, and in Shang and Zhou China as well, we have encountered display texts whose content was in part, if not entirely, economic or administrative. When we read Lord E's tallies and see a year formula, a list of officials, royal orders, and a specification of trading routes detailed enough to have been copied off a map, it takes some imagination to think of ritual. The tallies bear a royal decree concerning a trading expedition, written in an elegant hand and executed in expensive materials (Plate XXIII). Egyptian monuments of the same character are not difficult to find. In New Kingdom Egypt, a flotilla of ships working for the temple of Menmaatre set off each year from Nubia downstream to Egypt. The shipment included not only the year's harvest from the temple's Nubian landholdings but also exotic goods purchased through barter by traders employed by the temple. To enter Egypt the flotilla had to pass the second cataract fortresses at Semna and other points (Figures 3.38, 3.39). One such point must have been near Nauri, where King Seti I set up a decree to protect the shipment from avaricious local officials (Text 4.16).⁸²

Text 4.16. Excerpt from the Nauri Decree of Seti I.

Likewise His Majesty ordered the setting up of regulations for the fleets of tribute of Kush, for the temple of Menmaatre, the Heart is Content in Abydos: so as not to allow any superintendent of fortresses, who shall be in charge of the fort of Seti I, beloved of Ptah, which is in Sekhmet (?), to take anything from them, of gold, of pelts, of [all the] tribute of the fort, of anything belonging to a sailor in an arbitrary manner forever and ever.

Likewise, so as not [to allow the taking] of any sailor of the barge of the tribute of the temple of Menmaatre, the Heart is Content in Abydos, so that he is made [to do business] upon another road.

Likewise, so as not to allow any Viceroy, any troop commander or any overseer of Nubians of the land of Kush to meddle with a boat of the temple of Menmaatre, the Heart [is Content in Abydos], together with their crews.

As for any superintendent of fortresses or any scribe of the fort or any agent of the [fort, who] shall board a boat of the temple of Menmaatre, the Heart is Content in Abydos, and shall steal gold [...], leopard skins, the skins of *hwt/šwt*, giraffe's tails, giraffe's hides, ochre, [...], [her]bs and everything of Kush, which has been brought as tribute for the temple of Menmaatre, the Heart is Content in Abydos – [Punishment] shall be [done to him] by [beating] him with 100 blows, and by exacting the goods from him as a penalty for the temple of Menmaatre, the Heart is Content in Abydos, at eighty to one.

After Davies 1997, p. 301.

The Nauri decree and the Chu tallies are display texts concerned with revenue. Their content is basically economic.

PEOPLE, LAND, AND THE STATE'S NEED FOR WRITING

We turn now to the last topic of this chapter: the state's use of writing for control. It is a topic we have touched on repeatedly – for instance, in discussing passports. The personal descriptions in Han passports give (1) occupation and place of origin; (2) personal name; (3) age; (4) height; (5) color; and (6) for accompanying family members, relationship to the passport holder, place of origin, tax status, name, age, and skin color.⁸³ How useful this information would have been to an inspector at a control point is not clear. The Han ordinance quoted in [Text 4.13](#) suggests that it was possible to use another person's passport undetected, and it may well be that the power of the passport was more psychological than practical.⁸⁴ But the decision as to what information should appear on a passport may have been influenced less by the needs of the border guard than by the state's information-collecting habits. The Han government conducted a statewide population census, household by household.⁸⁵ Several scholars have suggested that the information we know from passports, even though it is missing from extant census records, was collected by the census.⁸⁶ In compiling detailed census records, the Han state was continuing a practice already well established in Warring States times.

Accounting and the Army

Mention has been made of the reforms, including universal census, that the warring states carried out to meet the demands of their military establishments. The shift from armies dominated by chariots ([Text 4.17](#)) to massed infantry required soldiers in much greater numbers.⁸⁷ The older armies had been dominated by a warrior nobility that lived in the urban centers and supplied soldiers and equipment in limited quantities from its own households. Although the numbers given in transmitted texts for Warring States armies are often rhetorical round figures, their internal consistency suggests that each of the seven major states had a few hundred thousand capable soldiers. The same order of magnitude is suggested by Han records of the numbers of the slain at Qin's victories, records that had probably been collected in the Qin archives and were transmitted to the Han government after Han overthrew Qin.⁸⁸ As we have seen in Assyrian palace reliefs, which depict soldiers counting severed heads, scribes accompanied armies to record deeds and plunder.⁸⁹ Their counts of dead and captive enemies would presumably be used in making awards after the battle. The Shang and Zhou states kept such records, but the numbers we encounter in them are small (Shang, [Text 4.2](#), no. 2; Western Zhou, [Text 4.17](#)).

Text 4.17. Excerpt from the *Xiao Yu ding* inscription.

Yu with many flags with suspended Guifang [name of an enemy polity] ... entered the Southern Gate, and reported saying: "The king commanded Yu to take ... to attack

the Guifang [and shackle chiefs and take] trophies. [I] shackled two chiefs, took 4,812 trophies, captured 13,081 men, captured . . . horses, captured 30 chariots, captured 355 oxen and 38 sheep." (JC 2839)

After Shaughnessy 1999, p. 320.

The casualties recorded for Qin's battles are tremendous, sometimes on the order of 100,000.⁹⁰ The greatest battle of the Warring States period is supposed to have been that between Qin and Zhao at Shanxi Changping.⁹¹ When the Zhao army finally surrendered, the Qin general buried the soldiers alive, Sima Qian tells us, and he says that the total number killed in the three-year war was 450,000. Sima Qian was a Han historian writing a century after the battle, and we may doubt both his objectivity and the quality of his sources, but there are reasons to believe that the casualties in Qin's wars were very great. We must first remember that the reforms attributed to Shang Yang had organized the Qin state for war, and that one major objective of these reforms was to create accountability and responsibility in every activity that could conceivably matter to the state.⁹² Text 4.18 is Sima Qian's description of them.

Text 4.18. Sima Qian's account of Shang Yang's reforms.

He commanded that the people be divided into tens and fives and that they supervise each other and be mutually liable. Anyone who failed to report criminal activity would be chopped in two at the waist, while those who reported it would receive the same reward as that for obtaining the head of an enemy. Anyone who actively hid a criminal would be treated the same as one who surrendered to an enemy [he would be executed and all property confiscated]. Any family with more than two adult males who did not divide the household would pay a double military tax. Those who had achievements in the army would in proportion receive an increase in rank [in the twenty-rank hierarchy in which the entire populace was rated]. Those who engaged in private quarrels would be punished with a severity that accorded with the gravity of their quarrel. Those who devoted themselves to the fundamental enterprises and through their farming and weaving contributed much grain and cloth would be remitted [from tax and *corvée*], while those who worked for peripheral profits [in trade and crafts] and those who were idle or poor would be confiscated as slaves. Those in the royal family who had no military merit would not be listed in the registers of [royal] relatives . . . For the fields he opened up the *qian* and *mo* [horizontal and vertical pathways] and set up boundaries. He equalized the military levies and land tax and standardized the measures of capacity, weight, and length. (*Shi ji*, 68, pp. 2230, 2232)

After Lewis 2007, pp. 30–1.

The reward for obtaining enemy heads was promotion in a hierarchy of twenty ranks. These ranks, which classified the whole population, determined the amount of land, the

number of residences, and the number of domestic servants one could receive from the state. They could also be used as credits to remit penalties imposed on oneself or on relatives. Army officers above the fifth rank were not rewarded according to the numbers they slew but according to the number of heads collected by the units under their direct control.⁹³ Because the number of enemy heads mattered to everyone from the lowest-ranking soldier (for claiming benefits) to the state (for dispensing benefits and thus allocating resources), careful accounting can be assumed. Unsurprisingly, soldiers and commanders sought to inflate the numbers – for example, by stealing the trophies of other soldiers or by passing off the heads of slain comrades as enemy heads (Text 4.19).

Text 4.19. Model texts for investigating severed heads claimed as trophies (third century B.C., pre-unification, from the tomb of a Qin official at Shuihudi in Hubei).

[title of the model text:] Snatching away a head. – Report from (authority) X at Headquarters: A, a commoner of X *li*-unit, bound and brought in a man C, as well as one severed head; a man D accompanied them. He reported, saying: “(I), A, am a private functionary of colonel X, taking part in the battle of Xingqiu city. Today I saw C at the headquarter’s company straightaway felling and wounding D with his sword and snatching away this head. I then arrested him and came, bringing him in.” We have examined the head and we have already examined D; we have also examined the condition of his wounds.

[title lost]...X report: “A commoner A from X *li*-unit and a *gongshi* [the lowest in the twenty-rank system] from Zheng (living) in X *li*-unit, called C, together brought in one severed head. They reported, saying each: “(I), A, (resp. I) C, fought at the city of Xingqiu, and this is the head (I), A, (resp. I), C, took. (We), A and C quarreled about this and we have come to bring it.” On examining the head (it was found that)...hair. On the right temple there is a wound, five inches long, and so deep that it enters into the bone, resembling the traces of a sword. The neck region is irregular and mangled. By letter (I) enquired about the head, saying: “If there are persons missing from their squad as well as persons who have been delayed and who have not come, send (someone) to come and recognize (the head) at the commander’s camp.” (SHD, p. 153, strips 31–6)

After Hulsewé 1985, pp. 191–2.

These model texts, used for teaching scribes how to detect and report fraud, show that the state devised strict procedures to prevent inflated claims. They also suggest what sort of bookkeeping the state did: it recorded in detail who killed how many enemies during which battle. The detailed record was needed to evaluate each claimant’s merit and calculate the proper reward, but the central archives of the state no doubt kept summary statistics as well, and these archives were seized by the future chief minister of the Han dynasty when he occupied the Qin capital at the fall of the dynasty. Thus Sima Qian, in his position at the Han court, may well have had the Qin records in his own

custody.⁹⁴ His sources, therefore, may have been reliable. How faithfully he reported them is another question, one to which we have no answer.⁹⁵

What is important here, however, is what our sources do make clear. The Qin state demanded detailed and accurate records from its scribes, and the details it demanded included the identities of individual soldiers and heads; the scribe needed to verify that a head claimed as a trophy was not the head of a Qin soldier. To do so, he had to be able to account for all Qin soldiers, living and dead, after the battle, something he could hardly do without a list that recorded them by name. As mentioned earlier, name lists may already have existed for Western Zhou armies, but there the numbers involved were much smaller. How does the state make an unambiguous list of a hundred thousand names?

Names and States

In a stimulating article, James Scott and his coauthors argue that cross-culturally the establishment of permanent family names has been always related to state making.⁹⁶ Although they mainly use materials from medieval and modern Europe and from European colonies in Asia and the Americas, they do note that the “precocious” Qin state seems to have designed a centralized system of surnames to allow registering the entire population for purposes of taxation, forced labor, and conscription (how universal it was remains unclear).⁹⁷ Scott and his colleagues emphasize that to a state administrator from outside, local naming practice is illegible. Vernacular place names and personal names are meaningful and clear only to the locals. In the absence of permanent patronyms, individuals can be identified in a variety of ways. If a village has more than one person named John, the different Johns can be distinguished by father’s name (“John, William’s son”), by occupation (“John-the-miller”), by residence (“John-on-the-hill”), by a personal trait (“John-do-little”), and more. These names are not inheritable. Scott writes, “The rise of the permanent patronym is inextricably associated with those aspects of state-making in which it was desirable to be able to distinguish individual (male) subjects: tax collection (including tithes), conscription, land revenue, court judgments, witness records, and police work.”⁹⁸

According to Scott and his colleagues, at the first stage in the history of European population registers – for instance, in the Florentine state in the fifteenth century – only a few great families possessed patronyms. The census registrars identified commoners simply by following vernacular naming practice, writing alongside a person’s given name the names of father and grandfather, a nickname, a profession, and so on. This was the first step toward “an administrative crystallization of personal surnames.”

In fact we have encountered similar practices in the census records of Mesopotamia and Egypt, where the inclusion of paternal names was normal for everyone from the elite to slaves; occasionally, place of residence or profession was recorded as well (*Texts* 3.1, 3.5, 3.6, 3.13, 3.14, 3.17). As for China, we cannot say anything definite about naming practice in the Shang period. We know that people were counted, but we do not know whether their names were listed. All the names that appear in the oracle bone inscriptions belong to the elite. Many are the names of diviners, and most are single characters

that occur also as names of human groups, places, and spirits.⁹⁹ Whether elite families at Anyang had surnames is unknown.¹⁰⁰ The names in Western Zhou inscriptions are also, unsurprisingly, confined to the elite. Single-character names occur constantly, but two- and three-character names also appear (Texts 4.11 and 4.12). Current opinion regarding the naming practice of this period is based on bronze inscriptions and on later texts that purport to describe Zhou customs. Lewis summarizes as follows:

[T]he patronym (*xing*) first appeared under the Zhou as a function of the division of the single royal ancestral cult into a multitude of noble lineages and sublineages. The Zhou aristocracy was divided into a small number of patronyms distinguished by a taboo on intermarriage, and a large number of “clan names” (*shi*) usually derived from names of fiefs or official titles. The establishment of cults to the founders of the feudal states and the lineages of hereditary officials was followed by the royal granting of family names to all those tracing descent from a common ancestor. Both patronym and clan name were granted in the enfeoffment process and were hence a noble privilege, while commoners had no family names.¹⁰¹

In other words, Western Zhou noblemen and lesser elites took the names of their offices or lands as clan names.¹⁰² Qiu Wei, the maker of the *Fifth Year Qiu Wei ding* (Text 4.11), got his clan name Qiu from his title Si Qiu (“officer in charge of hides”).¹⁰³ A few noblemen also received patronyms from the king. Toward the beginning of the Warring States period, however, this old aristocracy fell from power, and their patronyms disappeared. The new elites that replaced them took clan names that were not necessarily related to landholdings, and they began to use those clan names as patronyms.¹⁰⁴

Our first evidence for names of commoners comes from the Warring States period. The names can be divided into five groups according to the materials in which they occur:

1. Foundrymen’s names incised on the weapons they cast (Text 4.20).¹⁰⁵
2. Potters’ names stamped on the pots they made (Text 4.22a–b).¹⁰⁶
3. Commoners’ names appearing in administrative and legal documents (Text 4.22c–d).¹⁰⁷
4. Private seals that probably belonged to non-elite persons.¹⁰⁸
5. A few names preserved in transmitted texts dating from the Warring States period, whose bearers probably had commoner backgrounds.¹⁰⁹

How were the names of commoners formed? In the first three groups we can be sure that the bearers of the names were commoners, so let us concentrate on them. In group 1, as seen in Text 4.20, at least four of the seven major warring states (we have no examples from Chu) routinely put the foundryman’s name at the end of the inscription, preceded by the titles and names of various officials, in descending order of rank, responsible for the operation of the foundry. Although no comprehensive analysis has been conducted, most of the names of foundrymen seem to be one-character personal names; only a few have a second character that might be a family name (Text 4.20, no.

2). This is in apparent contrast to the naming of officials in the states of Han, Zhao, and Wei, who have family names that are identical to the standard patronyms of later times. The Qin inscriptions are different. With rare exceptions all the names, including those of the officials, are one-character personal names, and even though the name of the foundryman is sometimes preceded by the title “foundryman,” it is at other times preceded instead by a term denoting a status in Qin law, either a grade in the twenty-rank hierarchy or a convict type (Text 4.20, no. 5). Weapons from Qi and Yan are usually inscribed only with the personal name of the ruler in his capacity as nominal supervisor of the state workshops.

Text 4.20. Quality-control inscriptions on weapons.

1. Twentieth year; prefect of Zheng, Han Gao; master of convicts, Wu Yu; master of artisans of the Left Arsenal, Zhang Ban; foundryman Gan. [From the state of Han.]
2. (recto) Fourth year, counselor-in-chief, marquis of Chunping; master of artisans of the state’s Left Arsenal, Zhang Shen; foundryman Tao Li cast. (verso) Great Minister of Works, Zhao Jian. [From the state of Zhao.]
3. Seventh year; state master of the convicts, Fu Sheng; master of artisans of the Upper Arsenal, Shu Jian; foundryman X. [From the state of Wei.]
4. Fifth year, made by the counselor-in-chief Lü Buwei; Zhaoshi-officer, Tu; assistant chief, Ji; foundryman Yin. [From the state of Qin.]
5. Twenty-fifth year; made by the governor of Shang commandery, Xi; master of artisans of Gaonu, Yao; assistant chief, Shen; *guixin* convict-laborer, Chu. [From the state of Qin.]
6. Ge-blade made by King Zhi of Yan for Juyou [a military unit?]. [From the state of Yan.]
7. Made by Marquis Yinzi of Chen. [From the state of Qi.]

After Gao Ming 1996, p. 435, no. 15; p. 437, no. 1; p. 442, no. 1; p. 446, no. 6; p. 450, no. 18; p. 451, no. 3; p. 455, no. 5; my translations.

These weapons were the products of state-run workshops. Although each state had its own formula, the basic function of the inscriptions was the same (except in Yan and Qi?): to control the quality of a vital product by making it clear that producers would be held accountable. By the Warring States period, state workshops must have been keeping detailed accounts. The micromanagement demanded by the Qin statutes is scarcely imaginable without meticulous bookkeeping at every stage of production (Text 4.21). The desire for minute control reminds us of the obsessive accounting of the Ur III state (Text 3.1). Inscribing the finished product was the most direct way to match producer with product, more permanent than attaching a tag (Figure 3.4). The product identified itself, and identifying the person named as responsible for it must have been easy on the premises of a state workshop. We do not know the pattern of residence for the workers in the Chinese state workshops, but the foundries must have kept name rolls just as the workshops of the Isin period in Mesopotamia did. The scale of Chinese foundries

is unsurpassed elsewhere in the ancient world. The Houma foundry, which was at its peak around the beginning of the Warring States period, seems to have covered an area of about twenty hectares. It employed a complex casting method to meet the demands of different customers, producing intricately designed and finely executed bronze ritual vessels for the highest nobility, clumsy vessels for less wealthy patrons, ornamental plaques for export to the northern nomads, and much more, all in very large numbers.¹¹⁰ The casting method was designed to exploit a minute division of labor, and the foundry organization this entailed must have required extensive use of administrative writing, the most basic form of which would have been name lists for distributing raw materials and rations. Given the size and output of the foundry, not to mention the special skills required of many of its workers, it is unlikely to have depended on part-time workers like those in the Isin workshop, and a roster of full-time workers, particularly if organized by specialty or department, could probably have identified them all without much ambiguity using personal names alone.

Text 4.21. Excerpts from the Qin statutes on artisans (third century B.C., pre-unification, from the tomb of a Qin official at Shuihudi in Hubei).

When making vessels of the same type, their size, length and width should also be identical. Statutes on Artisans

When making accounts, items that are not of the same norm must not be listed in the same way. Statutes on Artisans

Prefectures as well as (government) workshops let the office correct their balances and weights (and their cubic measures) *dou, yong* and *sheng*; one must not let a year pass (without doing so) once. When there are artisans, these must not undertake the correction; when (these weights and measures) are loaned for use, they are corrected. Statutes on Artisans

When for statute labour in the capital area as well as for official work on government buildings there is borrowing of government (tools), and the borrowers die or abscond, orders are likewise to be given to the statute labourers and the retainers to stand surety for those borrowers, as in the case of participating in levies for frontier service. Statutes on Artisans

Government armour and arms are each to be incised or branded with the name of the office concerned; on those that cannot be incised or branded, it should be written with vermilion or lacquer. When armour and arms are loaned to commoners, it is essential to record the brandmark; they are to be bestowed according to the brandmarks. When loaned (armour and arms) are handed in and they have no brand-mark, as well as when it is not the brand-mark of the office concerned, (such armour and arms) are all to be confiscated by the government; they are to be charged according to the Statutes on Equipment. (Statutes on) Artisans

<p>Government tools and office. . . . branded, brand them; those that cannot be branded, brand them with lacquer. When somebody has borrowed government tools and returns these, these are only to be accepted when the brand-mark is correct. From those that are spoiled and discarded the brand-mark is scraped off. The office every time informs the person who borrows a tool, saying: "When a tool is spoiled and it is to be feared that the brand-mark will be rubbed off, then, before it is rubbed off, you should request to renew the mark." When the mark has been rubbed off and is unrecognizable, (the borrower) must be ordered to provide (another tool) in repayment. Whenever the work of the person who borrowed the tool is terminated, as well as when he is dismissed, the office should collect the tool; not collecting it quickly constitutes a crime. In case the borrower dies or absconds or commits a crime, it is not to be charged; the official(s) repay(s) it in his stead. One must not unauthorizedly loan government tools; all those who unauthorizedly loan government tools are guilty of a crime. Those who destroy or break government tools as well as those who . . . are to be ordered to repay them.</p>	<p>(Statutes on Artisans)</p>
<p>For bond servants, persons under detention (and) <i>chengdan</i> who are working together with artisans, the winter norm is the applied norm; three days imposed on them are equivalent to two days in summer. For bond-women assigned to work (the labour of) two bond-women is equivalent to that of one artisan. (The labour of) four bond-women taking their turn of duty is equivalent to that of [one] artisan. For small bond servants and bond-women who can be employed, (the labour of) five persons is equivalent to that of one artisan.</p>	<p>Personnel norms for Artisans Norms for Artisans¹¹¹</p>
<p>For bond-women as well as women who use the needle to make embroidery and other things, one woman is equivalent to one man. When a new artisan begins his work as an artisan, in one year (he obtains) half the work; in the year thereafter the work imposed on him is equal to that of an old hand. If the Master of the Artisans teaches him well, what the old artisan accomplishes in one year, the new artisan accomplishes in two years. When somebody is capable of accomplishing his training before the term, this is reported to the superior; the superior will have means to reward him. When somebody does not accomplish his training within the term, this is noted in his register and reported to the Minister of Finance.</p>	<p>Norms for Artisans Statutes on Equalizing Artisans</p>
<p>When bond servants are clever and could be made artisans, they must not be made servants or cooks of other people.</p>	<p>(Statutes on Equalizing Artisans)</p>

SHD, pp. 43–6, strips 98–112; English translation after Hulsewé 1985, pp. 57–63.

The identification of individuals located in well-defined social spaces is seen also in the inscriptions of [Text 4.22](#). The names of potters in Qi and Qin inscriptions are accompanied either by shop location or by town and ward (*li*) ([Text 4.22a–b](#)). Non-elite persons mentioned in legal documents from Chu and administrative documents from Qin are identified in the same way ([Text 4.22c–d](#)). The Chu documents also identify a dependent by giving the master's name ([Text 4.22c](#), nos. 4–6; notice the difference between 3 and 4).

Text 4.22. The notation of commoners' names in the Warring States and Qin periods.

a. Inscriptions on pottery from workshops in the state of Qi

1. You (of) Xintao *li*-unit, Left Nanguo Street
2. Wang Wen (of) Ping *li*-unit, Qiuqi
3. Wang Tong (of) Tao *li*-unit, Qiuqi

From Gao Ming 1990, 3.480, 3.624, 3.639.

b. Inscriptions on pottery from workshops in the state of Qin

1. Hui (of) Qu *li*-unit, Xianyang
2. Chen (of) Qu *li*-unit, Xianyang
3. Xi (of) Rui *li*-unit, Xianyang

From Gao Ming 1990, 5.35, 5.36, 5.119.

c. Commoners' names from Chu legal documents found at Baoshan

1. Qing Xin, a person of Ji *li*-unit, Shang (county?)
2. Qu Quan, a person of Xiayi *li*-unit, Anlu (county?)
3. X, a person of Sheng Furen's fief at Qing *yi*-unit.
4. Zong X, Zong Wei, persons of Sheng Furen
5. Zhou Yan, a person of Zhou Sha
6. Wu Jia, a person of Zang Qin

From Chen Wei 1996, pp. 109–10.

d. Commoners' names from administrative documents of Qin (post-unification)

1. Wusi, a commoner of Yiju *li*-unit, Yangling county
2. Bushi, a commoner of Xia *li*-unit, Yangling county
3. Yan, a commoner of Xia *li*-unit, Yangling county
4. Xu, a *shangzao* [second grade in the twenty-rank system] of Tiayang [*li*-unit], Yangling county

From Hunan Sheng Wenwu Kaogu Yanjiusuo et al. 2003a, pp. 19–20; Hunan Sheng Wenwu Kaogu Yanjiusuo 2007, pp. 185, 187–8.

e. Forced laborers' names in inscriptions from the mausoleum complex of the First Emperor of Qin

1. Qing Ji, a *shangzao* of Dongwu (county), *juci* (person who works off fines)
2. Jiu, a *bugeng* [fourth grade in the twenty-rank system] of Dongxian (*li*-unit), Dongwu (county), *juci*
3. Qibi, a *gongshi* [first grade in the twenty-rank system] of Wude (*li*-unit), Yangmin county, *juci* (buried in the same grave as no. 2)
4. Yu, a *bugeng* of Yong *li*-unit, Bochang county, *juci* (see [Figure 4.10](#), inscription no. 4)

From Yuan Zhongyi 2002, pp. 342–3, nos. 9–11, 15.

As we have seen, the warring states kept maps that showed the names their settlements had as administrative units (we do not know whether they were the same as the local names). When it used these names to register its subjects, the state mapped its population. Using personal name and place of residence as the two main attributes, and sometimes adding information about rank, it could track individuals in contexts that mixed people from different places – for example, in the army or in labor gangs working on a large state project. In such contexts there was little possibility that two persons would have both the same name and the same place of origin, and the army and labor gangs in any case had internal organizational units of their own that could further specify a person. In fact we have evidence showing that the Qin empire identified the tens of thousands of forced laborers building the mausoleum of the First Emperor in just this way (Text 4.22e; Figures 4.9 and 4.10 bottom). These laborers, who came from all over the empire, were conscripted for a variety of reasons. Some were “criminals”; some were free commoners unable to pay their debts. Many died or were executed and were buried at the construction site in neatly laid-out cemeteries. The graves were just big enough to hold the corpses, and there were almost no grave goods except for a few manacles. The deceased debtors of commoner status, however, were buried with one object that is of interest to us: a tile scratched with identifying information. The information is the same that we have seen in other inscriptions: personal name, place of origin, rank, and type of punishment.¹¹²

These inscribed tiles might remind us of the dog tags worn by modern soldiers for identification in case of death on the battlefield. We do not know whether Qin soldiers and forced laborers wore such tags, but it would not be surprising, given the pervasive use of tags in Han administration (Han passports were tags). Indeed we may suspect that the way the forced laborers were organized in death, labeled and laid out in tidy cemeteries, reflected the way they were organized in life. Qin scribes were required by the Shang Yang reform to keep tabs on the living and the dead alike: “registering the living, deleting the dead.” The laborers probably lived in barracks like the ones known at the construction sites of Egyptian pyramids (Figure 4.10). Lists of their names would have served a variety of administrative purposes, including control, the distribution of rations, and the assignment of work parties to specific tasks. The inscribed shards in the graves show that the Qin administrators had available to them the concrete mechanism of the dog tag. Could they have resisted using it? It is a temptation to which the Canadian government, though in no way so ruthless or authoritarian as the Qin government, succumbed in the twentieth century:

Inspired by the experience of military “dog tags,” the Ministry of the Interior at first devised for the illegible Inuit a disk system. Each small fiber disk had, printed in relief, a crown, the words, “Eskimo Identification-Canada” and then a letter and a number: e.g. “E-6-2155.” The “E-6” would stand for “East Zone, District 6” indicating the administrative zone of the North where this particular Inuit had been sighted, registered, and tagged! The succeeding number, “2155,” was a personal identification reference (as a social security number might be in the United States) which directed an official to the appropriate dossier containing all the information of interest to the state (name, aliases, birth-date, civil status, vaccinations, criminal record, pension and welfare records, etc.).¹¹³

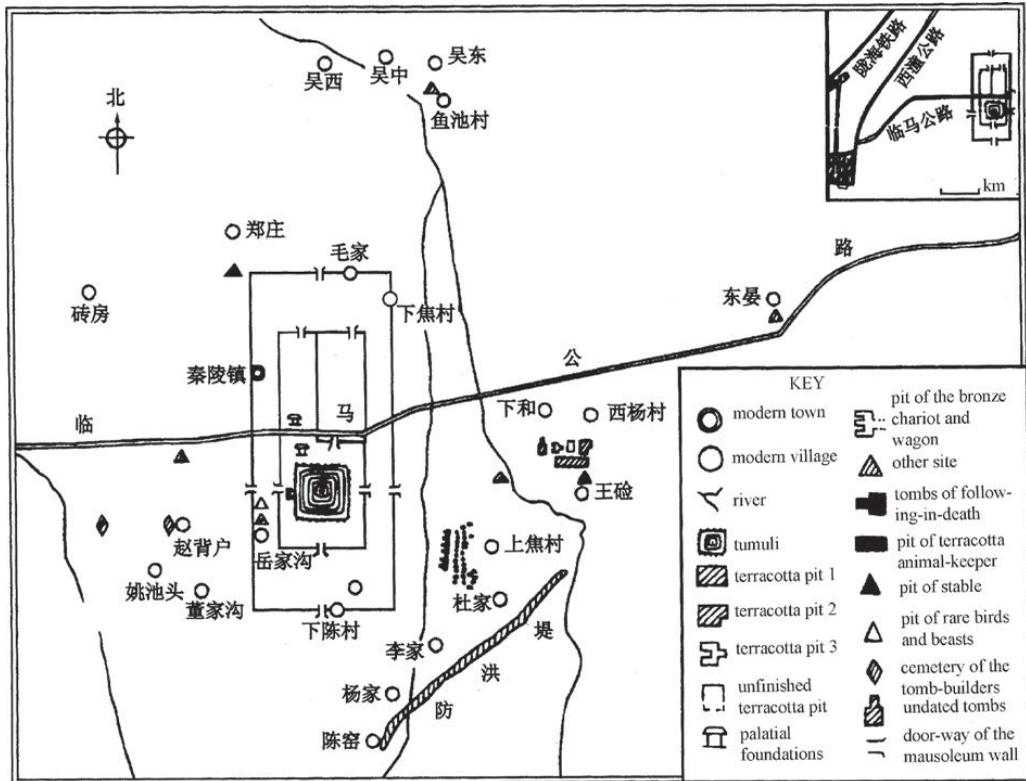


FIGURE 4.9 Building on the grandest scale: a comparison between the Giza pyramid plateau (*next page*) and the First Emperor of Qin's mausoleum complex (*above*). The symbolic meanings of the Qin complex have been extensively studied, but there is no study of the administration involved in constructing it of the kind that Kemp has done for the pyramids (see Kemp 2006, pp. 184–92). After Kemp 2006, p. 186, Figure 65; Yuan Zhongyi 2002, p. 2, Figure 1.

Soldiers and laborers in Egypt and China may not have been as irritatingly mobile as the Inuit, but they were often on the move and hence needed to pass the checkpoints on the state roads. Moreover they were allotted rations according to rank (Text 4.27), much as the Inuit received allowances from the Canadian state, and states distributing rations are always concerned to prevent fraud.¹⁴⁴ In the Nubian fortresses Egyptian soldiers were given bread ration tokens in the shape of a particular kind of loaf, with inscriptions specifying the quantity of bread due (Figure 4.10, top right, inset). Name tags like those found in the Qin graves could have functioned simultaneously as identification cards and as ration cards for laborers and soldiers alike, and in this forced labor/army context, a naming practice based on personal name and place of origin would have sufficed.

Universal Census

Giving an individual a name that would be unambiguous when he was in his place of origin required a different strategy. It was a necessary precondition for conscripting laborers and soldiers. The ultimate impetus behind the Warring States census was

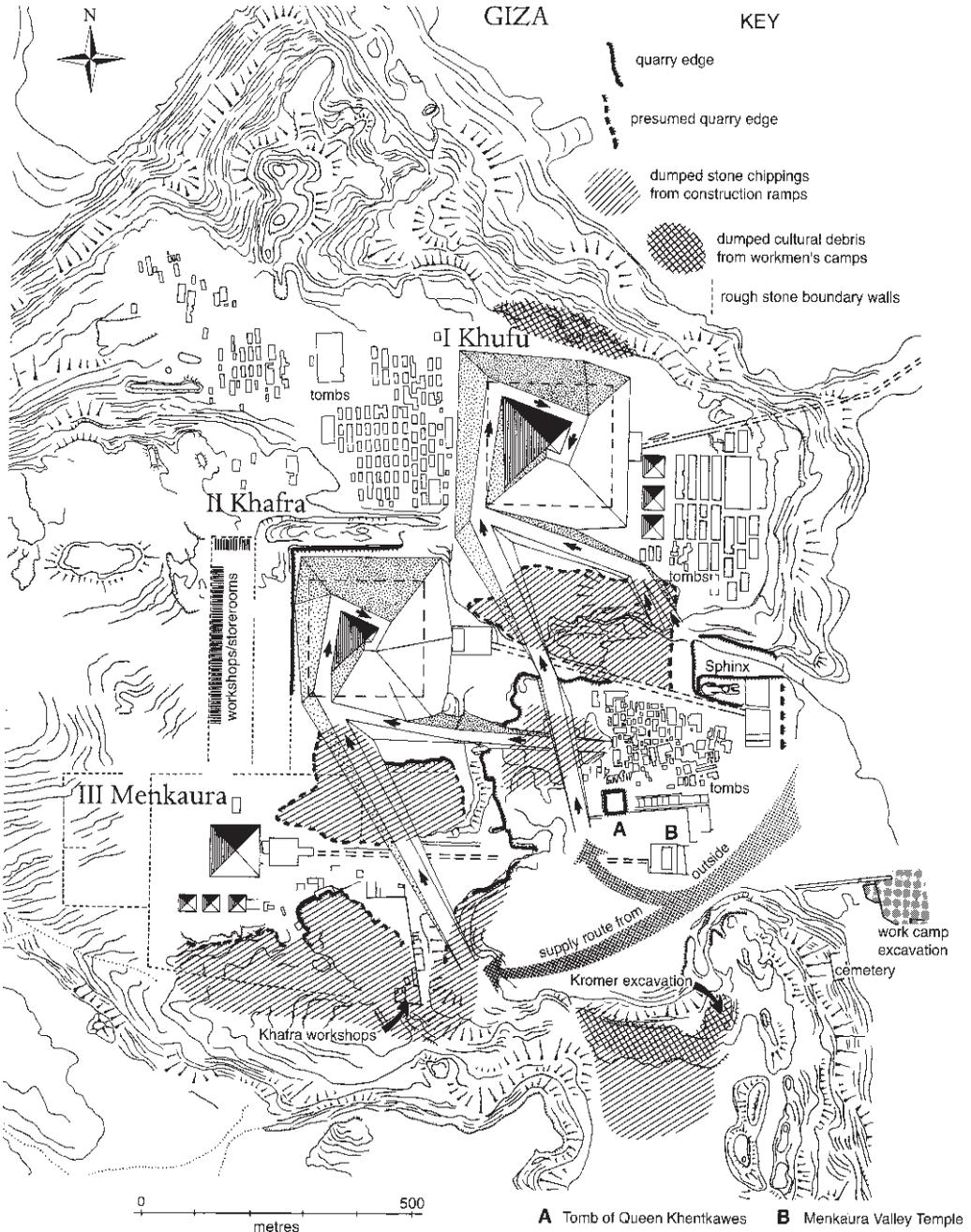


FIGURE 4.9 (cont.)

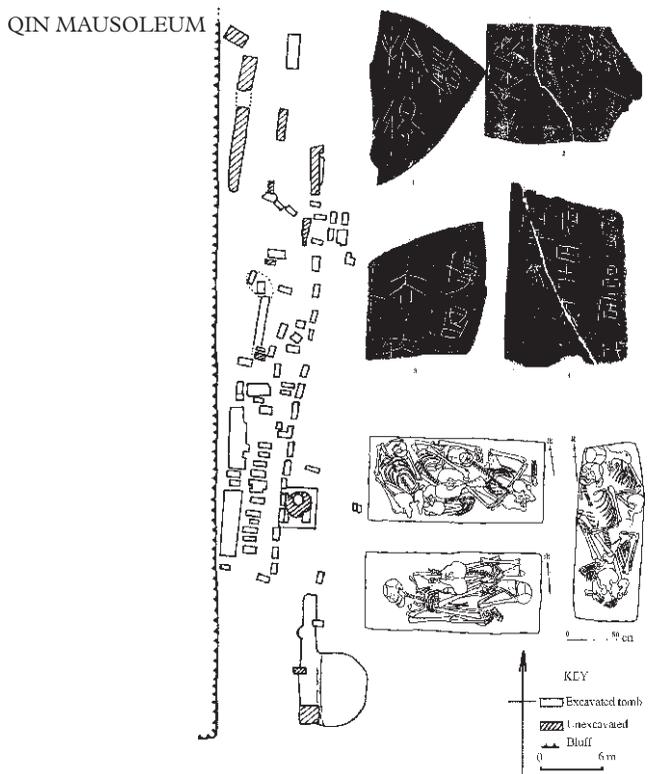
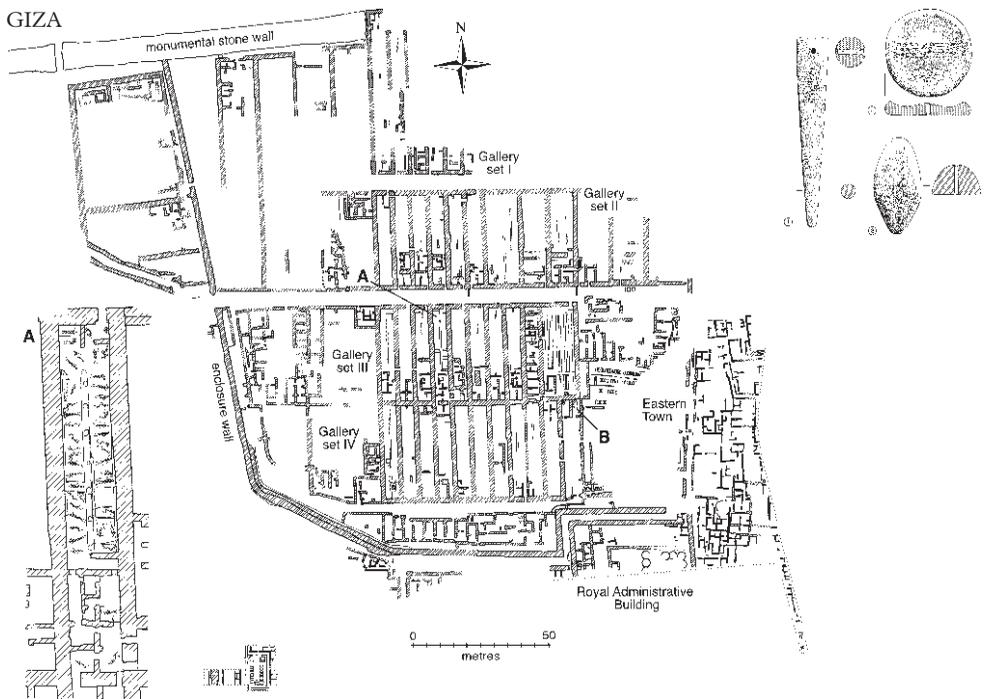


FIGURE 4.10 The living conditions of tomb builders: a comparison between (top) the Egyptian work camp at Giza and (bottom) a cemetery of laborers near the First Emperor of Qin's mausoleum. After Kemp 2006, p. 189, Figure 66; p. 176, Figure 62 (ration tokens at top right); Yuan Zhongyi 2002, p. 335, Figure 124; p. 336, Figure 125; p. 346, Figure 130 (inscribed tiles at top right).

endemic, large-scale warfare. Scott and colleagues explain the role of warfare in promoting detailed population census in early modern Europe:

War, because of the exceptional demands it makes on the mobilization of resources, is the great handmaiden of all forms of legibility, including permanent patronyms. Mobilization for war . . . impelled the early modern state to abandon indirect, tributary rule through powerful, and often recalcitrant, intermediaries and, instead, directly seize the military resources it needed. What the state requires, of course, is far more than just conscripts (who are hopefully, unambiguously identified). Fielding a 60,000-man army in the late seventeenth century would have required, for its men and its 40,000 horses, nearly a million pounds of food a day: a quartermaster's nightmare. The task demanded impressive feats of organization and expenditure. The mere grain needed to keep this army in the field, let alone armed and clothed, cost the equivalent of the wages of 90,000 ordinary laborers. This last requirement meant taxation nets of finer and finer mesh to enumerate real property, wealth, commercial exchange, and above all, the individuals who would bear the responsibility for paying and fighting.¹¹⁵

As noted earlier, Western Zhou armies seem to have been composed of noble warriors who brought with them soldiers from their own urban establishments. Transmitted texts such as the *Zhou li* say that each household was required to supply one soldier or laborer, a rate comparable to the Inka labor tax (Text 3.22). Nothing so decentralized and casual would have sufficed to raise the armies of the Warring States period, which were far larger than the European armies mentioned in the passage just quoted. Raising an army numbered in the hundreds of thousands required extending conscription from the cities to the countryside, and it required conscripting more than one soldier from households that contained more than one suitable male, and for this the state needed to know the composition of individual households.¹¹⁶ Large armies put vastly increased pressure on the state's revenue-making apparatus. The Western Zhou state had to rely for the collection of taxes on the local nobility, who might naturally prefer to keep surplus for themselves, and those local aristocrats, if they used anything resembling the well-field system, probably treated each village as a single tax unit. Similarly, even though the Aztec empire located its tribute collection points with the aim of bypassing local power holders, it still depended on local authorities to collect and transport the tribute. Resource extraction on the scale achieved by the warring states depended on the state's breaking through local illegibility, eliminating unsupervised intermediaries, and going deep into individual households. Making the individual household the taxpaying unit extended the service obligation directly to each potential revenue-yielding person.

Dramatically increasing the state's revenue depended on putting universal census in the service of another state project, land allocation, whether by the well-field system or some other. Both transmitted texts and excavated law codes suggest that the warring states made it a regular policy to allocate both residential space and agricultural land, and similar policies were pursued by governments for the next millennium.¹¹⁷ In the Warring States period the land allotted to individual households seems to have been larger than under the well-field system. One excavated pre-unification Qin text titled "Statute for forming arable plots" (*Wei tian li*) prescribes, among other things, measurements for plots of land and rules for setting field boundaries that seem consistent

with traditional accounts.¹¹⁸ Mandating that adult males establish their own households (Text 4.18) produced more tax-yielding households, more allotted land, and greater state revenue.

Although Leeming's argument for the reality of the well-field system is disputable, the regular rectilinear layout of the north China landscape must be the result of some kind of land allocation scheme. The match between land allotment and household was achieved by the creation of legible agricultural landscapes and equally legible household registers. Precise identity is essential to bookkeepers. Scott and his colleagues argue that the passage in the United States of the General Allotment Act of 1887 (the Dawes Act) was the impetus for standardizing the names of Native Americans: "Allotments meant deeds, titles, cadastral surveys, and inheritance, and these, in turn, required an unambiguous legal identity – preferably one that reflected close kinship ties." As we have seen (Texts 4.20 and 4.22), a few Warring States commoners may have had patronyms, but so far, curiously, we have no evidence from the Qin state for the use of family names to identify taxpayers.¹¹⁹ Perhaps the system of collective responsibility instituted by Shang Yang offered a different way of achieving similar ends (Text 4.18). Shang Yang ordered the division of the populace into units of ten and five (the units of five, seen in the last paragraph in Text 4.26, a Western Han will, survived to the end of the dynastic period in China).¹²⁰ This division resembles the Inka decimal system, but only superficially, for Inka landholding was collective whereas each household in the Qin state was a smallholder. Perhaps a Qin registrar could fix a person's identity by specifying his unit of five or ten instead of giving him a family name. Certainly the units reduced the work load for direct administration over individual households. As we have seen in Egypt, collective punishment could be used to prevent the flight of *corvée* labor: family members could be held hostage (Text 3.13b).

Without actual census records from the Warring States period, we may never know for certain how people's names were recorded and what kinds of information about them were required. Fortunately excavated legal and administrative documents from the states of Qin and Chu preserve some traces of the use of registers. The legal documents from the tomb of a fourth century B.C. minister of justice of the state of Chu (Text 4.23) contain cases related to population registers.

Text 4.23. Registering youths in Chu (from the tomb at Baoshan in Hubei province of a Chu minister of justice who died in 316 B.C.).

In the year when the Lord of Luyang led the Chu army to build a wall for the city of Zheng for the second time [320 BC], the Dongxi month, the prefect Xi Wei of Fen received a mandate from the crown prince to register the people who were underage and (therefore) had not been registered in the *dian*-registers in the archives (stored in) the Jade Office of Fen. Youths of Fen (with the) family name of Gu, Huo (personal name), one man, Juan (personal name), one man, who reside in Kuang Lu district in Yuan *yi*-settlement; total two men of the *qunzi* (rank?¹²¹). Let them be registered. (BS, p. 349, strips 2–4)

My translation after the transcription and annotation in Liu Xinfang 2003; see also Weld 1999, p. 85, and Chen Wei 2010, pp. 7–14.

Text 4.23 shows that keeping the census up-to-date was a royal concern and that the state had a special place or places to house the census data. Because male youths are singled out, we may infer that the age grades in the Chu census distinguished between adult and non-adult, but we do not know how the distinction was made. As we shall see in a moment, the Qin state used height rather than age to define tax status until 231 B.C., when it issued a mandate requiring the reporting of ages, standard practice in all later periods.¹²² Nowadays we have no difficulty keeping track of our ages, but doing so depends on having a stable reference point. Keeping track of the ages of a whole population depends on having a standardized calendar and complete records of birth dates. The standardization of time as a state project, yet another component of legibility, cannot be pursued here, but it should be noted that most of the texts that we have seen in this chapter are concerned with time.

The two youths in the text from the Baoshan tomb (**Text 4.23**) have the same surname. It is not clear whether they were elite or commoner. Researchers have noted a profusion of single-surname groups in the Baoshan texts.¹²³ Although the bearers of many of the names were members of the elite, some were not (**Text 4.22c**). As just noted, Scott and colleagues argue that the use of patronyms expands when laws make a claim to property dependent on the possession of a written deed. This seems to fit the legal context reflected in the Baoshan documents, some of which are concerned with land and labor disputes. As **Text 4.24** shows, private households had to keep registers in order to establish their right to dependent laborers. The text specifies that all four of the seized laborers shared the surname Deng. We may recall the Egyptian royal decree and list of servants preserved on the Papyrus Brooklyn 35.1446, which likewise concern labor disputes (**Texts 3.12** and **3.13a**). There too the list of servants was drawn up by the plaintiff himself, and to judge by the multiple names he assigned to each of the Asiatics (original Asiatic name, Egyptian name, and nickname), he believed that exact identifications would be helpful in securing his claim. In both the Chu and the Egyptian texts, the king appears to have been the ultimate arbitrator, although he referred the case to appropriate officials to handle the details. It seems likely that in Chu as in Egypt, the long process from petition of complaint to redress was conducted mainly in writing.

Text 4.24. Legal document from the state of Chu concerning a labor dispute (from Baoshan, 316 B.C.).

I, Ruo, the legal officer [in charge of] the charioteers of the Five Armies, dare to report to the *shiri* [probably the official on duty as an intermediary between the Chu king and the complainant¹²⁴]: “The lord of Shaoxing, Pan Ke Jin, today seized my subordinates Deng Xi, Deng Qi, Deng Pu, Deng Zang, with no just cause. I reported this to the lord king, referred it to the noble *zuoyin*; the noble *zuoyin* referred it to Dan, the newly appointed director of inquisitions. [He] ordered me to submit them [as evidence], but when both parties [were to] bring forward their registers, I had them while Shaoxing did not. [Now] the director of inquisitions has not ruled in my favor, and the summer [field] work of my laborers will soon be irreparably

lost. I cannot present [my case] to the director, and dare not fail to report this to the *shiri*.”

The legal officer in charge of the charioteers of the Five Armies reports, saying, Jin, the lord of Shaoxing, seized his subordinates; the director of inquisitions did not decide in his favor; he is displeased. In the tenth month, on day *jiashen*, the king delegated [the matter] to the *zuoyin*. (BS, pp. 349–50, strips 15–7)

After Weld 1999, pp. 86–7, slightly modified.

The connection between written deeds and patronyms is seen again in a Chu legal case involving a dispute over land (Text 4.25).

Text 4.25. Legal document from the state of Chu concerning land transfer (from Baoshan, 316 B.C.).

The Left Charioteer Fan Xu had a salary land at the Qian *yi*-settlement at Yun Yu, one *tian*-unit¹²⁵ of suburban (?) field, bordered by the state’s empty field. When Xu died, his son Fan Bu inherited it; when Bu died, he had no son, (so) his younger brother Fan Zhi inherited it; when Zhi died, he had no son, (so) the Left Intendant Shi ordered that Zhi’s paternal cousin Fan Suo should inherit it. Because Suo’s salary land became encumbered with debt, it was divided to pay off the debt. The Left Charioteer You Chen divided it, (and) had five *ze* of it. The heir of Wang Shi, Kuangshang, brought charge against it [i.e., the land transfer], saying that Fan Xu did not have heirs. The Left Minister of War Shi ordered the Left Prefect Jue to judge this. (Jue) said, Xu had heirs. (BS, p. 360, strips 151–2)

My translation based on Liu Xinfang 2003, pp. 155–7, and Weld 1999, pp. 92–3.

In this case the history of ownership of a piece of land was traced back through four successive owners represented by four names that share the patronym Fan. How did the last heir, Fan Suo, successfully defend his right? A possible answer is suggested by the Egyptian land dispute mentioned in Chapter 3 in which written records going back two hundred years were consulted.¹²⁶ The description of Fan Xu’s field in terms of location, acreage, and borders may have come from land registers kept in state archives. A passage in the *Zuozhuan* records that as early as 543 B.C. the Chu state conducted a comprehensive survey to register its resources, the first of which was land.¹²⁷ Fan Xu’s salary field had obviously been allotted to him by the state, in the same way that land was allotted to commoners. From the state’s point of view, to attach a name to a farming plot was to establish responsibility for the payment of taxes. Here no less than in carving a quality control inscription on a weapon, naming aims at accountability.¹²⁸ Because land, unlike weapons, cannot be inscribed, attaching an individual to a plot of land was achieved by making written cadasters. The difference is a little like the difference between a tattoo and a tag.

Seen in this light the vexing question of landownership in early China takes on a slightly different complexion. To the state, what mattered was extracting surplus.

Who owned a piece of land did not matter as long as someone was accountable for it. The state had no interest in prohibiting the sale of land. It might actively encourage inheritance, and it might favor inheritance in the male line because adult males were usually the main laborers in the field. This in turn would help the spread and fixing of patronyms. Lacking written deeds and wills, we cannot trace the increasing use of wills and the associated spread of fixed patronyms in detail, but present evidence suggests that these developments were under way already in the Warring States period, though perhaps uneven in pace and geographical distribution. By the early Western Han period, the government had issued statutes to make written wills drafted by local officials mandatory. A suit would not be heard unless the plaintiff could present a will.¹²⁹ The terms and phraseology specified for wills in the statutes are confirmed by an excavated will dating more than a hundred years later than the statutes (Text 4.26).

Text 4.26. A Western Han will.

On the tenth day of the ninth month of the fifth year of the Yuanshi reign period [A.D. 5], Zhu Ling of Gaodu village (*li*), who has lived in Xin'an village, is extremely close to death. Therefore he requests the Thrice Venerables of the county and district (*xiang*),¹³⁰ the general district official, the *zuo* official, the *lishi* official, Tian Tan, etc., to execute this will.

[Zhu] Ling himself says, "There were three fathers as well as six sons and daughters of different fathers. I want to order each of them to be aware of his or her father and his or her place within the household. The sons and daughters are Yijun, Zizhen, Zifang, and Xianjun, whose father was Zhu Sun; my younger brother Gongwen, whose father was Shuaijinjun of Wu; and my younger sister Ruojun, whose father was Bing Changbin of Qu'a."

The old woman [Zhu Ling's wife] says, "At age fifteen Gongwen left home to go out under his own surname and never sent back a single cash to support us. I personally gave land to Zizhen and Zifang. The aforesaid daughters Xianjun and Ruojun are poor and lack property. On the tenth day of the fourth month of the fifth year [of the Yuanshi reign period] I took one field of rice and two fields of mulberry and gave them to Ruojun, and I took one field of paddy and gave it to Xianjun until the twelfth month. Gongwen injured a person and was sentenced to penal servitude, and is poor and lacks property.

On the eleventh day of the twelfth month Xianjun and Ruojun are each to return these fields to me, and I will cede them to Gongwen. When I receive the fields, I will take two fields of rice and two fields of mulberry and give them to Gongwen. The boundaries of the fields are to remain as they were before, and Gongwen may not transfer the fields in sale to anyone else."

The currently serving officials and witnesses are the *lishi* official, people of the same five household unit, [Tian] Tan, etc., and the relatives Kong Ju, Tian Wen, and Man Zhen. The will is clear; its provisions can be followed. (*Wenwu* 1987.1, pp. 10–2)

After Hinsch 1998, pp. 3–4.

This precious text, the only will extant from the four centuries of the Han period, throws light on the interplay between patrilineage and matrilineage in property inheritance and on the use of fixed patronyms in Western Han.¹³¹ It shows that in the Han period women had substantial economic power. They could marry several times, something prohibited in later periods by an ethic that required widows to remain chaste and undefiled. After the death of the husband, it was the wife who held the right to dispose of the family property. It appears that children of the same mother, regardless of their fathers, were eligible to inherit property. This emphasis on matrilineage is confirmed by Han historical texts, from the highest echelon to the lowest class of society.¹³² By the late Western Han period, surnames were widely employed, for primers used in training scribes include common surnames as well as personal names (see the discussion of *Jijiu pian* in Chapter 6).

But it seems that the link between surname and bloodline was still in flux. During the Western and Eastern Han periods the change of one's surname seems to have been a frequent (and not shameful) practice, and many people used their mother's surname. Only after the late Eastern Han period did using the father's name as the surname become the norm.¹³³ Thus we find that not all the people mentioned in excavated Han and pre-Han texts have surnames, and when they do, we cannot assume that the name was transmitted from parent to child, for transmitted texts record cases in which persons acquired their surnames in some other way.¹³⁴ Perhaps this explains the naming practice we encounter in Qin and Han population registers. The term *mingshu* used in the following Qin statute (Text 4.27a, last two lines) and also in Han texts implies that population registry required personal names, not patronyms, and a recently unearthed population register of early Western Han date in fact contains no surnames (Text 4.28).

¹³⁵

Text 4.27a. Excerpts from the Qin statutes on granaries (third century B.C., pre-unification, from the tomb of a Qin official at Shuihudi in Hubei).

As regards bond-servants and bond-women engaged in work for the government, a bond-servant (receives a ration of) two bushels of grain per month, a bond-woman one and a half bushel; to those not engaged in work no rations are given. Small *chengdan* and bond-servants who are working (receive a ration of) one and a half bushel of grain per month; those not yet able to work, one bushel of grain per month. Small bond-women and grain-pounders who are working (receive a ration of) one bushel and two and a half *dou* per month; those not yet able to work, one bushel of grain per month. Infants who have no mother (receive a ration of) half a bushel each; although they have a mother and they are with her while she is assigned to (work for the government), they are also given rations: per month half a bushel of grain.

Bond-servants and *chengdan* whose height is not fully six feet and five inches (c. 1.50 m), and bond-women and grain-pounders whose height is not fully six feet and two inches (c. 1.43 m) are all considered as "small." When their height is five feet and two inches (c. 1.20 m) they are all put to work.

When a bond-servant wishes to be redeemed by two adult persons, this is to be allowed. When old ones, warranted to be dismissed for old age (or) small ones of five

feet and less in height as well as bond-women wish to be redeemed by one adult person, this is to be allowed. For redemption always men are used; those who redeem are made bond-servants. Women engaged in embroidery-work as well as clothing must not be redeemed. For those in border prefectures, the population register [literally “personal names and numbers,” *mingshu*] is to be returned to their prefecture.

SHD, pp. 32–3, 35, strips 49–52, 61–2; English translation after Hulsewé 1985, pp. 31, 45.

Text 4.27b. Excerpt from the Qin statutes on food rations of passport-holders (third century B.C., from Shuihudi).

(Holders of the rank of) *shangzao*, down to office assistants and clerks who do not possess aristocratic rank, as well as diviners, astrologers, chief-coachmen, attendants and storehouse keepers (will receive a daily ration of) one *dou* of husked grain, vegetable soup, and two twenty-seconds of a *sheng* of salt.

Statutes concerning Food Rations of Holders of Passports [*title written at the end of the statute*].

SHD, pp. 60–61, strip 182; English translation after Hulsewé 1985, p. 85.

We may therefore answer the question raised by Scott and colleagues regarding the use of patronyms in early China by saying that patronyms were extended to commoners beginning in the Warring States period, but that the process took six or seven centuries to complete, during which time population registers did not consistently employ them.¹³⁶ Lack of patronyms does not seem to have interfered significantly with the state’s control over individuals. Qin statutes and Han documents make it clear that wherever people moved, their registration documents moved with them (Text 4.28).¹³⁷ The state could always find a legally registered person.

Text 4.28. Notice to transfer a population register (Western Han, second century B.C.).

1. In the seventh year [of Emperor Wen’s reign, 173 B.C.], in the tenth month, which began on the day *bingzi*, on the day *gengzi* [the 25th day of the month], (the overseer of the) Zhong commune presumes to report: An adult woman (named) Yan from Xin’an says herself, (that) she (intends) to move to Andu with two adult male-servants A and B, one adult female-servant Fang, and requests (the officials in Andu) to receive (her) population register (*mingshu*). This I presume to report. On the day *gengzi* of the tenth month, the Deputy Prefect of Jiangling (county), Long Shi, herewith respectfully forwards to the Deputy Prefect of Andu (“the capital of peace”).

Ting handled this.

2. Xin’an (county), household head, adult woman, Yan, *guannei* (second highest rank in the twenty-rank system), widow

Adult male servant A
 Adult male servant B
 Adult female servant Fang.
 Family (enjoying) preferential treatment, no capitation tax and no labor tax (?)
 Hubei Sheng Jingzhou Bowuguan 2000, pp. 222–4, Figure 163, and color Plate 20.
 My translation, following Li Xueqin’s punctuation in Li Xueqin 2003, pp. 79–80.

Numbers and Budget

If the *mingshu*, the population register, contained “personal names” and “numbers,” what were the numbers? The Qin statutes quoted in Text 4.27 in effect give us a ration table, spelling out the correspondence between height, status, and the quota of rations. These are the numbers that were vital to the state’s financial management. We have seen tax tables in the Aztec empire (Figure 3.27, top right). Chinese states must have had similar tables, as indicated by an entry in the Qin statutes concerning levies of hay and straw (Text 4.29). Although we do not have the corresponding statute for grain, it must have been assessed similarly.

Text 4.29. Excerpt from the Qin Statutes on Agriculture.

The delivery of hay and straw per *qing* [=100 *mu*, c. 4.6 hectare, standard size in the land allotment scheme] is to be done according to the number of fields bestowed. Irrespective of whether the fields are cultivated or uncultivated the delivery per *qing* is three bushels of hay (or) two bushels of straw. From a raking of hay or a bundle of whitlow grass upward, everything will be received. When delivering hay and straw, substitution of the one for the other is allowed.

SHD, p. 21, strips 8–9; English translation after Hulsewé 1985, p. 23.

Fixed quotas have the appeal that officials planning a budget know in advance the revenue that will be received. A well-known passage from *Li ji*, a transmitted text no earlier than the late Warring States period, says that the government should make thirty-year budgets, first estimating its revenues and then spending accordingly (*liang ru yi wei chu*).¹³⁸ The officials in charge of public finance in Han and later dynasties took this rule as a fundamental operating principle. However, as Lien-sheng Yang pointed out a long time ago, in practice each dynasty began by projecting expenditures and then levied the necessary taxes:

At the beginning of a dynasty, tax rates are as a rule fixed by measuring revenues against expenditures. Consequently on such an occasion, the rule has to be reversed ... the modern procedure of setting an annual budget was not followed in traditional China. Instead, the nation had a static budget which was intended to be observed throughout the dynasty or at least for a great part of it. The duty of officials as tax-collectors was merely to fulfill their quotas. In this sense Max Weber is correct in comparing Chinese officials with tax farmers.¹³⁹

TABLE 4.1. Households and tax for Dongyang county, middle or late Western Han.

Name of commune	Households	Population	Average household size (modern)	Tax units	Average household tax (modern)
Dong	1,783	7,795	4.37	3,689	2.06
Du	2,398	10,819	4.51	5,045	2.10
Yangchi	1,451	6,328	4.36	3,169	2.18
Yu	880	4,005	4.55	1,890	2.14
Yuanyong North	1,375	6,354	4.62	3,285	2.38
Yuanyong South	1,282	5,669	4.42	2,931	2.28
Total	9,169	40,970	4.46	20,009	2.18

Source: Adapted from Hsing I-tien 2009, p. 77, Table 3.

Making a static budget depended on knowing the revenue sources. On the state level, this knowledge had to be very abstract, consisting mainly of numbers in various categories. A document found at Turfan confirms that the static budget method was actually employed by the central government in the Tang period.¹⁴⁰ We do not have such state-level documents from earlier periods, but we do have one county-level document recording the county’s annual tax. Even at this level the reliance on abstraction and simplification is surprisingly heavy, and its content can be conveniently summarized in a tabular format (Table 4.1; the fourth and last columns are modern statistics). Labor tax and tax in cash were combined into one tax unit by an unstated conversion rate. Except for the seniors and children, each family member was liable for one such unit. The document does not tell us the cash value of the unit, but it must have been a fixed quota for its time.¹⁴¹

A late Western Han commandery’s statistical report recently excavated from a local official’s tomb at Jiangsu Yinwan may give us a glimpse of the actual making of the state budget by the Han government (Text 4.30).¹⁴²

Text 4.30. Excerpt from a commandery’s annual accounts (unearthed at Yinwan in Jiangsu).

Collected Records

Borders (of the commandery) east-west 551 *li*, south-north 480 *li*, same as before. Officials, 2,203.¹⁴³

Total land, 51,292 *qing* (and) 85 *mu* 2 ... same as before.

Wheat planted, 1,073, □□ *qing*, 19,820 *qing* (and) 82 *mu* more than before.

(Mulberry) trees cultivated in the spring, 656,794 *mu*, 46,320 *mu* more than before.

Annual total incoming cash, 266,642,506 cash.

Annual total outgoing cash, 145,834,391 cash.

Annual total incoming grain, 506,637 *shi* (and) 2 *dou* (and) 2 *sheng* (and) 1/3 *sheng*.

Annual total outgoing grain, 412,581 *shi* (and) □□ *sheng*.

Households, 66,290, 2,629 more than before, of which 11,662 households are resettled refugees (?).

Persons (lit. mouths), 1,397,343, of whom 42,752 are resettled refugees (?).
Males, 766,064.
Females, 688,132, females are 7,926 more than before.¹⁴⁴
Age above 80, 33,871; age below 6, 262,588; total, 296,459.
Age above 90, 11,670; age above 70 receiving staffs, 2,823;¹⁴⁵ total 4,493; 718 persons more than before.
Households aided according to the Spring Ordinance, 7,039, persons, 27,926. Grain cost, 7,951 *shi* (and) 8 *dou* and X *sheng* and a half *sheng*; average per person, 2 *dou* (and) 8 *sheng* with odds and ends.

My translation after Lianyungang Shi Bowuguan et al. 1997, pp. 77–8, order of entries slightly changed.

This remarkable document, together with several others, including promotion and attendance records for officials of the subunits of the commandery who were on the government payroll, is believed to “have originated from the annual procedure whereby officials of the provinces reported to the centre, thus enabling it to maintain its controls and raise its revenue.”¹⁴⁶ This annual reporting, called the “submission of accounts” (*shang ji*), can be traced back to the Warring States period. According to tradition, the local officials would write a budget projection twice on a single sheet of silk, tear the sheet in half, give one half to their superiors (ultimately the ruler), and keep the other. During an annual visit to their superiors they would present a statistical report on the registered population, acreage of arable land, income and expenditure, and criminals. By comparing budget projection with actual statistics, an official’s performance could be evaluated. Every third year a “great inspection” would be held.¹⁴⁷

This checking procedure confronted the local officials with a typical bureaucrat’s dilemma. If they wanted to impress the ruler by inflating the numbers, especially the number of households, they would have to send the state more taxes. If on the other hand they understated the number of households, their performance evaluations would suffer. Doubts have been raised regarding the reliability of the population figures and ratios reported in the Yinwan documents, but careful analysis suggests that the figure for the number of tax-yielding persons is reasonable.¹⁴⁸

Visible Subjugation

Like the Ur III annual accounts and the New Kingdom Papyrus Harris I (Text 3.21), the Yinwan documents contain summary data that must have been generated from more detailed documents submitted by the commandery’s subunits, above all the population census and land registers that I have been discussing. The tomb of a late Eastern Han governor contains a stone relief that has been identified as depicting local officials submitting their accounts to the fiscal officer in charge of a commandery’s accounting (Figure 4.11).¹⁴⁹ The identification seems secure because the commandery in question is recorded to have consisted of thirteen counties, and the number of officials shown

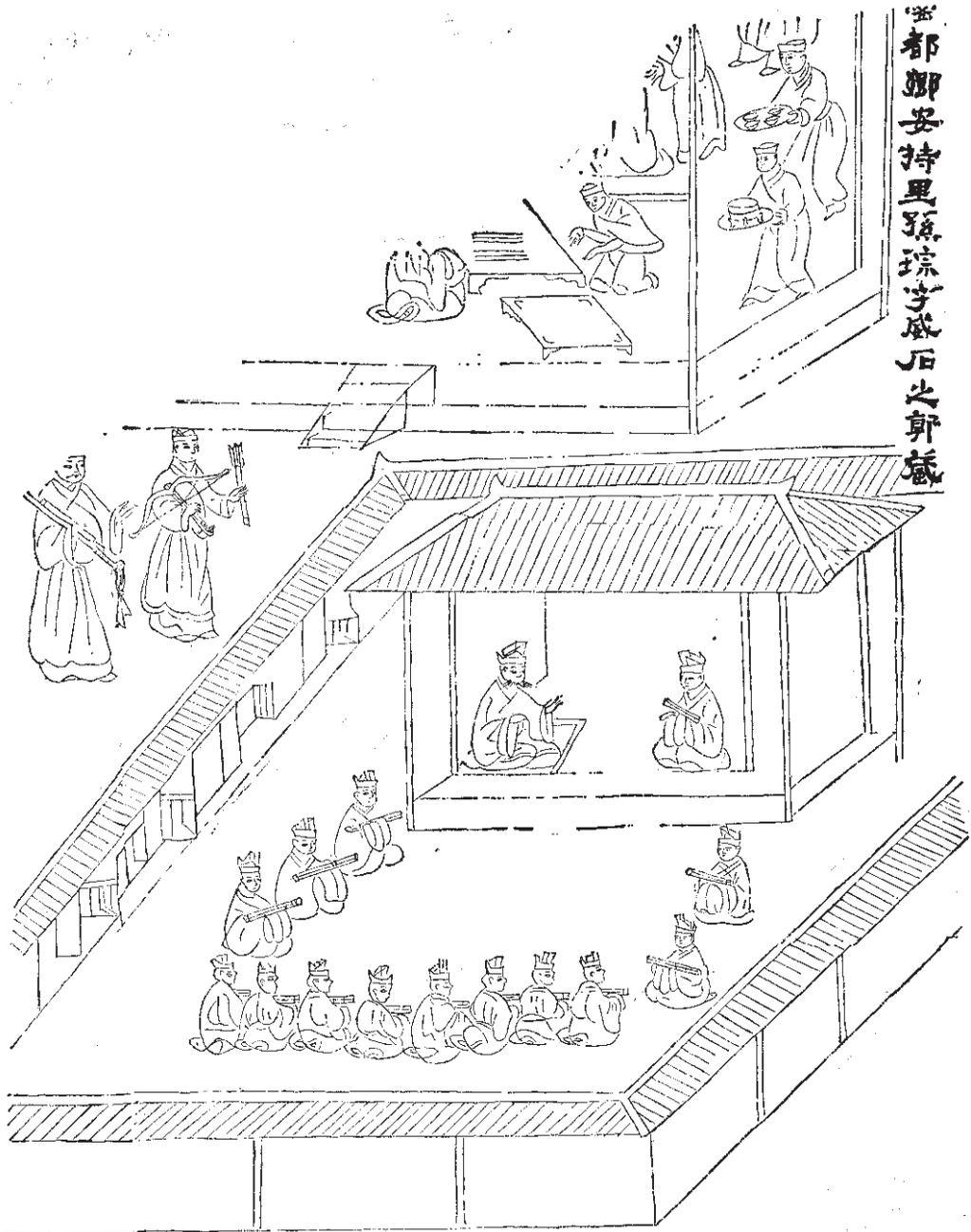


FIGURE 4.11 Submitting reports: the quintessence of bureaucracy. An Eastern Han tomb mural depicting the submission of accounts at the provincial level. After Ren Rixin 1981, p. 21, Figure 9.

holding bamboo documents is thirteen (the person facing the superior should be his assistant, not a county official). Han sources tell us that errors or discrepancies, accidental or not, could lead to punishment.¹⁵⁰ We have seen tax collectors in Egypt punished for poor performance (Figure 3.14), and in Mesopotamia one main function of accounting was to control officials. The excavated legal documents from Qin and Chu make it

clear that in China too most of the rules and admonitions were designed to regulate the behavior of the bureaucrats.¹⁵¹

But administrative writing was surely more than just a tool for discouraging official malfeasance. In Han times the officials who brought statistical reports to the capital gathered together to attend important court ceremonies. In the New Year ceremony all the officials of the central government came to the court to greet the emperor and the “tribute”-bearing emissaries from frontier polities, after which the emperor received the local officials with their reports. Officials were also asked to present their reports to the imperial ancestors and deities during another ceremony held before the imperial mausoleums.¹⁵² By analogy with Papyrus Harris I, a report made to the gods by Ramesses III, we might view the numbers reported in these Han ceremonies as summing up the achievements of the emperor himself in his capacity as the head of all bureaucrats. This cult of numbers was not unique to China and Egypt. We have seen it implicitly in Mesopotamia and Mesoamerica, and the Inka are said to have taken a census of state and temple animals every November when ceremonies intended to help the herds multiply were held.¹⁵³

Administrative numbers were backed up by detailed surveys. Every one of the men, women, and children recorded in the Yinwan account, including the officials, had his or her name inscribed on registers and housed in governmental archives. Under each name, amounts of land, houses, rations, salary, tax, and so on were assigned. We have seen the recording of names, of both rulers and ruled, in other early states. The names of rulers were inscribed to mark ownership and to create history. By contrast, the names and titles of the ruled, from noble to peasant, “were inscribed on registers whose ultimate recipient was the ruler of the state. Thus to be inscribed marked subjection.”¹⁵⁴ As we have seen in Western Zhou inscriptions, at the beginning of the investiture ceremony the scribe read out the appointee’s name from the document that conferred the appointment; after the ceremony the document – bearing the name – was kept in the royal archives in the possession of the ruler. Rule by the recording of names is seen also in the covenant texts of the Spring and Autumn period ([Text 4.31](#)); in the quality-control inscriptions of the Warring States period, in which the names of foundrymen and high officials occur side by side ([Text 4.20](#)); in the Han promotion and attendance records for local officials found at Yinwan; and in countless other contexts and all later periods.¹⁵⁵ According to Han statutes, the household registers, cadasters, land entitlements, tax registers, and so on that were made by the overseer of the local communes were to be duplicated, and the duplicate copy was to be kept in the county archives.¹⁵⁶ As the Yinwan documents demonstrate, the Han court had registers of the local officials who controlled the local archives. Although it does not seem that the court archives had registers that showed the commoners’ names, by controlling the local officials, who did have such registers, the state used names to control the whole population of the empire.¹⁵⁷

Text 4.31. A covenant text pledging loyalty.

[I], An Zhang, pledge myself at the dwelling place of my lord. Insofar as [I] dare to overstep the bounds [of this alliance] and communicate with Zhao Ni’s camp, or with his descendants, or with [here follows an enemies list consisting of twenty-two names]; or join in a faction to summon others to covenant with them; [or if I], Zhang,

physically harm You or Your descendants; [or] in any manner restore [the above-listed enemies] to the territory of the State of Jin; then, [may the far-seeing spirits] forever [stand ready] instantly to detect me; and may ruin befall my lineage. Or if, after this pledge, [I] dare to fail to [cause] the sorcerers and seers, invokers and scribes to offer up victims and other foodstuffs, and regularly sacrifice to the former rulers of Jin in their ancestral temples; then, [may the far-seeing spirits] forever [stand ready] instantly to detect me; and may ruin befall my lineage. As for the descendants of Men Fa, [if], meeting them upon the road, [I] do not kill them, may the [former] rulers spy me out. (HM 156.20)

After Weld 1990, pp. 395–6; 1997, pp. 146, 148.

No wonder, then, that written names and numbers in the form of registers, together with maps based on the registers, had by the Warring States period become symbols of authority, a role we saw them play in Sima Qian's story of the attempted assassination of the future First Emperor.¹⁵⁸ Registers and maps figure again in Sima Qian's account of the struggle for the throne after the First Emperor's death. Here is his description of an unsuccessful contender, General Xiang Yu:

When Xiang Yu was a boy he studied the art of writing. Failing to master this, he abandoned it and took up swordsmanship. When he failed at this also, his uncle, Xiang Liang, grew angry with him, but Xiang Yu declared, "Writing is good only for keeping records of people's names. Swordsmanship is useful only for attacking a single enemy and is likewise not worth studying. What I want to learn is the art of attacking 10,000 enemies!" With this, Xiang Liang began to teach his nephew the art of warfare, which pleased Yu greatly. On the whole Yu understood the essentials of the art, but here again he was unwilling to pursue the study in detail.¹⁵⁹

Later in his history Sima Qian tells us that when Xiang Yu's successful rival, Liu Bang, the founder of the Han dynasty, captured the Qin capital, all of his generals hurried into the treasuries to seize valuables except for Xiao He, the future Han prime minister:

At the time when Gaozu [Liu Bang] marched into the capital of Xianyang, all the generals rushed to the storehouses and fought with each other over Qin's goods and treasures. But Xiao He entered ahead of them and gathered up all the maps and official records that had belonged to Qin's ministers and secretaries and stored them away. When Gaozu became king of Han, Xiao He served as his prime minister. Xiang Yu arrived later with the other nobles, massacred the inhabitants of Xianyang, burned the city, and then marched away. But because of the maps and registers of Qin which Xiao He had in his possession, the king of Han was able to inform himself of all the strategic defence points of the empire, the population and relative strength of the various districts, and the ills and grievances of the people.¹⁶⁰

Earlier in life Xiao He had been a Qin local official in charge of the Bureau of Merit, a post like the one the owner of the Yinwan documents held; Xiang Yu was the grandson of a Chu general. It is hardly surprising that they thought differently about bookkeeping.

Xiao He's foresight and Xiang Yu's contempt for the recording of names are unlikely to be the only reasons for Xiang Yu's failure and Liu Bang's success, but the lesson of this chapter is clear enough. Names and numbers are indispensable to the functioning of any state. The significance, both practical and symbolic, of maps and registers was grasped by all clearheaded statesmen. But how did the state ensure the keeping of the records it required, the compiling and continuous updating of maps and censuses and land registers? That is the subject of [Part III](#).

PART III

WRITING AND THE PERPETUATION OF THE STATE: SCRIBAL EDUCATION, LEXICAL LISTS, AND LITERATURE

Now, what I want is, Facts. Teach these boys and girls nothing but Facts. Facts alone are wanted in life. Plant nothing else, and root out everything else. You can only form the minds of reasoning animals upon Facts: nothing else will ever be of any service to them. This is the principle on which I bring up my own children, and this is the principle on which I bring up these children. Stick to Facts, sir!

Charles Dickens, *Hard Times*, Chapter 1

Let me see: four times five is twelve, and four times six is thirteen, and four times seven is – Oh dear! I shall never get to twenty at that rate! However, the Multiplication-Table doesn't signify: let's try Geography. London is the capital of Paris, and Paris is the capital of Rome, and Rome – no, that's all wrong, I'm certain!

Lewis Carroll, *Alice's Adventures in Wonderland*, Chapter 2

5

THE NEAR EAST AND THE AMERICAS

Today the word *scribe* has associations with menial clerks, copyists, and drudges – associations that encourage us to think of ancient scribes as mere secretaries. In the literate societies in our sample, this would be a serious error. Like the English word, the indigenous words for the scribe in those societies refer to the ability to write, and in the days before universal literacy, writing was a prestigious accomplishment.¹ In Mesopotamia, Egypt, the Maya cities, and China, the title of scribe was sometimes used as though it designated a class rather than an occupation. From the king down to the lowest clerk in the bureaucracy, everyone was proud of this title.

Scribal training is indispensable if a writing system is to be kept alive and functional. Our four literate civilizations all have a long history of script use – in three cases, more than three thousand years – so they clearly had effective means for teaching the scribal art. In the Mexican and Andean civilizations schools taught young students other ways of storing and communicating information. The training of scribes involves several interlocking key factors: a teaching place – a school in the physical sense; a curriculum; institutional or private sponsorship; sources of teachers and students; the logistics of running the school; and the careers for which the students are being prepared. These factors are hard to trace in the archaeological record except where texts or representations are present.

MESOPOTAMIA

Early evidence of schooling is best documented in Mesopotamia. Let us turn there to retrieve the memory of humanity's first school days.

Archaic Lexical Lists and Mathematics

LEXICAL LIST. Among the many types of cuneiform text produced over three thousand years, one kind was extraordinarily long lived – the so-called lexical list: lists of words and phrases, like the vocabulary lists in any modern language textbook.² Lexical lists feature prominently among the earliest written texts in Mesopotamia (ca. 3200–3000 B.C.). In the southern Mesopotamian city of Uruk, copies of lexical lists account for about 10 percent of the oldest tablets; the rest are administrative texts.³ There are no letters, legal documents, or literary works. What these figures tell us is that in the earliest phase of script development, it was the simple word lists used for scribal training that were indispensable, not genres of writing that feature connected discourse.

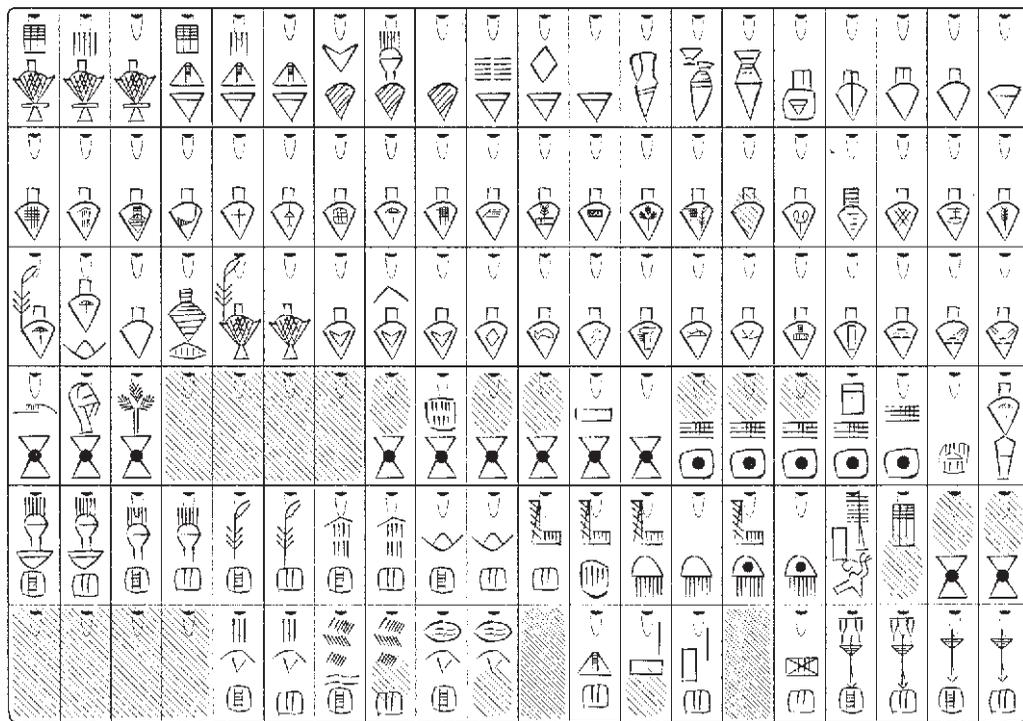


FIGURE 5.1 The generative power of paradigms: a composite copy of the proto-cuneiform lexical list of vessels. After Englund 1998, p. 97, Figure 29. The tablet is rotated from its original orientation to make the iconicity of the earliest signs more evident. This iconicity was lost at an early date, and for unknown reasons tablets were rotated 90 degrees counterclockwise, so that writing and reading were done at a 90 degree angle from the original orientation of the signs.

Assyriologists are certain that these archaic lexical lists were used for scribal education chiefly because their rigid formats are different from the formats of administrative texts and because they were faithfully copied in large quantities over a period of more than a thousand years. Lexical lists are arranged thematically, that is, by category. There are five categories of lexical list in archaic Uruk: designations of places, of animals, of plants and manufactured products (Figure 5.1), of persons, and the so-called tribute lists.⁴ A shared feature of these five categories is that they are all names of various sorts, not verbs.

Why did archaic scribes spend so much time learning to write names? In Part II we have seen that administrative documents not just in Mesopotamia but all over the world are composed mainly of numbers and names: commodity names, place names, and personal names. Combined with numbers that denote quantities and time, names record the bulk of the information needed for purposes of control. Names moreover had an intellectual or psychological importance that is well summed up by Barry Kemp: “[T]o the ancients knowing the name of a thing made it familiar, gave it a place in one’s mind, reduced it to something that was manageable and could be fitted into one’s mental universe.”⁵ Not surprisingly, all the literate societies considered in this study in one way or another produced lexical lists that were mainly composed of various kinds of nouns.

THE ONOMASTIC ORIGIN OF WRITING. Writing was sustained by lexical lists; indeed it seems likely that writing and lexical lists came into being simultaneously. The fact that most graphs in the pristine writing systems were initially iconic suggests that writing began by encoding the names of depictable things. In both writing and pictographic recording systems, toponyms and personal names were often designated by tangible objects or symbols, as, for example, in the king lists of Central Mexico. These names were not randomly chosen. They were the names most useful in administration and, to a less certain extent, the ones most important in royal display (e.g., in king lists). As we have seen in [Part II](#), administration classifies. It is therefore not surprising to find that the inventors of writing devised a system suited to sorting and tracking things.

The hypothesis of the onomastic origin of writing in a mainly administrative setting makes it easier to understand why, in the earliest lists made for instructional purposes, signs were grouped semantically rather than by pronunciation. Pronunciation must have seemed less fundamental, more accidental than meaning.⁶ Phonetic concerns seem to have been very limited, if not absent. Instead we find semantic groups and subgroups – for example, various shapes within a large list of vessels ([Figure 5.1](#)). The nested process of classification continues within each subcategory to such an extent that some of the individual entries clearly cannot have been needed in actual administrative documents. In [Figure 5.1](#), for example, the individual entries in the second and third rows consist of two signs (plus, in each of the cases, the numeral 1, diagnostic of lexical lists): a sign for a certain type of vessel, the same in every entry, and a sign designating a type of dairy product, a different one in each entry. Presumably the two signs together meant “one container used for such-and-such a dairy product,” a meaning conveyed visually by putting the dairy signs inside the vessel sign. Robert Englund suggests that most of these compound signs were compiled purely for the sake of “paradigmatic completeness” in a lexical context, because most of them are not attested in the administrative texts at all.⁷

THE URGE TO BE EXHAUSTIVE. What was the impulse behind this minute and “impractical” classification, and presumably along with it, the formation of “useless” signs? Although one can argue from the countless indigenous taxonomies recorded by ethnographers that to classify the world is human nature, the classification of natural and man-made objects in lexical lists cannot be simply equated with practical taxonomy. The nascent writing system was inviting its practitioners to expand writing’s scope. Writing was already beginning to acquire a partly autonomous life. Its paradigmatic nature invited exploration. Many of the compound signs invented by the list compilers probably had a life only in the scribal-training setting. The expansion might have served pedagogical purposes (e.g., to illustrate the principles of sign combination). But it may simply be that the compilers derived satisfaction from the orderliness and completeness of their lists. One of the entries in the archaic lexical lists means “old calves”! We will encounter this scribal mentality often in the following pages.

In terms of extant quantity and undisputed continuity, the lexical lists from Mesopotamia surpass those from the other three early civilizations combined. They therefore give the impression that at any given time, the vocabulary and the number of signs in use were enormous. The foregoing observations qualify this impression, obliging us to clarify our definitions and to distinguish signs, compounds, practical words, and scholastic words. Signs are the building blocks in a writing system. A sign

can stand for a word, especially in a monosyllabic language. It can also be combined with other signs to form a compound that stands for a word. Practical words are words that the scribes actually used in their administrative texts, probably only a subset of the words spoken in everyday life. Scholastic words, on the other hand, are words generated by the writing system and meant to represent the knowledge of the language and, by extension, of the world. They might overlap with the vocabulary of everyday life, but some of them had no counterpart in an illiterate person's vocabulary. And some signs may have had no fixed verbal realization. The vessel containing such-and-such a dairy product might not have had one specific name; it might have been described in a variety of ways. We are not certain how the scribe would have processed it.

NUMERACY AND METROLOGY. Lexical lists cannot represent the whole of the earliest Mesopotamian curriculum. Other skills needed to be mastered by the scribes: the making of tablets, the layouts of the various tablet formats, the bookkeeping procedures, and mathematics. On an administrative tablet, information about the relationships between entries and groups of entries is coded in the bewildering array of subcases, subcolumns, and varying column widths. These nongrammatical and nonsyntactical devices for encoding information were developed several centuries before grammatical and syntactical elements appeared.⁸ Connected discourse (as later used in royal inscriptions, letters, and literature) was not the stimulus for the invention of proto-cuneiform. Ledgers then, as now, did not need complete sentences.

Numbers make up 90 percent of the content of the archaic tablets. Unlike later Mesopotamian arithmetical practice, which principally employed the sexagesimal system regardless of the objects that were to be quantified, archaic bookkeeping had several numerical systems that were used for different objects: the bisexagesimal system, the grain capacity system, the area system, and another system that is still poorly understood. There were also derived systems for timekeeping and measurement.⁹ The choice of numerical system roughly corresponded to the bureaucratic division (land surveyor, tax collector, etc.). It is possible that individual scribes needed only to learn one system specific to their offices.

An Overview of Scribal Education in Mesopotamia

ARCHAIC PERIOD (3200–2900 B.C.). Who trained the state scribes, and in what kind of setting? Where did the students come from? The earliest phase of cuneiform writing has left us almost no evidence for the training process, but it seems likely that, when writing was still a new craft, it was transmitted in the same way as any other trade, namely, by apprenticeship. To communicate with each other the first scribes had to establish conventions. What apprentices had to learn was those conventions. The first generations of scribes might have passed on this knowledge to trainees in their place of work. Or, as in other crafts, sons might take up their fathers' scribal art at home, as attested in later sources.¹⁰ In other words, there may have existed a hereditary group of specialized scribes.

Because writing was certainly a monopoly of palace and temple at first, we may have to envision substantial institutional involvement. Formal schools, *e₂-dub-ba-a* (hereafter *eduba*) in Sumerian, literally meaning "tablet house," may well have appeared soon after writing was invented. The word *eduba* has not been found in the proto-cuneiform

tablets, but the fact that a number of find loci yielded large numbers of lexical lists and sometimes nothing but lexical lists, though admittedly in a secondary context, prompts Englund to suspect that they were originally stored together in scribal schools or libraries.¹¹ The nature of the supposed schools is unclear because their locations cannot be pinpointed. However, the remarkable unity of script forms and writing conventions between Uruk and other cities (notably Jamdat Nasr) during the same phase forces us to conclude that there were formal schools of some kind in each city and that intercity communications were smooth and active.¹² Family teaching or apprenticeship within the confines of an office would hardly have been able to achieve this uniformity without an initial stage of standardization and diffusion.

EARLY DYNASTIC PERIOD (2900–2350 B.C.). Little is known about scribal training in the first half of the Early Dynastic period. For the latter half, lexical lists are abundant from Fara, Abu Salabikh, and Nippur. In addition to administrative documents and lexical lists, there are legal documents and literary texts, the last including temple hymns, myths, magical incantations, and wisdom literature.¹³ The appearance of new genres of writing points to new uses of writing. The curriculum must have been expanded accordingly. Some of the literary texts are attested in student exercise tablets.

None of the lexical texts at Fara can be proven to come from a palace or temple. The nature of the so-called Tablet House at Fara is not certain, but other smaller households that yielded lexical tablets were neither palaces nor temples. At Abu Salabikh, lexical and literary texts were found in both temple and smaller household contexts. These contexts lead some scholars to suggest that at this time households made provision for the education of their members, others to suggest that the lexical texts were reference works that the scribes carried with them to wherever they were at work.¹⁴ Giuseppe Visicato instead proposes that there were centers for scribal training at Ur, Fara, and Girsu.¹⁵ We probably should imagine a mixed education system involving both public institutions and private families.

Prosopographic study shows that the teachers of the scribal schools of this period were also administrative officials. Many scribes' personal names are attested both in the administrative documents from Fara and Abu Salabikh and in the lexical lists, something that strongly suggests a dual responsibility.¹⁶ But we are completely in the dark regarding the sources of students.

DYNASTY OF AKKAD (2350–2150 B.C.). Our evidence for education during the dynasty of Akkad must include that from Ebla, a small city-state in northern Syria outside the political orbit of the Akkad empire, because Akkad's capital has not been archaeologically located. At Ebla, lexical lists were found together with administrative texts in a palace archive ([Figure 5.2a–b](#)).¹⁷ The only school texts that do not come from that archive were found in another storeroom within the palace ([Figure 5.2a](#), at location A). Alfonso Archi suspects that the texts from the storeroom were test exercises done by an apprentice scribe to impress the teachers of Ebla's scribal school. One of them is a king list.¹⁸ Most of the school texts from Eshnunna, a city in northern Mesopotamia, were found in a private house, but because they could well have been ancient refuse, their original location is not certain.¹⁹ We might again have to entertain the possibility of a mixed educational system.

The lexical lists of this period provide the earliest known witnesses of bilingual lists and phonological definitions of logographic cuneiform signs. Aage Westenholz lists

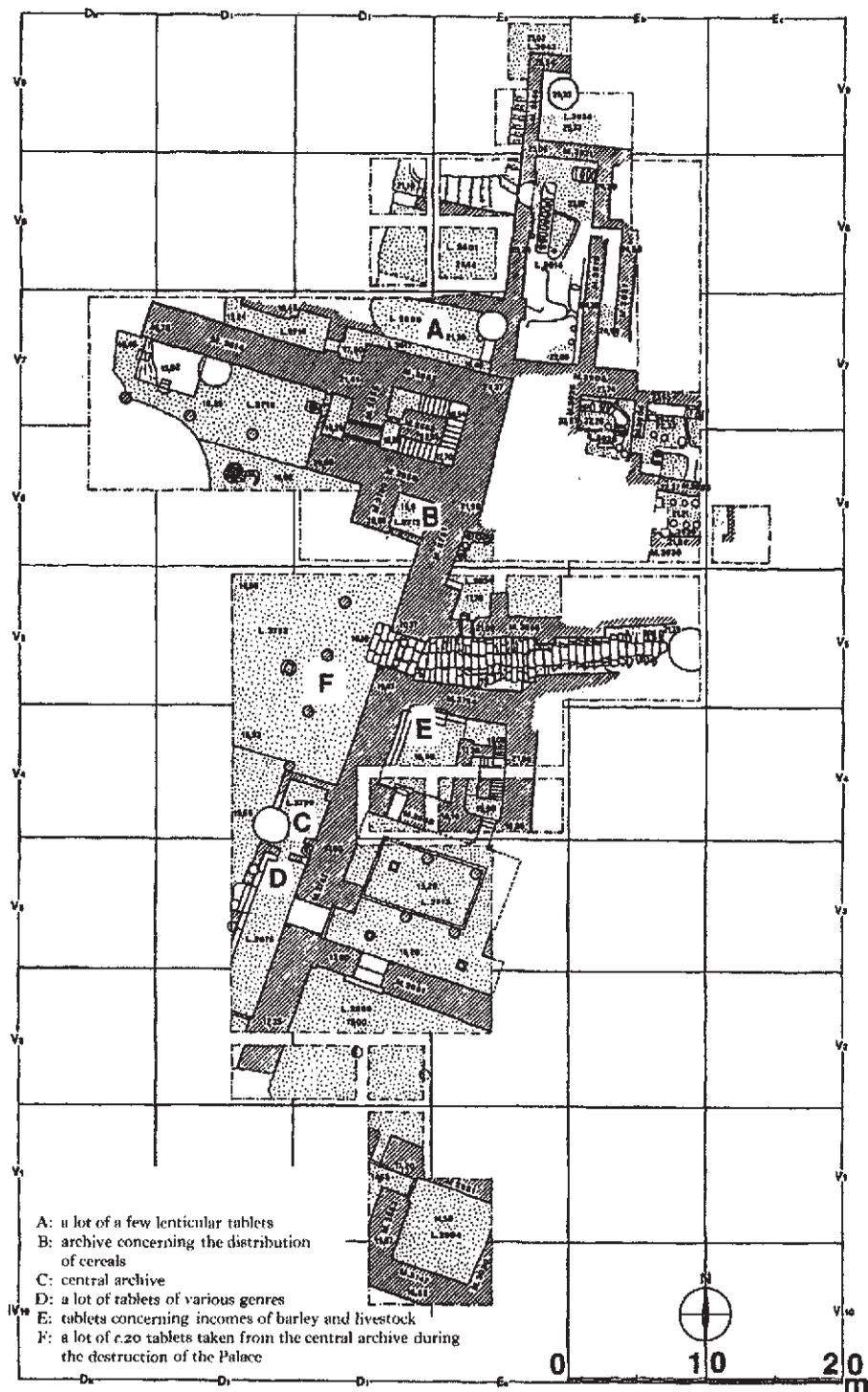
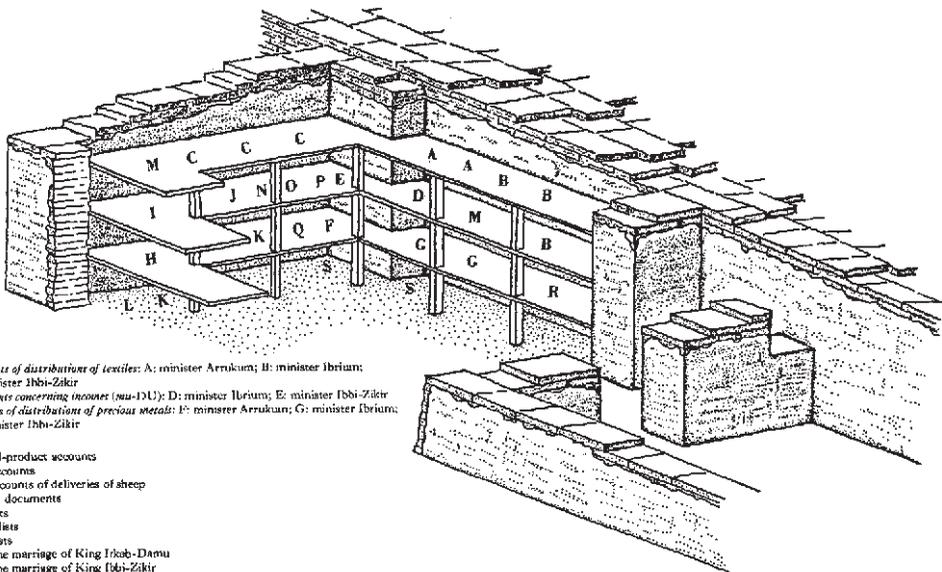
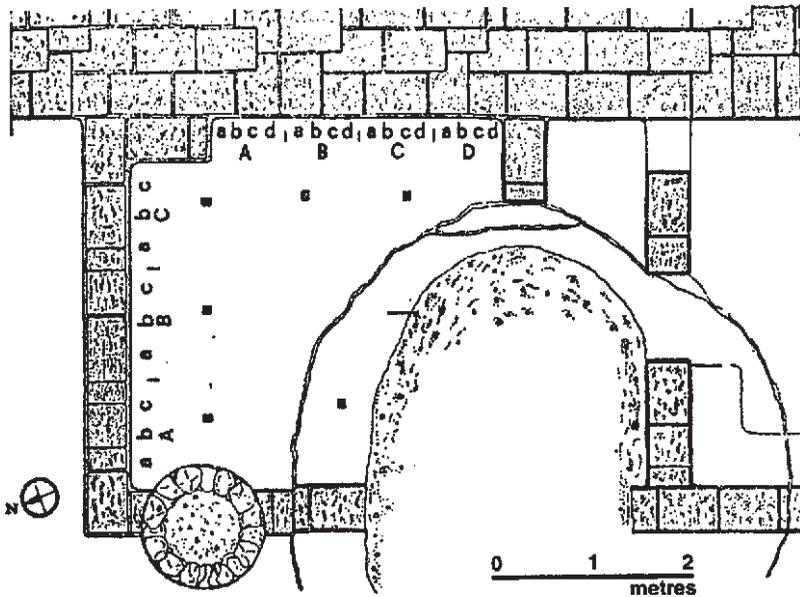


FIGURE 5.2a Palace archives and palace schools: the find loci of tablets in the palace at Ebla, ca. 2350 B.C. The Ebla archive's remarkable state of preservation was owed to the burning of the palace, which baked the tablets. No other writing surface used for administrative documents in any civilization in our sample is improved by burning. After Archi 2003, p. 19, Figure 2.1. For excellent photographs see Veenhof 1986 (including the front cover) and Postgate 1994a, p. 59, Figure 3:8.



- Monthly accounts of distributors of textiles: A: minister Arrukum; B: minister Ibrum;
 C: minister Ibbi-Zikr
 Annual documents concerning incomes (nu-DU): D: minister Ibrum; E: minister Ibbi-Zikr
 Annual accounts of distributions of precious metals: F: minister Arrukum; G: minister Ibrum;
 H: minister Ibbi-Zikr
- I: field texts
 J: agricultural-products accounts
 K: livestock accounts
 L: monthly accounts of deliveries of sheep
 M: chancellery documents
 N: literary texts
 O: unilingual lists
 P: bilingual lists
 Q: ritual for the marriage of King Ibbi-Damu
 R: ritual for the marriage of King Ibbi-Zikr
 S: tenticular tables

FIGURE 5.2b Ancient archivists at work: the archive room at Ebla. *Top*, plan of the central archive (room L. 2769 at location C in Figure 5.2a). *Bottom*, reconstruction showing the arrangement of the tablets according to text type. After Archi 2003, pp. 32–3, Figures 2.6 and 2.7. We know that Ur III scribes used clay tags to identify the contents of containers of tablets (Chapter 3). Here the archivists may have used similar labels to sort documents stacked on shelves. The Erligang storage facility shown in Figure 4.1 also had shelves. Might it have been used to store documents written on bamboo or wood?

four goals of the education of Sargonic Akkadian officials: (1) to familiarize the student with cuneiform writing; (2) to give the student a rudimentary knowledge of Sumerian; (3) to train the student in drafting documents, letters, and accounts; and (4) to familiarize the student with Akkadian literature. How these Akkadian-speaking students began

their study of Sumerian is unknown, although the later practice of the Old Babylonian period gives some hints.²⁰

UR III DYNASTY (2150–2000 B.C.). The Ur III Empire is a byword for intense scribal activity. Surprisingly, however, it has left us little of a lexical nature. Nevertheless, King Šulgi's royal hymns hint that schools of this period underwent a conscious state reform (Text 6.9b).²¹ Piotr Michalowski has reconstructed the curriculum of Ur III schools on the hypothesis that the literary texts that supplied the curriculum of the Old Babylonian schools descended from Ur III predecessors. According to him,

The content of this curriculum has little to do with practical administrative matters. Starting from basic exercises which were meant to facilitate the learning of cuneiform signs, the students proceeded to learn royal and divine hymns, debates, literary letters, myths, epics, and other literary compositions – all of them, in the south at least, in Sumerian. There is little evidence, among the actual school texts, of any training in practical matters; the model contracts, the mathematical exercises, and the Akkadian school letters constitute the only known remnants of such schoolwork. Most of our evidence for administrative instruction comes only from idealized descriptions of school work found in the literary debates and in the post-Old Babylonian “examination texts.”²²

Nissen has a different view of the curriculum of Ur III schools. In his opinion, though Šulgi boasted of being good at writing, music, mathematics, and so on, this cannot “be regarded as the standard for the normal curriculum, but probably only applied to a small minority of the upper classes.”²³ Nissen further argues that

the average training of a scribe had ... to be oriented to the requirements placed on a scribe in his later professional life. Besides learning to read and write, a crucial subject in his training was ... mathematics.... Moreover, the prevailing forms of legal, administrative, and economic documents had to be learned by heart. Finally, it has to be assumed that the spread of specialization, which began at the latest during the Ur III period, also affected the education of the scribe.²⁴

No matter which position we favor, the evidence is clear that the Ur III schools were no longer institutions that aimed only at practical training. They had begun to manipulate history on behalf of rulers. At the same time, having a measure of independence from the rulers, they produced bureaucrats who could influence the behavior of rulers. The *Curse of Akkad* is a fictitious depiction of the fall of the Akkadian dynasty attested in Ur III tablets.²⁵ Michalowski situates its composition in the scribal-training setting of the Ur III state, Akkad's successor. Because the actual events of the change of dynastic power were well within the reach of human memory, he reasons, the school must have been knowingly rewriting history for the indoctrination of future officials.²⁶ However, the *Curse of Akkad* is also a lesson warning future rulers not to repeat the errors committed by the doomed king of the preceding dynasty. Those who claimed to know history and who actually wrote it – graduates of the schools – were claiming to know the future. When today we say “those who do not know history are condemned to repeat it,” we make a similar claim, and we are usually hoping to influence rulers. “The

traditions fostered through the schools provided an ideological continuity for a bureaucratic class, independent, to a degree, from the vagaries of power at the top."²⁷ We shall see in [Chapter 6](#) that the manipulation of history in schools and courts in China was strikingly similar.

THE DEATH OF SUMERIAN. When Sumerian as a spoken language of the streets died out is a thorny question that has puzzled many scholars. If, as Cooper and Michalowski suggest, it was already a dead language by the Ur III period, the fact that it was still the language of education suggests that it served to define and distinguish the educated elite.²⁸ It could serve in this way precisely because it was no longer commonly spoken.²⁹

OLD BABYLONIAN PERIOD (1900–1595 B.C.). Most of our knowledge about education in ancient Mesopotamia comes from the Old Babylonian period. There have been several detailed studies and good overviews of this subject.³⁰ Thus I give only a summary account under the five headings (1) institution, (2) students, (3) teachers, (4) language of instruction, and (5) curriculum. Because the curriculum of this period is exceptionally well documented, and invaluable for comparative purposes, I treat it in a separate section.

1. **Institution.** The institution of education is the tablet house, *eduba*.³¹ The tablet houses were located mainly in major cities such as Nippur, Ur, Kish, and Sippar. So far archaeologists have failed to identify with certainty an *eduba* in an official setting. The majority of the school texts found in Nippur are from only three private houses ([Figure 5.3](#)).³² Other school texts were found scattered in temples and palaces.
2. **Students.** Schooling began in early childhood, at five to seven years old, and lasted until adulthood.³³ The students were from well-to-do families.
3. **Teachers.** There were three kinds of staff in the *eduba*: headmaster, tutor, and proctor.³⁴ How they were recruited is unknown.
4. **Language of instruction.** The language used for instruction could be Babylonian (the native language of most of the students) in the initial stage, and then Sumerian.³⁵ The latter was taught using several literary works carefully chosen for their grammatical coverage.

School Curriculum of the Old Babylonian Period

ELEMENTARY EDUCATION. The elementary curriculum in Nippur had four stages. The contents of the curriculum seem to have been the same for all the schools at Nippur, although the order in which they were covered could vary from school to school. The first three stages did not involve learning complete sentences. At the very beginning, students practiced the mechanics of wedge and sign formation. They impressed the three basic wedges (in other scripts often called “strokes”: horizontal, vertical, and diagonal) repeatedly ([Figure 5.4](#)). The next step was to combine the three wedge forms in a variety of ways, presumably to learn stroke order. Then students began to write common signs taken from a list that Assyriologists call Syllable Alphabet B. This exercise emphasized correct execution of a sign rather than its meaning. After mastering the sign

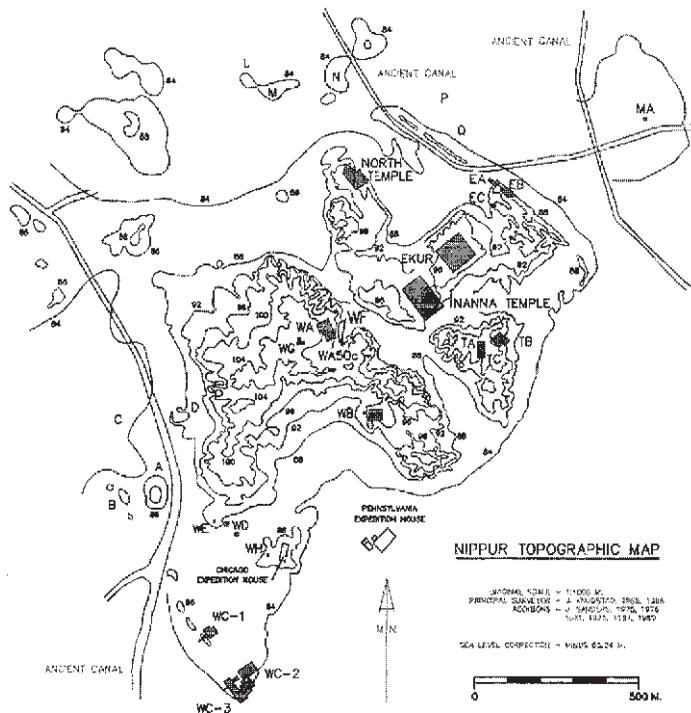




FIGURE 5.4 Schooling at Nippur, the first step: making wedges. (Making wedges was actually the second step; the first was making tablets.) Courtesy of the Penn Museum, image # 133371.

forms, students proceeded to learn their sound values using a text called today after its first line, “Tu-ta-ti.” In “Tu-ta-ti” the signs were arranged in groups of three, each group with a different vowel attached to the same consonant (Figure 5.5, a–b). There were about eighty syllables in “Tu-ta-ti.” Lists of personal names came next. This exercise completed the first stage.

The second stage taught metrological tables and thematic noun lists. The lists began with trees and wooden objects (Figure 5.6 and Texts 5.1a–b). In Sumerian writing, things related to wood have the determinative for wood, so each line of this list begins with this sign (see the left edge of the tablet in Figure 5.6). Vocabulary learning continued with lists of reeds, vessels, leather objects, metal objects, animals and meats, stones, plants, fish, birds, garments, geographical names, stars, and foodstuffs.

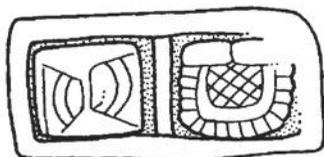
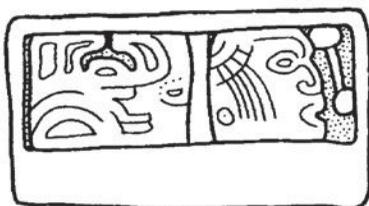
Text 5.1a. Synopsis of the Nippur list of trees and wooden objects. The left column gives the modern numbering of the signs in each category.

001–141	trees
142–159	miscellaneous wooden objects related to school

Tutati Exercise/Sample

tu
ta
ti
tu + ta + ti
nu
na
ni
nu - na - ni

a



c



b

FIGURE 5.5 Vowels and consonants in ancient Mesopotamian, Maya, and modern Philadelphia schools. *a*. Old Babylonian Tu-ta-ti exercises used in Steve Tinney's Sumerian class at the University of Pennsylvania, author's copy. *b*. A Tu-ta-ti exercise tablet from Nippur. Courtesy of the Penn Museum, image # 143185. *c*. A Maya equivalent to Sumerian Tu-ta-ti carved on stone from a Maya school at the Osario, Chichen Itza. After Houston 2000, p. 151, Figure 3.

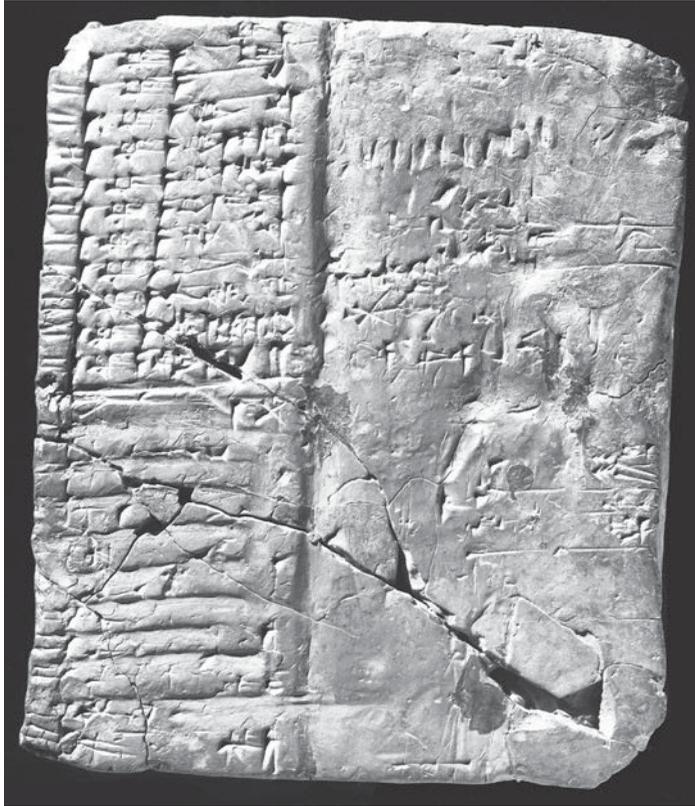


FIGURE 5.6 Follow me: a Type II school tablet from Nippur. This tablet type has two columns on the obverse. The left contains the teacher's master model of an extract from a lexical list or a name list; the right is a scratch pad on which students can write repeatedly. The model text on the tablet illustrated here is an extract from the list of woods, but on the scratch pad portion the student wrote a variety of exercises, not all of them related to the model. The reverse side of the tablet contains a list of personal names. Courtesy of the Penn Museum, image #143183.

160–260	furniture and household utensils
261–320	boats
321–325	staves
326–373	chariots and wagons
374–406	doors and locks
407–425	tools for weaving and spinning
426–435a	repetitive items
436–441	balances
442–495	agricultural tools
496–507	maces
508–514	boards
515–526	measuring vessels
527–561	traps and throwing weapons
562–570	axes

571–579	miscellaneous, including wooden wheel parts
580–591	shovels
592–596	“old wood”
597–620	musical instruments
621–629	racks for vessels
630–633	(unclear)
634–644	siege engines
645–706	varia
707	subscript: praise be Nisaba

After Veldhuis 1997, p. 85, slightly modified.

Text 5.1b. Subsection for chariots in the list of trees and wooden objects.

326	chariot
327	cabin of the chariot
328	box for the whip of the chariot
329	(unidentified)
330	rear part of the chariot
331	(part of) the yoke of the chariot?
332	“dugsguard” of the chariot
333	part of the pole of the chariot?
334	tethering ropes of the chariot
335	side poles of the chariot
336	seat of the chariot
337	footboard of the chariot
338	handle of the chariot
339	peg of the handle of the chariot
340	yoke of the chariot
341	peg of the yoke of the chariot
342	wheel of the chariot
343	peg of the wheel of the chariot
344	horn of the chariot
345	front guard of the chariot
346	front guard of the chariot

After Veldhuis 1997, pp. 92–3.

The third stage loaded the students with more advanced lists (e.g., kinship terms), metrological facts, and simple arithmetic, all to be learned by rote memorization. Table 5.1 reproduces such an exercise tablet, with the teacher’s copy of a reciprocal table on the obverse (the student’s copy is erased), and a list of capacities on the reverse.

Only when students advanced to the fourth stage did they begin to encounter sentences written in Sumerian (e.g., model contracts, Text 5.2) and the most basic literary Sumerian

TABLE 5.1. A mathematical tablet from Nippur.

Obverse I	Obverse II	Reverse III	Reverse II	Reverse I
$\frac{2}{3}$ of sixty is 40	(erased)	(top missing)	(top missing)	(missing)
Its half is 30		5 (gēšu) gur	12 [gur]	
Its 3rd part is [20]		1 (šar) gur	13 [gur]	
[Its 4th part] is [15]		2 (šar) gur	14 [gur]	
[Its 5th part] is 12		3 (šar) gur	15 [gur]	
Its 6th part is 10		4 (šar) gur	16 [gur]	
Its 8th [part] is 7;30 ^a		5 (šar) gur	17 [gur]	
Its 9th [part] is 6;40 ^a		6 (šar) gur	18 [gur]	
Its 10th part is 6		7 (šar) gur	19 [gur]	
Its 12th part is [5]		8 (šar) gur		
(rest missing)		9 (šar) gur		

a. “The semicolon is a ‘sexagesimal point’ marking the boundary between whole and fractional parts of the number” (Robson 2008, p.16).

Source: After Robson 2008, p. 101, Table 4.6.

proverbs – for example, “Fate is a cloth stretched out in the desert for a man”; “The word of a poor man is not accepted.”³⁶ Proverbs were usually arranged by theme into collections, some of which were standardized, judging from their many duplicates. Students copied extracts from these collections. In the model contracts all the sentences were fixed formulas. In their exercises the students needed only to change the numbers (in ascending order $\frac{1}{2}$, $1\frac{1}{2}$ in Text 5.2) and add personal names learned from lexical lists. At this stage the students were given further practice in writing metrological units such as areas, capacities, and weights. Calculations were also introduced at the end of this stage.³⁷

Text 5.2. Two model contracts concerning the sale of a house.

- (1) A built-up <house> plot of $\frac{1}{2}$ sar with a second floor and a wooden roof; the door and the bar are there. Its exit is on the broad street, next to the house of Lugal-a the house of Amarabzu son of Lu[galezen] from Amarabzu. Dingirdanumea bought; its full price $\frac{2}{3}$ mana silver he paid him. In the future Amarabzu and his heirs, as many as there will be will not raise a claim to this house; thus he swore in the name of the king.
- (2) A built-up house plot of $1\frac{1}{2}$ sar at the main street to the Abulmah next to the house of Uršubula, the house of Ilakšuqir from Ilakšuqir Nurilishu bought. Its full price $\frac{2}{3}$ mana and 5 shekels silver he paid him. In the future Ilakšuqir and his heirs, as many as there will be will not raise a claim to this house; thus he swore in the name of the king.

After Veldhuis 1997, pp. 60–1.

MIDDLE-LEVEL EDUCATION. After elementary education the students advanced to a higher level that added four hymns to the curriculum. The hymns’ grammatical difficulties ascended from the easiest, “Praise of Lipit-Eshtar” (fifth king of the Isin dynasty),

to hymns praising other kings and Nisaba, patron goddess of scribes. In the “Praise of Lipit-Eshtar” the literary influence of the lexical lists is conspicuous in lists of nominal phrases, such as the epithets of the king at the beginning (Text 5.3). The careful wording of the hymn and its thorough sampling of basic Sumerian verbal inflections bespeak its conscious design to help Akkadian-speaking students learn a dead language.³⁸ Yet pedagogy was not the only agenda behind it. The “Praise of Lipit-Eshtar” was also carved on basalt statues as a testimony to royal power.³⁹ In this hymn, the equation of wisdom with writing and the promise that writing and schools will perpetuate the memory of the king’s glory serve the scribal class by ingratiating it with the king. They are manifestations of a scribal ideology that has managed to hijack the vehicle of royal display to further its own interests. This nonroyal scribal ideology appears over and over in other literary works that were used in the curricular setting and that therefore shaped the thinking of generations of students.

Text 5.3. Excerpt from the “Praise of Lipit-Eshtar” (numbered by Assyriologists as Lipit-Eshtar B in ETCSL).

Lipit-Eshtar, proud king, enthroned prince, most seemingly offshoot of kingship, who walks like Utu, brilliant light of the Land, lofty in nobility, riding on the great divine powers; who settles the people in the four quarters; favoured by Enlil, beloved by Ninlil, trustworthy youth with shining eyes, worthy of the throne-dais, whose seemingly head is adorned with the tiara, the good headdress, who holds in his hand the sceptre over the black-headed, prince Lipit-Eshtar, son of Enlil, wise shepherd, who leads the people to let them relax . . . in pleasant shade, lord, great bison, beloved by An! Your trust is put in mother Ninlil; Lipit-Eshtar, you exert great power.

You, who speak as sweet as honey, whose name suits the mouth, longed-for husband of Inana, to whom Enki gave broad wisdom as a gift! Nisaba, the woman radiant with joy, the true woman, the scribe, the lady who knows everything, guides your fingers on the clay: she makes them put beautiful wedges on the tablets and adorns them with a golden stylus. Nisaba generously bestowed upon you the measuring rod, the surveyor’s gleaming line, the yardstick, and the tablets which confer wisdom.

...

Lipit-Eshtar, Enlil’s son, you have made every mouth speak of your righteousness. The tablets will forever speak your praise in the *eduba*. May the scribes . . . and glorify you greatly! May eulogies of you never cease in the *eduba*! Perfect shepherd, youthful son of Enlil, Lipit-Eshtar, be praised!

After ETCSL 2.5.5.2.

In addition to these elementary literary works, students needed to learn other, more practical subjects for the would-be administrator, including legal phraseology, letter writing, formulas for stelae, technical jargon, mathematics and surveys (Text 5.5), and even music.⁴⁰

HIGHER EDUCATION. Many students probably graduated from school after the intermediate level, but some evidently stayed on for higher education. Some scholars have

divided this phase of higher education into four grades. One Old Babylonian catalogue lists ten literary texts that were probably taught in a fixed order. They include two royal hymns, three hymns to deities, a temple hymn, three narratives, and a composition written around the cuneiform sign for “hoe,” exploring the paradigmatic nature of the writing system (see “The Urge to be Exhaustive,” earlier in this chapter).⁴¹ Excavation of the private schools at Nippur shows that other texts were also used, including lamentations over the destruction of cities, debates, and a group of *eduba* texts that to a large extent idealized school life but nevertheless underlined the importance of learning and of obeying the teachers (Text 5.4a–b).

Text 5.4a. A supervisor’s advice to a young scribe (*Eduba C*).

(The supervisor speaks:) “One-time member of the school, come here to me, and let me explain to you what my teacher revealed. Like you, I was once a youth and had a mentor. The teacher assigned a task to me...I did not depart from my teacher’s instructions...I just did whatever he outlined for me...He guided my hand on the clay and kept me on the right path. He made me eloquent with words and gave me advice. He focused my eyes on the rules which guide a man with a task... Your name will be hailed as honourable for its prominence...

After *ETCSL* 5.1.3.

Text 5.4b. In praise of the scribal art (Examination Text D).

The scribal art is the mother of orators, the father of masters,
The scribal art is delightful, it never satiates you,
The scribal art is not (easily) learned, (but) he who has learned it need no longer be
anxious about it,
Strive to (master) the scribal art and it will enrich you,
Be industrious in the scribal art and it will provide you with wealth and abundance,
Do not be careless concerning the scribal art, do not neglect it,
The scribal art is a “house of richness,” the secret of Amanki,
Work ceaselessly with the scribal art and it will reveal its secret to you,
If you neglect it, they will make malicious remarks about you,
The scribal art is a good lot, richness and abundance,
Since you were a child it causes you grief, since you have grown up ...

...

To have superior knowledge in Sumerian, to learn ...

To write a stela, to draw a field, to settle accounts ...

After Sjöberg 1972, p. 127.

What was the aim of the most advanced study? Presumably students with such training could become upper-echelon officials. Alternatively, they could become teachers themselves, and hence continue the scribal tradition, as the supervisor in Text 5.4a

tells us. But career considerations notwithstanding, we should not rule out the desire to acquire knowledge for its own sake (“it never satiates you” in [Text 5.4b](#)). Erudite teachers and gifted students are probably responsible for most of the extant Sumerian literature, historical texts (e.g., the Sumerian King List, [Text 1.5](#)), and mathematical knowledge ([Text 5.5a](#)).

Text 5.5a. Mathematics in public works.

The cost in silver of excavating a canal

A small canal. 5 *uš* the flank, 3 cubits the width, 3 cubits its depth, 10 *shekels* the work norm, 6 barley-corns the wages of a hired man. Ground, mud, workers, silver are what? 1 15 *šar* the ground (the bottom area), [2 *iku*] 25 *šar* the mud (the volume), 2 30 the workers, and $\frac{2}{3}$ *mina* 5 *shekels* the silver.

The daily progress in excavating a canal

A small canal. 1 cubit the width, 1 cubit its depth, $\frac{1}{3}$ *mina* of mud the work norm. One man, of flank what did he take? 4 n. of flank he took.

The daily progress in excavating a substructure

A substructure. 5 n. the flank, $1\frac{1}{2}$ n. the front, $\frac{1}{2}$ n. its depth, 10 *shekels* the work norm. One man, of flank what did he take? You, with your doing: The front and its depth bring together (multiply), 9 it gives to you. The opposite of 9 resolve, 6 40 it gives to you. The 6 40 steps (times) the work norm raise (multiply), 1 06 40 it gives to you. 1 06 40 takes one man.

After Friberg 2000, pp. 126–7.

Text 5.5b. A mathematical problem in the distribution of rations, from the Rhind Papyrus.

The standard of entering into matters, knowing all that is, [all] the obscure things, [all...], and all secrets. Now this roll was copied in Year 33, month 4 of Akhet, [under the Person of the Dual] King: Aawoserre, given life, according to the writings of old, made in the time of the Dual [King: Nima]atre. It was the scribe Ahmose who copied this document.

(Problem 65)

Method of distributing 100 loaves amongst 10 men, if the skipper, the crew-leader and the doorkeeper [receive] double.

Its procedure: you add up the people to receive supplies: thus 13.

Divide the 100 loaves by 13. That makes $7 + \frac{2}{3} + \frac{1}{39}$ [i.e., $7\frac{9}{13}$].

Then you say: [this] is the consumption of the 7 men, [while] the skipper, the crew-leader and the doorkeeper receive double.

Opening colophon after Parkinson 1991, p. 77; problem after Kemp 2006, p. 176.

EGYPT

Few texts can be identified as school texts or school exercises in the millennium between the first Egyptian writing around 3000 B.C. and the beginning of the Middle Kingdom (2055 B.C.). No known text or image depicts scribal training. Yet we know that the Egyptian writing system had been developing continuously in this period and had undergone several major reforms that redirected its trajectory.⁴² All these developments must have rested on an enduring educational system. Training scribes must have produced voluminous school exercises and school texts like those from Mesopotamia. The conspicuous lack of them should not surprise us; how much survives of the scribbles and homework we did in our own school days? In this sense Mesopotamia is truly an exception because of the happy historical accident that the scribes chose clay as their writing surface *and* used unneeded tablets as house fill. To draw a sketch of Egyptian education we must rely heavily on New Kingdom evidence and clues from Mesopotamia.

Onomastica

The two writing boards from two Old Kingdom elite tombs at Giza (Chapter 1, [Figure 1.10](#), bottom), with lists of royal names, names of gods, and place names, probably represent an early onomasticon.⁴³ Otherwise, word lists do not appear in the archaeological record until the Middle Kingdom ([Text 5.6](#) and [Figure 5.7](#)).

Text 5.6. Synopsis of a Middle Kingdom onomasticon with excerpt.

(The preface is lost but probably resembled that of a New Kingdom onomasticon; see [Text 5.7](#). After the title comes a list of words, each occupying a separate and numbered line. The determinative of each word, which signifies its thematic group, is placed in a distinct subcolumn for easy recognition: see the columns with arrows in [Figure 5.7](#), and compare with the column of cuneiform determinatives in [Figure 5.6](#).)

1–90	[plants and liquids]
91–2	oils
93–121	plants and liquids
122–33	birds
134–52	fish
153–63	birds
164–70	desert animals
171–87	fortresses of Nubia and Upper Egypt
188–215	towns of Upper Egypt
216–53	bread, cakes and confectionery (this group has a heading “Things placed in water,” which refers to the practice of moistening bread before eating)
254–65	cereals
266–70	minerals (perhaps used as seasonings, as “salt” is included)
271–311	anatomical parts (used in butchery)
312–23	fruits and tree-produce

(The final lines from line 315 read as follows:)

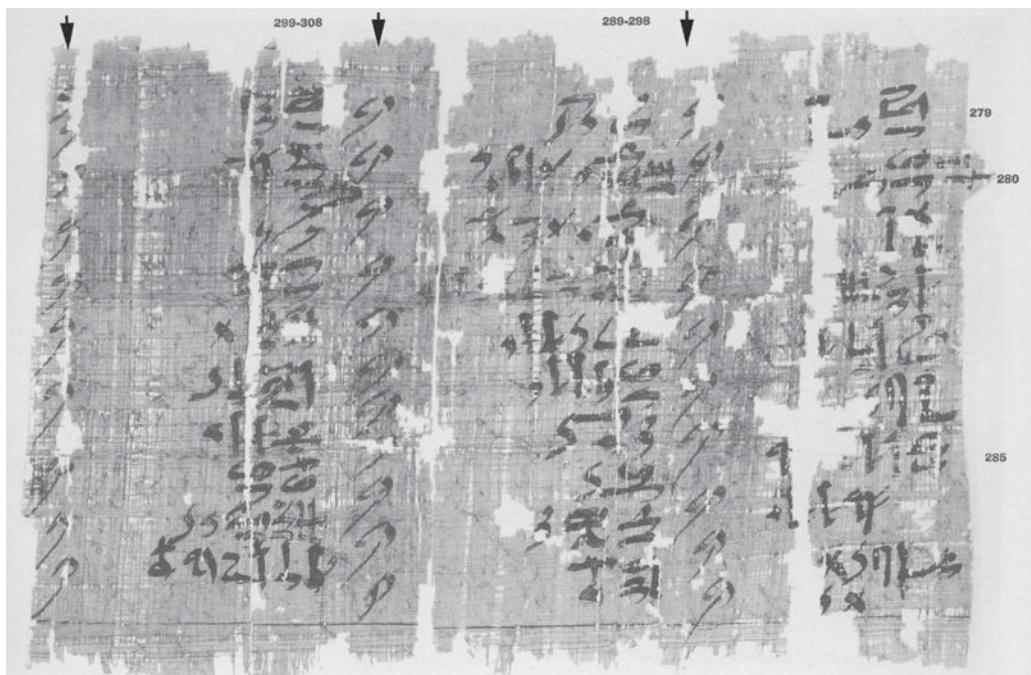


FIGURE 5.7 A Middle Kingdom onomasticon. The columns with arrows contain the same determinative. After Gardiner 1947, Vol. 3, Plate IV, top.

“salt”-fruit (= fenugreek)
 “natron”-fruit (?)
 unripe sycamore figs
 persea fruit
 berry of Christ-thorn
 bark of st[...]
 aniseed
 interior of fenugreek
 Total 323 (items); not 343 (as there should have been).
 After Parkinson 1991, pp. 76–7.

What Assyriologists call lexical lists, Egyptologists call by the Greek term *onomastica*. Different nomenclatures notwithstanding, all are lists of things thematically arranged. As a pedagogical tool Egyptian *onomastica* were copied by students in large numbers, just as in Mesopotamia. But is the onomasticon a Middle Kingdom invention, or a much older genre dating back to the origin of Egyptian writing? As we have seen in Chapter 1, the earliest extant Egyptian writing takes the form of simple numbers, words, or phrases, not complete sentences.⁴⁴ Continuous texts appeared only after the Third Dynasty. The words are mostly names of some sort, identifying commodities, people, and places. At the earliest stage, word lists alone would have sufficed for training in basic literacy. Encyclopedic New Kingdom lists like the one in Text 5.7 are surely

the result of accumulation over a long stretch of time. Writing allows expanding lists beyond the capacity of human memory.

Text 5.7. Synopsis of a New Kingdom onomasticon with excerpt.

I. Introductory Heading. "Beginning of the teaching of making intelligent, of instructing the ignorant and of knowing all that is: what Ptah created, what Thoth copied down, heaven with its affairs, earth and what is in it, what the mountains belch forth, what is watered by the flood, all things upon which Re has shone, all that is grown on the back of earth, excogitated by the scribe of the sacred books in the House of Life, Amenope, son of Amenope. He said:"

II. Sky, water, earth (Nos. 1–62). "sky, sun, moon, star... water, flood, sea... clay, woodland, sand..."

III. Persons, court, offices, occupations (Nos. 63–229). "god, goddess, male spirit, female spirit, king, queen, king's mother, king's child, crown-prince, vizier... fan bearer on the right of the king... royal scribe within the palace... lector-priest, temple scribe... bringer of offerings, bearer of the wine-jar stand... milker..."

IV. Classes, tribes, and types of human being (Nos. 230–312). "man, mankind, infantry, chariotry, *yjemh*-people, *yjehnu*-people (all foreign peoples)..."

V. The towns of Egypt (Nos. 313–419). "town, Senmet, Elephantine, Ombi..." (a long list of the towns of Upper Egypt and a shorter one of towns in Lower Egypt, arranged consecutively from south to north.)

VI. Buildings, their parts, and types of land (Nos. 420–73). "castle, settlement, house, room, living-room, side-room, basement, outer chamber, broad hall, alcove, store house, colonnade, upper chamber..."

VII. Agricultural land, cereals and their products (Nos. 474–555). "ploughland, hillock, mud bank... threshing floor, winnow... white emmer, red emmer... dates, flour..."

VIII. Beverages (Nos. 556–78). All sorts of untranslatable beer and wine.

IX. Parts of an ox and kinds of meat (Nos. 579–610). "meat, head, neck, breast... foreleg, underpart of foreleg... cooked meat, spiced meat."

Adapted from Alan Gardiner 1947, Vol. 1, pp. 37ff., and Vol. 2, passim.

See also Parkinson 1999, pp. 61–2.

Because few word lists for the purpose of elementary education have survived from before the New Kingdom, we might turn to administrative documents for traces of them. After all, what the scribes wrote in their daily business was based on what they had learned as students. A sheet of accounts from the Old Kingdom pyramid temple at Abusir brings this out nicely. The headings and subheadings are explicit categories under which individual elements are listed: place of origin (Kaki, Iu-Shedefwi); bread (*beset* bread, *pesen* bread, *hetja* bread); and so on.⁴⁵ The scribe's mania for listing not only was the backbone of administration but also manifested itself in much religious, commemorative, and literary composition. The execration text used in state magic against

Egypt's enemies contains what is essentially a comprehensive list of enemies sorted by geography and type (Text 5.8).⁴⁶

Text 5.8. A Middle Kingdom execration text listing rebels.

[The preceding text concludes "and every rebel who plans to rebel"]

in this entire land:

all the Medjai of Webat-sepet;

all the Nubians of Wawat, Kush,

Shaata and Beqes,

[their] heroes, [their] runners,

all the Egyptians who are with them,

all the Nubians who are with them,

all the Asiatics who are with them,

all the families (?) of Upper and Lower Egypt (?) [who are with them],

the [...] who are with them,

all the [...] who are wi[th] them,

all the [for]eigners who are with [them];

all the Tjemhu of all the western hill-countries of the land of Tjemhu,

of He[...]kes and Hebeqes,

their heroes and their runners;

the dead man Intefiqer

born of Satsasobek,

and born of Intefiqer;

Senwosret born of Imas.

After Parkinson 1991, pp. 125–6.

We might be reminded of the Genealogy of the Hammurapi Dynasty (Text 1.3). Both are ritual texts that consist mainly of lists of names for invocation, one for cursing, the other for blessing.

Enumeration Literature

Literary compositions too are influenced by list mania, thereby betraying their pedagogical function and the scribal status of their authors. In Mesopotamia the lexicon often inspired literary composition. We have already seen the listlike hymn to Lipit-Eshtar used for beginning Sumerian. "A text may consist mainly of a listing of the terms of a lexical set. Each term is encased in a fixed repeated formula and provided with a comment. The enumeration is inserted in a narrative or laudatory frame."⁴⁷ The poem in Text 5.9 consists of a listing of the lexical subset of plants grazed on by sheep inserted into a lyrical frame. The plant names are encased in this formula: "May my sheep eat my plant, my (plant name), which (comment)."⁴⁸

Text 5.9. Excerpt from a Mesopotamian poem inspired by a lexical list.

May my sheep eat my plant, my *šakir*-plant,
Support of the orphan, sustenance of the widow.
May my sheep eat my plant, my colocynth,
a string of balls (?) in the fields.
May my sheep eat my plant, my reed shoots in the marshes,
Beerwort, taken with honey.
May my sheep eat my plant, my grown reeds,
an orchard with luxuriant fresh apples.
May my sheep eat my plant, my licorice,
Aromatic of the fields, dripping with honey.
...
The young man was gentle toward his wife,
The Wild Bull stood up to give a blessing.
He was gentle toward holy Inanna.
Embracing [her...] – was not he affectionate to her?
[Dumuzi] stood up to [give a blessing].

After Civil 1987, pp. 40–1.

In the New Kingdom “Tale of the Two Brothers,” someone asks a cowherd who is carrying fodder, “How much do you have on your shoulders?” The cowherd replies, “Emmer: 3 sacks; barley: 2 sacks; total 5.”⁴⁹ In the so-called *Miscellanies*, which were composed for scribal training, long lists of vegetables, fishes, and the like are embedded within seemingly literary texts (Text 5.10).⁵⁰ We now turn to this corpus of texts and the curriculum it represents.

Text 5.10. A model letter commanding preparations for Pharaoh’s arrival.

Further, apply yourself to have things ready before (the arrival of) Pharaoh, your good lord, with zeal, firmness and efficiency. Do not let yourself be found fault with. Look to yourself carefully and beware! Be not remiss! List of all that you shall cause to be ready. Let the basket-makers be supplied with reeds and rushes. Likewise, cause to be made 10 trays for heaps, 100 ring-stands for bouquets, and 500 food-baskets. List of the food-stuff that you shall get upon them: Fine bread: ... *ibšt*-biscuits, 10000. Fine bread: *tt*-loaves, 2000. Fine bread: *ht*-loaves, 1000... Dried meat, 100 baskets; amounting to 300 *dgyt*-cuts. Entrails, 250 handfuls. Milk, 60 *gsr*-measures... Grapes, 50 *pdr*-sacks... Charcoal, 200 *gsr*-measures... Likewise incense, sweet moringa-oil, *inb*-oil of Alasia, *nkftr*-oil of Sangar... *gt*-oil of Takhsy... *bg*-fish of the Ptri-waters... *tpy*-fish of the pond, *hpnpn*-fish of the reservoir, fat quails... Fine chariots of *brry*-wood more resplendent than lapis lazuli, their [...] being wrought in gold, their *htr*-piece of gold and their *thr* having the hue of red cloth and being carved with blossoms; (the) board wrought in *dšr*-wood... Bows and many quivers... lances, swords...

After Caminos 1954, pp. 198–200.

Schooling in Egypt

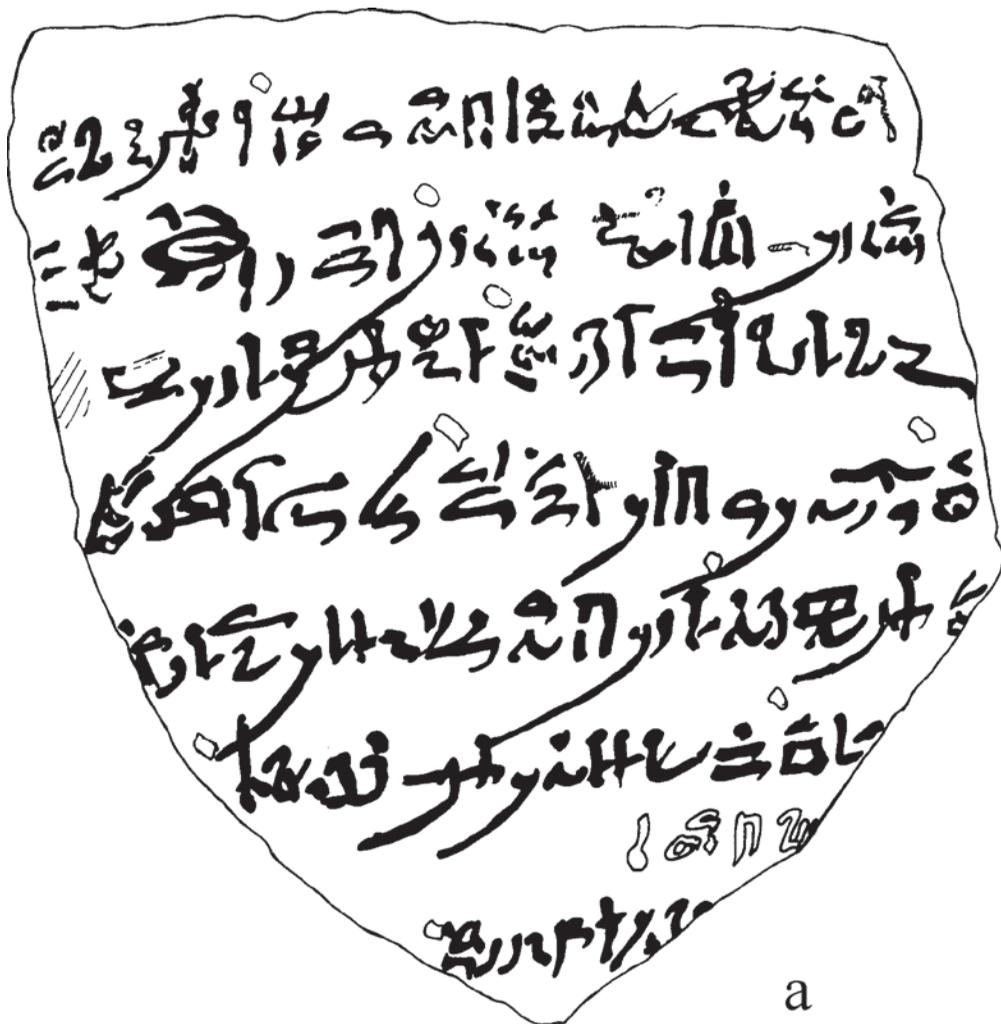
The texts today grouped together under the title *Miscellanies* survive mainly in practice copies on papyrus and ostraca written by apprentice scribes in government offices. They include Middle Egyptian classics composed during the Middle Kingdom and Late Egyptian hymns, official letters, and reports mostly written in the New Kingdom.⁵¹ Within the corpus, the most extensively copied text is the *Satire on Trades*, which casts the lofty scribal profession in high relief upon a background of paltry trades (Text 5.11 and Figure 5.8, a). Its remarkable longevity and popularity are testimony to its firm grasp of scribal aspirations: writing gives the power to control. However, none of these texts is suitable for teaching beginning students individual signs and words. Because of this, researchers at one time proposed that students began their training with whole sentences, but a moment's reflection should be enough to persuade us that elementary education must begin with isolated strokes, signs, and words. A beginner must practice long and hard just to acquire the motor control necessary to produce regular, legible letters or characters. Something resembling Henry Fischer's *Ancient Egyptian Calligraphy: A Beginner's Guide to Writing Hieroglyphs* (Figure 5.8, b) must have existed to guide the novice in making legible signs, stroke by stroke, both in hieroglyphic and in its cursive forms: cursive hieroglyphic and hieratic. Primary school children in the United States today learn to form their letters using similar model books. Experience with our own children tells us that it is very difficult to teach a kindergartener to write complete sentences. Even the aforementioned onomastica probably would have been tough for a first-year student. There is evidence that students in Egypt and Mesopotamia began schooling when they were five or six years old and spent four years at elementary school.⁵² Some Egyptologists believe that the cursive scripts were the first to be learned and often the only ones.⁵³

Text 5.11. Excerpt from *Satire on Trades* (also called *The Teaching of Khety*).

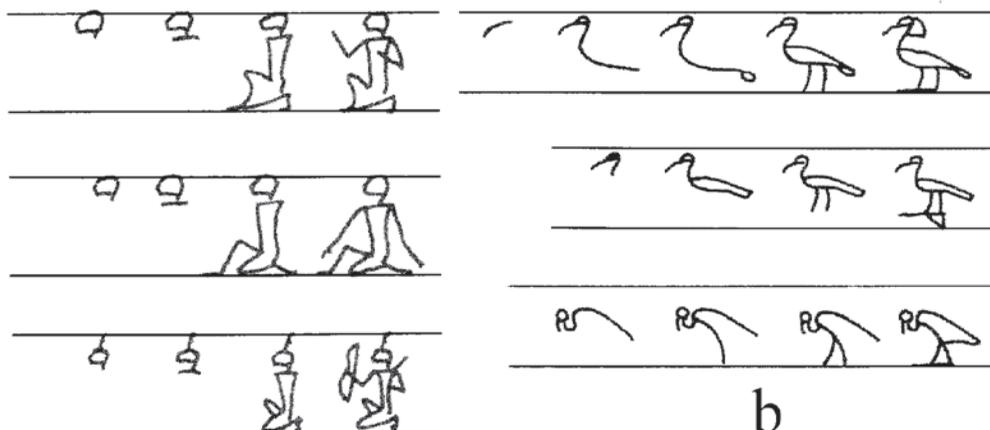
Beginning of the teaching made by the man of Sile, called Duaf's son Khety, for his son called Pepy, while journeying south to the Residence to place him in the scribal school, in the midst of the children of the officials and as the foremost of the Residence.

Then he said to him: "I have seen beatings! Set your heart to writings. Observe how it rescues from labour! Look, there is no excelling writings – they are a water-tight boat! Read at the end of the *Compendium*, and you will find these verses there, saying: 'A scribe in any position in the Residence – because of it, he will never be wretched.'

He fills another's want even before that person can leave the court content. I can see no other profession like it, one about which those verses could be said. I shall make you love writing more than your mother; I shall make its beauties be shown to you. Now, it is greater than any other profession. There is not its like in the land. The scribe begins to flourish when he is a child; he will be greeted, will be sent to do missions, before he has arrived at the age to wear a kilt.



a



b

FIGURE 5.8 Student exercises for learning Egyptian. *a*. A hieratic student copy of a passage from the *Satire on Trades* written on an ostracon in black (inked-in) and red (outlined). The red ink was used to mark punctuation above the lines and to add the date of copying in the second line from the bottom. From the workmen's village at Deir el-Medina. After McDowell 1999, p. 131, Figure 21. *b*. Stroke-by-stroke learning of hieroglyphs in Henry Fischer's *Ancient Egyptian Calligraphy: A Beginner's Guide to Writing Hieroglyphs*. After Fischer 1983, p. 15, A₃, A₇, A₁₂; p. 27, G₂₅-G₂₇.

I can see no sculptor on a commission, nor goldsmith being sent. But I have seen the metal worker at his labour at the mouth of his furnace, with his fingers like a crocodile's, and stinking more than fish roe.

...

And the field-worker laments more than the guinea fowl, his voice louder than the ravens, with his fingers swollen and with all sorts of excessive stinks. He is weary, having been assigned to the Delta, and so he is always in rags. He's well – well among lions!...

...

And the washerman washes on the riverbank, and he is near to the crocodile. 'Father, come out of the flowing water!' say his son and daughter. This is no profession that anyone can be content in, more so than any other profession; his food is mixed with shit, and no part of him is clean. He puts himself to the undershirts of woman who is in her period;

...

But if you know writings, all will be well for you; more so than with these professions I have shown you. Look at them, at their wretchedness! One cannot call a field-worker a man: beware of this! Look, what I have done in coming south to the Residence – look, I have done for your sake. A day in school is good for you – it is for eternity, its works are mountains."

...

After Parkinson 1997, pp. 275–9.

Achieving basic literacy and learning arithmetic (see the Rhind Mathematical Papyrus, [Text 5.5b](#)) were not the only aims of schooling. One text mentions teaching "all the arts of war."⁵⁴ Court etiquette was presumably taught in court schools to princes and their companions.

Beyond the initial stage, learning to write must always have involved chanting. In *The Teaching of King Merikare*, King Khety tells his son Merikare, "[D]o not kill a man whose excellence you know, with whom you used to chant the writings."⁵⁵ Chanting helped pupils memorize the practice texts they would write (just as primary school children in the United States today have a song to help them memorize the alphabet). When the texts were Middle Egyptian classics that sounded very different from the vernacular Late Egyptian the children spoke in daily life, this must have been particularly helpful. Egyptian schoolchildren also learned catchy mathematical formulas. "They say: 'three plus three ...'"⁵⁶

No physical remains of schools survive, but a few documents mention their existence. In [Text 5.11](#) the father, Khety, was from a provincial place; he sent his son to a school in the royal residence city to study with the children of court officials. But there were surely also local schools and informal teaching. The majority of New Kingdom student exercises from Egypt are from the workmen's village at Deir el-Medina. They have survived because the local students wrote on ostraca, that is, potsherds and pieces of limestone. These were locally abundant because of the villagers' work – tomb building

in the Valley of the Kings – and the stone flakes provided an ideal surface for writing (Figure 5.8, a). Andrea McDowell convincingly argues that these exercises were written by advanced students who had already left elementary school. Their find loci do not support the identification of a local school.⁵⁷

MAYA

Little is known about scribal training in Maya. There is a term “houses of writing” (*ts’ibal na:h*) in classical Maya, which, like the Sumerian “tablet house” or Egyptian “room of teaching” or “house of life,” might refer to scribal schools.⁵⁸ Several architectural structures have been identified as houses of writing (Figure 5.9). The only known text that can be compared to the pedagogical lists of Mesopotamia and Egypt is from a glyph band carved on stone blocks on a “house of writing” at Chichén Itzá (Figure 5.5, c). It pairs glyphs that share a vowel but differ in their consonants. Given the similarity between this and the Tu-ta-ti syllabic list from Mesopotamia (Figure 5.5, a–b), Stephen Houston is probably right to connect the Chichén Itzá list with a Maya syllabic primer.⁵⁹ Unlike the Mesopotamian list, which comes to us through student exercises on clay tablets, the Maya example is carved on stone in a scribal school. It perhaps functioned as a permanent and canonical model for students to copy on perishable bark and palm leaves. Alternatively, it might simply be a display announcing the purpose of the building. Could a writing system and scribal tradition like those of the Maya possibly have functioned without lexical lists? Can we think of any other mechanism for standardizing and transmitting the script?⁶⁰ It is hard to imagine how a Maya teacher would teach his students without lists. Writing is a system; a system needs to be learned systematically. The Maya are known to have written on perishable materials.⁶¹ The likelihood is that written lists existed but have perished.

The corpus of Maya writing does not lack lists of signs. The “head variants” in early Maya writing may represent lists of gods, assembled as patrons of a particular site (Plate XXIV, left).⁶² A list of day names from the 260-day calendar was written neatly on a Late Preclassic–Early Classic vase from a temple at Tikal (Plate XXIV, right).⁶³ The Classic Maya king lists are certainly comparable to the written lists of personal names in other civilizations, and the pervasive use of “name tags” in Maya writing underscores the importance of names to the Classic Maya. The Maya lexicon as known at present can be sorted into distinct categories such as vessels (e.g., drinking vessels, plates, tripod plates), ornaments (e.g., collar ornaments, ear-spools), architectural terms (e.g., lintels, doorways, thrones, temples), body parts (e.g., head, eye, nose), and human actions (e.g., return, leave, arrive).⁶⁴ We might compare these semantic categories with those in Mesopotamian and Egyptian lexical lists and speculate about the existence of similar lists in the Maya schools. Stuart and Houston attribute the practice of name-tagging objects to a symbolic gift economy that involved feasting.⁶⁵ Stuart embraces the onomastic theory of the origin of writing because of the importance of names in the extant corpus of Maya writing.⁶⁶ Might we go a step further and suggest that name-tagging was essential to the administration of the state economy?

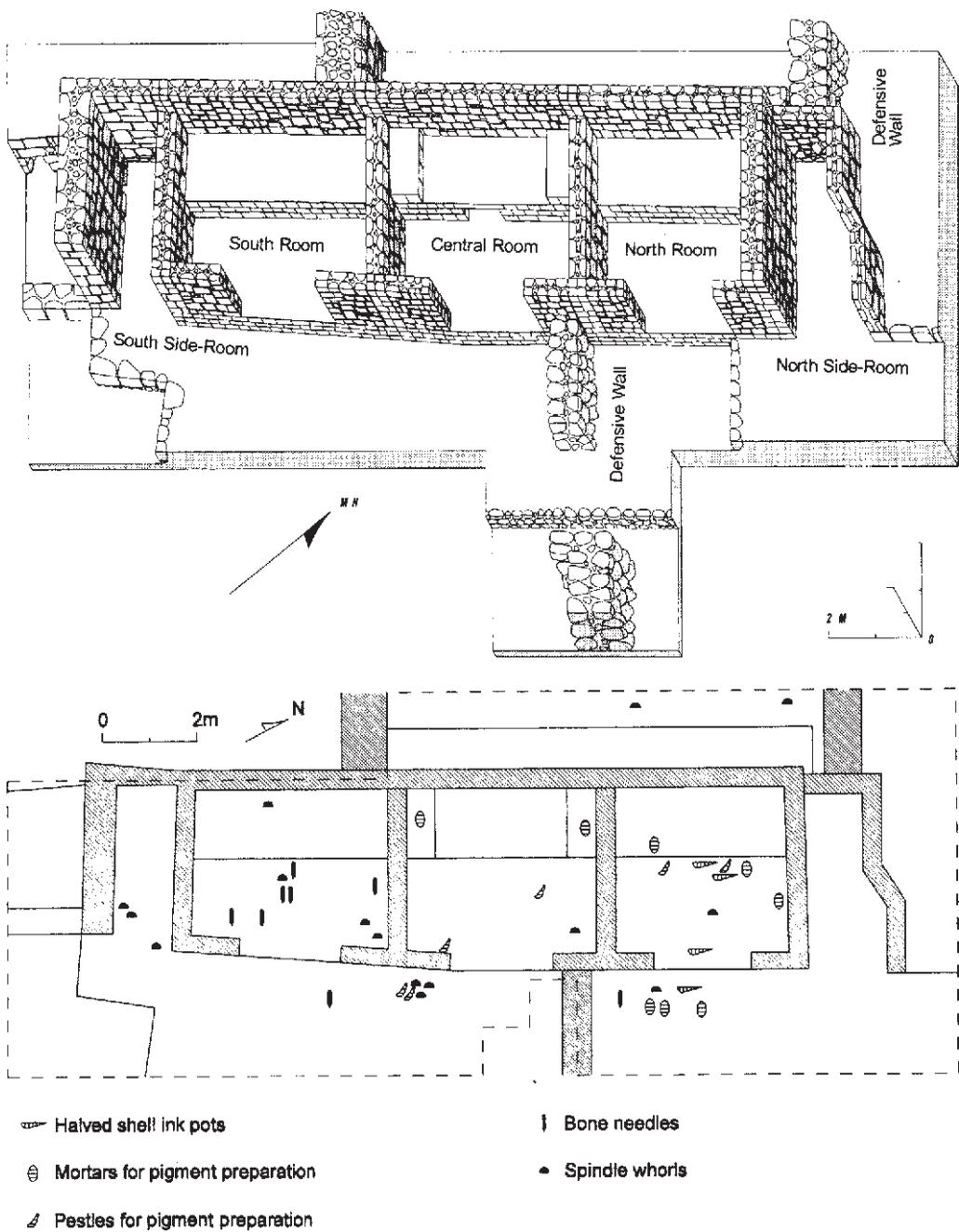


FIGURE 5.9 A Maya school: Structure M8-10 at Aguateca, Guatemala. Like the Palace at Ebla (Figure 5.2), this Late Classic Maya city was burned by enemies, thanks to which some artifacts were preserved in their original locations. Structure M8-10 has yielded many scribal implements and has therefore been plausibly identified as a “house of writing.” After Inomata and Stiver 1998, pp. 438-9, Figures 4 and 6.

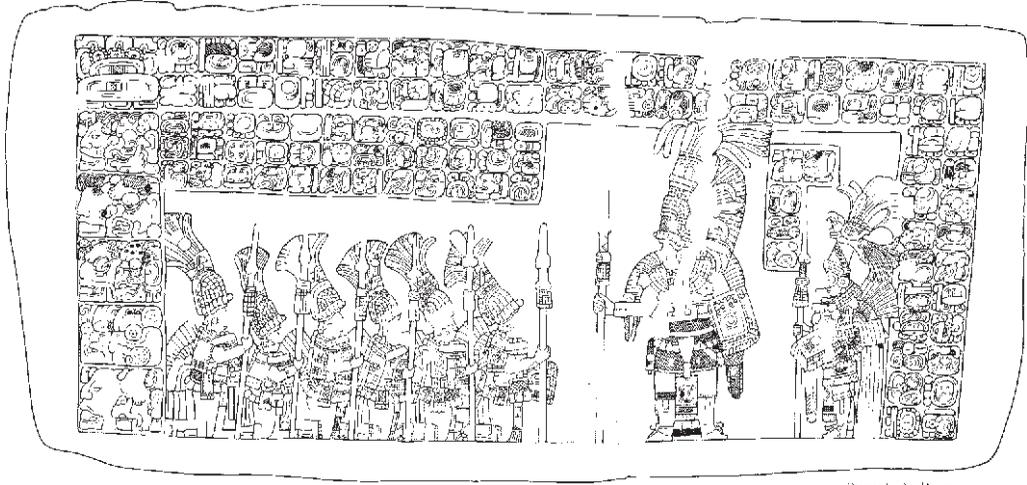


FIGURE 5.10 Military training of hostages? Panel 2 from Piedras Negras, Guatemala. After Schele and Miller 1986, p. 149, Plate 40a, drawing by David Stuart.

One ceramic vessel appears to show two scenes in which teaching is taking place (Plate XXV, top). In one scene a god is teaching glyphs to two young scribes; in the other, a different god teaches arithmetic or calendrics.⁶⁷ This division of teaching by subject seems to correspond with the distinction observed by the Maya between the “true writing” of the glyphs and numerical notations.⁶⁸ The Maya created two gods in charge of these two varieties of notation (Plate XXV, bottom). This specialization in the realm of the gods may not accurately reflect the practice of Maya scribes, however. Perhaps schoolteachers were specialized, but pupils in the more elementary levels are unlikely to have been. As in Mesopotamia and Egypt, would-be scribes were probably taught both basic mathematics and lexical lists. In Classic Maya monuments calendrical notations were often carved side by side with other glyphs by the same scribes, indicating mastery of both.

The setting in which the two gods are teaching is not readily identifiable. Simon Martin is surely correct when he reasons that palace schools must have existed in Classic Maya. He suggests that a famous panel from Piedras Negras might depict the military training of princelings from Bonampak, Lacanha, and Yaxchilan at the court of their political masters (Figure 5.10). Cross-culturally we find that noble youths are often hostages for their home cities’ loyalty.⁶⁹ We shall see that court schools for political hostages existed also in other civilizations in our sample.

Could the setting of teaching in Plate XXV be one of the “houses of writing”? To judge from an undisturbed artifact distribution that reflected both domestic and scribal activities, the best preserved example looks more like a residence of scribes than a classroom per se (Figure 5.9).⁷⁰ However, the Old Babylonian private schools at Nippur remind us that a house could serve as the living quarters of the teacher and at the same time provide space for instructing a few students (Figure 5.3). Another possibility is that the Maya “houses of writing” were in fact boarding schools for boys and girls: perhaps the scribal equipment belonged to the schoolboys, and the domestic tools (e.g., spindle

whorls) were for instructing girls.⁷¹ This kind of institution is in fact well documented in the Aztec empire.⁷²

CENTRAL MEXICO

There were two types of school in Central Mexico that were open to both boys and girls but not coeducational. One was called *calmecac*, the priests'house; the other was *telpochcalli*, the young men's house.⁷³ Both were boarding schools attached to temples, and both had harsh discipline and punishments (from bloodletting to the death penalty). The students ate at their own homes but slept at the schools. The *telpochcalli* was for the commoners; each ward had its own school. Boys were taught the arts of war, girls the religious knowledge they needed for future participation in the cults. The *calmecac* were by and large elite schools, with only one for boys and one for girls in each city. The *calmecac* in the Aztec capital Tenochtitlan was located in the ceremonial center; its patron deity was the god Quetzalcoatl.⁷⁴ The majority of its students were children of rulers, nobles, and other well-to-do people. Common children "who wished it" were also admitted. The age at which children entered the *calmecac* varied from five to fourteen.⁷⁵ They were taught "good discourse" and "the songs which they called the gods' songs. They were inscribed in the books. And they were all taught the reckoning of the days, the book of dreams, and the book of years."⁷⁶ Military training was an important subject for boys; some of the students would become warriors. Other subjects included astronomy, history, arithmetic, and architecture. Because priests were responsible for the running of temples and shrines, administrative skills may also have been taught in schools. Arithmetic and the reckoning of time are of course two major components of bookkeeping. The law was taught as well, for some of the graduates were to be appointed as judges or other important administrators.⁷⁷

In Central Mexico the art of speech was highly esteemed and regularly on display on important social occasions. We have seen its role in the narrating of history (Chapter 1). To this we should add the reciting of poetry, the delivery of ritual speech, the conduct of lawsuits, and bargaining in the market. The teaching of fine speech accordingly occupied the central place in education.⁷⁸ However, to declaim from a painted manuscript or carved monument required recognizing the limited repertoire of glyphs (e.g., day signs), and for Motecuhzoma's steward to read the tribute lists he had to know the place names and numbers recorded in glyphs (Figure 3.32, Plate XIV). These presumably were also taught in schools.

The teachers of the *calmecac* were priests called *tlamatini*, meaning wise man.⁷⁹ As the embodiment of the high culture they were perhaps the most highly revered men in Aztec society. Text 5.12 informs us that the source of their esteem was the possession of books and of the knowledge transmitted through them. Pictorial writing and oral transmission were entirely fused, neither being able to subsist on its own. Their close relationship is exemplified by the similarities between the listing of epithets in the oral texts and the listing of tributes in pictorial recordings (Figure 3.32, Plate XIV).

Text 5.12. In Praise of the Teacher.

The wise man [is] exemplary. He possesses writings; he owns books. [He is] the tradition, the road; the leader of men, a mover, a companion, a bearer of responsibility, a guide.

The good wise man [is] a physician, a person of trust, a counselor; an instructor worthy of confidence, deserving of credibility, deserving of faith; a teacher... He lights the world for one; he knows of the land of the dead; he is dignified, unreveiled.

After Sahagún 1950, Book 10, p. 29; Townsend 2000, p. 203.

THE ANDES

Little is known about education in the Andes. The Spanish priest Bernabé Cobo commented that “the children had no education in any discipline and study that would cultivate their minds other than helping their parents. Thus each child learned the profession and way of life of its parents.”⁸⁰ This may have been true of the common people in the Inka empire, but like the Aztecs, Inka rulers certainly gave serious attention to the education of both the male and female members of the nobility. Lower-ranking women were trained to weave, cook, and brew for the state; higher-ranking women were in addition instructed in religious matters. Important provincial nobles were required to send their sons and close relatives to the court in Cuzco at the age of fourteen or fifteen years. Together with the sons of Inka nobles, they attended *yachawasi*: special schools run by learned men (*amautakuna*) who were also noblemen. Among the pupils in the court schools were the eldest sons of the most important provincial nobles. They were hostages for their fathers’ loyalty and second-generation nobles-in-training at the same time.

A later writer, Martín Murúa, informs us that the length of study at the court schools was four years. He gives us an outline of the curriculum organized by year. It included the court version of the Inka language – the chief subject – along with Inka rituals and calendrics, *kipu* record keeping, Inka history, law, statecraft, military tactics, and behavior appropriate to the students’ social class. Although Murúa’s account is suspiciously Europeanized, the subjects taught do not conflict with those listed by earlier writers.⁸¹ However, it is not clear what kinds of *kipu* record keeping were taught to what kinds of student at school. Other accounts seem to suggest that there was a specialist group of “*kipu* makers” (*kipukamayuc*). How they transmitted the knowledge of reading a *kipu* is not recorded by the colonial chroniclers. A seventeenth-century friar, Antonio de la Calancha, left us the only general account of studying *kipu* (Text 5.13). But specialists are not even sure whether the “*kipu* makers” actually made the *kipus* or simply read them.⁸²

Text 5.13. Calancha’s account of the activities of the “*kipu* makers.”

... whether because of the privileges with which they honored the office, or because if they did not give a good accounting concerning that on which they were questioned they would be severely castigated, they [the *kipukamayuc*] continually studied the

signs, ciphers, and relations, teaching them to those who would succeed them in office, and there were many of these Secretaries, each of whom was assigned his particular class of material, having to suit [or fit] the story, tale, or song to the knots of which they served as indices, and points of "site memory."

After Urton 2003, p. 122.

In contrast to the sparse accounts of the learning of record keeping, there exist numerous reports that the Inka rulers ordered all their subordinates to learn the Inka language. The order recognized the problem of heteroglossia in the vast empire and solved it in a way that was simple and consistent with the state ideology: making one language official and requiring its use. To make such an order effective, the Inka rulers must have ordered the establishment of local schools to educate the sub-elite.⁸³ But we are ignorant of details, such as who had the right or obligation to go to those schools. It is clear that the recruitment policy for the court schools recognized the authority of the local nobles. Meanwhile by educating (and brainwashing) their sons, the court sought to secure local loyalty, because it was the sons who attended the court schools who would succeed to their fathers' offices, not their siblings who were not educated in the capital. Here Egypt provides a parallel. One title of a Nubian prince during the reign of Tutankhamun indicates that "he had served whilst a youth as a page at the Egyptian court, exemplifying a common Egyptian policy of giving an Egyptian court education to the children of foreign princes."⁸⁴ The Inka rulers strengthened their control of the provinces by directly appointing provincial governors.⁸⁵

THEIR NAMES ENDURE FOREVER

Materials directly related to literacy education are scanty, especially for the earliest periods of script development, owing to the bias of preservation. Yet the step-by-step process of learning to write cuneiform, beginning with the simplest strokes and with stroke order, is not very different from the process of learning to write English or Chinese today, and it may well be a good model for literacy acquisition everywhere, whether the script being learned is logographic or something else. In keeping with writing's first function – the recording of names – elementary scribal training seems to have begun with word lists. With the appearance of texts written in complete sentences, school curricula expanded to include literary works and model administrative documents (e.g., letters and contracts). The influence of list making continued to be felt in all sorts of written genres, however, so much so that a tradition grew up in scribal cultures of organizing all knowledge of the ordered cosmos into encyclopedic lists.

Scribal training seems to have had a mixed character from the very beginning. State institutions (palaces, temples, and administrative offices) and private homes (teaching the teacher's own children or students from other families) complemented each other. In Mesopotamia and Egypt there seems to have existed a standard pool of school texts for individual schools or teachers to choose from. This made it possible to achieve a measure of uniformity, especially in the sphere of administration. The mutual comprehensibility of scribes from various city-states in Mesopotamia or from various nomes in

Egypt suggests that a more or less universal curriculum, regulated at least at first by the state and by itinerant teachers, helped set standards.⁸⁶ Training in numerical notation and mathematics was universal because of administrative requirements. A related subject is calendrical calculation, which was indispensable for ritual activities. The power of language, both written and spoken, was recognized and explored by all the early civilizations in various ways.⁸⁷ Schools taught not only literacy but also fine speech and appropriate manners, and Egyptian and Aztec schools also provided military training for male students. We shall see that all of these subjects had a place in Chinese education as well.

Not only were the technical aspects of the writing system and the school curriculum standardized, but a standard scribal ideology was also promoted inside and outside the schools. Students were indoctrinated either through ideology-laden school texts or by the oral instruction of their teachers. Some teachers and writers were extolled as sages and paragons of wisdom who, thanks to the endurance of the written words that recorded their teaching, outlasted the kings. The power of writing to make names permanent is nowhere more eloquently stated than in [Text 5.14](#), a suitable ending for a chapter on scribal education.

Text 5.14. An Egyptian tribute to learning.

But now, if you have done these things, you are versed in writings. As for the learned scribes from the time that came after the gods – those who foretold the things to come – their names endure for ever, although they have gone, having completed their lifetimes, and all their relatives are forgotten.

They did not make for themselves pyramids of copper with stelae of iron. They were not able to leave an heir in the form of children [who would] pronounce their names, but they made for themselves an heir of the writings and instructions they had made.

They appointed for themselves [the book as a lector] priest, the writing board as a beloved son. Instruction texts are their pyramids; the reed-brush is their child; a stone surface (their) wife. Both great and small are made his children, for the scribe, he is their chief.

Gates and chapels were made for (them); they have crumbled. Their mortuary priest is [gone] while their stelae are covered with dirt and their graves forgotten. But their name is pronounced on account of their writings which they made when they were (alive). The memory of what they did will be good for ever and eternity.

Be a scribe! Put it in your heart, so that your name will fare thus. A papyrus roll is more useful than an engraved stela, than a constructed chapel wall. These (i.e. papyrus rolls) act as chapels and pyramids for the sake of pronouncing their name. Certainly, (one's) name in the mouth of men is a useful thing in the necropolis!

A man has perished and his corpse is dirt; all his relatives have crumbled to dust. The book is what causes him to be remembered in the mouth of the reciter. A papyrus roll is more useful than a constructed house, than tomb-chapels in the West; better than a constructed mansion, or than a stela in the temple.

Is there one here like Hordedef? Is there another like Imhotep? There have been none among our relatives like Neferty or Khety, the foremost of them. I shall let you know the name of Ptahemdjedhuty and Khakheperreseneb. Is there another like Ptahhotep or Kaires, either?

Those sages who foretold the future, that which came forth from their mouth happened. One benefited from (it) as a saying written in his books. The children of others are given to them as heirs, like their own children. They concealed their magic from all men, (but) it is read in their instructions. Departure caused their name to be forgotten; writings are what cause them to be remembered!

After McDowell 1999, pp. 137–8.

6

CHINA

Historians of late imperial China have devoted much study to the civil service examinations that recruited talent into the state administration.¹ They have given less attention to the basic literacy training that started candidates on the road to the examinations. Yet in China, no less than in the other literate states in our sample, literacy training was vital and, regardless of writing system, had the same basic tasks to accomplish.

FIRST STEPS

Although writing was almost certainly in use already during the Erligang period, the only Erligang inscriptions yet known come from a find at Zhengzhou Xiaoshuangqiao that is far too small to tell us anything about literacy training (see [Plate VI](#)). The oldest substantial corpus of writing belongs to the Anyang period. For a glimpse of schooling in early China, let us jump to the Anyang oracle bone inscriptions.

Schooling at Anyang

Several oracle bone inscriptions contain a character that has been transcribed as *xue*, which in later classical Chinese has three basic meanings: school; to teach; and to learn. One fragment of an inscription mentions the approval of a proposal to build a *xue*, possibly within the Shang royal residence.² In addition to court schools there seem to have existed schools located outside the royal household. One inscription reads, “Crack-making on the day *bingzi*, divining, ‘[Should] the Many Children go to school? Will it not rain on their way home?’”³ A similar divination was made on the next day. Still another inscription seems to imply that nobles or their children from other polities were “taught and admonished” in the Shang capital.⁴ Could these children be political hostages who nevertheless received education in court schools, like the ones in New Kingdom Egypt, the Inka empire, and the Maya cities ([Figure 5.10](#))? In China the taking of political hostages was a common phenomenon in the multistate period from the eighth to the third century B.C., but it is not clear whether the hostages were educated at the courts where they were held.⁵

The oracle bone inscriptions tell us little about what was taught in the schools. Some inscriptions mention learning ritual dance and music, but not necessarily in schools.⁶ No compelling evidence for literacy schooling at Anyang exists – apart from the conclusive evidence of literacy itself. A character written with brush and ink on

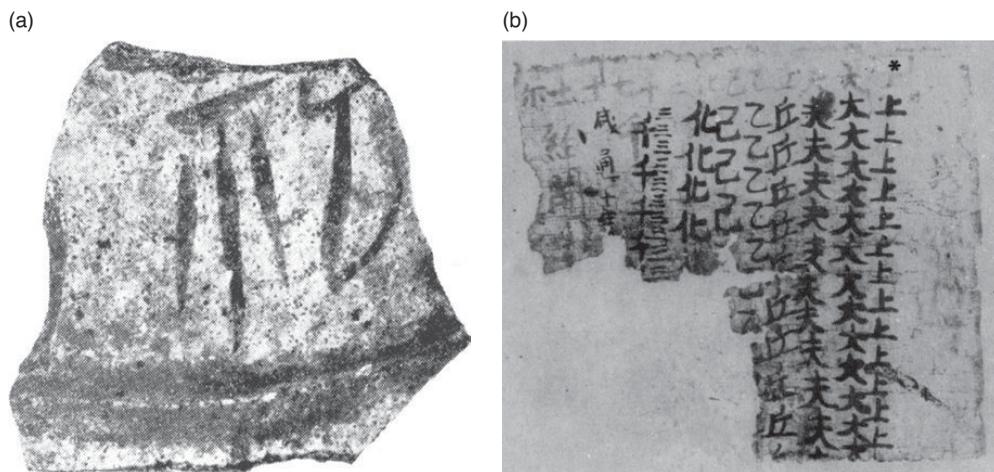


FIGURE 6.1 Student exercises in China I. *a.* Potsherd from Anyang, about thirteenth century B.C. After Li Ji 1956, Plate XXII (= Bagley 1987, p. 133, Figure 206; Bagley 2004, p. 217, Figure 7.16). *b.* Student exercise on paper from Dunhuang, about A.D. ninth century. After Huang Yongwu 1981, p. 580, Plate 4900.

a discarded potsherd is at present one of the few direct witnesses of writing practice, and it is far too skillfully executed to have been done by a beginner (Figure 6.1, a). That Mesopotamian pupils spent much time practicing simple wedges and their combinations (Figure 5.4) reminds us that Chinese beginners likewise have always had to start from basic strokes and then proceed to simple characters, adhering to a strict stroke order. No student exercise containing only basic strokes is extant from Shang times, but I still remember how a long time ago I sweated over practicing the eight basic strokes.

Lessons from Dunhuang

One way to begin learning to write is to practice a few characters that are simple in structure but nevertheless contain most of the basic strokes. Students in China have been doing this at least since the A.D. ninth century. One “text” that contains only twenty-five characters has been copied by schoolchildren all over China down to the modern period. The text is in fact a meaningless cluster of simple characters, although it is always punctuated every three characters; the first three, *shang da fu/ren*, are usually taken as the title. It is so popular that it has become an inspiration for literary writers and common people, who both use it and make fun of it.⁷ An A.D. ninth century student exercise based on it, from a famous cache of documents at Dunhuang, is reproduced in Figure 6.1, b. The first column on the right has two characters written in red ink by the teacher. They say, “trial characters.” Each of the next thirteen columns begins with a character written in red ink by the teacher; they are the first thirteen characters of the *shang da fu/ren* text. In the space that remained the student copied each of the teacher’s characters in black ink as many as thirteen times. It seems that the student did not finish the assignment, because only nine characters were practiced. In the tenth column a colophon gives the date: “the tenth year of the Xiantong reign” (A.D. 869); the month and day when the homework was done were presumably written on the missing part of the

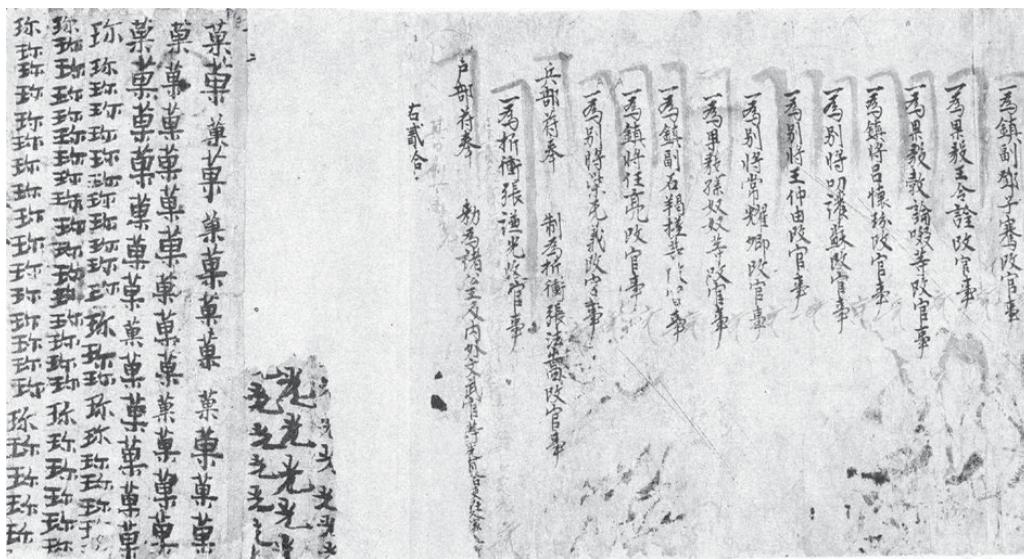
piece of paper. Perhaps the colophon was written by the student's adult guardian. The goal of this kind of practice is to accustom the student to holding the brush, forming strokes, and building simple structures.

Another student exercise preserves a day-to-day record of what the student did. The teacher checked the daily exercise by writing a character meaning something like "checked" and a date (e.g., "the fifteenth day"). Sometimes he added a complimentary word ("excellent") or sentence for encouragement (Figure 6.2). The example in Figure 6.1 emphasizes strokes and basic character structure; the exercises in Figure 6.2 are a step further on the way to literacy. They are based on a text called *Qian zi wen* ("The Thousand-Character Classic"), which has been the most popular of primers since its composition in the A.D. sixth century. One of the attractions of the essay as a school text is that no character is repeated: it is composed of a thousand different characters, each used only once.⁸ Presumably the student who wrote Figure 6.2 worked from a model text written on a separate sheet.

A comparison between the shaky beginners' exercises from Dunhuang and the accomplished character on the Anyang shard should convince us that there is a long way to go from schoolchild handwriting to the forming of pleasing characters. Repetition is the key not just to fine writing but to any legible writing. Practice at Anyang would not have been very different from practice at Dunhuang. Many graphs of the Anyang script are more complicated in structure and stroke number than those being practiced at Dunhuang in the ninth century, but not all of them are – some of the calendrical terms are very simple – and certainly most Anyang graphs can be dissected into basic strokes.

Another conclusion can be drawn from the comparison of Figures 6.1 and 6.2. Student exercises were always done on the cheapest and most readily available writing surface. Most of the student exercises from Dunhuang are written on scratch paper such as discarded government documents (Figure 6.2), Buddhist sutras, or the exercise sheets of more advanced students. The shard from Anyang is probably an equivalent to the Dunhuang scratch paper or the stone flake ostraca from the workmen's village at Deir el-Medina in Egypt. The fact that the orientation of the character is opposite to the standing position of the pot the shard originally belonged to argues that the pot was broken before the writing was done. Why have Anyang archaeologists found only a few such practice shards? One possibility is that the normal surface for practice was not potsherds but was the same as the normal surface for everyday writing, namely perishable bamboo and wood strips, just as the clay tablets of Mesopotamia and the papyri of Egypt served practice and practical needs alike. Another possible reason is loss of the writing itself. Ink writing on any surface is likely to disappear after prolonged exposure, washing, or friction. In Chinese archaeological practice, potsherds are routinely scrubbed clean in water by peasant workers before the archaeologists sit down to reassemble them. The chance of survival for writing on potsherds is very slim.⁹

Certain non-divination inscriptions found at Anyang have sometimes been interpreted as models for apprentice bone carvers to copy or as carving practice done by apprentice carvers. An inscription that repeats a single character many times, for example, looks like carving practice. One scholar has recently suggested instead that these inscriptions are school exercises, and further that they are typical of Anyang school



S. 2703 / 4



S. 2703 / 7

FIGURE 6.2 Student exercises in China II. *Top*, a Tang dynasty student's writing exercise from Dunhuang, done in the margins of a government register. *Bottom*, on the verso, three days of the same student's homework, characters copied from a primer. Both of these exercises are based on *Qian zi wen*, the Thousand-Character Classic. After Zhongguo Shehui Kexueyuan Lishi Yanjiusuo et al. 1990, Vol. 4, p. 200, bottom, p. 202, top.

exercises.¹⁰ This strains credulity. Learning to write in ancient Anyang cannot have been any easier than learning to write today, and schoolchildren today must spend several years writing many practice pages to master the execution of even a simple alphabetic script. They write on a cheap and expendable writing surface, and they write with the tool whose use they are trying to master. Mesopotamian schoolboys did the same. Chisels and tortoise shells were not the ordinary writing materials at Anyang; Anyang scribes wrote with brush and ink on bamboo and wood strips, and Anyang schoolboys surely did too.¹¹ The administrative functions of writing at Anyang (Chapter 4), the fact that elite literacy was not confined to diviners (discussed later), the primacy of brush writing (evident in the imitation of brush writing on carved bones and bronze), and the absence from the Anyang archaeological record of brush-written student exercises on any writing surface leave us no choice but to conclude that school exercises have disappeared from the record.¹² There is nothing surprising or improbable about this. Only two corpora of school exercises written on perishable materials have survived from the first three thousand years of Chinese recorded history.¹³ They were recovered in arid parts of northwest China, and they survived not because they had been intentionally preserved but only by chance, having been thrown away as trash or abandoned when the sites were abandoned. Where but in the wastebasket would one look for student exercises today?

Two Goals

Basic literacy acquisition has two goals: the ability to recognize graphs and the ability to write them. Depending on the sign repertory of the writing system, strategies for teaching recognition may not be the same as strategies for teaching writing, although they may overlap in the first stages of education. For syllabic and alphabetic systems the total number of basic signs is small, fewer than one hundred. Schoolchildren can begin with recognition and execution of these signs. Once the signs have been mastered, the pupils can proceed to the recognition and spelling of words. The execution of words is not difficult; it is the memorization of spelling that is difficult, for no system of phonetic writing is completely transparent.¹⁴ At this stage the lexicons to be learned for recognition and execution coincide with each other.

Logographic (Chinese), logosyllabic (Sumerian and Mayan), and logoconsonantal (Egyptian) writing systems have bigger repertoires of basic signs: proto-cuneiform, fewer than 900; cuneiform, 600–800; proto-hieroglyphic (or proto-hieratic), 50–100 (uncertain); hieroglyphic Egyptian, 700; hieroglyphic Mayan, fewer than 400; and Chinese, 2000.¹⁵ Students learning these scripts cannot have waited to master all the basic signs before beginning to practice sign combinations and word recognition. In the initial stages, practicing the most basic signs and recognizing structurally more difficult written words probably took place simultaneously. Beginning students therefore might not learn to write real words as quickly as students of syllabic and alphabetic scripts, but at a later stage of instruction the two groups of students face similar difficulties. A student who can write 2,400 modern Chinese characters can write essentially the whole vocabulary of modern Chinese (which has many disyllabic words written with two characters).¹⁶ A student with an equal mastery of written English has memorized the spellings of tens of thousands of words.¹⁷

LEARNING WORDS AND PHRASES

The lists of names we have seen in Mesopotamia, Egypt, and the Maya cities may well have been employed by all the first scribal schoolmasters teaching the two skills of reading and writing. Such lists must have been just as prominent a feature of schooling in China as in Mesopotamia; in China, as elsewhere, word lists must have arisen with writing itself. The Anyang writing system employed several thousand characters. Someone must have had a list! But none has ever been found. Later Chinese education used many types of primers – a variety unmatched elsewhere – all designed to teach beginners a thousand or more characters before instruction in reading and composing text commenced.¹⁸ Might we be able to trace the same pedagogical strategy back to the early stages of Chinese writing?

An A.D. first-century text catalogs a dozen primers for elementary education.¹⁹ The first one on the list is said (by another first-century text) to have been compiled by a Grand Scribe named Zhou at the late Western Zhou court (ca. ninth century B.C.), hence its title *Shi Zhou pian*, “Bamboo Bundles by Scribe Zhou.” It seems that *Shi Zhou pian* was still widely used in the Han period (second century B.C. to A.D. second century). An early Han statute on the training of scribes ordered students to master characters from a primer that has been interpreted as *Shi Zhou pian* (Text 6.1).

Text 6.1. Statute on scribes in the Han Empire.

The sons of the scribes and diviners go to school at the age of seventeen.

The young students studying to be scribes, diviners, and invocators study for three years. (After that) the school instructor takes them to visit the Grand Scribe, Grand Diviner, and Grand Invocator (in the capital). The young students studying to be scribes from the commanderies go to see their governors (in the provincial capital). All of them should be examined on the first day of the eighth month.

Examine the young students studying to be scribes by using fifteen bundles of bamboo strips (of the *Shi Zhou pian*). Only those who are able to recite and write more than five thousand characters can serve as (ordinary) scribes. Then test them on the eight script types; the commanderies transfer the students’ examinations on the eight script types to the Grand Scribe. The Grand Scribe reads aloud the examinations and chooses the best one as the prefecture’s foreman scribe; do not appoint those of poor quality as scribes. The prefecture’s foreman scribes should be examined every three years, [the Grand Scribe?] chooses the best ones as the adjutant scribes to the Imperial Secretariat.

Only those young students studying to be diviners who are able to recite and write three thousand characters from the *Shi Zhou pian* (or write three thousand *li*-script characters), and to chant three thousand characters from the diviner’s text, and to predict correctly one out of six times can become diviners; make them assistants in the office. Among these assistants those who can chant more than thirty thousand characters (from the diviner’s text) should be made the sixth-grade diviner in the annual account. If there are vacancies (for the sixth-grade diviner), the candidates should be tested, and those who can predict correctly three out of six times should fill the vacancies.

Use the fourteen chapters of invocation to test the young students studying to be invocators. Only those who are able to chant seven thousand characters can become fifth-grade invocators. The Grand Invocator tests the invocators. Those who are good at invocation and understand the affairs of sacrifice should be made reserve invocators, keep them in reserve. Those who cannot enter the offices of scribes, diviners, and invocators should be fined four *liang* of gold (or copper); (their) school instructors two *liang* (of gold or copper).

ZJS, pp. 203–4, strips 474–80; my translation. See also Li Xueqin 2002; Zhu Honglin 2005, pp. 280–4; Peng Hao, Chen Wei, and Kudô Totoo (eds.) 2007, pp. 295–304; Yates 2011, pp. 350–5.

Shi Zhou pian is said to have had great influence on the composition of other primers, but it went out of use after Han and eventually disappeared. There is no extant primer or lexical list that can be dated to Western Zhou. In a collection of as yet unpublished bamboo texts (ca. fourth century B.C.) purchased by the Shanghai Museum, there are said to be some fragments of lexical texts.²⁰ An encyclopedic thesaurus of synonyms and their glosses compiled in the fourth century B.C. or a little later thus does not look as isolated as it once did (Text 6.2).²¹ As in Mesopotamia and Egypt, encyclopedic lists were not primers but scribal enterprises intended to systematize knowledge of the language and script. However, their ultimate source is likely to have been simpler lexical lists designed for elementary education. To this category might belong the lists of official titles that were probably in circulation in Western Zhou.²²

Text 6.2. Synopsis of *Er ya* (“Approaching what is correct”).

Part I. Heterogeneous corpus of words that are not nouns

1. “To explain archaic words.” Verbs, words that are commonly used as adjectives or adverbs, and a few grammatical particles.
2. “To explain words.” Verbs.
3. “To explain commentary.” Primarily stative or descriptive verbs, many of which are reduplicative binomes.

Part II. Names and glosses arranged by topic

4. “To explain kinship.” Kinship terms.
5. “To explain rooms.” Architectural terms.
6. “To explain vessels.” Names of a wide range of utensils and tools, together with verbs having to do with the use of these items.
7. “To explain music.” Names of musical instruments and certain other items of musical terminology.
8. “To explain heaven.” Astronomical, calendrical, and meteorological terms.
9. “To explain earth.” Geographical and geological terms.
10. “To explain hills.” Terms having to do with hills.

11. "To explain mountains." Terms pertaining to mountains, and names of famous mountains.
12. "To explain water." Terms having to do with rivers and streams and also a variety of related items such as islands and boats.
13. "To explain grasses." Names of grasses, herbs, and vegetables.
14. "To explain wood." Names of trees and shrubs.
15. "To explain insects." Names of insects, spiders, reptiles, etc.
16. "To explain fish." Names of various aquatic creatures such as fish, amphibians, and crustaceans.
17. "To explain birds." Names of wildfowl.
18. "To explain beasts." Names of wild and legendary animals.
19. "To explain domestic animals." Names of domestic animals and poultry.

Adapted from Coblin 1993, pp. 94–5.

The same A.D. first-century text just mentioned also tells us that three high court officials of the Qin empire (221–206 B.C.), including the chief minister, compiled three primers that were based on the *Shi Zhou pian*. The primers were subsequently combined by "local masters of writing" during the Han period. The combination is called *Cangjie pian* ("Bamboo Bundles by Cangjie") after Cangjie, the legendary inventor of writing. The Han recension has fifty-five sections, each of which contains 60 characters, making a total of 3,300 characters. There were repeated characters in the list, but how many is unknown because, like the *Shi Zhou pian*, this text went out of use after a few centuries of popularity, being replaced by more up-to-date texts such as the Thousand-Character Classic.²³ Fortunately archaeologists have found some fragments of the *Cangjie pian* in the form of both student exercises and master copies, amounting to about one-fifth of the original composition (Text 6.3 and Figure 6.3).

Text 6.3. Synopsis of the fragmentary *Cangjie pian* ("Bamboo Bundles by Cangjie") with excerpt.

Preface: "Cangjie invented writing, to teach later descendants.

"Young lad, receive the instruction/decrees, be prudent, respectful, and cautious.

"Take effort to chant and recite, do not give up day and night.

"Make sure to become a scribe, to count and manage.

"You will be promoted to excel the crowd, appearing (to be) outstanding and set apart from the others.

"Although it is toilsome at the beginning, you will eventually benefit.

"... [dynasty name] unified all under heaven, [all states] within the seas were combined together.

"Readjust policy and administer the laws."...

Funerary terms: "tomb, outer coffin, coffin, coffin (with corpse)."

Wooden and bamboo containers: "basket, box," etc.

Topographical terms: villages, roads, territorial sections, "*qiu*-mound, *ling*-mound," etc.



FIGURE 6.3 Master copies of the Han primer *Cangjie pian* from northwest China and central China. *a*. A list of color terms that have the same radical (determinative), “black,” from a garrison in northwest China. After Gansu Sheng Wenwu Kaogu Yanjiusuo 1991, Vol. 1, Plate 154, by permission of Gansu Sheng Wenwu Kaogu Yanjiusuo. *b*. A copy found in the tomb of a high-ranking early Western Han nobleman in Henan province. The six sidelined characters in the extreme left strip share the same radical, “sickness.” After Fuyang Hanjian Zhengli Zu 1983, p. 32, Figure 2. *c*. A copy from northwest China written in the archaic seal script, one of several script types that Western Han scribes were required by law to master (Text 6.1). After Gansu Sheng Wenwu Kaogu Yanjiusuo 1991, Vol. 1, Plate 133, by permission of Gansu Sheng Wenwu Kaogu Yanjiusuo.

Storage facilities: granaries and storehouses, etc.
 Types of clothes.
 Color terms: “*qian*-black, *yan*-black, *an*-black, *tan*-black, *mian*-black, *you*-black, *yan*-black, *yang*-black, *jin*-black, *yan*-black, *he*-red, *nan*-red, *xiu*-black, *chi*-red, white, yellow ...”
 Maladies and injuries: “bruise, laceration, dislocation,” etc.
 Juridical terms: “to kill, to arrest, to imprison, to interrogate,” etc.
 Constellations.
 Ethnic terms: “*di*-people, *qiang*-people,” etc.

My translation, based on the transcriptions and commentaries given in Fuyang Han Jian Zhengli Zu 1983, pp. 24 and 26; Greatrex 1994, pp. 105 and 107; Bottéro 2003, pp. 105, 111; notes by Michael Nylan summarizing Bottéro 2003.

Cangjie pian consists of four-character lines.²⁴ Some of them are narrative phrases and sentences; the rest are mostly enumerations of semantically related words. It is in a way similar to the *Er ya* thesaurus of synonyms (Text 6.2) in that many lines consist

of paired near-synonyms (including verbs, adjectives, and nouns, e.g., *qiu*-mound and *ling*-mound) or near-antonyms (including verbs and adjectives, e.g., to open and to close).²⁵ It groups characters into thematic categories such as topography, woven materials, vegetables, animals, diseases, architectural terms, capacity units, and so on. Often all the characters in a category share the same determinative (see the marked characters in Figure 6.3, a–b, and compare with Figures 5.6 and 5.7). Many of the characters are attested in contemporary administrative documents, but we are left to wonder whether all eleven of the color terms that share the radical “black” were actually used in contemporary texts to denote eleven kinds of black or were mere scribal inventions that had life only in the lexical tradition (compare Figure 6.3, a, with Figure 5.1).

Cangjie pian is usually rhymed.²⁶ Rhyme helps recitation and memorization. Its presence here indicates that there was a significant oral component in scribal teaching, as the text itself says (“take effort to chant and recite”). As in Mesopotamia and Egypt, rote learning by reciting and chanting was a common way to commit lessons to memory.²⁷ Rhyming and sentencelike, rather than mere listlike, primers continued in use for the next two thousand years. The only complete primer of the Han period that has been transmitted to the present shows the same features (Text 6.4 and Plate XXVI).

Text 6.4. Synopsis of *Jijiu pian* (“Bamboo Bundles for Quick Reference”) with excerpt.

“First [chapter]: The *jijiu* prism is different from others;

“It lists the names of various things and personal names.

“They are sorted into different categories and do not confuse with each other.

“How nice it is, because you can learn them in only a few days.

“Study it diligently, and you will have joy.

“Now let me say the text:

“Song Yannian, Zheng Zefang, Wei Yishou ...

(With) personal names learned, (let me) talk about things:”

7th–8th chapters, colors and tints, silks: “brocade, embroidery, plain clothes, knitted clothes, (on which are) departing clouds (and) birds ... *ti*-silk, *luo*-silk, *jian*-silk, *lian*-silk, *su*-silk, *bo*-silk, *chan*-silk ...”

8–9 finance, measures: “To buy on credit, to borrow, to sell and to buy, (these activities) give convenience to merchants and markets ...”

9–10 cereals, vegetables, sauces, spices, fruits: “rice, *shu*-millet, *shu*₂-millet, *ji*-millet, *su*-millet, hemp, *kang*-rice ... *kui*-vegetable, leek, chive, *jiu*-vegetable, *liao*-vegetable, *su*-vegetable, ginger ...”

10–11 habits of tunics, shoes, clothes of the uncivilized peoples

11–12 metals and metallic objects

12–13 things made in bronze, in bamboo, in wood, of earth; aquatic animals: “copper, *zhong*-vessel, *ding*-vessel, *yan*-vessel, *juan*-vessel, *yi*-vessel, *yao*-vessel ...”

13–14 women, servants, furniture of bedroom

15–16 cuisine, food, drink

16–17 human body

17–18 arms, equipment for horses

19–20 terms for work in the field, trees

20–22 illnesses

23–24 pharmacopoeia

24 religious domain and ritual

24–26 curriculum, prospective path in the officialdom, administration: “After things are exhausted come the five officials (meaning officials in general).”

“Official learning (includes) reciting the *Odes*, the *Classic of Filial Piety*, the *Analects of Confucius*, the *Spring and Autumn Annals*, the *Documents*, the texts of the statutes and edicts. Studying the rituals and anecdotes to temper your body, (then) your intelligence will be penetrating and your knowledge will be widening. (Your) name will be distinguished, unique, outstanding, and set apart from (your) peers. (You) will be recommended and promoted (with justice just like) the divide between black and white. Accumulating your meritorious service and achievements to become the shepherd of the people (i.e., the Regional Inspector), Chief Minister, Chief Prosecutor. . . . Lords have their fiefs, lands, and vassals, [these privileges] come from hard studies, not from [the help of] ghosts or spirits. The governors of the capital are in charge of administering the people, be honest, clean (from corruption), equal, caring, reasonable/mild, and loving. . . .”

27–30 justice and the laws

31 eulogy on the glories of the Han.

My translation. See also Lee 2000, pp. 437–8. Synopsis after Michael Nylan’s translation of Bottéro 2003, pp. 114–15, with modification.

The main text of *Jijiu pian* consists of thirty-one chapters, each of which has about sixty characters. If each chapter were written on a three-sided prism like the one mentioned in the first sentence of the text, thirty-one prisms would carry the whole two thousand or so characters. The author seems to have had in mind the three-sided prism as a standard format either for master copies or for student exercises, and archaeology confirms the use of prisms for writing *Jijiu pian* (Plate XXVI).²⁸ That there might have been a typology of stationery for school texts in the Han period is reminiscent of the standardized typology of school tablets in Mesopotamia, which had seven tablet formats for different curricular stages and pedagogical purposes, including one with spaces for a model text and a student’s copy (Figure 5.6), and even some in prismatic form (the Sumerian King List, Figure 1.10).²⁹

Many of the personal names listed in *Jijiu pian* were used by Han commoners and officials alike, as attested in contemporary texts.³⁰ Except for the list of personal names, the lines of the text are either seven-character narrative sentences or strings of seven proper names. *Jijiu pian* includes prosopographic, geographic, administrative, and legal knowledge and the like, all of which were of practical value to scribes in charge of the empire’s everyday running. Later commentators suggested that its title means “quick reference.” Its author was Shi You (Scribe You?), the Director of Eunuch Attendants during the reign of Emperor Yuan (48–33 B.C.).³¹ Shi You presumably wrote it to educate his subordinates and other functionaries. One of the responsibilities of the palace eunuchs

from the Han period onward was to check arriving officials against the officials' names written on wooden boards suspended above the palace doors and prevent unauthorized people from entering the palace.

Like the New Kingdom onomasticon (Text 5.7), this Han primer has a promising opening but then turns directly to sundry lists. Unlike *Cangjie pian*, which puts the alluring prospect of a scribal career at the beginning of the teaching (Text 6.3), *Jijiu pian* waits until the end to point out that learning is the way to enter into the highest echelon of the imperial administration.

Jijiu pian's vogue coincided with the rise of calligraphy as an art practiced by educated men of high social standing. Prominent calligraphers quickly fastened on it as a vehicle for practicing and exhibiting their styles. Copies sometimes supplied the text in various model scripts, and students imitated the models to learn both the characters and the major script types (Figure 6.3, Plate XXVI). *Jijiu pian*'s connection with calligraphy is probably one reason it has been transmitted to the present day, even though its content (vocabulary) has become obsolete. The other most popular primers are likewise favorite subjects of prominent calligraphers.

LEARNING SENTENCES

Compositionally speaking, Chinese primers like the *Cangjie pian* and *Jijiu pian* are something between sundry lists and literary writings (especially the beginning and final parts). What did students study after these primers? Mesopotamian and Egyptian pedagogy usually continued with collections of maxims and simple hymns that were sometimes still heavily influenced by list making, as we have seen, but teachers also provided their students with examples pertaining to grammar. In China the only extant pre-imperial collections of aphorism-like sentences are from a tomb of ca. 300 B.C. at Guodian in Hubei province.³² Li Ling speculates that three of the four collections from this tomb are something like commentaries on other classical texts, but the remaining one is a collection of sayings and anecdotes meant to aid the composition of good dialogue and persuasion. The short sayings in these collections can be loosely grouped by subject matter.³³ One of the maxims says, "The meat broth in a rut cannot compare with the vast water. The stupid wives and husbands cannot distinguish the gentleman from the base person even in their own community, (so) they have no wisdom (but) eat leeks all their lives."³⁴ The maxim compares two images: stupid couples are equated with meat broth in a rut, their intelligence no match for the "vast water" of the gentleman's.

Maxim collections of this kind are similar to the wisdom texts of Egypt and Mesopotamia. Egyptian wisdom texts are usually collections of wise sayings attributed to ancient sages and wise men. Independent maxims are loosely linked into short series by subject matter and language.³⁵ One maxim from an Egyptian text called *Teaching of the Vizier Ptahhotep* says, "Don't be proud because you are wise! The limits of art are unattainable; no artist is fully equipped with his mastery. Perfect speech is more hidden than malachite, yet it is found with the maidservants at the millstones."³⁶ The basic meaning is that even servants have their own wisdom, from which the elite can profit.

The two maxims from China and Egypt just quoted are apparently proclaiming opposite values, but they are very similar in form, figures of speech, and didactic tone. (Compare also the proverbs from Mesopotamia mentioned earlier – for example, "The

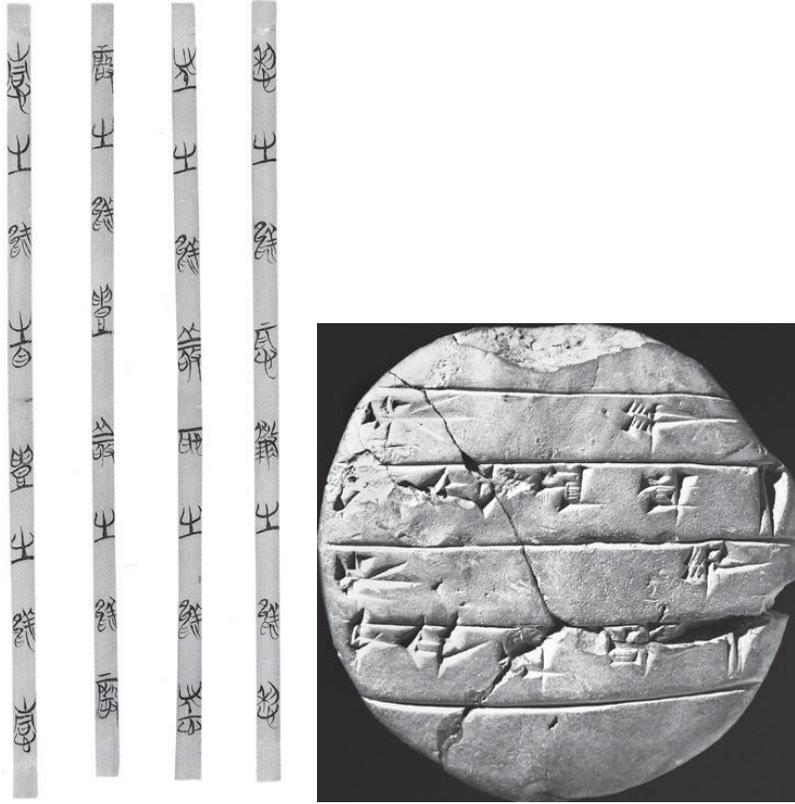


FIGURE 6.4 Conventional formats for school texts. *Left*, short bamboo strips containing excerpts from collected sayings, from the Guodian tomb in Hubei province. Courtesy of Zhang Changping. *Right*, school tablet of the type called “lentil” or “bun,” from Nippur, bearing extracts from the beginner’s literary text Lipit-Eshtar B. Courtesy of the Penn Museum, image #143182.

word of a poor man is not accepted.”) Might we tentatively suggest that the Chinese texts under discussion are also wisdom texts that were employed in literacy training? The bamboo strips on which these sayings were written were the shortest among the manuscripts from the Guodian tomb. Unlike the other manuscripts, which were written continuously from one strip to the next regardless of where a sentence stops, all but one of the collections of sayings was written so that each strip was self-contained (Figure 6.4, left). Could this, like the *Jijiu* prism, be a conventional format for school texts? It reminds us of the Mesopotamian tablet type called “lentil,” which also usually contained extracts from a beginning literary text (Figure 6.4, right). Three other pieces of evidence tend to support this argument.

First, some of the aphorisms in the first group of texts (in Li Ling’s classification) are by and large examples of wordplay constructed on sets of synonyms and antonyms. For example, “Strength is born of one’s nature; fortitude is born of strength; resoluteness is born of fortitude. Weakness is born of one’s nature; puzzlement is born of weakness; failure is born of puzzlement.” Despite its pretentious philosophical overtones, this kind of formulaic composition has an appearance suspiciously like the pairing of synonyms and antonyms in lexical lists. It thus invites comparison with the lexicon-inspired school texts from Mesopotamia and Egypt.³⁷

The second piece of evidence comes from two transmitted texts that were probably compiled at roughly the same time as the Guodian texts or a little later. They are the well known, probably the best known, Chinese wisdom texts: *Lunyu* (*The Analects [of Confucius]*) and *Xiaojing* (*The Classic of Filial Piety*).³⁸ In essence these are collections of dialogues between a master (purportedly Confucius) and his disciples. In form and didactic character, the master's aphorisms in the two transmitted texts are not different from the sayings in the Guodian texts. An example from the *Analects* suffices to make the point: "The Master said: 'It is humaneness which is the attraction of a neighborhood. If from choice one does not dwell in humaneness, how does one obtain wisdom?'"³⁹ The primer *Jijiu pian* lists the *Lunyu* and the *Xiaojing* in the curriculum (Chapter 24 in Text 6.4), and first-century B.C. texts state that *Lunyu* and *Xiaojing* were the main school texts used after schoolchildren had mastered the primers.⁴⁰ To judge from a copy of the *Lunyu* excavated from the tomb of a first-century B.C. prince, this may have been true even earlier.

The centrality of these two texts in the elementary curriculum remained unchallenged to the end of the dynastic period.⁴¹ Their enduring popularity was probably owed to their brevity and to their enunciation of a morality that was embraced by the literate elite. David Schaberg points out that *Lunyu* "must have been recopied at least enough times to outrun the decay of exposed bamboo, silk, or paper, and it must have been disseminated widely enough in every generation, and with enough prestige, to justify that recopying." He also mentions its use in teaching but does not explicitly connect its longevity with transmission in a setting of scribal training. Yet its brevity by comparison with other classics surely made it particularly suitable as an elementary school text, and use as a school text would explain why it won a wider audience than the other canonical texts enjoyed.⁴² Chairman Mao's "Sayings" (the little red book) is a modern analogy. As Arthur Wright pointed out a long time ago, for ordinary people the *Selected Works of Chairman Mao* were as difficult as the classics, so the party collected "pithy digests of the same authoritative truths" for mass consumption. He also noted that the title of the little red book is the same as that of the collected sayings of Zhu Xi, the twelfth-century reformulator of neo-Confucianism, which in turn was a calculated echo of the title of Confucius's *Lunyu*.⁴³

The third piece of evidence comes from the intertextual relationship between the Guodian collections of sayings and other, more advanced literary compositions. Several sentences are identical or very similar in structure and images to sentences in transmitted texts, *Lunyu* included.⁴⁴ One sentence from Guodian reads, "There are no words that are not echoed, there is no favor that is not required." This expression is found also in the most frequently attested literary collection, the *Odes*, which I discuss shortly. The corresponding sentence from the transmitted *Odes* expresses the same meaning.⁴⁵ But the wording is slightly different, replacing a couple of words in the Guodian text with synonyms:

非言不讎	非德無復	(Guodian)
no words no echo	no favor no return	
無言不讎	無德不報	(transmitted <i>Odes</i>)
no words no echo	no favor no recompense	

As Veldhuis observes of a similar phenomenon in the Mesopotamian curriculum, stock phrases and imagery in collections of proverbs served to prepare students for

understanding more advanced literary compositions.⁴⁶ These poetic expressions were not necessarily precise quotations from fixed compositions (although they could well be), but obviously they were carefully chosen for instructional purposes by teachers who knew written texts by heart.⁴⁷

LEARNING POETRY

Maxim collections like those from Guodian, containing stock expressions derived from longer literary compositions, paved the way for students to proceed to the next phase of literacy acquisition. In Mesopotamia, after the drilling in model contracts and proverbs, students were introduced to simple hymns in praise of gods, kings, and temples. In China most of the surviving pre-imperial hymns were collected in an anthology whose title is commonly translated as the *Odes*. The Han recension of the *Odes*, containing about three hundred poems, has been transmitted down to the present.⁴⁸ The existence of this anthology in written form before the imperial period, though currently in dispute, seems difficult to doubt. Several excavated texts either quote from or allude to some of the poems. It seems clear that at least some individual poems were in wide circulation by the late fourth century B.C. if not earlier. Moreover, one of the excavated texts acquired by the Shanghai Museum (ca. fourth century B.C.) records terse commentaries to no fewer than sixty poems in the *Odes*.⁴⁹ The commentator (supposedly Confucius) refers to a particular poem by giving its title, which is usually taken from the incipit of that poem. He also mentions by title the four sections of the transmitted anthology. One gets the feeling that he was commenting on a written anthology or at least that he had before him the table of contents of a well-organized written anthology.⁵⁰ By analogy with Mesopotamia I propose that poems from the *Odes*, or even the whole anthology (or a similar one), were used in scribal education at the next stage after the acquisition of maxims like the ones from Guodian.

[Text 6.5a](#) is an excerpt from the *Odes*; [Text 6.5b](#) is one from Mesopotamia that we encountered at the beginning of [Chapter 5](#). Both poems are constructed through the piling up of nominal phrases with few or very simple grammatical elements. The vocabulary used in the Chinese poem includes items of clothing, kinship terms, titles, names of states, body parts, insects, and color terms. This vocabulary is well covered in the encyclopedic thesaurus *Approaching What Is Correct* and the primers mentioned above. In fact later commentators used *Approaching What Is Correct* to explain terms like “tree-grub” in the poem. Poems in the *Odes*, especially those in the section called “Airs of the States,” abound in names of flora and fauna, so much so that in the *Analects* Confucius says that the *Odes* can teach students “the names of birds and beasts, plants and trees.”⁵¹

Text 6.5a. The Stately Lady.

The stately lady is tall,
she is dressed in a brocade robe and unlined slip-over robe;
she is the daughter of the Marquis of Qi,
the wife of the Marquis of Wei,
younger sister of the crown prince,

sister-in-law of the Marquis of Xing;
the Lord of Tan is her brother-in-law.
her hands are like soft young shoots,
her skin is like cream;
her neck is like the tree-grub,
her teeth are like melon-seeds,
her head is cicada-like,
her eyebrows are silkworm-like;
her artfully smiling (mouth) is red,
her beautiful eyes are well-defined black and white ...

SSJZS, p. 322. Modified from Karlgren 1974, p. 38.

Text 6.5b. King Lipit-Eshtar.

Lipit-Eshtar, proud king, enthroned prince, most seemingly offshoot of kingship, who walks like Utu, brilliant light of the Land, lofty in nobility, riding on the great divine powers; who settles the people in the four quarters favoured by Enlil, beloved by Ninlil, trustworthy youth with shining eyes, worthy of the throne-dais, whose seemingly head is adorned with the tiara, the good headdress, who holds in his hand the sceptre over the black-headed, prince Lipit-Eshtar, son of Enlil, wise shepherd, who leads the people to let them relax... in pleasant shade, lord, great bison, beloved by An! Your trust is put in mother Ninlil; Lipit-Eshtar, you exert great power.

First paragraph of Text 5.3.

In Mesopotamia knowledge stored in lexical lists was transplanted into literary compositions, such as the poetic *Nanshe and the Birds*, which incorporates pedantic knowledge of birds in its long list of bird descriptions (Text 6.6).⁵² Perhaps we should imagine a similar mixing of literature and knowledge in the *Odes* when we read lines like “‘*guan! guan!*’ cries the osprey, on the islet of the river,” “‘the male pheasant goes flying, slow-moving are his wings,” “‘the quails are ardent, the magpies are fierce.’”⁵³

Text 6.6. Excerpt from *Nanshe and the Birds*.

The ostrich produces eggs bigger than a mountain.
One takes these eggs as carrying baskets.
The bird is familiar with the watch at night;
The peacock keeps the watch at dawn.
The pure bird calls ‘Haja! Haja!’ at dawn.
A bird red from carnelian, blue from lapis lazuli,
white from chalcedony, with all kinds of gold for leather-with-gold inlay,
that is how the sculptor fashions a peacock...
the bird is called *niggurmudum* (‘it carries wealth’ = magpie).

The magpie calls out
and laments in the desert of Keš....
The *gurug* heron is brown, and clad with a *gun*-garment in the reed beds.
The UD.DU bird catches *azagur* fish....
The *šegšeg* bird sobs like a crying child.
The *gubiguzaga* bird [...] like an angry man....
The dove [pecks at] the ground in the broad field;
while the pigeons [eat?] 2 *ban* (20 liters) of wheat at the threshing floor of the king....

After Veldhuis 2004, pp. 119–21.

The epithets of King Lipit-Eshtar in [Text 6.5b](#) were strategically used in the Mesopotamian curriculum as a transfer point to help students proceed from lexical lists to simple sentences. Might a similar strategy be working in the Chinese case? In fact, descriptions of people like the one in [Text 6.5a](#) were not confined to literature but were also used in administrative documents ([Text 4.14c](#)) and in legal documents such as the report given in [Text 6.7](#), although these latter had scant aesthetic ambition.⁵⁴ The model forensic report in [Text 6.7](#) is a coldly factual description of a bloody murder scene. It reveals no feeling of horror on the scribe's part but pride in precision. He has taken the appropriate terms for body parts, colors, and clothes from his lexical lists and combined them with the careful measurement that he was also taught in school. We have already encountered this dispassionate professionalism in the Egyptian and Chinese scribes who read out funerary inventories during a solemn burial ritual where everyone else was supposed to be mourning ([Figure 3.9](#)).

Text 6.7. A model forensic report (third century B.C., pre-unification Qin, from the tomb of a Qin official at Shuihudi in Hubei).

Report of the Prefectural Clerk X: "Together with the Prison Bond-servant X I went to A to investigate. The corpse of the man lay south of X's house, fully on his back. On the left edge of his neck there was a wound made with a blade, and on the back two wounds, all vertical to the neck and the back, each four inches long, struck together and each one inch wide, all depressed, resembling wounds made by an axe. The temples and cheek-bones had all bled, the blood covering the neck, the back and the ground; of all these it was impossible to establish the width and the length. For the rest he was intact. He wore a hempen unlined skirt and jacket, one piece each. The back of his jacket, facing the wounds, had been torn by a blade in two pieces. Corresponding to the wounds, the back of the jacket and the center of its front flap were stained with blood. To the west of the man there was a pair of Qin silk shoes, one at over six paces, the other at ten paces; shoeing him with the shoes, they fitted him. The ground being hard, we were unable to recognize the murderer's foot-prints. The man is an adult of pale coloring, his length is seven feet, one inch; his hair is two feet long. On the belly there are two old moxa scars. From the place of the man's

corpse to the police post X the distance is one hundred paces; to the farmhouse of the commoner C of X village two hundred paces.”

SHD, pp. 157–8, strips 55–62; English translation after Hulsewé 1997, pp. 205, 207; Hulsewé 1985, p. 198.

The point of this comparison between literary texts and administrative documents is that writing descriptive documents would not have been difficult for a student who had memorized and learned to write simple poems like the one in [Text 6.5a](#). In a bronze inscription we find a scribe effortlessly juxtaposing poetic phrases with down-to-earth lists of gifts ([Text 4.8](#)). To write purely utilitarian documents the scribe simply omitted poetic devices such as literary vocabulary, parallelism, repetition, meter, rhyming, and so on. These devices were taught not for the purpose of embellishing administrative documents but as essential preparation for more advanced literary composition. After the initial stage of literacy acquisition, mundane writing could be taken for granted. What mattered in the final stage of the curriculum was to create and impart a collective vision of culture and history that bound together the literate elites.⁵⁵

LEARNING CULTURE AND HISTORY

In [Part I](#) we have seen that king lists played an important role in shaping collective identity and memory in the early states. Probably only the literate elite and sub-elite had the privilege of access to this knowledge. In [Figure 1.3](#) Prince Ramesse (later Ramesses II “the great”), holding a partially unrolled papyrus, is described by the captions above his head as “reading out praises” addressed to the king list he and his father are facing. Presumably the papyrus also contained the king list itself.⁵⁶ Likewise the noblemen Qiang and Lai embedded lists of the Western Zhou kings in their eulogies to their own ancestors ([Texts 2.4–2.5](#), [Plates VII](#) and [VIII](#)). As we have seen, part of the agenda behind these long (multi-dynastic) and short (single-dynastic) king lists was an insistence on political unity, regardless of the harsh reality of many competing states. Including the royal genealogy in the school curriculum thus cannot be viewed merely as a way of legitimizing the current ruler. We shall see soon that the schoolteachers had their own say in constructing a unified history through the compilation and selection of the literary works that would be taught to would-be elites.

The section “Airs of the States” in the *Odes* includes more than one hundred poems that depict everyday life and customs in fifteen states. Tradition has it that the poems were collected from these states. That poems about *different* states were brought together and taught to students was in itself an assertion of cultural unity. The tall lady in [Text 6.5a](#) had connections with no fewer than four states under the nominal rule of the king of Zhou.⁵⁷ Veldhuis observes a similar clash between ideal and reality in Mesopotamia, where the curriculum of one city-state, Nippur, “glorifies Gilgamesh of Uruk, king Šulgi of Ur, the heroic god Ninurta of Lagash . . . and a host of other local kings, heroes, and deities. The literary corpus thus represents the ideal that in reality was hard to achieve: the unity of the cities.”⁵⁸

The same can be said of the hymns in the *Odes* that praise not only the good kings of the Zhou dynasty but also the virtuous kings of the more remote Shang dynasty,

which the Zhou had conquered, and even the legendary founder of the earliest dynasty, King Yu.⁵⁹ A recurrent phrase wherever the *Odes* mentions King Yu is “the track of Yu” (e.g., [Text 6.11a](#), line 11). Yu was credited with uniting the Nine Regions under heaven by spreading earth and channeling rivers to control the great flood, and all later kings and their subjects lived in the area delineated by his “track.”⁶⁰ The Nine Regions of Yu’s track, taken as a unit, are thus comparable to “Sumer and Akkad” in Mesopotamia and “The Two Lands” in Egypt: the unit models a common cultural identity to which elites can give their allegiance. The name of the dynasty that Yu’s son established is Xia, a word that by the fourth century B.C. had acquired the meanings “elegant” and “orthodox.” In the excavated commentary to the *Odes* mentioned earlier, two of the anthology’s four section titles are given as *Da Xia* (Greater Elegantiae) and *Xiao Xia* (Lesser Elegantiae). A dynastic name has become the token for civilization.⁶¹

One of the most telling indications that the teaching of the *Odes* played a major role in creating a vision of historical unity can be found in a passage in *Zuozhuan*. A minister attempting to persuade his lord cites a remonstrance from the past that begins, “Far stretched the track of Yu, as he marked off the Nine Regions.” The phrase “the track of Yu” and the rhymed tetrasyllabic lines throughout the text are reminiscent of the poems in the *Odes*. Schaberg argues that this remonstrance “may well have been composed by ... the educated community who kept possession of the memories of early ... history, and among whom the classics developed.”⁶² I would go a step further and suggest that the composition is the work of an author who had learned the *Odes* at scribal school. It is after all very fitting that poems designed for and learned in a didactic setting should be used on a didactic occasion – remonstrance by speech or by the writing of history. History is didactic. In the schools the memories of early history were materialized in poetic compositions like the *Odes*, the king lists, and the narratives fleshing them out – for example, the excavated *Rong cheng shi*, which recounts King Yu’s achievement in a less poetic way.⁶³

The deeds remembered were not only those of kings. Able ministers and wise men also entered into the history that would be invoked again and again in later times. Schaberg discusses the recurrent appearance of lists of these exemplary figures and the succinct biographies attached to their names in Warring States and early Han texts ([Text 6.8a](#)).⁶⁴ Like the stories of kings, this simple biographical history was codified, the image of each figure (invented or historical) being fixed by just one act, episode, or characteristic that was considered to sum up the figure’s personality and ineluctable fate. The lists became the final judgment. Who codified them, and by what means?

It was in the schools, I suggest, and in the form of student exercises, that literate elites first became acquainted with these lists. After our own prolonged immersion in the various lists and tabular literature from Mesopotamia and Egypt, we have become used to linking any listlike literature to scribal schools. This is probably not an error. The curriculum embedded in *Jijiu pian* included history teaching in the form of annals ([Text 6.4](#), Chapter 24). Something similar is found in a fourth-century B.C. text that purports to record the curriculum for educating the crown prince of the Chu state, and a second-century B.C. text records that a later Chu royal tutor shortened and abbreviated the annals because they were too long and complicated for the king to read. One excavated manuscript is thought by scholars to be the product of such abbreviation.⁶⁵ Could it be that lists of historical figures were also part of the curriculum? At least since the Tang dynasty (A.D. 618–907), lists of exactly this kind have been used to teach schoolchildren

anecdotal history and ethics in China, Korea, and Japan. A list called *Meng qiu* (“Initiate”) is usually regarded as the first of the type (Text 6.8b).⁶⁶

No doubt Schaberg is right in saying that, because the full story would only prove the moral, full narration of the stories gathered around exemplary figures was superfluous to the historiographers who cited them. But full narration was superfluous only because everyone had learned the stories as children. To schoolchildren who did not yet know them, oral narration by the teacher was essential before the figures could become stock examples. A mention of “George Washington and the cherry tree” suffices to remind any American that young George could not tell a lie, because every American child learns this story.⁶⁷ All the compact phrases – a personal name plus a verb or adjective – in Text 6.8b are highly condensed stories from early written texts. They could become a “collection of easily manipulated tokens” only because the text’s users already knew by heart the full stories and their morals.⁶⁸

Text 6.8a. List of famous ministers and their hardships embedded in a transmitted text of about the fourth century B.C.

故文王說紂而紂囚之，翼侯炙，鬼侯腊，比干剖心，梅伯醢，夷吾束縛，而曹羈奔陳，伯里子道乞，傳說轉鬻，孫子臄腳於魏，吳起收泣於岸門、痛西河之為秦、卒杖解於楚，公叔痤言國器、反為悖，公孫鞅奔秦，關龍逢斬，萇宏分脰，尹子阱於棘，司馬子期死而浮於江，田明辜射，宓子賤、西門豹不鬥而死人手，董安于死而陳於市，宰予不免於田常，范睢折脅於魏。（《韓非子·難言》）

Thus King Wen delivered a persuasion before Zhou, and Zhou imprisoned him; the Marquis of Yi was roasted; the Marquis of Gui was dried and cured; Bigan had his heart cut open; the Earl of Mei was pickled; Yiwu was bound; Cao Ji fled to Chen; Boli Zi begged by the wayside; Fu Yue was sold at retail; Sunzi had his feet cut off in Wei; Wu Qi wiped away tears at the An Gate, was pained that the territory west of the River was Qin’s, and was finally torn limb [from limb] in Chu; Gongshu Cuo though speaking of a treasure of the state, was yet thought to be seditious; Gongsun Yang fled to Qin; Guanlong Feng was cut in half; Chang Hong was disemboweled; Yinzi was thrown into a pit of brambles; Sima Ziqi died and was cast adrift in the Jiang; Tian Ming was incriminated and shot; Mi Zijian and Ximen Bao died at others’ hands without a struggle; Dong Anyu died and was exposed in the marketplace; Zai Yu did not escape Tian Chang; and Fan Sui had his ribs broken in Wei.

After Schaberg 1999, pp. 316–17.

Text 6.8b. Primer of anecdotal history, student exercise found in the cache at Dunhuang, ca. A.D. ninth century.

王戎簡要，裴楷清通。孔明臥龍，呂望飛熊。楊震關西，丁寬易東。謝安高潔，王導公忠。匡衡鑿壁，孫敬閉戶。鄧郁蒼鷹，寧成乳虎。周嵩狼抗，梁冀跋扈。郗超髯參，王珣短簿。伏波標柱，博望尋河。陵李初詩，田橫感歌。武仲不休，士衡患多。桓譚非讖，王商止訛。嵇呂命駕，程孔傾蓋。劇孟一敵，周處三害。（敦煌本《蒙求》）

Wang Rong was brief and concise, Pei Kai was fair and erudite. Kong Ming's style name was Wolong, Lü Wang's style name was Feixiong. Yang Zhen was from the west of the (Hangu) Pass, Ding Kuan returned to the east. Xie An was noble and unsullied, Wang Dao was just and loyal. Kuang Heng chiseled the wall (to read), Sun Jing closed the door (to read). Zhi Yu was nicknamed "goshawk," Ning Cheng was nicknamed "sucking tiger." Zhou Song was stubborn, Liang Ji was domineering. Xi Chao the army staff officer had bushy whiskers, Wang Xun the chief clerk was short. Fu Bo [title of the Han general Ma Yuan] set up the bronze post to mark the southern boundary of the Han empire, Bo Wang [title of the Han explorer Zhang Qian] searched for the origin of the Yellow River. Li Ling initiated poetry, Tian Heng inaugurated elegy. Wu Zhong [style name of Fu Yi] could not stop writing, Shi Heng [style name of Lu Ji] worried about his excessive talent. Huan Tan censured prophecy, Wang Shang stopped rumors. When Ji Kang and Lü An missed each other they would travel 1000 *li* to meet, Master Cheng and Confucius talked to each other all day while their chariot canopies tilted toward each other. Ju Meng was like one enemy state, Zhou Chu was like three evils.

My translation of Zheng Acai and Zhu Fengyu 2002, pp. 233–6.

The stability and intertextuality of these lists is most easily accounted for if we imagine that they circulated widely in the form of school texts.⁶⁹ Historians using anecdotal history to explain what happened in the past and predict what will happen in the future cited and adapted them because they were already known to the audience the historians addressed. As William Boltz argues in his study of the composite nature of early Chinese texts, these floating passages became building blocks.⁷⁰ Although the composition of no text is purely mechanical, early Chinese texts laden with history could not be anything but composite. The anecdotes taught in the schools had become the locus for cultural memory and guides to future action.

There is good evidence that of all the texts, it was the *Odes* hymns praising King Wen, the founding father of the Zhou dynasty, that received the greatest attention in the fourth century B.C. One hymn in particular – fittingly titled “King Wen” – is cited more often than any other in both the excavated and the received texts of this period (Text 6.9a). Schaberg has convincingly argued that the reason for this was King Wen's suitability as a model of good order for later generations to imitate.⁷¹ In Schaberg's view, it was the history writers of the fourth century B.C. who put him at center stage. Although not denying them their due, I suggest that if we see the hymn as part of the school curriculum, we will find it easier to grasp the actual process by which King Wen came to embody order for the elites who cited the “King Wen” in their speeches, diplomatic exchanges, and historiographical writings. Just as in certain phases of Mesopotamian history the hymns praising King Lipit-Eshtar of the Isin dynasty (Text 5.3) and King Šulgi of the Ur III dynasty (Text 6.9b) became “core” texts in the school curriculum, “King Wen” might have been adopted by Chinese schoolmasters who presented its protagonist as a model for their pupils to emulate.

Text 6.9a. Excerpt from “King Wen”.

King Wen is on high,
Oh, he shines in heaven;
Though Zhou is an old state,
Its (heavenly) mandate is new;
The house of Zhou became amply illustrious,
Was not the appointment of God timely?
King Wen ascends and descends,
He is on the left and right of God.
Vigorous was King Wen,
His good fame never ceases;
Amply endowed, indeed, was (the house of) Zhou;
There were the grandsons and sons of King Wen;
The grandsons and sons of King Wen, (they are) the trunk and the branches (of the family) for a hundred generations!
All the officers of Zhou,
They are amply illustrious for many generations.
Amply illustrious for generations,
Their plans are very orderly;
Fine are the many officers who are born in this kingdom;
The kingdom has been able to bear them,
They are the supporters of Zhou;
Stately are the many officers;
King Wen through them enjoys his repose.
August was King Wen,
Continuously bright and reverent;
Great, indeed, was the mandate of Heaven;
There were Shang’s grandsons and sons;
Shang’s grandsons and sons,
Their number, was it not a hundred thousand!
But God on High gave his mandate,
And so they became subject to Zhou. . . .

SSJZS, pp. 503–4. After Karlgren 1974, pp. 185–6, slightly modified.

Text 6.9b. Excerpt from a hymn in praise of King Šulgi (Šulgi A).

I, the king, was a hero already in the womb;
I, Šulgi, was born to be a mighty man. . .
I am the king of the four regions;
I am the herdsman and shepherd of the black-headed people.
I am a respected one, the god of all the lands.
I am a child born of Ninsumun.

I am the choice of holy An's heart.
I am the man whose fate was decided by Enlil.
...
I am a knowledgeable scribe of Nisaba;
I have perfected my wisdom just as my heroism and my strength.
Reliable words can reach (?) me.
I cherish righteousness but do not tolerate wickedness.
...
So that my name should be established for distant days and never fall into
oblivion,
So that my praise should be uttered throughout the Land,
And my glory should be proclaimed in the foreign lands,
...
Truly I am not boasting!
Wherever I look to, there I go;
Wherever my heart desires, I reach.
By the life of my father holy Lugalbanda,
and Nanna the king of heaven and earth,
I swear that the words written on my tablet are [at least 4 lines missing or
unclear]
...
I consolidated my kingship,
Subdued the foreign lands,
Fortified the Land.
May my name be proclaimed among the well-guarded people of the four regions!
May they praise it in holy hymns about me!
...

After *ETCSL* 2.4.2.01.

But why did this particular hymn, or sets of hymns, related to King Wen, rather than other royal hymns that might seem equally suitable for teaching purposes, carry such weight in the fourth century B.C., a time when the Zhou dynasty had long since fallen into obscurity? Perhaps the answer is simply that the King Wen hymns had been part of the school curriculum ever since Western Zhou.⁷² It is not farfetched to suppose that to legitimize and perpetuate its rule a dynasty might commission hymns to be sung and performed in court rituals, nor that it might then put those hymns into the school curriculum to instill its ideology in later generations. The Ur III and Isin dynasties commissioned such hymns and saw to it that they were taught to elite students. In both dynasties, it seems, not only administration but also education was reformed by royal decree.⁷³ One result was that some of the royal hymns of the Ur III kings, especially those dedicated to King Šulgi (*Text 6.9b*), survived to form part of the curriculum of the Isin dynasty, where they were taught side by side with the royal hymns of the Isin kings (*Text 5.3*). It was thanks to the continuous existence of schools, rather than the self-advertisement of short-lived dynasties, that kings and their glorious deeds were remembered

by later generations. Although these hymns may have originated as propaganda, their later functions probably should not be characterized in this way: they became textbooks for learning Sumerian language and writing. They also became history.

Schools certainly existed during the Western Zhou period; schools exist wherever literacy exists. The character *xue* (for “school”) mentioned in the oracle bone inscriptions is attested also in Western Zhou bronze inscriptions. Moreover the bronze inscriptions clearly distinguish two levels of school: *xiao xue* (little school, i.e., elementary school) and *xue gong* or *pi yong* (literally school palace, a kind of higher school to judge by later texts).⁷⁴ Text 4.8 records the Zhou king’s speech to a nobleman: “You, in my early days, held an important charge. I then was attending my first school, you would not press me, your sovereign, then.”⁷⁵ Presumably there was a court school for royal children and selected children of high officials, as in Egypt.⁷⁶ Other inscriptions mention that the Zhou king presided over archery contests held at the higher school; the students of this school may have been older. But the inscriptions tell us almost nothing about what besides archery was taught at these schools.

Texts written after the fourth century B.C. claim that during the Western Zhou period, writing, bookkeeping, music, and poems were taught at elementary schools whereas music, archery, and charioteering were reserved for higher schools.⁷⁷ Knowledge and skills unrelated to writing were certainly taught at schools in Mesopotamia, Egypt, Mesoamerica, and the Andes as well. Yet when writing was the subject being taught, poems were often the instrument of instruction, and in Mesopotamia, at least, it seems that music was often associated with poems. The person who composed the inscription for the scribe Hui (Text 6.10b) must have learned poetic language by learning poems from the *Odes*, for the inscription’s quotation from the *Odes* actually rhymes with the next sentence.⁷⁸ The content of the inscription suggests that Hui had some kind of teaching responsibility. Although the word the inscription uses for his job is very vague, it is not inconceivable that he was actually a teacher at a scribal school. If so, it would seem fitting that the inscription should praise him using something he taught. We cannot rule out the possibility that Hui himself composed it.

Text 6.10a. A royal hymn from the *Odes* promising diligent study.

Be reverent, be reverent;
Heaven is splendid,
its charge is not easy (to keep);
do not say: “It is very high above”;
[meaning “It takes no cognizance of our doings”]
it ascends and descends in its workings,
and daily inspects us who are here.
I, the little child,
am not wise or reverent;
(but) I will every day progress and every month advance;
I will learn from those who are continuously bright in their enlightenment;
Great is the burden on my shoulder;
but it (Heaven) shows me the bright path of virtue.

SSJZS, p. 598. After Karlgren 1974, p. 249.

Text 6.10b. A late Western Zhou bronze inscription that quotes Text 6.10a.

Scribe Hui made this precious *ding* tripod.
Hui every day progresses and every month
advances, (he) knows (how) to teach (that which is) bad and good, (therefore)
he received a great and graceful award. May his sons and grandsons eternally
treasure (it).

Li Xueqin 1990, p. 122. My translation.

The hypothesis that royal hymns focused on King Wen belonged to the core curriculum of Western Zhou schools receives additional support from the poem titled “King Wen Has Fame” (Text 6.11a). The hymn seems to attribute the construction of the higher school to King Wen; it also implies that the school was a magnet that drew people from far and near. We might compare it with one of the hymns in praise of King Šulgi of the Ur III dynasty, which emphatically records Šulgi’s connection with the scribal schools (Text 6.11b). Both hymns stress royal patronage of schools. But whereas Šulgi was outspoken about his intention to establish schools to perpetuate his fame, King Wen’s fame was only subtly linked with the royal school. Likewise, in none of the extant royal hymns does a Chinese ruler openly boast of his achievements in scribal art – in sharp contrast to some Near Eastern and Maya kings – although this certainly does not mean that they were illiterate.

Text 6.11a. King Wen Has Fame.

King Wen has fame.
...
King Wen received the mandate.
...
When he had made the attack on Chong,
He made a city in Feng.
...
The wall he built was moated, ...
The (city) Feng he built matched it;
He did not alter his plans,
Mindful of his predecessors,
He came and was filial;
...
The river of Feng flowed to the east,
It was the track of Yu,
That was (where) (the people of) the four quarters came together;
...
The capital of Hao (had) the *piyong* (higher school);
From west, from east,
From south, from north,

There were none who thought of not submitting;
The august king was splendid.

...

SSJZS, pp. 526–7. Modified after Karlgren 1974, pp. 198–9.

Text 6.11b. King Šulgi Built Schools.

Downstream, at Ur, in the Pure Place (my song) is sung,
The house of Wisdom of Starry Nisaba is (the place) of my song.
Upstream, at Nippur, in the Great Place (my song) is established
For my benediction in Ekur, the place that I did set on a firm footing.
The scribe shall come, his hand shall capture (the song in writing),
The minstrel shall come, shall declaim thereof for them,
For all eternity the Edubba is never to change,
For all eternity the Place of Learning is never to cease functioning.

After George 2005, p. 133.

Scholars mostly agree that a major ritual reform took place in the Zhou state sometime after the middle Western Zhou period.⁷⁹ The reform seems to have had a profound impact on many aspects of Zhou institutions. Might we surmise that an educational reform was part of a larger restructuring project? Might it be not just a coincidence that the primer *Shi Zhou pian* is attributed to a court scribe of this period? The script seen in bronze inscriptions of this period is very different in style from that of earlier times. One mechanism of script change is a standardization imposed from above and implemented by the schools; the histories of the Near Eastern and Maya writing systems furnish instances. If a new curriculum was imposed by the Zhou court, the prominence in it of dynastic founders would not be surprising. As we have seen in [Part I](#), dynastic founders regularly receive special attention in king lists. The lists embedded in two late Western Zhou bronze inscriptions ([Texts 2.4](#) and [2.5](#)) confirm that King Wen was regarded as the *de facto* founder of the dynasty. The eulogy to him at the beginning of one of the inscriptions is, like the hymn “King Wen” in the *Odes*, carefully phrased and rhymed.⁸⁰ If we recall that this inscription belonged to a scribal family – it was probably composed by a member of the family – we will not find it hard to imagine a school curriculum centered on texts about King Wen, such as the hymns to him in the *Odes*.

Perhaps these speculations about the curriculum of Western Zhou schools have gone far enough. But the existence of scribal schools and a scribal curriculum seems beyond doubt, and, that being so, their importance can hardly be overstated. As we have seen clearly in Mesopotamia and Egypt, scribal schools provided a natural setting for transmitting texts and forming views of the past.

CONCLUSION

States can exist without writing, but only if they resort to radical administrative measures of the kind we saw in the Andes, or are content with the rather loose control we saw in the Aztec empire. But writing could not have come into being without the state, it seems, for writing has arisen *ex nihilo* only in the context of early state institutions. Inspiration alone is not enough. Whatever individual genius was involved in the invention, writing could take root and flourish only in institutions that were willing to invest large resources in it because they had important uses for it.

Early writing had two basic functions, administration and display. Both contributed to the construction of the state as an imagined political community. In Anderson's words, "[A]ll communities larger than primordial villages of face-to-face contact (and perhaps even these) are imagined," because the members of such communities, especially the citizens of a modern nation-state, "never know most of their fellow members or meet them, yet they bear the image of their communion."¹

Many devices were mobilized by the elites of early states to construct the imagined community. Architecture and the other arts are perhaps the most familiar, for the temples, pyramids, and royal statuary of some ancient societies survive to this day. A more ephemeral but no less potent device, spectacle, for which architecture often provided the setting, is the subject of a stimulating recent volume edited by Takeshi Inomata and Lawrence Coben.²

Yet another, the one examined here, is writing. The question I have posed is, How did writing help or force people to see themselves as part of the state? The preceding chapters have sought to answer this question by looking separately at three sometimes overlapping subcommunities of the state.

PART I

The subcommunity of concern to [Part I](#) is the group that constituted the audience for royal display and for legitimizing ideology in general. But what was this group? Who formed the audience? Given the prominence of writing in royal display in most of the states in our sample, the audience must have been literate, and it was therefore small. [Part I](#) discussed the king list as a way of manufacturing history for the consumption of this audience. The result was to create an elite group identity and to assert the special position of the ruler within the elite. Focusing attention on the king nurtured the belief that society was, and had to be, organized around divinely appointed kings.

The forms taken by royal display vary among the societies in our sample, and different forms may have addressed slightly different audiences. The inscription inside a Shang bronze did not reach as large an audience as the pylon in front of a New Kingdom pharaoh's mortuary temple (although we must remember that even the most grandiose royal images in Egypt were in locations to which access was in some degree restricted). Here we come to one of the most conspicuous differences between early China and the other states in our sample: the absence from China of images – public or private – of the king.³ Depictions of the human figure are extremely rare in early Chinese art, not because they were confined to perishable materials but because they were marginal in elite art.⁴ In [Chapter 2](#) it was suggested that the deceased kings of the Erlitou and Erligang states were commemorated by their tombs and perhaps by spirit tablets inscribed with their names and housed in ancestral temples. Tombs and spirit tablets in fact were the focus of ancestor veneration throughout later Chinese history. Representing the ancestor not by an image labeled with his name but by the name itself may be something distinctively Chinese. The mausoleum complex of the First Emperor of Qin (d. 210 B.C.) had thousands of life-sized clay figures of soldiers to accompany the emperor, but as far as we know no image of the emperor himself. From Han times we have written references to portraits of generals and concubines but not of rulers.⁵ Portraits of rulers did not appear until after Han, and even then, when representational art had come to dominate artistic production, Chinese rulers seldom sought to set their likenesses before the public. The contrast with Egypt, Mesopotamia, and the Maya cities is striking.

On the other hand, the king's lineage and the legitimacy it gave him were at the center of royal display in all the states in our sample, China included. As we have seen, writing was not the only way to advertise a royal genealogy. Material presentation of the king's ancestors might advertise it or even (in the case of Inka mummies, and perhaps Erlitou tombs) replace it. But in societies that had writing, the written king list was always important. We have several times seen the coalescence of a symbol (a written name) and the thing it stands for (a person) – for example, in such ritual texts as the Genealogy of the Hammurapi Dynasty ([Text 1.3](#)), a Middle Kingdom execration text ([Text 5.8](#)), and a Chinese covenant text ([Text 4.31](#)). In part because of the magical efficacy of written names, the king list itself could be an object of veneration. In Egypt, in the Temple of Seti at Abydos, a king list that is three thousand years old survives to this day *in situ*. Apparently the only text from the Shang dynasty that survived to reach Han writers was the Shang king list, transmitted faithfully to Sima Qian and from Sima Qian to us.

The audience for written king lists, as I have said, was necessarily a literate one. To characterize this audience in detail, civilization by civilization, would take us deep into two very large areas of study: first, the role of writing in elite art, and second, ancient literacy. Some general observations must suffice here.

First, on the role of writing in art.⁶ Beautiful writing was an essential constituent of elite monuments in Mesopotamia, Egypt, the Maya cities, and China. In all four places, writing was a major vehicle of display, sometimes the principal one. In at least two civilizations – Egyptian and Maya – elite figurative art can hardly be understood apart from the writing it is combined with ([Plates IX and XVI](#)). In Mesopotamia, writing tends to caption depictions rather than fuse with them, but it can be conspicuous and very fine.

In China, where there were no depictions to be captioned, fine writing itself became the center of attention (Plates VII and VIII). The inscribed monuments that survive from ancient China are bronze ritual vessels, bronze bells, and then from the Han period, stone stelae. (Buildings too may have carried inscriptions, but they were wood and have perished.) Particularly spectacular examples of display writing on bronze are the gold-inlaid inscriptions – more than thirty-five hundred characters – on a set of bells cast for Marquis Yi of Zeng, the ruler of a minor late Zhou state, who died in 433 B.C.⁷

As to literacy, writing could never have become a vehicle of elite display if the elite had not been literate.⁸ Display writing in Egypt, China, and the Maya cities testifies to elite literacy at least as decisively as the explicit claims made by a few ancient Near Eastern rulers proud of their learning. In all four civilizations, the literate comprised two overlapping groups: on the one hand, the ruler, his relatives, and the elite in general; on the other, the scribal class, ranging all the way from high officials down to humble accountants (who, by comparison with peasants, were themselves members of an elite, a fact we have seen stressed repeatedly in the school texts, e.g., Texts 5.11 and 6.4). Thus in all of the four literate civilizations in our sample, literacy was first and foremost identified with the elite and sub-elite, just as it was in the Greco-Roman world.⁹ Indeed it seems to have been largely confined to this group, although there may have been isolated extensions into a few nonscribal professions.¹⁰

It was this dual community of the literate that was the target audience for king lists and for the ideology surrounding them. As a fraction of the population, the community was small, but as we have seen in Parts II and III, it held all or most of the power in the state and hence was probably the only audience for royal propaganda that mattered. Within it we should perhaps see two slightly different power bases. One was the state administration, starting at the bottom with tax collectors and going all the way up the hierarchy to the king. The other was the scribal schools, which as time went on acquired a measure of autonomy, a tradition and intellectual life of their own. Partly autonomous, partly enmeshed with the administrative hierarchy, the schools might at times exert influence on the ideology of the state, as we saw in Part I (the Sumerian King List, the Mandate of Heaven).¹¹ As custodians of king lists and royal ideologies, they both subscribed to and shaped them, and they also shaped the elite, who studied in the schools. The construction of an imagined community around the king was first achieved within this club of power.

Did the king lists and ideologies discussed in Part I matter to anyone outside the elite? The two Western Zhou bronze inscriptions quoted in Texts 2.4 and 2.5 assure us that the king's genealogy mattered to members of the elite who were not part of the royal family. But did it matter to the peasants? It has sometimes been suggested that even illiterate commoners might have been able to recognize a small number of royal names, understanding them simply as emblems.¹² But the settings in which inscribed royal monuments were placed suggest that commoners seldom had access to them. Even when a wider audience was involved, as seems to have been the case with the theatrical performances on Maya stairways (Figure 1.3), an inscribed king list might not have been legible to spectators at a distance. Dynastic history could no doubt have been conveyed to an illiterate audience by oral performance of some kind (in front of an inscribed monument that could be pointed to as confirmation?). Recall that at Cuzco the royal mummies were displayed to the populace while singers sang of their deeds. The

absence of archaeological evidence for such oral indoctrination obviously means little. Yet in the absence of any kind of record saying or even hinting that illiterate commoners were taught dynastic history and ideology, we may wonder whether they ever were. Did the ruler need for the peasants to know and believe the dynastic history that the educated elite learned in the scribal schools?

Maybe it was enough for the peasants to know that there was a king. In an illuminating study of the agrarian world of the Northern Dynasties (A.D. 420–589), Hou Xudong finds that villagers commissioned Buddhist inscriptions that prayed for the emperors as if they were the embodiments of the state but were indifferent to the ups and downs of the courts during this period of political turmoil. The same prayer was used for two emperors of two different dynasties, unchanged except for the dating formula. It seems that the only thing the villagers needed the current ruler's name for was naming the year.¹³ They might have learned about names of rulers and changes of dynasty from royal decrees, which at least as early as the Han period were posted in prominent locations and read aloud to the people by local officials.¹⁴ Gossips in the marketplaces could also have supplied bits of information, although it is hard to see gossip as a useful channel for royal propaganda.¹⁵ But this may be all that the ordinary villager knew or cared about. Mesopotamian festivals of city gods and similar festivals in New Kingdom Egypt suggest a measure of public involvement in myths of divine kingship, but it does not seem likely that the myths and the dynastic history they enveloped were created with the peasant in mind.

PART II

Thus it was not display texts that induced the population at large to imagine the state as a community and themselves as part of it. The state made its presence directly and inexorably felt through the activities of the scribe administrator. [Part II](#) examined the impact of bookkeeping on three elements of society: the taxpayers, the ruler to whom taxes were due, and the administrators who were the instruments by which wealth was gathered and disbursed.

The administrative records studied in [Part II](#) are in some cases extant, in some cases reconstructed from display texts, in some cases only hypothesized on thinner evidence. Except in Mesopotamia, the day-to-day bookkeeping of early states was done on perishable materials that have mostly vanished with the passage of time. Display texts were often inscribed on durable materials with better chances of survival. Our textual sample is thus biased by uneven survival and also by the chances of discovery and excavation.¹⁶ The question of what it does and does not contain is the inevitable backdrop to any discussion of the functions of early writing. In the words of van Driel, "What is in the texts can reasonably be discussed, but what can be inferred is a permanent problem. But it is a fallacy to suppose that what is in the texts is all that existed, and especially, in a negative way, that what is not written down, did not exist."¹⁷ We must not allow ourselves to become prisoners of a biased sample; we must not be (as the Chinese say) the frog at the bottom of a well, who thinks the sky is small. To speculate about what we do not have is risky, but comparative study gives us a powerful tool for controlled speculation, and to operate as though our sample were complete would not be risky, it would be wrong. [Part II](#)'s attempt to retrieve administrative information from display texts is an effort to

remedy the bias of the archaeological record. It is also a reminder that administrative information was a major theme for textual display.

Early states recorded administrative information to facilitate extracting and redistributing wealth. What information was collected depended in part on the state's ambition. All early states required labor to carry out building programs, man the army, provide service and craftsmanship, and cultivate land, and to secure labor they conducted population census. The census assigned each person a place in the state, making him conscious both of his position and of the state. The information most commonly recorded was tax status. In ancient times as today, the experience of being recorded as taxpayers did not give people a happy view of their membership in the state (as a Mesopotamian saying goes, "The man to fear is the tax-collector"). But we should not forget that laborers usually received rations from the state's storehouses for performing labor service, and rations in essence were not different from modern salaries. When the state initiated grand building programs, or projects for irrigation or land reclamation, it created jobs that returned some of the wealth it had extracted.¹⁸ To the extent that people saw such projects as necessary or beneficial, they might come to regard the state as a provider, and themselves as dependents. In addition to providing order and security in a general sense, the early states offered a measure of social welfare through famine relief, tax exemption, and other benefits for specific social groups.

However, the early state's determination to keep records of its people and to give them an identity in the body politic did not arise from a concern to deliver them benefits; quite the contrary. The state kept records to control its people and to exploit them effectively. Of the states examined here, the Inka empire probably had the least detailed census, and as individuals, at least, the people under Inka rule were probably the least legible to the state: at the local level the Inka census was utterly impersonal. The sense of belonging to a community was certainly strong, and (as rebellions attest) strongly resented, but it depended less on record keeping than on more drastic intervention. Forced resettlement, the dramatic visibility on the landscape of the state farms, the pursuit of administrative simplicity by demographic engineering – these were all daily reminders of the omnipresent power of the Inka state.

The early Chinese state stands at the opposite extreme of administrative minuteness. From the Warring States period onward, it seems to have achieved, with the help of writing, the deepest penetration into people and land of any ancient administration. The contrast between the concreteness of the local-level census and the abstractness of the census data used by the central authority is striking. On present evidence China's universal census conducted at the level of individual households seems to have been unmatched in thoroughness and depth anywhere in the ancient world, and its freehold land tenure likewise has no parallel for its systematic enforcement by the state. The organizational sophistication of Han state factories, documented by quality-control inscriptions that sometimes run to fifty characters or more, is striking testimony to the state's ambition.¹⁹ Indeed we might take the Han factory as a microcosm of the Han state. As for the people, the knowledge that their names, sex, age, height, place of residence, and more had been recorded and were stored in the state's archives must have made them very conscious that they belonged to the state.

Nevertheless their vision of the state would in most cases have been partial and local, for, apart from soldiers and some *corvée* laborers, most of the common people spent

most of their lives attached to one place. The ruler by contrast had a comprehensive, synoptic view. The administrative documents at his disposal – the maps, the registers, the summary accounts of the state’s wealth in all its forms – were not only the tools by which he controlled his administrators and through them the common people, they were an image of the state.

The interface between the ruler and the taxpayer was the administrative hierarchy of scribe officials. Being elements of the state apparatus and authors of the documents by which it operated, these scribes identified themselves with the state. Yet their view of the state was shaped not only by their work but also by their training. They had a sense of community that was rooted in part in the texts they had studied in school, the subject of [Part III](#).

PART III

In [Part II](#) our documents were administrative records, and we saw how scribes employed writing in the service of the state administration. [Part III](#) continued the discussion of that portion of the literate for whom writing was a profession. We examined the setting in which professional scribes received their training, and in which some pursued lifelong careers as teachers, and our documents were school texts written by those teachers. Because the members of this script community were the personnel of the state administration, it is not surprising to find the imprint of their schooling on some of the largest state projects: planning a grid settlement ([Figure 3.12](#)), building enclosure walls ([Figure 4.5](#)), laying out farming fields in regular strips ([Figure 3.2b](#) and [Plate XI](#)), social engineering of all kinds. Insistence on orderliness and indifference to reality on the ground were indoctrinated in the earliest ivory towers. And as we saw in [Part I](#), the thinking of the scribal schools could have an impact in the sphere of ideology as well.

The importance of schools and school texts extends far beyond the education of scribal professionals, however, for all the literate were taught from the same texts by the same methods, in the process encountering the same ideas and ways of thinking. In other words, when we study scribal education, we study the education of the elite. The title “scribe,” we must remember, was proudly claimed even by kings.

In [Parts I](#) and [II](#) we saw broad cross-cultural similarities in the use of writing to assert legitimacy and control, but we also found certain respects in which China seems to have been distinctive. In [Part III](#) Chinese distinctiveness is harder to find. Needless to say, the ideas and values promoted in the school texts in China are not always the same as those encountered in other cultures. But in pedagogy and the strategies for literacy acquisition, it is hard to see a difference. Cross-culturally, differences in writing systems do not seem to translate into major differences in pedagogy. How much variation, after all, do we see in primary education in the world today? There is no culture in which young children are immersed in tubs of alphabet soup to absorb literacy. The step-by-step teaching of the correct execution of signs, the learning of word lists and texts through copying, memorization, and even singing may all be more or less mandated by the motor and cognitive mechanisms that reading and writing exploit.

Lexical lists (today we call them dictionaries) have always been essential to the functioning and hence to the teaching of any writing system. In view of their well-attested place at the center of ancient scribal education, it is no surprise that much of what scribes

did was an extension of listing, or that so many text types grew out of lists or were influenced by the habit of listing. To compile an encyclopedia is to annotate a list. In Egypt onomastic lists viewed as embodiments of knowledge became part of the system of display; knowledge that had no utility in real life was codified in them and preserved for millennia.²⁰ In the documents left by the early states, lists are everywhere, from land registers to poems to royal titularies: “Chief priest of Assur, the chosen one of Enlil and Ninurta, the favorite of Anu and Dagan, the divine weapon of the Great Gods, the potent king, the king of the world, the king of Assyria ...”²¹ This pervasiveness of lists has a direct bearing on the origin of writing.

NAMES, LISTS, AND THE INVENTION OF WRITING

The picture is clearest in Mesopotamia, where the first writing was proto-cuneiform bookkeeping: forms were divided into cases, then numerals and signs were entered in the cases. The signs denoted names of goods, places, titles, and persons. To invent this bookkeeping system someone had to assemble a collection of signs, either by turning existing signs to a new purpose or by inventing new signs or both. The size of his collection depended on the number of names he needed to record. We are unlikely ever to know how many signs he used in his first experiment in graphic bookkeeping: we will never know the size of the very first sign repertory. But as Cooper points out, numerical and numerico-ideographic tablets prepared the way for proto-cuneiform, but once it was invented, there were “no further incremental steps in the process. The idea that commodities, titles, names, and transaction types could be represented graphically led almost immediately to the elaboration of an entire system of signs.”²² This elaboration had certain automatic consequences. As soon as the number of signs became large, someone had to make a list of them. The moment the list existed, it became the curriculum for training new bookkeepers. As the list grew in length, a way had to be found to organize it for easy reference: the signs were classified. And classifying the signs established paradigms for generating new signs from the existing repertory (recall the proto-cuneiform list of pots in [Figure 5.1](#)). A writing system is a system, and the backbone of the system is the lexical list.

To what in this constellation of events might we want to apply the expression “the invention of writing”? Was “the inventor” the person (or committee) who first used signs to fill out a bookkeeping form? Perhaps so, but this is a rather impoverished description of what actually took place. Perhaps we should think instead in terms of a whole package: (1) inventing bookkeeping forms, and signs to fill them out with; (2) making lists of the signs; and (3) creating a community of users, a script community, by obliging apprentice bookkeepers to memorize the lists. If we had a better sample of early tablets, and a very exact chronology for them, we might be able to unpack the package and divide the process of script invention into a sequence of smaller steps. But fascinating as that would be, would it really change the picture? Might we not still want to apply the expression “the invention of writing” to the whole package?

Once invented, Mesopotamian writing developed along a punctuated trajectory, marked by reforms carried out at intervals in scribal settings, as we saw in [Chapter 5](#). The same seems to be true of Egyptian writing, whose early history Baines describes as a jerky development shaped by several reforms.²³ All reforms aim at standardization. But

how in practice does one standardize a writing system? Lexical lists and scribal schools are the obvious arena for reformers to act in, one in which they can standardize not only orthography but phonology and grammar as well.²⁴

In Egypt it seems possible that royal display played a role in the invention of writing. Certainly the early Egyptian epigraphic record differs strikingly from the Mesopotamian one, where the earliest writing consists exclusively of bookkeeping and lexical lists. Yet even if we assume a difference in the function of the earliest writing in the two places, is the role of lists likely to have been different? It is hard to think so. Regardless of function, the practical operation of the sign system creates the same needs. The prominence of onomastica in Egypt, the history punctuated by reforms – everything seems parallel to what we know from Mesopotamia.

As has been stressed by Houston on several occasions, and concretely demonstrated by the recent discovery of Olmec writing, the Maya writing system was not a pristine one.²⁵ Because we know little about the Olmec civilization and next to nothing about its writing system, to speculate about invention and development seems premature. But in thinking about a mechanism for the secondary invention of Maya writing, we might recall the transmission and spread of cuneiform in Mesopotamia in the form of lexical lists and itinerant teachers. And the Maya system's later development, in which Houston sees "sudden episodes of scribal innovation," would also seem readily understandable if situated in a context of lexicography.²⁶

The Chinese writing system is likely to be a pristine one, but archaeology has yet to recover any trace of its earliest history.²⁷ We cannot reconstruct its invention in the way the Mesopotamianists are able to trace the invention of cuneiform; we have no "proto-Chinese" but only the fully developed script of the Anyang oracle texts. Unlike the Olmec and Maya specialists, however, we have an immense corpus of writing from later periods, and as we saw in [Chapter 6](#), list-making figures just as prominently in the Chinese corpus as in Egypt or Mesopotamia. Can we doubt that when writing was invented in China, the lexical list was invented, too? I think not, and I believe that lists will survive as long as writing does. The modern decipherment of any ancient script begins by assembling its signs; we compile a *signary*, a term coined by epigraphers. And once the script is deciphered, we compile a dictionary, guided by whatever principles we used in organizing the signary.²⁸ Are we not repeating what the first scribes did millennia ago when they created their scripts?

NOTES

INTRODUCTION

- ¹ See Rodney Needham's introduction in Durkheim and Mauss 1963; Pinker 2002.
- ² Anderson 2006, p. 6.
- ³ Skinner 2009, p. 362.
- ⁴ Yoffee 2005, p. 17.
- ⁵ See Douglas 1986, p. 1, and Herzfeld 1992.
- ⁶ See Whimster 2004 and Burchell et al. 1991.
- ⁷ Weber 1968, p. 67.
- ⁸ Kemp 1991, p. 7.
- ⁹ I find Jean-Jacques Glassner's argument to the contrary unconvincing (2003), and few of his colleagues in Assyriology seem to agree with him; see, for example, Cooper 2004.
- ¹⁰ Weber 1976, pp. 93–4.
- ¹¹ Scott 1998; Yoffee 2005, Chapter 4, especially p. 94.
- ¹² Kemp 2006, p. 182.
- ¹³ Whimster 2004, p. 1.
- ¹⁴ Lévi-Strauss 1973, p. 299.
- ¹⁵ Goody 1986, p. 91.
- ¹⁶ De Swaan 2001, p. 125.
- ¹⁷ Gordon 1991, p. 3.
- ¹⁸ Douglas 1986, Chapters 5 and 8.
- ¹⁹ See Cooper 1989; Trigger 2004, pp. 43–6; and compare Boone 2004, Urton 2003, p. 28.
- ²⁰ See *FW*.
- ²¹ Nissen et al. 1993.
- ²² Gordon 1991, p. 10. For a recent intellectual history of the archaic idea of police in the West, with extensive references to previous scholarship on this subject, see Dodsworth 2008.
- ²³ Urton 2009, especially pp. 801, 817, and 823.
- ²⁴ Herzfeld 1992.
- ²⁵ I am grateful to Stephen Houston for this observation.
- ²⁶ Arguing from a different angle, Wengrow reaches a similar conclusion; see Wengrow 2006, p. 266.
- ²⁷ Herzfeld 1992, p. 39.
- ²⁸ Weber 1968, p. 68.
- ²⁹ Houston 2004a, p. 6.
- ³⁰ De Swaan 1988, Chapter 3.
- ³¹ Levine 1988, p. 206. Levine is discussing the emergence of high culture in late nineteenth-century America, but his comment applies equally well to early states.

- ³² Weber 1968, p. 76, emphasis his.
- ³³ Brown's list of human universals is reproduced in Pinker 2002, pp. 435–9. "Making comparisons" appears on p. 439.
- ³⁴ Goody and Watt 1963. For articles on the power, limits, and death of literacy in the same journal, see Vol. 33, no. 2 (1991), Vol. 34, no.1 (1992), and Vol. 45, no. 3 (2003).
- ³⁵ For example, Halverson 1992; Olson 1994; Goody 2000, pp. 5–9; and Houston 2004a, p. 6.
- ³⁶ Gelb 1963, p. 222.
- ³⁷ Qiu Xigui 2000; Boltz 2003. For a critical appraisal, see Steinke 2012.
- ³⁸ See also Postgate et al. 1995.
- ³⁹ Bagley 2004 is an exception.
- ⁴⁰ Mann 1986, pp. 108–10.
- ⁴¹ Finer 1997, p. 446. For a critique, see Li Feng 2008, p. 7.
- ⁴² Trigger 2003, pp. 108–9.
- ⁴³ Trigger 2003, pp. 587–8. See also Chapters 4 and 6 in the present book and, for more detail, Bagley 2004.
- ⁴⁴ Eisenstadt 1963, p. viii.
- ⁴⁵ Thrupp 1958, p. 2.
- ⁴⁶ Houston 2004a, p. 5.
- ⁴⁷ Postgate 1994c, p. 176.
- ⁴⁸ Thrupp 1962, p. 120.
- ⁴⁹ As Peter Ucko (1969, p. 262) argued long ago, the primary use of ethnographic parallels "is to widen the horizons of the interpreter ... to present the possibility of varied and heterogeneous reasons or causes for a practice."
- ⁵⁰ Li Feng 2008, p. 70.
- ⁵¹ Lewis 1999b, p. 15.
- ⁵² Postgate offers us a model of vigilance; see Postgate 1994a and 2005; and Postgate et al. 1995.
- ⁵³ Kemp 2006, p. 7.
- ⁵⁴ Gordon 1991, p. 4.
- ⁵⁵ Kemp 2006, pp. 1–2.
- ⁵⁶ Yü Ying-shih 2006, p. 166. Almost a century ago, Franz Boas (1927, p. 1), the founding father of American anthropology, asserted "the fundamental sameness of mental processes in all races and in all cultural forms of the present day." This is an assumption we do not hesitate to make when the subject of our study belongs to our own race or culture; what Western reader wonders whether the mental processes of Thucydides and Homer were the same as her own? The assumption we make automatically about Greeks we must make also for Persians and Egyptians and Peruvians.
- ⁵⁷ An influential book on strategies for comparing modern states is *How to Compare Nations: Strategies in Comparative Politics*, by Mattei Dogan and Dominique Pellassy (1984).
- ⁵⁸ My remarks on Lévi-Strauss and Goody in the preceding section should suggest my dissatisfaction. Lewis has 11 pages on laws and census in a 500-page book (1999b, pp. 18–28).

1. THE NEAR EAST AND THE AMERICAS

- ¹ Stuart 2005, p. 262. See also the introduction to Finamore and Houston 2010, p. 15.
- ² The size and dimensions of some of these monuments suggest to David Stuart (2011, pp. 265–6) that "they may have been considered as stand-in 'bodies' of the performing king, living portraits engaged in public ceremonies out in the open" and that they were "animate embodiments of the king, extensions of the kingly self that always 'acted' to ensure the perpetual renewal of time and the cosmos."

- ³ See Kemp et al. 2000, which includes a discussion of Günter Dreyer's views. See also Kemp 2006, pp. 128–31.
- ⁴ Kemp suggests that the sign Dreyer reads as Narmer's name (a catfish) might actually depict a falcon perched on a spike (Kemp et al. 2000, pp. 223–6). He believes that the emblems on the colossi belong to a "vocabulary of symbols in use during the period immediately prior to the 1st dynasty" and suggests "as a working hypothesis" that they represent "clan-like" groups of people.
- ⁵ For the U-j inscriptions see Chapter 3 in this book. Compare the shells, birds, and elephants on conical hills in Figures 1.1 (Coptos) and 3.5 (U-j).
- ⁶ John Baines seems to agree with Dreyer; see Baines 2004a, pp. 162–3 (for another view, see the article Baines quotes on p. 185).
- ⁷ Toby Wilkinson 2001, pp. 62–3.
- ⁸ See Baines 2007, p. 97, and Baines 2008, p. 24.
- ⁹ Redford 1986, p. 86; Baines 1994, p. 133. For a skeptical view of the compilation of king lists and annals before the Fourth Dynasty, see O'Mara 1996.
- ¹⁰ Kemp calls the practice of sealing "a psychological ploy" (Kemp 2006, p. 170). Thomas Hare points out that nonroyal Egyptian seals of the Early Dynastic period "were very seldom actually used for the sealing of vessels in the burial." See Hare 1999, p. 93.
- ¹¹ Cervelló-Autuori 2008, especially p. 895.
- ¹² On strategies for royal legitimation see Baines 1995, especially the thoughtful general remarks on pp. 1–9.
- ¹³ Baines 1994, p. 134.
- ¹⁴ Kitchen 2001, p. 237. The king list in Seti's temple (Figure 1.3) served such a function.
- ¹⁵ Houston 1998a, p. 356; Houston 2000, p. 156. The texts on the stairway are severely eroded; see the description in Tate 1992, pp. 155–6, and, for a new reading, Nahm 2006.
- ¹⁶ Miller and Houston 1987.
- ¹⁷ Inomata 2006, p. 199.
- ¹⁸ See Houston et al. 2000. On the Maya kings' awareness of distant rulers, see Houston and Inomata 2009, pp. 137–40. On Maya messengers, see Chapter 3 in this book.
- ¹⁹ Houston 2000, p. 146.
- ²⁰ McAnany 1998, p. 284. In addition to the stelae in Figure 1.5, floating ancestors often appear on objects made of marine shells, such as conch trumpets, connecting royal ancestors with the mythic sea. See Finamore and Houston 2010, nos. 42 and 45.
- ²¹ Houston, Stuart, and Taube 2006, p. 68. Houston (2004b, p. 303) disputes the claim that some of the deity faces on the facades of Preclassic buildings represent the beginnings of king lists, although David Stuart suggested in their personal communications that some of them might be royal names.
- ²² Houston, Stuart, and Taube 2006, p. 50.
- ²³ Storey 2005, pp. 323–4; Price et al. 2010, p. 18; Chase and Chase 1996a, p. 71; Fitzsimmons 2009, Chapter 5, especially p. 144, Table 5; Weiss-Krejci 2004; Tiesler et al. 2010.
- ²⁴ McAnany 1998, p. 276. James Fitzsimmons documents the archaeological and iconographical evidence for bundled Mesoamerican, especially Maya, royal corpses. He notes that it is unclear whether such Maya bundles "served a function outside the tomb" but suggests that it is likely that, like the Postclassic Aztecs, the Classic Maya could have used these bundles in battles, migrations, and pilgrimages (2009, pp. 76–81). In a comprehensive treatment of Mesoamerican mortuary bundles, Annabeth Headrick makes an intriguing suggestion that the Avenue of the Dead in Teotihuacan may have been lined by bundled ancestors placed in the temples on the long road; see Headrick 2007, pp. 51–68, especially p. 64.
- ²⁵ Isbell 1997, pp. 38–68, Figures 2.1–2.6; Urton 2001, pp. 133–4; Moseley 2001, pp. 56, 65–6; Moore 2004, pp. 106–112, Figures 3–6; Moore 2006, pp. 65–6; Mantha 2009.

- ²⁶ Moore 2004, p. 112.
- ²⁷ Stephen Houston, personal communication, April 4, 2006. The importance of mummies in Central Andean social organization is treated in Isbell 1997, especially Chapters 2 and 3.
- ²⁸ The term *gallery of kings* is taken from Baines and Málek 1980, p. 38.
- ²⁹ Moore 2004, pp. 99–100.
- ³⁰ Summarized in Isbell 1997, p. 58.
- ³¹ Arriaga 1968 [1621], p. 50; Moore 2006, p. 64.
- ³² Isbell 1997, p. 58; Urton 2001, p. 134. Notice that the latter is only an interesting hypothesis because no one can really “decipher” the *kipu*. See Urton 2003 for the state of *kipu* studies.
- ³³ Conrad 1982 provides an overview of these burial platforms and a persuasive interpretation of their function; see Moore 2004 for more references.
- ³⁴ Moore 2006, p. 66; 2004, pp. 116–7.
- ³⁵ See also Baines 2006 for a similar view of the Egyptian evidence.
- ³⁶ Moore 2006, p. 66; 2004, pp. 116–7; 2003, pp. 96–7. Another interpretation views the Chimú scene as similar to the Inka ceremonies directed at the whole population. I find Moore’s interpretation more convincing in that his scenario corresponds well to the myths recorded immediately after the conquest; see Moore 2004, pp. 102–6.
- ³⁷ Korpisaari 2006, p. 161.
- ³⁸ Young-Sánchez 2004, pp. 35–6, Figures 2.12–2.14.
- ³⁹ For a summary, see Nicholson 1971, p. 52. For the subtle shift of visual emphasis in depicting rulers from pre-conquest to early colonial periods, see Barnes 2005.
- ⁴⁰ Nicholson 1973; Colston 1993. For the nature of phoneticism in Mexican codices see Chapter 3 in this book.
- ⁴¹ Boone 2000, p. 22.
- ⁴² For the Sumerian King List, Jacobsen 1939 is still the classic edition; electronic versions of the composition, translation, and bibliography are available at *ETCSL*. For a critical study of the ideological context of this list, see Michalowski 1983. A late Old Babylonian fragment in the University Museum in Philadelphia has been suggested to be a later addition to the Sumerian King List; see Peterson 2008. For the Genealogy of the Hammurapi Dynasty, see Finkelstein 1966 and Lambert 1968. For the Assyrian King List, see Gelb 1954. For the King List of Ugarit, see Kitchen 1977.
- ⁴³ Finkelstein 1966, pp. 115–17. Lambert 1968; Bayliss 1973, p. 122; de Moor 1976, pp. 333ff.; Kitchen 1977, 140–1.
- ⁴⁴ Bayliss 1973 (pp. 122–5) supplies a basic description of the royal ancestor cult in Mesopotamia; Birot 1980 translates a text describing the *kispu* ritual performed in Mari.
- ⁴⁵ Katz 1999.
- ⁴⁶ Pfälzner 2007, pp. 50, 57–8. For a cautious view regarding this interpretation, see Schwartz 2008, p. 592.
- ⁴⁷ Slanski 2003, pp. 264–5.
- ⁴⁸ Michalowski 1983.
- ⁴⁹ Norman Yoffee, personal communication, April 13, 2006.
- ⁵⁰ Kemp 2006, p. 65 and Chapter 4.
- ⁵¹ Jacobsen 1939, pp. 147–54; Michalowski 1983, p. 239; for Egypt, see the discussion earlier in this chapter.
- ⁵² As Jacobsen (1939, p. 148) observed, date lists usually contain the names of the rulers.
- ⁵³ Van Seters 1995, pp. 2433, 2438–40.
- ⁵⁴ For the problem of origins in ancient Mesopotamia, see Glassner 1995, pp. 1819–20. For Egypt, see van Dijk 1995, pp. 1699–1702, and Kemp 2006, p. 65.
- ⁵⁵ Brovarski 1987.

- ⁵⁶ The identification of Bedjau (Hetepsekhemwy?) is not certain, but it seems that he belonged to the Second Dynasty. Here I follow Wildung (1969, pp. 39–40) and Brovarski (1987, p. 28).
- ⁵⁷ Brovarski 1987, p. 51. For a similar board from the New Kingdom, see Galán 2007.
- ⁵⁸ Michalowski 1983, p. 239 and n. 13. Michalowski is aware of the suitability of the Sumerian King List as a school text but reluctant to accept this function for it for several reasons. First, all the extant copies of the list are complete, in contrast with copies of common school texts, which are usually extracts. Second, no copy of the list was included in the very large group of school exercises found at Nippur. Third, the large tablet size and the high percentage of errors in the extant king lists make them unlikely to be exercises of advanced students. The second objection might be answered by the lack of large-scale excavation in Nippur. The third can be answered by noting that large tablets including prisms like the one shown in Figure 1.10 unquestionably were used for school exercises; see Tinney 1999, p. 160. The first objection is at present less easy to dismiss, but as Norman Yoffee pointed out to me (personal communication, April 13, 2006), the copies are not really complete.
- ⁵⁹ Van Seters (1995) distinguishes two types of historiography in the ancient Near East. His typology suits the king lists as well.
- ⁶⁰ John Rowe (cited in Isbell 1997, p. 59) concludes that the Inka themselves officially recognized a royal dynasty consisting of twelve or thirteen kings, each of whom was represented by a mummy or an idol.
- ⁶¹ The Inka made statues of living and dead rulers, but none of them has survived. See Trigger 2003, p. 558, and Isbell 1997, pp. 56–7.
- ⁶² Stephen Houston, personal communication, April 4, 2006.
- ⁶³ Baines and Yoffee define the “inner elite” by saying that it “consists of a very small percentage of people, certainly less than one percent, and constitutes both the cultural and the administrative and executive core of a society.” The larger “sub-elite” includes scribes, administrators, and artisans who were dependent on the inner elite. See Baines and Yoffee 2000, p. 16; see also Baines and Yoffee 1998; and Liverani 1995, pp. 2354–5.

2. CHINA

- ¹ See Endymion Wilkinson 2000, pp. 501–15; Gardiner 1973; Wang Gungwu 1973.
- ² The authorship of the *Shi ji* is unsettled, but this does not concern us here. See Durrant 2005, p. 93.
- ³ This encyclopedic approach is analyzed in Lewis 1999b, pp. 308–17; see also Durrant 2005.
- ⁴ Li Ling 2004, p. 263; Durrant 2005, p. 97.
- ⁵ The literature on the history and current development of this debate is vast. I find Yang Chunmei 2006 and some articles in Wu Rui 2006 particularly illuminating. See Guo Yongbing 2008 on the relationship between transmitted genealogies of legendary kings and excavated manuscripts.
- ⁶ Derrida 1976, p. 124.
- ⁷ For the archaeology of Erlitou, see Chapter 4 in this book.
- ⁸ Xu Hong et al. 2005; Xu Hong 2009, pp. 102–3.
- ⁹ Xu Hong et al. 2004, p. 26.
- ¹⁰ Kemp 1995, p. 48; McAnany 1995, pp. xi–xii, 15.
- ¹¹ For early dynastic Egyptian royal cemeteries, see Toby Wilkinson 2001, Chapter 7. Although the so-called royal cemetery of Ur was continuously used as a burial ground for elite and non-elite alike for more than five hundred years (more than two thousand burials), Woolley argued that the sixteen large tombs he termed “royal” were the kernel around which the cemetery grew. (Marchesi 2004 is a thorough examination of the epigraphic and textual data supporting Woolley’s theory. See also Zettler 1998, and Pollock 1999, pp. 210–1.) For royal Maya burials

- see Fitzsimmons 2009. In proto-historic Tonga in Western Polynesia, the dual paramount chiefs occupied separate residential compounds within the residential and ritual center of the elites. Generations of the paramount chiefs were interred in a cluster of massive burial mounds within the residential center; see Kirch 2000, pp. 224–5 and 289, Figure 7.10.
- ¹² On early Chinese lack of interest in pictorial art see the Conclusion in this book and the references cited there. For emblems depicting anthropomorphic figures, see, for example, Bagley 1987, pp. 582–7 and nos. 30, 31, 36, 52, 61, 70, 71, 77, 82, 83, and 88.
- ¹³ See Falkenhausen 1993, pp. 146–52. Shen Jianhua argues that this practice can be discerned in the oracle bone inscriptions (2008, pp. 27–34).
- ¹⁴ Liu Zhao 1995; Yang Kuan 1999, p. 429.
- ¹⁵ See Keightley 1999, pp. 257–8 and n. 50. Some scholars argue that the inscriptions on the three bronze weapons are modern forgeries (Jing Zhongwei 2008, with references), but the vermilion inscriptions mentioning ancestral names written on a few jade objects (e.g., Meng Xianwu 1997; Bagley 2004, p. 215, Figure 7.15) of similar shape argues for their authenticity.
- ¹⁶ Bagley 1999, pp. 165–71. See also Bagley 2014; Wang Haicheng 2014.
- ¹⁷ Bagley has argued for the existence of Chinese writing in this period; see Bagley 2004, p. 236. On the Xiaoshuangqiao find, see Song Guoding 2003 and Bagley 2014. Ink-written inscriptions on jade are easily lost, although a few survive from the Anyang period.
- ¹⁸ Cooper 2004 makes the point convincingly.
- ¹⁹ Actually two capital cities of the Shang dynasty were located at Anyang, Huanbei and Yinxi. They were built and abandoned in succession on opposite sides of the Huan River (see Wang Haicheng, in preparation a). Here I focus on the later city Yinxi but retain the conventional modern name Anyang throughout.
- ²⁰ Bagley 1999, pp. 180–208; Wang Haicheng (in preparation a).
- ²¹ Chen Mengjia 1956, pp. 373–9; Keightley 1978a, pp. 95–100, 185–7, 204–9; Keightley 1999, pp. 233–5, 260–1, 273; Keightley 2000, pp. 98–9.
- ²² Bagley 1999, pp. 191–4.
- ²³ For the genealogical table in *Shi ji* see Loewe 2004, pp. 215–7; for translations of the “basic annals,” Nienhauser 1994, pp. 1–86.
- ²⁴ In a conversation that he appended to Sima Qian’s genealogical table, Chu Shaosun, a contemporary, made it clear that the rationale for the table’s sequential presentation of dynasties was the legitimacy conferred by the Mandate of Heaven. Loewe (2004, p. 436) remarks that Sima Qian “gave full play to a belief that pre-imperial houses depended on the Mandate.”
- ²⁵ The name of the last Shang king, Zhou, is not the same word as the name of the Zhou dynasty that overthrew him.
- ²⁶ For a survey of the Mandate of Heaven in the philosophical texts of the Warring States period, see Loewe 2004, pp. 428–30. For a discussion of the subtly different understandings of this concept among Warring States philosophers, based on excavated manuscripts and bronze inscriptions, see Guo Jingyun 2010, especially pp. 199–202.
- ²⁷ In this text the Mandate of Heaven ideology is fused with correlative cosmology, a strain of speculation that was new in the third century B.C., hence the correlation of dynasties with five colors and five elements or phases.
- ²⁸ The first sage king in Sima Qian’s king lists.
- ²⁹ Falkenhausen reads the name of the vessel’s maker as Qiu. In the translation I have substituted the generally accepted reading Lai.
- ³⁰ Shaughnessy (1991, p. 101) translates: “I have heard that Yin dropped its Mandate.”
- ³¹ *Shi ji*, 3, p. 119; Nienhauser 1994, p. 59. Wang Hui uses the occurrences of the characters for king and earl in oracle bone inscriptions discovered at Zhouyuan (in Zhou’s homeland) to argue that they both refer to King Wen, confirming Sima Qian’s account of King Wen’s receiving the mandate and changing his title (Wang Hui 2003, pp. 78–80). But the identification is not

- ironclad, for it seems equally possible that these characters, together with two other attestations of the character for king in oracle bones discovered at Zhougongmiao (also in Zhou's homeland), refer to King Wu. See Dong Shan 2006, pp. 267–8.
- ³² Sima Qian tells us that after King Wu succeeded his father, people asked him to chastise the king of Shang, but King Wu refused: “You do not know the Mandate of Heaven as yet. He cannot [be chastised] as yet.” (*Shi ji* 4, p. 121; see also Nienhauser 1994, p. 60.) It sounds as though only King Wu and his deceased father knew the content of the Mandate of Heaven.
- ³³ The earliest attestation of this character is on the *Qin Gong gui* (ca. sixth century B.C.). Ge Yinghui identifies an anthropomorphic character in the oracle bone inscriptions as the character for Xia and argues that it refers to the founder of the Xia dynasty, Yu, but his argument seems to be based entirely on a tenuous reading of the pictograph itself (2009, p. 67). The sage king Yu and the story that Heaven commanded him to control floods are mentioned in a recently discovered bronze inscription that is probably of middle Western Zhou date (see the discussion of this bronze inscription in Chapter 6). Yu is the king named by Warring States transmitted texts and by Sima Qian as the founder of Xia. However, because the elaboration of stories around already existing names is a familiar phenomenon in Chinese (and other) mythology, the bronze inscription's mention of Yu the controller of floods supplies no evidence one way or the other regarding the dynasty with which later writers connected him. (Nor, of course, does it assure us that he was a real historical figure; he might be a middle Western Zhou invention.) Several scholars have noticed similarities between the *Da Yu Ding* inscription and the “Jiu gao” chapter in the *Shang shu* (*Book of Documents*), a collection of transmitted texts of uncertain origin and editorial history. The “Jiu gao” chapter explicitly attributes the Shang dynasty's acquisition of Heaven's mandate to its sobriety, and the subsequent loss of that mandate to excessive drinking. Even if we were to trust the chapter as an accurate record of an early Western Zhou mandate theory (as does, e.g., Li Chaoyuan 2007, p. 297), it does not tell us from which dynasty Heaven transferred its mandate to the Shang; there is no mention of a Xia dynasty. For a newly annotated translation of the chapter, see Gu Jiegang and Liu Qiyu 2005, Vol. 3, pp. 1380–1420. For an accessible English translation, see Legge 1960 (1893–94), pp. 399–412. A group of bamboo manuscripts (ca. 300 B.C.) recently acquired by Tsinghua University in Beijing is believed to contain some chapters of the *Shang shu*, some of which are missing from the transmitted version. Some of these texts mention the Xia dynasty, and one implies that Heaven transferred its mandate from the Xia to the Shang (Li Xueqin 2010; for transcriptions see Part 2, pp. 128, 134, and 174). Although the language is archaic, it is not certain whether the composition of these texts can be traced back to Zhou times. Their claim to be Western Zhou texts, in other words, is no better than that of the “Jiu gao,” which took its present form, at the earliest reckoning, around the third century B.C. and therefore is roughly contemporary with the Tsinghua manuscripts.
- ³⁴ Certain poems in the *Odes* anthology have sometimes been cited in discussions of the Mandate of Heaven ideology (e.g., “The Mandate of Heaven does not last for ever,” Mao 235; “Heaven's charge was never remitted,” Mao 294), but they are too uncertainly dated and (being transmitted texts) too vulnerable to contamination by later conceptions to shed any useful light on the history of the ideology's formation; see also Kern 2009, pp. 148–52.
- ³⁵ Creel 1937; Creel 1970, Chapter 5. Despite its air of critical rigor, Creel's argument is in essence only a repackaging of *Shang shu* and *Shi ji*, and in the hindsight allowed by decades of archaeology his conception of the first Zhou rulers as sophisticated political thinkers is not very persuasive. The pre-conquest Zhou we see in the archaeological record were, in material culture at least, far from sophisticated. In a review of the archaeological evidence, Jessica Rawson (1989) posed the question as “Statesmen or Barbarians?” and came down firmly on the side of the barbarians (see also Bagley 1999, pp. 226–31). Allan (2007) traces the origin of the mandate idea to an astronomical event at the time of the Shang-Zhou transition, but because the event is hypothetical and by her own admission unverifiable, her argument is of limited interest. Keightley (1978b)

finds hints of the Mandate of Heaven theory in the Shang oracle inscriptions, but he seems to be reading later ideas into these cryptic texts rather than out of them. Understandably, perhaps, Shang specialists tend to find the origins of everything that is “characteristically Chinese” in their period, whereas Zhou specialists like Creel tend instead to see a cultural break between Shang and Zhou, a break that makes Zhou the source of Chinese culture.

³⁶ A start has however been made recently in a paper by Mercedes Valmisa Oviedo titled “Is the ideology of the ‘Mandate of Heaven’ already present in Western Zhou bronze inscriptions?” (term paper, Princeton University, May 2012), which makes revealing comparisons between bronze inscriptions and transmitted texts. I am most grateful to Ms. Valmisa Oviedo for allowing me to read her paper, which has saved me from some misstatements. For another thoughtful treatment of this topic, though all too brief, see Chen Hanping 1986, pp. 332–40.

³⁷ These exceptions include, in the West, Creel (1937, 1970) and Bagley (1999, especially pp. 229–31); and for thoughtful observations on pre-Han historiography, see above all Schaberg 2001c.

3. THE NEAR EAST AND THE AMERICAS

¹ *CEO* (see Hudson and Wunsch 2004 in Abbreviations) is a rare exception.

² Trigger 2003, p. 375.

³ *Ibid.*, p. 376.

⁴ As noted by James Scott (1976, p. 28).

⁵ See Van De Mieroop 1999, pp. 106–7, for a summary of recent scholarship. For land tenure before the Old Babylonian period, see also Postgate 1994a, pp. 183–90; Renger 1995; Edzard 1996; Buccellati 1996; Van Driel 1998; de Maaijer 1998; Steinkeller 1999; and Cripps 2007. For land tenure in the Old Babylonian and later periods, see Ellis 1976 and Renger 1995.

⁶ Postgate 2003, p. 20.

⁷ Yoffee 2005, p. 60.

⁸ Liverani 1990; Postgate 1994a, p. 188.

⁹ See the plowing scene depicted on a cylinder seal impression, Postgate 1994a, Figure 8.4.

¹⁰ See Nissen et al. 1993, p. 58, Figure 49.

¹¹ Liverani 1990, pp. 157–8.

¹² Nissen et al. 1993 argues that the assessment of performance did not happen before Ur III.

¹³ For example, *ibid.*, Figure 48, text a.

¹⁴ *Ibid.*, Figure 51.

¹⁵ Thus I disagree with Robert McCormick Adams, who regards allocating seed in advance as impractical (2004, p. 6). The practice is attested in Middle-Assyrian administrative texts concerning crown lands, which divide this year’s harvest into seed corn, rations, and fodder for next year. See Wiggermann 2000, p. 180.

¹⁶ Van De Mieroop 2004, p. 57.

¹⁷ Postgate 2003, pp. 10–20.

¹⁸ Foster 1982, p. 22.

¹⁹ Finley 1985a, p. 33; Jursa 2004, p. 146, in agreement with Van De Mieroop.

²⁰ Steinkeller 2004. Robert Englund 2004 shares this view.

²¹ Van Driel 2000, p. 496.

²² Postgate 1974, p. 230.

²³ See Scott 1998 for a classic illustration of this point.

²⁴ Postgate 1984, p. 14.

²⁵ Postgate 1994a, p. 234, Figure 12:4.

²⁶ *Ibid.*, p. 200. For storerooms within the Mari palace, see *ibid.*, p. 143, Figure 7.4. For storerooms and distribution rooms during the Late Uruk period, albeit in eastern Anatolia rather than southern Mesopotamia, see Palmieri 1989. Three buildings from the late Neolithic site Tell Sabi

- Abyad in Syria were identified as storage; see Akkermans and Verhoeven 1995. Silos for storing grain surplus dating to the sixth millennium B.C. have been recently found at Tel Tsaf in the southern Levant; see Garfinkel et al. 2009.
- ²⁷ To what extent administrative writing also served as a lever of economic augmentation is unknown. Robert McCormick Adams seems to doubt that it did (2004).
- ²⁸ For archives in the ancient Near East, see the volumes edited by Brosius (2003) and Veenhof (1986). For an Ur III state archive found *in situ* at Tello (ancient Girsu), see Zettler 2003, p. 14, and the references given there. See also Postgate 1994a, pp. 59–60.
- ²⁹ Robson 1999, p. 140; 2008.
- ³⁰ Van De Mierop 2004, pp. 57–8.
- ³¹ Scott 1976.
- ³² Postgate 1994a, pp. 243–4. The set apparently originated from one institution that controlled the draft; see Greengus 1979, pp. 1–45, especially p. 5, for the archaeological context and contents of the finds.
- ³³ Fales and Postgate 1995, pp. xxxii–xxxiii; Postgate 1974, pp. 36–9.
- ³⁴ Steinkeller 2004.
- ³⁵ A Neo-Sumerian stela of about 2100 B.C. shows a scribe with an assistant (here the assistant holds the tablet the scribe writes on: Postgate 1994a, p. 58, Figure 3:7).
- ³⁶ Barnett 1958, Plate 36, scribes counting prisoners and spoil after the storming of a city by King Tiglath-pileser, relief from Nimrud, Central Palace, eighth century B.C.
- ³⁷ Scott 1976, p. 125.
- ³⁸ *Ibid.*, p. 33.
- ³⁹ Englund 1998, p. 71; van Driel 2000, p. 497.
- ⁴⁰ VerSteege 2002, p. 115. For Egyptian landownership, see Janssen 1986; Katary 1989 and 2001; Eyre 1994a, 1997, and 1999; Warburton 1997; and Haring 1997 and 1998. Note, however, that (except perhaps for Eyre 1997) most of these discussions are about the New Kingdom, the only period from which we have lengthy economic papyri related to land tenure.
- ⁴¹ Katary 2001, p. 353; Kemp 2006, p. 306.
- ⁴² Baines 2004a, pp. 164–5.
- ⁴³ Cited in *ibid.*, p. 154.
- ⁴⁴ Kemp 1995, p. 47. Compare Figure 3.4 in the present book with the First Dynasty tomb Saqqara Tomb 3054 (Kemp 1995, Figure 7, and Emery 1954, Plate 39).
- ⁴⁵ Fischer 1989, p. 69 and Figure 8.
- ⁴⁶ Toby Wilkinson 2000, pp. 165–66; Strudwick 2005, p. 72.
- ⁴⁷ In Mesopotamia, proto-cuneiform tags possibly used to tag shipments or stored commodities: Englund 1998, p. 57 and n. 115. Ur III clay tags for filing tablet containers: Steinkeller 2003, p. 48. Han wooden tags are known both from the Mawangdui tombs in Hunan and from north-west China; see, for example, Loewe 1967, Vol. 1, Plate 4.
- ⁴⁸ Emery 1938, p. 41, no. 432; Baines 1983, pp. 575 and 593, n. 4; Baines 2004a, p. 174; Fischer 1989, p. 69.
- ⁴⁹ For a brief sketch of Hemaka’s career see Wilkinson 2001, p. 147; for the structure of Early Dynastic administration, *ibid.*, p. 144.
- ⁵⁰ Parkinson and Quirke 1995.
- ⁵¹ Wengrow 1998.
- ⁵² Baines 2010.
- ⁵³ Baines 2004a, pp. 154–61; Baines 2010.
- ⁵⁴ Fischer 1989, p. 69; Bard 1992, p. 303.
- ⁵⁵ Baines 1983, p. 573, caption no. 2 to Figure 1; 1988, p. 132. In his later writings Baines drops the suggestion that the onomastic list originated in administration; see 1999, p. 35; 2004a, pp. 172–4.

- ⁵⁶ Baines 1985 attributes the origin of register composition to one of the archaic palettes (a line underneath an animal). Baines 1999 emphasizes the interplay between vertical writing and horizontal representation during the Early Dynastic period and the Old Kingdom (pp. 25–8).
- ⁵⁷ Smith 1946, pp. 141ff, Plates 32 and 33a; 1998, p. 22; Robins 1997, pp. 39, 51–2; Baines 1999, p. 26 and n. 21; Manuelian 2003. For a Fourth Dynasty slab stela see Plate IX.
- ⁵⁸ Smith 1946, p. 141.
- ⁵⁹ Kemp 1995, pp. 46–8.
- ⁶⁰ Summarized in Baines 1999, p. 34.
- ⁶¹ Robins 1997, p. 23, caption to Figure 14.
- ⁶² Lai Guolong 2000, Chapter 2, especially pp. 56–7.
- ⁶³ Baines 2004a, p. 151.
- ⁶⁴ Wilkinson 2001, Figures 4.1–4.2.
- ⁶⁵ See, for example, Postgate 1994a, Figure 2.8 (Sumerian city seals); Kemp 2006, Figure 33 (the Tjehenu Palette); and Wilkinson 2001, Figure 5.1.5 (Hierakonpolis stone relief). Maya city emblems and Mixtec place emblems supply further instances.
- ⁶⁶ Eyre 1997, pp. 371–2.
- ⁶⁷ See an ivory year label of Semerkhet, Wilkinson 2001, Figure 8.7.2.
- ⁶⁸ Wilkinson 2001, p. 142.
- ⁶⁹ Toby Wilkinson 2000, pp. 108–10, with reference.
- ⁷⁰ Eyre 1999, p. 40.
- ⁷¹ Toby Wilkinson 2000, p. 158. On the incorporation of cattle into bodily display and ritual in prehistoric and archaic Egypt, see Wengrow 2001a.
- ⁷² There were “scribes of the king’s document” who were responsible for the royal documents and decrees; see Eyre 1987, p. 6.
- ⁷³ Baines 1999, p. 33.
- ⁷⁴ See Metropolitan Museum of Art 1999 for an isometric drawing and color illustration (pp. 209–13), and Baines 1999, Figure 10, for a fuller view of columns 7–11.
- ⁷⁵ The inscriptions certainly operate on other levels, such as representing the ideal life on one’s rural estates and substituting for reliefs, which were probably perceived as more important than writing. See Baines 1999, pp. 34–6.
- ⁷⁶ See Gelb et al. 1991 for a critical edition with illustrations of the Maništušu obelisk, the Hoffman tablet, and the Blau plaque.
- ⁷⁷ *Ibid.*, Vol. 1, p. 15.
- ⁷⁸ In her study of these artifacts Kathryn Slanski argues strongly against the application of the word *kudurru* to them and opts instead for the term *narûs* (2003). I here stick to the familiar older term for the convenience of those who have not read Slanski’s book. In a thorough review of the book J. A. Brinkman shows that the inscriptions themselves use several terms, including *kudurru* and *narûs*, to refer to their bearers. He therefore questions whether a universal term for all these objects was accepted by the Babylonians themselves (2006, pp. 6–8).
- ⁷⁹ Slanski 2003, p. 69.
- ⁸⁰ Brinkman 2006, p. 16.
- ⁸¹ On the evidentiary value of these texts, see Postgate 1994a, p. 285.
- ⁸² The Hoffman tablet, Gelb et al. 1991, Vol. 2, Plate 1, no. 1.
- ⁸³ Fakhry 1961, Plates 12–15; Kemp 2000, p. 48.
- ⁸⁴ For these dates see Cooper 2004, p. 83. Compare the earliest translatable ancient *kudurru* (Gelb et al. 1991, pp. 48–64) with the earliest royal inscription, that of King Enmebaragesi of Kish, which probably dates to about 2700 B.C. (Cooper 1986, p. 18).

- ⁸⁵ Baines 1983, p. 577. Baines later dates the oldest attested continuous written language to the late Second and early Third Dynasties, when it served to record statements of divine favor or divine speech formulas (1997, p. 132 and n. 8, a sealing inscription, “He of Ombos: He has joined the Two Lands for his son, the Dual King Peribsen”; see also Baines 2004b).
- ⁸⁶ Eyre 1987, p. 35.
- ⁸⁷ Kemp 2006, pp. 164–71.
- ⁸⁸ Eyre 1987, pp. 19 and 34. For the Gebelein papyri, see Posener-Kriéger and Demichelis 2004.
- ⁸⁹ Strudwick 1985, pp. 245–7.
- ⁹⁰ Hayes 1955; Quirke 1990, Chapter 6; Parkinson 1991, pp. 85, 99–100.
- ⁹¹ Hayes notes that petitions could be “submitted in writing as well as being presented orally, and that the excerpts quoted in the decrees were transcribed from the written versions” (1955, p. 78). In either case, it seems that the petitions were registered in writing either before or after they reached the king. That there were model letters teaching how to make complaints in the New Kingdom *Miscellanies* seems to favor the supposition that in many cases petitions were written; see the quotation from Kemp in the text and Caminos 1954, pp. 273–4 (complaint about excessive taxation), pp. 280–2 (complaint to the scribe of the Treasury). The model letter protesting against the conscription of certain men for forced labor may be close in content to Ibia’s complaint (pp. 455–7).
- ⁹² Some letter anthologies: Michalowski 1993 (early Mesopotamian); Heimpel 2003 (Mari); Wente 1990 (Egyptian, all periods); Collier and Quirke 2002 (Middle Kingdom letters from Kahun); Moran 1992 (Amarna). The *State Archives of Assyria*, published by the Neo-Assyrian Text Corpus Project (editor in chief Simo Parpola), includes several volumes of correspondence between the Neo-Assyrian kings and their subjects (*SAA* 1, 5, 13, 15–18).
- ⁹³ Kemp 2006, p. 308.
- ⁹⁴ Hayes 1955, pp. 87–125; Quirke 1990, pp. 147–9; Kemp 2006, pp. 28 and 200.
- ⁹⁵ Goody discusses the renaming of slaves taken from Africa to the New World. See Goody 2000, pp. 86–7.
- ⁹⁶ Quirke 1990, p. 147.
- ⁹⁷ Kemp 2006 states that trials might take place in this office (p. 220), a fact that would fit nicely with the evidentiary role of the papyrus. Hayes argues that the “reporter” was an official who “served as the local representative of the central administration and whose functions seem to have combined those of town-clerk and sheriff” (1955, p. 77).
- ⁹⁸ Hayes 1955, Chapter II; Quirke 1990, pp. 130–40; Parkinson 1991, pp. 99–100; Kemp 2006, p. 181.
- ⁹⁹ A perusal of the extant names listed in the document makes this clear, some gods, such as Sobek, being especially popular. See Hayes 1955, pp. 20–24.
- ¹⁰⁰ Hayes 1955, p. 65.
- ¹⁰¹ Kemp 2006, p. 181.
- ¹⁰² *Ibid.*, Chapter 5.
- ¹⁰³ Quirke 1988, pp. 87–90; Kemp 2006, p. 220.
- ¹⁰⁴ Summarized in Collier and Quirke 2006, pp. iii–iv. See also Luft 1998, pp. 24–5.
- ¹⁰⁵ Griffith 1898, foldout between pages 26 and 27; Kemp 2006, p. 220. For translation of this list see Collier and Quirke 2004, p. 117.
- ¹⁰⁶ Parkinson 1991, pp. 111–12; Kemp 2006, p. 219, Figure 79, and p. 221.
- ¹⁰⁷ Kemp 2006, p. 220.
- ¹⁰⁸ Collier and Quirke 2006, p. iv.
- ¹⁰⁹ Luft 1998, pp. 23–4.
- ¹¹⁰ Quirke 1988; Kemp 2006, p. 220.
- ¹¹¹ Peet 1930, pp. 82–7.
- ¹¹² *Ibid.*, p. 86.

- ¹¹³ Kemp 2006, p. 313.
- ¹¹⁴ For the layout of Deir el-Medina see *ibid.*, p. 320, Plate 9.
- ¹¹⁵ McDowell 1999, p. 51. For tomb looting involving the workmen, see pp. 194–200.
- ¹¹⁶ Haring 1997, p. 284.
- ¹¹⁷ Goelet 2004, p. 259.
- ¹¹⁸ Kemp argues that “the complex and sometimes interlocking patterns of temple and statue cult income, not all on the same basis, made an overall accounting system necessary”; his example is the Wilbour Papyrus. See Kemp 1978, pp. 32–3.
- ¹¹⁹ For a short introduction to Egyptian archives and libraries, see Parkinson and Quirke 1995, pp. 57–61.
- ¹²⁰ Haring 1997, p. 301.
- ¹²¹ Parkinson and Quirke 1995 gives the famous example of the Ramesside official Mose using two-hundred-year-old records stored in the state office in a lawsuit over land. For details see Kemp 2006, pp. 329, 413, n. 83; Kitchen 1982, pp. 128–9. For more references regarding the use of official documents in Egyptian law, see Jasnow 2003, pp. 311–2.
- ¹²² Kemp 2006, p. 309.
- ¹²³ Shore 1987.
- ¹²⁴ Pace Kain and Baigent 1992, p. 5.
- ¹²⁵ Berger 1934, p. 55 and n. 2.
- ¹²⁶ Van den Boorn’s commentary does not specify the media bearing the boundary marks (1988, p. 190).
- ¹²⁷ Berger 1934, p. 55.
- ¹²⁸ See Murnane and Van Siclen III 1993.
- ¹²⁹ Buccellati 1996, p. 135.
- ¹³⁰ Haring 1997, p. 290.
- ¹³¹ James 2003, p. 84, which is quoted in Katary 2001, p. 352.
- ¹³² James 1953, p. 45, and 2003, p. 84.
- ¹³³ Haring 1997, pp. 158–61.
- ¹³⁴ Haring 1997, pp. 159–60.
- ¹³⁵ Goelet argues that there were at least four hands (2004, p. 260 and n. 91).
- ¹³⁶ Wang Haicheng *in preparation b*.
- ¹³⁷ D’Altroy 2002, p. 231.
- ¹³⁸ Basic literature includes Murra 1980, Chapter 2; D’Altroy 2002, pp. 127–40, 268–76. Trigger 2003, pp. 324–5, provides further references.
- ¹³⁹ Cobo records that “When the Inca settled a town, or reduced one to obedience, he set up markers on its boundaries and divided the fields and arable land within its territory into three parts [state cult, the crown, and the common people]. ... The boundaries of the lands and fields belonging to each one of these divisions were kept so exact, and the care and protection of these markers of the fields of the Inca and of Religion ... were so impressed upon the Indians that it was one of the most important religious duties that they had; so much so that no one dared pass by these fields without showing their respect with words of veneration that they had reserved for the purpose” (1979, p. 211). The boundary markers for local ethnic groups were the aboveground mortuary structures called *chullpas* mentioned in Chapter 1; see Mantha 2009.
- ¹⁴⁰ See La Lone and La Lone 1987.
- ¹⁴¹ Wachtel 1982, pp. 205–13; D’Altroy 2002, p. 273.
- ¹⁴² Murra 1982, p. 238.
- ¹⁴³ Morris 1992, p. 174.
- ¹⁴⁴ Van De Mierop 1999, p. 129.

- ¹⁴⁵ Wachtel estimates that about 10 percent of the seventy-seven strips of field were assigned to the workers for their subsistence (1982, p. 216). Litigation records from the sixteenth century show that in other state farms the workers were given lands adjacent to state lands; see La Lone and La Lone 1987, pp. 52 and 58.
- ¹⁴⁶ See D’Altroy (2002, p. 285) for labor shortages caused by scheduling conflicts between state farms and communal lands.
- ¹⁴⁷ Wachtel 1982, p. 217.
- ¹⁴⁸ Murra 1982, p. 238. For some exceptions, whose proportion was tiny, see pp. 238–9.
- ¹⁴⁹ Rowe 1958, p. 501.
- ¹⁵⁰ Murra 1982, p. 240.
- ¹⁵¹ Urton 2003, p. 97.
- ¹⁵² Assadourian 2002, p. 122; Urton 2003, p. 55.
- ¹⁵³ Julien 1988, pp. 264–6. Note that in Julien’s Table 4, the table reproduced here, the figure at the bottom of the right column is incorrectly given as 112.7. I have supplied the correct figure, 102.7.
- ¹⁵⁴ Murra 1982, p. 240.
- ¹⁵⁵ D’Altroy 2002, p. 248.
- ¹⁵⁶ Scott 1998, pp. 186–91; 2009, pp. 44–97.
- ¹⁵⁷ See Clarysse and Thompson 2006, Vol. 1, Chapter 2 (titled “The Census”) for a perceptive study of the Ptolemaic census in Egypt.
- ¹⁵⁸ Rowe 1958, p. 517.
- ¹⁵⁹ *Ibid.*
- ¹⁶⁰ On Mesopotamian tokens, see Schmandt-Besserat 1992.
- ¹⁶¹ Recent studies of the Inka storage system are conveniently collected in LeVine 1992.
- ¹⁶² Gasparini and Margolies 1980, p. 120, Figure 106 (schematic drawing); La Lone and La Lone 1987, p. 51.
- ¹⁶³ La Lone and La Lone 1987, p. 51.
- ¹⁶⁴ The classic study of the Inka road system is Hyslop 1984. For a brief introduction see D’Altroy 2002, pp. 242–7; see also von Hagen and Morris 1998, pp. 186–9.
- ¹⁶⁵ LeVine 1992, p. 147.
- ¹⁶⁶ For the archaeology of this city, see Morris and Thompson 1985.
- ¹⁶⁷ D’Altroy notes that the storehouses throughout the empire tended to be standardized as though they were built from the same measurement template, an obvious aid to accounting (2002, p. 283).
- ¹⁶⁸ Morris 1982, p. 162.
- ¹⁶⁹ D’Altroy 2002, p. 283.
- ¹⁷⁰ Morris and Thompson 1985, pp. 94–6.
- ¹⁷¹ Morris 1992, pp. 163–4.
- ¹⁷² Kemp 1986, p. 134.
- ¹⁷³ Roth 1991. See also Kemp 2006, pp. 166–70, and n. 4 on p. 404 for further references.
- ¹⁷⁴ Steinkeller 2003, p. 38.
- ¹⁷⁵ Quoted in Urton 2002, p. 6.
- ¹⁷⁶ Morris and Thompson 1985, pp. 83, 89–91, and Plates 47–50.
- ¹⁷⁷ Morris and von Hagen 1993, p. 170.
- ¹⁷⁸ For material remains related to weaving, see Morris and Thompson 1985, Plates 42–4.
- ¹⁷⁹ Morris and Hunt 1974, pp. 56–7.
- ¹⁸⁰ For the administration of Egyptian brewing and baking, see Kemp 2006, pp. 172–5. The closest thing to a barracks layout in Egypt is the Giza work camp, but the barracks there seem to have been used only for sleeping and not working. See Lehner 2002, p. 69, Figure 20, for a modern

experiment demonstrating how the barracks might have been used, and see also Figures 4.9 and 4.10 in this book.

¹⁸¹ Nissen et al. 1993, pp. 83–8, Figures 69–70.

¹⁸² Van De Mieroop 1987, Chapter 3, especially pp. 81–7. For another textual study of the Mesopotamian textile industry see Zawadzki 2006.

¹⁸³ Van De Mieroop 1987, p. 87.

¹⁸⁴ Topic 2003.

¹⁸⁵ *Ibid.*, p. 251.

¹⁸⁶ Taube 2000, p. 1. The presence of the Maya at Teotihuacan can be inferred from Maya-style paintings; see Foncerrada de Molina 1980, pp. 189–91, Figures 14–23. Houston et al. 2006 points out that these so-called realistic paintings were “almost certainly from an enclave decorated in part by literate Maya painters” (p. 120). Several ethnic enclaves have been identified at Teotihuacan – for example, the Oaxaca Barrio and Merchant’s Barrio in Figure 3.19. See Michael Spence 1992 (with a comparative passage on the Assyrian trading colony at Kanesh).

¹⁸⁷ Berlo 1989, pp. 20–23 and Figures 3–5 on p. 22.

¹⁸⁸ Taube 2000, p. 28. See also Colas 2011.

¹⁸⁹ Nicholson 1973, pp. 13–14, Figures 13 and 15.

¹⁹⁰ See the sign list for Middle Egyptian in Allen 2000. This is different from the earliest Egyptian writing of tomb U-j, which represents fauna and human beings in complete rather than dismembered forms (Figure 3.5). Baines (2004a, pp. 163–4), questioning the phonetic readings proposed by Dreyer, suggests that the U-j material could be “a representation of concepts in a pictographic or more purely pictorial or graphic form” like Mesoamerican recording systems, but in making this comparison he is overlooking the evidence for phoneticism in at least some of those systems, the Aztec in particular.

¹⁹¹ See the discussion of phoneticism in conjunction with the Maguay Plan in the next section.

¹⁹² Taube 2000, pp. 35 and 48. For the Mixtec almanac see Boone 2004, pp. 337–41, Figures 11.20–11.23.

¹⁹³ Cabrera 1996b shows that La Ventilla has one civil–religious compound and one residential compound (Figures 2–3 and 5). I am not certain to which compound the plaza belongs.

¹⁹⁴ Taube 2000, p. 6. The possibility that codices were used in Teotihuacan is further strengthened by the recent discovery of Teotihuacan-style murals resembling codex pages in Room 1 of La Sfricaya, a small site to the west of the main plaza of Holmul in El Petén, Guatemala. See Wagner 2004 (I am grateful to Stephen Houston for this reference).

¹⁹⁵ Taube 2000, p. 47.

¹⁹⁶ The Codex Mendoza is described in the next section of this chapter.

¹⁹⁷ Kelley 1976, p. 166, cited in Houston 2004b, p. 276.

¹⁹⁸ For the selective destruction of the city, see Cowgill 1997, p. 156; see also Sugiyama 2004, pp. 119–20.

¹⁹⁹ Cowgill 1997, p. 133; 2003, p. 38.

²⁰⁰ Cowgill 1997 estimates the population range for the early phase at 20,000–40,000, for the peak phase at 60,000–80,000 (p. 133). In Cowgill 2003 and 2008 he opts for 100,000 (p. 37 and p. 962). Sugiyama 2004 gives the range 100,000–150,000 (p. 97).

²⁰¹ Cowgill 2003 lists the perceived advantages and disadvantages (pp. 44–51).

²⁰² Sugiyama 2005, especially p. 241. See also Headrick 2007, pp. 158–64.

²⁰³ Houston et al. 2003, p. 215 and n. 1.

²⁰⁴ Cowgill 2003, p. 49.

²⁰⁵ Parsons 1991, pp. 27, 36–7, and 39. One thing archaeologists need to do in future is to find the storage facilities that must have existed at Teotihuacan yet curiously have resisted identification.

²⁰⁶ *Ibid.*, p. 39.

- ²⁰⁷ Coe 1964; Armillas 1971; Hassig 1985, pp. 47–53; Parsons 1991, pp. 19–23; Trigger 2003, p. 306; Berdan 2005, pp. 26–7.
- ²⁰⁸ Armillas 1971; Parsons 1991, pp. 22–3.
- ²⁰⁹ Townsend relates this land reclamation program to a set of imperial strategies for consolidating the empire (2000, p. 80). See also Armillas 1971, p. 660, and Parsons 1991, pp. 33–5. For a critical view of the hypothesis that land reclamation was initiated by the Aztec state, see Baker 1998, pp. 79–80. Baker’s criticism is based on the evidence from the area around Tenochtitlan; he does not consider Lake Chalco-Xochimilco, the main *chinampa* district of the empire. As discussed later in this chapter, the *chinampa* fields within the Tenochtitlan area coordinated with the city planning and therefore must be part of a state project. A different objection is made by Carlos Cordova (1997), who suggests that the construction of cities and *chinampas* was a response to repeated changes of lake level rather than a deliberate reclamation of marshland. Whether deliberate or not, it seems to me that the scale of these constructions indicates state involvement.
- ²¹⁰ See Scott 1998, *passim*.
- ²¹¹ A photographic reproduction of the original map appears in Diaz 1910, Vol. 3 (number 2). It is too large to be reproduced here in its entirety, but a portion of it should be enough to make the orthogonal layout evident. For the king list on this map, not discussed in Chapter 1, see Barnes 2005, pp. 330–5. A similar map of landholdings is Codex Reese at the Beinecke Rare Book and Manuscript Library (call number: WA MSS S-2533), which can be viewed at http://130.132.81.94/dl_crosscollex/SearchExecXC.asp?srchtype=CNO, accessed on June 25, 2011 (it was the ever resourceful Stephen Houston who directed my attention to this codex).
- ²¹² The following description is based mainly on Calnek 1973, pp. 190 and 192.
- ²¹³ *Ibid.*, p. 194. For the conquest of the Tepanec empire, see Hassig 1988, pp. 142–7.
- ²¹⁴ Duran 1964, pp. 59–60, referred to in Calnek 1973, p. 194, and paraphrased in Hassig 1988, p. 147.
- ²¹⁵ Robertson 1959, p. 83.
- ²¹⁶ Calnek 1973, pp. 190 and 193.
- ²¹⁷ Zorita 1994, p. 110, quoted in Williams and Harvey 1997, p. 6, and Berdan 2005, p. 65.
- ²¹⁸ Townsend 2000, p. 174; Trigger 2003, p. 323.
- ²¹⁹ Calnek 1972, p. 105; Townsend 2000, p. 28.
- ²²⁰ Calnek 1972, p. 111.
- ²²¹ Kemp 2006, p. 194 and n. 1. See also Shore’s explanation for the absence of a strong tradition of cartography in Egypt (Shore 1987).
- ²²² Robertson 1959, p. 77.
- ²²³ An administrator who wishes to label a plan with the names of 10,000 households needs a practical way to write 10,000 names; for this purpose some use of phoneticism seems unavoidable. (Phoneticism, as defined by Gelb (1963, pp. 193–4), refers to the ascription of a sound value to a grapheme (glyph) that is independent of the meaning of that grapheme. But as H. B. Nicholson (1973, p. 13) pointed out, “the determination of whether a grapheme was employed solely for its phonic value quite apart from its semantic message depends on ascertaining the correct etymology of the word in question” – and this we normally cannot hope to do.) Scholars have been hesitant to admit any significant amount of phoneticism in Mexican codices, perhaps because of the prevailing (Gelbian) view that the rebus principle is a very difficult discovery, which, once made, leads immediately to full writing – something that clearly is not present in Mexican codices. Nevertheless students of the codices have detected unmistakable evidence of phoneticism in early colonial pictorial codices, notably in a group of cadasters and tribute lists to be discussed shortly, and they have argued persuasively that it cannot be credited entirely to European influence (see Nicholson 1973; Colston 1993). Moreover the prevailing theoretical view that long stood in the way of their argument has been convincingly refuted by

Bagley (2004, p. 232): “If the repertory of pictographs grew large (for example, at a higher level of administration tracking a wider range of commodities), having fixed names for them might have been distinctly useful. In the right setting, therefore, the attachment of sounds to signs and the rebus use of signs might come about easily enough. [Rebus use, Bagley notes, is only punning.] If there is an intellectual difficulty in the graphic representation of words, surely it lies not in the principles themselves but in imagining what can be accomplished by their systematic application.” I therefore agree with Gelb and David Stuart that a need to write proper names is likely to have promoted *systematic* exploitation of phoneticism, and I would add that land administration – the making of censuses and cadasters – is a likely setting for that exploitation. But the phonetic writing that came into being in this way did not record speech. The real difference between the Mexican record keeping system and full writing strictly defined is not the degree of phoneticism but the intention to represent speech.

²²⁴ Berdan 2005, p. 14.

²²⁵ The following description of the codex is based on Williams and Harvey 1997 and Barbara J. Williams 1991.

²²⁶ Offner 1983, pp. 169–70; 1984, p. 142. See also Hicks 1984, pp. 160–2, and Berdan 2005, p. 65.

²²⁷ Williams and Harvey 1997, pp. 48–50.

²²⁸ See also Trigger 2003, p. 376, and Berdan 2005, p. 41.

²²⁹ Carrasco 1991, p. 112.

²³⁰ In the terminology of a recent collaborative study of Aztec imperial strategies, Berdan et al. 1996.

²³¹ *Ibid.*, p. 111.

²³² Berdan 1996, pp. 115–16, n. 3.

²³³ Hodge 1996, p. 26, Table 2–4, and p. 41; Hassig 1985, p. 105.

²³⁴ Hodge 1996, pp. 41 and 45.

²³⁵ Hassig 1985, p. 109; Hodge 1996, pp. 30–1; Berdan 1996, p. 125; and 2005, p. 41.

²³⁶ Williams and Harvey 1997, p. 48.

²³⁷ Carrasco 1982.

²³⁸ Hassig 2001, pp. 80–1.

²³⁹ Hodge 1996, p. 30, Figure 2–7.

²⁴⁰ *Ibid.*, pp. 23–9.

²⁴¹ Berdan et al. 1996, especially pp. 110–11.

²⁴² Smith 1996.

²⁴³ Berdan 1996.

²⁴⁴ Calnek 1982, pp. 56–7. For the structure of the hegemonic Aztec empire, see Hassig 1985, pp. 92–103.

²⁴⁵ Hassig (1985, p. 147) assigns two tribute administrators to each province but does not explain how he arrived at this figure. The actual working of tribute collection and delivery is poorly documented; see Berdan 1996, p. 122 and n. 9. Ancient Greek sources are also silent on this issue; see Finley 1985b, p. 79.

²⁴⁶ Sharlach 2004, pp. 38–9.

²⁴⁷ Díaz 1963, pp. 227–8.

²⁴⁸ Quoted in Berdan 2005, p. 45.

²⁴⁹ See Mundy 1987 for a detailed survey of Mesoamerican cartography. For the advantages of using lists, tables, and diagrams in Mexican pictorial records, see Boone 2004. For general surveys of Mesopotamia and Egypt, see Millard 1987; Nemet-Nejat 1998, pp. 93–4; Shore 1987. For Late Babylonian field plans see Nemet-Nejat 1982.

²⁵⁰ Trigger 2003, p. 315.

²⁵¹ *Ibid.*, p. 385.

²⁵² McAnany 1989, pp. 1–2.

- ²⁵³ McAnany 1995.
- ²⁵⁴ McAnany 1995, p. 110. Her main argument about Maya land tenure is in Chapter 3, titled “Creating a Genealogy of Place.”
- ²⁵⁵ *Ibid.*, p. 96–7.
- ²⁵⁶ *Ibid.*, p. 137.
- ²⁵⁷ See also Houston et al. 2003 for discussion of the role of the ruler’s moral authority in controlling the people.
- ²⁵⁸ Martin and Grube 2008, p. 7.
- ²⁵⁹ Houston et al. 2003; Inomata 2004.
- ²⁶⁰ Houston 2000, p. 171. See also Martin and Grube 2008, pp. 17–21.
- ²⁶¹ The earthwork encircling Tikal was not built to mark the edge of the city; see Webster et al. 2007. The stone barricade encircling the site center at Chunchucmil was built after much of the architecture it enclosed had been abandoned; see Hutson et al. 2008, p. 26.
- ²⁶² Chase and Chase 2003, p. 109.
- ²⁶³ Houston et al. 2003, p. 235.
- ²⁶⁴ Chase and Chase 2003.
- ²⁶⁵ *Ibid.*, pp. 111–12.
- ²⁶⁶ Houston et al. 2003, pp. 235–6.
- ²⁶⁷ Protzen 1993, p. 32.
- ²⁶⁸ *Ibid.*, p. 271.
- ²⁶⁹ Cobo 1979, p. 211.
- ²⁷⁰ Houston 1993, p. 138.
- ²⁷¹ Chase and Chase 1996b refer to a two-page essay published in *Belize Today* 5.5 (1991) titled “Mixing Archaeology with Touristic Development at Caracol” (pp. 12–13), which I have not seen. The time frame they give corresponds to the reigns of K’an II and his successor K’ak’ Ujol K’inich II, so I presume that the territory they assume to have been under Caracol’s control included that of Naranjo. For the political history of this period, see Martin and Grube 2008, pp. 91–5.
- ²⁷² Houston 2000, pp. 171–2; Martin and Grube 2008, p. 20.
- ²⁷³ Miller and Martin 2004, p. 35.
- ²⁷⁴ Coe and Kerr 1997, pp. 92–3, Figures 49 and 56.
- ²⁷⁵ Jackson and Stuart 2001. See also Stuart 2005, p. 283.
- ²⁷⁶ Houston et al. 2006, pp. 241–2.
- ²⁷⁷ For translation of the inscriptions on the Stela of the Vultures, see Cooper 1986, pp. 34–7. For the Hittite–Egyptian treaties, see Davies 1997, pp. 97–116, and Kitchen 2000.
- ²⁷⁸ Stuart 2006, p. 190–1.
- ²⁷⁹ Houston et al. 2006, p. 108.
- ²⁸⁰ Is it possible that the Maya distinguished numerals from glyphs because they believed that the two systems had different origins? Or were the origins too far in the past for that to be conceivable?
- ²⁸¹ Houston et al. 2006, p. 244–50.
- ²⁸² Stuart 2006, p. 190. The reconstruction of this Room 1 label in Plate XIX is not complete, but it resembles closely the one on the cacao bundle depicted in Room 3 captured in infrared photographs.
- ²⁸³ I have not seen these infrared photographs. I infer the labels of the tribute bundles under the throne from a statement in Houston et al. 2006, p. 242: “One such bundle from the murals of Bonampak tabulates a total of 40,000 beans, with other bundles behind multiplying that number considerably.”
- ²⁸⁴ Houston et al. 2006, p. 248.
- ²⁸⁵ *Ibid.*, p. 241.

- ²⁸⁶ www.famsi.org.
- ²⁸⁷ For the produce of the *chinampas*, see Calnek 1972, pp. 112 and 114.
- ²⁸⁸ McAnany 1995, p. 146; Inomata 2004.
- ²⁸⁹ For critiques of the traditional theory of shifting cultivation, see McAnany 1995, Chapter 3; Dunning 2004.
- ²⁹⁰ McAnany 1995, pp. 86–90.
- ²⁹¹ Golden et al. 2005.
- ²⁹² Kemp 2006, pp. 236–41.
- ²⁹³ Parkinson speculates that the forts would have checked fugitives escaping labor duty from Egypt (1991, p. 93); Barbara B. Williams argues that Egypt’s frontier was meant as much to keep dissatisfied Egyptians in as to prevent Nubian infiltration (1991). If there were Egyptians who did wish to flee the country, the authors of the boundary inscriptions might not have wanted to admit it.
- ²⁹⁴ Scott 1998, pp. 185–6; 2009, pp. 127–77.
- ²⁹⁵ Houston et al. 2003, p. 234.
- ²⁹⁶ Scott 1998, p. 186; 2009, pp. 93, 148, and 163.
- ²⁹⁷ For Maya captives, see Houston 1999, p. 73, Plate 10; Houston et al. 2006, pp. 18–22, 243.
- ²⁹⁸ Smither 1945; Parkinson 1991, pp. 93–5; Kemp 2006, pp. 239–40.
- ²⁹⁹ Houston et al. 2006, p. 243.
- ³⁰⁰ Houston et al. 2000, p. 338. In their view the language of the inscriptions is Classic Ch’oltian.
- ³⁰¹ McAnany 1995, p. 90.
- ³⁰² Dunning 2004, p. 102. For house lot walls at Chunchucmil, see Hutson et al. 2008, p. 35, Figure 10.
- ³⁰³ McAnany 1995, pp. 85–6.
- ³⁰⁴ Sheets 2002, p. 8, n. 1; Sheets 2005. See also Houston and Inomata 2009, pp. 225–9.
- ³⁰⁵ Houston et al. 2006, p. 108.

4. CHINA

- ¹ For some speculations see Chen Wei 2010, p. 28, and Hsing I-tien 2009, p. 85.
- ² In the Han period, when the empire extended into the arid northwest, conditions there favored the preservation of documents as well, and we have a vast corpus of administrative texts.
- ³ Kemp 2006, p. 182.
- ⁴ For example, Li Feng 2008.
- ⁵ For example, Liu Li and Chen Xingcan 2003; Yan Shengdong 2010.
- ⁶ Scott 2009, pp. 64–97. Thus I disagree with Li Feng 2008, p. 150, who, for the Western Zhou period at least, chooses land.
- ⁷ Xue Yong 2006.
- ⁸ The foregoing account is based on Xu Hong 2009, pp. 66–8. For English descriptions of the site, see Bagley 1999, pp. 158–65; Liu Li and Chen Xingcan 2003, pp. 57–64; and Liu Li and Chen Xingcan 2012, pp. 263–70.
- ⁹ Liu Li et al. 2004. Wang Wei reported more sites at the 2011 annual conference of the Association for Asian Studies.
- ¹⁰ Xu Hong 2009, pp. 92, 108–14, and 189–90.
- ¹¹ Liu Li 2006, pp. 182–6. Xu Hong’s figure (2009, p. 70) is more than 20,000.
- ¹² A recent study attempts to use GIS tools to estimate the population and cultivated field area in the Yiluo region, but it relies heavily on data gained from two excavated Neolithic sites outside the region and historical records of the same region in 1933 (Qiao Yu 2010). These limitations make the study less comparable to what has been done in Mesopotamia (e.g., Hritz 2010), and little information about the patterns of land use has emerged.

- ¹³ Postgate 2003, pp. 19–20.
- ¹⁴ Nissen et al. 1993.
- ¹⁵ For example, Liu Li and Chen Xingcan 2003.
- ¹⁶ Zhengzhou Shi Wenwu Kaogu Yanjiusuo 2004.
- ¹⁷ Yoffee 2005, Chapter 3.
- ¹⁸ Bagley 1999, pp. 165–71.
- ¹⁹ Keightley 1999, p. 278.
- ²⁰ Wang Yuxin and Yang Shengnan 1999, pp. 538–41, Table 20.
- ²¹ *Ibid.*, p. 529.
- ²² Chen Bangghuai 1959, Part 2, p. 5.
- ²³ Chen Mengjia 1956, p. 548; Keightley 1999, p. 278 and n. 99.
- ²⁴ Ge Jianxiong 2002, pp. 216–17.
- ²⁵ Bagley 2004.
- ²⁶ For Shandong Sufutun, see Bagley 1999, pp. 219–21; for Hebei Dingzhou, see Hebei Sheng Wenwu Yanjiusuo 1993; for Xi’an Laoniupo, see Liu Shi’e 2001. For a brief survey of important Shang sites (the application of the label “Shang” here is often questionable) outside Anyang, see Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 2003, pp. 305–25.
- ²⁷ See, for example, Campbell (2007, p. 96): “[W]riting in the Late Shang [was] mostly restricted to the king and other high elite’s practices of ancestral communication, commemoration and veneration” ; and A. Smith (2011, pp. 173–4), who imagines “a literate population of less than a dozen individuals, all in the immediate entourage of the Shang king and his family, based at Anyang but participating in excursions outside, and preoccupied with documenting divination, scheduling sacrifices, and occasionally labeling ritual implements and expensive gifts.” Mark Lewis sees an origin in the royal ancestral cult as having shaped the role of writing in Chinese statecraft ever after: “The so-called bureaucratic polity in China emerged from a theocratic state organized around the ancestral cult, in which writing had served to communicate with the dead and political documents had provided the content for such communication. The political uses of writing that re-created the state during the Warring States period (*ca.* 481–221) entailed the adaptation of these earlier religious uses” (Lewis 1999b, p. 13).
- ²⁸ Bagley 2004, especially pp. 234–5.
- ²⁹ Keightley 1999, pp. 286–7. Lewis (1999b, p. 369, n. 3) rejects even this cautious view: “[T]he evidence of the oracle inscriptions suggests that the Shang had no bureaucracy.”
- ³⁰ Bagley 1987, pp. 525–31.
- ³¹ Falkenhausen 1993, p. 156.
- ³² *Ibid.*, p. 148.
- ³³ See Inomata and Houston 2000 for a comparative approach, especially pp. 7–12.
- ³⁴ Kemp 2006, p. 84, Figure 27.
- ³⁵ In Davies 1941, Plates 33–34, we see the vizier Ramose receiving collars of gold from Akhnaten and Nefertiti. In a scene carved in Nebwenenef’s tomb chapel in Western Thebes, we see Ramesses II and Queen Nefertari in the Window of Appearance at Abydos conferring on Nebwenenef the appointment translated here in Text 4.5 (Kitchen 1982, p. 47, Figure 6). In a wall painting at Mari, a king is shown being entrusted with office by a goddess (Postgate 1994a, p. 144, Figure 7:5).
- ³⁶ For example, the autobiography of Weni; see Lichtheim 2006, Vol. 1, pp. 18–22.
- ³⁷ Trigger 2003, pp. 142–54. Li Feng 2008 lists different avenues to office and argues that during middle Western Zhou, the king “seems to have appointed more officials from non-hereditary sources than from hereditary sources” (p. 233). The statistics he uses to support this argument seem to me unrepresentative, ignoring the vast number of uninscribed vessels that may well have resulted from investitures. The inscriptions leave no doubt that some lineages maintained their political power for more than two centuries, and hereditary office seems to be the most

- logical explanation for this fact; see Zhu Fenghan 2004, pp. 373–4. For a nuanced reading of these inscriptions and their implications for the career path of Western Zhou elites, see He Shuhuan 2007, who recognizes that “hereditary offices” meant sometimes the inheritance of actual responsibilities identical to those given to the ancestors, sometimes with additional duties, but sometimes only an aristocratic ranking (pp. 250–316).
- ³⁸ This is the traditional interpretation (e.g., Chen Hanping 1986, pp. 134–6). He Shuhuan (2007, pp. 263–95) proposes that renewal often involved additional duties.
- ³⁹ Falkenhausen 1993, p. 165.
- ⁴⁰ Textual studies: Du Zhengsheng 1979, Chapter 2; Yang Kuan 1999, Chapter 4; Shaughnessy 1999. Archaeological studies: Rawson 1999; Zhu Fenghan 2004, pp. 238–86. Li Feng 2006, Chapter 1; Li Feng 2008; Zhang Tian’En 2010. For maps see Li Feng 2006, p. xvi, and Shaughnessy 1999, p. 313, Map 5.3.
- ⁴¹ Houston 1993, p. 100; Houston et al. 2003, p. 137.
- ⁴² Shaughnessy 1997, pp. 77–8; 1999, p. 312 and n. 45.
- ⁴³ For the resettlement of Shang elites in Chengzhou, see Yang Kuan 1999, pp. 158–82; Zhu Fenghan 2004, pp. 274–83.
- ⁴⁴ The *Li fangyi* inscription (JC 9900), translated in Shaughnessy 1999, p. 325; see also Li Feng 2008, p. 81.
- ⁴⁵ Du Zhengsheng 1990, pp. 2–3.
- ⁴⁶ For the lineage-based settlement pattern in Chinese history, see Hsing I-tien 1995.
- ⁴⁷ Du Zhengsheng 1979, pp. 51–3.
- ⁴⁸ Yang 1950, pp. 531–43; Leeming 1980, pp. 169–70.
- ⁴⁹ Leeming 1980.
- ⁵⁰ *Ibid.*, pp. 187–9.
- ⁵¹ Mark Lewis does not believe that the Western Zhou state could have had the power to reshape the landscape on such a scale. In his view the grid pattern must result from land allotment schemes of the Warring States period (1990, p. 273, n. 40). See also Lewis 2007, pp. 33–4, Figure 1.
- ⁵² Guojia Wenwuju 2006, pp. 100–4; Hsing I-tien 2009, pp. 37–44.
- ⁵³ Listed and transcribed in He Shuhuan 2004; see also Li Feng 2006, pp. 123–4.
- ⁵⁴ JC 4327.
- ⁵⁵ Yuan Lin 2000, pp. 84–5.
- ⁵⁶ Scott 1998, pp. 25–33.
- ⁵⁷ For interpretation of this sentence, see Qiu Xigui 1992b, pp. 398–9.
- ⁵⁸ For interpretation of this sentence, see Qiu Xigui 1998, p. 225.
- ⁵⁹ Shaughnessy 1999, p. 328.
- ⁶⁰ The *bang* was a Western Zhou administrative unit. Shaughnessy translates the word as “state.” It occurs also in Text 4.8, the inscription of the *Da Yu ding* (“I present you four noblemen in the service of the States”).
- ⁶¹ The reading of the character 貯 as meaning “to sell” has been questioned. According to Chen Jie and Zu Shangxi (2005), it should be read as 贖, meaning “to compensate.” This reading casts doubt on the generally accepted opinion that private land sale appeared in the Western Zhou period, but it does not rule out the existence of transactions in land, which is our concern here.
- ⁶² The *yi* was a settlement, but of what kind is not certain. Shaughnessy translates the word as “city” in this inscription, and “town” in Text 4.7, the *Yi Hou Ze gui* inscription.
- ⁶³ Postgate 1994a, pp. 282–7, especially Figure 15:1.
- ⁶⁴ According to Biggs, kings in medieval Western Europe knew their territories as lists of place names, the itineraries of royal inspections; Renaissance rulers, being furnished with maps

- recording boundaries, were equipped to visualize their states very differently (Biggs 1999, pp. 374 and 378). See also Kemp 2000 and Kemp 2004.
- ⁶⁵ Shaughnessy 1999, p. 326, n. 85, two inscriptions.
- ⁶⁶ For a masterly introduction to the political history of this period, see Lewis 1999a.
- ⁶⁷ Biggs 1999, p. 387.
- ⁶⁸ For a French translation of these passages, see Biot 1851, Vol. 2, pp. 100 and 105.
- ⁶⁹ For a general introduction with references, see Boltz 1993b; see also Lewis 1999b, pp. 42–8, and the pertinent essays in Elman and Kern 2010. For the cuneiform lists of professions, see Nissen et al. 1993, pp. 110–15.
- ⁷⁰ Listed in Lewis 1999b, p. 372, n. 38.
- ⁷¹ The following account is based on Hsu 1993, with reference to the original report and studies in Chinese. See also CHAC, pp. 1012–13 (by Michael Loewe), Figure 14.2; Hsing I-tien 2009, pp. 23–9.
- ⁷² The classic study of the universal draft in the Warring States period remains Du Zhengsheng 1990, Chapter 2; see also Lewis 1999a.
- ⁷³ Pines 2004, p. 41.
- ⁷⁴ The following account is based on Hunan Sheng Bowuguan and Hunan Sheng Wenwu Kaogu Yanjiusuo 2004; Hsu 1978; Chang 1979. See also Hsing I-tien 2009, pp. 110–26.
- ⁷⁵ Hsing I-tien 1987, pp. 411–48. However, in a recent article Hsing does not list state-enforced deportation as a possible reason for the present map (2009, pp. 111–12).
- ⁷⁶ Li Xueqin 1985, passim; Wu Hung 1999, p. 654.
- ⁷⁷ See the passage from *Han Feizi* quoted earlier.
- ⁷⁸ For Han control of travelers, see Loewe 1967, Vol. 1, pp. 107–14. Loewe’s book remains the classic English introduction to Han administrative texts found in the northwest frontier garrisons.
- ⁷⁹ Falkenhausen 2005.
- ⁸⁰ The *Zhou li* stipulates that a tally is indispensable in traveling (Falkenhausen 2005, pp. 83, 117, n. 12), implying that, like a Han passport, it provided personal identification, but Lord E’s tallies do not identify him and cannot have had this function.
- ⁸¹ Falkenhausen 2005, pp. 91, 98–103. I have omitted a few other arguments listed in his conclusion.
- ⁸² Kemp 2006, p. 308.
- ⁸³ In extant Han passports and similar documents, most of the holders are described as black in skin color. Ge Jianxiong 2002, pp. 233–4.
- ⁸⁴ Giele 2005, pp. 353–61; Lewis 1999b, p. 29.
- ⁸⁵ Ge Jianxiong 2002, p. 234.
- ⁸⁶ Du Zhengsheng 1990, pp. 4–10; Ge Jianxiong 2002, pp. 237–8.
- ⁸⁷ For the military changes during this period see Du Zhengsheng 1990, Chapter 2, and Lewis 1999a, pp. 620–32.
- ⁸⁸ Du Zhengsheng 1990, pp. 392–8; Lewis 1999a, pp. 625–7.
- ⁸⁹ Barnett 1958, Plate 131, Assyrians counting Elamite heads, from the Palace of Sennacherib at Nineveh, end of the eighth century B.C. See also the paragraph after Text 3.6 in Chapter 3.
- ⁹⁰ See the list in Du Zhengsheng 1990, p. 396.
- ⁹¹ See Lewis 1999a, p. 640, for a brief description, with references.
- ⁹² Lewis 2007, Chapter 2.
- ⁹³ For the Qin twenty-rank system and the standards for promotion within it according to merit in battle, see Du Zhengsheng 1990, pp. 328–71. See also Lewis 2007, p. 32.
- ⁹⁴ See his account of the sack of the Qin capital, quoted in the last paragraph of this chapter.
- ⁹⁵ The risks of trusting ancient texts to give meaningful statistics have been aptly exposed by M. I. Finley (1985b, Chapter 3).

- ⁹⁶ Scott et al. 2002; see also Scott 1998, pp. 64–71.
- ⁹⁷ Scott et al. 2002, pp. 15, 39–40, nn. 12 and 26; Scott 1998, pp. 65, 371–72, nn. 39–40.
- ⁹⁸ Scott et al. 2002, p. 11.
- ⁹⁹ Keightley 2000, p. 103.
- ¹⁰⁰ Chen Jie 2007 discusses this question and concludes that the royal house had a surname, but that other nonroyal elite did not have surnames (pp. 216–18).
- ¹⁰¹ Lewis 1999b, p. 25. A similar idea is expressed in Du Zhengsheng 1990, pp. 188–92.
- ¹⁰² In medieval Europe the initial spread of family names among the elite was closely linked with the securing of private property rights. By adopting heritable patronyms, landowners in thirteenth-century England could protect their claims to landed property and office. Land registers reveal “that most of these patronyms were derived from the lands possessed by their bearers” (Scott et al. 2002, p. 12).
- ¹⁰³ His patronym is the same as that of the distinguished epigrapher Qiu Xigui.
- ¹⁰⁴ Du Zhengsheng 1990, p. 192.
- ¹⁰⁵ Examples listed by state can be found in Gao Ming 1996, pp. 431–55.
- ¹⁰⁶ Assembled in Gao Ming 1990.
- ¹⁰⁷ There are only three corpora of pre-Han administrative and legal documents that have real personal names in significant numbers. One is the legal and administrative documents from Baoshan tomb no. 2 of the Chu state. The second is the administrative documents found in a well at Hunan Liye belonging to the Qin state; these documents range from immediately before to immediately after the unification. The third one is names on clay sealings of the Qin state. For an English introduction to the Baoshan texts, see Weld 1999. For the reports and studies of the Liye documents, see Hunan Sheng Wenwu Kaogu Yanjiusuo et al. 2003a–b, Hunan sheng Wenwu Kaogu Yanjiusuo 2007, Li Xueqin 2003, and Chen Jie 2009. For an annotated translation of some of the Liye documents in Japanese, see Riya Shinkan kōdokukai 2004, pp. 88–137. For the names on Qin sealings, see Liu Zhao 2010.
- ¹⁰⁸ For a brief English introduction to Warring States seals, see Li Xueqin 1985, Chapter 24. See also the references listed in Gao Ming 1996, pp. 458–9, and Lewis 1999b, p. 372, n. 36.
- ¹⁰⁹ See the examples given in Du Zhengsheng 1990, p. 192.
- ¹¹⁰ Bagley 1995, 1996.
- ¹¹¹ Compare Nissen et al. 1993, pp. 85, 87.
- ¹¹² For the archaeological report, see Shaanxi Sheng Kaogu Yanjiusuo 1992; see also Yuan Zhongyi 2002, pp. 327–62. For a brief English summary, see Li Xueqin 1985, pp. 260–1. For the identification of the commoners who were unable to pay their debts, see Zhang Jinguang 2004, pp. 565–6.
- ¹¹³ Scott et al. 2002, p. 27.
- ¹¹⁴ Hulsewé 1985, pp. 83–5, 104.
- ¹¹⁵ Scott et al. 2002, p. 15.
- ¹¹⁶ Du Zhengsheng 1990, pp. 50–61.
- ¹¹⁷ Yang Kuan 2003, pp. 17–39; Du Zhengsheng 1990, pp. 174–86; Lewis 1990, p. 57; Yang Zhenhong 2003; Yu Zhenbo 2004.
- ¹¹⁸ Yang Kuan 2003, pp. 35–9. For an English introduction to this text, see Sage 1992, pp. 131–3.
- ¹¹⁹ Text 4.22e might be an exception. The first character, Qing, is attested as a family name in Warring States times – for example, by Text 4.22c, no. 1.
- ¹²⁰ The term for the unit of fives (*wu lin*, “five neighbors”) is also included in section 27 of the late Western Han primer *Jijiu pian* (see Text 6.4). For the organization of the units of five, see Du Zhengsheng 1990, pp. 131–9. The unit of tens does not seem to have been put to practical use.
- ¹²¹ This reading is given in Chen Wei 1996, p. 127.
- ¹²² One letter from the Liye find requests information about ages from seventeen households (Hunan Sheng Wenwu Kaogu Yanjiusuo 2003a, p. 34; Li Xueqin 2003, p. 77).

- ¹²³ For example, Weld 1999, p. 96.
- ¹²⁴ I follow Chen Wei's new interpretation of this term; see Chen Wei 2010, pp. 186–90.
- ¹²⁵ This unit, *tian*, is written with the same character we have seen in the Western Zhou *Mao gui* inscription mentioned earlier. Li Xueqin suggests that here it equals 100 *mu*, the quota for land allotment during the Warring States period in the northern states (cited in Liu Xinfang 2003, p. 155).
- ¹²⁶ Kemp 2006, pp. 329, 413, n. 83; Kitchen 1982, pp. 128–9.
- ¹²⁷ Du Zhengsheng 1990, p. 176; Lewis 1999b, p. 27. The *Zuozhuan* is a transmitted text that is likely to have been compiled during the fourth century B.C.; for more detailed information see Schaberg 2001a.
- ¹²⁸ This point was first made in Hou Xudong 2005a.
- ¹²⁹ *ZJS*, strips 334–5; Liu Hsin-ning 2007, pp. 116–18.
- ¹³⁰ Enno Giele translates the same word *xiang* as “commune” (2005, p. 363). I have followed his translation in the Western Han register in Text 4.28.
- ¹³¹ For an English study see Hinsch 1998, with references to Chinese and Japanese scholarship. For a more recent study in Chinese, see Li Jiemin 2005. See also Lewis 2006b, Chapter 2, on the construction of the household in early China.
- ¹³² See Hou Xudong 2005b, pp. 67–81.
- ¹³³ A detailed discussion can be found in *ibid.*, Chapter 3. See also Du Zhengsheng 1990, pp. 193–6.
- ¹³⁴ Du Zhengsheng 1990, p. 195.
- ¹³⁵ For the occurrence of the term in excavated and transmitted Han texts, see the reference given in Hou Xudong 2005a, p. 15, n. 5. For the early Han population register, see Hubei Sheng Jingzhou Bowuguan 2000, pp. 222–8, and Li Xueqin 2003, pp. 79–80. Although it seems to be not the original official document but a funerary document made to accompany the dead registrant into her tomb, it was modeled on local administrative documents; see Lai Guolong 2014.
- ¹³⁶ In four fragmentary household registers dating from the late Eastern Han period, one household head does not seem to have a surname, although another one does. See Wang Su 2005, p. 70; Changsha Shi Wenwu Kaogu Yanjiusuo and Zhongguo Wenwu Yanjiusuo 2006, pp. 107–8. Lewis's hypothesis about the acquisition of patronyms may not make sufficient allowance for alternatives to the use of surnames: “To register tens of thousands of households solely on the basis of personal names would have been impossible, so it is a reasonable hypothesis that the granting or recognition of surnames took place in association with the process of registration” (1999b, pp. 25–6).
- ¹³⁷ One Qin letter from the Liye find mentions the transfer of registers of seventeen migrating households and the age of the household members; see Hunan Sheng Wenwu Kaogu Yanjiusuo et al. 2003a, p. 34; Hunan Sheng Wenwu Kaogu Yanjiusuo 2007, p. 194; and Li Xueqin 2003, p. 77.
- ¹³⁸ *Li ji*, 12 (“Wangzhi,” *SSJZS* 1, p. 1334a).
- ¹³⁹ Lien-sheng Yang 1950, pp. 527–8.
- ¹⁴⁰ The “Tang yifeng sannian duzhi zouchao” is studied in depth in Li Jinxiu's multivolume book on the fiscal management of the Tang dynasty (1995); see especially Vol. 1, Parts 1–2. For an English introduction to the finance of the Tang, see Twitchett 1963.
- ¹⁴¹ For the report see Tianchangshi Wenwu Guanli Suo and Tianchangshi Bowuguan 2006. For recent studies, see Yuan Yansheng 2008 and Hsing I-tien 2009, pp. 74–81. I follow Hsing I-tien's dating, not the report's.
- ¹⁴² Lianyungang Shi Bowuguan et al. 1997. For an English introduction see Loewe 2004, Chapters 2–3.
- ¹⁴³ A detailed list organized by rank and location was written on a separate wooden board.

- ¹⁴⁴ The population total of 1,397,343 is less than the sum of the male (766,064) and female (688,132) persons by 3,147. There is also no mention of the male increase. Several explanations for these inconsistencies have been offered, none very convincing.
- ¹⁴⁵ The Han government issued a kind of walking staff topped by a bird finial to elders past age seventy as a token that they enjoyed certain privileges; see Wang Haicheng 2005.
- ¹⁴⁶ Loewe 2004, p. 44.
- ¹⁴⁷ Lewis 1999a, p. 609; 1999b, pp. 30, 374, n. 49; Ge Jianxiong 2002, pp. 224–6, 231–9.
- ¹⁴⁸ Hsing I-tien 2009 is a recent attempt to question the reliability of these documents (pp. 88–91). I follow Ge Jianxiong in believing that the number is reasonable (2002, pp. 323–7). A similar document was recently recovered from Hubei Jingzhou. For each of the twelve counties and four principdoms of the Nan commandery, it records the number of people in five categories: seniors with tax exemption, newly registered, disabled, capable of labor tax, incapable of labor tax; see Jingzhou Bowuguan 2008 and Hsing I-tien 2009, pp. 82–7. The earliest surviving census data, recorded in the *Han shu*, are of about the same date as the Yinwan documents. For an English study of them, see Bielenstein 1947 (which extends the discussion to the Tang dynasty). A more up-to-date study of the population history of ancient China is Ge Jianxiong 2002 and the other three volumes in the same series, all in Chinese.
- ¹⁴⁹ Ren Rixin 1981; Wang Entian 1985.
- ¹⁵⁰ Loewe 2004, p. 46 and n. 26.
- ¹⁵¹ Yates 1995; Lewis 1999a, p. 610; 1999b, Chapter 1.
- ¹⁵² Gao Heng 1999, pp. 130, 137, nn. 14–15.
- ¹⁵³ D’Altroy 2002, p. 279.
- ¹⁵⁴ Lewis 1999b, p. 26.
- ¹⁵⁵ For covenant texts of the Spring and Autumn period, see Weld 1990 and 1997.
- ¹⁵⁶ *ZJS*, strip 332. On the administrative role of the overseer of the commune, see Qiu Xigui 1992a, pp. 430–523.
- ¹⁵⁷ A detailed substantiation of Lewis’s formulation “to be inscribed marked subjection” can be found in Hou Xudong 2005a, from which the foregoing account is drawn. Hou argues that after paper replaced wooden and bamboo strips, the court began to control the name list of the commoners directly.
- ¹⁵⁸ During the Han period the submitting of accounts sometimes resulted in the correction of existing maps. Maps showing provincial boundaries sometimes accompanied the reports; see Loewe 2004, pp. 45–6.
- ¹⁵⁹ *Shi ji*, 7, pp. 295–6; Watson 1993, Vol. 1, p. 17. See Lao Gan 1959 for a fascinating analysis of the passage about Xiang Yu based on administrative documents from the Han frontier garrisons.
- ¹⁶⁰ *Shi ji*, 53, p. 2014; Watson 1993, Vol. 1, pp. 91–2.

5. THE NEAR EAST AND THE AMERICAS

- ¹ The Sumerian word for scribe is *dub-sar*, meaning “tablet writing.” Egyptian hieroglyphic writing uses the scribal kit to designate the scribe. The kit included the palette with cakes of red and black paint, a bag for powdered pigment, and a brush holder for rush pens. In Classic Mayan, *ah-ts’ib* means “he of the writing/painting”; some logographic variants depict a hand with a brush. Chinese terms are more problematic. In the oracle bone inscriptions, there are two terms that are usually translated as “scribe.” One is *zuo ce*, literally “make a set of slips.” This seems to resemble the Sumerian compound “tablet writing,” which likewise mentions the stationery. The other term is *shi*, which has generated much graphical and morphological analysis but resists interpretation. Whatever its underlying meaning, its association with writing has been firmly in place since the Western Zhou period, and it gradually replaced *zuo ce* as a more or less generic term for scribe. Its cognate *li* became virtually a class name for scribes in the Han period.

- ² See Civil 1995 for an expert overview of lexical lists. The archaic period comprises the Late Uruk and Jamdet Nasr periods, from 3200 B.C. to 2900 B.C.
- ³ Englund 1998, p. 82; Cooper 2004, p. 78. In another article Englund remarks that these figures represent averages over Uruk IV and Uruk III: “less than one percent of the earliest, the Uruk IV tablets, are of the lexical genre, while close to 20% of the following Uruk III tablets belong to this type of documents [sic]” (2004, p. 28).
- ⁴ Englund 1998, p. 90.
- ⁵ Kemp 2006, p. 71.
- ⁶ This is not to say that phonetic elements did not play a role in forming compound signs in the first scripts.
- ⁷ Englund 1998, pp. 68, 95, and 98. For a similar view, see Veldhuis 2006, pp. 189–90.
- ⁸ Green 1981 is the best introduction to the meta-script information contained in the archaic tablets, especially pp. 349–56. See also Green 1989, pp. 52–4.
- ⁹ Englund 1998, p. 111.
- ¹⁰ Civil 1992, p. 303.
- ¹¹ Englund 1998, pp. 41, 86, and 90.
- ¹² Hans Nissen suspects that a centralized system of education existed even in the archaic period; see Nissen et al. 1993, p. 105.
- ¹³ Biggs 1966.
- ¹⁴ For the first suggestion, see Martin 1975, p. 181; for the second, Krebernik and Postgate 2009, p. 8.
- ¹⁵ Visicato 2000, p. 17, n. 16; p. 20, n. 28.
- ¹⁶ *Ibid.*, p. 233.
- ¹⁷ *Archi* 1986, pp. 77–8, 82–5; *Archi* 1992; *Archi* 2003.
- ¹⁸ *Archi* 2001.
- ¹⁹ Westenholz 1974, p. 96.
- ²⁰ H. L. J. Vanstiphout dismissed the idea that lexical lists and grammatical paradigms can teach Sumerian morphology and syntax. See Vanstiphout 1979, pp. 119–20.
- ²¹ Michalowski 1991, p. 52. See also Charpin 2010, pp. 22–5.
- ²² Michalowski 1991, p. 52.
- ²³ Nissen et al. 1993, p. 108.
- ²⁴ *Ibid.*, p. 108.
- ²⁵ Rubio 2009, pp. 38–9. For an annotated translation, see Cooper 1983.
- ²⁶ In view of the tendency of human memory to remember what it wants to remember, we might wish to avoid the phrase “knowingly rewriting history,” which says that the authors knew what they wrote to be false. We have too many examples in the modern world of narratives written in perfect good faith yet shaped in obvious ways by the allegiances of their authors.
- ²⁷ Michalowski 1991, p. 53.
- ²⁸ Michalowski 2006 is his latest argument for the death of Sumerian as a spoken language by Ur III time, with references to earlier scholarship; see especially pp. 174–7. See also Rubio 2006, pp. 174–6. For a different view, see Woods 2006.
- ²⁹ Michalowski 1991, p. 52; Kuhrt 1995, Vol. 1, p. 60. The analogy with Latin in nineteenth-century English public schools is obvious.
- ³⁰ Civil 1992; Veldhuis 1997, 2004, and 2006; Tinney 1998 and 1999; Robson 2001 and 2008; Rubio 2009, pp. 39–42; Charpin 2010, pp. 17–67; Delnero 2010.
- ³¹ The exact translation of this term is uncertain. It could also be translated as “the house that distributes the tablets.” See Woods 2006, p. 107, n. 106.
- ³² Sjöberg argues that it is possible that the houses that yielded the school texts in Nippur were scribal quarters; see Sjöberg 1976, pp. 176–7. Charpin supports Robson’s identification of these as houses belonging to the schoolmasters, who taught from their own homes. He also lists

- similar houses in Tell ed-Dēr (the house of Ur-Utu in ancient Sippar-Amnānum) and Ur (house no. 7 on Quiet Street); see Charpin 2010, pp. 29–30. For houses probably similar to these examples in greater Mesopotamia, see Rubio 2009, p. 39.
- ³³ Nissen et al. 1993, pp. 108–9; Roberson 2008, p. 102.
- ³⁴ Landsberger 1956, p. 124.
- ³⁵ Sjöberg 1976, p. 162.
- ³⁶ Quoted from *ETCSL* 6.1.02.12 and 6.1.02.27. For a detailed discussion of the proverbs in the Old Babylonian curriculum, see Veldhuis 2000 and Jon Taylor 2005. For the proverbs' function in creating the educated scribe's identity and their use outside the scribal school, see Alster and Oshima 2006, pp. 31–43.
- ³⁷ Robson 2008, pp. 100 and 106.
- ³⁸ Vanstiphout 1978, p. 51.
- ³⁹ Tinney 1999, p. 170 and n. 61, no photograph or drawing of the statue (a fragment).
- ⁴⁰ Sjöberg 1976, pp. 164–70.
- ⁴¹ Rubio 2009, pp. 40–1. For the ten texts, see Tinney 1999.
- ⁴² Baines 2004 suggests that the writing system was reformed to record words (lexemes) in Dynasty 0, about one century after its invention (p. 172). Baines 1983 mentions reforms in the Third Dynasty and Old Kingdom (pp. 577 and 590; for a slightly revised version, see Baines 2007, p. 59). The Twelfth Dynasty witnessed another major reform (Baines 2012).
- ⁴³ Brovarski 1987, p. 52.
- ⁴⁴ Baines notes that many Early Dynastic personal names were mini-sentences, but no name was longer than one sentence. See Baines 1983, p. 593, n. 7. Sumerian names also contain sentences, but with the single exception of “Enlil ti” (“Enlil gives life”), it is not certain whether the names attested in the archaic tablets do.
- ⁴⁵ Kemp 2006, pp. 164–71. For the final report of the papyrus archive from Abusir, see Posener-Kriéger et al. 2006. See also the offering formula and offering list in *Text* 3.7 and the linen list in Plate IX, all of which are concerned with the classification of words.
- ⁴⁶ The inscriptions referred to collectively as the Execration Texts date from the late Old Kingdom to the Twelfth Dynasty (reigns of Senusret III and Amenemhat III). They were written in hieratic on clay pots or clay figures of bound prisoners that were then broken and buried. Compare the list of enemies in the Houma covenant inscription (*Text* 4.31).
- ⁴⁷ Civil 1987, p. 37.
- ⁴⁸ *Ibid.*, pp. 37–8. For an overview of this kind of “enumeration literature” in Mesopotamia, see Veldhuis 2004, pp. 56–8.
- ⁴⁹ Baines 1983, p. 575; Parkinson 1991, p. 22.
- ⁵⁰ Gardiner 1947, Vol. 1, pp. 3–4; McDowell 1999, p. 132.
- ⁵¹ Traditionally *Miscellanies* includes only Late Egyptian texts, excluding the Middle Egyptian classics, but Andrea McDowell convincingly argues that both of them belong to a single collection for instructing advanced students. The disjunction is due only to their separate modern publication. See McDowell 2000, p. 223.
- ⁵² Mesopotamia: Nissen et al. 1993, p. 108. Egypt: Janssen and Janssen 1990, pp. 72–4; McDowell 2000, p. 219. The short life expectancy in ancient Egypt (and elsewhere) was itself a reason for beginning schooling at an early age. (Medical schools today do not accept applicants above a certain age because they do not want to invest training in doctors who will not practice long.) A scribe would have begun his official career at the age of fifteen. See Baines and Eyre 1983, pp. 72–3.
- ⁵³ Eyre and Baines 1989, p. 93. Janssen and Janssen 1990, p. 78. Parkinson 1991, p. 14; 1999, p. 150.
- ⁵⁴ McDowell 2000, p. 218.
- ⁵⁵ Eyre and Baines 1989, p. 94. Parkinson 1997, p. 220; McDowell 2000, p. 218.

- ⁵⁶ Janssen and Janssen 1990, p. 76.
- ⁵⁷ McDowell 1999, pp. 128–9, and McDowell 2000.
- ⁵⁸ Houston 2000, pp. 149–50.
- ⁵⁹ *Ibid.*, p. 150.
- ⁶⁰ Houston and his colleagues see the standardization of the Maya script as either a result of the educational system or a response to “an aesthetic and conceptual need” for a canonical idiom. They leave the question open for the lack of direct evidence. See Houston, Robertson, and Stuart 2000, p. 351.
- ⁶¹ The Spanish friar Diego de Landa notoriously recorded burning large numbers of Maya codices; only four are known today.
- ⁶² Houston 2000, p. 144.
- ⁶³ Coe and Kerr 1997, p. 189, Plate 82; Fahsen and Grube 2005, p. 77.
- ⁶⁴ Houston 2000, p. 156, with extensive references. For body parts and related human actions see Houston, Stuart, and Taube 2006, Chapter 1, especially p. 55, Figure 1.58.
- ⁶⁵ Stuart 1995, pp. 394–402; Houston 2000, pp. 156–7.
- ⁶⁶ Stuart 1995, pp. 21–2.
- ⁶⁷ Stephen Houston, personal communication, December 16, 2006.
- ⁶⁸ Houston 2000, p. 148.
- ⁶⁹ Martin 2001, p. 182. For the political history of this period see Martin and Grube 2008, pp. 143–4.
- ⁷⁰ Inomata and Stiver 1998, pp. 436–41.
- ⁷¹ The excavators suggest that each bench in the house is likely to have accommodated no more than one adult; see Inomata and Stiver 1998, p. 441. Presumably the benches can accommodate more children. However, on a painted vessel excavated from Tikal (Kerr no. 2695), a ruler is being dressed for an impersonation ritual within a “house of writing.” There is a bench behind him. Is this the ruler’s living room? Or is the ruler performing in a palace school? See Houston, Stuart, and Taube 2006, pp. 272–3, Figure 8.26.
- ⁷² Stephen Houston alerted me to the Aztec analogy, personal communication, December 16, 2006. One of the two types of Aztec school, the “house of youth” or the young men’s house, is attested among the last independent Maya, the Itzá of Petén, Guatemala. See Houston, Stuart, and Taube 2006, p. 211.
- ⁷³ Sahagún 1950, Book 3, pp. 49–65; Hassig 1988, pp. 30–7; Boone 2000, p. 26; Townsend 2000, pp. 166–8; Offner 1983, pp. 223–5.
- ⁷⁴ Hassig 1988, p. 34. The *calmecac* has not been archaeologically identified. For a schematic plan of the Templo Mayor precinct with its hypothetical location indicated (letter A), see Berdan 2005, p. 13, Figure 1.5.
- ⁷⁵ Hassig 1988, p. 35; Townsend 2000, p. 166.
- ⁷⁶ Sahagún 1950, Book 3, pp. 64–5.
- ⁷⁷ Townsend 2000, p. 168.
- ⁷⁸ *Ibid.*
- ⁷⁹ Boone 2005.
- ⁸⁰ Cobo 1990, p. 202.
- ⁸¹ Rowe 1982, p. 95; Trigger 2003, p. 607.
- ⁸² Urton 2003, p. 121–3.
- ⁸³ Rowe 1982, p. 96.
- ⁸⁴ Kemp 1978, p. 36. See also Kemp 2006, pp. 33–7. The British Empire followed this policy, selecting promising young men from its Asian and African colonies, educating them at Oxford and Cambridge, and sending them home to serve as civil servants and administrators. Some of those Oxbridge-educated young men then led the independence movements that put an end to the British Empire.

- ⁸⁵ Rowe 1982, p. 96; Carrasco 1982, pp. 35–6.
- ⁸⁶ Civil 1995, p. 2306; McDowell 2000, p. 230. Benjamin Foster notes that “classical Sargonic script is remarkably uniform throughout Mesopotamia, and has a harmony and serene elegance such as cannot be found in any other period of cuneiform writing” (1982, p. 4; see also Charpin 2010, p. 81). It cannot be chance that this uniformity coincides with the founding of the first empire in Mesopotamia. After comparing administrative documents from different sites written in Linear B, Michael Ventris and John Chadwick conclude that “the almost identical sign-forms, spelling, phraseology and tablet shape and arrangement shown at Knossos, Pylos and Mycenae ... may themselves show that writing was the preserve of specialists trained in a rigidly conservative scribal school” (*Documents in Mycenaean Greek*, Cambridge University Press, 1956), cited in Hudson and Levine 1996, p. 25. In a conference on Mycenaean palaces, the cuneiform specialist J. N. Postgate suggested that the extraordinary similarities between tablets from different sites must have been the result of conscious and deliberate effort to maintain uniformity, and he asked why Mycenaean archaeologists do not think that the various archives are the product of a single administration in the service of a Mycenaean empire, to which no answer was given by the Linear B specialists (Voutsaki and Killen 2001, p. 13).
- ⁸⁷ Michalowski 1991, pp. 49–51; Houston 2000, pp. 162–4; Rowe 1982, pp. 95–6. One particular case of the power of language would be the power of a prestige language shared across linguistic boundaries, the role Houston et al. (2000) propose for Classic Ch’oltian.

6. CHINA

- ¹ For example, Elman 2000.
- ² The character specifying the school’s location is partially obliterated; here I follow Oliver Moore’s restoration and translation. See Moore 2000, p. 25, Figure 3.5. Kaizuka Shigeki and Itō Michiharu omit the character from their transcription; see Kaizuka and Itō 1980, Vol. 1, p. 161.
- ³ *HJ* 3250; Chen Banghuai 1959, Vol. 2, pp. 9–10; Yang Kuan 1999, p. 664. See also Lee 2000, p. 40, n. 1. Some scholars translate this inscription differently: “Crack-making on the day *bingzi*, divining: ‘Will it rain heavily if the Many Children’s school time is postponed?’” (Wang Yuxin et al. 2004, p. 1469, no. 69; Han Jiangsu 2007, p. 446; see also Smith 2011, p. 179.) The exact meaning of the term *duo zi* (“Many Children”) is uncertain. Lin Yun argues that it refers not to children but to the headmen of the collateral branches of the king’s lineage, and that divinations like this one were made for them rather than for the king. See Lin Yun 1998 [1979], pp. 52–5. Qiu Xigui agrees; see Qiu Xigui 1992 [1983], pp. 305–6. In a sentence that involves schooling, however, the term may indeed denote children.
- ⁴ Guo Moruo 1965, p. 250, no. 1162; transcription and interpretation on pp. 639–40.
- ⁵ For hostage keeping in Chinese history see Yang 1952.
- ⁶ Han Jiangsu 2007, pp. 446–57.
- ⁷ The title of the short story “Kong yi ji” by the eminent modern writer Lu Xun consists of the fourth, fifth, and sixth characters of this text. For a general introduction to the text, see Zhang Zhigong 1992, pp. 38–9. For student exercises from Dunhuang that use it and for its use in literature, see Zheng Acai and Zhu Fengyu 2002, pp. 139–56.
- ⁸ For an English translation, see Paar 1963. For the essay’s position in the curriculum of late imperial times, see Ridley 1973, pp. 392–3.
- ⁹ The earliest Chinese writing, found on pottery from the Erligang site at Xiaoshuangqiao (see Plate VI), was preserved presumably because it was written in vermilion, hence easily caught attention.
- ¹⁰ Smith 2011. Smith argues that Bagley (2004) is wrong to compare Anyang literacy acquisition with Old Babylonian schooling. Smith maintains that the proper comparison is instead between Anyang and archaic scribal training at Uruk. If he means to suggest that the writing system

at Anyang was at the same stage of development as the writing system at archaic Uruk, he is mistaken. The scribes of archaic Uruk could not write sentences; Anyang scribes, who could, possessed a fully developed system that must have had a long history behind it. In any case, the objection to Old Babylonian comparisons is misguided. What the Old Babylonian evidence does is alert us to elements of basic literacy training that we can recognize in the schoolwork of our own children today.

- ¹¹ Bagley 2004, pp. 216–18.
- ¹² Regarding the imitation of brush writing on carved bones and bronze, see Bagley 2004, pp. 218–20.
- ¹³ One was found together with Han administrative texts in the northwest frontier garrisons (see Chapter 4); the other comes from Dunhuang.
- ¹⁴ Except for a few recent systems like Korean and Finnish; see Section 17 and pp. 678–81 in *WWS*. But even those systems are not phonetically equally transparent for every user of the script; the users do not all speak with the same accent.
- ¹⁵ Proto-cuneiform: Englund 1998, p. 68; cuneiform: Cooper 1996, p. 40; proto-hieroglyphic (or proto-hieratic): Baines 2004, p. 172; Ritner 1996, p. 74; hieroglyphic Egyptian: Baines 2004, p. 172, says a few hundred to a thousand; hieroglyphic Mayan: Houston 2000, p. 144, citing Nicolai Grube's argument with approval; Chinese: Mair 1996, p. 200 (there are about five hundred discrete components that can be used to form characters).
- ¹⁶ Mair 1996, p. 200.
- ¹⁷ On English vocabulary size, see Miller 1991, pp. 134–8.
- ¹⁸ The classic treatment of traditional Chinese primers is Zhang Zhigong 1962 and 1992.
- ¹⁹ Ban Gu 1962, Vol. 6, pp. 1718–20.
- ²⁰ Li Chaoyuan, personal communication, November 2003.
- ²¹ For a brief introduction to this text, see Coblin 1993.
- ²² See the discussion of *Zhou li* in Chapter 4.
- ²³ For repeated characters, see Greatrex 1994, pp. 104–5 and n. 32. Nine characters are repeated twice in the extant manuscript, which is about one-fifth of the original. If the statistic is representative, the total number of repeated characters would not be very large.
- ²⁴ A newly discovered version consists of seven-character lines. Some strips have colophons stating that each chapter has 105 characters. See Zhang Cunliang and Wu Hong 2009; Hu Pingsheng 2010.
- ²⁵ Greatrex 1994, pp. 100 and 105.
- ²⁶ Hu Pingsheng 2010; Hu Pingsheng and Han Ziqiang 1983, pp. 37–8; Greatrex 1994, p. 104; Bottéro 2003, pp. 103–11.
- ²⁷ Rhyme seems to be absent from the Near Eastern word lists and literary texts. Veldhuis states that it exists but does not play a large role in Sumerian poetic language; see Veldhuis 2004, p. 51. However, Jeremy Black cautions that our understanding of the phonology of Sumerian is so poor that we simply cannot discuss rhyme with precision; see Black 1998, p. 24.
- ²⁸ See Hsing I-tien 2011a, pp. 616–20.
- ²⁹ For Sumerian school tablet types, see Civil 1995, p. 2308; Veldhuis 1997, pp. 29–40; Delnero 2010; Tinney 1998, pp. 44–6, with ample illustrations. Mathematical texts also follow this typology; see Robson 2008, pp. 99 and 107; Friberg 2000, Appendix 3, for illustrations. There are Han mentions of various types of stationery. Scholars have tried to correlate them with excavated bamboo strips and wooden boards, but without reaching any consensus.
- ³⁰ Hsing I-tien 2011b, pp. 84–101. See also Zhang Lisheng 1983, pp. 217–24. Notice that Zhang Lisheng interprets all the personal names in *Jijiu pian* as monosyllabic family names, against the traditional view that they are monosyllabic family name plus disyllabic personal name; see Bottéro 2003, p. 114. I find Zhang's interpretation unconvincing.
- ³¹ Greatrex 1994, p. 102.

- ³² Jingmen Shi Bowuguan 1998, pp. 77–107, no plate numbers. For transcriptions and commentary, see Li Ling 2002a, pp. 44–58 and 147–75.
- ³³ Li Ling 2002a, pp. 50–3, 156–7.
- ³⁴ This is my free translation based on Li Ling’s interpretation; see Li Ling 2002a, p. 46.
- ³⁵ Parkinson 1997, p. 247.
- ³⁶ *Ibid.*, p. 251.
- ³⁷ In fact this compositional feature is not confined to the maxims under discussion. In China in all periods, wordplay is frequently employed in overtly philosophical texts and poetic compositions. In later elementary education there are collections of poems for acquainting schoolchildren with poetic language and helping them compose their own couplets and poems. For this purpose two most basic skills were taught: the practice of rhyming and the pairing of words by semantic categories. For instance, *heaven* pairs with *earth*, *rain* with *wind*, and so on (see Zhang Zhigong 1962, pp. 100–6). Texts like this also help students learn vocabulary more easily than by the memorization of random words. A modern essay of this kind can be found in Yuenren Chao’s *Mandarin Primer* (Chao 1948, pp. 172–4; Chinese text in *Character Text for Mandarin Primer*, Chao 1954, pp. 31–3), where students are introduced to pairs of words: “the opposite of come is go, the opposite of buy is sell, the opposite of true is false ... the counterpart of water is fire.” Once learned, these sentences stick in the mind. Early Chinese writers may well have learned from similar texts.
- ³⁸ For general introductions with bibliographical references, see Cheng 1993; Boltz 1993a. For a critical review of six recent translations of *Lunyu* see Schaberg 2001b. John Makeham (1996) hypothesizes that it was not until the middle of the first century B.C. that the *Analects* came into existence as a book. He further argues that “this book was based on a number of early ‘collected sayings’ of the Master,” much as I have proposed in the case of the Guodian texts.
- ³⁹ Raymond Dawson’s translation as quoted in Schaberg 2001b, p. 127.
- ⁴⁰ Chi Xiaofang 1998, pp. 148–52.
- ⁴¹ *Ibid.*, Chapter 4.
- ⁴² Schaberg 2001b, pp. 115 and 122.
- ⁴³ Wright 1973, p. 16.
- ⁴⁴ Li Ling 2002a, pp. 45–6, 48–9, 154, 156, and 162.
- ⁴⁵ Karlgren’s translation is as follows: “There are no words that are not answered, there is no kindness that is not requited.” See Karlgren 1974, p. 218.
- ⁴⁶ Veldhuis 2000, p. 385.
- ⁴⁷ Jon Taylor 2005 notes that the relation between the Sumerian proverbs and contemporary literary texts is complex. “There are numerous passages in common, or at least very similar to each other, found in the collections and in literary or other scholastic texts.” But it is hard to determine in any given case whether the text is quoting a proverb, or the proverb is quoting literature, or both are quoting something else (pp. 21–2).
- ⁴⁸ For a general introduction see Loewe 1993. References to individual poems are here given as page numbers in *SS/ZS*.
- ⁴⁹ Ma Chengyuan 2001.
- ⁵⁰ Yuri Pines has made a similar observation (2005, p. 262, n. 48).
- ⁵¹ Martin Kern suggests that one of the original functions of the *Odes* was to serve as an “encyclopedic storehouse of knowledge.” See Kern 2000, p. 51.
- ⁵² The best treatment of this composition and of its implications for understanding ancient religion, literature, and knowledge is Veldhuis 2004. According to Veldhuis, the knowledge embodied in Mesopotamian lexical lists and literary compositions essentially belongs to the category of school exercises.
- ⁵³ Karlgren 1974, pp. 2, 20, and 32.

- ⁵⁴ Similar reports can be found in Hulsewé 1985, pp. 192, 200, and 205. Medical texts need to describe the patient's symptoms, and this, too, often involves physical descriptions. See, for example, *ZJS*, p. 242, strip no. 40.
- ⁵⁵ Veldhuis 2004, pp. 66–75.
- ⁵⁶ James 2003, pp. 132–3.
- ⁵⁷ Fourth-century B.C. historians framed this woman in a particular historical moment; see Schaberg 1999, p. 312 and n. 18.
- ⁵⁸ Veldhuis 2004, p. 79.
- ⁵⁹ Cooper makes a strong case that the scribal curriculum of the Ur III dynasty, which had supplanted the dynasty of Akkad, glorified the kings of Akkad; see Cooper 2001, p. 139. Regarding King Yu, see Karlgren 1974, pp. 164, 199, 230, 259, 264, 266. The legends had it that Yu's son seized power and founded the first dynasty (i.e., ruling family) by discarding the practice of yielding the throne to the best minister. See Lewis 2006a, pp. 148–9.
- ⁶⁰ For a concise discussion of the legends of King Yu, see Li Ling 2002c, pp. 41–4.
- ⁶¹ *Ibid.*, p. 41.
- ⁶² Schaberg 1997 provides a translation and illuminating discussion of the historiographical context in which the passage was used; see especially pp. 152–4.
- ⁶³ Qiu Dexiu 2003, which should be read in conjunction with Chen Jian's rearrangement of the text (2004).
- ⁶⁴ Schaberg 1999, pp. 316–21.
- ⁶⁵ *Chunqiu shiyu*, from Tomb 3 at Mawangdui. See Zhang Zhenglang 1977. For earlier but similar documents recently bought by the Shanghai Museum, see Chen Wei 2010, pp. 210–14, 240–1.
- ⁶⁶ Zhang Zhigong 1962, pp. 52–9; Chi Xiaofang 1998, pp. 258–61; Zheng Acai and Zhu Fengyu 2002, pp. 227–53.
- ⁶⁷ As a second-language learner, I learned it from my English textbook in middle school.
- ⁶⁸ Schaberg 1999, p. 317. One fragment of the *Meng qiu* found at Dunhuang has written commentary with the main text; see Zheng Acai and Zhu Fengyu 2002, pp. 233–41.
- ⁶⁹ Paul Fischer lists twenty-four means by which intertextuality may appear in early Chinese texts, but he does not seem to situate any of them in a setting of scribal training (2009).
- ⁷⁰ Boltz 2005. Li Ling holds a similar view; see Li Ling 2004, pp. 198 and 204.
- ⁷¹ Schaberg 2001a, p. 74.
- ⁷² Dating any part of the *Odes* anthology is difficult, but there are some hints that in some form the King Wen hymns do go back to Western Zhou. Employing linguistic evidence, philologists have dated some of the hymns eulogizing the Zhou royal house to the Western Zhou period (mid-eleventh to early eighth century B.C., Shaughnessy 1999, p. 295 and n. 6), and two bronze inscriptions encourage the supposition that some of the poems go back at least to the ninth or tenth century B.C. The first inscription is one belonging to a scribe named Hui (*Text 6.10b*). Li Xueqin 1990 argues that the sentence “every day progress and every month advance” in this inscription is a direct quotation from a royal hymn in the *Odes* subsection “Hymns of the Zhou” (*Text 6.10a*). The second inscription is probably earlier than the first one, probably middle Western Zhou. Its unusual content and style make it very hard to understand, but scholars all agree that its opening sentence is about the story of King Yu controlling the flood. It thus pushes this story back to Western Zhou, meaning that poems in the *Odes* that mention Yu, especially a few that are about King Wen (*Text 6.11a*), need not on that ground be dated later than Western Zhou, as they often have been (Xing Wen 2003 includes several English and Chinese articles dealing with this inscription; four more by Chinese specialists are published in *Zhongguo lishi wenwu* [ZLW] 2002.6).
- ⁷³ Veldhuis 2004, pp. 60–1; George 2005, pp. 132–5. Michalowski made the interesting point that the administrative reforms that took place in the Akkadian and Ur III dynasties “were not brought

- about by the founders but by the consolidators, Naram-Sin and Šulgi.” See Michalowski 1991, p. 49. This may partly explain why hymns of Šulgi figured so prominently in the curriculum.
- ⁷⁴ Yang Kuan 1999, pp. 665–7, with references to earlier studies. Shaughnessy’s parsing of a related sentence in the *Jing gui* inscription is *she xue gong*, translated as “Archery Academy”; see Shaughnessy 1991, p. 146, n. 48.
- ⁷⁵ Dobson suggests that the nobleman Yu was the Zhou king’s tutor (1962, p. 225). Yang Kuan, citing Guo Moruo, suggests that it was Yu who attended school; see Yang Kuan 1999, p. 665.
- ⁷⁶ Baines 2007, pp. 45, 81–2. Baines’s suggestion that the king would choose trusted companions from among the noble children who had gone to school with him is equally plausible in the Chinese case.
- ⁷⁷ Chi Xiaofang 1998, pp. 143–7; Yang Kuan 1999, p. 665.
- ⁷⁸ Li Xueqin 1990, p. 124.
- ⁷⁹ Rawson 1989, pp. 87–93.
- ⁸⁰ Li Ling 2002b, p. 46. Compare Text 2.4 with Text 6.9a.

CONCLUSION

- ¹ Anderson 2006, p. 6.
- ² Inomata and Coben 2006.
- ³ The first mention known to me of this rather remarkable fact is a sentence in Trigger 1978 (p. 165); Trigger returns to the point in 2003 (p. 556 – three sentences). The observation has also been made by Bagley (e.g., 1990, p. 8) and Michèle Pirazzoli-t’Serstevens (2008, pp. 300–9 and n. 9). Any study of the absence of public representations of rulers in China would have to deal with a whole constellation of related phenomena, such as the absence of the architectural types and urban layouts that in Greece or Rome provided settings for the display of images (for comparisons along these lines between Han Chang’an and Rome, see Brennan and Hsing I-tien 2010).
- ⁴ Bagley 2004, pp. 207–8; Bagley 2006, especially p. 22.
- ⁵ Depictions of former kings and sages on stone, brick, and lacquer during the Han period might qualify as “imaginary portraits,” but they were not royal commissions and not public monuments.
- ⁶ See Wang Haicheng in preparation b.
- ⁷ Jenny So 2000; Bagley 2005.
- ⁸ Bagley 2004, pp. 211–13.
- ⁹ Harris 1989, p. 248.
- ¹⁰ A useful framework is laid out in Harris 1989. For literacy in Egypt see Baines 2007, pp. 33–178; in Mesopotamia, Larsen 1989; in the Maya cities, Houston 1994. For literacy of Han soldiers, women, and craftsmen, see Yates 2011 and Barbieri-Low 2011. On popular literacy in late imperial China see Rawski 1979.
- ¹¹ Ideas that emerge from our universities today sometimes influence our governments, although not so often as academics might wish. And our governments sometimes influence the thinking of academics, however little we might wish to acknowledge it.
- ¹² Suggested in the case of Teotihuacan by Taube 2000.
- ¹³ Hou Xudong 2005b, pp. 265–96, especially pp. 277–8. For peasant understanding of emperorship in late imperial China, see McDermott 1999, p. 15.
- ¹⁴ Wright 1973, pp. 13–14; Wang Guihai, 1999, pp. 156–9; Hou Xudong 2005b, pp. 342–3; Giele 2006, Chapter 5, *passim*. The death of Ramesses II and the accession of his son were promptly announced throughout Egypt by messengers traveling on the Nile (Kitchen 1982, p. 207).

- ¹⁵ Hou Xudong 2005b, pp. 172–230, 335. For the Central Mexican marketplace as a place for gossip, see Berdan 2005, pp. 47–50. For market scenes in Egypt, see T. G. H. James 2003, pp. 250–7, and Kemp 2006, pp. 324–6. For markets in Mesopotamia, see Postgate 1994a, p. 79.
- ¹⁶ See Postgate 1994a and 2005; also Postgate et al. 1995.
- ¹⁷ Van Driel 1998, p. 27. On the same page he remarks, “We cannot avoid all argumentation *ex silentio*, since an important section of society, that of the pastoralists, is next to silent. If we had to accept that lack of documentation is identical with non-existence, we would be forced to state that there was no subsistence agriculture anywhere in Mesopotamia.” In the case of Shang China, which has left us little but inscriptions concerned with ritual, to suppose that what is in the texts is all that existed would be an even larger error.
- ¹⁸ Kemp 2006, pp. 167 and 305; Postgate 1994a, pp. 237–40.
- ¹⁹ Barbieri-Low 2007, especially pp. 76–83.
- ²⁰ Baines 1988, especially pp. 129–33.
- ²¹ Crawford et al. 1980, p. 32, a part of the so-called Standard Inscription from the Palace of Ashurnasirpal II (883–859 B.C.) at Nimrud.
- ²² Cooper 2004, pp. 77–8. Numerical tablets have nothing on them but numerals. (Perhaps they were stored in a way that indicated what the numerals referred to – one basket for sheep, another for pigs.) The so-called numerico-ideographic tablets have numerals and one or two other signs on each tablet. Englund does not give an estimate of the number of these tablets – they come only from Uruk and Susa – or of the total number of signs attested on them (Englund 1998, pp. 51, 53, and 214; see also Cooper 2004, p. 74).
- ²³ Baines 2004 and 2012. For the similarity of the developments visualized by Egyptologists and Mesopotamianists, see the references given in Bagley 2004, p. 245, n. 68.
- ²⁴ Civil 1995 classifies the various types of Mesopotamian lexical list and discusses their canonization.
- ²⁵ Houston 2004b. An inscribed Olmec block that has been dated to about 900 B.C. is reported in Rodríguez Martínez et al. 2006. One of the earliest Maya inscriptions, the hieroglyphic captions in a wall painting at San Bartolo, Guatemala, is dated third century B.C. by Saturno et al. 2006. In the formal report it was dated to the first century B.C. (Saturno et al. 2005, pp. 41–8). Houston 2006 accepts the higher date, whereas Houston and Inomata 2009 date it to the second century (p. 90).
- ²⁶ See Houston 2000, pp. 146–7.
- ²⁷ Bagley 2004 (on the likelihood of independent invention, see pp. 226–7).
- ²⁸ Pope 1999.

REFERENCES

- Adams, Robert McCormick. 2004. "The Role of Writing in Sumerian Agriculture: Asking Broader Questions." In J. G. Dercksen (ed.), *Assyria and Beyond: Studies Presented to Mogens Trolle Larsen*. Leiden: Nederlands Instituut voor het Nabije Oosten, pp. 1–8.
- Akkermans, P. M. M. G., and Marc Verhoeven. 1995. "An Image of Complexity: The Burnt Village at Late Neolithic Sabi Abyad, Syria." *American Journal of Archaeology* 99, no. 1: 5–32.
- Aldred, Cyril. 1998. *The Egyptians*. 3rd ed. London: Thames and Hudson.
- Allan, Sarah. 2007. "On the Identity of Shang Di and the Origin of the Concept of a Celestial Mandate (Tian Ming)." *EC* 31: 1–46.
- Allen, James P. 1999. "Translations [of the Chapel of Metjen]." In *Egyptian Art in the Age of the Pyramids*. New York: Metropolitan Museum of Art, p. 213.
- . 2000. *Middle Egyptian: An Introduction to the Language and Culture of Hieroglyphs*. Cambridge: Cambridge University Press.
- Alster, Bendt, and Takayoshi Oshima. 2006. "A Sumerian Proverb Tablet in Geneva With Some Thoughts on Sumerian Proverb Collections." *Orientalia* 75, no. 1: 31–72.
- Anderson, Benedict. 2006. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. 3rd ed. London and New York: Verso.
- Anhui Sheng Wenwu Kaogu Yanjiusuo. 2010. *Huoqiu Yantai*. Beijing: Kexue Chubanshe.
- Anthony, David W. 1990. "Migration in Archaeology: The Baby and the Bathwater." *American Anthropologist* 92, no. 4: 895–914.
- Archi, Alfonso. 1986. "The Archives of Ebla." In Klaas R. Veenhof (ed.), *Cuneiform Archives and Libraries*. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul, pp. 72–86.
- . 1992. "Transmission of the Mesopotamian Lexical and Literary Texts from Ebla." In P. Fronzaroli (ed.), *Literature and Literary Language at Ebla*. Florence: Università di Firenze, pp. 1–39.
- . 2001. "The King-Lists from Ebla." In Tzvi Abusch et al. (eds.), *Historiography in the Cuneiform World*. Bethesda, MD: CDL Press, pp. 1–13.
- . 2003. "Archival Record-Keeping at Ebla 2400–2350 BC." In Maria Brosius (ed.), *Ancient Archives and Archival Traditions: Concepts of Record-Keeping in the Ancient World*. Oxford: Oxford University Press, pp. 17–36.
- Armillas, Pedro. 1971. "Gardens on Swamps." *Science* 174: 653–61.
- Arriaga, Pablo Joseph de. 1968 [1621]. *The Extirpation of Idolatry in Peru*. L. Clark Keating (trans). Lexington: University of Kentucky Press.
- Assadourian, Carlos Sempat. 2002. "String Registries: Native Accounting and Memory According to the Colonial Sources." In Jeffrey Quilter and Gary Urton (eds.), *Narrative Threads: Accounting and Recounting in Andean Khipu*. Austin: University of Texas Press, pp. 119–50.
- Bagley, Robert W. 1987. *Shang Ritual Bronzes in the Arthur M. Sackler Collections*. Cambridge, MA: Harvard University Press.

- . 1990. "Shang Ritual Bronzes: Casting Technique and Vessel Design." *Archives of Asian Art* 43: 6–20.
- . 1995. "What the bronzes from Hunyuan tell us about the foundry at Houma." *Orientalions*, January 1995, pp. 46–54. Reprinted with corrections in *Chinese Bronzes: Selected Articles from Orientalions 1983–2000* (Hong Kong: 2001), pp. 214–22.
- . 1996. "Debris from the Houma Foundry." *Orientalions*, October 1996, pp. 50–8. Reprinted in *Chinese Bronzes: Selected Articles from Orientalions 1983–2000* (Hong Kong: 2001), pp. 246–54.
- . 1999. "Shang Archaeology." In *CHAC*, pp. 124–231.
- . 2004. "Anyang Writing and the Origin of the Chinese Writing System." In *FW*, pp. 190–249.
- . 2005. "The Prehistory of Chinese Music Theory." *Proceedings of the British Academy* 131: 41–90.
- . 2006. "Ornament, Representation, and Imaginary Animals in Bronze Age China." *Arts Asiatiques* 61: 17–29.
- . 2014. "Erligang bronzes and the discovery of the Erligang culture." In Kyle Steinke (ed.), *Art and Archaeology of the Erligang Civilization*. Princeton, NJ: Princeton University Press.
- Baines, John. 1983. "Literacy and Ancient Egyptian Society." *Man* n.s. 18: 572–99. Reprinted in Baines 2007, pp. 33–62.
- . 1985. *Fecundity Figures: Egyptian Personification and the Iconology of a Genre*. Warminster, UK: Aris & Phillips.
- . 1988. "An Abydos List of Gods and an Old Kingdom Use of Texts." In John Baines et al. (eds.), *Pyramid Studies and Other Essays Presented to I. E. S. Edwards*. London: Egypt Exploration Society, pp. 124–33.
- . 1989. "Communication and Display: The Integration of Early Egyptian Art and Writing." *Antiquity* 63: 471–82. Reprinted in Baines 2007, pp. 281–97.
- . 1994. "Ancient Egyptian Concepts and Uses of the Past: 3rd to 2nd Millennium BC Evidence." In Robert Layton (ed.), *Who Needs the Past?* London: Routledge, pp. 131–49. Reprinted in Baines 2007, pp. 179–201.
- . 1995. "Kingship, Definition of Culture, and Legitimation." In David O'Connor and David P. Silverman (eds.), *Ancient Egyptian Kingship*. Leiden: Brill, pp. 3–47.
- . 1997. "Kingship before Literature." In Rolf Gundlach and Christine Raedler (eds.), *Selbstverständnis und Realität: Akten des Symposiums zur ägyptischen Königsideologie Mainz 15–17.6.1995*. Wiesbaden: Otto Harrassowitz, pp. 125–74.
- . 1999. "Forerunners of Narrative Biographies." In Anthony Leahy and John Tait (eds.), *Studies on Ancient Egypt in Honour of H. S. Smith*. London: Egypt Exploration Society, pp. 23–37.
- . 2004a. "The Earliest Egyptian Writing: Development, Context, Purpose." In *FW*, pp. 150–89.
- . 2004b. "Modelling sources, processes, and locations of early mortuary texts." In Susanne Bickel and Bernard Mathieu (eds.), *D'un monde à l'autre: Textes des Pyramides et Textes des Sarcophages. Bibliothèque d'Etude* 139. Cairo: Institut Français d'Archéologie Orientale, pp. 15–41.
- . 2006. "Public Ceremonial Performance in Ancient Egypt: Exclusion and Integration." In Takeshi Inomata and Lawrence S. Coben (eds.), *Archaeology of Performance: Theaters of Power, Community, and Politics*. Lanham, MD: AltaMira, pp. 261–302.
- . 2007. *Visual and Written Culture in Ancient Egypt*. Oxford: Oxford University Press.
- . 2008. "On the Evolution, Purpose, and Forms of Egyptian Annals." In Eva-Maria Engel et al. (eds.), *Zeichen aus dem Sand: Streiflichter aus Ägyptens Geschichte zu Ehren von Günter Dreyer*. Wiesbaden: Harrassowitz Verlag, pp. 19–40.

References

- . 2010. "Aesthetic culture and the emergence of writing in Egypt during Naqada III." *Archéo-Nil* 20: 134–49.
- . 2012. "Script, High Culture, and Administration in Middle Kingdom Egypt." In Stephen Houston (ed.), *The Shape of Script: How and Why Writing Systems Change*. Santa Fe, NM: School of American Research Press, pp. 25–62.
- Baines, John, and Christopher Eyre. 1983. "Four Notes on Literacy." *Göttinger Miszellen* 61: 65–96. Reprinted in Baines 2007, pp. 63–94.
- Baines, John, and Jaromír Málek. 1980. *Atlas of Ancient Egypt*. Oxford: Phaidon.
- Baines, John, and Norman Yoffee. 1998. "Order, Legitimacy, and Wealth in Ancient Egypt and Mesopotamia." In Gary M. Feinman and Joyce Marcus (eds.), *Archaic States*. Santa Fe, NM: School of American Research Press, pp. 199–260.
- . 2000. "Order, Legitimacy, and Wealth: Setting the Terms." In Janet Richards and Mary Van Buren (eds.), *Order, Legitimacy, and Wealth in Ancient States*. Cambridge: Cambridge University Press, pp. 13–17.
- Baker, Jeffrey L. 1998. "The State and Wetland Agriculture in Mesoamerica." *Culture & Agriculture* 20: 78–86.
- Ban Gu. 1962. *Han shu*. Beijing: Zhonghua Shuju, 12 vols.
- Barbieri-Low, Anthony. 2007. *Artisans in Early Imperial China*. Seattle: University of Washington Press.
- . 2011. "Craftsman's Literacy: Uses of Writing by Male and Female Artisans in Qin and Han China." In Li Feng and David Branner (eds.), *Writing and Literacy in Early China*. Seattle: University of Washington Press, pp. 370–99.
- Bard, Kathryn. 1992. "Origins of Egyptian Writing." In Renée Friedman and Barbara Adams (eds.), *The Followers of Horus: Studies Dedicated to Michael Allen Hoffman, Oxbow Monograph 20*. Oxford: Oxbow, pp. 297–306.
- Barnes, William L. 2005. "Secularizing for Survival: Changing Depictions of Central Mexican Native Rule in the Early Colonial Period." In Elizabeth H. Boone (ed.), *Painted Books and Indigenous Knowledge in Mesoamerica*. New Orleans: Middle American Research Institute, pp. 319–44.
- Barnett, R. D. 1958. *Assyrian Palace Reliefs and Their Influence on the Sculptures of Babylonia and Persia*. London: Batchworth Press.
- Baudez, Claude-François. 1994. *Maya Sculpture of Copán*. Norman: University of Oklahoma Press.
- Bayliss, Miranda. 1973. "The Cult of Dead Kin in Assyria and Babylonia." *Iraq* 35: 115–25.
- Berdan, Frances F. 1996. "The Tributary Provinces." In Frances F. Berdan et al. (eds.), *Aztec Imperial Strategies*. Washington, DC: Dumbarton Oaks, pp. 115–36.
- . 2005. *The Aztecs of Central Mexico: An Imperial Society*. 2nd ed. Belmont, CA: Thomson Wadsworth.
- Berdan, Frances F., and Patricia Rieff Anawalt. 1992. *The Codex Mendoza*. Berkeley and Los Angeles: University of California Press, 4 vols.
- Berdan, Frances F., et al. 1996. *Aztec Imperial Strategies*. Washington, DC: Dumbarton Oaks.
- Berger, Suzanne. 1934. "A Note on Some Scenes of Land-Measurement." *JEA* 20: 54–6.
- Berlo, Janet Catherine. 1989. "Early Writing in Central Mexico: In Tlilli, In Tlapalli before A.D. 1000." In Richard A. Diehl and Janet Catherine Berlo (eds.), *Mesoamerica after the Decline of Teotihuacan, A.D. 700–900*. Washington, DC: Dumbarton Oaks, pp. 19–47.
- Berrin, Kathleen, and Esther Pasztory (eds.). 1993. *Teotihuacan: Art from the City of the Gods*. London: Thames and Hudson.
- Bielenstein, Hans. 1947. "The Census of China During the Period 2–742 AD." *Bulletin of the Museum of Far Eastern Antiquities* 19: 125–63.
- Biggs, Robert D. 1966. "The Abu Salabikh Tablets: A Preliminary Survey." *JCS* 20: 73–88.

References

- Biggs, Michael. 1999. "Putting the State on the Map: Cartography, Territory, and European State Formation." *CSSH* 41:374–405.
- Biot, Édouard. 1851. *Le Tcheou-li ou Rites des Tcheou*. Paris: Imprimerie Nationale, 3 vols.
- Birot, Maurice. 1980. "Fragment de Rituel de Mari Relatif au Kispum." In Bendt Alster (ed.), *Death in Mesopotamia*. Copenhagen: Akademisk Forlag.
- Black, Jeremy. 1998. *Reading Sumerian Poetry*. London: Athlone Press.
- Boas, Franz. 1927. *Primitive Art*. Cambridge, MA: Harvard University Press.
- Boltz, William G. 1993a. "Hsiao ching." In *ECT*, pp. 141–53.
- . 1993b. "Chou li." In *ECT*, pp. 24–32.
- . 2003. *Origin and Early Development of the Chinese Writing System*. Rev. ed. New Haven, CT: American Oriental Society.
- . 2005. "The Composite Nature of Early Chinese Texts." In Martin Kern (ed.), *Text and Ritual in Early China*. Seattle: University of Washington Press, pp. 50–78.
- Boone, Elizabeth Hill. 2000. *Stories in Red and Black: Pictorial Histories of the Aztecs and Mixtecs*. Austin: University of Texas Press.
- . 2004. "Beyond Writing." In *FW*, pp. 313–48.
- . 2005. "In Tlaminime: The Wise Men and Women of Aztec Mexico." In idem (ed.), *Painted Books and Indigenous Knowledge in Mesoamerica*. New Orleans: Middle American Research Institute, pp. 9–25.
- Bottéro, Françoise. 2003. "Les [Manuels de Caractères]: À L'époque des Han Occidentaux." In Christine Nguyen Tri and Catherine Despeux (eds.), *Éducation et Instruction en Chine*. Paris: Éditions Peeters, Vol. 1, pp. 99–120.
- Brennan, T. Corey, and Hsing I-tien. 2010. "The Eternal City and the City of Eternal Peace." In Michael Nylan and Michael Loewe (eds.), *China's Early Empires: A Re-appraisal*. Cambridge: Cambridge University Press, pp. 186–212.
- Brinkman, J. A. 2006. "Babylonian Royal Land Grants, Memorials of Financial Interest, and Invocation of the Divine." *JESHO* 49.1:1–47 (review article of Slanski 2003).
- Brosius, Maria (ed.). 2003. *Ancient Archives and Archival Traditions: Concepts of Record-Keeping in the Ancient World*. Oxford: Oxford University Press.
- Brovarski, Edward. 1987. "Two Old Kingdom Writing Boards from Giza." *ASAE* 71: 27–52.
- Buccellati, Giorgio. 1996. "The Role of Socio-Political Factors in the Emergence of 'Public' and 'Private' Domains in Early Mesopotamia." In Michael Hudson and Baruch A. Levine (eds.), *Privatization in the Ancient Near East and Classical World*. Cambridge, MA: Peabody Museum of Harvard University, pp. 129–51.
- Burchell, Graham et al. (eds.). 1991. *The Foucault Effect: Studies in Governmentality*. Chicago: University of Chicago Press.
- Cabrera Castro, Rubén. 1996a. "Caracteres glíficos Teotihuacanos en un piso de la Vantilla." In Beatriz de la Fuente (ed.), *La Pintura Mural Prehispánica en México, Teotihuacán*. Mexico City: Universidad Nacional Autónoma de México, Vol. 1, pp. 3–26.
- . 1996b. "Figuras glíficas de La Ventilla, Teotihuacán." *Arqueología* 15: 27–40.
- Calnek, Edward E. 1972. "Settlement Pattern and Chinampa Agriculture at Tenochtitlan." *American Antiquity* 37, no. 1: 104–15.
- . 1973. "The Localization of the Sixteenth Century Map Called the Maguey Plan." *American Antiquity* 38, no. 2: 190–5.
- . 1982. "Patterns of Empire Formation in the Valley of Mexico, Late Postclassic Period, 1200–1521." In *IAS*, pp. 43–62.
- Caminos, Ricardo A. 1954. *Late-Egyptian Miscellanies*. Oxford: Oxford University Press.
- Campbell, Roderick. 2007. *Blood, Flesh, and Bones: Kinship and Violence in the Social Economy of the Late Shang*. PhD dissertation, Harvard University.
- Carrasco, Pedro. 1982. "The Political Economy of the Aztec and Inca States." In *IAS*, pp. 23–40.

- . 1991. "The Territorial Structure of the Aztec Empire." In H. R. Harvey (ed.), *Land and Politics in the Valley of Mexico*. Albuquerque: University of New Mexico Press, pp. 93–112.
- Cervelló-Autuori, Josep. 2008. "The Thinite 'Royal Lists': Typology and Meaning." In B. Midant-Reynes and Y. Tristant (eds.), *Egypt at Its Origins 2*. Leuven: Uitgeverij Peeters en Department Oosterse Studies, pp. 887–99.
- Chang, Kuei-sheng. 1979. "The Han Maps: New Light on Cartography in Classical China." *Imago Mundi* 31: 9–17.
- Changsha Shi Wenwu Kaogu Yanjiusuo and Zhongguo Wenwu Yanjiusuo. 2006. *Changsha Dongpailou donghan jiandu*. Beijing: Wenwu Chubanshe.
- Chao, Lin. 1972. *Shang Government*. PhD dissertation, University of Chicago.
- Chao, Yuen-ren. 1948. *Mandarin Primer*. Cambridge, MA: Harvard University Press.
- . 1954. *Character Text for Mandarin Primer*. Cambridge, MA: Harvard University Press.
- Charpin, Dominique. 2010. *Reading and Writing in Babylon*. Jane Marie Todd (trans). Cambridge, MA: Harvard University Press.
- Chase, Arlen F., and Diane Z. Chase. 1996a. "A Mighty Maya Nation: How Caracol Built an Empire by Cultivating Its 'Middle Class.'" *Archaeology* 49, no. 5: 66–72.
- . 1996b. "More than Kin and King: Centralized Political Organization among the Late Classic Maya." *Current Anthropology* 37: 801–10.
- . 1998. "Scale and Intensity in Classic Period Maya Agriculture: Terracing and Settlement at the 'Garden City' of Caracol, Belize." *Culture and Agriculture* 20, no. 2–3: 60–77.
- . 2003. "Minor Centers, Complexity, and Scale in Lowland Maya Settlement Archaeology." In Gyles Iannone and Samuel V. Connell (eds.), *Perspectives on Ancient Maya Rural Complexity*. Los Angeles: Cotsen Institute of Archaeology, pp. 108–18.
- Chen Banghuai. 1959. *Yindai shehui shiliao zhengcun*. Tianjin: Tianjin Renmin Chubanshe.
- Chen Hanping. 1986. *Xizhou ceming zhidu yanjiu*. Shanghai: Xuelin Chubanshe.
- Chen Jian. 2004. "Shangbo jian Rongchengshi de zhujian pinhe yu bianlian wenti xiaoyi." In Shanghai Daxue Gudai Wenming Yanjiu Zhongxin (ed.), *Shangbo guancang Chu zhushu yanjiu xubian*. Shanghai: Shanghai Shudian Chubanshe, pp. 327–34.
- Chen Jie. 2007. *Shangzhou xingshi zhidu yanjiu*. Beijing: Shangwu Yinshuguan.
- . 2009. "Liye hujijian yu Zhanguo moqi de jiceng shehui." *Lishi yanjiu* 2009, no. 5: 23–40.
- Chen Jie and Zu Shangxi. 2005. "Kang ding mingwen yu Xizhou tudi suoyouzh." *ZLW* 2005, no. 1: 19–27.
- Chen Mengjia. 1956. *Yixu buci zongshu*. Beijing: Kexue Chubanshe. Reprinted by Zhonghua Shuju, 1988, 2004.
- Chen Wei. 1996. *Baoshan Chujian chutan*. Wuhan: Wuhan Daxue Chubanshe.
- . 2010. *Xinchu Chujian yandu*. Wuhan: Wuhan Daxue Chubanshe.
- Cheng, Anne. 1993. "Lun yü." In *ECT*, pp. 313–23.
- Chi Xiaofang. 1998. *Zhongguo gudai xiaoxue jiaoyu yanjiu*. Shanghai: Shanghai Jiaoyu Chubanshe.
- Childe, V. Gordon. 1950. "The Urban Revolution." *Twon Planning Review* 21: 3–17.
- Civil, Miguel. 1987. "Feeding Dumuzi's Sheep: The Lexicon as a Source of Literary Inspiration." In Francesca Rochberg-Halton (ed.), *Language, Literature, and History: Philological and Historical Studies Presented to Erica Reiner*. New Haven, CT: American Oriental Society, pp. 37–55.
- . 1992. "Education in Mesopotamia." *Anchor Bible Dictionary*. New York: Doubleday, Vol. 2, pp. 301–5.
- . 1995. "Ancient Mesopotamian Lexicography." In *CANE*, pp. 2305–14.
- Clarysse, Willy, and Dorothy Thompson, in collaboration with Ulrich Luft. 2006. *Counting the People in Hellenistic Egypt*. Cambridge: Cambridge University Press, 2 vols.
- Coblin, W. South. 1993. "Erh ya." In *ECT*, pp. 94–9.

References

- Cobo, Bernabé. 1979. *History of the Inca Empire: An Account of the Indians' Customs and Their Origin, Together with a Treatise on Inca Legends, History, and Social Institutions*. Roland Hamilton (trans). Austin: University of Texas Press.
- . 1990. *Inca Religion and Customs*. Roland Hamilton (trans). Austin: University of Texas Press.
- Coe, Michael D. 1964. "The Chinampas of Mexico." *Scientific American* 211 (July): 90–8.
- . 1995. "On Not Breaking the Indus Code." *Antiquity* 69: 393–5.
- . 2011. *The Maya*. 8th ed. London: Thames and Hudson.
- Coe, Michael, and Justin Kerr. 1997. *The Art of the Maya Scribe*. London: Thames and Hudson.
- Coe, Michael, and Rex Koontz. 2008. *Mexico: From the Olmecs to the Aztecs*. 6th ed. London: Thames and Hudson.
- Coe, Michael, and Mark van Stone. 2001. *Reading the Maya Glyphs*. London: Thames and Hudson.
- Colas, Pierre. 2011. "Writing in Space: Glottographic and Semasiographic Notation at Teotihuacan." *Ancient Mesoamerica* 22: 13–25. Revised and published by Stephen Houston due to the author's tragic death.
- Collier, Mark, and Stephen Quirke. 2002. *The UCL Lahun Papyri: Letters*. BAR International Series 1083. Oxford: Archaeopress.
- . 2004. *The UCL Lahun Papyri: Religious, Literary, Legal, Mathematical and Medical*. BAR International Series 1209. Oxford: Archaeopress.
- . 2006. *The UCL Lahun Papyri: Accounts*. BAR International Series 1471. Oxford: Archaeopress.
- Colston, Stephen A. 1993. "People, Places, and Pictures: Name Signs from a Corpus of Early Colonial Acolhua Cadastral Manuscripts." In Alana Cordy-Collins and Douglas Sharon (eds.), *Current Topics in Aztec Studies: Essays in Honor of Dr. H. B. Nicholson*. San Diego: San Diego Museum of Man, pp. 93–109.
- Conrad, Geoffrey W. 1982. "The Burial Platforms of Chan Chan." In Michael E. Moseley and Kent C. Day (eds.), *Chan Chan: Andean Desert City*. Albuquerque: University of New Mexico Press, 1982, pp. 87–117.
- Cooper, Jerrold S. 1983. *The Curse of Agade*. Baltimore: Johns Hopkins University Press.
- . 1986. *Presargonic Inscriptions*. New Haven, CT: The American Oriental Society.
- . 1989. "Writing." In Eric Barnouw (ed.), *International Encyclopedia of Communications*. New York: Oxford University Press, Vol. 4, pp. 321–31.
- . 1996. "Sumerian and Akkadian." In WWS, pp. 37–57.
- . 2001. "Literature and History: The Historical and Political Referents of Sumerian Literary Texts." In Tzvi Abusch et al. (eds.), *Historiography in the Cuneiform World*. Bethesda, MD: CDL Press, pp. 131–47.
- . 2004. "Babylonian Beginnings: The Origin of the Cuneiform Writing System in Comparative Perspective." In *FW*, pp. 71–99.
- Cordova, Carlos. 1997. *Landscape Transformation in Aztec and Spanish Colonial Texcoco, Mexico*. PhD dissertation, University of Texas at Austin.
- Cowgill, George L. 1997. "State and Society at Teotihuacan, Mexico." *Annual Review of Anthropology* 26: 129–61.
- . 2003. "Teotihuacan: Cosmic Glories and Mundane Needs." In Monica L. Smith (ed.), *The Social Construction of Ancient Cities*. Washington, DC: Smithsonian Books, pp. 37–55.
- . 2008. "An Update on Teotihuacan." *Antiquity* 82: 962–75.
- Crawford, Vaughn E., Prudence O. Harper, and Holly Pittman. 1980. *Assyrian Reliefs and Ivories in the Metropolitan Museum of Art: Palace Reliefs of Assurnasirpal II and Ivory Carvings from Nimrud*. New York: Metropolitan Museum of Art.
- Creel, Herrlee Glessner. 1937. *Studies in Early Chinese Culture*. Baltimore: American Council of Learned Societies.

- . 1970. *The Origins of Statecraft in China, Volume One: The Western Chou Empire*. Chicago: University of Chicago Press.
- Cripps, Eric L. 2007. *Land Tenure and Social Stratification in Ancient Mesopotamia: Third Millennium Sumer before the Ur III Dynasty*. BAR International Series 1676. Oxford: Archaeopress.
- Culbert, T. Patrick, and Don S. Rice (eds.). 1990. *Precolumbian Population History in the Maya Lowlands*. Albuquerque: University of New Mexico Press.
- D'Altroy, Terence N. 2002. *The Incas*. Oxford: Blackwell.
- Davies, Benedict G. 1997. *Egyptian Historical Inscriptions of the Nineteenth Dynasty*. Jonsered, Sweden: Paul Åströms förlag.
- Davies, Norman de Garis. 1941. *The Tomb of the Vizier Ramose*. London: Egypt Exploration Society.
- De Moor, Johannes C. 1976. "Rāpi'ūma–Rephaim." *ZAW* 88: 323–45.
- Delnero, Paul. 2010. "Sumerian Extract Tablets and Scribal Education." *JCS* 62: 53–69.
- Derrida, Jacques. 1976. *Of Grammatology*. Gayatri Spivak (trans). Baltimore: Johns Hopkins University Press.
- Díaz, Bernal. 1910. *The True History of the Conquest of New Spain*. Alfred P. Maudslay (trans). London: Hakluyt Society, Vol. 3.
- . 1963. *The Conquest of New Spain*. J. M. Cohen (trans). Harmondsworth, UK: Penguin.
- Dobson, W. A. C. H. 1962. *Early Archaic Chinese*. Toronto: University of Toronto Press.
- Dodsworth, F. M. 2008. "The Idea of Police in Eighteenth-Century England: Discipline, Reformation, Superintendence, c. 1780–1800." *Journal of the History of Ideas* 69, no. 4: 583–604.
- Dogan, Mattei, and Dominique Pelassy. 1984. *How to Compare Nations: Strategies in Comparative Politics*. Chatham, NJ: Chatham House Publishers.
- Dong Shan. 2006. "Shilun Zhougongmiao guijia buci jiqi xiangguan wenti." *Gudai wenming* 5: 243–69.
- Douglas, Mary. 1986. *How Institutions Think*. Syracuse, NY: Syracuse University Press.
- Dreyer, Günter. 1987. "Ein Siegel der frühzeitlichen Königsnekropole von Abydos." *MDAIK* 43: 33–43.
- Dreyer, Günter, et al. 1996. "Umm el-Qaab: Nachuntersuchungen im frühzeitlichen Königsfriedhof, 7./8. Vorbericht." *MDAIK* 52: 11–81.
- Dreyer, Günter, Ulrich Hartung, and Frauke Pumpenmeier. 1998. *Umm el-Qaab I, Das prädynastische Königsgrab U-j und seine frühen Schriftzeugnisse*. Deutsches Archäologisches Institut, Abteilung Kairo, Archäologische Veröffentlichungen 86. Mainz: Philipp von Zabern.
- Du Zhengsheng (Tu Cheng-sheng). 1979. *Zhoudai chengbang*. Taipei: Lianjing Chubanshe.
- . 1990. *Bianhu qimin: Chuantong zhengzhi shehui jigou zhi xingcheng*. Taipei: Lianjing Chubanshe.
- Dunning, Nicholas. 2004. "Down on the Farm: Classic Maya 'Homesteads' as 'Farmstead.'" In Jon C. Lohse and Fred Valdez, Jr. (eds.), *Ancient Maya Commoners*. Austin: University of Texas Press, pp. 97–116.
- Duran, Diego. 1964. *The Aztecs: The History of the Indies of New Spain*. Doris Heyden and Fernando Horcasitas (trans). New York: Orion Press.
- Durkheim, Émile, and Marcel Mauss. 1963. *Primitive Classification*. Rodney Needham (ed. and trans.). Chicago: University of Chicago Press.
- Durrant, Stephen. 2005. "Truth Claims in *Shiji*." In Helwig Schmidt-Glintzer et al. (eds.), *Historical Truth, Historical Criticism, and Ideology: Chinese Historiography and Historical Culture from a New Comparative Perspective*. Leiden: Brill, pp. 93–111.
- Eldzard, Dietz Otto. "Private Land Ownership and Its Relation to 'God' and the 'State' in Sumer and Akkad." In Michael Hudson and Baruch A. Levine (eds.), *Privatization in the Ancient Near East and Classical World*. Cambridge, MA: Peabody Museum of Harvard University, pp. 109–28.

References

- Eisenstadt, S. N. 1963. *The Political Systems of Empires*. London: Free Press of Glencoe.
- Ellis, M. de J. 1976. *Agriculture and the State in Ancient Mesopotamia*. Philadelphia: Occasional Publications of the Babylonian Fund.
- Elman, Benjamin A. 2000. *A Cultural History of Civil Examinations in Late Imperial China*. Berkeley and Los Angeles: University of California Press.
- Elman, Benjamin A., and Martin Kern (eds.). 2010. *Statecraft and Classical Learning: The Rituals of Zhou in East Asian History*. Leiden: Brill.
- Emery, Walter B. 1938. *The Tomb of Hemaka*. Cairo: Government Press, Bulâq.
- Englund, Robert K. 1998. "Texts from the Late Uruk Period." In Joseph Bauer, Robert Englund, and Manfred Krebernik (eds.), *Mesopotamien: Späturuk-Zeit und Frühdynastische Zeit*. Orbis Biblicus et Orientalis 160/1. Freiburg: Universitäts-Verlag; Göttingen: Vandenhoeck & Ruprecht, pp. 15–223.
- . 2004. "Proto-Cuneiform Account-Books and Journals." In *CEO*, pp. 23–46.
- Eyre, Christopher J. 1987. "Work and the Organization of Work in the Old Kingdom." In Marvin A. Powell (ed.), *Labor in the Ancient Near East*. New Haven, CT: American Oriental Society, pp. 5–47.
- . 1994a. "Feudal Tenure and Absentee Landlords." In S. Allam (ed.), *Grund und Boden in Altägypten*. Tübingen: Slebstvelag des Herausgebers, pp. 107–33.
- . 1994b. "The Water Regime for Orchards and Plantations in Pharaonic Egypt." *JEA* 80: 57–80.
- . 1997. "Peasants and 'Modern' Leasing Strategies in Ancient Egypt." *JESHO* 40, no. 4: 367–90.
- . 1999. "Village Economy in Pharaonic Egypt." In A. K. Bowman and E. Rogan (eds.), *Agriculture in Egypt from Pharaonic to Modern Times*. Proceedings of the British Academy 96. Oxford: Oxford University Press, pp. 33–60.
- Eyre, Christopher, and John Baines. 1989. "Interactions between orality and literacy in ancient Egypt." In Karen Schousboe and Mogens Trolle Larsen (eds.), *Literacy and Society*. Copenhagen: Akademisk Forlag, pp. 91–119.
- Fahsen, Federico, and Nikolai Grube. 2005. "The Origins of Maya Writing." In Virginia Fields and Dorie Reents-Budet (eds.), *Lords of Creation: The Origins of Sacred Maya Kingship*. London: Scala Publishers, pp. 75–9.
- Fakhry, Ahmed. 1961. *The Monuments of Sneferu at Dahshur, Vol. II: The Valley Temple*. Cairo: General Organization for Government Print Offices, 2 parts.
- Fales, F. M., and J. N. Postgate (eds.). 1995. *Imperial Administrative Records, Part II: Provincial and Military Administration*. State Archives of Assyria 11. Helsinki: University of Helsinki Press.
- Falkenhausen, Lothar von. 1993. "Issues in Western Zhou Studies: A Review Article." *EC* 18: 145–71.
- . 2005. "The E Jun Qi Metal Tallies." In Martin Kern (ed.), *Text and Ritual in Early China*. Seattle: University of Washington Press, pp. 79–123.
- . 2006a. *Chinese Society in the Age of Confucius*. Los Angeles: Cotsen Institute of Archaeology.
- . 2006b. "The Inscribed Bronzes from Yangjiacun: New Evidence on Social Structure and Historical Consciousness in Late Western Zhou China (c. 800 BC)." *Proceedings of the British Academy* 139: 239–95.
- . 2011. "The Royal Audience and Its Reflections in Western Zhou Bronze Inscriptions." In Li Feng and David Branner (eds.), *Writing & Literacy in Early China*. Seattle: University of Washington Press, pp. 239–70.
- Fields, Virginia, and Dorie Reents-Budet (eds.). 2005. *Lords of Creation: The Origins of Sacred Maya Kingship*. London: Scala Publishers.
- Finamore, Daniel, and Stephen Houston (eds.). 2010. *Fiery Pool: The Maya and the Mythic Sea*. Salem, MA: Peabody Essex Museum.

- Finer, S. E. 1997. *The History of Government from the Earliest Times, Vol. 1: Ancient Monarchies and Empires*. Oxford: Oxford University Press.
- Finkelstein, Jacob J. 1966. "The Genealogy of the Hammurapi Dynasty." *JCS* 20: 95–118.
- Finley, M. I. 1985a. *The Ancient Economy*. 2nd ed. Berkeley and Los Angeles: University of California Press.
- . 1985b. *Ancient History: Evidence and Models*. Harmondsworth, UK: Penguin.
- Fischer, Henry G. 1983. *Ancient Egyptian Calligraphy: A Beginner's Guide to Writing Hieroglyphs*. 2nd ed. New York: Metropolitan Museum of Art.
- . 1989. "The Origin of Egyptian Hieroglyphs." In Wayne Senner (ed.), *The Origins of Writing*. Lincoln: University of Nebraska Press, pp. 59–76.
- Fischer, Paul. 2009. "Intertextuality in Early Chinese Masters-Texts: Shared Narratives in *Shi Zi*." *Asia Major* 22, no. 2 (third series): 1–34.
- Fitzsimmons, James L. 2009. *Death and the Classic Maya Kings*. Austin: University of Texas Press.
- Folan, William J., et al. 1995. "Calakmul: New Data from an Ancient Maya Capital in Campeche, Mexico." *Latin American Antiquity* 6, no. 4: 310–34.
- Foncerrada de Molina, Marta. 1980. "Mural Painting in Cacaxtla and Teotihuacan Cosmopolitism." In Merle Greene Robertson (ed.), *Third Palenque Round Table, 1978, Part 2*. Austin: University of Texas Press, pp. 183–98.
- Foster, Benjamin R. 1982. "Archives and Record-keeping in Sargonic Mesopotamia." *Zeitschrift für Assyriologie und Vorderasiatische Archäologie* 72: 1–27.
- Friberg, Jöran. 2000. "Mathematics at Ur in the Old Babylonian Period." *RA* 94: 97–188.
- Fuyang Han Jian Zhengli Zu. 1983. "Fuyang Han jian 'Cangjie pian.'" *Wenwu* 1983, no. 2: 24–34.
- Galán, José M. 2007. "An Apprentice's Board from Dra Abu El-Naga." *JEA* 93: 95–116.
- Gansu Sheng Wenwu Kaogu Yanjiusuo. 1991. *Dunhuang Han jian*. Beijing: Zhonghua Shuju, 2 vols.
- Gao Heng. 1998. "Han jiandu zhong suojian lingwen jikao." *Jianbo yanjiu* 3: 382–427.
- . 1999. "Handai shangji zhidu lunkao." In Lianyungang Shi Bowuguan and Zhongguo Wenwu Yanjiusuo (eds.), *Yinwan Han mu jiandu zonglun*. Beijing: Kexue Chubanshe, pp. 128–38.
- Gao Ming. 1990. *Gu taowen huibian*. Beijing: Zhonghua Shuju.
- . 1996. *Zhongguo guwenzixue tonglun*. Beijing: Beijing Daxue Chubanshe.
- Gardiner, Alan H. 1941. "Ramesside Texts Relating to the Taxation and Transport of Corn." *JEA* 27: 19–73.
- . 1947. *Ancient Egyptian Onomastica*. Oxford: Oxford University Press, 3 vols.
- . 1948. *The Wilbour Papyrus*. Oxford: Oxford University Press, 3 vols.
- Gardiner, K. H. J. 1973. "Standard Histories, Han to Sui." In Donald Leslie et al. (eds.), *Essays on the Sources for Chinese History*. Columbia: University of South Carolina Press, pp. 42–52.
- Garfinkel, Yosef, et al. 2009. "Large-scale Storage of Grain Surplus in the Sixth Millennium BC: The Silos of Tel Tsaf." *Antiquity* 83: 309–25.
- Gasparini, Graziano, and Luise Margolies. 1980. *Inca Architecture*. Patricia J. Lyon (trans). Bloomington: Indiana University Press.
- Ge Jianxiong. 2002. *Zhongguo renkou shi*. Shanghai: Fudan Daxue Chubanshe, Vol. 1.
- Ge Yinghui. 2009. "Xia zi xingyi kao." *ZLW* 2009, no. 1: 66–8.
- Gelb, Ignace J. 1954. "Two Assyrian King Lists." *JNES* 13, no. 4: 209–30.
- . 1963. *A Study of Writing*. 2nd ed. Chicago: University of Chicago Press.
- Gelb, Ignace J., Piotr Steinkeller, and Robert M. Whiting, Jr. 1991. *Earliest Land Tenure Systems in the Ancient Near East: Ancient Kudurrus*. Chicago: Oriental Institute, 2 vols.
- George, Andrew R. 1988. "Babylonian Texts from the Folios of Sidney Smith, Part One." *RA* 82: 139–62.
- . 2005. "In Search of the É.DUB.BA.A: The Ancient Mesopotamian School in Literature and Reality." In Yitschak Sefati et al., (eds.), *An Experienced Scribe Who Neglects Nothing: Ancient Near Eastern Studies in Honor of Jacob Klein*. Bethesda, MD: CDL Press, pp. 127–37.

References

- Giele, Enno. 2005. "Signatures of 'Scribes' in Early Imperial China." *Asiatische Studien* 59: 353–87.
- . 2006. *Imperial Decision-Making and Communication in Early China*. Wiesbaden: Harrassowitz Verlag.
- Glassner, Jean-Jacques. 1995. "Progress, Science, and the Use of Knowledge in Ancient Mesopotamia." In *CANE*, Vol. 3, pp. 1815–24.
- . 2003. *The Invention of Cuneiform: Writing in Sumer*. Zainab Bahrani and Marc van de Mieroop (ed. and trans.). Baltimore: The Johns Hopkins University Press.
- Goelet, Ogden. 2004. "Accounting Practices and Economic Planning in Egypt before the Hellenistic Era." In *CEO*, pp. 215–68.
- Golden, Charles W., Andrew K. Scherer, and A. Rene Muñoz. 2005. "Exploring the Piedras Negras-Yaxchilan Border Zone: Archaeological Investigations in the Sierra del Lacandón, 2004." *Mexicon* 27 (February): 11–6.
- Goody, Jack. 1986. *The Logic of Writing and the Organization of Society*. Cambridge: Cambridge University Press.
- . 2000. *The Power of the Written Tradition*. Washington, DC: Smithsonian Institution Press.
- Goody, Jack, and Ian Watt. 1963. "The Consequences of Literacy." *CSSH* 5, no. 3: 304–45.
- Gordon, Colin. 1991. "Governmental Rationality: An Introduction." In Graham Burchell et al. (eds.), *The Foucault Effect: Studies in Governmentality*. Hemel Hempstead, UK: Harvester Wheatsheaf, pp. 1–51.
- Grandet, Pierre. 1994. *Le papyrus Harris I (BM 9999)*. 2 vols. Bibliothèque d'Étude 109/1–2. Cairo: Imprimerie de l'Institut français d'archéologie orientale du Caire.
- Greatrex, Roger. 1994. "An Early Western Han Synonymicon." In Joakim Enwall (ed.), *Outstretched leaves on his bamboo staff: Studies in honour of Göran Malmqvist on his 70th birthday*. Stockholm: Association of Oriental Studies, pp. 97–113.
- Green, M. W. 1981. "The Construction and Implementation of the Cuneiform Writing System." *Visible Languages* 15: 345–72.
- . 1989. "Early Cuneiform." In Wayne Senner (ed.), *The Origins of Writing*. Lincoln: University of Nebraska Press, pp. 43–57.
- Greengus, Samuel. 1979. *Old Babylonian Tablets from Ishchali and Vicinity*. Istanbul: Nederlands Historisch-Archaeologisch Instituut.
- Griffith, F. L. 1898. *The Petrie Papyri: Hieratic Papyri from Kahun and Gurob*. London: Bernard Quaritch.
- Gu Jiegang and Liu Qiyu. 2005. *Shangshu jiaoshi yilun*. Beijing: Zhonghua Shuju, 4 vols.
- Guo Jingyun. 2010. *Qinren yu tianming: Cong Ziyi kan xianqin ruxue zhuanhua cheng jing*. Taipei: Wanjuanlou.
- Guo Moruo. 1965. *Yin qi cui bian*. Beijing: Kexue Chubanshe.
- Guo Yongbing. 2008. *Dixi xinyan: Chudi chutu Zhanguo wenxian zhong de chuanshuo shidai gu diwang xitong yanjiu*. Beijing: Beijing Daxue Chubanshe.
- Guojia Wenwuju (ed.). 2006. *2005 Zhongguo zhongyao kaogu faxian*. Beijing: Wenwu Chubanshe.
- Halverson, John. 1992. "Goody and the Implosion of the Literacy Thesis." *Man* 27: 301–17.
- Han Jianguo. 2007. *Yinxu Huadong H₃ buci zhuren zi yanjiu*. Beijing: Xianzhuang Shuju.
- Hare, Thomas. 1999. *ReMembering Osiris: Number, Gender, and the Word in Ancient Egyptian Representational Systems*. Stanford, CA: Stanford University Press.
- Haring, B. 1997. *Divine Households: Administrative and Economic Aspects of the New Kingdom Royal Memorial Temples in Western Thebes*. Leiden: Nedeerlands Instituut voor het Nabije Oosten.
- . 1998. "Access to Land by Institutions and Individuals in Ramesside Egypt." In B. Haring and R. de Maaijer (eds.), *Landless and Hungry? Access to Land in Early and Traditional Societies*. Leiden: Research School CNWS, Leiden University, pp. 74–89.
- Harris, William. 1989. *Ancient Literacy*. Cambridge, MA: Harvard University Press.

References

- Harvey, H. R. 1984. "Aspects of Land Tenure in Ancient Mexico." In *EE*, pp. 83–102.
- Hassig, Ross. 1985. *Trade, Tribute, and Transportation: The Sixteenth-Century Political Economy of the Valley of Mexico*. Norman: University of Oklahoma Press.
- . 1988. *Aztec Warfare*. Norman: University of Oklahoma Press.
- . 2001. *Time, History, and Belief in Aztec and Colonial Mexico*. Austin: University of Texas Press.
- Hayes, W. C. 1955. *A Papyrus of the Middle Kingdom in the Brooklyn Museum* [Papyrus Brooklyn 35.1446]. Brooklyn: The Brooklyn Museum.
- He Shuhuan (Ho Shu-huan). 2004. "Xizhou guizu tudi de qude yu zhuanrang—jiantan Xizhou 'wang tu' de gainian." *Xinshixue* 15, no. 1: 1–44.
- . 2007. *Xizhou ximing mingwen xinyan*. Taipei: Wenjin Chubanshe.
- Headrick, Annabeth. 2007. *The Teotihuacan Trinity: The Socialpolitical Structure of an Ancient Mesoamerican City*. Austin: University of Texas Press.
- Hebei Sheng Wenwu Kaogu Yanjiusuo. 1993. "Dingzhou Beizhuangzi Shang mu fajue jianbao." *Wenwu chunqiu*, supplement of 1992, pp. 230–40.
- Heimpel, Wolfgang. 2003. *Letters to the King of Mari*. Winona Lake, IN: Eisenbrauns.
- Herzfeld, Michael. 1992. *The Social Production of Indifference: Exploring the Symbolic Roots of Western Bureaucracy*. New York: Berg.
- Hicks, Frederic. 1984. "Rotational Labor and Urban Development in Prehistoric Tetzoco." In *EE*, pp. 147–74.
- Higuchi Takayasu and Enjoji Jiro. 1984. *Chugoku seidōki hyakusen*. Tokyo: Nihon Keizai Shinbunsha.
- Hinsch, Bret. 1998. "Women, Kinship, and Property as Seen in a Han Dynasty Will." *T'oung Pao* 84: 1–20.
- Hodge, Mary G. 1991. "Land and Lordship: The Politics of Aztec Provincial Administration in the Valley of Mexico." In H. R. Harvey (ed.), *Land and Politics in the Valley of Mexico*. Albuquerque: University of New Mexico Press, pp. 113–39.
- . 1996. "Political Organization of the Central Provinces." In Frances F. Berdan et al. (eds.), *Aztec Imperial Strategies*. Washington, DC: Dumbarton Oaks, pp. 17–45.
- Hou Can and Yang Daixin. 1999. *Loulan Han wen jiazhi wenshu jicheng*. Chengdu: Tiandi Chubanshe, 3 vols.
- Hou Xudong. 2005a. "Zhongguo gudai renming de shiyong jiqi yiyi: Zunbei, tongshu, yu zeren." *Lishi yanjiu* 2005, no. 5: 3–21.
- . 2005b. *Beichao cunmin de shenghuo shijie: Chaoting, zhouxian yu cunli*. Beijing: Shangwu Yinshuguan.
- Houston, Stephen D. 1993. *Hieroglyphs and History at Dos Pilas: Dynastic Politics of the Classic Maya*. Austin: University of Texas Press.
- . 1994. "Literacy Among the Pre-Columbian Maya: A Comparative Perspective." In Elizabeth H. Boone and Walter Mignolo (eds.), *Writing Without Words: Alternative Literacies in Mesoamerica and the Andes*. Durham, NC: Duke University Press, pp. 27–49.
- . 1998a. "Classic Maya Depictions of the Built Environment." In Stephen Houston (ed.), *Function and Meaning in Classic Maya Architecture*. Washington, DC: Dumbarton Oaks, pp. 333–72.
- . 1998b. "Finding Function and Meaning in Classic Maya Architecture." In Stephen Houston (ed.), *Function and Meaning in Classic Maya Architecture*. Washington, DC: Dumbarton Oaks, pp. 519–38.
- . 1999. "Classic Maya Religion: Beliefs and Practices of an Ancient American People." *BYU Studies* 38, no. 4: 43–72.
- . 2000. "Into the Minds of Ancients: Advances in Maya Glyph Studies." *Journal of World Prehistory* 14, no. 2: 121–201.

References

- . 2004a. "Overture to the First Writing." In *FW*, pp. 3–15.
- . 2004b. "Writing in Early Mesoamerica." In *FW*, pp. 274–309.
- . 2004c. "Final Thoughts on First Writing." In *FW*, pp. 349–53.
- . 2006. "An Example of Preclassic Mayan Writing?" *Science* 311 (March): 1249–50.
- Houston, Stephen D., and David Stuart. 2000. "Peopling the Classic Maya Court." In Takeshi Inomata and Stephen Houston (eds.), *Royal Courts of the Ancient Maya*. Boulder, CO: Westview Press, Vol. 1, pp. 54–83.
- Houston, Stephen D., John Robertson, and David Stuart. 2000. "The Language of Classic Maya Inscriptions." *Current Anthropology* 41, no. 3: 321–56 (with comments and reply).
- Houston, Stephen D., et al. 2003. "The Moral Community: Maya Settlement Transformation at Piedras Negras, Guatemala." In Monica L. Smith (ed.), *The Social Construction of Ancient Cities*. Washington, DC: Smithsonian Books, pp. 212–53.
- Houston, Stephen D., David Stuart, and Karl Taube. 2006. *The Memory of Bones: Body, Being, and Experience among the Classic Maya*. Austin: University of Texas Press.
- Houston, Stephen D., and Takeshi Inomata. 2009. *The Classic Maya*. Cambridge: Cambridge University Press.
- Hritz, Carrie. 2010. "Tracing Settlement Patterns and Channel Systems in Southern Mesopotamia Using Remote Sensing." *JFA* 35, no. 2: 184–203.
- Hsing I-tien (Xing Yitian). 1987. *Qin Han shi lungao*. Taipei: Dongda Tushu Gongsi.
- . 1995. "Cong Zhanguo zhi Xihan de zuju, zuzang, shiye lun Zhongguo gudai zongzu shehui de yanxu." *Xinshixue* 6, no. 2: 1–44.
- . 2009. "Cong chutu ziliao kan Qinhan juluo xingtai he xiangli xingzheng." In Huang Kuan-chung (ed.), *Zhongguoshi xinlun, jiceng shehui fence*. Taipei: Academia Sinica and Lianjing Chubanshe, pp. 13–126.
- . 2011a. *Zhiguo anbang*. Beijing: Zhonghua Shuju.
- . 2011b. *Di bu aibao*. Beijing: Zhonghua Shuju.
- Hsu, Mei-Ling. 1978. "The Han Maps and Early Chinese Cartography." *Annals of the Association of American Geographers* 68, no. 1: 45–60.
- . 1993. "The Qin Maps: A Clue to Later Chinese Cartographic Development." *Imago Mundi* 45: 90–100.
- Hu Pingsheng. 1995. "Juyan Han jian zhong de gong yu lao." *Wenwu* 1995, no. 4: 51–5.
- . 2010. "Du Shuiquanzi Hanjian qiyanben Cangjie pian." http://www.guwenzi.com/SrcShow.asp?Src_ID=1064, accessed on April 26, 2011.
- Hu Pingsheng and Han Ziqiang. 1983. "'Cangjie pian' de chubu yanjiu." *Wenwu* 1983, no. 2: 35–40.
- Huang Yongwu (ed.). 1981. *Dunhuang baozang*. Taipei: Xin Wenfeng Chuban Gongsi, multiple volumes.
- Hubei Sheng Jingzhou Bowuguan. 2000. *Jingzhou Gaotai Qinhan mu*. Beijing: Kexue Chubanshe.
- Hudson, Michael. 2004. "Introduction: The Role of Accounting in Civilization's Economic Takeoff." In *CEO*, pp. 1–22.
- Hudson, Michael, and Baruch Levine (ed.). 1996. *Privatization in the Ancient Near East and Classical World*. Cambridge, MA: Peabody Museum of Archaeology and Ethnology.
- Hulsewé, Anthony. 1959. "The Shuo-Wen Dictionary as a Source for Ancient Chinese Law." In Søren Egerod (ed.), *Studia Seria Bernhard Karlgren Dedicata*. Copenhagen: Ejnar Munksgaard, pp. 239–58.
- . 1985. *Remnants of Ch'in Law*. Leiden: Brill.
- . 1997. "Qin and Han Legal Manuscripts." In *NSECH*, pp. 193–221.
- Hunan Sheng Bowuguan and Hunan Sheng Wenwu Kaogu Yanjiusuo. 2004. *Changsha Mawangdui er, san hao Han mu*. Beijing: Wenwu Chubanshe.

- Hunan Sheng Wenwu Kaogu Yanjiusuo et al. 2003a. "Hunan Longshan Liye Zhanguo-Qin dai gucheng yihao jing fajue jianbo." *Wenwu* 2003, no. 1: 4–35.
- . 2003b. "Xiangxi Liye Qindai jiandu xuanshi." *ZLW* 2003, no. 1: 8–25.
- . 2007. *Liye fajue baogao*. Changsha: Yuelu Chubanshe.
- Hutson, Scott, et al. 2008. "Site and Community at Chunchucmil and Ancient Maya Urban Centers." *JFA* 33: 19–40.
- Hislop, John. 1984. *The Inka Road System*. New York: Academic Press.
- Inomata, Takeshi. 2004. "The Spatial Mobility of Non-Elite Populations in Classic Maya Society and Its Political Implications." In Jon C. Lohse and Fred Valdez, Jr. (eds.), *Ancient Maya Commoners*. Austin: University of Texas Press, pp. 175–96.
- . 2006. "Politics and Theatricality in Mayan Society." In Takeshi Inomata and Lawrence S. Coben (eds.), *Archaeology of Performance: Theaters of Power, Community, and Politics*. Lanham, MD: AltaMira, pp. 187–221.
- Inomata, Takeshi, and Laura Stiver. 1998. "Floor Assemblages from Burned Structures at Aguateca, Guatemala: A Study of Classic Maya Households." *JFA* 25, no. 4: 431–52.
- Inomata, Takeshi, and Stephen Houston. 2000. "Opening the Royal Maya Court." In Takeshi Inomata and Stephen Houston (eds.), *Royal Courts of the Ancient Maya*. Boulder, CO: Westview Press, Vol. 1, pp. 3–23.
- Inomata, Takeshi, and Lawrence S. Coben (eds.). 2006. *Archaeology of Performance: Theaters of Power, Community, and Politics*. Lanham, MD: AltaMira.
- Isbell, William H. 1997. *Mummies and Mortuary Monuments: A Postprocessual Prehistory of Central Andean Social Organization*. Austin: University of Texas Press.
- Jacobsen, Thorkild. 1939. *The Sumerian King List*. Assyriological Studies 11. Chicago: University of Chicago Press.
- Jackson, Sarah, and David Stuart. 2001. "The *aj k'uhun* Title: Deciphering a Classic Maya Term of Rank." *Ancient Mesoamerica* 12, no. 2: 217–28.
- James, T. G. H. 1953. *The Mastaba of Khentika Called Ikhekhi*. London: Egyptian Exploration Society.
- . 2003. *Pharaoh's People: Scenes from Life in Imperial Egypt*. London: Tauris Parke Paperbacks.
- Janssen, J. J. 1986. "Agrarian Administration in Egypt during the Twentieth Dynasty." *Bibliotheca Orientalis* 43: 351–66.
- Janssen, Rosalind M., and Jac Janssen. 1990. *Growing Up in Ancient Egypt*. London: Rubicon.
- Jasnow, Richard. 2003. "New Kingdom." In Raymond Westbrook (ed.), *A History of Ancient Near Eastern Law*. Leiden: Brill, Vol. 1, pp. 289–359.
- Jingmen Shi Bowuguan. 1998. *Guodian Chu mu zhujian*. Beijing: Wenwu Chubanshe.
- Jing Zhongwei. 2008. "You qunage xingzhi bian zufuxiong sange de zhenwei." *Kaogu* 2008, no. 5: 78–87.
- Jingzhou Bowuguan. 2008. "Hubei Jingzhou Jinan Songbai mu fajue jianbao." *Wenwu* 2008, no. 4: 24–32.
- Johns, C. H. W. 1901. *An Assyrian doomsday book, or, Liber censualis of the district round Harran in the seventh century B.C.* Leipzig: J. C. Hinrichs, Assyriologische Bibliothek, Bd. 17.
- Julien, Catherine J. 1982. "Inca Decimal Administration in the Lake Titicaca Region." In *IAS*, pp. 119–51.
- . 1988. "How Inca Decimal Administration Worked." *Ethnohistory* 35, no. 3: 257–79.
- Jursa, Michael. 2004. "Accounting in Neo-Babylonian Institutional Archives: Structure, Usage, Implications." In *CEO*, pp. 145–98.
- Kain, Roger J. P., and Elizabeth Baigent. 1992. *The Cadastral Map in the Service of the State: A History of Property Mapping*. Chicago: University of Chicago Press.

- Kaizuka Shigeki. 1959–68. *Kyōto daigaku jimbun kagaku kenkyūjo zōkōkotsu moji*. Kyōto: Kyōto Daigaku Jimbun Kagaku Kenkyūjo, 3 vols.
- Kaizuka Shigeki and Itō Michiharu. 1980. *Kōkotsu monji kenkyū*. Kyōto: Dōbōsha, 3 vols.
- Karlgren, Bernhard. 1974. *The Book of Odes*. Stockholm: Museum of Far Eastern Antiquities.
- Katary, Sally L. D. 1989. *Land Tenure in the Ramesside Period*. London: Kegan Paul International.
- . 2001. "Taxation." In Donald B. Redford (ed.), *The Oxford Encyclopedia of Ancient Egypt*. Oxford: Oxford University Press, Vol. 3, pp. 351–56.
- Katz, Dina. 1999. "The Messenger, Lulil and the Cult of the Dead." *RA* 93: 107–18.
- Keightley, David N. 1978a. *Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China*. Berkeley and Los Angeles: University of California Press.
- . 1978b. "The Religious Commitment: Shang Theology and the Genesis of Chinese Political Culture." *History of Religions* 17: 211–24.
- . 1999. "The Shang." In *CHAC*, pp. 232–91.
- . 2000. *The Ancestral Landscape: Time, Space, and Community in Late Shang China*. Berkeley: Institute of East Asian Studies, University of California.
- Kelley, David H. 1976. *Deciphering the Maya Script*. Austin: University of Texas Press.
- Kemp, Barry J. 1978. "Imperialism and Empire in New Kingdom Egypt (c. 1575–1087 B.C.)." In P. D. A. Garnsey and C. R. Whittaker (eds.), *Imperialism in the Ancient World*. Cambridge: Cambridge University Press, pp. 7–57.
- . 1983. "Old Kingdom, Middle Kingdom and Second Intermediate Period." In Bruce Trigger et al. (eds.), *Ancient Egypt: A Social History*. Cambridge: Cambridge University Press, pp. 71–182.
- . 1986. "Late Middle Kingdom Granary Buildings." *Zeitschrift für Ägyptische Sprache* 113: 120–36.
- . 1991. *Ancient Egypt: Anatomy of a Civilization*. 1st ed. London: Routledge.
- . 1995. "How Religious Were the Ancient Egyptians?" *CAJ* 5, no. 1: 25–54.
- . 2000. "Bricks and Metaphor." *CAJ* 10, no. 2: 335–45.
- . 2001. "Just Like Us?" *CAJ* 11, no. 1: 123–30.
- . 2006. *Ancient Egypt: Anatomy of a Civilization*. 2nd ed. London: Routledge.
- Kemp, Barry J., Andrew Boyce, and James Harrell. 2000. "The Colossi from the Early Shrine at Coptos in Egypt." *CAJ* 10, no. 2: 211–42.
- Kemp, Barry J., et al. 2004. "Egypt's Invisible Walls." *CAJ* 14, no. 2: 259–88.
- Kern, Martin. 2000. "Shijing Songs as Performance Texts: A Case Study of 'Chu Ci' (Thorny Caltrop)." *EC* 25 (2000): 49–111.
- . 2009. "Bronze Inscriptions, the *Shijing* and the *Shangshu*: The Evolution of the Ancestral Sacrifice during the Western Zhou." In John Largerwey and Marc Kalinowski (eds.), *Early Chinese Religion, Part One: Shang through Han (1250 BC–220 AD)*. Leiden: Brill, Vol. 1, pp. 143–200.
- Kirch, Patrick V. 2000. *On the Road of the Winds: An Archaeological History of the Pacific Islands before European Contact*. Berkeley and Los Angeles: University of California Press.
- Kitchen, K. A. 1977. "The King List of Ugarit." *Ugarit-Forschungen* 9: 131–42.
- . 1982. *Pharaoh Triumphant: The Life and Times of Ramesses II, King of Egypt*. Mississauga, Canada: Benben Publications.
- . 2000. *Ramesside Inscriptions Translated & Annotated, Notes and Comments, Volume II: Ramesses II, Royal Inscriptions*. Oxford: Blackwell.
- . 2001. "King Lists." In Donald B. Redford (ed.), *The Oxford Encyclopedia of Ancient Egypt*. Oxford: Oxford University Press, Vol. 2, pp. 234–8.
- Korpisaari, Antti. (2006). *Death in Bolivian High Plateau: Burials and Tiwanaku Society*. BAR International Series 1536. Oxford: Archaeopress.

References

- Krebernik, M., and J. N. Postgate. 2009. "The Tablets from Abu Salabikh and Their Provenance." *Iraq* 71: 1–32.
- Kuhrt, Amelie. 1995. *The Ancient Near East*. London: Routledge, Vol. 1.
- Lai Guolong. 2002. *The Baoshan Tomb: Religious Transitions in Art, Ritual, and Text during the Warring States Period (480–221 BCE)*. PhD dissertation, University of California, Los Angeles.
- . 2014. *The Archaeology of Early Chinese Religion: A Regional Perspective*. Seattle: University of Washington Press.
- La Lone, Mary B., and Darrell E. La Lone. 1987. "The Inca State in the Southern Highlands: State Administrative and Production Enclaves." *Ethnohistory* 34, no. 1: 47–62.
- Lambert, W. G. 1968. "Another Look at Hammurabi's Ancestors." *JCS* 22, no. 1: 1–2.
- Landsberger, Benno. 1956. "Babylonian Scribal Craft and Its Terminology." In Denis Sinor (ed.), *Proceedings of the Twenty-Third International Congress of Orientalists*. London: Royal Asiatic Society, pp. 123–6.
- Langdon, S. H. 1923. *Historical Inscriptions, containing principally the chronological prism, W-B. 444*. Vol. 2 of Oxford Editions of Cuneiform Inscriptions, edited under the direction of S. Langdon. London: Oxford University Press.
- Lao Gan (Lao Kan). 1959. "Shiji Xiangyu benji zhong 'xueshu' he 'xuejian' de jieshi." *Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo jikan* 30, no. 2: 499–510.
- . 1976. "Shiji Xiangyu benji zhong xueshu he xuejian de jieshi." In idem, *Lao Gan xueshu lunwenji*. Taipei: Yiwen Yinshuguan, Vol. 2, pp. 895–906. Originally published in *Lishi yuyan yanjiusuo jikan* 30: 499–510.
- Larsen, Mogens Trolle. 1989. "What They Wrote on Clay." In Karen Schousboe and M. T. Larsen (eds.), *Literacy and Society*. Copenhagen: Akademisk Forlag, pp. 121–48.
- Lee, Thomas H. C. 2000. *Education in Traditional China: A History*. Leiden: Brill.
- Leeming, Frank. 1980. "Official Landscapes in Traditional China." *JESHO* 23: 153–204.
- Legge, James. 1960 [1893–94]. *The Chinese Classics, Vol. 3: The Shoo King, or Book of Historical Documents*. London: Henry Frowde, 1865; 2nd ed. Oxford: Clarendon, 1893–94; rpt. Hong Kong: University of Hong Kong Press, 1960.
- Lehner, Mark. 2002. "The Pyramid Age Settlement of the Southern Mount at Giza." *Journal of the American Research Center in Egypt* 39: 27–74.
- Lévi-Strauss, Claude. 1973. *Tristes Tropiques*. John and Doreen Weightman (trans.). New York: Atheneum.
- Levine, Lawrence. 1988. *Highbrow/Lowbrow: The Emergence of Cultural Hierarchy in America*. Cambridge, MA: Harvard University Press.
- LeVine, Terry Y. (ed.). 1992. *Inka Storage Systems*. Norman: University of Oklahoma Press.
- LeVine, Terry Y. 1992. "Inka State Storage in Three Highland Regions: A Comparative Study." In idem (ed.), *Inka Storage Systems*. Norman: University of Oklahoma Press, pp. 107–48.
- Lewis, Mark Edward. 1990. *Sanctioned Violence in Early China*. Albany: State University of New York Press.
- . 1999a. "Warring States Political History." In *CHAC*, pp. 587–650.
- . 1999b. *Writing and Authority in Early China*. Albany: State University of New York Press.
- . 2006a. *The Flood Myths of Early China*. Albany: State University of New York Press.
- . 2006b. *The Construction of Space in Early China*. Albany: State University of New York Press.
- . 2007. *The Early Chinese Empires: Qin and Han*. Cambridge, MA: Harvard University Press.
- Li Chaoyuan. 2007. *Qingtongqi xuebu ji*. Beijing: Wenwu Chubanshe.
- Li Feng. 2006. *Landscape and Power in Early China: The Crisis and Fall of the Western Zhou, 1045–771 B.C.* Cambridge: Cambridge University Press.
- . 2008. *Bureaucracy and the State in Early China: Governing the Western Zhou*. Cambridge: Cambridge University Press.

References

- . 2011. "Literacy and the Social Contexts of Writing in the Western Zhou." In Li Feng and David Branner (eds.), *Writing and Literacy in Early China*. Seattle: University of Washington Press, pp. 271–301.
- Li Ji (Li Chi). 1956. *Xiaotun, di san ben, Yinxi Qiwu: jia bian, Taoqi: shang ji*. Taipei: Institute of History and Philology, Academia Sinica.
- Li Jiemin. 1999. "Donghai jun xi Xia zhangli mingji yanjiu." In Lianyungang Shi Bowuguan and Zhongguo Wenwu Yanjiusuo (eds.), *Yinwan Han mu jiandu zonglun*. Beijing: Kexue Chubanshe, pp. 46–75.
- . 2005. "Yangzhou Yizheng Xupu jianshu xinkao." In Li Xueqin (ed.), *Changsha sanguo wujian ji bainian lai jianbo faxian yu yanjiu guoji xueshu yantaohui lunwenji*. Beijing: Zhonghua Shuju, pp. 449–57.
- Li Jinxiu. 1995. *Tang dai caizheng shigao*. Beijing: Beijing Daxue Chubanshe, 2 vols., 5 parts.
- Li Ling. 2002a. *Guodian Chu jian jiaodu ji*. Rev. ed. Beijing: Beijing Daxue Chubanshe.
- . 2002b. "Chongdu Shi Qiang pan." In Xu Tianjin (ed.), *Jijin zhu guoshi*. Beijing: Wenwu Chubanshe, pp. 42–57.
- . 2002c. "Lun X Gong Xu faxian de yiyi." *ZLW* 2002, no. 6: 35–45.
- . 2004. *Jianbo gushu yu xueshu yuanliu*. Beijing: Sanlian Shudian.
- Li Xueqin. 1985. *Eastern Zhou and Qin Civilizations*. K. C. Chang (trans.). New Haven, CT: Yale University Press.
- . 1990. *Xinchu qingtongqi yanjiu*. Beijing: Wenwu Chubanshe.
- . 2002. "Shi shuo Zhangjiashan jian shilü." *Wenwu* 2002, no. 4: 69–72.
- . 2003. "Chudu Liye Qin jian." *Wenwu* 2003, no. 1: 73–81.
- Li Xueqin (ed.). 2010. *Qinghua Daxue cang Zhanguo zhujian, Volume 1*. Shanghai: Zhongxi Shuju.
- Lianyungang Shi Bowuguan et al. 1997. *Yinwan Han mu jiandu*. Beijing: Zhonghua Shuju.
- Lichtheim, Miriam. 2006. *Ancient Egyptian Literature*. Berkeley and Los Angeles: University of California Press, 3 vols.
- Lin Yun. 1998. *Lin Yun xueshu lunwen ji*. Beijing: Zhongguo Da Baike Quanshu Chubanshe.
- Liu Hsin-ning. 2007. *You Zhangjiashan Hanjian Ernian liling lun Hanchu de jicheng zhidu*. Taipei: Guoli Taiwan Daxue Chuban Weiyuanhui.
- Liu Li. 2006. "Urbanization in China: Erlitou and Its Hinterland." In Glenn R. Storey (ed.), *Urbanism in the Preindustrial World: Cross-Cultural Approaches*. Tuscaloosa: University of Alabama Press, pp. 161–89.
- Liu Li and Chen Xingcan. 2003. *State Formation in Early China*. London: Duckworth.
- . 2012. *The Archaeology of China: From the Late Paleolithic to the Early Bronze Age*. Cambridge: Cambridge University Press.
- Liu Li et al. 2004. "Settlement Patterns and Development of Social Complexity in the Yiluo Region, North China." *JFA* 29: 75–100.
- Liu Shi'e. 2001. *Laoniupo*. Xi'an: Shaanxi Renmin Chubanshe.
- Liu Xinfang. 2005. "Juyan Han jian li pian yanjiu." *Kaogu* 2005, no. 9: 78–81.
- Liu Zhao. 1995. "Anyang Hougang Yin mu suo chu 'bing xing qi' yongtu kao." *Kaogu* 1995, no. 7: 623–5, 605.
- . 2010. "Guanyu Qinyin xingming de chubu kaocha." http://www.guwenzi.com/SrcShow.asp?Src_ID=1256, accessed July 18, 2011.
- Liverani, Mario. 1990. "The Shape of Neo-Sumerian Fields." *Bulletin of Sumerian Agriculture* 5: 147–86.
- . 1995. "The Deeds of Ancient Mesopotamian Kings." In *CANE*, pp. 2353–66.
- Loewe, Michael. 1967. *Records of Han Administration*. Cambridge: Cambridge University Press, 2 vols. Reprinted, London: Routledge Curzon, 2002.
- . 1993. "Shih ching." In *ECT*, pp. 415–23.
- . 2004. *The Men Who Governed Han China*. Leiden: Brill.

References

- Luft, Ulrich. 1998. "The Ancient Town of El-Lahun." In Stephen Quirke (ed.), *Lahun Studies*. Reigate, UK: SIA Publishing, pp. 1–41.
- Ma Chengyuan (ed.). 1988. *Shangzhou qingtongqi mingwen xuan*. Beijing: Wenwu Chubanshe, 4 vols.
- Ma Chengyuan (ed.). 2001. *Shanghai Bowuguan cang Zhanguo Chu zhushu*. Shanghai: Shanghai Guji Chubanshe, Vol. 1.
- Mair, Victor. 1996. "Modern Chinese Writing." In WWS, pp. 200–8.
- Makeham, John. 1996. "The Formation of *Lunyu* as a Book." *Monumenta Serica* 44: 1–24.
- Mann, Michael. 1986. *The Sources of Social Power*. Cambridge: Cambridge University Press, 2 vols.
- Mantha, Alexis. 2009. "Territoriality, Social Boundaries and Ancestor Veneration in the Central Andes of Peru." *Journal of Anthropological Archaeology* 28: 158–76.
- Manuelian, Peter D. 2003. *Slab Stelae of the Giza Necropolis*. New Haven, CT: Peabody Museum/University of Pennsylvania Museum.
- Manzanilla, Linda. 2004. "Social Identity and Daily Life at Classic Teotihuacan." In Julian A. Hendon and Rosemary A. Joyce (eds.), *Mesoamerican Archaeology: Theory and Practice*. Oxford: Blackwell, pp. 124–47.
- Marchesi, Gianni. 2004. "Who Was Buried in the Royal Tombs of Ur?" *Orientalia* 73, no. 2: 153–97.
- Margueron, J. C. 1972. "Deux kudurru de Larsa I. Étude iconographique." *RA* 66: 147–61.
- Martin, Harriet P. 1975. "The Tablets of Shuruppak." In *Le temple et le culte*, proceedings of the 20th Rencontre Assyriologique Internationale. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul, pp. 173–82.
- Martin, Simon. 2001. "Court and Realm: Architectural Signatures in the Classic Maya Southern Lowlands." In Takeshi Inomata and Stephen Houston (eds.), *Royal Courts of the Ancient Maya*. Boulder, CO: Westview, Vol. 1, pp. 168–94.
- Martin, Simon, and Nikolai Grube. 2008. *Chronicle of the Maya Kings and Queens*. 2nd ed. London: Thames and Hudson.
- McAnany, Patricia A. 1989. "Introduction." In Patricia A. McAnany and Barry L. Isaac (eds.), *Prehistoric Maya Economies of Belize*. Greenwich, CT: JAI Press, pp. 1–13.
- . 1995. *Living with the Ancestors: Kinship and Kingship in Ancient Maya Society*. Austin: University of Texas Press.
- . 1998. "Ancestors and the Classic Maya Built Environment." In Stephen Houston (ed.), *Function and Meaning in Classic Maya Architecture*. Washington, DC: Dumbarton Oaks, pp. 271–98.
- McDermott, Joseph P. 1999. "Introduction." In idem (ed.), *State and Court Ritual in China*. Cambridge: Cambridge University Press, pp. 1–19.
- McDowell, Andrea. 1999. *Village Life in Ancient Egypt: Laundry Lists and Love Songs*. Oxford: Oxford University Press.
- . 2000. "Teachers and Students at Deir el-Medina." In R. J. Demarée and A. Egberts (eds.), *Deir el-Medina in the Third Millennium AD*. Leiden: Nederlands Instituut voor het Nabije Oosten, pp. 217–33.
- Meng Xianwu. 1997. "Yinxu chutu de yuzhang zhushu wenzi." *Huaxia Kaogu* 1997, no. 2: 72–7.
- Metropolitan Museum of Art. 1999. *Egyptian Art in the Age of the Pyramids*. New York: Metropolitan Museum of Art.
- Michalowski, Piotr. 1983. "History as Charter: Some Observations on the Sumerian King List." *JAOS* 103, no. 1: 237–48.
- . 1991. "Charisma and control: On continuity and change in early Mesopotamian bureaucratic systems." In McGuire Gibson and Robert Biggs (eds.), *The Organization of Power*. 2nd ed. Chicago: Oriental Institute of the University of Chicago, pp. 45–57.
- . 1993. *Letters from Early Mesopotamia*. Atlanta: Scholars Press.

References

- . 2006. "The Lives of the Sumerian Language." In Seth Sanders (ed.), *Margins of Writing, Origins of Culture*. Chicago: Oriental Institute of the University of Chicago, pp. 159–84.
- Millard, A. R. 1987. "Cartography in the Ancient Near East." In *HC*, Vol. 1, pp. 107–16.
- Miller, George A. 1991. *The Science of Words*. New York: Scientific American Library.
- Miller, Mary E., and Stephen D. Houston. 1987. "The Classic Maya Ballgame and Its Architectural Setting: A Study of Relations between Text and Image." *Res* 14: 46–65.
- Miller, Mary E., and Simon Martin (eds.). 2004. *Courtly Art of the Ancient Maya*. London: Thames and Hudson.
- Minelli, Laura Laurencich. 2000. *The Inka World: The Development of Pre-Columbian Peru, A.D. 1000–1534*. Revised and updated edition. Norman: University of Oklahoma Press.
- Molina, Christoval de. 1873 [ca. 1570–84]. "An Account of the Fables and Rites of the Yncas." In Clements R. Markham (trans. and ed.), *Narratives of the Rites and Laws of the Yncas*. London: Hakluyt Society, pp. 3–64.
- Moore, Jerry D. 2003. "Life Behind Walls: Patterns in the Urban Landscape on the Prehistoric North Coast of Peru." In Monica Smith (ed.), *The Social Construction of Cities*. Washington, DC: Smithsonian Books, pp. 81–102.
- . 2004. "The Social Basis of Sacred Spaces in the Prehispanic Andes: Ritual Landscapes of the Dead in Chimú and Inka Societies." *Journal of Archaeological Method and Theory* 11, no. 1: 83–124.
- . 2006. "'The Indians Were Much Given to Their Taquis': Drumming and Generative Categories in Ancient Andean Funerary Processions." In Takeshi Inomata and Lawrence S. Coben (eds.), *Archaeology of Performance: Theaters of Power, Community, and Politics*. Lanham, MD: AltaMira, pp. 47–79.
- Moore, Oliver. 2000. *Chinese*. Berkeley and Los Angeles: University of California Press.
- Moran, William L. 1992. *The Amarna Letters*. Baltimore: Johns Hopkins University Press.
- Morris, Craig. 1982. "The Infrastructure of Inka Control in the Peruvian Central Highlands." In *IAS*, pp. 153–71.
- . 1992. "Huánuco Pampa and Tunsukanca: Major and Minor Nodes in the Inka Storage Network." In Terry Y. LeVine (ed.), *Inka Storage Systems*. Norman: University of Oklahoma Press, pp. 151–75.
- Morris, Craig, and Eva Hunt. 1974. "Reconstructing Patterns of Non-Agricultural Production in the Inka Economy: Archaeology and Documents in Institutional Analysis." *Bulletin of the American Schools of Oriental Research, Supplementary Studies* 20: 49–68.
- Morris, Craig, and Adriana von Hagen. 1993. *The Inka Empire and Its Andean Origins*. New York: Abbeville Press.
- Morris, Craig, and Donald E. Thompson. 1985. *Huánuco Pampa: An Inca City and Its Hinterland*. London: Thames and Hudson.
- Moseley, Michael E. 2001. *The Incas and Their Ancestors*. Rev. ed. London: Thames and Hudson.
- Mundy, Barbara E. 1987. "Mesoamerican Cartography." In *HC*, Vol. 2, pp. 183–256.
- Murnane, William J., and Charles C. Van Siclen III. 1993. *The Boundary Stelae of Akhenaten*. London: Kegan Paul International.
- Murra, John Victor. 1980. *The Economic Organization of the Inka State*. Greenwich, CT: JAI Press.
- Murra, John Victor. 1982. "The Mit'a Obligations of Ethnic Groups to the Inka State." In *IAS*, pp. 237–62.
- Nahm, Werner. 2006. "New Readings on Hieroglyphic Stairway 1 of Yaxchilan." *Mexicon* 28: 28–38.
- Nemet-Nejat, Karen Rhea. 1982. *Late Babylonian Field Plans in the British Museum*. Rome: Biblical Institute Press.
- . 1998. *Daily Life in Ancient Mesopotamia*. Westport, CT: Greenwood Press.

- Nicholson, H. B. 1971. "Pre-Hispanic Central Mexican Historiography." In *Investigaciones Contemporáneas Sobre la Historia de México: Memorias de la Tercera Reunión de Historiadores Mexicanos y Norteamericanos, Oaxtepec, Morelos, 4-7 de noviembre de 1969*. Mexico: Universidad Nacional Autónoma de México, pp. 38-81.
- . 1973. "Phoneticism in the Late Pre-Hispanic Central Mexican Writing System." In Elizabeth P. Benson (ed.), *Mesoamerican Writing Systems*. Washington, DC: Dumbarton Oaks, pp. 1-46.
- Nienhauser, William H., Jr. (ed.), with Tsai-fa Cheng, Zongli Lu, and Robert Reynolds (trans.). 1994. *The Grand Scribe's Records. Vol. 1: The Basic Annals of Pre-Han China by Ssu-ma Chi'en*. Bloomington: Indiana University Press.
- Nissen, Hans J., Peter Damerow, and Robert Englund. 1993. *Archaic Bookkeeping: Early Writing and Techniques of Economic Administration in the Ancient Near East*. Paul Larsen (trans.). Chicago: University of Chicago Press.
- Ōba Osamu. 2001. "The Ordinances on Fords and Passes Excavated from Han Tomb Number 247, Zhangjiashan." *Asia Major* 14, no. 2: 119-41.
- Offner, Jerome A. 1983. *Law and Politics in Aztec Texcoco*. Cambridge: Cambridge University Press.
- . 1984. "Household Organization in the Texcocan Heartland." In *EE*, pp. 127-46.
- Olson, David R. 1994. *The World on Paper: The Conceptual and Cognitive Implications of Writing and Reading*. Cambridge: Cambridge University Press.
- O'Mara, Patrick F. 1996. "Was There an Old Kingdom Historiography? Is It Datable?" *Orientalia* 65: 197-208.
- Paar, Francis W. (ed.). 1963. *Ch'ien Tzu Wen: The Thousand Character Classic, a Chinese Primer*. New York: Frederick Ungar.
- Palmieri, Alba. 1989. "Storage and Distribution at Arslantepe-Malatya in the Late Uruk Period." In Kutlu Emre et al. (ed.), *Anatolia and the Ancient Near East: Studies in Honor of Tahsin Özgüç*. Ankara: Türk Tarih Kurumu Basımevi, pp. 419-30.
- Parkinson, Richard. 1991. *Voices from Ancient Egypt*. London: British Museum Press.
- . 1997. *The Tale of Sinuhe and Other Ancient Egyptian Poems*. Oxford: Oxford University Press.
- . 1999. *Cracking Codes*. Berkeley: University of California Press.
- Parkinson, R. B., and S. G. Quirke. 1995. *Papyri*. London: British Museum Press.
- Parsons, Jeffrey R. 1991. "Political Implications of Prehispanic Chinampa Agriculture in the Valley of Mexico." In H. R. Harvey (ed.), *Land and Politics in the Valley of Mexico*. Albuquerque: University of New Mexico Press, pp. 17-41.
- Parsons, Jeffrey R., et al. 1985. "Chinampa Agriculture and Aztec Urbanization in the Valley of Mexico." In I. S. Farrington (ed.), *Prehistoric Intensive Agriculture in the Tropics*. BAR International Series 232. Oxford: Archaeopress, pp. 49-96.
- Paso y Troncoso, Francisco del. 1912. *Códice Kingsborough*. Madrid: Fototipía de Hauser y Menet.
- Peden, A. J. 1994. *Egyptian Historical Inscriptions of the Twentieth Dynasty*. Jonsered, Sweden: Paul Åströms förlag.
- Peet, T. Eric. 1930. *The Great Tomb-robberies of the Twentieth Egyptian Dynasty*. Oxford: Clarendon Press, 2 vols.
- Peng Hao, Chen Wei, and Kudō Motoo (eds.). 2007. *Ernian lüling yu Zouyanshu: Zhangjiashan 247 hao Hanmu chutu falü wenxian shidu*. Shanghai: Shanghai Guji Chubanshe.
- Peterson, Jeremiah. 2008. "A New Sumerian Fragment Preserving an Account of the Mesopotamian Antediluvian Dynasties." *Aula Orientalis* 26: 257-62.
- Pfälzner, Peter. 2007. "Archaeological Investigations in the Royal Palace of Qatna." In Daniele Bonacossi (ed.), *Urban and Natural Landscapes of an Ancient Syrian Capital: Settlement and Environment at Tell Mishrifeh/Qatna and in Central-Western Syria*. Udine, Italy: Forum, Editrice Universitari A Udinese, pp. 29-64.

- Pines, Yuri. 2000. "'The One That Pervades the All' in Ancient Chinese Political Thought: The Origins of 'the Great Unity' Paradigm." *T'oung Pao* 86: 280–324.
- . 2004. "The Question of Interpretation: Qin History in Light of New Epigraphic Sources." *EC* 29: 1–44.
- . 2005. "Disputers of Abdication: Zhanguo Egalitarianism and the Sovereign's Power." *T'oung Pao* 91: 243–300.
- Pinker, Steven. 2002. *The Blank Slate: The Modern Denial of Human Nature*. New York: Viking.
- Pirazzoli-t'Serstevens, Michèle. 2008. "Imperial Aura and the Image of the Other in Han Art." In Fritz-Heiner Mutschler and Achim Mittag (eds.), *Conceiving the Empire: China and Rome Compared*. Oxford: Oxford University Press, pp. 299–317.
- Pollock, Susan. 1999. *Ancient Mesopotamia: The Eden That Never Was*. Cambridge: Cambridge University Press.
- Pope, Maurice. 1999. *The Story of Decipherment*. Rev. ed. London: Thames and Hudson.
- Posener-Kriéger, Paule, and Sara Demichelis. 2004. *I papyri di Gebelein: scavi G. Farina 1935*. Torino: Ministero per i Beni e le Attività Culturali, Soprintendenza al Museo delle Antichità Egizie.
- Posener-Kriéger, Paule, Miroslav Verner, and Hana Vymazalová. 2006. *Abusir X: The Pyramid Complex of Raneferef: The Papyrus Archive*. Prague: Czech Institute of Egyptology, Faculty of Arts, Charles University in Prague.
- Postgate, J. N. 1974. *Taxation and Conscription in the Assyrian Empire*. Rome: Biblical Institute Press.
- . 1984. "Cuneiform Catalysis: The First Information Revolution." *Archaeological Review from Cambridge* 3: 4–18.
- . 1986. "Middle Assyrian Tablets: The Instruments of Bureaucracy." *Altorientalische Forschungen* 13: 10–39.
- . 1994a. *Early Mesopotamia: Society and Economy at the Dawn of History*. Rev. ed. London: Routledge.
- . 1994b. "How Many Sumerians per Hectare? Probing the Anatomy of an Early City." *CAJ* 4, no. 1: 47–65.
- . 1994c. "Text and figure in ancient Mesopotamia: Match and mismatch." In Colin Renfrew and Ezra B. W. Zubrow (eds.), *The Ancient Mind: Elements of Cognitive Archaeology*. Cambridge: Cambridge University Press, pp. 176–84.
- . 2001. "System and Style in Three Near Eastern Bureaucracies." In Sofia Voutsaki and John Killen (eds.), *Economy and Politics in the Mycenaean Palace States*. Cambridge: Cambridge Philological Society, pp. 181–94.
- . 2003. "Learning the Lessons of the Future: Trade in Prehistory through a Historian's Lens." *Bibliotheca Orientalis* 60: 5–26.
- . 2005. "New Angles on Early Writing." *CAJ* 15, no. 2: 275–80.
- Postgate, J. N., Tao Wang, and Toby Wilkinson. 1995. "The Evidence for Early Writing: Utilitarian or Ceremonial?" *Antiquity* 69: 459–80.
- Price, T. Douglas, et al. 2010. "Kings and Commoners at Copan: Isotopic Evidence for Origins and Movement in the Classic Maya Period." *Journal of Anthropological Archaeology* 29: 15–32.
- Protzen, Jean-Pierre. 1993. *Inka Architecture and Construction at Ollantaytambo*. New York: Oxford University Press.
- Qiao Yu. 2010. "Yiluo diqu Peiligang zhi Erlitou wenhua shiqi fuza shehui de yanbian—dili xinxi xitong jichu shang de renkou he nongye kegengdi fenxi." *Kaogu xuebao* 2010, no. 4: 423–54.
- Qiu Dexiu. 2003. *Shangbo Chu jian Rong cheng shi zhuyi kaozheng*. Taipei: Taiwan Guji Chuban Youxian Gongsi.
- Qiu Xigui. 1992a. *Gudai wenshi yanjiu xintan*. Nanjing: Jiangsu Guji Chubanshe.
- . 1992b. *Gu wenzi lunji*. Beijing: Zhonghua Shuju.

References

- . 1998. "Xi Zhou liangtian kao." In Zhong Yongshan (ed.), *Hu Houxuan xiansheng jinian wenji*. Beijing: Kexue Chubanshe, pp. 221–7.
- . 2000. *Chinese Writing*. Gilbert L. Mattos and Jerry Norman (trans.). Early China Special Monograph Series, No. 4. Berkeley: University of California Press.
- Quirke, Stephen. 1988. "State and Labour in the Middle Kingdom." *Revue d'Égyptologie* 39: 83–106.
- . 1990. *The Administration of Egypt in the Late Middle Kingdom: The Hieratic Documents*. New Malden, UK: SIA.
- Rawski, Evelyn Sakakida. 1979. *Education and Popular Literacy in Ch'ing China*. Ann Arbor: University of Michigan Press.
- Rawson, Jessica. 1989. "Statesmen or Barbarians? The Western Zhou as Seen Through Their Bronzes." *Proceedings of the British Academy* 75: 71–95.
- . 1990. *Western Zhou Ritual Bronzes from the Arthur M. Sackler Collections*. Cambridge, MA: Harvard University Press, 2 vols.
- . 1999. "Western Zhou Archaeology." In *CHAC*, pp. 352–449.
- Redford, Donald B. *Pharaonic King-Lists, Annals and Day-Books: A Contribution to the Study of the Egyptian Sense of History*. SEA Publication 4. Mississauga, Canada: Benben Publications, 1986.
- Ren Rixin. 1981. "Shandong Zhucheng Han mu huaxiang." *Wenwu* 1981, no. 10: 14–21.
- Renger, Johannes. 1995. "Institutional, Communal, and Individual Ownership or Possession of Arable Land in Ancient Mesopotamia from the End of the Fourth to the End of the First Millennium B.C." *Chicago-Kent Law Review* 71: 269–319.
- Rice, Don S. 2006. "Late Classic Maya Population: Characteristics and Implications." In Glenn R. Storey (ed.), *Urbanism in the Preindustrial World: Cross-Cultural Approaches*. Tuscaloosa: University of Alabama Press, pp. 252–76.
- Ridley, Charles Price. 1973. *Educational Theory and Practice in Late Imperial China: The Teaching of Writing as a Specific Case*. PhD dissertation, Stanford University, Stanford, CA.
- Ritner, Robert K. 1996. "Egyptian Writing." In *WWS*, pp. 73–84.
- Riya Shinkan kōdokukai. 2004. "Riya Shinkan yakuchū." *Chūgoku shutsudo shiryō kenkyū* 8, pp. 88–137.
- Robertson, Donald. 1959. *Mexican Manuscript Painting of the Early Colonial Period: The Metropolitan Schools*. New Haven, CT: Yale University Press. Reprinted in 1994 by the University of Oklahoma Press.
- Robins, Gay. 1997. *The Art of Ancient Egypt*. Cambridge, MA: Harvard University Press, 1997.
- Robson, Eleanor. 1999. *Mesopotamian Mathematics, 2100–1600 BC: Technical Constants in Bureaucracy and Education*. Oxford: Clarendon Press.
- . 2001. "The Tablet House: A Scribal School in Old Babylonian Nippur." *RA* 95: 39–66.
- . 2008. *Mathematics in Ancient Iraq: A Social History*. Princeton, NJ: Princeton University Press.
- Rodríguez Martínez, Ma. del Carmen, et al. 2006. "Oldest Writing in the New World." *Science* 313 (15 September): 1610–14.
- Roth, Ann Macy. 1991. *Egyptian Phyles in the Old Kingdom: The Evolution of a System of Social Organization*. Chicago: Oriental Institute of the University of Chicago.
- Roth, Martha T. 1995. *Law Collections from Mesopotamia and Asia Minor*. Atlanta: Scholars Press.
- Rowe, John H. 1958. "The Age Grades of the Inca Census." In *Miscellanea Paul Rivet octogenario dicata*. México: Universidad Nacional Autónoma de México, Vol. 2, pp. 499–522.
- . 1982. "Inca Policies and Institutions Relating to the Cultural Unification of the Empire." In *IAS*, pp. 93–118.
- Rubio, Gonzalo. 2006. "Šulgi and the Death of Sumerian." In Piotr Michalowski and Niek Veldhuis (eds.), *Approaches to Sumerian Literature: Studies in Honour of Stip (H. L. J. Vanstiphout)*. Leiden: Brill, 167–79.

References

- . 2009. "Sumerian Literature." In Carl Ehrlich (ed.), *From an Antique Land: An Introduction to Ancient Near Eastern Literature*. Lanham, MD: Rowman & Littlefield, pp. 11–76.
- Sage, Steven F. 1992. *Ancient Sichuan and the Unification of China*. Albany: State University of New York Press.
- Sahagún, Fray Bernardino de. 1938. *Historia general de las cosas de Nueva España, por el m. r. p. fr. Bernardino de Sahagún, de la Orden de los frayles menores de la observancia*. México, D. F. Robredo, 5 vols.
- . 1950. *Florentine Codex: General History of the Things of New Spain*. Translated and edited by Arthur J. O. Anderson and Charles E. Dibble. Monographs of the School of American Research, no. 14, 13 parts. Salt Lake City: University of Utah Press.
- . 1993. *Primeros Memoriales by Fray Bernardino de Sahagún. Facsimile edition, photographed by Ferdinand Anders*. The Civilization of the American Indian Series, Vol. 200, Part 1. Norman: University of Oklahoma Press.
- . 1997. *Primeros Memoriales by Fray Bernardino de Sahagún, Paleography of Nahuatl Text and English Translation by Thelma D. Sullivan, completed and revised by H. B. Nicholson et al*. The Civilization of the American Indian Series, Vol. 200, Part 2. Norman: University of Oklahoma Press.
- Saturno, William A., et al. 2005. *The Murals of San Bartolo, El Petén, Guatemala, Part 1: The North Wall*. Ancient America 7. Barnardsville, NC: Center for Ancient American Studies.
- Saturno, William A.,. 2006. "Early Maya Writing at San Bartolo, Guatemala." *Science* 311 (March): 1281–3.
- Schaberg, David. 1997. "Remonstrance in Eastern Zhou Historiography." *EC* 22: 133–79.
- . 1999. "Song and the Historical Imagination in Early China." *Harvard Journal of Asiatic Studies* 59, no. 2: 305–61.
- . 2001a. *A Patterned Past: Form and Thought in Early Chinese Historiography*. Cambridge, MA: Harvard University Press.
- . 2001b. "Sell It! Sell It! Recent Translations of *Lunyu*." *Chinese Literature* 23: 115–39.
- . 2001c. "Texts and Artifacts: A Review of *The Cambridge History of Ancient China*." *Monumenta Serica* 49: 463–515.
- Schele, Linda, and Mary E. Miller. 1986. *The Blood of Kings: Dynasty and Ritual in Maya Art*. Fort Worth, TX: Kimbell Art Museum.
- Schmandt-Besserat, Denise. 1992. *Before Writing: From Counting to Cuneiform*. Austin: University of Texas Press, 2 vols.
- Schwartz, Glenn M. 2008. Review of *Urban and Natural Landscapes of an Ancient Syrian Capital: Settlement and Environment at Tell Mishrifeh/Qatna and in Central-Western Syria*. *JAOS* 128, no. 3: 591–2.
- Scott, James C. 1976. *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*. New Haven, CT: Yale University Press.
- . 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, CT: Yale University Press.
- . 2009. *The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia*. New Haven, CT: Yale University Press.
- Scott, James C., John Tehranian, and Jeremy Mathias. 2002. "The Production of Legal Identities Proper to States: The Case of the Permanent Family Surname." *CSSH* 44, no. 1: 4–44.
- Shaanxi Sheng Kaogu Yanjiusuo and Lintong Xian Wenwu Gongzuodui. 1992. *Qinling yaoyi xingtu mu*. Xi'an: Shaanxi Luyou Chubanshe.
- Sharer, Robert J., with Loa P. Traxler. 2006. *The Ancient Maya*. 6th ed. Stanford, CA: Stanford University Press.
- Sharlach, Tonia. 2004. *Provincial Taxation and the Ur III State*. Leiden: Brill.

- Shaughnessy, Edward L. 1989. "Historical Geography and the Extent of the Earliest Chinese Kingdoms." *Asia Major* (3rd series) 2, no. 2: 1–22.
- . 1991. *Sources of Western Zhou History: Inscribed Bronze Vessels*. Berkeley: University of California Press.
- . 1997. "Western Zhou Bronze Inscriptions." In *NSECH*, pp. 57–84.
- . 1999. "Western Zhou History." In *CHAC*, pp. 292–351.
- Sheets, Payson. 2005. *The Cerén Site: An Ancient Village Buried by Volcanic Ash in Central America*. 2nd ed. Belmont, CA: Thomson Wadsworth.
- Sheets, Payson (ed.). 2002. *Before the Volcano Erupted: The Ancient Cerén Village in Central America*. Austin: University of Texas Press.
- Shen Jianhua. 2008. *Chuxue ji: Shen Jianhua jiaguxue lunwen xuan*. Beijing: Wenwu Chubanshe.
- Shore, A. F. 1987. "Egyptian Cartography." In *HC*, Vol. 1, pp. 117–29.
- Sjöberg, A. W. 1972. "In Praise of the Scribal Art." *JCS* 24: 126–31.
- . 1976. "The Old Babylonian Eduba." In Stephen Lieberman (ed.), *Sumerological Studies in Honor of Thorkild Jacobsen on His Seventieth Birthday*. Chicago: University of Chicago Press, pp. 159–79.
- Skinner, Quentin. 2009. "A Genealogy of the Modern State." *Proceedings of the British Academy* 162: 325–70.
- Skosey, Laura A. 1996. *The Legal System and Legal Tradition of the Western Zhou*. PhD dissertation, University of Chicago, 3 vols.
- Slanski, Kathryn E. 2003. *The Babylonian Entitlement Narûs (Kudurrus)*. Boston: American Schools of Oriental Research.
- Smith, Adam D. 2011. "The Evidence for Scribal Training at Anyang." In Li Feng and David Branner (eds.), *Writing and Literacy in Early China*. Seattle: University of Washington Press, pp. 173–205.
- Smith, Michael E. 1996. "The Strategic Provinces." In Frances F. Berdan et al. (eds.), *Aztec Imperial Strategies*. Washington, DC: Dumbarton Oaks, pp. 137–50.
- Smith, William Stevenson. 1946. *A History of Egyptian Sculpture and Painting in the Old Kingdom*. Oxford: Oxford University Press.
- . 1958. *The Art and Architecture of Ancient Egypt*. 1st ed. Baltimore: Penguin Books.
- . 1998. *The Art and Architecture of Ancient Egypt*. 3rd. ed. New Haven, CT: Yale University Press.
- Smither, Paul C. 1945. "The Semnah Despatches." *JEA* 31: 3–10.
- So, Jenny F. (ed.). 2000. *Music in the Age of Confucius*. Washington, DC: Freer Gallery of Art and Arthur M. Sackler Gallery.
- Song Guoding. 2003. "Zhengzhou Xiaoshuangqiao yizhi chutu taoqi shang de zhushu." *Wenwu* 2003, no. 5: 35–44.
- Spence, Michael W. 1992. "Tlailotlacan, a Zapotec Enclave in Teotihuacan." In Janet Catherine Berlo (ed.), *Art, Ideology, and the City of Teotihuacan*. Washington, DC: Dumbarton Oaks, pp. 59–88.
- Steinke, Kyle. 2012. "Script Change in Bronze Age China." In Stephen Houston (ed.), *The Shape of Script: How and Why Writing Systems Change*. Santa Fe, NM: School for Advanced Research, pp. 135–58.
- Steinkeller, Piotr. 1987. "The Foresters of Umma: Toward a Definition of Ur III Labor." In Marvin A. Powell (ed.), *Labor in the Ancient Near East*. Ann Arbor, MI: American Oriental Society, pp. 73–115.
- . 1991. "The Administrative and Economic Organization of the Ur III State: The Core and the Periphery." In McGuire Gibson and Robert D. Biggs (eds.), *The Organization of Power: Aspects of Bureaucracy in the Ancient Near East*. 2nd ed. Chicago: The Oriental Institute of the University of Chicago, pp. 15–33.

References

- . 2003. "Archival Practices at Babylonia in the Third Millennium." In Maria Brosius, ed., *Ancient Archives and Archival Traditions: Concepts of Record-Keeping in the Ancient World*. Oxford: Oxford University Press, pp. 37–58.
- . 2004. "The Function of Written Documentation in the Administrative Praxis of Early Babylonia." In *CEO*, pp. 65–88.
- Stone, Elizabeth C. 1987. *Nippur Neighborhoods*. Chicago: Oriental Institute of the University of Chicago.
- Storey, Rebecca. 2005. "Health and Lifestyle (before and after Death) among the Copán Elite." In E. Wyllys Andrews and William L. Fash (eds.), *Copán: The History of an Ancient Maya Kingdom*. Santa Fe, NM: School of American Research Press, pp. 315–43.
- . 2006. "Mortality through Time in an Impoverished Residence of the Precolumbian City of Teotihuacan." In Glenn R. Storey (ed.), *Urbanism in the Preindustrial World: Cross-Cultural Approaches*. Tuscaloosa: University of Alabama Press, pp. 277–94.
- Strudwick, Nigel C. 1985. *The Administration of Egypt in the Old Kingdom: The Highest Titles and Their Holders*. London: KPI.
- . 2005. *Texts from the Pyramid Age*. Leiden: Brill.
- Stuart, David S. 1995. *A Study of Maya Inscriptions*. Ph.D. dissertation, Vanderbilt University, Nashville, TN.
- . 1996. "Kings of Stone: A Consideration of Stelae in Ancient Maya Ritual and Representation." *Res* 29–30: 148–71.
- . 1998. "'The Fire Enters His House': Architecture and Ritual in Classic Maya Texts." In Stephen Houston (ed.), *Function and Meaning in Classic Maya Architecture*. Washington, DC: Dumbarton Oaks, pp. 373–425.
- . 2005. "Ideology and Classic Maya Kingship." In Vernon L. Scarborough (ed.), *A Catalyst for Ideas: Anthropological Archaeology and the Legacy of Douglas Schwartz*. Santa Fe, NM: School of American Research Press, pp. 257–85.
- . 2006. "The Language of Chocolate: References to Cacao on Classic Maya Drinking Vessels." In Cameron L. McNeil (ed.), *Chocolate in Mesoamerica: A Cultural History of Cacao*. Gainesville: University Press of Florida, pp. 184–201.
- . 2011. *The Order of Days: The Maya World and the Truth of 2012*. New York: Harmony.
- Sugiyama, Saburo. 2004. "Governance and Polity at Classic Teotihuacan." In Julian A. Hendon and Rosemary A. Joyce (eds.), *Mesoamerican Archaeology: Theory and Practice*. Oxford: Blackwell, pp. 97–123.
- . 2005. *Human Sacrifice, Militarism, and Rulership: Materialization of State Ideology at the Feathered Serpent Pyramid, Teotihuacan*. Cambridge: Cambridge University Press.
- Swaan, Abram de. 1988. *In Care of the State: Health Care, Education, and Welfare in Europe and the USA in the Modern Era*. New York: Oxford University Press.
- . 2001. *Human Societies: An Introduction*. Beverley Jackson (trans.). Cambridge: Polity Press.
- Tate, Carolyn E. 1992. *Yaxchilan: The Design of a Maya Ceremonial City*. Austin: University of Texas Press.
- Taube, Karl. 1996. "The Olmec Maize God." *Res* 29–30: 39–81.
- . 2000. *The Writing System of Ancient Teotihuacan (Ancient America 1)*. Washington, DC: Center for Ancient American Studies.
- Taylor, Jon. 2005. "The Sumerian Proverb Collections." *RA* 99: 13–38.
- Thrupp, Sylvia L. 1958. "Editorial." *CSSH* 1, no. 1: 1–4.
- . 1962. "Reply: Our Objectives." *CSSH* 5, no. 1: 118–20.
- Tianchangshi Wenwu Guanlisuo and Tianchangshi Bowuguan. 2006. "Anhui Tianchang Xihan mu fajue jianbo." *Wenwu* 2006, no. 11: 4–21.
- Tinney, Stephen J. 1998. "Texts, Tablets, and Teaching: Scribal Education in Nippur and Ur." *Expedition* 40: 40–50.

- . 1999. "On the Curricular Setting of Sumerian Literature." *Iraq* 61: 159–72.
- Tiesler, Vera, et al. 2010. "A Taphonomic Approach to Late Classic Maya Mortuary Practices at Xuenkal, Yucatán, Mexico." *JFA* 35, no. 4: 365–79.
- Topic, John R. 1990. "Craft Production in the Kingdom of Chimor." In Michael E. Moseley and Alana Cordy-Collins (eds.), *The Northern Dynasties: Kingship and Statecraft in Chimor*. Washington, DC: Dumbarton Oaks, pp. 145–76.
- . 2003. "From Stewards to Bureaucrats: Architecture and Information Flow at Chan Chan, Peru." *Latin American Antiquity* 14, no. 3: 243–74.
- Townsend, Richard. 2000. *The Aztecs*. Rev. ed. London: Thames and Hudson. 3rd ed.
- Trigger, Bruce G. 1978. *Time and Traditions: Essays in Archaeological Interpretation*. Edinburgh: Edinburgh University Press.
- . 2003. *Understanding Early Civilizations: A Comparative Study*. Cambridge: Cambridge University Press.
- . 2004. "Writing Systems: A Case Study in Cultural Evolution." In *FW*, pp. 39–68. Updated and revised from its original publication in *Norwegian Archaeological Review* 30: 39–62.
- Twitchett, D. C. 1963. *Financial Administration under the T'ang Dynasty*. Cambridge: Cambridge University Press.
- Twitchett, Denis, and Michael Loewe (eds.). 1986. *The Cambridge History of China, Volume I: The Ch'in and Han Empires, 221 B.C.–A.D. 220*. Cambridge: Cambridge University Press.
- Ucko, Peter J. 1969. "Ethnography and archaeological interpretation of funerary remains." *World Archaeology* 1: 262–80.
- Urton, Gary. 2001. "A Calendrical and Demographic Tomb Text from Northern Peru." *Latin American Antiquity* 12, no. 2: 121–47.
- . 2002. "Recording Signs in Narrative-Accounting Khipu." In Jeffrey Quilter and Gary Urton (eds.), *Narrative Threads: Accounting and Recounting in Andean Khipu*. Austin: University of Texas Press, pp. 171–96.
- . 2003. *Signs of the Inka Khipu*. Austin: University of Texas Press.
- . 2009. "Sin, Confession, and the Arts of Book- and Cord-Keeping: An Intercontinental and Transcultural Exploration of Accounting and Governmentality." *CSSH* 51, no. 4: 801–31.
- Van De Mierop, Marc. 1987. *Crafts in the Early Isin Period: A Study of the Isin Craft Archive from the Reigns of Išbi-Erra and Šū-Ilišu*. Leuven, Belgium: Department Oriëntalistiek.
- . 1999. *Cuneiform Texts and the Writing of History*. London: Routledge.
- . 2004. "Accounting in Early Mesopotamia: Some Remarks." In *CEO*, pp. 47–64.
- . 2007. *A History of the Ancient Near East*. 2nd ed. Oxford, UK: Blackwell.
- van den Boorn, G. P. F. 1988. *The Duties of the Vizier: Civil Administration in the Early New Kingdom*. London: Kegan Paul International.
- van Dijk, Jacobus. 1995. "Myth and Mythmaking in Ancient Egypt." In *CANE*, pp. 1697–1709.
- van Driel, G. 1998. "Land in Ancient Mesopotamia: 'That what remains undocumented does not exist.'" In B. Haring and R. de Maaijer (eds.), *Landless and Hungry? Access to Land in Early and Traditional Societies*. Leiden: Research School CNWS, Leiden University, pp. 19–49.
- . 2000. "Closer to Mesopotamia's Proto-History." *Bibliotheca Orientalis* 57: 494–509.
- van Seters, John. 1995. "The Historiography of the Ancient Near East." In *CANE*, pp. 2433–44.
- Vanstiphout, H. L. J. 1978. "Lipit-Eštar's Praise in the Edubba." *JCS* 30: 33–61.
- . 1979. "How Did They Learn Sumerian?" *JCS* 31: 118–26.
- Veenhof, Klaas R. (ed.). 1986. *Cuneiform Archives and Libraries*. Leiden: Nederlands Historisch-Archaeologisch Instituut te Istanbul.
- Veldhuis, Niek. 1997. *Elementary Education at Nippur: The Lists of Trees and Wooden Objects*. PhD dissertation, University of Groningen. <http://dissertations.ub.rug.nl/FILES/faculties/arts/1997/n.c.veldhuis/thesis.pdf>.

References

- . 2000. "Sumerian Proverbs in Their Curricular Context." *JAOS* 120, no. 3: 383–99.
- . 2004. *Religion, Literature, and Scholarship: The Sumerian Composition Nanše and the Birds*. Leiden: Brill.
- . 2006. "How Did They Learn Cuneiform? Tribute/Word List C as an Elementary Exercise." In Piotr Michalowski and Niek Veldhuis (eds.), *Approaches to Sumerian Literature: Studies in Honour of Stip (H. L. J. Vanstiphout)*. Leiden: Brill, pp. 181–200.
- VerSteeg, Russ. 2002. *Law in Ancient Egypt*. Durham, NC: Carolina Academic Press.
- Visicato, Giuseppe. 2000. *The Power and the Writing: The Early Scribes of Mesopotamia*. Bethesda, MD: CDL Press.
- von Hagen, Adriana, and Craig Morris. 1998. *The Cities of the Ancient Andes*. London: Thames and Hudson.
- Voutsaki, Sofia, and John Killen. 2001. "Introduction." In idem. (eds.), *Economy and Politics in the Mycenaean Palace States*. Cambridge: Cambridge Philological Society, pp. 1–14.
- Wachtel, Nathan. 1982. "The *Mitimas* of the Cochabamba Valley: The Colonization Policy of Huayna Capac." In *IAS*, pp. 199–235.
- Wagner, Elisabeth. 2004. "Some Thoughts on the Composition of Murals 1 and 3 of Structure 1, La Sfricaya, El Petén, Guatemala." *Wayeb Notes* 10: 1–8 (http://www.wayeb.org/notes/wayeb_notes0010.pdf).
- Wang En'tian. 1985. "Zhucheng Liangtai Sun Cong huaxiangshi mu kao." *Wenwu* 1985, no. 3: 93–6.
- Wang Guihai. 1999. *Handai guanwenshu zhidu*. Nan'ning: Guangxi Jiaoyu Chubanshe.
- Wang Gungwu. 1973. "Some Comments on the Later Standard Histories." In Donald Leslie et al. (eds.), *Essays on the Sources for Chinese History*. Columbia: University of South Carolina Press, pp. 53–63.
- Wang Haicheng. 2005. "Dove-shaped staff finial." In Cary Liu, Michael Nylan, and Anthony Barbieri-Low (eds.), *Recarving China's Past: Art, Archaeology, and Architecture of the "Wu Family Shrines"*. New Haven, CT: Yale University Press, pp. 447–9.
- . 2014. "China's First Empire? Interpreting the Material Record of the Erligang Expansion." In Kyle Steinke (ed.), *Art and Archaeology of the Erligang Civilization*. Princeton, NJ: Princeton University Press.
- . In preparation a. "Writing and the City in Early China." In Norman Yoffee (ed.), *The Cambridge World History, Volume III: A World with Cities, 4000 BCE–1200 CE*. Cambridge: Cambridge University Press.
- . In preparation b. "Beautiful Writing in Egypt and China." In Deborah Vischak and John Baines (eds.), *The Egyptian Image in Context*. Philadelphia: University of Pennsylvania Press.
- Wang Hui. 2003. *Gu wenzi yu Shangzhou shi xinzheng*. Beijing: Zhonghua Shuju.
- Wang Su. 2005. "Changsha Dongpailou donghan jian du xuanshi." *Wenwu* 2005, no. 12: 69–75, 40.
- Wang Xuerong. 2000. "Henan Yanshi Shangcheng di er hao jianzhu yizhi yanjiu." *Huaxia kaogu* 2000, no. 1: 41–60.
- Wang Yuxin and Yang Shengnan (eds.). 1999. *Jiaguxue yibai nian*. Beijing: Shehui Kexue Wenxian Chubanshe.
- Wang Yuxin, Yang Shengnan, and Nie Yuhai. 2004. *Jiaguwen jingcui shiyi*. Kunming: Yunnan Remin Chubanshe.
- Warburton, David A. 1997. *State and Economy in Ancient Egypt: Fiscal Vocabulary of the New Kingdom*. Fribourg, Switzerland: University Press Fribourg.
- Watson, Burton. 1993. *Records of the Grand Historian*. Rev. ed. New York: Renditions-Columbia University Press, 2 vols.
- Weber, Max. 1968. *On Charisma and Institution Building: Selected Papers*. Chicago: University of Chicago Press, 1968.
- . 1976. *The Agrarian Sociology of Ancient Civilizations*. R. I. Frank (trans.). London: NLB, 1976.

References

- Webster, David, et al. 2007. "The Great Tikal Earthwork Revisited." *JFA* 32: 41–64.
- Weiss-Krejci, Estella. 2004. "Mortuary representations of the noble house." *Journal of Social Archaeology* 4, no. 3: 368–404.
- Weld, Susan. 1990. *Covenant in Jin's Walled Cities: The Discoveries at Houma and Wenxian*. PhD dissertation, Harvard University, Cambridge, MA.
- . 1997. "The Covenant Texts from Houma and Wenxian." In *NSECH*, pp. 125–60.
- . 1999. "Chu Law in Action: Legal Documents from Tomb 2 at Baoshan." In Constance Cook and John Major (eds.), *Defining Chu: Image and Reality in Ancient China*. Honolulu: University of Hawai'i Press, pp. 77–98.
- Wengrow, David. 1998. "The Changing Face of Clay: Continuity and Change in the Transition from Village to Urban Life in the Near East." *Antiquity* 72: 783–95.
- . 2001a. "Rethinking 'Cattle Cults' in Early Egypt: Towards a Prehistoric Perspective on the Narmer Palette." *CAJ* 11, no. 1: 91–104.
- . 2001b. "The Evolution of Simplicity: Aesthetic Labour and Social Change in the Neolithic Near East." *World Archaeology* 33, no. 2: 168–88.
- . 2006. *The Archaeology of Early Egypt: Social Transformations in North-East Africa, 10,000 to 2650 BC*. Cambridge: Cambridge University Press.
- Wente, Edward F. 1990. *Letters from Ancient Egypt* (Writings from the Ancient World 1). Atlanta: Scholars Press.
- Westenholz, Aage. 1974. "Old Akkadian School Texts." *Archiv für Orientforschung* 25: 95–110.
- . 1999. "The Old Akkadian Period: History and Culture." In Walther Sallaberger and Aage Westenholz (eds.), *Mesopotamien: Akkade-Zeit und UrIII-Zeit*. Freiburg, Schweiz: Universitätsverlag; Göttingen: Vandenhoeck & Ruprecht, pp. 15–117.
- Whimster, Sam (ed.). 2004. *The Essential Weber: A Reader*. London: Routledge.
- Wiggemann, F. A. M. 2000. "Agriculture in the northern Balikh Valley: The case of Middle Assyrian Tell Sabi Abyad," in R. M. Jas (ed.), *Rainfall and Agriculture in Northern Mesopotamia*. Leiden: Nederlands Historisch-Archaeologisch Instituut Te Istanbul, pp. 171–231.
- Wildung, Dietrich. 1969. *Die Rolle ägyptischer Könige im Bewusstsein ihrer Nachwelt*. Berlin: B. Hessling.
- Wilkinson, Endymion. 2000. *Chinese History: A Manual*. Rev. and enl. ed. Cambridge, MA: Harvard University Asia Center for the Harvard-Yenching Institute.
- Wilkinson, Toby A. H. 2000. *Royal Annals of Ancient Egypt*. London: Routledge.
- . 2001. *Early Dynastic Egypt*. London: Routledge.
- Williams, Barbara B. 1991. "A Prospectus for Exploring the Historical Essence of Ancient Nubia." In W. V. Davies (ed.), *Egypt and Africa*. London: British Museum Press, pp. 74–91.
- Williams, Barbara J. 1984. "Mexican Pictorial Cadastral Registers: An Analysis of the Códice de Santa María Asunción and the Codex Vergara." In *EE*, pp. 103–25.
- . 1991. "The Lands and Political Organization of a Rural Tlaxilacalli in Tepetlaoztoc, ca. A.D. 1540." In H. R. Harvey (ed.), *Land and Politics in the Valley of Mexico: A Two-Thousand-Year Perspective*. Albuquerque: University of New Mexico Press, pp. 187–208.
- Williams, Barbara J., and H. R. Harvey. 1997. *The Códice de Santa María Asunción, Facsimile and Commentary: Households and Lands in Sixteenth-Century Tepetlaoztoc*. Salt Lake City: University of Utah Press.
- Woods, Christopher. 2006. "Bilingualism, Scribal Learning, and the Death of Sumerian." In Seth Sanders (ed.), *Margins of Writing, Origins of Culture*. Chicago: Oriental Institute of the University of Chicago, pp. 91–120.
- Wright, Arthur. 1973. "Propaganda and Persuasion in Imperial and Contemporary China." *Rice University Studies* 59, no. 4: 9–18.
- Wu Hung. 1999. "The Art and Architecture of the Warring States Period." In *CHAC*, pp. 651–744.
- Wu Rui (ed.). 2006. *Hou Gushibian shidai zhi Zhongguo gudixianxue*. Taipei: Tangshan Chubanshe.

References

- Xing Wen (ed.). 2003. *The X Gong Xu*. A special issue of International Research on Bamboo and Silk Documents Newsletter. Hanover, NH: Dartmouth College.
- . 2009. *Zuizao de Zhongguo*. Beijing: Kexue Chubanshe.
- Xu Hong. 2005. "Henan Yanshi shi Erlitou yizhi zhongxin qu de kaogu xin faxian." *Kaogu* 2005, no. 7: 15–20.
- Xu Hong et al. 2004. "Erlitou yizhi juluo xingtai de chubu kaocha." *Kaogu* 2004, no. 11: 23–31.
- Xue Yong. 2006. *Agrarian Urbanization: Social and Economic Changes in Jiangnan from the Eighth to the Nineteenth Century*. PhD dissertation, Yale University, New Haven, CT.
- Yan Shengdong. 2010. "Bohai nan'an diqu Shangzhou shiqi yanye yizhiqun jiegou yanjiu." *Gudai wenming* 8: 88–137.
- Yang Chunmei. 2006. "Quxiang kanyou de Zhongguo gudianxue." *Wenshizhe* 2006, no. 2: 5–25.
- Yang Kuan. 1999. *Xi Zhou shi*. Shanghai: Shanghai Renmin Chubanshe.
- . 2003. *Yang Kuan gushi lunwen xuanji*. Shanghai: Shanghai Renmin Chubanshe.
- Yang, Lien-sheng. 1950. "Notes on Dr. Swann's Food and Money in Ancient China." *Harvard Journal of Asiatic Studies* 13: 524–57.
- . 1952. "Hostages in Chinese History." *Harvard Journal of Asiatic Studies* 15: 507–21.
- Yang Zhenhong. 2003. "Qin-Han ming tianzhai zhi shuo – cong Zhangjiashan Hanjian kan Zhanguo-Qin-Han de tudi zhidu." *Zhongguoshi yanjiu* 2003, no. 3: 49–72.
- Yangjiacun Lianhe Kaogudui. 2003. "Shaanxi Meixian Yangjiacun Xizhou qingtongqi jiaocang fajue jianbao." *Wenwu* 2003, no. 6: 4–42.
- Yates, Robin D. S. 1995. "State Control of Bureaucrats under the Qin: Techniques and Procedures." *EC* 20: 331–65.
- . 2011. "Soldiers, Scribes, and Women: Literacy among the Lower Orders in Early China." In Li Feng and David Branner (eds.), *Writing and Literacy in Early China*. Seattle: University of Washington Press, pp. 339–69.
- Yoffee, Norman. 2005. *Myths of the Archaic State: Evolution of the Earliest Cities, States, and Civilizations*. Cambridge: Cambridge University Press.
- Young-Sánchez, Margaret. 2004. "The Art of Tiwanaku." In idem (ed.), *Tiwanaku: Ancestors of the Inca*. Lincoln: University of Nebraska Press, pp. 24–69.
- Yü Ying-shih. 2006. "Shishu Chen Yinque de shixue sanbian." In idem, *Yü Yingshi wenji*. Nan'ning: Guangxi Shifan Daxue Chubanshe, Vol. 5, pp. 142–73.
- Yu Zhenbo. 2004. "Zhangjiashan Han jian zhong de ming tian zhi jiqi zai Handai de shishi qingkuang." *Zhongguoshi yanjiu* 2004, no. 1: 29–40.
- Yuan Guangkuo and Zeng Xiaomin. 2004. "Lun Zhengzhou Shangcheng neicheng he waiguo cheng de guanxi." *Kaogu* 2004, no. 3: 59–67.
- Yuan Lin. 2000. *Liang Zhou tudi zhidu xinlun*. Changchun: Dongbei Shifan Daxue Chubanshe.
- Yuan Yansheng. 2008. "Tianchang Jizhuang mudu suanbu yu Handai suanfu wenti." *Zhongguoshi yanjiu* 2008, no. 2: 105–18.
- Yuan Zhongyi. 2002. *Qin shihuang ling kaogu faxian yu yanjiu*. Xi'an: Shaanxi Renmin Chubanshe.
- Zawadzki, Stefan. 2006. *Garments of the Gods: Studies on the Textile Industry and the Pantheon of Sippar according to the Texts from the Ebabbar Archive*. Fribourg, Switzerland: Academic Press, and Göttingen: Vandenhoeck & Ruprecht.
- Zettler, Richard L. 1998. "The Royal Cemetery of Ur." In Richard L. Zettler and Lee Horne (eds.), *Treasures from the Royal Tombs of Ur*. Philadelphia: University of Pennsylvania Museum, pp. 21–5, 29–31.
- . 2003. "Reconstructing the World of Ancient Mesopotamia: Divided Beginnings and Holistic History." *JESHO* 46, no. 1: 3–45.
- Zhang Bingquan. 1988. *Jiaguwen yu jiaguxue*. Taipei: Guoli Bianyi Guan.
- Zhang Cunliang and Wu Hong. 2009. "Shuiquanzi Hanjian chushi." *Wenwu* 2009, no. 10: 88–91.
- Zhang Jinguang. 1984. "Lun Qin Han de xueli zhidu." *Wenshizhe* 1984, no.1: 30–9.

References

- . 2004. *Qinzhi yanjiu*. Shanghai: Shanghai Guji Chubanshe.
- Zhang Lisheng. 1983. *Jijiu pian yanjiu*. Taipei: Taiwan Shangwu Yinshuguan.
- Zhang Tien'En. 2010. "Jin'nan yi faxian de Xizhou guozuo chuxi." *Kaogu yu wenwu* 2010, no. 1: 50–6.
- Zhang Zhenglang. 1977. "Chunqiu shiyu jieti." *Wenwu* 1977, no. 1: 36–9.
- Zhang Zhigong. 1962. *Chuantong yuwen jiaoyu chutan*. Shanghai: Shanghai Jiaoyu Chubanshe.
- . 1992. *Chuantong yuwen jiaoyu jiaocai lun*. Shanghai: Shanghai Jiaoyu Chubanshe.
- Zheng Acai and Zhu Fengyu. 2002. *Dunhuang mengshu yanjiu*. Lanzhou: Gansu Jiaoyu Chubanshe.
- Zhengzhou Shi Wenwu Kaogu Yanjiusuo (ed.). 2004. *Zhengzhou Dashigu (2002–2003)*. Beijing: Kexue Chubanshe.
- Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo (ed.). 2003. *Zhongguo kaoguxue: Xia Shang juan*. Beijing: Zhongguo Shehui Kexue Chubanshe.
- Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo Henan Diyi Gongzuodui. 2010. "2002–2003 nian Henan Yanshi Huizui yizhi de fajue." *Kaogu xuebao* 2010, no. 3: 393–422.
- Zhongguo Shehui Kexueyuan Lishi Yanjiusuo et al. 1990–. *Ying cang Dunhuang wenxian: Han wen fojing yiwai bufen*. Chengdu: Sichuan Renmin Chubanshe, multiple volumes.
- Zhongguo Wenwu Yanjiusuo and Gansu Wenwu Yanjiusuo. 2001. *Dunhuang Xuanquan yueling zhaotiao*. Beijing: Zhonghua Shuju.
- Zhu Fenghan. 2004. *Shangzhou jiazhu xingtai yanjiu*. Rev. ed. Tianjin: Tianjin Guji Chubanshe.
- Zhu Honglin. 2005. *Zhangjiashan Er'nian lü ling jishi*. Beijing: Shehui Kexue Wenxian Chubanshe.
- Zhu Zongbin. 2000. "Shilun woguo gudai lixu zhidu de fazhan jieduan ji qi xingcheng de yuanyin." *Yanjing xuebao* 9: 87–121.
- Zorita, Alonso de. 1994. *Life and Labor in Ancient Mexico: The Brief and Summary Relation of the Lords of New Spain*. Benjamin Keen (trans.). Norman: University of Oklahoma Press. Originally published 1963, Rutgers University Press.

INDEX

- Abaj Takalik (Maya), 27
Abu Salabikh (Mesopotamia), 245
Abusir (Egypt), 261
Abydos (Egypt), 23, 78, 79, 302
accountability, and functions of
 administrative documents, 63, 65, 183.
 See also bookkeeping
accounting: and military in Warring States
 period, 211–14; uses and ideological
 underpinnings of in early states, 55; and
 workshops in Ur III state of Mesopotamia,
 216. *See also* bookkeeping; budgets and
 budgeting
Acolhuacan (Mexico), 146, 149
administration: archaeological evidence for
 details of, 154; and bookkeeping in Aztec
 empire, 152–3; budgets and budgeting in
 Mesopotamia, 61; of cities in Inka empire,
 114–21; and extraction of wealth by state,
 304–6; and functions of bookkeeping in
 Mesopotamia, 65–9; of Inka state farms,
 106–14; as inseparable from ideology,
 55; labor expenses in Mesopotamia and
 provincial, 151. *See also* accountability;
 bureaucracy
agriculture, archaeology of in China, 177.
 See also chinampas; irrigation; labor; land
 tenure; state farms; terraces and terracing;
 wealth
Aguateca (Guatemala), 268
Akhenaten (Egypt), 100
Amarna (Egypt), 97, 100
Amenmes (Egyptian priest), 26
Amorite genealogy (Mesopotamia), 36
ancestors: Classic Maya period and effigies
 of, 27; Inka and embalmed mummies of,
 28; statues of in royal palace of Qatna
 (Mesopotamia), 34; worship of in early
 China, 41–5, 182; worship of in Maya
 lowlands, 155. *See also* floating ancestors;
 king lists
Anderson, Benedict, 2, 5, 12, 13, 301
Andes, and ancient writing: chronology and
 cultural areas of early states in,
 14–18; and education of scribes, 271–2;
 and extraction of wealth by state,
 105–21, 305; and legitimation of state,
 28–31, 39, 303. *See also* Chimú state; Inka
 empire
Anhui Huoqiu (Western Zhou), 192
“announcement of merit,” and royal
 mandates in Western Zhou, 184
Anthony, David, 188
Anyang: and education of scribes, 275–6,
 277, 279, 280, 298; and extraction of wealth
 by state, 180–4; and invention of writing
 system, 308; and legitimation of state, 41,
 42, 44–52; Zhou expansion and capture of,
 188. *See also* China
apartment compounds, in Teotihuacan, 122,
 124, 125
apprenticeship, and education of scribes in
 Mesopotamia, 244–5
Approaching What Is Correct. See *Er ya*
 thesaurus
aqqalakuna (Inka). *See* “chosen women”
archaeology: of agriculture in China,
 177; difficulty of extracting details of
 administration from, 154; and study of
 writing in earliest social contexts, 7; and
 verification of ancient history in Sima
 Qian, 52
Archi, Alfonso, 245
archives: establishment of within palaces in
 Mesopotamia, 65, 245–7; and labor issues
 in Egypt, 88; and Place of Documents in
 Egypt, 97, 99; and population registers in
 Chu state, 225; royal house and central in

- archives: establishment of within palaces in Mesopotamia (*cont.*)
 Egypt, 79; Western Zhou and publication of royal, 184–8
- Arriaga, Pablo Joseph de, 30
- art, role of writing in, 302–3. *See also* calligraphy; murals; representational art
- Assyrian King List, 32, 33, 34
- Asunción. *See* Códice Santa María Asunción
- audience: for display of royal mummies in Andes, 30; for king lists, 39, 303; for *kispu* ceremonies in Mesopotamia, 34; for royal display in Central Mexico, 32; for royal display in early China, 302; for royal displays in Egypt and Maya lowlands, 26, 302
- “autobiographies,” in Egyptian tomb carvings, 186
- Azcapotzalco (Aztec), 129
- Aztecs: and *chinampas*, 126, 127–31, 195; and extraction of wealth by state, 126–54; and king lists, Plate I, 31–2; and links with Teotihuacan recording system, 122–3; and military training, 273; outer provinces and border control by, 164; personal and place names in codices, 122; and schools, 270–1; and tribute system, 144–54, 163, 171, 224. *See also* Central Mexico
- Babylonian language, 249
- Bagley, Robert, 7
- Baines, John, 9, 14, 24, 39, 72, 73, 74, 77, 81, 125, 307
- bamboo strips: and format for school texts, 287; and Han ordinances, 204, 207; and perishable materials from Anyang, 182; possible uses of in Erligang, 179; use of in Western Zhou archives, 185
- Baoshan tomb (Warring States period), 226
- basic annals (*benji*), 40, 50
- Berdan, Frances F., 151
- Berger, Suzanne, 100
- Berlo, Janet, 121
- Biggs, Michael, 198
- Bloch, Marc, 7
- Boas, Franz, 7
- Boltz, William, 295
- Bonampak murals (Maya), Plate XIX, 163–4
- bookkeeping: and administration of Aztec empire, 152–3; administrative functions of in Mesopotamia, 65–9; land in Aztec state and pictorial, 133–9; and Maya tribute, 162–4; and Middle Kingdom of Egypt, 86–93; names, lists, and invention of writing, 307; and New Kingdom of Egypt, 93–105; from Predynastic Period to Old Kingdom in Egypt, 70–86; traces of from Anyang, 182. *See also* accounting
- border control: and Classic Maya period, 164–70, 199; and frontier of Egypt, 165, 167–9, 199; and Warring States period, 199–200
- boundaries and boundary markers: and Inka empire, 105, 106; and landscape of Maya city-states, 170–4; and stela in Egypt, 100; and Western Zhou, 198
- bronze *ding* vessels: from Erlitou and Erligang, Plate V, 179; from Western Zhou, Plate XXII
- bronze foundry, at Erlitou, 177. *See also* Houma foundry
- bronze inscriptions: and Anyang, Plate XXI, 41, 298; and Warring States period, Plate XXIII, 208–10; and Western Zhou, Plates VII–VIII, 47–50, 184–91, 195–8, 300, 303
- bronze ritual vessels, from Erligang, Plate V, 42–3
- Brooklyn Papyrus (Egypt), 86, 87, 88, 226
- Brown, Donald, 6–7
- Buccellati, Giorgio, 100–1
- budgets and budgeting: and administrative records in Mesopotamia, 61; and statistical reports in Warring States period, 231–3
- bureaucracy: and religion in Egypt, 76–7; reports in writing as quintessence of, 183; and study of early state, 3. *See also* administration
- cadastral maps and registers, 131, 134, 195–9. *See also* written cadasters
- Calakmul (Maya), Plate XVIII, 155, 156–7, 159, 163, 169
- Calancha, Antonio de la, 271–2
- calendars: and Maya, 267; and Teotihuacan, 124
- calligraphy, *Jijiu pian* and rise of as art, 286
- calmecac* (priests’ house, Central Mexico), 270
- Calnek, Edward E., 129, 131, 132–3, 151
- Canada, and identity tags for Inuits, 220–1
- CANE (*Civilizations of the Ancient Near East* [Sasson, Baine, Beckman, and Robinson 1995]), 14
- Cangjie pian* (“Bamboo Bundles by Cnagjie,” Qin empire), 282–4, 286
- Caotapachi (Peru), 114
- capulli* (Aztec community), 131, 133, 171
- Caracol (Maya), 157–9, 161–2, 164

- Carrasco, Pedro, 151
- cartography: boundary markers and function of in ancient world, 198; lack of strong tradition of in Egypt, 99; and state planning in Central Mexico, 133; and topographical maps in Warring States period, 200–4, 205, 206; and topographical maps in Western Zhou, 193, 194.
See also cadastral maps and registers
- cartouches, 24, 25, 38, 78
- cattle, census of in Egypt, 79
- causeways, and Maya cities, 157–62
- cemeteries: and evidence for human sacrifice in Anyang, 45; and proof of descent in Erlitou, 41
- censuses: and comparison of in Mesopotamia and Egypt, 85–6; and direct control of land and people by state, 79, 305; of households in Aztec state, 134–9; and *kipu* in Inka state, 112–13; and military service in Mesopotamia, 67; and military in Warring States period, 221, 224–30; and naming practices in Mesopotamia and Egypt, 214
- Central Mexico: chronology and cultural areas of early states, 14–18; and education of scribes, 270; and extraction of wealth by state in Teotihuacan, 121–6; and king lists, 243; role of writing in legitimation of state, 31–2, 39. See also Aztecs; Mixtec; Olmec; Tenochtitlan; Zapotec
- central provinces, of Aztec empire, 144, 145, 146, 147, 149–51
- Cerén (El Salvador), 171, 173, 195
- CHAC (*The Cambridge History of Ancient China: From the Origins of Civilization to 221 B.C.* [Loewe & Shaughnessy 1999]), 18
- Chan Chan (Chimú state), 30–1, 119–21
- chanting, and education of scribes, 266, 284
- Chase, Arlen & Diane, 157–9, 161–2
- Chengzhou (Western Zhou), 190–1
- Chen Xingcan, 11
- Childe, Gordon, 8
- Chimú state (Peru), 30–1, 119–21
- China, and ancient writing systems: absence of images of rulers compared to other culture areas, 302; chronology and cultural areas of early states in, 14–18; comparative studies of writing in early states, 6–14, 306; and diplomatic correspondence of rulers, 170; early imperial period compared to New Kingdom in Egypt, 175; and education of scribes, 275–300; and evidence for long-term budgeting, 64; and extraction of wealth by state, 175–237, 305; invention of writing system in, 308; and king lists, 21; manipulation of history in schools and courts of, 249; and punishment for failure to provide reports, 65; quotations of royal decrees in records of appointment of officials, 81; ritualization of system of oversight by matching of written accounts, 102; and role of writing in legitimation of state, 40–52, 302–4. See also Anyang; Erligang; Erlitou; Han empire; Warring States period; Western Zhou
- chinampas*, and agriculture in Central Mexico, 126, 127–31, 195
- “chosen women,” and Inka empire, 118–19
- chronology, of early states in comparative studies, 14–18
- Chu state (Warring States period), 208–10, 219, 225–7, 234–5, 293
- chullpas* (ancestral crypts, Inka), 28
- Chupaychu (Peru), 111
- cities: administration of in Inka empire, 114–21; of Erlitou compared to Mesopotamia and Maya, 178; founding of in Early and Late Classic Maya periods, 156; and population concentration in Teotihuacan, 125–6. See also urbanization
- city-state model, as norm for early states, 178
- civilization, definition of in comparative studies, 12
- class. See audience; literacy
- classification: and Inka state, 112; and lexical lists, 243; and origins of order, 1–2; sorting and quantification in early recording systems, 5
- clay pots, and earliest writing in China, Plate VI, 179. See also potsherds
- Cobo, Bernabé, 161, 271
- Cochabamba Valley (Peru), 106, 114
- Codex Magliabechiano, 29
- Codex Mendoza, Plate XIV, 122, 125, 145, 146–51, 153–4, 163–4
- Codex Vergara, 133
- Códice Kingsborough, 133, 142, 143, 149, 150
- Códice de Otlazpan, 142
- Códice de Santa María Asunción, 133–9, 141, 142, 144, 153–4
- codices: personal and place names in Aztec, 122; and pictorial king lists in Central Mexico, 32; and Teotihuacan, 123, 125. See also Codex Mendoza; Códice Kingsborough; Códice de Santa María Asunción; Florentine Codex; Matícula de Tributos

- Coe, Michael, 14, 129, 162
 Cohen, Lawrence, 301
 Collier, Mark, 93
 colonization, and military of Western Zhou, 188–93. *See also* resettlement; Southeast Asia; Spanish
 comparative studies: chronology and cultural areas of early states in, 14–18; of writing in early China, 6–14. *See also* cross-cultural studies
Comparative Studies in Society and History (journal), 7, 8–9
 concentration, and organization of Teotihuacan, 125–6
 Confucius, 288, 289
 control: and accountability, responsibility, and planning as functions of administrative documents, 65; censuses and maintaining of over land and people by state, 79; of people in Warring States period, 203; state's use of writing for, 211
 Cooper, Jerrold S., 249, 307
 Copan (Maya), 26
 Coptos colossi (Egypt), 21–4
 Cortés, Hernán, 142
corvée labor, and Inka state farms, 106–7
 craft production, monitoring of by Inka state, 118–21. *See also* factories; workshops
 Creel, Herrless Glessner, 51
 cross-cultural studies: distinct types of, 7; and establishment of permanent family names as related to state making, 214; and noble youths as hostages, 269, 275; and similarities in use of writing by state, 306. *See also* Andes; Central Mexico; China; comparative studies; Egypt; Mesopotamia
 culture: and education of scribes in early China, 292–300; order as prerequisite for, 6. *See also* cross-cultural studies; culture areas
 culture areas, of early states in comparative studies, 14–18
Curse of Akkad (Mesopotamia), 248
 Cuzco (Peru), 105

 Dahsur (Egypt), 84, 85, 164
Da Ke ding inscription (Western Zhou), Plate XXII, 195, 196
 D'Altroy, Terence N., 18
 Damerow, Peter, 4
Da Yu ding inscription (Western Zhou), 50, 189–90
 dead, land endowments in name of in Egypt, 69. *See also* ancestors; cemeteries; funerary estates; mummies and mummy bundles
 decimal officers (Inka), 107
 decimal system, and Inka administration, 107–10, 142, 225
 defensive structures, and villages of Western Zhou, 192. *See also* forts and fortresses; walled settlements
 Deir el-Medina (workmen's village, Egypt), 95–6, 265, 266–7
 demography. *See* population
 Den, King (Egypt), 23, 24, 79, 86
 Derrida, Jacques, 41
 Díaz, Bernal, 152
 display glyphs, and Teotihuacan recording system, 122–5
 divination texts, from Anyang, 183. *See also* oracle bone inscriptions
 Doubting Antiquity (scholarly movement), 40
 Dreyer, Günter, 21, 23
 drinking vessels, inscriptions on Maya, 174
 Dunhuang, and education of scribes in early China, 276–9, 294
 Dunning, Nicholas, 171
 Duran, Fray Diego, 129
Duties of the Vizier (Egypt), 97, 99, 104
 Du Zhengsheng, 192, 195

 Ebla (Syria), 245, 246, 247
 economics. *See* labor; wealth
eduba (tablet house), 249
 education, of scribes: in Andes, 271–2; in Central Mexico, 270; in China, 275–300; conclusions from cross-cultural studies of, 306–7; in Egypt, 259–67, 272–3, 273–4, 284, 286, 287; and ideology, 273; in Maya lowlands, 267–70; in Mesopotamia, 241–58, 262, 263, 267, 269, 272–3, 276, 284, 285, 286, 287, 288, 289, 290–1, 295, 296, 297–8, 299, 300; as part of process of state formation, 6; and writing of names, 39
 Egypt, and ancient writing: accountability and responsibility as function of administrative documents in, 63, 183; administrative reports from Western Zhou compared to, 185; and “autobiographies” in Old Kingdom tomb carvings, 186; and border control, 165, 167–9, 210; and census as basis for assessing labor duties, 107; census compared to Inka, 112; census compared to Mesopotamia, 85–6; census and naming practices in, 191, 214, 226; chronology and culture areas of early states, 14–18; comparative studies of China and, 11; and control of craft workshops,

- 119; and crew approach to administration of large labor groups, 117; and education of scribes, 259–67, 272–3, 273–4, 284, 286, 287, 307; elites and literacy in, 292; and extraction of wealth by state, 69–105; and king lists, 37–8, 302; and labor for construction of pyramids, 86, 220, 221, 222–3; and land tenure system, 105, 107, 181; and land transaction records, 80–5, 187, 195, 227; and legitimation of state, 21–4, 39, 302–4; Maya royal inscriptions compared to, 25–6; planning compared to Aztecs, 132, 133; and punishment of tax collectors, 234; and receipts, 117–18; and royal display texts, 210; and standardization of writing, 307, 308; state census and conflict with populace, 67; and tomb inventories, 153; tribute lists compared to Maya, 164; use of body parts for phonetic values, 123; writing from tomb U-J compared to earliest writing from China, 179. *See also* Middle Kingdom; New Kingdom
- El Callejón (Inka), 161
- El Mirador (Maya), 27
- Englund, Robert, 4, 243
- entitlement stones (Egypt), 100
- enumeration literature, and education of scribes in Egypt, 262–3
- epidemic disease, and population of Central Mexico, 134
- Erligang: and education of scribes, 275; and extraction of wealth by state, 179–80; and legitimation of state, 42–3, 302. *See also* China
- Erlitou: and extraction of wealth by state, 176–80; and legitimation of state, 41–2, 43, 302. *See also* China
- Er ya* thesaurus, of synonyms, 281–2, 283–4, 289
- Eshnunna (Mesopotamia), 245
- ethnicity: and household census in Aztec state, 134; and Inka administration of state farms, 107; and Spanish colonial records for Peru, 111
- Europe: and history of population registers, 214; warfare and censuses in early modern, 224. *See also* Spanish
- exclusion, ideology of in Chimú, 31
- factories, and Inka state, 119. *See also* bronze foundry; workshops
- Falkenhansen, Lothar von, 184, 187, 209
- Fara (Mesopotamia), 245
- feasts and feasting: and Inka state, 118; and name-tagging of objects by Maya, 267
- Fenton Vase (Maya), Plate XVI, 162
- Fifth Year Qiu Wei ding* inscription (Western Zhou), 196, 197, 215
- Finer, S. E., 8
- Finkelstein, J., 34
- Finley, M. I., 63
- Fisher, Henry, 264
- floating ancestors*, 26–7
- Florence, and naming practices, 214
- Florentine Codex, Plate I, 152–3
- Following of Horus, 79
- forensic reports, and education of scribes, 291–2
- forts and fortresses, and border control: in Egypt, 165, 167–9, 199, 210; in Han period, 204, 207–8; in Warring States period, 199, 208–9
- Foucault, Michel, 3, 4, 13
- fraud, and accounting in Warring States period, 213
- funerary estates, and mortuary cult in Egypt, 76
- Gebelein papyri (Egypt), 86
- Gelb, I. J., 7–8
- gender: and division of state labor in Inka empire, 112; and Maya “houses of writing,” 269–70; and use of masculine pronouns for rulers, 18. *See also* women
- genealogy. *See* king lists; kinship
- General Allotment Act of 1887 (Dawes Act, U.S.), 225
- Genealogy of the Hammurapi Dynasty (Mesopotamia), 32, 33, 34, 35, 262, 302
- Giza (Egypt), 38–9
- Golden, Charles, 165
- Goody, Jack, 4, 7, 63
- Gudea (Mesopotamia), 64
- Guodian texts (Hubei province), 286, 287, 288
- Guo of Zhi (Anyang), 183
- Hammurapi (Mesopotamia), 34–5, 36. *See also* Genealogy of the Hammurapi Dynasty
- Han empire: and codification of biographical history, 293; court ceremonies and presentation of reports, 235; and education of scribes, 280–1, 284; and ordinances on bamboo strips, 204, 207; and organization of state factories, 305; and overthrow of Qin state, 211; and passports, 169, 207, 211; patrilineage and matrilineage in property

- Han empire: and codification of biographical history (*cont.*)
 inheritance, 228–9; statistical reports and state budgets of, 232–3; and topographical maps, 203–4, 205
- Han Feizi* (Warring States text), 200
- Haring, Ben, 104
- Harris Papyrus. *See* Papyrus Harris I
- Harvey, H. R., 139, 142
- Hemaka (chancellor, Egypt), 70–1
- Herzfeld, Michael, 5, 6
- He zun* inscription (Western Zhou), 191
- history: and education of scribes in early China, 292–300; Mesopotamia and manipulation of on behalf of rulers by scribes, 248–9; and Sima Quin on pre-Han China, 52; study of early Chinese and focus on intellectual, 175; succession of kings and ideology of early state, 2.
See also king lists
- Hobbes, Thomas, 2
- Hodge, Mary, 146, 151
- Houma foundry (Warring States period), 217
- households: census of in Aztec state, 134–9;
 town planning and registration of in Egypt, 91–3. *See also* kinship
- “houses of writing” (Maya), 267, 268, 269–70
- Houston, Stephen, 8, 9, 14, 26, 126, 159, 162, 163, 164, 169–70, 267, 308
- Hou Xudong, 304
- Huallaga Valley (Peru), 108
- Huánuco Pampa (Peru), 114–18, 119
- Hui (scribe, Western Zhou), 298, 299
- human sacrifice, and Anyang royal cemetery, 45
- hymns: and education of scribes in early China, 292–3; and education of scribes in Mesopotamia, 255–6, 257, 289, 295, 297–8
- Ibia (local official, Egypt), 87
- ideology: administration as inseparable from, 55; and audience for king lists, 303; and education of scribes, 273, 306; of exclusion in Chimú, 31; and Mandate of Heaven, 46, 50–2
- inheritance, of land in Warring States and Han periods, 227–9
- “incipient bureaucracy,” of Anyang, 183
- Inka empire: and decimal system, 107–10, 142, 225; and *khipu*, 105, 107–10, 112–13, 117–18, 163, 271; and labor tax, 193, 224; planning compared to Aztecs, 132; and relocation of populations, 111, 204; and road system, 114, 162; and terracing on royal estates, 160–1. *See also* Andes
- Inomata, Takeshi, 14, 25, 301
- insignia, and group identification in Inka state, 111–12
- Institute for the Comparative Study of Civilisations (Oslo), 7
- intellectual history, and studies of early China, 175
- Inuits (Canada), 220–1
- inventories: and bookkeeping in Aztec warehouses, 152–3; and bookkeeping in Egypt, 70
- investiture, records of in royal archives of Western Zhou, 184–8, 235
- irrigation, and early state in Mesopotamia, 57
- Jackson, Sarah, 162
- James, T. G. H., 102
- Jiangsu Yinwan (Han empire), 232–3
- Jijiu pian* (“Bamboo Bundles for Quick Reference”), 284–5, 288, 293
- Julien, Catherine J., 109, 110
- Kahun (town, Egypt), 90, 91–3, 117
- Katz, Dina, 34
- Keightley, David N., 183
- Kelley, David, 125
- Kemp, Barry, 11, 13–14, 38, 75–6, 91, 117, 173, 175, 242
- Kerr, Justin, 164
- Khentika (vizier, Egypt), 101–2
- khipu* (Inka), 105, 107–10, 112–13, 117–18, 271
- King List of Ugarit (Mesopotamia), 32, 34
- king lists: audience for, 39, 303; and legitimation of state in Central Mexico, 31–2, 243; and legitimation of state in Egypt, 21–4, 39, 302; and legitimation of state in Maya lowlands, 24–8, 39, 267; and legitimation of state in Mesopotamia, 32–9, 302; mummies and mummy bundles in Andes as form of, 28, 29, 39; Shang dynasty and transmission of by Sima Qian, 302
- kings and kingship: accounting records and knowledge of available resources, 64; depictions of in act of writing in Egyptian representational art, 87; intervention of in labor disputes in Egypt, 86–7; royal display and creation of elite group identity, 301–4; as symbol of community in early state, 2
- kinship: and household censuses by Aztecs, 134; and inheritance of land in

- Warring States and Han periods, 227–9;
and use of terms in Shang king list, 44.
See also household; king lists
- kispu* ceremony (Mesopotamia), 34, 35
- knowledge: domains of and definition of
state, 2; and onomastic lists in Egypt, 307;
and use of written lists by early states, 5
- Koontz, Rex, 14
- kudurru*s, as administrative documents
in Mesopotamia, 82–4, 171, 197,
198, 209
- labor: and administration of Inka state farms,
106–7; and construction of pyramids in
Egypt, 86, 220, 221, 222–3; and distribution
of duties by Inka state, 109–11; and
extraction of wealth by early states, 55–6,
305–6; and extraction of wealth by state
in Mesopotamia, 59, 60; and intervention
of kings in disputes in Egypt, 86–7; and
Office of Labor in Egypt, 87, 89; sexual
division of in Inka empire, 112; and state
farms in Anyang, 181; and taxation in
Inka empire, 193, 224; and tribute in Aztec
empire, 151; Warring States period and
building of mausoleum of First Emperor of
Qin, 220, 221, 222–3
- Lai pan* (Western Zhou bronze vessel), Plate
VIII, 48–9, 51
- land registers, and administrative records in
Egypt, 77, 79, 181
- landscapes, and boundaries of Maya
city-states, 170–4
- land tenure: allocation and extraction of
wealth by state in Mesopotamia, 56–7,
58, 59; and extraction of wealth by state
in Maya lowlands, 154–5; institutional,
communal, and private forms of in Egypt,
69; local communities and allocation of by
Inka state, 105; and pictorial bookkeeping
by Aztecs, 133–9; and transaction records
in Egypt and Mesopotamia, 80–5, 187,
195, 227; and use of terms *rent* and *tax*, 55;
Warring States period and allocation of,
225, 227–9; Western Zhou and allocation
of, 193–9
- language: education of scribes in Andes
and Inka, 271, 272; education of scribes
in Mesopotamia, 249; and Maya dialects,
170; scribes and study of Sumerian, 247–8,
249, 254–5
- Larsa, Dynasty of (Mesopotamia), 36
- La Ventilla (Teotihuacan), 122, 123, 124
- Leeming, Frank, 193–5, 225
- legal documents, and transaction records in
Egypt, 80–5
- letters and letter writing, and royal decrees
in Mesopotamia and Egypt, 87
- Lévi-Strauss, Claude, 4, 5
- Lewis, Mark, 11–12, 215
- lexical lists, and education of scribes, 241–4,
306–7. *See also* word lists
- liang ren* (surveyor, Warring States
period), 199
- Li Feng, 11
- Li ji* (Warring States period), 231
- Li Ling, 286, 287
- Lipit-Eshar, King (Mesopotamia), 291, 295
- literacy: and class in ancient societies, 303;
and elites in Egypt and Western Zhou, 292
- literary texts, and education of scribes in
Mesopotamia, 257. *See also* poetry
- Liu Bang (founder of Han empire), 236, 237
- Liu Li, 11
- Loewe, Michael, 18
- Luft, Ulrich, 93
- Lunyu* (*The Analects [of Confucius]*), 288
- Machiavelli, Niccoló, 3
- Maguey Plan (Aztec), 129, 130, 131,
132, 133
- Manco Inka, 30
- Mandate of Heaven doctrine (China), 2, 45–7,
50–2, 184
- Maništušu (Sargonic king), 82
- Mann, Michael, 8
- Mao Gong ding* inscription (Western
Zhou), 187
- map(s). *See* cartography
- Mapachtepec (Mexico), 122–3
- Map Chamber (Western Zhou), 198
- Martin, Simon, 269
- mathematics: and education of scribes
in Mesopotamia, 258; and standard
rates used by Mesopotamian scribes,
66. *See also* decimal system; numbers;
vigesimal strategy
- Maticula de Tributos, 146. *See also* codices
- Mawangdui Tomb No. 3 (Western Han
period), 203–4, 205, 206
- maxim collections, and education of scribes
in early China, 286–7
- Maya, and ancient writing: and border
control, 164–70, 199; chronology and
culture areas of early states, 14–18; cities
of compared to Erlitou, 178; and education
of scribes, 267–70; estimates of population,
177; and ethnic enclave in Teotihuacan,

- Maya, and ancient writing: and border control (*cont.*)
 121; and extraction of wealth by state, 154–74; genealogy and understanding of kingship in, 21; and legitimation of state, 24–8, 39, 302–3; Olmec and development of writing system of, 156, 308; and process of urbanization, 156, 188
- McAnany, Patricia, 154–5, 161, 170, 171
- McDowell, Andrea, 267
- measurement, standardization of in Western Zhou, 195
- Mencius (Warring States period), 193
- Mesoamerica, chronology and culture areas of early states in, 14–18. *See also* Central Mexico; Maya
- Mesopotamia, and ancient writing:
 accountability and responsibility as functions of administrative documents in, 63, 183; bookkeeping and invention of writing in, 307; and boundary markers, 100, 171; and census as basis for assessing labor duties, 107; census compared to Egypt, 85–6; census compared to Inka, 112, 113; census and naming practices in, 191, 214; chronology and culture areas of early states in, 14–18; cities of compared to Erlitou, 178; and control of craft workshops, 119; and control of officials, 234; and education of scribes, 241–58, 262–3, 267, 269, 272–3, 285–300; and extraction of wealth by state, 56–69, 304; and kudurrus, 82–4, 171, 197, 198, 209; and labor expenses for provincial administration, 151; and land tenure systems, 105, 107; and land transaction records, 80–5, 187; and legitimation of state, 32–9, 302–4; and poetry, 263; and role of writing in political interaction, 156; and royal display texts, 210, 302; and sexagesimal system, 244; symbolic value of bookkeeping compared to Egypt, 101; and treaties, 163; workshops and accounting in Ur III state, 216
- Metjen (Egypt), 80–1, 84
- Mexico. *See* Aztecs; Central Mexico; Maya
- Michalowski, Piotr, 248, 249
- Middle Kingdom (Egypt), and
 bookkeeping, 86–93
- migration, as patterned human behavior
 with discernible structure, 188, 189.
See also population; resettlement
- milcolli* register (Aztec), 139
- military: and accounting in Warring States period, 211–14; and census tablets in Mesopotamia, 67; and colonization in Western Zhou, 188–93; and education of scribes in Central Mexico, 270; and rationing in Inka empire, 114.
See also warfare
- mingshu* (population register), 230, 231
- Miscellanies* (Egypt), 263, 264
- mit'a* (labor tax, Andes), 107
- Mixtec (Mexico), 32, 121
- mobility, of Maya commoners, 164.
See also resettlement
- Molina, Christoval de, 28, 29
- Morris, Craig, 117
- mortuary cult, and funerary estates in Egypt, 76
- Motecuhzoma (Aztec ruler), 152, 270
- mummies and mummy bundles: and royal ancestors of Maya, 28; of royalty in Andes as form of king list, 28, 29, 39
- murals: and recording systems of Teotihuacan, 122; and tribute lists in Maya lowlands, 163–4
- Murra, John Victor, 107
- Murúa, Martín, 271
- name(s), and naming: and household lists in Egypt, 94; importance of to Classic Maya, 267; and invention of writing, 307–8; in *Jijiu pian* of Han period, 285; of laborers in Egypt, 87, 89, 191, 226; and laborers in Mesopotamia, 59, 191; and lexical lists, 242; in Warring States period, 214–21.
See also place names
- name glyphs: and Central Mexico, 31; and Gebelein texts in Egypt, 86; and Maya, 27, 39
- Nanshe and the Birds* (Mesopotamia), 290–1
- Naranjo (Maya), 162
- Narmer, King (Egypt), 21, 24
- Narmer macehead (Egypt), 74
- nationalism, and group identity in early states, 5
- Native Americans, and Dawes Act, 225
- Nauri Decree (Egypt), 210
- Nazi-Maruttaš (Mesopotamia), 83–4
- Neo-Assyrian empire, 68
- neo-Confucianism, 288
- Neolithic villages (China), and protective ditches, 192
- New Kingdom (Egypt): and bookkeeping, 93–105; and king lists, 24
- New Year ceremony (Han period), 235

- Nezahualcoyotl (Aztec ruler), 153
 niche stones (Egypt), 74–5
 Nimaathapi, Queen (Egypt), 69
 Nippur (Mesopotamia), 249, 250, 251, 252, 253, 257, 269, 292
 Nisaba (Mesopotamian goddess of scribes), 256
 Nissen, Hans, 4, 8, 248
 Northern Dynasties (A.D.420–589), 304
 numbers: and content of ancient tablets, 244; cult of in China and Egypt, 235. *See also* mathematics
- Odes* anthology (Warring States period), 42, 288, 289–90, 292–3, 295, 296, 298, 299, 300
 offering lists, and bookkeeping in Egypt, 74–6
 Ollantaytambo (Inka royal estate), 160, 161
 Olmec (Mexico), 156, 308
 onomastica: and education of scribes in Egypt, 259–62, 264, 286, 307, 308; and hypothesis on origin of writing, 243
 oracle bone inscriptions, and Anyang, 44–5, 180, 181, 214–15, 275
 oral narratives and tradition: and boundary markers of Inka state, 105, 106; and king lists, 39. *See also* speech
 Otomi (Central Mexico), 134
 outer provinces, of Aztec empire, 144, 145, 151–2, 164
 overseers, of labor in Mesopotamia, 59
 oxen, and agriculture in early Mesopotamia, 57
- Palermo Stone (Egypt), 70, 79, 80, 84, 86, 104–5, 195
 papyrus, and bookkeeping in Egypt, 70–4. *See also* Brooklyn Papyrus; Gebelein papyri; Papyrus Harris I; Wilbour Papyrus
 Papyrus Harris I (Egypt), 96–7, 99, 102–4, 185, 235
 Parsons, Jeffrey, 126, 195
 passports, and Han empire, 169, 207, 211
 Pasztory, Esther, 125
 Peet, T., 94
 Petexbatun (Maya), 171
 Petrie, Flinders, 21
phyle system, in Egypt, 117
 pictorial recording systems, and Aztecs, 32, 133–9, 153
 Piedras Negras (Maya), 157, 165, 269
pik (pan-Mesoamerican measurement unit), 163
 Pines, Yuri, 203
- Pizarro, Hernando, 118
 place names, and topographical maps in Warring States period, 203
 planning: and purpose of accounting in Mesopotamia, 63–4; of Tenochtitlan by Aztec state, 132–3; of Teotihuacan, 126; of towns and household registration in Egypt, 91–3
 Plaza de los Glifos (Teotihuacan), 123, 124, 125
 poetry, and education of scribes, 262, 289–92
 police function: of accounting in Classical world, 63; of household lists in Egypt, 93–5
 politics, and city-states in Late Classic Maya period, 155–7. *See also* state
 Poma, Guamán, 29, 114, 117
 population: and epidemic diseases in Central Mexico, 134; estimates of Maya, 177; estimates of urban in Erlitou, 177; movements of in Warring States period, 204, 207–10. *See also* migration
 Postgate, J. N., 9, 13–14, 64
 potsherds, survival of early writing on, 276, 277
 power. *See* control
 “Praise of Lipit-Eishtar” (Mesopotamia), 255–6
Primeros Memoriales, 31–2
The Prince (Machiavelli 1532), 3
 property register, and Aztecs, 131
 proto-bureaucracy, of Anyang, 183
 proto-writing, 4
 proverbs, from Mesopotamia, 255, 286, 288
pucullo (ancestral crypts, Inka), 28
 pyramids, labor for construction of, 86, 220, 221, 222–3
- Qaa, King (Egypt), 23, 24
 Qatna (Syria), 34, 35
Qian zi wen (“The Thousand-Character Classic”), 277, 278
 Qin state. *See* Warring States period
 Qiu Wei (Western Zhou), 215
 quality control, and inscriptions on weapons in Warring States period, 216
 Quetzalcoatl (Aztec god), 270
 Quirigua (Maya), 155
 Quirke, Stephen, 88, 93
- Ramesses II (Egypt), 186
 Ramesses III (Egypt), 96, 102–4, 165, 167, 185, 292
 Ramesses IV (Egypt), 104

- Ramesses V (Egypt), 96
rationing and ration systems: and budgeting in Mesopotamia, 61; and budgeting in Warring States period, 229–30, 231; as system of social welfare, 305
receipt, as common form of administrative document, 117–18
reciprocity, and extraction of wealth by early states, 56
Redford, Donald, 24
religion: and administrative needs of early states, 55; and bureaucracy in Egypt, 76–7; Maya scribes and specialization in realm of gods, 269; priests and education of scribes in Central Mexico, 270. *See also* Mandate of Heaven doctrine
reports: as function of early writing, 104; Han empire and submission of, 233, 234, 235; in writing as quintessence of bureaucracy, 183; punishment for failure to provide in early China, 65
representational art, in early China, 186, 302
Resseneb (son of vizier, Egypt), 87, 88
resettlement, and long-distance relocation of ethnic groups by Inka state, 111, 204. *See also* migration
rhyme, and *Cangjie pian*, 284
road system, and Inka empire, 114, 162
Robertson, Donald, 131, 169–70
Rowe, John, 30, 107, 112
“royal strategy,” and planning of Teotihuacan, 126
- Sahagún, Bernardino de, 31–2, 152
Samsuiluna (Mesopotamia), 67
San Bartolo (Maya), 156
San Shi pan/*Ze Ren pan* inscription (Western Zhou), 197–8
San state (Western Zhou), 198
Saqqara (Egypt), 78, 79, 80
Sargon, King (Assyria), 68
Satire on the Trades (Egypt), 264, 265
Sayil (Yucatan), 172
Schaberg, David, 288, 293, 294, 295
Scott, James, 3, 12, 111, 176, 195, 214, 224, 226, 230
scribes: as interaction zone between populace and state, 69; modern versus ancient implications of term, 241; training of as indispensable to writing system, 241; and written king lists, 38. *See also* education
script community, 6, 307
seal impressions (Egypt), 23–4, 77–8
- Selected Works of Chairman Mao* (little red book), 288
Semna fort (Egypt), 167, 168, 169, 210
sentences, and education of scribes in early China, 286–9
Senusret II, King (Egypt), 90
Senusret III, King (Egypt), 165, 169
Seti I (Egypt), 210, 302
sexagesimal system, in Mesopotamia, 244
shang da fu/ren text (Dunhuang), 276–7
Shang dynasty: and hymns in *Odes*, 292–3; and Mandate of Heaven, 50. *See also* Anyang; Shang king list
shang ji (annual reporting), 233
Shang king list, 44–52, 302
Shang Yang (Qin state), 212, 225
Shanxi Changping (battle in Warring States period), 212
Sharlach, Tonia, 151
Shaughnessy, Edward L., 196
Shi ji (Historical Records), 40, 45–7
Shi Qiang pan (Western Zhou), Plate VII, 47–50
Shi You (Han period), 285
Shi Zhou pian (Han period), 280–1, 282, 300
signs, and lists as building blocks of writing systems, 243–4, 308. *See also* symbols and symbolism
silk, and Qin maps, 204
Sima Qian, 40, 45–7, 49–52, 204, 212–14, 236, 302
Sinuhe (Egypt), 167
si xian (Warring States period), 199
Skinner, Quentin, 2
Smith, William Stevenson, 75
Sneferu, King (Egypt), 84, 85, 164
soil types, and glyphs in Aztec records, 139, 141
Southeast Asia: destruction of state records by peasantry in colonial, 69; Maya city-states compared to precolonial, 167
Spanish, and colonial administration of former Inka state, 107–8, 111, 113
speech, art of in Central Mexico, 270. *See also* oral narratives and tradition
Spring and Autumn period (770–476 B.C.), 199, 235
stairways, and Maya king lists, 24, 25
standardization: and Aztec tax tables, 142; of measurement in Western Zhou, 195; of tribute collection in Aztec empire, 151; of writing systems, 307–8
state: chronology and culture areas of early, 14–18; and city-state model, 178;

- comparisons of modern and ancient, 13; and cross-cultural conclusions on education of scribes, 306–7; definition of, 2, 12; and establishment of permanent family names, 214; and extraction of wealth in Andes, 105–21, 305; extraction of wealth as central concern of, 55–6; and extraction of wealth in Central Mexico, 121–54; and extraction of wealth in early China, 175–237, 305; and extraction of wealth in Egypt, 69–105; and extraction of wealth in Maya lowlands, 154–74; and extraction of wealth in Mesopotamia, 56–69, 304; introduction to role of writing in, 1–6; legitimation of in Andes, 28–31, 39, 303; legitimation of in Central Mexico, 31–2, 39; legitimation of in early China, 40–52, 302–4; legitimation of in Egypt, 21–4, 39, 302; legitimation of in Maya lowlands, 24–8, 39; legitimation of in Mesopotamia, 32–9, 302–3; prominence of writing in royal display and creation of elite group identity, 301–4; and use of writing for control, 211. *See also* kings and kinship; politics
- state farms: and Anyang, 181; and Inka empire, 105–14, 115
- state spaces, 111
- “Statute for forming arable plots” (*Wei tian li*, Qin state), 224–5
- Steinkeller, Piotr, 65, 68, 69
- stela, as boundary markers in Egypt, 100
- Stela of the Vulture (Mesopotamia), 163
- Step Pyramid of Djoser (Egypt), 24
- stone sickles, 181
- storage: lack of archaeological evidence for in Mesopotamia, 65; and Middle Kingdom town of Kahun in Egypt, 90; and storehouses in Inka empire, 113–14, 115
- strategic provinces, of Aztec empire, 151
- Stuart, David, 162, 169–70, 174, 267
- A Study of Writing* (Gelb 1963), 7–8
- subsistence fields, and Inka state farms, 106
- Sugiyama, Saburo, 126
- Šulgi, King (Mesopotamia), 248, 295, 296–7, 299, 300
- Sumerian King List, 2, 32, 36–8, 39
- Sumerian language, 247–8, 249, 254–5
- surveys and surveying, and symbolic value of bookkeeping in Egypt, 101
- Syllable Alphabet B (Mesopotamia), 249
- symbols and symbolism, and power of bookkeeping in Egypt, 100–5. *See also* signs
- tablet houses (Mesopotamia), 245, 249
- tags: and administrative records in Egypt, 75, 77, 79; and Inuits in Canada, 220–1; and laborers in Qin empire, 220
- “Tale of the Two Brothers” (Egypt), 263
- Tang dynasty, 232, 293
- Taube, Karl, 122–5
- taxes and taxation: assessment of by Aztec state, 42–4, 139; and labor in Inka empire, 193, 224; systems of land tenure and use of term, 55
- The Teaching of King Merikare* (Egypt), 266
- Teaching of the Vizier Ptahhotep* (Egypt), 286
- Tecolote (Guatemala), 165, 166
- telpochcalli* (young men’s house, Central Mexico), 270
- Tenochtitlan: and *chinampa* farming, 126; and education of scribes, 270; and king lists, 31; settlement pattern of, 131–3. *See also* Central Mexico
- Teotihuacan (Mexico), 121–6
- Tepetlaoztoc (Mexico), 133, 139, 140, 142, 150
- termini*, and causeways of Maya cities, 158
- terraces and terracing: and Inka royal estates, 160–1; and Maya cities, 157–62
- Thruppe, Sylvia, 9
- Tikal (Maya), 27, 155, 156–7, 163, 177
- time: retrograde presentation of in Classic Maya, 24; and time depth of Maya city-states, 155–6; and tribute collection in Aztec empire, 151
- Tinney, Steve, 252
- Tiwanaku (Andes), 31
- tlaheulmatli* (surface area of field, Aztec), 139
- tlamatini* (priests, Central Mexico), 270
- tlaquahuatl* (measurement, Aztec), 142
- tomb U-j inscriptions (Egypt), 23, 70, 71, 73, 75, 77, 84, 179
- tools, for agriculture in Anyang, 181
- Topic, John, 119, 121
- topography, and maps: in Warring States period, 200–4, 205, 206; and Western Zhou, 193, 194
- town registers, and planning in Egypt, 95
- Townsend, Richard, 131
- transaction records, and legal documents in Egypt, 80–5
- transportation, and storehouses of Inka state, 113–14
- tribute: assessment and collection of by Aztecs, 144–54, 224; as different from rent and tax, 56; and extraction of wealth by state in Maya lowlands, 162–4
- Trigger, Bruce, 8, 154

- Triple Alliance (Tenochtitlan, Texcoco, Tlacopan), 126, 144–54
- Turin king list (Egypt), 37–8
- Tutankhamun (Egypt), 272
- Tu-ta-ti syllable list (Mesopotamia), 267
- Tuthmosis IV (Egypt), 100
- Twenty-Four Standard Histories (China), 40
- Twitchett, Denis, 18
- Uaxactun (Maya), 28, 29
- Umma (Mesopotamia), 151
- urbanization: process of in Maya region, 156, 188; Zhou colonization and processes of, 188. *See also* cities
- Urton, Gary, 5, 18, 118
- Uruk (Mesopotamia), 177–8, 241, 242
- Userkaf (Egypt), 79, 80, 84
- Van De Mieropp, Marc, 14, 66, 119
- van Driel, G., 304
- Veldhuis, Niek, 288–9, 292
- vigesimal strategy, and Aztec tax records, 142, 150
- Visicato, Giuseppe, 245
- walled settlements, in early China, 178, 199–200
- warfare, and censuses in early modern Europe, 224. *See also* defensive structures; military; weapons
- Wari (Andes), 31
- Warring States period: and beginning of reliance on documents for administration, 175; and codification of biographical history, 293; and extraction of wealth by state, 199–237; and legitimation of state, 46–7, 51. *See also* China
- Watt, Ian, 7
- wealth: extraction of by state in Andes, 105–21, 305; extraction of by state in Central Mexico, 121–54; extraction of by state in early China, 175–237, 305; extraction of by state in Egypt, 69–105; extraction of by state in Maya lowlands, 154–74; extraction of by state in Mesopotamia, 56–69, 304; role of writing in extraction of by state, 2–3, 55–6, 304–6
- weapons, and names of rulers in Warring States period, 216
- Weber, Max, 3, 6, 8, 9
- Wen, King (Western Zhou), 50, 295, 296, 297, 299, 300
- Westenholz, Aage, 245, 247
- Western Zhou: and education of scribes, 280–1, 298, 299; elites and literacy in, 292; and extraction of wealth by state, 184–99; and investiture ceremonies, 184–8, 235; and legitimation of state, 47–52, 303; and military, 224; and naming practices, 215. *See also* China
- Wilbour Papyrus (Egypt), 96–7, 99, 101
- Wilkinson, Toby, 79
- Williams, Barbara J., 139, 142
- wisdom texts, and education of scribes, 286, 288
- “witness-stela” (Egypt), 100
- women: and economic power in Han period, 228; education of in Andes, 271. *See also* gender
- word lists, and education of scribes, 259, 261–2, 280. *See also* lexical lists
- workshops: comparison between control of by Inka and Old World states, 119, 120; and weapons in Warring States period, 216–17. *See also* craft production
- Wright, Arthur, 288
- writing, ancient systems of: and definitions of key terms in comparative studies, 12; and extraction of wealth by state in Andes, 105–21, 305; and extraction of wealth by state in Central Mexico, 121–54; and extraction of wealth by state in early China, 175–237, 305; and extraction of wealth by state in Egypt, 69–105; and extraction of wealth by state in Maya lowlands, 154–74; and extraction of wealth by state in Mesopotamia, 56–69, 304; and importance of training of scribes, 241; introduction to role of in early state, 1–6; and legitimation of state in Andes, 28–31, 39; and legitimation of state in Central Mexico, 31–2, 39; and legitimation of state in early China, 40–52; and legitimation of state in Egypt, 21–4, 39; and legitimation of state in Maya lowlands, 24–8, 39; and legitimation of state in Mesopotamia, 32–9; and lexical lists, 243; names, lists, and invention of, 307–8; narrow and broad definitions of, 4; reports and main functions of, 104; royal display and creation of elite group identity, 301–4; state and education of scribes, 306–7; state’s use of for control, 211; and use of term *scribe*, 241
- written cadasters (Egypt), 97, 99, 100. *See also* cadastral maps and registers
- Wu, King (Western Zhou), 50, 190

- Xia (legendary dynasty in early China), 293
 Xiang Yu, General (Qin period), 236, 237
 Xiao He (Han period), 236–7
Xiaojing (*The Classic of Filial Piety*), 288
 Xiaotun (Anyang), 180
Xiao Yu ding inscription (Western Zhou period), 211–12
 Xinyang Dashigu (Erlitou period), 178
xiquipilli (numerical unit, Nahuatl), 163
 Xochimilco basin (Central Mexico), 128, 132
xue (schools, China), 275, 298
- Yacha (Peru), 111
yachawasi (special schools, Inka), 271
 Yang Lien-sheng, 231
 Yanshi (Erligang period), 179, 180
 Yaxchilan Hieroglyphic Stairway (Maya), 24
 Yax K'uk' Mo' (Maya), 26
 Yax Pasaj (Maya), 26
 Yi (territory of Western Zhou), 188–9
- Yi Hou Ze gui* inscription (Western Zhou), 188
 Yiluo River (China), 176
 Yinwan documents (Han period), 233, 235
 Yoffee, Norman, 2, 3, 9, 12, 39, 57, 178
 Yu, King (legendary founder of Xia dynasty), 293. *See also* Xia
 Yü Ying-shih, 13
- Zapotec (Mexico), 121
 Ze, Lord (Western Zhou), 188, 189, 198
zhang jiang (Warring States period), 199
 Zheng (Western Zhou), 189
 Zhengzhou (Erligang period), 42–3, 179, 275
 Zhou (Grand Scribe, Western Zhou), 280
 Zhou dynasty, 48, 49, 292, 297, 300
Zhou li (Warring State period), 199–200, 224
 Zhu Xi (neo-Confucianism), 288
 Zorita, Alonso de, 131, 133, 171
Zuozhuan (Warring States period), 227

