NORLD PREHISTORY

A BRIEF INTRODUCTION

Fourth Edition

Brian M. Fagan



WORLD PREHISTORY

A Brief Introduction

FOURTH EDITION

Brian M. Fagan University of California, Santa Barbara



An imprint of Addison Wesley Longman, Inc.

New York • Reading, Massachusetts • Menlo Park, California • Harlow, England Don Mills, Ontario • Sydney • Mexico City • Madrid • Amsterdam Editor-in-Chief: Priscilla McGeehon

Marketing Manager: Megan Galvin

Project Coordination and Text Design: York Production Services

Cover Designer/Manager: Nancy Danahy

Photo Researcher: Mira Schachne

Full Service Production Manager: Richard Ausburn

Senior Print Buyer: Hugh Crawford

Electronic Page Makeup: York Production Services

Printer and Binder: The Maple-Vail Book Manufacturing Group

Cover Printer: Coral Graphic Services, Inc.

For permission to use copyrighted material, grateful acknowledgment is made to the copyright holders on pp. 337–338, which are hereby made part of this copyright page.

Library of Congress Cataloging-in-Publication Data

Fagan, Brian M.

World prehistory: a brief introduction/Brian M. Fagan.-4th ed.

p. cm.

Includes bibliographical references and index.

ISBN 0-321-02365-X

1. Prehistoric peoples. 2. Anthropology, Prehistoric. 3. Human

evolution. 4. Antiquities, Prehistoric. I. Title.

GN740.F34 1998

930-dc21

...

98-35076 CIP

Copyright © 1999 by Lindbriar Corporation

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. Printed in the United States.

Please visit our website at http://longman.awl.com

ISBN 0-321-02365-X

12345678910-MA-01009998

Preface

olden pharaohs, lost cities, grinning human skeletons: archaeology is the Stuff of romance and legend! Many people still think of archaeologists as adventurers and treasure hunters, like Indiana Jones of Hollywood movie fame seeking the elusive Holy Grail. This enduring image goes back to the late nineteenth century, when archaeologists like Heinrich Schliemann fame could still find lost civilizations like Troy and excavate three royal palaces in a week. Today, few, if any, archaeologists behave like Indiana Jones. They are scientists, not adventurers, as comfortable in an air-conditioned laboratory as they are on a remote excavation. The development of scientific archaeology from its Victorian beginnings ranks among the greatest triumphs of 20th-century science. Archaeology has changed our understanding of the human experience in profound ways. A century ago, most scientists believed humans were no more than 100,000 years old. Today we know that our origins go back 5 million years. Our predecessors assumed the Americas were settled in about 8000 B.C. and that farming began around 4000 B.C. New excavations date the first Americans to at least 12,000 B.C. and the beginnings of agriculture to 8500 B.C. Most important of all, archaeology has changed our perceptions of ourselves, our biological and cultural diversity. Welcome to the fascinating world of archaeology!

The fourth edition of World Prehistory continues a long tradition of providing an interesting, jargon-free journey through the 5-million-year-old land-scape of the human past. I hope you enjoy your sojourn in its pages!

HIGHLIGHTS OF THE FOURTH EDITION

This is an exciting time to be writing about archaeology, for many scientific advances are changing our perceptions about the past. Accordingly, the fourth edition is somewhat longer than its predecessors, with expanded coverage of major theoretical issues and the early civilizations. The fourth edition contains important new discoveries about early human evolution, the late Ice Age, and the origins of agriculture. New and updated coverage of the field appears in

every chapter, with an up-to-date Guide to Further Reading at the end of the book along with Glossaries of Technical Terms and Archaeological Sites and Cultural Names.

Updating and Rewriting

- New perceptions of world prehistory. Chapter 1 includes new discussion of archaeology and alternative perspectives on the past, reflecting new thinking on this important topic.
- Early human evolution. Chapter 2 discusses the latest advances in the study of human origins, including the latest fossil discoveries in Ethiopia and Kenya, among them Ardipithecus ramidus, the earliest known human ancestor.
- Origins of modern humans. Chapter 3 covers new research into the controversial issue of the earliest modern humans and fresh perceptions of Neanderthal ancestry and behavior.
- Origins of food production. In Chapter 6, the fourth edition incorporates much-expanded coverage of the latest theories on the origins of agriculture and animal domestication. Chapter 7, which describes the first farmers, incorporates new dates for early agriculture obtained from accelerator mass spectrometry (AMS) radiocarbon dates.
- Origins of states and civilization. Chapter 9 has been expanded to include current theoretical debates on the origins of state-organized societies. Chapters 10 to 14 offer an up-to-date description and analysis of the first civilizations, with expanded coverage of ancient Egyptian civilization and of south and southeast Asian states. Chapters 12 and 13 offer more comprehensive analysis of highland and lowland Mesoamerican civilizations than in previous editions.
- Revision and updating throughout. The entire text and Guide to Further Reading have been revised and updated on a page-by-page basis. Over half the book has been completely rewritten for this expanded edition.

Boxes

Two types of in-text boxes enhance the book, designed to amplify the narrative:

- Discovery. These boxes include brief accounts of spectacular discoveries that have revolutionized our understanding of the past, such as Grotte de Chauvet, France, the Ice Man of the Alps, and the Lords of Sipán, Peru.
- Dating the Past. These boxes introduce key dating methods, such as radiocarbon and AMS dating.

In addition, Chapter 1 includes boxes on ethnographic analogy, classification of ancient societies, and chronological methods.

New and Revised Art Program

The fourth edition's art program has been expanded with new photographs and fresh or revised line art. The new illustrations provide additional background on recent discoveries, amplify the narrative, or replace older art with new pictures. Some expanded captions serve to integrate the illustrations more closely into the text.

ACKNOWLEDGMENTS

The fourth edition has benefited from the expertise of many colleagues, too numerous to list here. I am deeply grateful for their encouragement and assistance. I would like to thank the following reviewers for their help in revising the ninth edition. I appreciate their frank comments:

Anagnosti Agelarakis, Adelphi Univeristy Cliff Boyd, Radford University Charles Ellenbaum, College of DuPage Thomas Foor, University of Montana Alan McPherron, University of Pittsburgh Jane Peterson, Marquette University John Pryor, CSU-Fresno Anne Rogers, Western Carolina University

Lastly, my thanks to my editor of many years, Alan McClare, also to photographic researcher Mira Schachne, and the editorial and production staff at York Production Services. They have turned a complex manuscript into an attractive book and done all they can to minimize unexpected difficulties.

As always, I would be most grateful for criticisms, comments, or details of new work, sent to me c/o Department of Anthropology, University of California, Santa Barbara, CA 93108 (e-mail: bfagan@west.net).

Brian M. Fagan

A Note on Chronologies and Measurements

The narrative of prehistory in these pages is organized in as linear a fashion chronologically as is practicable. It is based on radiocarbon, potassium-argon, and tree-ring dates, as well as historical documents. Although every effort has been made to make dates accurate, many of them should be recognized for what they are—statistical approximations. The time scales of prehistory are presented in two ways:

- At the beginning of each chapter (except Chapters 1, 5, 8, and 13), a
 Timelines column shows the reader the relative position of the developments described in that chapter within the broad time frame of prehistoric times.
- Chronological tables placed at strategic points in the book provide a
 comparative view of developments in different areas of the world. Each
 is linked to its predecessors and successors, so that they provide background continuity for the narrative.

The following conventions are used:

- Dates before 10,000 years ago are expressed in years Before Present (B.P.)
- Dates after 10,000 years ago are expressed in years Before Christ (B.C.) or Anno Domini (A.D.).

Another common convention is B.C.E./C.E. (Before Common Era/Common Era), which is not employed in this book. By scientific convention, "present" is A.D. 1950.

Please note that all radiocarbon dates and potassium-argon dates should be understood to have a plus and minus factor that is omitted from this book in the interests of clarity. They are statistical estimates. Where possible, radiocarbon dates have been calibrated with tree-ring chronologies, which adds a substantial element of accuracy (see Chapter 1).

For tree-ring calibration of radiocarbon dates, see *Radiocarbon*, 1993. *Measurements*. All measurements are given in miles, yards, feet, and inches, with metric equivalents.

Contents

Preface xv

A Note on	Chronologies and Measurements xix
PART	1 PREHISTORY 1
CHAPTER	1 The Study of Human Prehistory 3
"In the	Beginning" 3 OVERY The Tomb of Tutankhamun, Egypt 4
	rchaeology 5
	ry, Archaeology, and World Prehistory 6
•	Developments in Human Prehistory 8
•	and Linear Time 9 Records, Oral History, and Archaeology 14
	g World Prehistory 16
	are 16
	History, Time and Space, and the "Myth of the Ethnographic
Present	
Cont	ext 18
Time	
Space	
	ng the Past 22
	ogy and the "Ethnographic Present" 22
	Process and Past Lifeways 24
	chanisms of Culture Change 25
	as Adaptation 27
	ilinear Cultural Evolution 27
	ral Traditions and Cultural Change 29 ent Social Organization 30
	•
_	les: Ideology and Interaction 32
	ogy and Beliefs 32 actions 33

PART 2 THE WORLD OF THE FIRST HUMANS 35

CHAPTER 2 Human Origins 37

The Great Ice Age (1.6 million to 15,000 years ago) 37

■ DISCOVERY The Leakeys and Zinjanthropus 38

Early Primate Evolution and Adaptation 40

The Order Primates 40

"Coming Down from the Trees" 41

The Fossil Evidence for Human Evolution

(4 million to 1.5 million years ago) 43

Australopithecus 44

■ Potassium Argon Dating 45

A Trio of Hominid Forms: Ardipithecus ramidus, Australopithecus anamensis, Australopithecus afarensis 45

Gracile and Robust Australopithecines 50

Homo babilis 50

Toolmaking and Early Human Behavior 53
The Archaeology of Early Human Behavior 56
The Mind of the Earliest Humans 58
The Development of Language 60
Social Organization 61

CHAPTER 3 African Exodus 62

Ice Age Background 62

■ DISCOVERY Eugene Dubois and Homo erectus 64

Homo erectus (c. 1.9 million to after 200,000 years ago) 65

The Earliest African Examples 65

Homo erectus Radiates Out of Africa 68

Homo erectus in Asia 69

The Lifeway of Homo erectus 70

The Issue of Big-Game Hunting 71

Bamboo and Choppers 74

Language 75

Archaic Homo sapiens (c. 400,000 to 130,000 years ago) 75

The Neanderthals (c. 150,000 to 32,000 years ago) 76

The Origins of Modern Humans (?c. 180,000 to 150,000

years ago) 82

Continuity or Replacement? 83

Molecular Biology and Homo sapiens 85

Ecology and Homo sapiens 86

Out of Tropical Africa 88

PART 3 THE BIRTH OF THE MODERN WORLD 89

CHAPTER 4 Diaspora 91

■ DISCOVERY Altamira Cave Paintings 93

The Late Ice Age World (50,000 to 15,000 years ago) 93

The Peopling of Southeast Asia and Australia

(45,000 to 15,000 years ago) 95

■ Radiocarbon Dating 97

Late Ice Age Europe: The Cro-Magnons

(40,000 to 15,000 years ago) 97

Subsistence 98

Cro-Magnon Technology 100

Cro-Magnon Art 102

Hunter-Gatherers in Eurasia (35,000 to 15,000 years ago) 105

East Asia (35,000 to 15,000 years ago) 106

Sinodonty and Sundadonty 108

Early Human Settlement of Siberia (?before 20,000

to 15,000 years ago) 108

The First Americans (?before 15,000 years ago to 9000 B.C.) 109

Settlement before 30,000 Years Ago? 110

Settlement after 15,000 Years Ago? 111

The Clovis People (c. 9200 to 8900 B.C.) 112

CHAPTER 5 The Origins of Food Production 115

The Holocene (after 10,000 B.C.) 117

Changes in Forager Societies 117

Social Complexity among Foragers 120

Theories of Farming Origins 121

Early Theories: Oases and Hilly Flanks 123

The Recovery Revolution 124

Multicausal Theories 124

Flotation and Botanical Remains 125

Population and Resources Theories 125

Accelerator Mass Spectrometry (AMS) Radiocarbon Dating 126

Ecological Theories 126
The Consequences of Food Production 127

The Consequences of Food Production 127 Nutrition and Early Food Production 130

CHAPTER 6 The Earliest Farmers 132

Old World: Domestication of Animals 133

Old World: Domesticating Wheat and Barley 134

Southwest Asian Farmers (c. 8000 to 5000 B.C.) 136

■ DISCOVERY Plastered Skulls at Jericho 139

Early Egyptian and African Farmers

(earlier than 6000 B.C. to 1000 B.C.) 140

European Farmers (c. 6500 to 3000 B.C.) 142

Early Agriculture in Asia (before 6000 B.C.) 145

Early American Agriculture (8000 B.C. onward) 148

Mesoamerica: Guilá Naquitz and Early Cultivation 149

Maize 149

Andean Farmers 152

CHAPTER 7 Chiefs and Chiefdoms 154

■ DISCOVERY Frank Cushing and the Zuni 155

Reciprocity and "Big Men" 155

Navigators and Chiefs in the Pacific (2000 B.C. to modern times) 158

The American Southwest (300 B.C. to modern times) 163

■ Dendrochronology (Tree-ring Dating) 164 Hohokam, Mogollon, and Anasazi 164

Moundbuilders in Eastern North America (2000 B.C. to A.D. 1650) 168

Adena and Hopewell 169

The Mississippian Tradition 171

PART 4 EARLY CIVILIZATIONS 177

CHAPTER 8 State-Organized Societies 179

What Is a State-Organized Society? 179

Cities 181

Theories of the Origins of States 183

The "Urban Revolution" 183

Early Ecological Models 183

Technology and Trade 185

Warfare 186

Cultural Systems and Civilization 187

Environmental Change 188

Social Approaches: Power in Three Domains 188

Factionalism and Ideology 191

The Collapse of Civilizations 193

CHAPTER 9 Mesopotamia and the East Mediterranean World 196

DISCOVERY The Flood Tablets 197 Origins (5500 to 3000 B.C.) 197

The First Cities: Uruk 199

Writing and Metallurgy 200 The Sumerian Civilization (c. 3100 to 2334 B.C.) 202 Akkadians and Babylonians (2334 to 1650 B.C.) 206 Hittites and Sea Traders (1650 to 1200 B.C.) 206 The Hittites 207 Uluburun and Maritime Trade 208 Iron Technology 209 Minoans and Mycenaeans (1900 to 1200 B.C.) 209 Minoan Civilization (1900 to 1400 B.C.) 209 Mycenaean Civilization (1600 to 1200 B.C.) 212 Sea Peoples and Phoenicians (1200 to 800 B.C.) 214 Assyrians and Babylonians (900 to 539 B.C.) 215 CHAPTER 10 Egypt and Africa Predynastic Egypt: Ancient Monopoly? 216 ■ DISCOVERY Giovanni Belzoni the Mummy Hunter 217 Dynastic Egyptian Civilization (c. 3000 to 30 B.C.) 220 Archaic Egypt and the "Great Culture" (3000 to 2575 B.C.) 220 Old Kingdom (c. 2575 to 2134 B.C.) 222 Middle Kingdom (2040 to 1640 B.C.) 224 New Kingdom (1530 to 1075 B.C.) 224 Late Period (1070 to 30 B.C.) 227 Egypt and Afrocentrism 228 Nubia: The Land of Kush (3000 to 663 B.C.) 228 Meroe and Aksum 230 Meroe (593 B.C. To A.D. 330) 230 Aksum (A.D. 100 to 1000) 231 Ancient African Kingdoms 231 The Spread of Iron (c. 500 B.C. to A.D. 250) 234 The Kingdoms of Ghana, Mali, and Songhay (c. A.D. 800 to 1550) 234 Great Zimbabwe (A.D. 1100 to 1500) 236 **CHAPTER 11** South, Southeast, and East Asia 238 South Asia: The Harappan Civilization (c. 2700 to 1700 B.C.) 238 ■ DISCOVERY Mortimer Wheeler at Mohenjodaro 240 Mature Harappan Civilization South Asia after the Harappans (1700 to 180 B.C.) 244 The Origins of Chinese Civilization (2600 to 1100 B.C.) 245 Royal Capitals 246 Royal Burials 248 Bronzeworking 248

Shang Warriors 249

The War Lords (1100 to 221 B.C.) 249

Southeast Asian Civilization (A.D. 1 to 1500) 251

The Rise of Mandalas 251

The Angkor Mandala (A.D. 802 to 1430) 253

CHAPTER 12 Lowland Mesoamerica 255

Beginnings: Preclassic Peoples in the Lowlands (2000 B.C. to A.D. 300) 255

■ DISCOVERY John Lloyd Stephens at Copan 256

The Olmec (1500 to 500 A.D.) 258

The Origins of Maya Civilization: Cuello

(before 1000 to after 400 B.C.) 260

Nakbé and El Mirador (c. 1000 to 300 B.C.) 261

Kingship, Glyphs, and Political Cycles 262

Maya Script 262

Political Cycles 263

Classic Maya Civilization (A.D. 300 to 900) 264

The Rise of Tikal and Uaxactun (c. 200 B.C. to A.D. 900) 264

Calakmul (Preclassic Times to A.D. 800) 266

Palenque (A.D. 431 to 799) 266

Copán (earlier than A.D. 435 to 800) 268

Cerén: Lives of Commoners 269

The Classic Maya Collapse (A.D. 900) 270

Postclassic Maya Civilization (A.D. 900 to 1517) 272

CHAPTER 13 Highland Mesoamerica 274

The Rise of Highland Civilization (2000 to 500 B.C.) 274

The Valley of Oaxaca 274

■ DISCOVERY Bernal Diaz and Tenochtitlan 275

Monte Albán (500 B.C. to A.D. 750) 276

Valley of Mexico: Teotihuacán (200 B.C. to A.D. 750) 278

The Toltecs (A.D. 650 to 1200) 281

Aztec Civilization (A.D. 1200 to 1519) 282

Tenochtitlán 284

The World of the Fifth Sun 285

The Aztec State 286

The Spanish Conquest (A.D. 1517 to 1521) 288

CHAPTER 14 Andean Civilizations 290

The Maritime Foundations of Andean Civilization 291

■ DISCOVERY Hiram Bingham at Machu Picchu 292

Coastal Foundations (2500 to 900 B.C.) 293

The Early Horizon and Chavin de Huantar (900 to 200 B.C.) 295

The Initial Period 297

The Coast (after 1800 B.C.) 297

Lake Titicaca Basin: Chiripa and Pukara (1000 B.C. to A.D. 100) 298

The Moche State (200 B.C. to A.D. 700) 298

The Middle Horizon: Tiwanaku and Wari (A.D. 600 to 1000) 302

Tiwanaku 303

Wari 304

The Late Intermediate Period: Sicán and Chimu (A.D. 700 to 1460) 304

The Late Horizon: The Inca State (A.D. 1476 to 1534) 306

The Spanish Conquest (1532 to 1534) 310

Epilogue 311

Guide to Further Reading 315 Glossary of Technical Terms 325 Glossary of Archaeological Sites and Cultural Terms 329 Photo Credits 337 Index 338

PART

1

PREHISTORY

It is a capital mistake to theorize before one has data. Insensibly, one begins to wish facts to suit theories, instead of theories to suit facts....

SHERLOCK HOLMES

A Scandal in Bohemia

The Study of Human Prehistory

Since time immemorial, humans have been intensely curious about their origins, about the mysterious and sometimes threatening world in which they exist. They know that earlier generations lived before them, that their children, grand-children, and their progeny in turn will, in due course, dwell on earth. But how did this world come about? Who created the familiar landscape of rivers, fields, mountains, plants, and animals? Who fashioned the oceans and sea coasts, deep lakes and fast-flowing streams? Above all, how did the first men and women settle the land? Who created them, how did they come into being? Every society has creation stories to account for human origins. However, archaeology and biological anthropology have replaced legend with an intricate account of human evolution and cultural development that extends back more than 2.5 million years. This chapter describes how archaeologists study and interpret the past.

"IN THE BEGINNING . . . "

We Westerners take the past for granted, accept human evolution as something that extends back many thousands, even millions of years. Science provides us with a long perspective on ancient times. In contrast, the story of Icanchu's drum is a classic origin myth of the cosmic fire told by the Mataco Indians from South America. Like all such accounts, the tale begins with a primordium (the very beginning) in which a mythic being, in this case Icanchu, works to create the familiar animals, landscape, and plants of the world, and then the human inhabitants. Icanchu, and his equivalents in a myriad of human cultures throughout the world, create order from primeval chaos, as God does in Genesis, Chapter 1.

¹Lawrence Sullivan, Icanchu's Drum (New York: Macmillan, 1988), p. 92.