Third Edition

The World A History

Volume 1 To 1500

Felipe Fernández-Armesto





The World

A History



VOLUME ONE to 1500

Third Edition

The World

A History

Felipe Fernández-Armesto

University of Notre Dame



Vice President, Product Development: Dickson Musselwhite

Executive Editor: Ed Parsons **Program Manager:** Deb Hartwell

Editorial Assistant: Amandria Guadalupe Executive Field Marketer: Wendy Albert Product Marketing Manager: Jeremy Intel

Managing Editor: Denise Forlow Project Manager: Lynne Breitfeller

Senior Operations Supervisor: Mary Fischer Senior Operations Specialist: Mary Ann Gloriande Manager, Visual Research and Permissions: Beth Brenzel

Digital Studios Director: Peggy Bliss

Digital Studios Project Manager: Liz Roden Hall Art Directors: Maria Lange/Kathryn Foot Cover Designer: Lumina Datamatics

Content and Editorial Development: Ohlinger Publishing Services

Full Service Vendor: SPi Global

Copyright © 2016, 2010, 2007 by Pearson Education, Inc. or its affiliates. All Rights Reserved. Printed in the United States of America. This publication is protected by copyright, and permission should be obtained from the publisher prior to any prohibited reproduction, storage in a retrieval system, or transmission in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise except as authorized for use under the product subscription through which this digital application is accessed. For information regarding permissions, request forms and the appropriate contacts within the Pearson Education Global Rights & Permissions department, please visit www.pearsoned.com/permissions/.

Acknowledgments of third party content appear here: on the appropriate text page or on pages 445–448, which constitutes an extension of this copyright page.

Pearson and Always Learning, and are exclusive trademarks in the U.S. and/or other countries owned by Pearson Education, Inc. or its affiliates.

Unless otherwise indicated herein, any third-party trademarks that may appear in this work are the property of their respective owners and any references to third-party trademarks, logos or other trade dress are for demonstrative or descriptive purposes only. Such references are not intended to imply any sponsorship, endorsement, authorization, or promotion of Pearson's products by the owners of such marks, or any relationship between the owner and Pearson Education, Inc. or its affiliates, authors, licensees or distributors.

Maps designed and produced by DK Education, a division of Dorling Kindersley Limited, 80 Strand, London WC2R ORL. DK and the DK logo are registered trademarks of Dorling Kindersley Limited.

Library of Congress Control Number: 2015943205



Volume 1 ISBN 10: 0-13-416235-8 ISBN 13: 978-0-13-416235-5

Brief Contents

The Big Picture The World in 1491 434

PAR	The Divergent Species: The Beginnings of	Div	ersity, ca. 160,000 to ca. 3,000 Years Ago 2
1	Of Ice and Mud: From Africa to the World, from Foraging to Farming 4	3	The Multiplication of Civilizations: Ambition and Instability 62
2	The Great River Valleys: Accelerating Change and Developing States 36		
	The Big Picture The World in 1000 B.C.E. 88		
PAR	The Age of Empires from 1000 B.C.E. to 20	0 c.1	E. 90
4	Rebuilding the World: Recoveries, New Initiatives, and Their Limits 92	6	The Great Empires: Cultural Exchange in Big States 148
5	The Great Schools: New Thinking in the Age of Sages 122		
	The Big Picture The World in 200 c.e. 178		
PAR	T III Fitful Transitions from the Third Century	to th	ne Tenth Century 180
7	Postimperial Worlds: Problems of Empires in Eurasia and Africa 182	9	Remaking the World: Innovation and Renewal on Environmental Frontiers in the Late First
8	The Rise of World Religions: Christianity, Islam, and Buddhism 214		Millennium 242
	The Big Picture The World in 1000 c.e. 274		
PAR	T IV Contacts and Conflicts, 1000 c.e. to 1200 c	C.E.	276
10	Contending with Isolation: Initiatives in the Eleventh and Twelfth Centuries 278	11	The Nomadic Frontiers: The Islamic World, Byzantium, and China 306
	The Big Picture The World in 1200 c.e. 336		
PAR	The Crucible: The Eurasian Crises of the T	[hirt	eenth and Fourteenth Centuries 338
12	The World the Mongols Made: Trans-Eurasian Links 340	14	Expanding Worlds: Recovery in the Late Fourteenth and Fifteenth Centuries 400
13	The Revenge of Nature: Plague and Cold in the Fourteenth Century 368		



Contents

Brief Contents

Contents

Maps Special Features Getting the Most Out of the Maps in <i>The World</i>		xiii xvii xviii	Introducing <i>The World</i> A Note on Dates and Spellings	xxiii xxx
Part I	The Divergent Species ca. 160,000 to ca. 3,000 \		Beginnings of Diversity, Ago	2
Fro	Ice and Mud: m Africa to the World, m Foraging to Farming	4	2 The Great River Valleys: Accelerating Change and Developing States	36
Mig 1.1.1 1.1.2 1.1.3 1.2 The Diff 1.2.1 1.2.2 1.2.3 1.3 The 1.3.1 1.3.2 1.4 The	Tillers' Environments Spread of Agriculture Europe and Central Asia	8 8 9 10 15 16 16 16 18 19 22 30 30 30	 2.1 Growing Communities, Divergent Cultures 2.1.1 Intensified Settlement and Its Effects 2.2 The Ecology of Civilization 2.3 The Great Floodplains 2.3.1 The Ecology of Egypt 2.3.2 Shifting Rivers of the Indus Valley 2.3.3 Nature in Early Mesopotamia 2.3.4 The Good Earth of Early China 2.4 Configurations of Society 2.4.1 Settlement and Labor 2.4.2 Politics 2.4.3 Expansion In Perspective: What Made the Great River Valleys Different? 	38 40 42 43 43 45 47 48 49 50 51 57
1.4.3 1.4.4 1.4.5 1.5 So V 1.5.1 1.5.2 1.5.3 1.5.4 1.5.5 1.5.6 1.5.7	Africa The Pacific Why Did Farming Start? Population Pressure The Outcome of Abundance The Power of Politics Cult Agriculture Climatic Instability Agriculture by Accident Production as an Outgrowth of Procurement	30 30 31 31 31 31 32 32 32 32 33 34	 3 The Multiplication of Civilizati Ambition and Instability 3.1 The Hittite Kingdom 3.1.1 The Growth of Trade 3.1.2 The Rise of the Hittites 3.1.3 Fragility and Fall: The End of Hatti 3.2 Instability and Collapse in the Aegean 3.2.1 Cretan Civilization 3.2.2 Mycenean Civilization 3.3 A General Crisis in the Eastern Mediterranean World? 3.3.1 The Egyptian Experience 3.3.2 The Roots of Instability 	62 64 64 66 69 70 72 73 73

 \mathbf{v}

vii

About Felipe Fernández-Armesto From the Author to the Reader

xx

xxi

3.5	The Extinction of Harappan Civilization 3.4.1 The Evidence of the Rig Veda 3.4.2 The Environment of Stress Conflict on the Yellow River 3.5.1 The Rise of Zhou 3.5.2 The Zhou Political System	74 75 75 76 76 77	3.7	State-Building in the Americas 3.6.1 Andean Examples 3.6.2 Developments in Mesoamerica Assessing the Damage 3.7.1 Retrenchment in Egypt In Perspective: The Fatal Flaws The Big Picture: The World in 1000 B.C.E. E. to 200 C.E.	78 78 82 84 84 85 88
_	Rebuilding the World:			The Structures of Thought	141
-	Recoveries, New Initiatives, and Their Limits	92	0.0	In Perspective: The Reach of the Sages	144
4.1	Trade and Recovery in the Middle East 4.1.1 The Phoenician Experience 4.1.2 The Assyrian Empire	94 94		The Great Empires: Cultural Exchange in Big States Routes That Drew the Old	148
4.2	4.1.3 The Babylonian Revival Greece and Beyond 4.2.1 The Greek Environment	99 101 101		World Together 6.1.1 The Sea Routes of the Indian Ocean 6.1.2 Land Routes: The Silk Roads	150 150 151
	4.2.2 Greek Colonialism4.2.3 Early Greek Society4.2.4 The Spread of State-Building and City-Building	102 103 104	6.2	Persia 6.2.1 The Persian Heartland 6.2.2 The Persian Government 6.2.3 The Persian—Greek Wars	154 155 156 157
	Empires and Recovery in China and South Asia 4.3.1 The Zhou Decline 4.3.2 The Indian Ocean: Relocated Centers of Culture The Frustrations of Isolation	108 108 109 112	6.3	 6.2.4 The Empire of Alexander the Great The Rise of Rome 6.3.1 The Roman Frontiers 6.3.2 Ruling the Empire 6.3.3 Imperial Culture and Commerce 6.3.4 The Celts 	157 159 159 161 162 164
	4.4.1 Developments in North America4.4.2 New Initiatives in AfricaIn Perspective: The Framework of Recovery	112 113	6.4	The Beginnings of Imperialism in India 6.4.1 Government 6.4.2 Asoka and His Mental World	
5	The Great Schools: New Thinking in the Age of Sages	122	6.5	Chinese Unity and Imperialism 6.5.1 Unity Endangered and Saved 6.5.2 The Menace from the Steppes	168 169 171
5.1	The Thinkers 5.1.1 The Jews 5.1.2 Secular Thinking	125 128 130	6.6	Beyond the Empires 6.6.1 Japan and Korea 6.6.2 The Western Eurasian Steppe	172 172 173
5.2	The Thoughts 5.2.1 Religious Thinking 5.2.2 Political Thinking 5.2.3 Challenging Illusion	130 131 133 135		6.6.3 Mesoamerica In Perspective: The Legacies The Big Picture: The World in 200 c.E.	173 175 178

Paı	ct III Fitful Transitions from t	he Th	nird C	entury to the Tenth Century	180
7	Postimperial Worlds: Problems of Empires in Eurasia			8.1.1 War 8.1.2 Trade	216 218
	and Africa	182	8.2	Monarchs and Missionaries	221
7.1	The Western Roman Empire			8.2.1 In Christendom	221
	and Its Invaders	186		8.2.2 In the Buddhist World8.2.3 The Margins of Christendom	225 228
	7.1.1 Changes in the Roman Empire	188		8.2.4 Islam and the Turks	230
	7.1.2 The "Barbarian" West	189	8.3	Trickle Down: Christianization	
7.2	Steppelanders and Their Victims	191	0.0	and Islamization	230
	7.2.1 China	191	0.4		
	7.2.2 India	193	8.4	Religious Lives: The World of Monks and Nuns	232
7.3	New Frontiers in Asia	193		8.4.1 Christian Monasticism	232
	7.3.1 Korea	193		8.4.2 Buddhist Monks	233
	7.3.2 Funan	194		8.4.3 Sufism	234
7.4	The Rise of Ethiopia	194		8.4.4 Religious Women	234
7.5	The Crises of the Sixth and Seventh			In Perspective: The Triumphs	
7.0	Centuries	196		of the Potential World Religions	235
7.6			9	Remaking the World:	
7.0	Justinian and the Eastern Roman Empire	197		Innovation and Renewal on	
	•			Environmental Frontiers in the	
7.7	The New Barbarians	198		Late First Millennium	242
7.8	The Arabs	199	0.4		
	7.8.1 Islam	199	9.1	Isolation and Initiative: Sub-Saharan	244
	7.8.2 The Arabs against Persia and Rome	201		Africa and the Americas	244 244
7.9	The Muslim World	202		9.1.1 African Geography9.1.2 American Geography	244
7.10	Recovery and Its Limits in China	204	9.2	The Islamic World and the Environment	
	7.10.1 Rise of the Tang	205			
	7.10.2 Empress Wu	206	9.3	Frontier Growth in Japan	257
	7.10.3 Tang Decline	206	9.4	India and China	258
7.11	In the Shadow of Tang: Tibet and Japan	207		9.4.1 India	258
	7.11.1 Tibet	207		9.4.2 China	259
	7.11.2 Japan	208	9.5	Southeast Asia	261
	In Perspective: The Triumph of Barbarism?	210	9.6	The Pacific	263
8	The Rise of World Religions:		9.7	The Frontiers of Christendom	267
	Christianity, Islam, and Buddhism	214	3.1		
0.4	•			In Perspective: The Limits of Divergence	270
8.1	Commerce and Conflict: Carriers of Creeds	216		The Big Picture: The World in 1000 c.E.	274
Paı	rt IV Contacts and Conflicts,	1000	C.E. to	o 1200 C.E.	276
10	Contending with Isolation:		10.1	American Developments:	
	Initiatives in the Eleventh			From the Arctic to Mesoamerica	281
	and Twelfth Centuries	278		10.1.1 Greenland and the North	281

	10.1.2	The North American Southwest and the Mississippi Region	283	11.1	The I	slamic World and Its Neighbors	309
	10.1.3	Mesoamerica	286		11.1.1	The Steppelanders	310
40.0					11.1.2	The Crusades	310
10.2		nd the Indian Ocean: Ethiopia,	207		11.1.3	The Invaders from the Sahara	314
	the K	hmer, and India	287		11.1.4	The Progress of Sufism	318
	10.2.1	East Africa: The Ethiopian Empire	287	11.2	The E	Byzantine Empire	
	10.2.2	Southeast Asia: The Khmer Kingdom	288		and I	ts Neighbors	318
	10.2.3	India: Economy and Culture	290		11.2.1	Byzantium and the Barbarians	319
	10.2.4	The Chola Kingdom	291		11.2.2	Basil II	320
10.3	Euras	sia's Extremities: Japan			11.2.3	The Era of Difficulties	321
		Western Europe	293		11.2.4	Byzantium and the Crusaders	323
	10.3.1	Japan	293		11.2.5	Byzantine Art and Learning	325
	10.3.2	Western Europe: Economics and Politics	295	11 2	Chin	a and the Northern Barbarians	326
	10.3.3	Western Europe: Religion and Culture	300	11.5	11.3.1		326
	In Per	spective: The Patchwork of Effects	303		11.3.1	The End of the Tang Dynasty The Rise of the Song and the Barbarian	320
11	TP1	NI I'. Fanctions				Conquests	327
TT		Nomadic Frontiers:			11.3.3	Economy and Society under the Song	329
		Islamic World, Byzantium,	• • •		11.3.4	Song Art and Learning	331
	and (China	306		In Per	spective: Cains and Abels	332
					The B	ig Picture: The World in 1200 c.E.	336
Par	t V	The Crucible: The Euras	sian (Crises	of t	he Thirteenth	
Par	t V	The Crucible: The Euras and Fourteenth Centuri		Crises	of t	he Thirteenth	338
		and Fourteenth Centuri		Crises	of t	he Thirteenth Moral and Social Effects	378
	The		es	Crises	13.2.2 13.2.3	Moral and Social Effects Medicine and Morals	378 379
12	The Trans	and Fourteenth Centurion World the Mongols Made: s-Eurasian Links	es 340	Crises	13.2.2 13.2.3 13.2.4	Moral and Social Effects Medicine and Morals The Jews	378
12	The Trans	and Fourteenth Centurion World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia	340 342	Crises	13.2.2 13.2.3	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague:	378 379 380
12	The Trans The N	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan	340 342 342	Crises	13.2.2 13.2.3 13.2.4 13.2.5	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants	378 379 380 381
12	The Trans	and Fourteenth Centurion World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia	340 342		13.2.2 13.2.3 13.2.4 13.2.5	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism	378 379 380
12 12.1	The Trans The N 12.1.1 12.1.2	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan	340 342 342 348		13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond	378 379 380 381 382
12 12.1	The Trans The N 12.1.1 12.1.2	and Fourteenth Centurical World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe	340 342 342 348		13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone	378 379 380 381 382
12 12.1	The Trans The N 12.1.1 12.1.2 The N	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes	340 342 342 348 350		13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India	378 379 380 381 382 383 384
12 12.1	The M 12.1.1 12.1.2 The M 12.2.1	and Fourteenth Centurical World the Mongols Made: S-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China	340 342 342 348 350 354		13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia	378 379 380 381 382 383 384 384
12.1 12.2	The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3	and Fourteenth Centurical World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia	340 342 342 348 350 354 355 356		13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2 13.3.3	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan	378 379 380 381 382 383 384 385 388
12 12.1	The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3 The I	and Fourteenth Centurical World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest	340 342 342 348 350 354 355 356 357	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2 13.3.3	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali	378 379 380 381 382 383 384 384
12.1 12.2	The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt	340 342 342 348 350 354 355 356 357 357	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2 13.3.3	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan	378 379 380 381 382 383 384 385 388
12.1 12.2 12.3	The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3 The I 12.3.1 12.3.2	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt Muslim India: The Delhi Sultanate	340 342 342 348 350 354 355 356 357 357 358	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2 13.3.3	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali	378 379 380 381 382 383 384 385 388 390
12.1 12.2	The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3 The I 12.3.1	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt Muslim India: The Delhi Sultanate	340 342 342 348 350 354 355 356 357 357	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I 13.3.1 13.3.2 13.3.3 13.3.4 The I	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali Pacific: Societies of Isolation	378 379 380 381 382 383 384 385 388 390 392
12.1 12.2 12.3	The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3 The I 12.3.1 12.3.2 Europ	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt Muslim India: The Delhi Sultanate	340 342 342 348 350 354 355 356 357 357 358	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2 13.3.3 13.3.4 The I	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali Pacific: Societies of Isolation Easter Island	378 379 380 381 382 383 384 385 388 390 392 393
12.1 12.2 12.3	The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3 The I 12.3.1 12.3.2 Euroj In Per	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt Muslim India: The Delhi Sultanate	340 342 342 348 350 354 355 356 357 357 358	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2 13.3.3 13.3.4 The I 13.4.1	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali Pacific: Societies of Isolation Easter Island New Zealand	378 379 380 381 382 383 384 385 390 392 393 393
12.1 12.2 12.3	The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3 The I 12.3.1 12.3.2 Europ In Period the	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt Muslim India: The Delhi Sultanate pe spective: The Uniqueness Mongols	340 342 342 348 350 354 355 356 357 357 358 359	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I 13.3.1 13.3.2 13.3.3 13.3.4 The I 13.4.1 13.4.2 13.4.3 13.4.4	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali Pacific: Societies of Isolation Easter Island New Zealand Ozette	378 379 380 381 382 383 384 385 390 392 393 393 394
12.1 12.2 12.3	The Trans The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3 The I 12.3.1 12.3.2 Europ In Person of the	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt Muslim India: The Delhi Sultanate pe spective: The Uniqueness Mongols Revenge of Nature:	340 342 342 348 350 354 355 356 357 357 358 359	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2 13.3.3 The I 13.4.1 13.4.2 13.4.3 13.4.4 In Per	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali Pacific: Societies of Isolation Easter Island New Zealand Ozette Chan Chan spective: The Aftershock	378 379 380 381 382 383 384 385 388 390 392 393 394
12.1 12.2 12.3	The Trans The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3 The I 12.3.1 12.3.2 Europ In Person of the Plagu	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt Muslim India: The Delhi Sultanate pe spective: The Uniqueness Mongols Revenge of Nature: ue and Cold in the Fourteenth	340 342 342 348 350 354 355 356 357 357 358 359	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I 13.3.1 13.3.2 13.3.3 13.3.4 The I 13.4.1 13.4.2 13.4.3 13.4.4 In Per	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali Pacific: Societies of Isolation Easter Island New Zealand Ozette Chan Chan spective: The Aftershock anding Worlds:	378 379 380 381 382 383 384 385 388 390 392 393 394
12.1 12.2 12.3	The I 12.3.1 12.3.2 Europ In Persof the Plague Centrol	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt Muslim India: The Delhi Sultanate pe spective: The Uniqueness Mongols Revenge of Nature: ue and Cold in the Fourteenth ury	340 342 342 348 350 354 355 356 357 358 359 364	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2 13.3.3 13.4.4 The I 13.4.2 13.4.3 13.4.4 In Per Expa	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali Pacific: Societies of Isolation Easter Island New Zealand Ozette Chan Chan spective: The Aftershock anding Worlds: very in the Late Fourteenth	378 379 380 381 382 383 384 385 390 392 393 394 394 396
12.1 12.2 12.3	The I 12.3.1 12.3.2 Europ In Persof the Plague Centre III 12.1 12.2 12.3 In Persof the III 12.3 In Persof the III III III III III III III III III I	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt Muslim India: The Delhi Sultanate pe spective: The Uniqueness Mongols Revenge of Nature: ue and Cold in the Fourteenth	340 342 342 348 350 354 355 356 357 357 358 359	13.3	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2 13.3.3 13.4.4 The I 13.4.2 13.4.3 13.4.4 In Per Expa	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali Pacific: Societies of Isolation Easter Island New Zealand Ozette Chan Chan spective: The Aftershock anding Worlds:	378 379 380 381 382 383 384 385 388 390 392 393 394
12.1 12.2 12.3 12.4 13.1	The Trans The N 12.1.1 12.1.2 The N 12.2.1 12.2.2 12.2.3 The I 12.3.1 12.3.2 Europ In Persof the Plagu Centr	and Fourteenth Centuric World the Mongols Made: s-Eurasian Links Mongols: Reshaping Eurasia Genghis Khan The Mongol Steppe Mongol World beyond the Steppes China Persia Russia Limits of Conquest Mamluk Egypt Muslim India: The Delhi Sultanate pe spective: The Uniqueness Mongols Revenge of Nature: ue and Cold in the Fourteenth ury	340 342 342 348 350 354 355 356 357 358 359 364	13.3 13.4	13.2.2 13.2.3 13.2.4 13.2.5 13.2.6 The I the P 13.3.1 13.3.2 13.3.3 13.4.1 13.4.2 13.4.3 13.4.4 In Per Expanded	Moral and Social Effects Medicine and Morals The Jews Beneficiaries of Plague: Women and Peasants Peasant Millenarianism Limits of Disaster: Beyond lague Zone India Southeast Asia Japan Mali Pacific: Societies of Isolation Easter Island New Zealand Ozette Chan Chan spective: The Aftershock anding Worlds: very in the Late Fourteenth	378 379 380 381 382 383 384 385 390 392 393 394 394 396

14.2	Ecological Imperialism in the Americas	407	14.5 The Beginnings of Oceanic Imperialism	422
	14.2.1 The Inca Empire14.2.2 The Aztec Empire	407 408	14.6 The European Outlook: Problems and Promise	427
14.3	New Eurasian Empires 14.3.1 The Russian Empire 14.3.2 Timurids and Ottomans	412 412 414		431 434
14.4	The Limitations of Chinese Imperialism 14.4.1 The Rise of the Ming 14.4.2 Zheng He	418 419 420	Glossary Credits Index	436 445 449



Maps

1.1	Migration, 100,000–40,000 Years Ago	6
1.2	The Ice Age	12
1.3	Preagricultural Settlements in the Middle East	17
1.4	Herders' Environments	20
1.5	Early Crop Sites and the Spread of Agriculture	24
1.6	The Spread of Bantu Languages	31
2.1	Coastal Peru, ca. 3500 B.C.E.	40
2.2	Intensified Settlements in Western Eurasia, 5000–2000 B.C.E.	41
2.3	The Great River Valleys	43
2.4	Ancient Egypt	45
2.5	Harappan Civilization	46
2.6	Early China	48
2.7	Early Mesopotamia	51
2.8	The Citadel at Mohenjodaro	57
3.1	Trade in Anatolia and Mesopotamia, 2000–1200 B.C.E.	66
3.2	The Eastern Mediterranean, ca. 2000–1200 B.C.E.	70
3.3	The Decline of Harappan Civilization	75
3.4	Zhou China	77
3.5	State-Building in the Americas, ca. 1500–1000 B.C.E.	79
3.6	Egypt and Nubia, ca. 1500 в.с.е.	85
4.1	The Middle East and the Mediterranean, ca. 1000–500 B.C.E.	96
4.2	China and South Asia, ca. 750 B.C.E.	109
4.3	World Geography and Communication/Cultural Exchange	114
4.4	North America, ca. 1000–500 B.C.E.	116
4.5	Africa, ca. 1000–500 B.C.E.	117
5.1	The Axial Age	124
5.2	Ancient Israel	128
5.3	The World According to Eratosthenes	139
5.4	Philosophical Schools in the Mediterranean Region, 600 B.C.E.—100 C.E.	142
6.1	Eurasian Trade, ca. 500 B.C.E.–100 C.E.	152
6.2	The Persian Empire	155
6.3	The World According to Hecataeus	157
6.4	The Empire of Alexander the Great	158
6.5	The Roman World	160
6.6	The Reign of Asoka, ca. 268–223 B.C.E.	166

6.7	China and Its Neighbors, 250 B.C.E.–200 C.E.	170
6.8	Monte Albán and Teotihuacán	174
7.1	The Maya and Teotihuacán	184
7.2	The Western Roman Empire and Its Invaders	187
7.3	The Barbarian West, ca. 526	190
7.4	Steppelanders and Asian Kingdoms, ca. 300–700 c.e.	192
7.5	Ethiopia, Byzantium, and the New Barbarians	195
7.6	The Muslim World, ca. 756	202
7.7	Tang China, Tibet, and Japan, ca. 750 c.e.	205
8.1	The Rise of World Religions to 1000 c.e.	217
8.2(a)	The Christian World, ca. 1000 c.e.	236
8.2(b)	The Muslim World, ca. 1000 c.e.	237
8.2(c)	The Buddhist World, ca. 1000 c.e.	237
9.1	The Axial Zone, ca. 1000	245
9.2	African Geography	245
9.3	Mesoamerica and the Andes, 300 c.e. to 1000 c.e.	248
9.4	Transmission of New Crops to the Islamic World, ca. 1000	256
9.5	China and Southeast Asia, ca. 1000	260
9.6	The Colonization of the Pacific to 1000 c.e.	264
9.7	The Expansion of Christendom, Eighth to Eleventh Centuries	269
10.1	Thule Inuit and Norse Migrations to ca. 1200	282
10.2	North America and Mesoamerica to ca. 1200	284
10.3	The Indian Ocean: From Ethiopia to Cambodia, ca. 1000–1200	289
10.4	Japan, Korea, and Northern China	293
10.5	Europe, ca. 1200	296
11.1	The Middle East and the Mediterranean, ca. 900–1100	308
11.2	The Crusades	313
11.3	The Almoravids and the Almohads	317
11.4	Byzantine Empire, ca. 1050	320
11.5	Song Empire, ca. 1150	328
12.1	Mongol Compaigns of the Thirteenth Century	346
12.2	European Travelers of the Mongol Roads, 1245–1295	349
12.3	The Travels of Rabban Bar Sauma, 1275–1288	353
12.4	The Delhi Sultanate	358
12.5	Latin Christendom, 1200–1300	360
12.6	Grassland Environments Compared	364
13.1	Climate Change in the Fourteenth Century	372
13.2	The Black Death, 1320–1355	376
13.3	Jews in Medieval Europe and the Middle East, 1100–1400	381

13.4	South and Southeast Asia, ca. 1350	385
13.5	Japan, ca. 1350	388
13.6	The Kingdom of Mali, ca. 1350	391
13.7	Societies of the Pacific, ca. 1400	392
13.8	Easter Island (Rapa Nui)	393
13.9	The Ottoman Empire, ca. 1400	396
14.1	Major African States, 1400–1500	403
14.2	The Aztec and Inca Empires, ca. 1500	409
14.3	The Russian Empire, ca. 1505	414
14.4	Timur and the Ottomans, ca. 1370–1500	416
14.5	Ming China and the Voyages of Zheng He	420
14.6	Winds and Ocean Currents Worldwide	424
14.7	European Oceanic Exploration up to 1500	426



Special Features

The Big Picture

Part I The World in 1000 B.C.E.

Part II The World in 200 C.E.

178

Part III The World in 1000 C.E.

274

Part IV The World in 1200 C.E.

336

Part V The World in 1491

434

A Closer Look

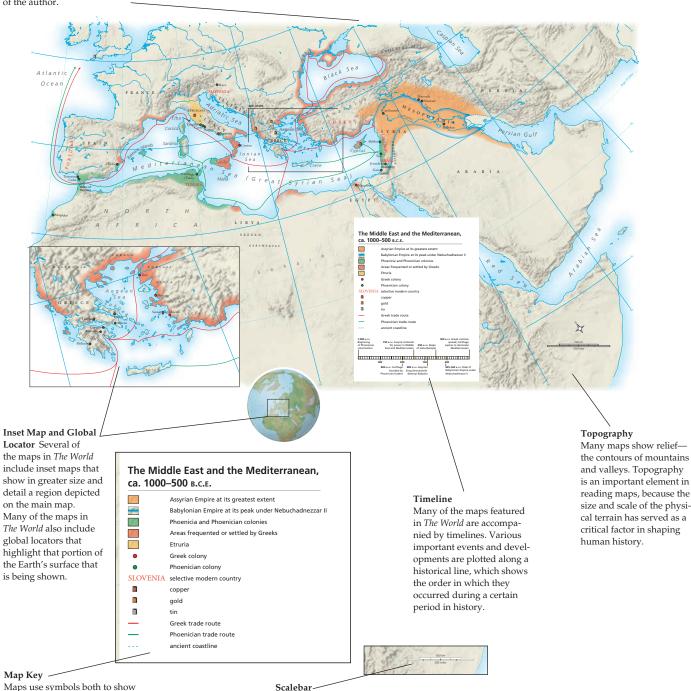
1 The Fertility Goddess of Çatalhüyük	29
2 A Board Game from Ancient Sumer	55
3 The Raimondi Stela at Chavín de Huantar	80
4 An Etruscan Sarcophagus	106
5 The Buddha's Footprints	127
6 The Great Stupa of Sanchi	167
7 The Quran	200
8 A Buddhist Pilgrim of the Seventh Century c.e.	220
9 Royal Bloodletting	251
10 Vézelay	301
11 A Cordovan Ivory Jar	315
12 A Mongol Passport	351
13 A Javanese Queen	387
14 A West African View of the Portuguese	406

Projection

A map projection is used to portray all or part of the round Earth on a flat surface, which cannot be done without some distortion. The projections in *The World* show the Earth at global, continental, country, and city scale and vary with each map. The map shown here uses a Robinson projection, which uses curvature to provide a good balance between the size and shape of the lands being depicted. As any number of projections could have been selected for each map in *The World*, great care was shown in choosing projections that best serve the goals of the author.

Getting the Most Out of the Maps in The World

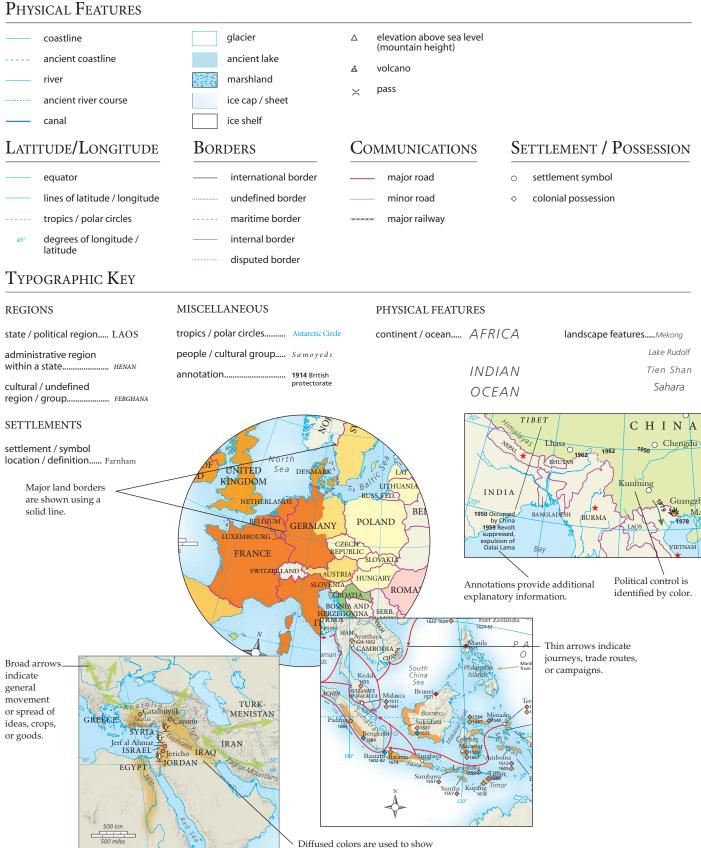
Maps use a unique visual language to convey a great deal of information in a relatively simple form. The maps in this book use a variety of different projections—techniques used to show Earth's curved surface on a flat map—to trace the history of humans from about 150,000 years ago to the present. This brief guide explains the different features on the maps in *The World*, Third Edition and how to interpret the different layers of information embedded in them.



information of a feature and to give information about that feature. The symbols are explained in the key that accompanies each map.

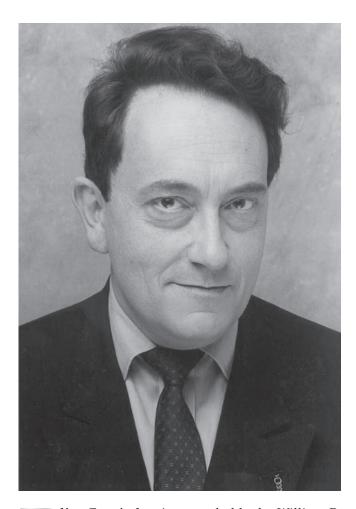
When using a map to work out what distances are in reality, it is necessary to refer to the scale of that particular map. Many of the maps in *The World* (such as the one shown here) use a linear scale. This only works on equal-area maps, where distances are true. On maps with projections that are heavily curved, a special "perspective-scale graphic" is used to show distance.

KEY TO MAP FEATURES IN THE WORLD, THIRD EDITION



a general region.

About Felipe Fernández-Armesto



Reynolds Chair of Arts and Letters at the University of Notre Dame. He has master's and doctoral degrees from the University of Oxford, where he spent most of his teaching career, before taking up the Chair of Global Environmental History at Queen Mary College, University of London, in 2000, and the Prince of Asturias Chair at Tufts University (2005–2009). Dr. Fernández-Armesto is on the editorial or advisory boards of many periodicals, including *Comparative Studies in Society*

and History, The Medieval Globe, Journeys, and Journal of Global History. Recent awards include Fellowship of the Academia Europea and the Cátedra Reina Victoria Eugenia of the Universidad Complutense, Madrid (2011), the World History Association Book Prize (2007), Spain's Premio Nacional de Gastronomía (2005, for his work on the history of food), and the Premio Nacional de Investigación (Sociedad Geográfica Española, 2004). Dr. Fernández-Armesto has had many distinguished visiting appointments, including a Fellowship of the Netherlands Institute of Advanced Study in the Humanities and Social Sciences and a Union Pacific Visiting Professorship at the University of Minnesota. He won the Caird Medal of the National Maritime Museum in 1995 and the John Carter Brown Medal in 1999 and has honorary doctorates from La Trobe University and the Universidad de los Andes. He has served on the Council of the Hakluyt Society, on the Committee of English PEN, and as Chairman of the PEN Literary Foundation. Dr. Fernández-Armesto's work in journalism includes regular columns in the British and Spanish press, and, among his many contributions to broadcasting, he was the longest-serving presenter of BBC radio's flagship current affairs program, Analysis. He has been short-listed for the most valuable literary prize in the United Kingdom.

Dr. Fernández-Armesto is the author, coauthor, or editor of 36 books and numerous papers and scholarly articles. His work has been translated into 28 languages. His books include *Before Columbus; The Times Illustrated History of Europe; Columbus; Millennium: A History of the Last Thousand Years* (the subject of a ten-part series on CNN); *Civilizations: Culture, Ambition, and the Transformation of Nature; Near a Thousand Tables; The Americas; Humankind: A Brief History; Ideas That Changed the World; The Times Atlas of World Exploration; The Times Guide to the Peoples of Europe; <i>Amerigo: The Man Who Gave His Name to America; Pathfinders: A Global History of Exploration;* and *Our America: A Hispanic History of the United States.*

From the Author to the Reader

Dear Reader,

History is stories. There are hundreds of tales in this book about real, flesh-and-blood people—commoners and kings, sons and mothers, heroes and villains, the famous and the failed. I try to combine them in two narratives that crisscross throughout the book. One is the story of how people connect and separate, as cultures take shape and influence and change one another. Alongside this story, there is another one of how humans interact with the rest of nature—other species, the unstable natural environment, the dynamic planet.

History is global. The whole world stays in view in almost every chapter. Readers can compare and connect what was happening in every region and every continent in every period—like observers from another galaxy, gazing at the world from outer space and seeing it whole.

History is universal. This book tries to say something about every sphere of life—including science and art, suffering and pleasure, thought and imagination.

History is a problem-posing discipline. This book is full of provocations, contested claims, debated speculations, open horizons, and questions too complex and too interesting to answer easily. I employ facts not just for their own sake but also to make my readers—and myself—think.

History is evidence. Readers of this book confront the sources on every page—the words, images, and objects people really used in the past—to reveal vivid pictures of what history looked like and what it felt like to live in the past.

History enhances life. I believe that a textbook can be entertaining, even amusing, as well as instructive and accessible; challenging without being hostile; friendly without being cloying.

History isn't over. This book is about how the world got to be the way it is, confronting present problems and perspectives for the future—which is, after all, only the past that hasn't yet happened.

Fripa Prison fred



Introducing the World

By the standards of astronauts, say, or science fiction writers, historians seem timid, unadventurous creatures who are only interested in one puny species—our species, the human species—on one tiny planet—our planet, Earth. But Earth is special. So far, we know of nowhere else in the cosmos where so much has happened and is happening today. By galactic standards, global history is a small story—but it's a good one.

Humans, moreover, compared with other animals, seem outward looking. Our concerns range over the universe, and beyond it, to unseen worlds, vividly imagined or mysteriously revealed. Not just everything we do but also everything that occurs to our minds is part of our history and, therefore, is part of this book, including science and art, fun and philosophy, speculations and dreams. We continually generate stories—new stories—at an amazing rate.

But the present passes instantly into the past. The present is always over, transformed into history. And the past is always with us, tugging at our memories, shaping our thoughts, launching and limiting our lives. Human history may seem narrowly self-interested, but it focuses on an undeniably riveting subject that is also our favorite subject—ourselves.

The Way of Humankind

Although the story of this book is a human story, it can never be merely human because, in isolation, humankind does not make perfect sense. Humans are animals, and to understand ourselves thoroughly and to know what, if anything, makes us unique, we have to compare ourselves with other animals. As with other animals, we are best studied in our habitats. We cannot begin to comprehend our own history except in context. Our story is inseparable from the climates where it takes place and the other life-forms that we depend on or compete with. We lord it over other species, but we remain linked to them by the food chain. We transform our environment, but we can never escape from it. We differentiate ourselves from nature—we speak loosely, for instance, of nature as if we were not natural creatures ourselves. We distance ourselves from our fellow animals by adopting what we think are unnatural behaviors—wearing clothes, for instance, cooking food, replacing nature with culture. In short, we do what is natural to us, and all the elaborate culture we produce generates new, intimate relationships with the environment we refashion and the life-forms we exploit.

We are exceptionally ambitious compared to other animals, consciously remodeling environments to suit our own purposes. We carve out fields, turn prairies into wheat lands, deserts into gardens, and gardens into deserts. We fell forests where we find them and plant them where none exist; we dam rivers, wall seas, cultivate plants, breed creatures, extinguish some species, and call others into being by selection and hybridization. Sometimes we smother terrain with environments we build for ourselves. Yet none of these practices liberates us from nature. As we shall see, one of the paradoxes of the human story is that the more we change the environment, the more vulnerable we become to ecological lurches and unpredictable disasters. Failure to establish the right balance between exploitation and conservation has often left civilizations in ruins. History becomes a path picked across the wreckage. This does not mean that the environment determines our behavior or our lives, but it does set the framework in which we act.

We are an exceptionally successful species in terms of our ability to survive in a wide range of diverse climates and landscapes—more so than just about any other creature, except for the microbes we carry around with us. But even we are still explorers of our planet, engaged in an ongoing effort to change it. Indeed, we have barely begun to change planet Earth, though, as we shall see, some human societies have devoted the last 10,000 years to trying to do it. We call ourselves lords, or, more modestly, caretakers of creation, but about 90 percent of the biosphere is too far underwater or too deep below the earth for us to inhabit with the technology we have at present: These are environments that humans have only recently begun to invade and that we still do not dominate.

If we humans are peculiarly ambitious creatures, who are always intruding in the life of the planet, we are also odd compared to other animals in the way we generate change among ourselves. We are an unpredictable, unstable species. Lots of other animals live social lives and construct societies. But those societies are remarkably stable compared to ours. As far as we know, ants and elephants have the same lifeways and the same kinds of relationships that they have had since their species first appeared. That is not to say animals never change their cultures. One of the fascinating discoveries in primatology is that apes and monkeys develop cultural differences from one another, even between groups living in similar and sometimes adjacent environments. In the forest region of Africa, chimpanzees have developed a termite-catching

technology. They "fish" with stripped branches that they plunge into termite nests but do not use tools to break open nuts. Chimps in neighboring regions are experts in nut-cracking, using rocks like hammers and anvils. In Sumatra in Indonesia, orangutans play a game—jumping from falling trees—that is unknown to their cousins in nearby Borneo. In Ethiopia in East Africa, males in some baboon groups control harems while others nearby have one mate after another. In some chimpanzee societies, hunting and meat-eating seem to have increased dramatically in recent times.

These are amazing facts, but the societies of nonhuman animals still change little compared with ours. So, along-side the theme of human interaction with the rest of nature is another great theme of our history: the ways our societies have changed, grown apart from one another, reestablished contact, and influenced one another in their turn.

The Way of This Book

This book, then, interweaves two stories—of our interactions with nature and of our relationships with each other. The environment-centered story is about humans distancing themselves from the rest of nature and searching for a relationship that strikes a balance between constructive and destructive exploitation. The culture-centered story is of how human cultures have become mutually influential and yet mutually differentiating. Both stories have been going on for thousands of years. We do not know whether they will end in triumph or disaster.

There is no prospect of covering all of world history in one book. Rather, the fabric of this book is woven from selected strands. Readers will see these at every turn, twisted together into yarn, stretched into stories. Human-focused historical ecology—the environmental theme—will drive readers back, again and again, to the same concepts: sustenance, shelter, disease, energy, technology, art. (The last is a vital category for historians, not only because it is part of our interface with the rest of the world, but also because it forms a record of how we see reality and of how the way we see it changes.) In the global story of human interactions—the cultural theme we return constantly to the ways people make contact with each another: migration, trade, war, imperialism, pilgrimage, gift exchange, diplomacy, travel—and to their social frameworks: the economic and political arenas, the human groups and groupings, the states and civilizations, the sexes and generations, the classes and clusters of identity.

The stories that stretch before us are full of human experience. "The stork feeds on snakes," said the ancient Greek sage, Agathon, "the pig on acorns, and history on human lives." The only way to build up our picture of human societies and ecosystems of the past is to start

with the evidence people have left. Then we reassemble it bit by bit, with the help of imagination disciplined by the sources. Anyone reading a history book needs to bear in mind that interpreting evidence is a challenge—half burden and half opportunity. The subject matter of history is not the past directly because the past is never available to our senses. We have only the evidence about it. This makes history an art, not a science, an art disciplined by respect for the sources, just as patterns impose discipline on poets or as the limitations of stagecraft discipline a play.

For a book like this, the sources set the limits of my imagination. Sometimes these are concrete clues to what people really did—footprints of their wanderings, debris of their meals, fragments of their technologies, wreckage of their homes, traces of diseases in their bones. Usually, however, the sources do not reflect the way things were but the way people wished to represent them in their arts and crafts and writings. In short, most sources are evidence of what happened only in the minds of those who made them. This means, in turn, that our picture of what went on in the world beyond human minds is always tentative and open to reinterpretation. The historian's job is not—cannot be—to say what the past was like, but rather, what it felt like to live in it because that is what the evidence tends to reveal.

One of the most admirable historians of the twentieth century, R. G. Collingwood, who was also a professor of philosophy at Oxford, said that "all history is intellectual history." He was right. History—even the environmental and cultural history that is the subject of this book—is largely about what people perceived rather than what they really saw, what they thought or felt rather than what happened outwardly, what they represented rather than what was real. Nineteenth-century philosopher Arthur Schopenhauer, one of the most pessimistic thinkers ever, who drew on Hindu and Buddhist writings for his inspiration, said that history's only subject was "humankind's oppressive, muddlesome dream." He thought that made history pointless. I think the dream makes it intriguing.

Because the evidence is always incomplete, history is not so much a matter of describing or narrating or question-answering as it is a matter of problem-posing. No one reading this book should expect to be instructed in straightforward facts or to acquire proven knowledge. The thrill of history is asking the right question, not getting the right answer. Most of the time, the most we can hope for is to identify interesting problems that stimulate debate. And we have to accept that the debate is worthwhile for its own sake, even if we have insufficient knowledge to reach conclusions.

There is no agreement among historians even about what are the right sorts of questions to ask. Some—including me—are interested in huge philosophical questions, such as how does history happen? What makes change? Is

it random or is it subject to scientific laws? Do impersonal forces beyond human control-environmental factors or economics or some world force called fate or evolution or God or progress—determine it? Or is change the externalization of ideas, which arise in minds and are projected onto the world through human action? And if it's a mixture, what's the balance?

At a slightly lower level of analysis, some historians ask questions about how human societies function. How and why do societies grow and fragment and take different forms? How do some people get power over others? How and why do revolutions happen and states and civilizations rise and fall?

Other historians like to pose problems about the present. How did we get into the mess we're in? Can we trace the causes of present dilemmas back into the past and, if so, how far? Why do we have a globally connected world without global governance? Why is peace always precarious? Why does ecological overkill menace our global environment? Having accounted—or failed to account for the present, some historians like to focus on the future. They demand lessons from history about how to change our behavior or cope with recurrences of past difficulties. Others, again, search to make sense of the past, to find an overall way of characterizing it or narrating it that makes us feel we understand it.

Yet others—the majority, in the current state of historical fashion, and again including me—like to study the past for its own sake and try to identify the questions that mattered to people at the time they first asked them. This does not mean that the sort of history found in this book is useless (although I do not necessarily think it would be a bad thing if it were). For to penetrate the minds of people of the past—especially the remote past of cultures other than your own—you have to make a supreme effort of understanding. The effort has dividends for the person who practices it. It enhances life by sharpening responses to the streetscapes and landscapes, art and artifacts, laws and letters we have inherited from the past. And understanding is what we need most today in our multicultural societies and multicivilizational world.

How This Book Is Arranged

After finding the time, accumulating the knowledge, posing the questions, stiffening the sinews, and summoning the blood, the big problem for the writer of a global history textbook is organizing the material. The big problem for the reader is navigating it. It is tempting to divide the world up into regions or cultures or even—as I did in a previous book—into biomes and devote successive chapters to each. You could call that "world history," if you genuinely managed to cover the world. But "global history" is different: an attempt to see the planet whole, as if from an immense, astral height, and discern themes that truly transcend geographical and cultural boundaries. In this book, therefore, I try to look at every continent in just about every chapter (there are a couple of chapters that, for reasons described in their place, focus only on part of the world). Each chapter concentrates on themes from the two great global stories: how human societies diverge and converge, and how they interact with the rest of nature.

Because history is a story in which the order of events matters, the chapters are grouped into parts, arranged chronologically. No one should be misled into thinking the parts are more than devices of convenience. Events that happened in, say, 1850, are in a different part of this book from those that happened in, say, 1750. But the story is continuous, and the parts could equally well be recrafted to start and end at different moments.

At every stage, some regions are more prominent than others because they are more influential, more populous, more world-shaping. For great stretches of the book, China occupies a lot of space, not for reasons of political correctness, but because China has, for much of the past, been immensely rich in globally influential initiatives. In the coverage of the last couple of hundred years, Europe and the United States get plenty of attention: this is not "Eurocentrism" or "Westocentrism" (if there is such a word), but an honest reflection of how history happened. But I have tried not to neglect the peoples and parts of the world that historians usually undervalue: poor and peripheral communities sometimes have a stunning impact on the world. The margins and frontiers of the world are often where world-changing events happen—the fault lines of civilizations, which radiate seismic effects.

Learning Features for the Third Edition of The World

The pedagogical program for the Third Edition of The World has been carefully devised to complement the narrative, reinforce important concepts, and prompt students to ask questions and formulate arguments.

Chapter-opening vignettes use dramatic and unusual stories to put the main themes of each chapter in relief.

Learning Objectives are provided at the outset of each chapter within the chapter outline and at the start of every major section within.

Global Dimensions, a set of global learning outcomes, are included at the end of each chapter's opening vignette to prepare the readers to think about the main topics covered within the chapter.

Making Connections tables throughout the text help students see the global linkages behind important historical developments. Praised by users of The World, every chapter includes at least one, and in some cases, as many as three, Making Connections tables. To further improve their visual efficacy, there are locator maps showing the regions examined in each Making Connections table.

A Closer Look sections, one per chapter, provide in-depth visual analysis of a specific cultural artifact. Praised by users for the way in which they connect the macro with the micro, detailed notes and tie lines draw the reader into close contact with the object, providing opportunities to pose larger questions. Users of *The World* have consistently cited the Closer Look sections as effective learning tools for their students. See page xvii for a complete listing.

Maps Widely hailed by users of the prior editions, the maps in *The World* employ innovative perspectives to help the reader see world history in a fresh and dynamic way. A range of different maps—from two-page thematic maps to spot maps that pinpoint specific events connect with the discussion on a variety of different levels. Each map has been extensively checked for accuracy and/or redrafted to improve its graphical presentation. The Third Edition includes 35 full-size maps and 102 locator maps. See page xiii for a listing of the maps.

The Big Picture Building on the success of the map program for the prior editions, each of the nine parts in The World ends with "The Big Picture," a two-page map of the world that graphically highlights an important, pivotal development in global history. Accompanied by text and questions, each Big Picture map provides the reader with a visual snapshot of what the world looked like at key intervals in human history. Interactive versions of the Big Picture maps can be found on MyHistoryLab. Short video clips of the author discussing developments in global history related to the Big Picture maps are also available on the MyHistoryLab that accompanies the text.

Visual Sources Users of *The World* consistently rank its photo program as the best found in any textbook available today. Intimately connected to the narrative, each photo provides a compelling visual record, from mammoth huts to satellite images of Earth from space. Detailed captions, crafted by the author, explicate the meaning behind each visual source.

In Perspective sections conclude each chapter and do much more than summarize the preceding discussion. They put the developments covered in the chapter into historical perspective, and they make explicit for the student the process by which historians interpret the past.

Chronologies throughout each chapter arrange key historical developments in the order in which they occurred.

Key Terms are defined in the Glossary and set in boldface type in the text.

Changes to the Third Edition

The text of previous editions has been revised, corrected, shortened, and updated to reflect recent scholarship. A new opening chapter replaces former Chapters 1 and 2. New Chapters 27, 28, and 29 have been added to extend coverage of the twentieth century and to bring the narrative up to the second decade of the twenty-first century:

- Chapter 27: "Order Unraveled: The Trial of Empires, ca. 1898-ca. 1931"—NEW and EXPANDED coverage on World War I, Postwar Mindsets, and The Age of Extremism.
- Chapter 28: "The Anvil of War: Ideology and Violence, ca. 1931-ca. 1957"—NEW and EXPANDED coverage on The Origins of Global Conflict, World War II, and The Suspension of World Order.
- Chapter 29: "Paradise Postponed: Cold War between Planned Societies, ca. 1957-ca. 1980"-NEW and EXPANDED coverage on Globalization, Countercolonization and Social Change, Personal Freedom Resurgent, Life after Empires, Superpower Confrontation, and The Return of the Free Market.
- Chapter 30: "World Order and Disorder: Capitalist Convergence and Conflicts of Culture, ca. 1980ca. 2010"—NEW and UPDATED coverage of The New World Order, Culture and Globalization, and Secularism and the Religious Revival.

New to This Edition

RevelTM

Educational technology designed for the way today's students read, think, and learn

When students are engaged deeply, they learn more effectively and perform better in their courses. This simple fact inspired the creation of REVEL: an immersive learning experience designed for the way today's students read, think, and learn. Built in collaboration with educators and students nationwide, REVEL is the newest, fully digital way to deliver respected Pearson content.

Revel enlivens course content with media interactives and assessments—integrated directly within the authors' narrative—that provide opportunities for students to read about and practice course material in tandem. This immersive educational technology boosts student engagement, which leads to better understanding of concepts and improved performance throughout the course.

Learn more about REVEL

www.pearsonhighered.com/REVEL

Rather than simply offering opportunities to read about and study world history, REVEL facilitates deep, engaging interactions with the concepts that matter most. By providing opportunities to improve skills in analyzing and interpreting primary and secondary sources of historical evidence, for example, REVEL engages students directly and immediately, which leads to a better understanding of course material. A wealth of student and instructor resources and interactive materials can be found within REVEL. Some of our favorites are mentioned in the paragraphs that follow.

Interactive Maps

Custom-built interactive maps, with contextual hotspots, animated routes, chronological layers, and panning and zooming functionality, provide students with multiple ways of engaging with map visualizations.

World History Videos

Each chapter of the text contains videos selected from Pearson's World History video library that appear directly in line with the content narrative. Students are able to watch the videos right there without ever leaving the page, providing a richer explanation of key people and events, such as Alexander the Great, the Thirty Years' War, and Apartheid in South Africa.

A Closer Look

In REVEL, we have turned this feature into an interactive widget with hotspot locations, allowing students to examine photos, paintings, and other historical items of interest in detail. The feature allows students to closely examine the items with intricate detail. Each A Closer Look concludes with questions that encourage students to focus on important issues raised within the feature.

Integrated Writing Opportunities

To help students reason more logically and write more clearly, each chapter offers three varieties of writing prompts. The Journal prompt elicits free-form topicspecific responses addressing topics at the module level, and the Shared Writing prompt encourages students to address multiple sides of an issue by sharing and responding to each other's viewpoints, encouraging all to interpret a historical event or text as would people of the time. Finally, each chapter includes an Essay prompt from Pearson's Writing Space, where instructors can assign both automatic-graded and instructor-graded prompts.

For more information about all of the tools and resources in REVEL and access to your own REVEL account for The World, Third Edition, go to www.pearsonhighered.com/REVEL.

Support Materials

The World, Third Edition, comes with an extensive package of support materials for teachers and students.

For Instructors

- The Instructor's Manual/Test-Item File includes chapter outlines, overviews, key concepts, discussion questions, teaching notes, map quizzes, and suggestions for audiovisual resources, as well as approximately 1,500 test items. Particular emphasis is placed on essay questions that test students' understanding of concepts across chapters.
- Test Manager is a computerized test management program for Windows and Macintosh environments. The program allows instructors to select items from the test-item file to create tests. It also allows for online testing.
- The Instructor's Resource Center (www.pearsonhighered.com) Text-specific materials, such as the instructor's manual, the test-item file, map files, digital transparencies and PowerPoint™ presentations, are available for downloading by adopters.

Popular Valuepacks for The World



Connections: Key Themes in World History. Series Editor Alfred J. Andrea. Concise and tightly focused, the titles in the popular Connections Series are designed to place the latest

research on selected topics of global significance, such as disease, trade, slavery, exploration, and modernization, into an accessible format for students. Available at a 50% discount when bundled with The World. For more information go to www.pearsonhighered.com.





Getz/Hoffman/Rodriguez, Exchanges: A Global History Reader introduces students to the discipline of world history. Unlike other source collections, Exchanges helps students look beyond strictly delineated regionalism and chronological structures to understand history as a series of ongoing debates. Available at a 50% discount when bundled with The World.



Clark, A Guide to Your History Course: What Every Student Needs to Know. This concise, spiral-bound guidebook orients students to the issues and problems they will face in the history classroom. Available at a 50% discount when bundled with The World.

• De The Prentice Hall Atlas of World History, Second Edition includes over 100 full-color maps in world history, drawn by Dorling Kindersley, one of the world's most respected cartographic publishers. Copies of the Atlas can be bundled with The World for a nominal charge. Contact your Pearson sales representative for details.

For Students



Extensively revised and updated, the Primary Source: Documents in Global History DVD is both a rich collection of textual and visual documents in world history and an indispensable tool for working with

sources. Extensively developed with the guidance of historians and teachers, the revised and updated DVD version includes over 800 sources in world history from cave art to satellite images of the Earth from space. More sources from Africa, Latin America, and Southeast Asia have been added to this revised and updated DVD version. All sources are accompanied by headnotes and focus questions, and are searchable by topic, region, or time period.

• CourseSmart eTextbooks Online is an exciting new choice for students looking to save money. As an alternative to purchasing the print textbook, students can subscribe to the same content online and save up to 50% off the suggested list price of the print text. With a CourseSmart eTextbook, students can search the text, make notes online, print out reading assignments that incorporate lecture notes, and bookmark important passages for later review. For more information, or to subscribe to the CourseSmart eTextbook, visit www.coursesmart.com.

Acknowledgments

Without being intrusive, I have tried not to suppress my presence—my voice, my views—in the text because no book is objective, other than by pretense, and the reader is entitled to get to know the writer's foibles and failures. In overcoming mine, I have had a lot of help (though there are sure still to be errors and shortcomings through my fault alone). Textbooks are teamwork, and I have learned an immense amount from my friends and helpers at Pearson Prentice Hall, especially my editors, Ed Parsons and Clark Baxter, and program manager, Deb Hartwell, whose indefatigability and forbearance made the book better at every turn. Wendy Albert, executive field marketer, and Jeremy Intel, product marketing manager, for their creativity. I also thank the picture researcher Lauren McFall, and the members of the production and cartographic sections of the team who performed Herculean labors: Denise Forlow, senior managing editor; Lynne Breitfeller, production project manager; and Kevin Lear, cartographer.

I also owe a debt of gratitude to the senior management team at Pearson who supported this endeavor every step of the way.

I could not have gotten through the work without the help and support of my wonderful colleagues at Queen Mary, University of London; the Institute of Historical Research, University of London; and the History Departments of Tufts University and the University of Notre Dame. I owe special thanks to the many scholars who shared and still share their knowledge of global history at the Pearson Prentice Hall Seminar Series in Global History, and through the World History Association, the Journal of Global History, the Journal of World History, and H-NET. David Ringrose of University of California, San Diego, was a constant guide, whose interest never flagged and whose wisdom never failed. Many colleagues and counterparts advised me on their fields of expertise or performed heroic self-sacrifice in putting all of the many pieces of the book together: Natia Chakvetadze, Shannon Corliss, Maria Guarascio, Anita Castro, Conchita Ordonez, Sandra Garcia, Maria Garcia, Hector Grillone, the late Jack Betterley, Jeremy Greene, Jai Kharbanda, Ernest Tucker (United States Naval Academy), Steve Ortega (Simmons College), David Way (British Library), Antony Eastmond (Courtland Institute), Morris Rossabi (Columbia University), David Atwill and Jade Atwill (Pennsylvania State University), Stephen Morillo (Wabash College), Peter Carey (Oxford University), Jim Mallory (Queens University, Belfast), Matthew Restall (Pennsylvania State University), Roderick Whitfield (School of Oriental and African Studies, University of London), Barry Powell (University of Wisconsin), Leonard Blussé (Harvard University), Guolong Lai (University of Florida), Frank Karpiel (The Citadel), George Kosar (Tufts University), David Kalivas and Eric Martin of H-NET and the many subscribers to their service who commented on the book or posted or e-mailed queries and suggestions, and the faculty, staff, and students of the many colleges where I got the chance to discuss the book (Boston College, Colorado State University, Essex Community College, Georgetown University, Jackson State University, Northern Kentucky University, Ohio State University, Penn State University, St. John's University [New York], Salem State University, San José State University, Simmons College, U.S. Air Force Academy, U.S. Naval Academy, University at Buffalo, University of California [San Diego], San Diego State University, University of Arkansas [Little Rock], and University of Memphis) as well as the many good people whose assistance I may have failed to acknowledge.

> Felipe Fernández-Armesto Somerville, Massachusetts

A Note on Dates and Spellings

In keeping with common practice among historians of global history, we have used B.C.E. (before the common era) and C.E. (common era) to date events. For developments deep in the past, we have employed the phrase "years ago" to convey to the reader a clear sense of time. Specific dates are only given when necessary and when doing so improves the context of the narrative.

Recognizing that almost every non-English word can be transliterated in any number of ways, we have adopted the most widely used and simplest systems for spelling names and terms. The *pinyin* system of Chinese spelling is used for all Chinese words with the exception of such words as *Yangtze*, which are still widely referred to in its Wade-Giles form. Following common usage, we have avoided using apostrophes in the spelling of Arabic and Persian words, as well as words from other languages—thus, *Quran* and *Kaaba* instead of *Qu'ran* and *Ka'ba*, and *Tbilisi* instead of *T'bilisi*. Diacritical marks, accents, and other specialized symbols are used only if the most common variant of a name or term employs such devices (such as *Çatalhüyük*), if they are part of a personal noun (such as *Nicolás*), or if the inclusion of such markings in the spelling of a word makes pronouncing it easier (*Teotihuacán*).



Part I



▲ THE HUMAN IMPRINT. Hand stencils—painted, scratched, or made by spraying with ocher, like this example from the Chauvet Cave on the south coast of France—are among the most common images in surviving Ice Age decorated caves. Chauvet, discovered in 1964, contains some of the earliest known examples. The practice of touching the rock surface with outstretched palm, and recording the visitor's presence in enduring form, lasted in the region for thousands of years: surviving examples cover a period of more than 12,000 years from about 30,000 B.C.E. This suggests remarkable continuities of belief and ritual among people who seem to have been trying to contact an immutable world of spirits inside the earth.

The Divergent Species

The Beginnings of Diversity ca. 160,000 to ca. 3,000 Years Ago

CHAPTER 1 Of Ice and Mud: From Africa to the World,

from Foraging to Farming 4

CHAPTER 2 The Great River Valleys: Accelerating Change

and Developing States 36

CHAPTER 3 The Multiplication of Civilizations:

Ambition and Instability 62

THE BIG

PICTURE The World in 1000 B.C.E. 88

NVIRONMENT

since 20,000 years ago

Global warming

ca. 4500 B.C.E. Irrigation ca. 3000-1000

B.C.E.
Continued warming

ca. 1200–800 B.C.E. Widespread environmental crises

technology

160,000 to 20,000 years ago

Most recent Ice Age



since ca. 150,000 years ago Homo sapiens since ca. 10,000 years ago Agriculture ca. 3500 B.C.E.
Horses domesticated

ca. 1800 B.C.E. Spread of iron

since at least 100,000 years ago Art, ritual, religion;

Art, ritual, religion; first migrations out of Africa since 5000 B.C.E. Intensive agriculture, bronze metallurgy: Tigris-Euphrates, Nile, Indus, Yellow Rivers since ca. 3500 B.C.E. Complex, hierarchical societies and

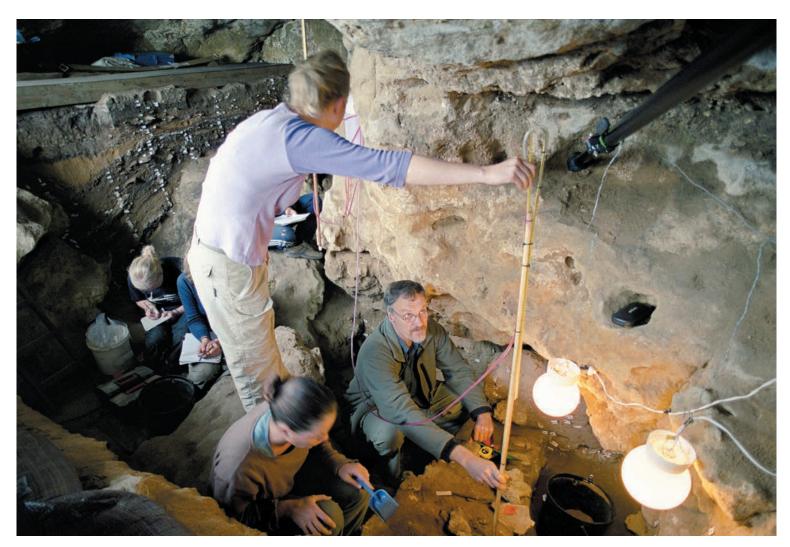
states

ca. 3200 B.C.E. Writing ca. 2000 B.C.E. Epic of Gilgamesh

Chapter 1

Of Ice and Mud:

From Africa to the World, from Foraging to Farming



▲ BLOMBOS CAVE in South Africa is one of the world's most exciting archaeological sites, an archive of some of the earliest surviving evidence of the imaginative power of Homo sapiens. Blocks of blood-red ochre, decorated with checkered symbols, and beads made from Nassarius shells were products of intellect and imagination designed for ritual and display more than 70,000 years ago. Here workers check the depth of excavations to establish the relative antiquity of finds at different levels.



Chapter Outline & Learning Objectives

1.1 The Beginnings of Divergence: Migration

What changes resulted from early human migration?

1.2 The Acceleration of Divergence: Different Foraging Cultures

How did human life change when the Ice Age ended?

1.3 The Beginnings of Farming

What kinds of environments were suited to the development of herding and of tilling, respectively?

1.4 The Spread of Agriculture

What are some examples of the early spread of agriculture?

1.5 So Why Did Farming Start?

How might farming have started?

In Perspective: Seeking Stability

Near the remains of a butchered hippopotamus, three skulls lay: a child's and two adults'. Archaeologists found them in Herto, Ethiopia, in 2003, in the depths of a long East African valley, where earlier digs had turned up many remains of humans' ancestor species (see Map 1.1). The Herto specimens were about 160,000 years old. They looked like average human skulls today, except that they were slightly larger. Relatives, companions, or captors had stripped them of flesh and polished them after death, as if in some death-linked ritual.

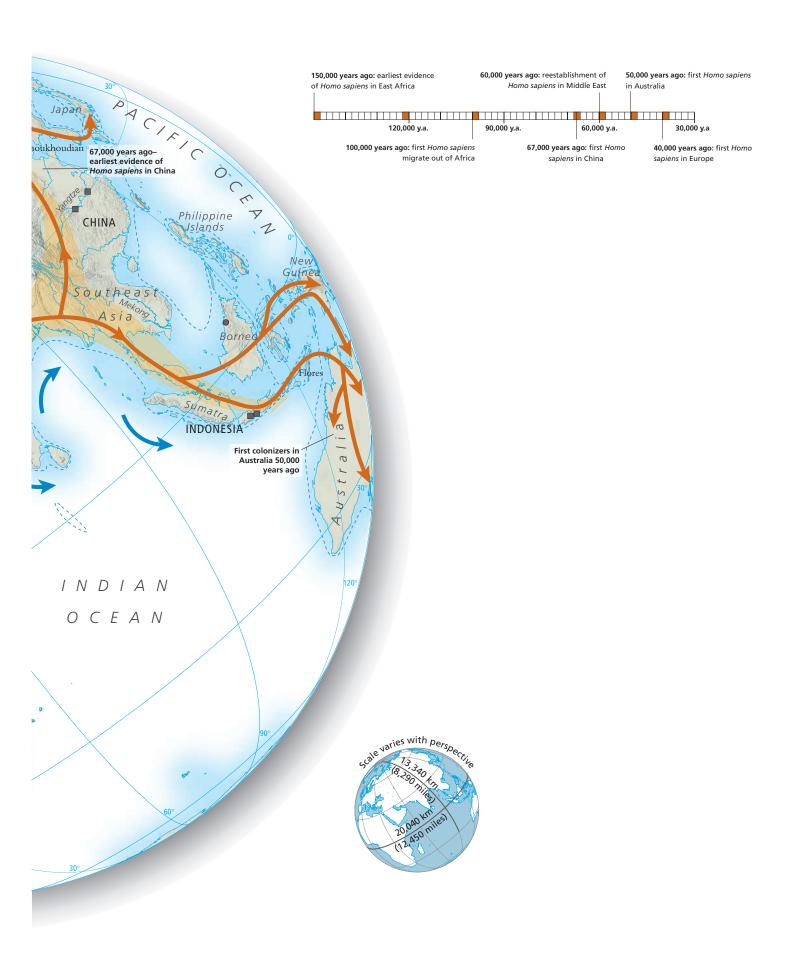
The archaeologists were face to face with the earliest known surviving relics of *Homo sapiens*—"wise" people, as we perhaps foolishly call ourselves.

Do older remains of our species await discovery? Probably not; at least, not much older, as genetic evidence tends to confirm that we—or creatures with the same small range of DNA that we now call human—have only been around for 200,000 years, at most—which gives us a good rough starting point for this text.

Depending on what you think "history" is, you could choose to start earlier, perhaps with the first known change in the cosmos—the "Big Bang," which, thirteen billion years ago, turned unimaginably dense matter into the expanding universe we inhabit. Or you could start at the formation of our planet about four and a half billion years ago, or at the emergence of life shortly afterward. You could even start with the first creatures with what we call **culture**—creatures who changed the way they lived not because biological laws drove them to, but because they discovered for themselves how to innovate and pass innovations on by teaching, learning, or imitation. Or you could start with the long, slow **evolution** of physical attributes or behaviors you think specially characteristic of humans.

There are, however, good reasons to focus on ourselves: No other surviving species has changed its lifeways so much, or, as far as we know, changed the planet it dwells on so much. We are animals, composed of the same matter as other animals, and ruled by the same need to feed and sleep and reproduce, but our peculiarities—our abundant thoughts and imaginings, the dazzling rate at which we project our

MAP 1.1 Migration 100,000-40,000 years ago Strait Earlier Homo erectus, 1.75–1.25 million years ago Homo sapiens, 100,000-40,000 years ago Possible coastal migrations Homo erectus sites Homo sapiens sites Gob GABON selective modern country ancient coastline ancient lake Volga Aral Sea GERMANY Sed Weander Valley Black Sea Lake 1 iddle Homo sapiens in Europe 40,000 years ago East Iberian' Mediterranean sea Peninsula Arabian Peninsula EGYP 100,000 years ago, Homo sapiens in Middle East ETHIOPIA Herto Olduvai **RWANDA** Gorge GABON Homo sapiens 100,000 years ago Kalahari Desert



ideas onto the world around us—are, understandably, of supreme interest to ourselves. We are odd, by the standards of other animals. Our oddities are worth examining.

The biggest oddity, perhaps, is how various we are, how culturally divergent. Whereas most other cultural animals exhibit very limited differences of behavior, humans have thousands of ways of feeding, finding their way, worshiping their gods, fashioning their dwellings, managing their environments, communicating with each other, and organizing and ruling their communities. The great thread that runs through this book is how this dazzling divergence happened. The central problem is why.

Divergence accumulated slowly at first—hardly at all for the first 100,000 years of Homo sapiens. This chapter is an attempt to examine and understand how divergence started and why it gathered pace beginning about 100,000 years ago, through the tremendous accelerations recounted in the next two chapters.

Global Dimensions What is culture? What, if anything, distinguishes humans from other animals? When and why did divergence begin to accelerate? What made Ice Age people affluent? What made them migrate?

1.1 The Beginnings of Divergence: Migration

What changes resulted from early human migration?

At the time the Herto skulls parted from their bodies, a small number of fellow creatures perhaps up to about 20,000 individuals—lived in the same region, practicing the same culture. In grassland and sparse woodland, they could, like predecessor species in the same circumstances, make up for their deficiency as climbers by standing erect to look out around them. They could set fires to manage the grazing of animals they hunted, and sharpen stones to butcher the carcasses. Though poorly equipped physically, in most respects, by comparison with competitor species—with inferior sight, smell, and hearing, slow movements, unthreatening teeth and nails, poor digestions, and weak bodies that confined them to the ground—they could sweat profusely over hairless skins to keep cool during long chases, and could ward off rival predators with relatively accurate throwing arms and well-coordinated eye-arm movements. In short, like most creatures, they fitted their habitat.

About 100,000 years ago, however, their descendants began to disperse over the globe (see Map 1.1). Such dispersal had happened before—or something like it had. Nearly a million years earlier, for instance, an ancestor species, *Homo erectus*, spread over most of what are now Africa and Eurasia (see Map 1.1). But neither theirs nor any other earlier dispersal led to the startling cultural divergence that came to constitute the history of our own species.

1.1.1 Peopling the Earth

To some extent, we can reconstruct where and when Homo sapiens traveled, though archaeological evidence is patchy, by, for example, measuring differences in blood type, genetic makeup, and language in different parts of the world. The best-informed research puts Homo sapiens in southern Africa and the Middle East by about 100,000 years ago (see Map 1.1, including for the migrations discussed in this paragraph). The latter colony failed, but newcomers reappeared about 60,000 years ago. Settlement proceeded along African and Asian coasts, probably in part by sea. The earliest agreed-upon archaeological evidence of *Homo sapiens* in China is about 67,000 years old (although digs have yielded puzzlingly earlier dates for similar remains). The first colonizers of Australia arrived over 50,000 years ago and must have used boats, because open sea was already in the way. Homo sapiens reached Europe only a little later, and northern Asia—isolated by daunting screens of cold—about 30,000 years ago.

For scholars, settlement of the Americas is the most contested phase of the story. Evidence scattered from the Yukon to Uruguay and from the Bering Strait to the Beagle Channel is so widespread, over so long a period, in so many different geological layers, and with such a vast range of cultural diversity, that one conclusion is inescapable: Colonists came at different times, by different routes, bringing different cultures with them.

Why did people move? And what made them so amenable to different environments? Most species stay where they are best adapted. Yet *Homo sapiens* relocated in challengingly different places: deep forests, where grassland habits were of limited use; deserts and seas, which demanded technologies humans had not yet developed; unfamiliar climates, which bred unaccustomed diseases. Still, people kept on moving. These surprising events highlight three key facts.

First, we are creatures of cold. The migrations coincided with the Ice Age, a period of cold climate, which, at its peak, about 20,000 years ago, spread ice in the northern hemisphere as far south as the present lower courses of the Missouri and Ohio rivers in North America and deep into what are now the British Isles (see Map 1.2). Ice covered what is today Scandinavia. Most of the rest of Europe was **tundra**—a treeless region with frozen subsoil—or taiga—coniferous forest; in central Eurasia, tundra reached almost to the present latitudes of the Black Sea (see Map 1.2). **Steppe**—dry plain with scrub grass—licked the shores of the Mediterranean (see Map 1.2). In the New World, tundra and taiga extended to where Virginia now is (see Map 1.2). Periods of the most intense cold, which each lasted for about 3,000 or 4,000 years—the first around 40,000 years ago, another some 16,000 years later—did not interrupt people's movements or creativity; if anything, the effect seems to have been stimulating.

Second, the people who traversed the ice-helmed world were conscious migrants, not just creatures whom biological and environmental imperatives impelled. They made artifacts associable with thoughts and sensibilities similar to our own: shell jewelry, incised slabs of ochre, and, in Blombos cave in South Africa about 100,000 years ago, shell crucibles and spatulas for mixing pigments. They had the mental equipment necessary to be able to imagine themselves in changed circumstances, to contemplate changes needed, and to attempt to realize them.

Finally, and perhaps most puzzlingly, the expansion of *Homo sapiens* implies an astonishing rate of population growth. We have no idea—beyond guesswork—of the numbers that migrated, but we can estimate a figure in the millions by the end of the process. As far as we know, everyone at the time lived by foraging. Because mothers cannot easily carry more than one or two infants, having large numbers of children is unsuited to foraging life. Consequently, foragers usually limit families. Long periods of lactation provided a means of contraception: Breastfeeding mothers are relatively infertile. The demographic growth that peopled the Earth is surprising, therefore, because it breaks the normal pattern of population stability in foraging communities.

1.1.2 Explaining Migration

The reasons for the migration remain unclear. Perhaps new stresses drove the migrants on, stresses such as food shortages or ecological disasters. But in every other case we know of population falls when food sources shrink. Warfare may be a more promising form of stress to consider. Among the four horsemen of the Apocalypse, plague, famine, and natural disaster tend to inhibit human action, whereas war spurs us to new responses. Archaeological data and inferences from anthropological case studies have encouraged speculation that warfare began—or, at least, entered a new, more

CHRONOLOGY: Early Human Migration			
160,000 years ago	H. sapiens		
100,000 years ago	H. sapiens migrates to southern Africa and to Middle East		
67,000 years ago	H. sapiens in China		
60,000 years ago	H. sapiens reestablishes colony in Middle East		
50,000 years ago	H. sapiens in Australia		
30,000 years ago	H. sapiens in Europe		
15,000 years ago (All dates are approximate)	H. sapiens in the Americas		